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# ABB SACE and its commitment to protecting the environment



ABB SACE is one of the forerunners among the companies in the Group in dedicating considerable resources towards reaching its objectives of sustainable development and environmental protection. This is confirmed by the fact that all the company manufacturing sites have been awarded ISO 9001 quality certification and most of them have also been awarded ISO 14001 environmental management system certification. The plants in Frosinone and Patrica have also been awarded the Quality, Environment and Safety Integrated System certification and are certified in compliance with the Social Accountability 8000 Standards which is the most recognized and widespread international standard that guarantees the company engagement to respect the production and working conditions ethic.

ABB SACE is actively involved in continuing the policy of improving environmental management by rationalizing the consumption of raw materials and energy, preventing pollution, respecting water and air, reducing noise levels to a minimum, reducing waste from production processes and carrying out periodic environmental checks at the main suppliers' premises.

By using analysis tools such as LCA (Life Cycle Assessment), from the initial design stages ABB SACE assesses and improves the environmental performance of its products throughout their entire life cycle in order to guarantee maximum efficiency in technical and energy performance during operation, control and reduce environmental impact in the manufacturing stage and define end-of-life procedures.

All these goals and activities are the result of a far-sightedness in adopting ecological policies and methods of reducing environmental impact and, here too, ABB SACE is, as already seen in the quality of its products, a leader on the Italian company scene.



Plant in Marostica (Vicenza-Italy)

## Selection and design tools

### Flexible management, services and advice: a complete package

To make selecting its products easier, ABB SACE guarantees 360° support both before and after purchase and provides tools for designing and sizing electrical installations which make calculations quicker, ensure that installations comply with regulations and reduce the risk of error.

The main ABB SACE computer tools for designing and estimating costs in electrical installations include:

### TCTWin (Technical Collection Tools)

TCTWin is the collection of ABB SACE softwares for professionals in the electrical field.

In particular:

- *DMBWin* allows you to select, configure and plan ArTu and Gemini distribution boards;
- *PICOWin* is the software dedicated to development and planning activities in the residential and commercial fields with the use of the Élos series, DomusTech home automation appliances and the whole range of ABB SACE modular devices and insulating enclosures;
- *ProSoft* (Softstarter Selection): with this software, after having selected the load and the ABB motor, you can select the most suitable starter, taking into account the current, the torque and the starting time;
- *DriveSize* is a programme that facilitates the selection of the

best solution for the motor, converter and transformer, and also allows you to calculate the current values and the network harmonics;

- *SPECs* allows you to create, customise and export the electrical plant specifications of many different structure types;
- *TCTWin* is completed by ABB Software Desktop, the control panel for operating all programmes and for utilising useful links and services

such as online subscription, assistance and updating .

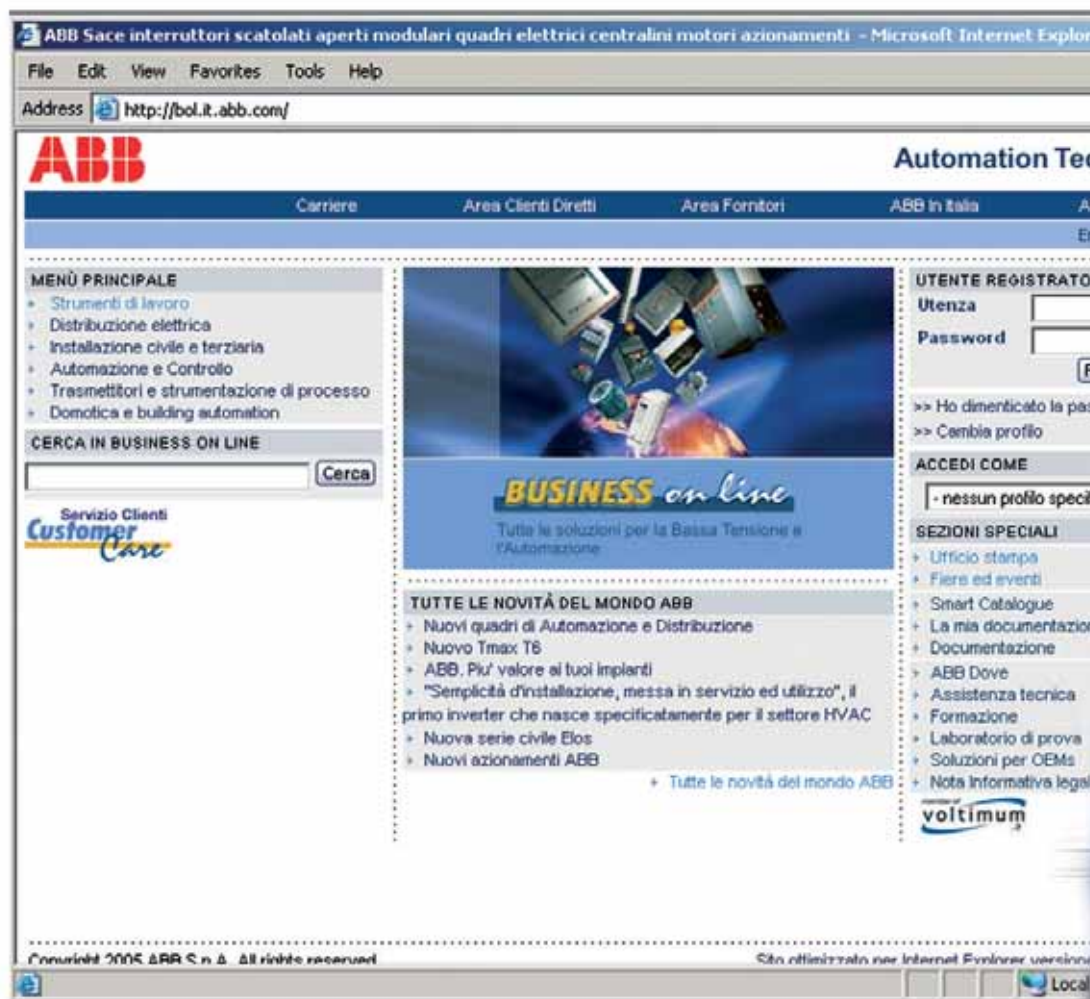
Sign in on Business online <http://bol.it.abb.com>, to upgrade your software in a simple and quick way: you will always have the most recent software versions at your disposal.

### Training courses

ABB SACE shares its own experience in the field of professional training, both from a technical and regulatory point of view. Each year these training activities provide many courses all over Italy, with the possibility

to organise customised lessons at your own seat. In the Training area of the Business on line website, <http://bol.it.abb.com>, you can have a look at the schedule and check the availability for each course; you can also book your favourite course from the website. Each course day will award you with 6 credits, according to the requirements of the Regolamento della formazione continua (Regulation for On-the-Job Training) (G.U. no. 89, 16/4/2004).

From here you can also order,



## Selection and design tools



The ABB Sace testing laboratory in Bergamo, with its state of the art skills and systems, is available to carry out short circuit, experimental, material and electronic tests on medium and low voltage devices and switchboards. Requests for any type of test can be sent to the following fax number 035 39 52 84. For further details consult the Laboratory page in the Business on line web site (<http://bol.it.abb.com>).

In order to guarantee the safety and reliability of low and medium voltage systems and products ABB Sace also offers a Technical Support Service (telephone +39 035 395512 and fax +39 035 395511), which provides maintenance and advice.

The support service is also aimed at residential and small tertiary sector installers, through the support provided by the Technical Support Centres, which can be contacted by clients at the Freephone number 800 551166.

free of charge, the CD-ROM of the Training on line collection and have a look at the list of monthly conferences and the relevant invitation forms in pdf format.

### **Business on line**

The Business on line portal (<http://bol.it.abb.com>) is a working tool that meets any professionals' needs.

It is organised in many different sections and it can be accessed in various ways according to the application type (distribution, residential and commercial

fields, automation, home and building automation etc.), so that the most important information for each field can be found immediately.

### **Smart Catalogue**

It contains the main data about all ABB SACE products. Each specific data sheet can be printed or stored; you can search by product family or using the specific "Search" function of our powerful search engine.

### **Documents**

All documents concerning

ABB SACE products can be consulted on line or they can be downloaded in pdf/html formats: catalogues and brochures, certificates, technical documents and regulation sheets.

### **Working tools**

Many useful working tools which can be consulted on line or stored on your computer: certificates, price lists, budgeting tools, retrofitting kits and much more. From this session you can also order the CDs of the TCTWin suite.

### **Press releases and all ABB news**

In these two sections you can find all product news, promotions and company communications, as well as news about projects and the main references.

ABB direct clients and suppliers can access the relevant reserved areas where they can interact with the company for managing processes and orders.





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Products offered by ABB for distribution in the residential and tertiary sectors ..... 1/2

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## Presentation

### Products offered by ABB for distribution in the residential and tertiary sectors

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ABB offers a range of consumer units and switchboards for the installation of modular components that enables to implement any type of application for power distribution in the residential and tertiary environments operating under the highest safety conditions and with significant savings of time. Among the several products that form this offer, the Unibox

In the range of switchboards, the Livorno Series meets first of all the requirements arising in emergency situations in which a fast and efficient operating mechanism for shutdown of plant is required.

The Marostica Series switchboards are designed to accommodate of the main IEC 309-1 sockets currently on the market, thus



consumer units are distinguished by a design, which perfectly fits into any decor, choosing between the wall-mounting version and the new flush-mounting version. Estetica and Europa Series consumer units and the wall-mounting covers are available in the modern RAL 9016 white.



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## Presentation

### Products offered by ABB for distribution in the residential and tertiary sectors

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resulting particularly suitable for installation in shops, warehouses, fairs, work sites, and so on.

To execute the terminal part of an electric plant, ABB offers a range of products that includes empty enclosures and control devices, also in versions for installation in rigid and protective conduits.

Junction and wiring accessories boxes present a safe use even under the most difficult environmental conditions: in particular

waterproof boxes guarantee full protection in operations for junction, branch connection and installation of equipments. In a "state of the art" electric plant, even details are carefully implemented. To secure total use safety and operational efficiency of the plant, minor components and accessories for erection of electrical equipment of ABB are made in compliance with the reference international Standards; metal section bars, cable-ties and fixing and cabling accessories are available in a wide assortment to satisfy any kind of application.

1



## Presentation

### Products offered by ABB for distribution in the residential and tertiary sectors

#### Unibox consumer units: elegant and functional even in the flush-mounting version

1

Unibox doubles. Elegant design and practicality for installation and use are now available also in the flush-mounting version of the consumer units IP 40 of ABB SACE for application in the residential and tertiary environments.

The new Unibox consumer units, manufactured in a self-

extinguishing thermoplastic material of colour RAL 9016 white, integrate themselves easily in whichever decoration solution; for the door, it is possible to choose between the transparent smoked version and the opaque version.

The models in the range can accommodate equipments of 8 to 54 modules that can be cabled more easily extracting the frame to work on the bench.

Resistance to chemical agents, atmospheric agents, UV rays and shocks is guaranteed; protection degree is IP 40.

Accessories make it possible to design their configuration with an accurate repartition of outlines, and a particular completeness of functions. The flush-mounting Unibox consumer units are manufactured in compliance with CEI 23-48 and 23-49 Standards, and IEC 670. They have obtained the IMQ approval.

Functionality and safety of installation and use of the new flush-mounting Unibox consumer units guarantee quality of construction characteristics, in particular:

- protection degree IP 40;
- insulation class II;
- self-extinguishing thermoplastic material and resistant to abnormal heat and fire up to 650 °C (glow wire test), in compliance with IEC 695-2-1 Standard;
- operating temperature from -20 °C to + 85 °C;



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## Presentation

### Products offered by ABB for distribution in the residential and tertiary sectors

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- shock resistance: 10 Joules (IK level 09);
- reversible door;
- door opening with push-pull mechanism;
- opening of the door up to 180 ° for multi-row consumer units;
- equipped with a film protected door;
- a lock with a coded key can be fitted;
- flush-mounting box with push-in inlet for entrance of protective corrugated conduits;
- extractable DIN rail frame;
- DIN 150 mm inter-axis between the rows;
- terminal holders and terminal bars supplied separately or already assembled;
- equipped with slots at the engagement points to compensate possible defects during the installation of the flush-mounting box.



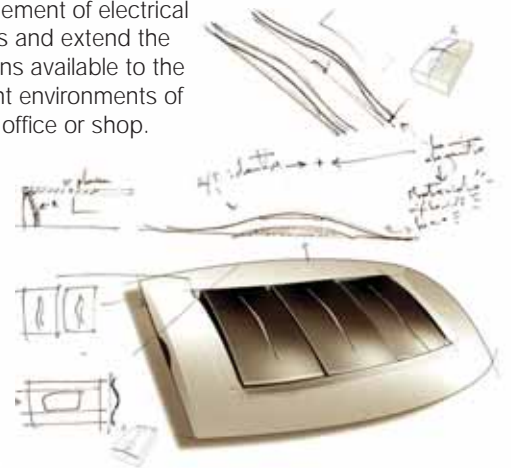
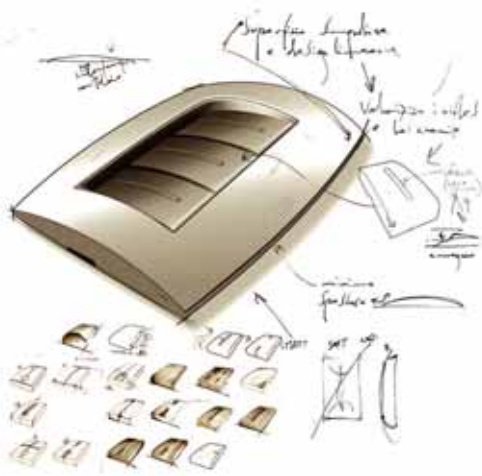
# Élos

The ABB wiring accessories series

*Élos awakens the senses and marks a turning point for the market: say goodbye to old habits, now you can choose the softness of its surfaces and the purity of its design.*

Élos is the ABB wiring accessories series for the terminal parts of electrical systems for residential and tertiary applications. The ABB range for distribution applications, along with the devices installed in the switchboard or in the central unit and the wiring and trunking products, allows you to design complete professional solutions in terms of quality and technology which are also aesthetically refined and modern.

The series consists of two lines, Élos Soft and Élos Smart, which include a complete range of devices with which to optimize the management of electrical devices and extend the functions available to the different environments of home, office or shop.



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# Élos

The ABB wiring accessories series

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Élos, by ABB, stands out from anything currently available on the market due to its sophisticated and innovative design. The Élos Soft plates feature an elegance and simplicity that can be found throughout the series: a striking and unique look is achieved with a sinuous plate resting on an under-plate which seems to detach it from the wall. The Élos Smart plates

are constructed from a single technopolymer surface that rests against the wall almost without any thickness, highlighting the components it contains.



The Élos Soft version of the anthracite grey keys has an organic and curvilinear surface whilst the Élos Smart version is flat and essential; both lines feature a vertical line which is familiar to the touch. The metal and technopolymer versions of the Élos Soft plates are available in more than 20 colors and in 3, 4 and 6 module versions.



*Élos has been selected amongst the best products competing in the Design section of the prestigious 2003 Intel Design "Augusto Morello" award.*

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**Elos**  
SOFT VETRO

As you've never seen it before

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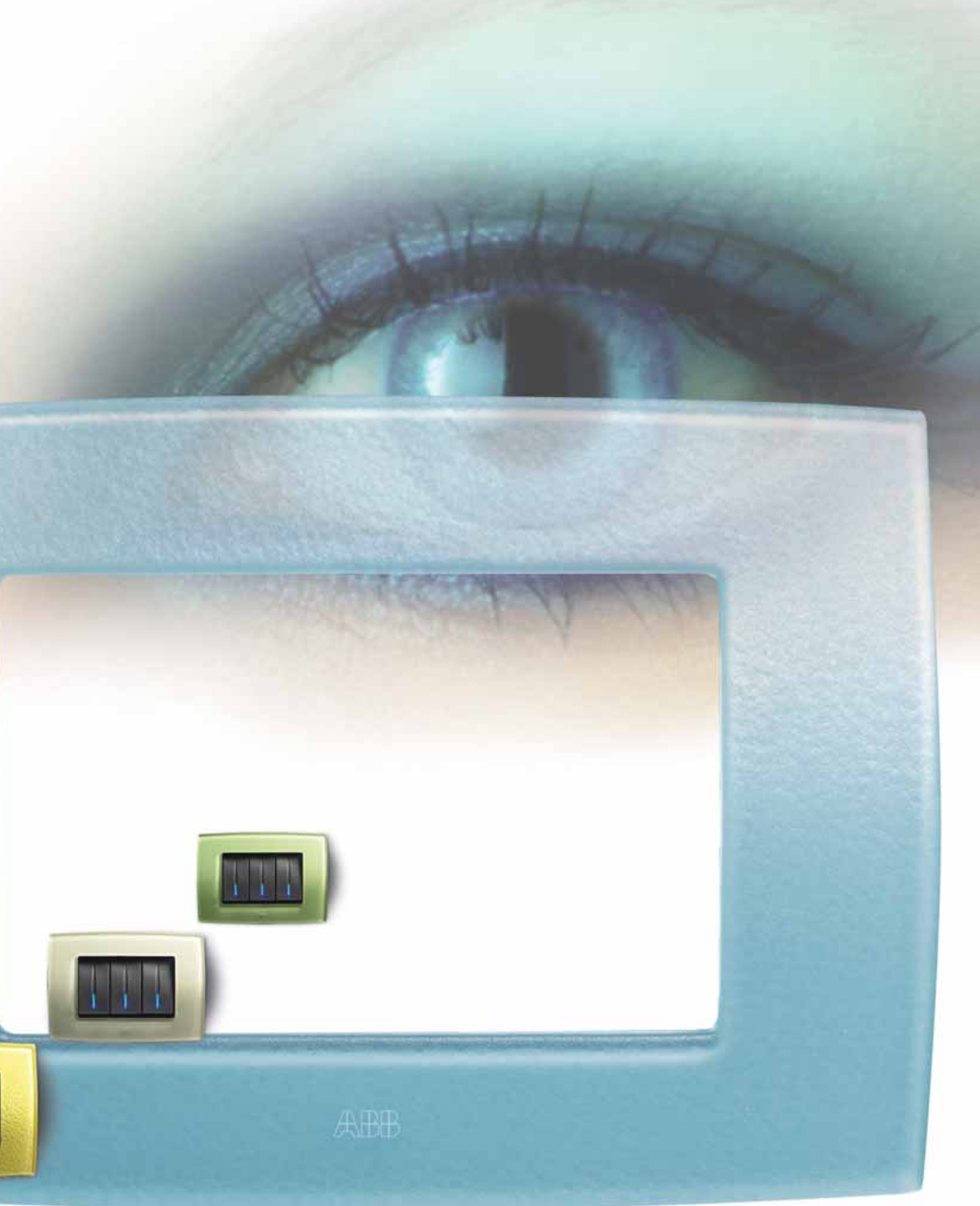
*The transparency highlights the purity of the design: Elos Soft glass is the choice for those that leave nothing to chance.*

Today Elos adds the irresistible and exclusive appeal of glass which, with its delicate transparencies, adds a unique elegance to Elos Soft: the delicate and refined profile of the soft wave is perfectly expressed with the glass.

Elos glass exudes vibrancy to sight and touch, satisfying the desire for beauty and harmony.

The plates in the range recall the colors of precious stones such as quartz, emerald, zircon, pearl, topaz and turquoise in both glossy and satin finishes.





ABB

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# Chiara

The new ABB wiring accessories series

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Chiara has arrived! ABB presents its new wiring accessories series. Chiara is light and harmony. The elegant white push buttons and devices are immersed in the evocative colours of the plates: white, sand, stone, volcano and the pastel shades of yellow, orange, green and blue. Chiara has a very broad appeal and enhances any environment. Flexibility is one of Chiara's characteristics, also in terms of installation. The 22 mm wide devices

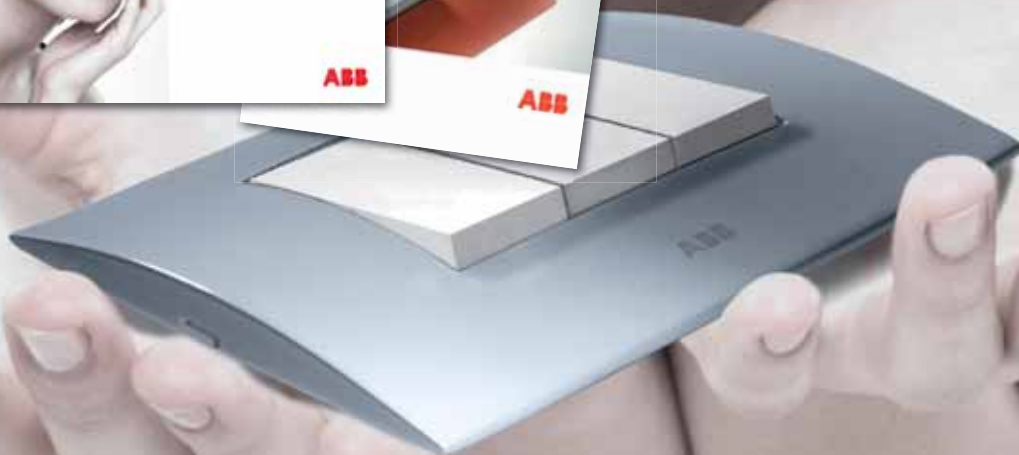
can be fitted into all round 60 mm diameter and rectangular flush-mounting boxes on the market. The supports and the plates are available in two, three, four and seven module versions that can be fitted into standard rectangular two, three, four or six module boxes. The light spot assembly is particularly simple: the frame is made of a semitransparent material

in order to facilitate fitting to the flush-mounted boxes. Furthermore the devices are assembled from the front.





"Chiara. Semplicemente Chiara" is also featured in the 2CSC600120B0901 brochure which can be consulted or ordered from the Documentation section of the Business on line website <http://bol.it.abb.com>



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# Élos and Chiara

## Components and functions

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A wide range of articles (devices, plates and accessories) is available for both Élos and Chiara wiring accessories series. All the eligible products in the range have obtained the IMQ certification as required to comply with current reference standards.



### Control devices

One-way and two-way switches, push buttons, reversing switches, relays and change-over switches in different versions to configure utility functions and control points in the most flexible and suitable way for each residential and working context.

The range includes devices with warning lights to indicate the status of the controlled devices or for night-localization.

The bulbs for warning light devices must be ordered separately; the codes are listed amongst the accessories.

### Sockets

2P+E 10-16A plug version for 250V lines are available in Italian and German standards, with safety shutters and side/central earth.

The Élos range also includes standard European and American shaver sockets, SELV sockets for very low

voltage safety devices and other special sockets. Various types of connectors for telephone and data transmission applications are available complying with the most frequently used and advanced international wiring standards.

### Protection devices

These come into action in the event of overloads, short circuits, power surges and other phenomena that are hazardous for the users and prevent the connected devices from functioning correctly. They provide protection directly downstream without interfering with the power supply to other points on the electrical plant.

### Warning devices

Warning lights to indicate the functioning status of connected devices, bells and buzzers.

The Élos range also includes the path light used as a

courtesy light to illuminate pedestrian paths and areas, for example corridors, garages, cellars etc. The bulbs fitted to the warning lights must be ordered separately; the codes are listed amongst the accessories.

### Devices for safety and comfort

To optimise the functioning of the electrical devices and increase the comfort of environments, the range includes devices for programming, adjustments and timing, thermostats and clocks. The anti black-out lamp switches on in case of interruption in the power supply with an autonomy of up to 4.5 hours; by removing it from the socket it can be used as a torch.

The Élos range also includes detectors for methane or LPG gas leaks, which automatically close the solenoid valve that they are connected to, to stop

# Élos and Chiara

## Components and functions

the delivery and prevent dangerous situations; the alarm can be extended in many places with the signal repeater.

### Installation components

Blank module for unused modules and 2, 3, 4, 7-modules supports for Chiara and 3, 4, 6, 8 and 12-modules supports for Élos, for installing devices and components in rectangular flush-mounting boxes for Élos and rectangular and round flush-mounting boxes for Chiara.

### IP40 and IP55 boxes and devices

The Élos and Chiara field of application is increased to include environments that require IP40 or IP55 protection degree, according to the CEI 64-8 standards. The IP55 versions allow Élos and Chiara to be used in particularly

demanding environments with the presence of dust or flammable liquids.

### Plates

Élos Soft plates are available in glass with a satin or glossy version; metal and technopolymer plates are made with a glossy finish and also in the mica-colors version. The metal plates are also supplied with special surface treatments (glossy chrome, brushed steel, natural zama and glossy gold).

Élos Smart plates are made in technopolymer, with mica-colors versions and a satin finish.

Chiara plates are made in technopolymer, with a glossy finish, in eight different colours.

### Key covers

The Élos range also includes key covers to identify available functions and connected

devices with different symbols. These are used to replace the standards keys supplied with control devices. In 1 and ½ module versions.

### Special systems

The Élos range also includes different special systems. The bus components for security burglar alarm systems allow for the management of up to 6 different areas which can be activated separately with the insertion/slicing device. The fixed or adjustable lens volumetric detectors and the contacts for the connection to the protection system for doors and windows register any burglary attempts in the controlled environments by activating the internal acoustic warning devices and the siren for the exterior; the telephone dial dials the numbers set in the memory to send an alarm warning. To prevent the disconnection

or the damage of the single components, the installation of an anti-tampering device that intervenes activating the alarms is recommended. With the speaker system you can extend stereophonic broadcast from tuners or external sources (e.g. HI-FI) throughout the home. The use of the intercom with microphone is especially useful in hotel and residential structures as a paging system. A complete access control and devices management system with up to 3 authorization levels is also available: the components in the range include the card key, the external reader in which to insert the card to enter the premises and the internal reader with which to activate the devices connected (e.g. lights, opening blinds etc.).







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# Consumer units

## Summary table

### IP 40 flush-mounting consumer units

### IP 40 wall-mounting consumer units

Modules	IP 40 flush-mounting consumer units						IP 40 wall-mounting consumer units			
	Unibox Series	Estetica Series	Europa Series	Europa Series	Europa Series	Europa Series	Unibox Series	Unibox Series	Europa Series	Europa Series
	residential application	residential application	residential application	residential application	residential application	residential application	residential/tertiary application	residential/tertiary application	residential/tertiary application	residential/tertiary application
										
	With opaque, vertically hinged door	With transparent, smoky, vertically hinged door	Without door	With transparent, smoky, horizontally hinged door	With opaque, vertically hinged door	With transparent, smoky, vertically hinged door	Without door	With opaque, vertically hinged door	With transparent, smoky, vertically hinged door	Without door
	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white RAL 7021 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey
2	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-
4	-	-	1SL2004A00 160x180x82	1SL2024A00 - 12 037 160x180x90	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-
8	1SL0500A00 214x238x110	1SL0510A00 214x238x110	1SL2008A00 230x180x82	1SL2028A00 - 12 038 230x180x90	1SL2040A00 - 12 026 230x190x90	1SL2057A00 - 12 058 230x180x90	12 208 - 12 228 215x220x105	12 238 - 12 248 215x220x105	12 258 - 12 268 215x220x105	1SL2408A00 - 12 428 230x200x95
10	-	-	-	-	-	-	-	-	-	-
12	1SL0501A00 293x262x110	1SL0511A00 293x262x110	1SL2012A00 300x180x82	1SL2032A00 - 12 042 300x180x90	1SL2041A00 - 12 027 300x180x90	1SL2061A00 - 12 062 300x180x90	12 212 - 12 232 295x245x115	12 242 - 12 252 295x245x115	12 262 - 12 272 295x245x115	1SL2412A00 - 12 432 305x200x95
18	-	-	1SL2013A00 410x180x82	1SL2033A00 - 12 043 410x180x90	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-
24	1SL0502A00 293x408x118	1SL0512A00 293x408x118	1SL2014A00 300x395x92	1SL2034A00 - 12 044 300x395x100	1SL2045A00 - 12 030 300x395x90	1SL2063A00 - 12 064 300x395x90	12 214 - 12 234 295x390x115	12 244 - 12 254 295x390x115	12 264 - 12 274 295x390x115	1SL2414A00 - 12 434 305x350x95
36	1SL0503A00 293x533x118	1SL0513A00 293x533x118	1SL2016A00 300x545x92	1SL2036A00 - 12 046 300x545x100	1SL2048A00 - 12 031 300x545x90	1SL2065A00 - 12 066 300x545x90	12 216 - 12 236 295x515x115	12 246 - 12 256 295x515x115	12 266 - 12 276 295x515x115	1SL2416A00 - 12 436 305x545x120
54	1SL0504A00 401x533x118	1SL0514A00 401x533x118	-	-	1SL2052A00 - 12 035 410x545x90	1SL2067A00 - 12 068 410x545x100	12 217 - 12 237 405x515x115	12 247 - 12 257 405x515x115	12 267 - 12 277 405x515x115	1SL2417A00 - 12 437 380x570x120

# Consumer units

## Summary table

IP 40 wall-mounting consumer units				IP 55 and IP 65 wall-mounting consumer units					Fronts		
Europa Series	Europa Polycarbonate Series		Wall covers	IP 55 Europa Series		IP 65 Fly Series	IP 65 Europa Series		IP 40 and IP 55 panel fronts		
residential/ tertiary application	tertiary/ industrial application		residential/ tertiary application	tertiary/industrial application		residential/ tertiary/ industrial application	residential/ tertiary/industrial application		tertiary/industrial application		
											
With opaque, vertically hinged door	With transparent, smoky, vertically hinged door		Without door	Without door	Spring closing	Key lock	With transparent door	With opaque, vertically hinged door	With transparent, smoky, vertically hinged door	Panel fronts	
RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	IP 40 RAL 7035 grey	IP 55
-	-	2-4 modules <b>12 702</b> 105x175x85	<b>1SL2402A00 - 12 422</b> 50x140x65	-	-	2-4 modules <b>12 742 - 12 722<sup>9)</sup></b> 105x175x100	-	-	-	<b>12 362</b> 81x90x50	-
-	-	-	-	-	-	-	-	-	-	<b>12 363</b> 99x90x50	-
-	-	-	<b>1SL2404A00 - 12 704</b> 140x220x110	<b>12 424</b> 95x160x65	<b>12 644</b> 125x180x105	<b>12 684</b> 125x180x105	-	<b>12 724</b> 140x220x140	<b>12 744</b> 140x220x140	<b>12 364</b> 117x90x50	<b>12 658</b> 125x180x80
-	-	-	<b>1SL2406A00 - 12 426</b> 140x160x65	<b>12 646</b> 160x180x105	<b>12 686</b> 160x180x105	-	-	-	-	-	<b>12 659</b> 160x180x80
<b>1SL2438A00 - 12 448</b> 230x200x95	<b>1SL2458A00 - 12 468</b> 230x200x95	<b>12 708</b> 205x220x110	-	-	-	-	<b>12 743</b> 205x220x140	<b>12 728</b> 205x220x140	<b>12 748</b> 205x220x140	-	-
-	-	-	-	<b>12 650</b> 230x180x105	<b>12 654</b> 250x320x139	<b>12 690</b> 230x180x105	-	-	-	-	<b>12 660</b> 230x180x80
<b>1SL2442A00 - 12 452</b> 305x200x95	<b>1SL2462A00 - 12 472</b> 305x200x95	<b>12 712</b> 275x220x110	-	-	-	-	<b>12 745</b> 275x220x140	<b>12 732</b> 275x220x140	<b>12 752</b> 275x220x140	-	-
-	-	-	-	-	-	-	-	<b>12 733</b> 380x220x140	<b>12 753</b> 380x220x140	-	-
-	-	-	-	<b>12 652</b> 250x320x135	<b>12 692</b> 150x230x	-	-	-	-	-	-
<b>1SL2444A00 - 12 454</b> 305x350x95	<b>1SL2464A00 - 12 474</b> 305x350x95	<b>12 714</b> 275x370x110	-	-	-	-	<b>12 746</b> 275x370x140	<b>12 734</b> 275x370x140	<b>12 754</b> 275x370x140	-	-
-	-	-	-	-	-	-	<b>12 735</b> 380x370x140	<b>12 755</b> 380x370x140	-	-	-
<b>1SL2446A00 - 12 456</b> 305x545x120	<b>1SL2466A00 - 12 476</b> 305x545x120	<b>12 716</b> 275x570x110	-	-	-	-	<b>12 747</b> 275x570x140	<b>12 736</b> 275x570x140	<b>12 756</b> 275x570x140	-	-
<b>1SL2447A00 - 12 457</b> 380x570x120	<b>1SL2467A00 - 12 477</b> 380x570x120	<b>12 718</b> 380x570x120	-	-	-	-	-	<b>12 738</b> 380x570x140	<b>12 758</b> 380x570x140	-	-

Residential application




15LCC001002R0001

# IP 40 flush-mounting consumer units

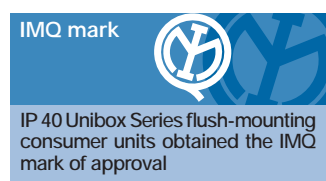
## Unibox Series

### Technical characteristics

- protection degree IP 40
- insulation class II 
- available in 2 versions: with transparent, smoky door and with opaque door both with vertical hinge
- colour RAL 9016 white
- available in self-extinguishing thermoplastic material, resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), atmospheric agents and UV rays
- operating temperature from -20 °C to +85 °C
- shock resistance 10 Joules (IK level 09)
- door opening with push-pull mechanism
- reversible door with protective film (to be removed only after the installation is completed), designed to be fitted with a coded lock
- flush-mounting box with push-in inlet for entrance of protective corrugated conduits
- extractable DIN rail frame to facilitate bench cabling
- DIN 150 mm inter-axis between the rows
- consumer units manufactured to compensate possible defects during the installation (thanks to slots at the points where the front parts are hooked on)
- consumer units manufactured in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
- consumer units are supplied complete with:
  - module covers
  - 1 plate for CEI 23-51 certification
  - instruction sheet
- to meet the installation needs of flush-mounting consumer units, separate codes are available for the flush-mounting box and the front of the consumer unit.



1SLC001001F0001



# IP 40 flush-mounting consumer units

## Unibox Series

8 modules

12 modules

24 modules

With transparent, smoky vertically hinged door

RAL 9016 white

2



1SLC001021F0001



1SLC001033F0001



1SLC001044F0001

Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front		
<b>1SL0510A00</b>	214x238x110	1/9
Flush-mounting box		
<b>1SL0521A00</b>	215x183x73	1/18
Front		
<b>1SL0532A00</b>	214x238x37,5	1/18

Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front		
<b>1SL0511A00</b>	293x262x110	1/7
Flush-mounting box		
<b>1SL0522A00</b>	284x183x73	1/14
Front		
<b>1SL0536A00</b>	293x262x37,5	1/14

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL0512A00</b>	293x408x118	1/5

With opaque, vertically hinged door

RAL 9016 white



1SLC001007F0001



1SLC001038F0001



1SLC001049F0001

Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front		
<b>1SL0500A00</b>	214x238x110	1/9
Flush-mounting box		
<b>1SL0521A00</b>	215x183x73	1/18
Front		
<b>1SL0533A00</b>	214x238x37,5	1/18

Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front		
<b>1SL0501A00</b>	293x262x110	1/7
Flush-mounting box		
<b>1SL0522A00</b>	284x183x73	1/14
Front		
<b>1SL0537A00</b>	293x262x37,5	1/14

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL0502A00</b>	293x408x118	1/5

# IP 40 flush-mounting consumer units

## Unibox Series

36 modules

54 modules

With transparent, smoky vertically hinged door

RAL 9016 white



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL0513A00</b>	293x533x118	1/3

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL0514A00</b>	401x533x118	1/1

With opaque, vertically hinged door

RAL 9016 white



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL0503A00</b>	293x533x118	1/3

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL0504A00</b>	401x533x118	1/1

# IP 40 flush-mounting consumer units

## Accessories for Unibox Series

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders.

Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.

2



Code	Description	Box/pack No. items
<b>12 492</b>	for 8 modules – composed of 12540x1 + 12531x1 + 12532x2	10/40
<b>12 495</b>	for 12 modules – composed of 12541x1 + 12532x2	10/40
<b>12 504</b>	for 24 modules – composed of 12541x2 + 12531x2 + 12533x2	10/40
<b>12 505</b>	for 36 modules – composed of 12541x2 + 12531x2 + 12534x2	10/40
<b>12 506</b>	for 54 modules – composed of 12542x2 + 12532x2 + 12535x2	5/20

### Terminal holders

RAL 7035 grey



Code	Description	For consumer units type	Box/Pack No items
<b>12 540</b>	for 8 modules	1SL0500A00 – 1SL0510A00	12/144
<b>12 541</b>	for 12 modules per row	1SL0501A00 – 1SL0511A00 1SL0502A00 – 1SL0512A00 1SL0503A00 – 1SL0513A00	12/144
<b>12 542</b>	for 18 modules per row	1SL0504A00 – 1SL0514A00	12/108

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separated from each other.

### Terminal bars



Code	Description	Box/pack No items
	No of holes x Ø holes (mm) + No of holes x Ø holes (mm)	
<b>12 531</b>	5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table.

All the possible configurations that can be created for each type of consumer unit are given in the technical details.

# IP 40 flush-mounting consumer units

## Accessories for Unibox Series

### Spare doors



FLC09277

Opaque RAL 9016 white	For consumer units type	Box/pack No items
<b>12 511</b>	1SL0500A00	1/25
<b>12 512</b>	1SL0501A00	1/15
<b>12 513</b>	1SL0502A00	1/10
<b>12 514</b>	1SL0503A00	1/5
<b>12 515</b>	1SL0504A00	1/5

Transparent smoky	For consumer units type	Box/pack No items
<b>12 521</b>	1SL0510A00	1/25
<b>12 522</b>	1SL0511A00	1/15
<b>12 523</b>	1SL0512A00	1/10
<b>12 524</b>	1SL0513A00	1/5
<b>12 525</b>	1SL0514A00	1/5

The mechanism for push-pull code No 12526 (in packs of 5 items) should be always ordered with each door.

### Module covers



FLC09228

Code	Colour	No modules	Box/pack No items
<b>1SL2857A00</b>	RAL 9016 white	1	50/1500
<b>1SL2859A00</b>	RAL 9016 white	4	50/600

### Lock with key



FLC09274

Code	Description	Box/pack No items
<b>12 530</b>	coded type	20/300

### Screw lead sealing accessory



1SLC001014F0001

Code	Box/pack No items
<b>12 860</b>	50/1500

Residential application




FLC09800

# IP 40 flush-mounting consumer units

## Estetica Series

### Technical characteristics

- protection degree IP 40
  - insulation class II 
  - available in 3 versions: without door, with white opaque or transparent smoky door with horizontal hinge
  - available in the following material:
    - RAL 9016 white and RAL 7021 grey thermoplastic, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
  - resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), atmospheric agents and UV rays
  - operating temperature from -20 °C to +85 °C
  - shock resistance 6 Joules
  - flush-mounting enclosure with push-in inlet for entrance of protective corrugated conduits
- extractable DIN rail frame to facilitate bench cabling
  - consumer units manufactured to compensate possible defects during the installation (thanks to slots at the points where the front parts are hooked on)
  - consumer units manufactured in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
  - consumer units are supplied complete with:
    - module covers
    - aesthetic flanges for covering the housing door holes (2 flanges supplied for each door; only for models without door)
    - 1 plate for CEI 23-51 certification
    - instruction sheet
  - to meet the installation needs of flush-mounting consumer units, separate codes are available for the flush-mounting box and the front of the consumer unit.



TSL0001015F0001



# IP 40 flush-mounting consumer units

## Estetica Series

### 4 modules

### 8 modules

### 12 modules

#### Without door

RAL 9016 white



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>1SL2004A00</b>	160x180x82	1/24
Flush-mounting box <b>1SL0520A00</b>	114x168x73	1/25
Front <b>1SL0530A00</b>	160x180x23	1/25



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>1SL2008A00</b>	230x180x82	1/14
Flush-mounting box <b>1SL0521A00</b>	215x183x73	1/18
Front <b>1SL0534A00</b>	230x180x23	1/18



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>1SL2012A00</b>	300x180x82	1/10
Flush-mounting box <b>1SL0522A00</b>	284x183x73	1/14
Front <b>1SL0538A00</b>	300x180x23	1/14

#### With transparent, smoky horizontally hinged door

RAL 9016 white



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>1SL2024A00</b>	160x180x90	1/24
Flush-mounting box <b>1SL0520A00</b>	114x168x73	1/25
Front <b>1SL0531A00</b>	160x180x23	1/25



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>1SL2028A00</b>	230x180x90	1/14
Flush-mounting box <b>1SL0521A00</b>	215x183x73	1/18
Front <b>1SL0535A00</b>	230x180x23	1/18



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>1SL2032A00</b>	300x180x90	1/10
Flush-mounting box <b>1SL0522A00</b>	284x183x73	1/14
Front <b>1SL0539A00</b>	300x180x23	1/14

#### With transparent, smoky horizontally hinged door

RAL 7021 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>12 037</b>	160x180x90	1/24
Flush-mounting box <b>1SL0520A00</b>	114x168x73	1/25
Front <b>1SL0553A00</b>	160x180x23	1/25



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>12 038</b>	230x180x90	1/14
Flush-mounting box <b>1SL0521A00</b>	215x183x73	1/18
Front <b>1SL0554A00</b>	230x180x23	1/18



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>12 042</b>	300x180x90	1/10
Flush-mounting box <b>1SL0522A00</b>	284x183x73	1/14
Front <b>1SL0555A00</b>	300x180x23	1/14

# IP 40 flush-mounting consumer units

## Estetica Series

18 modules

24 modules

36 modules

### Without door

RAL 9016 white



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>1SL2013A00</b>	410x180x82	1/6
Flush-mounting box <b>1SL0523A00</b>	384x183x73	1/9
Front <b>1SL0540A00</b>	410x180x23	1/9



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2014A00</b>	300x395x92	1/5



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2016A00</b>	300x545x92	1/3

### With transparent, smoky horizontally hinged door

RAL 9016 white



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>1SL2033A00</b>	410x180x90	1/6
Flush-mounting box <b>1SL0523A00</b>	384x183x73	1/9
Front <b>1SL0541A00</b>	410x180x23	1/9



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2034A00</b>	300x395x100	1/5



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2036A00</b>	300x545x100	1/3

### With transparent, smoky horizontally hinged door

RAL 7021 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
Flush-mounting box with front <b>12 043</b>	410x180x90	1/6
Flush-mounting box <b>1SL0523A00</b>	384x183x73	1/9
Front <b>1SL0556A00</b>	410x180x23	1/9



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 044</b>	300x395x100	1/5



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 046</b>	300x545x100	1/3

# IP 40 flush-mounting consumer units

## Accessories for Estetica Series

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders.  
Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.

2



Code	Description	Box/pack No items
<b>12 492</b>	for 8 modules – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 495</b>	for 12 modules – composed of 12541x1 + 12532x2	10/40
<b>12 503</b>	for 18 modules – composed of 12542x1 + 12531x1 + 12534x1	10/40
<b>12 504</b>	for 24 modules – composed of 12541x2 + 12531x2 + 12533x2	10/40
<b>12 505</b>	for 36 modules – composed of 12541x2 + 12531x2 + 12524x2	10/40

### Terminal holders

RAL 7035 grey



### Terminal bars



Code	Description	For consumer units type	Box/pack No items
<b>12 540</b>	for 8 modules	1SL2008A00 – 1SL2028A00 – 12 038	12/144
<b>12 541</b>	for 12 modules per row	1SL2012A00 – 1SL2032A00 – 12 042 1SL2014A00 – 1SL2034A00 – 12 044 1SL2016A00 – 1SL2036A00 – 12 046	12/144
<b>12 542</b>	for 18 modules per row	1SL2013A00 – 1SL2033A00 – 12 043	12/108

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separated from each other.

Code	Description	Box/pack No items
	No of holes x Ø holes (mm) + No of holes x Ø holes (mm)	
<b>12 531</b>	5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table.

All the possible configurations that can be created for each type of consumer unit are given in the technical details.

# IP 40 flush-mounting consumer units

## Accessories for Estetica Series

2

### Module covers



Code	Colour	No modules	Box/pack No items
<b>1SL2857A00</b>	RAL 9016 white	1	50/1500
<b>1SL2859A00</b>	RAL 9016 white	4	50/600
<b>12 895</b>	RAL 7021 grey	1	50/1500
<b>12 896</b>	RAL 7021 grey	4	50/600

### Aesthetic covers



Code	Colour	Box/pack No items
<b>1SL2868A00</b>	RAL 9016 white (pair)	10/120
<b>12 869</b>	RAL 7021 grey (pair)	10/120

### Spare doors



Transparent smoky	RAL 9016 white opaque	For consumer units type	Box/pack No items
<b>12 051</b>	<b>1SL2047A00</b>	1SL2024A00 – 12 037	1/80
<b>12 053</b>	<b>1SL2049A00</b>	1SL2028A00 – 12 038	1/50
<b>12 055</b>	<b>1SL2050A00</b>	1SL2032A00 – 12 042 1SL2034A00 – 12 044 1SL2036A00 – 12 046	1/50
<b>12 060</b>	<b>1SL2056A00</b>	1SL2033A00 – 12 043	1/50

### Screw lead sealing accessory



Code	Box/pack No items
<b>12 860</b>	50/1500

Residential application




FLC09602

# IP 40 flush-mounting consumer units

## Europa Series

### Technical characteristics

- protection degree IP 40
  - insulation class II 
  - available in 2 versions: with opaque door and with transparent, smoky door both with vertical hinge
  - available in the following material:
    - RAL 9016 white and RAL 7035 grey thermoplastic, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
  - resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), atmospheric agents and UV rays
  - operating temperature from -20 °C to +85 °C
  - shock resistance 6 Joules
  - door designed to be fitted with a pin lock code 12 867
- flush-mounting enclosure with push-in inlet for entrance of protective corrugated conduits
  - extractable DIN rail frame to facilitate bench cabling
  - consumer units manufactured to compensate possible defects during the installation (thanks to slots at the points where the front parts are hooked on)
  - consumer units manufactured in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
  - consumer units are supplied complete with:
    - module covers
    - 1 plate for CEI 23-51 certification
    - instruction sheet



15LCC001014F0001

IMQ mark



IP 40 Europa Series flush-mounting consumer units obtained the IMQ mark of approval

# IP 40 flush-mounting consumer units

## Europa Series

8 modules

12 modules

24 modules

With opaque vertically hinged door

RAL 9016 white / RAL 7035 grey

2



FLCO9019



FLCO9020



FLCO9021

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2040A00</b>	white	230x190x90	1/14
<b>12 026</b>	grey	230x190x90	1/14

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2041A00</b>	white	300x180x90	1/10
<b>12 027</b>	grey	300x180x90	1/10

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2045A00</b>	white	300x395x90	1/5
<b>12 030</b>	grey	300x395x90	1/5

With transparent, smoky vertically hinged door

RAL 9016 white / RAL 7035 grey



FLCO9024



FLCO9025



FLCO9026

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2057A00</b>	white	230x180x90	1/14
<b>12 058</b>	grey	230x180x90	1/14

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2061A00</b>	white	300x180x90	1/10
<b>12 062</b>	grey	300x180x90	1/10

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2063A00</b>	white	300x395x90	1/5
<b>12 064</b>	grey	300x395x90	1/5

# IP 40 flush-mounting consumer units

## Europa Series

36 modules

54 modules

### With opaque vertically hinged door

RAL 9016 white / RAL 7035 grey



FLC09022



FLC09023

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2048A00</b>	white	300x545x90	1/3
<b>12 031</b>	grey	300x545x90	1/3

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2052A00</b>	white	410x545x90	1/1
<b>12 035</b>	grey	410x545x90	1/1

### With transparent, smoky vertically hinged door

RAL 9016 white / RAL 7035 grey



FLC09027



FLC09028

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2065A00</b>	white	300x545x90	1/3
<b>12 066</b>	grey	300x545x90	1/3

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2067A00</b>	white	410x545x90	1/1
<b>12 068</b>	grey	410x545x90	1/1

# IP 40 flush-mounting consumer units

## Accessories for Europa Series

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders. Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.

2



Code	Description	Box/pack No items
<b>12 492</b>	for 8 modules – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 495</b>	for 12 modules – composed of 12541x1 + 12532x2	10/40
<b>12 504</b>	for 24 modules – composed of 12541x2 + 12531x2 + 12533x2	10/40
<b>12 505</b>	for 36 modules – composed of 12541x2 + 12531x2 + 12524x2	10/40
<b>12 506</b>	for 54 modules – composed of 12542x2 + 12532x2 + 12535x2	5/20

### Terminal holders

RAL 7035 grey



Code	Description	For consumer units type	Box/pack No items
<b>12 540</b>	for 8 modules	1SL2040A00 – 12 026 – 1SL2057A00 – 12 058	12/144
<b>12 541</b>	for 12 modules per row	1SL2041A00 – 12 027 – 1SL2061A00 – 12 062 1SL2045A00 – 12 030 – 1SL2063A00 – 12 064 1SL2048A00 – 12 031 – 1SL2065A00 – 12 066	12/144
<b>12 542</b>	for 18 modules per row	1SL2052A00 – 12 035 – 1SL2067A00 – 12 068	12/108

### Terminal bars



Code	Description	Box/pack No items
<b>12 531</b>	No of holes x Ø holes (mm) + No of holes x Ø holes (mm) 5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separated from each other.

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table. All the possible configurations that can be created for each type of consumer unit are given in the technical details.

# IP 40 flush-mounting consumer units

## Accessories for Europa Series

### Module covers



Code	Colour	No modules	Box/pack No items
<b>1SL2857A00</b>	RAL 9016 white	1	50/1500
<b>1SL2859A00</b>	RAL 9016 white	4	50/600
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Lock with key



Code	Description	Box/pack No items
<b>12 867</b>	pin type	10/300

### Spare doors



Opaque		For consumer units type	Box/pack No items
white RAL 9016	grey RAL 7035		
<b>1SL2078A00</b>	<b>12 070</b>	1SL2040A00 – 12 026	1/50
<b>1SL2079A00</b>	<b>12 071</b>	1SL2041A00 – 12 027	1/50
<b>1SL2080A00</b>	<b>12 072</b>	1SL2045A00 – 12 030	1/25
<b>1SL2081A00</b>	<b>12 073</b>	1SL2048A00 – 12 031	1/10
<b>1SL2088A00</b>	<b>12 087</b>	1SL2052A00 – 12 035	1/10

### Transparent smoky

	For consumer units type	Box/pack No items
<b>12 074</b>	1SL2057A00 – 12 058	1/50
<b>12 075</b>	1SL2061A00 – 12 062	1/50
<b>12 076</b>	1SL2063A00 – 12 064	1/25
<b>12 077</b>	1SL2065A00 – 12 066	1/20
<b>12 089</b>	1SL2067A00 – 12 068	1/10

### Screw lead sealing accessory



Code	Box/pack No items
<b>12 860</b>	50/1500

Residential/tertiary application



PLC9801

# IP 40 wall-mounting consumer units

## Unibox Series

### Technical characteristics

- protection degree IP 40
- available in 3 versions: without door, with opaque door and with transparent, smoky door with vertical hinge
- available in RAL 9016 white and RAL 7035 grey
- in thermoplastic, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), atmospheric agents and UV rays
- operating temperature from -20 °C to +85 °C
- shock resistance 10 Joules (IK level 09)
- door opening with push-pull mechanism
- door designed to be fitted with a coded lock code 12 530
- base of the consumer unit fitted with a special system to cover the holes used to attach it to the wall to guarantee perfect insulation
- extractable DIN rail frame to facilitate bench cabling that can be angled at a fixed position to make it easier to work on the connection cables. It can also be dismantled (and snapped on to reassemble it) to make it easier to cable the individual wires. The frame can be snapped onto the base of the consumer unit without having to use any extra screws
- all the models are provided with one extra module per row that can be used by removing the 1/2 module trimmings at the ends of each row
- screws for fixing the cover in rapid pitch insulating

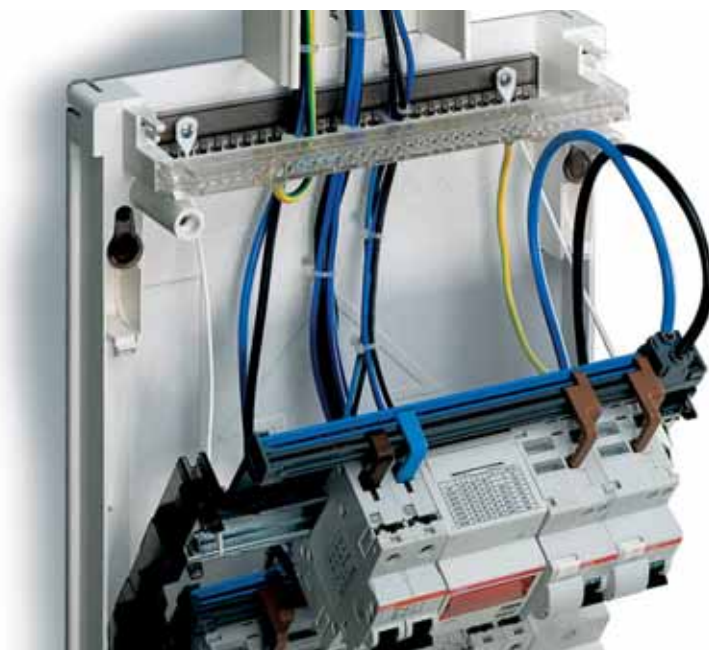
- thermoplastic material that can be lead sealed easily without extra accessories, making it possible to compensate for uneven brickwork up to 4 mm
- highest versatility in the trunking (trimming) and conduit (flange for conduits up to diameter of 40 mm) derivations
- a cable holding system guarantees safe and tidy cabling securing the input and output cables to a special accessory that protects the terminals from direct mechanical interference (excluded model with 8 modules)
- personalised finish, on request (bur, marble, patterned, etc.)
- consumer units manufactured in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
- components and accessories are easy to assembly by snapping on, without the need for screws
- elegant attractive line following the latest trends in design (patented model)
- consumer units supplied complete with:
  - module covers
  - protective film for door
  - cable-clip accessory
  - rigid flange for branch connections with conduits
  - 1 plate for CEI 23-51 certification
  - instruction sheet
  - 4 protection caps

2

IMQ mark



IP40 Unibox Series wall-mounting consumer units obtained the IMQ mark of approval



1SLC801012F1001



FLC09918

# IP 40 wall-mounting consumer units

## Unibox Series

8 modules

12 modules

24 modules

Without door

RAL 9016 white / RAL 7035 grey

2



Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 208</b>	white	215x220x105	1/9
<b>12 228</b>	grey	215x220x105	1/9

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 212</b>	white	295x245x115	1/7
<b>12 232</b>	grey	295x245x115	1/7

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 214</b>	white	295x390x115	1/5
<b>12 234</b>	grey	295x390x115	1/5

With opaque, vertically hinged door

RAL 9016 white / RAL 7035 grey



Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 238</b>	white	215x220x105	1/9
<b>12 248</b>	grey	215x220x105	1/9

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 242</b>	white	295x245x115	1/7
<b>12 252</b>	grey	295x245x115	1/7

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 244</b>	white	295x390x115	1/5
<b>12 254</b>	grey	295x390x115	1/5

With transparent, smoky vertically hinged door

RAL 9016 white / RAL 7035 grey



Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 258</b>	white	215x220x105	1/9
<b>12 268</b>	grey	215x220x105	1/9

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 262</b>	white	295x245x115	1/7
<b>12 272</b>	grey	295x245x115	1/7

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 264</b>	white	295x390x115	1/5
<b>12 274</b>	grey	295x390x115	1/5

# IP 40 wall-mounting consumer units

## Unibox Series

### 36 modules

### 54 modules

#### Without door

RAL 9016 white / RAL 7035 grey



FLC09047



FLC09051

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 216</b>	white	295x515x115	1/3
<b>12 236</b>	grey	295x515x115	1/3

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 217</b>	white	405x515x115	1/1
<b>12 237</b>	grey	405x515x115	1/1

#### With opaque, vertically hinged door

RAL 9016 white / RAL 7035 grey



FLC09057



FLC09061

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 246</b>	white	295x515x115	1/3
<b>12 256</b>	grey	295x515x115	1/3

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 247</b>	white	405x515x115	1/1
<b>12 257</b>	grey	405x515x115	1/1

#### With transparent, smoky vertically hinged door

RAL 9016 white / RAL 7035 grey



FLC09055



FLC09056

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 266</b>	white	295x515x115	1/3
<b>12 276</b>	grey	295x515x115	1/3

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>12 267</b>	white	405x515x115	1/1
<b>12 277</b>	grey	405x515x115	1/1

# IP 40 wall-mounting consumer units

## Accessories for Unibox Series

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders.

Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.



Code	Description	Box/pack No items
<b>12 492</b>	for 8 modules – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 495</b>	for 12 modules – composed of 12541x1 + 12532x2	10/40
<b>12 504</b>	for 24 modules – composed of 12541x2 + 12531x2 + 12533x2	10/40
<b>12 505</b>	for 36 modules – composed of 12541x2 + 12531x2 + 12524x2	10/40
<b>12 501</b>	for 54 modules – composed of 12542x2 + 12535x2	5/20

### Terminal-holders

RAL 7035 grey



### Terminal bars



Code	Description	For consumer units type	Box/pack No items
<b>12 540</b>	for 8 modules	12 208 – 12 228 – 12 238	12/144
		12 248 – 12 258 – 12 268	
<b>12 541</b>	for 12 modules per row	12 212 – 12 232 – 12 242	12/144
		12 252 – 12 262 – 12 272	
		12 214 – 12 234 – 12 244	
		12 254 – 12 264 – 12 274	
		12 216 – 12 236 – 12 246	
		12 256 – 12 266 – 12 276	
		12 217 – 12 237 – 12 247	
<b>12 542</b>	for 18 modules per row	12 257 – 12 267 – 12 277	12/108

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separated from each other.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table.

All the possible configurations that can be created for each type of consumer unit are given in the technical details.

Code	Description No of holes x Ø holes (mm) + No of holes x Ø holes (mm)	Box/pack No items
<b>12 531</b>	5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

# IP 40 wall-mounting consumer units

## Accessories for Unibox Series

### Spare doors



FLC09277

Opaque		For consumer units type	Box/pack No items
white RAL 9016	grey RAL 7035		
<b>12 511</b>	<b>12 516</b>	12 238 – 12 248	1/25
<b>12 512</b>	<b>12 517</b>	12 242 – 12 252	1/15
<b>12 513</b>	<b>12 518</b>	12 244 – 12 254	1/10
<b>12 514</b>	<b>12 519</b>	12 246 – 12 256	1/5
<b>12 515</b>	<b>12 520</b>	12 247 – 12 257	1/5

Transparent smoky		For consumer units type	Box/pack No items
<b>12 521</b>			
<b>12 522</b>		12 262 – 12 272	1/15
<b>12 523</b>		12 264 – 12 274	1/10
<b>12 524</b>		12 266 – 12 276	1/5
<b>12 525</b>		12 267 – 12 277	1/5

The mechanism for push-pull code No 12 526 (in packs of 5 items) should be always ordered with each door.

### Lock with key



FLC09274

Code	Description	Box/pack No items
<b>12 530</b>	coded type	20/300

2

### Module covers



FLC09118

Code	Colour	No modules	Box/pack No items
<b>1SL2857A00</b>	RAL 9016 white	1	50/1500
<b>1SL2859A00</b>	RAL 9016 white	4	50/600
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Coupling element



FLC09121

Code	Box/pack No items
<b>12 556</b>	10/100

### Cable-clip accessory

Not available for consumer units with 8 modules



FLC09278

Code	Box/pack No items
<b>12 550</b>	1/30

Residential/tertiary application




FLC09603

# IP 40 wall-mounting consumer units

## Europa Series

### Technical characteristics

- protection degree IP 40
  - insulation class II 
  - available in 3 versions: without door, with opaque door and with transparent, smoky door with vertical hinge
  - available in the following material:
    - RAL 9016 white and RAL 7035 grey thermoplastic, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
  - resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), atmospheric agents and UV rays
  - operating temperature from -20 °C to +85 °C
  - shock resistance 6 Joules
  - symmetrical, reversible door to open on either sides, designed to be fitted with a coded lock code 12 864
  - front part designed for input of cable trunking measuring up to 200x60 mm; possibility of branch connection with conduit thanks to a flange included in the supply
- consumer units designed with roomy interiors to make cabling easy and tidy
  - devices with a depth of 53 and 68 mm can be installed on switchboxes with 8, 12, 24 modules and devices with a depth of up to 75 mm on consumer units with 36-54 modules
  - consumer units manufactured in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
  - consumer units are supplied complete with:
    - module covers
    - 1 rigid flange for branch connection with conduit
    - 1 plate for CEI 23-51 certification
    - instruction sheet
    - 4 protection caps



FLC09289

# IP 40 wall-mounting consumer units

## Europa Series

8 modules

12 modules

24 modules

Without door

RAL 9016 white / RAL 7035 grey



FLC09032



FLC09033



FLC09034

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2408A00</b>	white	230x200x95	1/12
<b>12 428</b>	grey	230x200x95	1/12

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2412A00</b>	white	305x200x95	1/10
<b>12 432</b>	grey	305x200x95	1/10

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2414A00</b>	white	305x350x95	1/6
<b>12 434</b>	grey	305x350x95	1/6

With opaque, vertically hinged door

RAL 9016 white / RAL 7035 grey



FLC09037



FLC09038



FLC09039

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2438A00</b>	white	230x200x95	1/12
<b>12 448</b>	grey	230x200x95	1/12

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2442A00</b>	white	305x200x95	1/10
<b>12 452</b>	grey	305x200x95	1/10

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2444A00</b>	white	305x350x95	1/6
<b>12 454</b>	grey	305x350x95	1/6

With transparent, smoky vertically hinged door

RAL 9016 white / RAL 7035 grey



FLC09042



FLC09043



FLC09044

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2458A00</b>	white	230x200x95	1/12
<b>12 468</b>	grey	230x200x95	1/12

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2462A00</b>	white	305x200x95	1/10
<b>12 472</b>	grey	305x200x95	1/10

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2464A00</b>	white	305x350x95	1/6
<b>12 474</b>	grey	305x350x95	1/6

# IP 40 wall-mounting consumer units

## Europa Series

### 36 modules

### 54 modules

#### Without door

RAL 9016 white / RAL 7035 grey



FLC09035



FLC09036

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2416A00</b>	white	305x545x120	1/3
<b>12 436</b>	grey	305x545x120	1/3

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2417A00</b>	white	380x570x120	1/2
<b>12 437</b>	grey	380x570x120	1/2

#### With opaque, vertically hinged door

RAL 9016 white / RAL 7035 grey



FLC09040



FLC09041

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2446A00</b>	white	305x545x120	1/3
<b>12 456</b>	grey	305x545x120	1/3

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2447A00</b>	white	380x570x120	1/2
<b>12 457</b>	grey	380x570x120	1/2

#### With transparent, smoky vertically hinged door

RAL 9016 white / RAL 7035 grey



FLC09045



FLC09046

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2466A00</b>	white	305x545x120	1/3
<b>12 476</b>	grey	305x545x120	1/3

Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2467A00</b>	white	380x570x120	1/2
<b>12 477</b>	grey	380x570x120	1/2

# IP 40 wall-mounting consumer units

## Accessories for Europa Series

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders.

Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.

2



Code	Description	Box/pack No items
<b>12 492</b>	for 8 modules – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 495</b>	for 12 modules – composed of 12541x1 + 12532x2	10/40
<b>12 504</b>	for 24 modules – composed of 12541x2 + 12531x2 + 12533x2	10/40
<b>12 505</b>	for 36 modules – composed of 12541x2 + 12531x2 + 12524x2	10/40
<b>12 497</b>	for 54 modules – composed of 12543x2 + 12535x2	10/40

### Terminal holders



### Terminal bars



Code	Description	For consumer units type	Box/pack No items
<b>12 540</b>	for 8 modules	1SL2408A00 – 12 428 – 1SL2438A00	12/144
		12 448 – 1SL2458A00 – 12 468	
<b>12 541</b>	for 12 modules per row	1SL2412A00 – 12 432 – 1SL2442A00	12/144
		12 452 – 1SL2462A00 – 12 472	
		1SL2414A00 – 12 434 – 1SL2444A00	
		12 454 – 1SL2464A00 – 12 474	
		1SL2416A00 – 12 436 – 1SL2446A00	
<b>12 542</b>	for 18 modules per row	1SL2417A00 – 12 437 – 1SL2447A00	12/108
		12 457 – 1SL2467A00 – 12 477	

Code	Description	Box/pack No items
<b>12 531</b>	No of holes x Ø holes (mm) + No of holes x Ø holes (mm) 5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separated from each other.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table.

All the possible configurations that can be created for each type of consumer unit are given in the technical details.

# IP 40 wall-mounting consumer units

## Accessories for Europa Series

### Spare doors



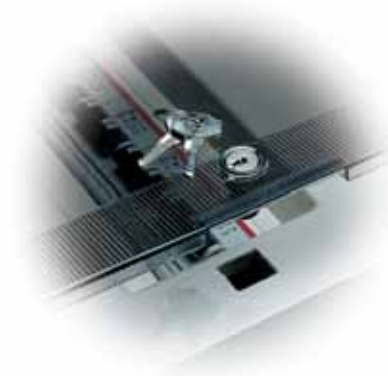
FLCO9234

Opaque		For consumer units type	Box/pack No items
white RAL 9016	grey RAL 7035		
<b>1SL2078A00</b>	<b>12 070</b>	1SL2438A00 – 12 448	1/50
<b>1SL2079A00</b>	<b>12 071</b>	1SL2442A00 – 12 452	1/50
<b>1SL2080A00</b>	<b>12 072</b>	1SL2444A00 – 12 454	1/25
<b>1SL2081A00</b>	<b>12 073</b>	1SL2446A00 – 12 456	1/10
<b>1SL2095A00</b>	<b>12 094</b>	1SL2447A00 – 12 457	1/10

### Transparent smoky

	For consumer units type	Box/pack No items
<b>12 074</b>	1SL2458A00 – 12 468	1/50
<b>12 075</b>	1SL2462A00 – 12 472	1/50
<b>12 076</b>	1SL2464A00 – 12 474	1/25
<b>12 077</b>	1SL2466A00 – 12 476	1/20
<b>12 096</b>	1SL2467A00 – 12 477	1/10

### Lock with key



FLCO9233

Code	Description	Box/pack No items
<b>12 864</b>	coded type	10/300

### Module covers



FLCO9228

Code	Colour	No modules	Box/pack No items
<b>1SL2857A00</b>	RAL 9016 white	1	50/1500
<b>1SL2859A00</b>	RAL 9016 white	4	50/600
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Screw lead sealing accessory



1SLCO01014F0001

Code	Box/pack No items
<b>12 860</b>	50/1500

Residential/tertiary applications



F1026

# IP 40 wall-mounting consumer units

## Europa Polycarbonate Series

### Technical characteristics

- protection degree IP 40
- insulation class II
- available in self-extinguishing polycarbonate resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- available in RAL 7035 grey
- material with low halogen content
- operating temperature from -25 °C to +115 °C
- shock resistance 20 Joules (IK level 10)
- high resistance to UV rays
- extractable DIN rail frame to facilitate bench cabling. It can also be dismantled (and snapped on to reassemble it) to make it easier to cable the individual wires
- possibility of installing devices with depth of 53, 68 and 75 mm
- models with 8 modules and more fitted with one rigid and one bi-material flange for facilitate input of conduits and cables
- models with 8 modules and more designed for the use of the UNIFIX L fast-cabling system
- consumer units manufactured in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
- consumer units are supplied complete with:
  - module covers
  - 1 plate for CEI 23-51 certification
  - 4 screw-cover caps for guarantee
  - instruction sheet



IMQ mark



IP40 Europa Polycarbonate Series wall-mounting consumer units obtained the IMQ mark of approval

# IP 40 wall-mounting consumer units

## Europa Polycarbonate Series

2-4 modules

4 modules

8 modules

12 modules

Without door

RAL 7035 grey

2



FLCO9065



FLCO9062



FLCO9063



FLCO9064

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 702</b>	105x175x85	1/36

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 704</b>	140x220x110	1/19

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 708</b>	205x220x110	1/9

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 712</b>	275x220x110	1/7

# IP 40 wall-mounting consumer units

## Europa Polycarbonate Series

24 modules

36 modules

54 modules

Without door

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 714</b>	275x370x110	1/5

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 716</b>	275x570x110	1/3

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 718</b>	380x570x120	1/2

# IP 40 wall-mounting consumer units

## Accessories for Europa Polycarbonate Series

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders.

Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.

2



Code	Description	Box/pack No items
12 490	for 4 modules – composed of 12538x2 + 12531x2	10/60
12 491	for 8 modules – composed of 12539x2 + 12531x2	10/60
12 492	for 12 modules – composed of 12540x1 + 12531x1 + 12532x1	10/40
12 494	for 24 modules – composed of 12540x2 + 12533x2	10/40
12 493	for 36 modules (3 rows) – composed of 12540x2 + 12534x2	10/40
12 497	for 54 modules – composed of 12543x2 + 12535x2	10/40

### Terminal holders



### Terminal bars



Code	Description	For consumer units type	Box/pack No items
12 538	for 4 modules	12 704	12/360
12 539	for 8 modules	12 708	12/360
12 540	for 12 modules per row	12 712 – 12 714 – 12 716	12/144
12 543	for 18 modules per row	12 718	12/144

Code	Description	Box/pack No items
	No of holes x Ø holes (mm) + No of holes x Ø holes (mm)	
12 531	5x4.5	20/240
12 532	10x4.5 + 3x5.6	20/240
12 533	16x4.5 + 3x5.6	20/240
12 534	15x4.5 + 6x5.6	20/240
12 535	19x4.5 + 6x5.6	20/240

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separated from each other.

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table.

All the possible configurations that can be created for each type of consumer unit are given in the technical details.

# IP 40 wall-mounting consumer units

## Accessories for Europa Polycarbonate Series

### Module covers



Code	Colour	No modules	Box/pack No items
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Wall brackets



Code	Description	Box/pack No items
<b>12 858</b>	in insulating material	20/240

### Screw lead sealing accessory



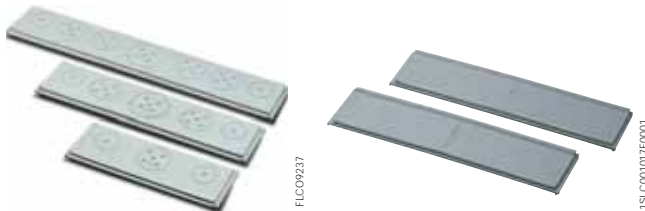
Code	Box/pack No items
<b>12 860</b>	50/1500

### Semi-flush-mounting frames



Code	For consumer units type	Box/pack No items
<b>12 590</b>	12 704	5/20
<b>12 591</b>	12 708	5/20
<b>12 592</b>	12 712	5/20
<b>12 593</b>	12 714	5/20
<b>12 594</b>	12 716	5/5
<b>12 595</b>	12 718	5/5

### Spare flanges



Code	For consumer units with	Box/pack No items
<b>12 600</b>	8 modules, bi-material	30/120
<b>12 601</b>	12, 24, 36 (12x3 rows) modules, bi-material	20/80
<b>12 602</b>	54 modules, bi-material	20/80
<b>1SL0550A00</b>	rigid flange 8 modules per row	30/120
<b>1SL0551A00</b>	rigid flange 12 modules per row	20/80
<b>1SL0552A00</b>	rigid flange 18 modules per row	20/80

Residential/tertiary applications



FC00862

# IP 40 wall-mounting consumer units

## Wall-mounting covers

### Technical characteristics

- protection degree IP 40
- available in material:
  - thermoplastic RAL 9016 white and RAL 7035 grey self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), to atmospheric agents and UV rays
- operating temperature from -20 °C to +85 °C
- shock resistance 6 Joules
- covers produced in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards



FLCOP920

IMQ mark



IP 40 wall-mounting covers units obtained the IMQ mark of approval

# IP 40 wall-mounting consumer units

## Wall-mounting covers

2 modules

4 modules

6 modules

Without door

RAL 9016 white - RAL 7035 grey



Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2402A00</b>	white	50x140x65	1/45
<b>12 422</b>	grey	50x140x65	1/45



Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2404A00</b>	white	95x160x65	1/20
<b>12 424</b>	grey	95x160x65	1/20



Code	Colour	Dimensions (mm) WxHxD	Box/pack No items
<b>1SL2406A00</b>	white	140x160x65	1/12
<b>12 426</b>	grey	140x160x65	1/12

# IP 40 wall-mounting consumer units

## Accessories for wall-mounting covers

### Terminal bars



Code	Description	For covers type	Box/pack No items
<b>12 502</b>	2x4.5 + 3x5.6	12 404 -12 406 12 424 -12 426	25/750

The terminal bar can be fixed to covers using the supplied screws.

### Module covers



Code	Colour	No modules	Box/pack No items
<b>1SL2857A00</b>	RAL 9016 white	1	50/1500
<b>1SL2859A00</b>	RAL 9016 white	4	50/600
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Screw lead sealing accessory



Code	Box/pack No items
<b>12 860</b>	50/1500

Residential/tertiary application




FLC09806

# IP 55 wall-mounting consumer units

## IP 55 Europa Series

### Technical characteristics

- protection degree IP 55
  - insulation class II 
  - available with transparent, smoky horizontally hinged door in the version with sealable spring closure and with key lock
  - available in RAL 7035 grey
  - available in thermoplastic self-extinguishing material resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
  - resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), to atmospheric agents and UV rays
  - operating temperature from -20 °C to +85 °C
  - shock resistance 6 Joules
- 10 and 20 module consumer units can be attached to the wall with brackets code 12 858
  - consumer units made and produced in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
  - consumer units are supplied complete with:
    - module covers
    - 1 plate for CEI 23-51 certification
    - 4 protection caps

2



FLC09936

# IP 55 wall-mounting consumer units

## IP 55 Europa Series

4 modules

6 modules

10 modules

Spring closing

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 644</b>	125x180x105	1/18

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 646</b>	160x180x105	1/12

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 650</b>	230x180x105	1/10

4 modules

6 modules

10 modules

Key lock

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 684</b>	125x180x105	1/18

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 686</b>	160x180x105	1/12

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 690</b>	230x180x105	1/10

# IP 55 wall-mounting consumer units

## IP 55 Europa Series

20 modules

10 special modules

Spring closing

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 652</b>	250x320x139	1/6



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 654</b>	250x320x139	1/6

20 modules

Key lock

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 692</b>	250x320x139	1/6

# IP 55 wall-mounting consumer units

## Accessories for IP 55 Europa Series

### Terminal blocks



Code	Description		For consumer units type	Box/pack No items
	Neutral terminal blocks No of holes x Ø holes (mm) + No of holes x Ø holes (mm)	Earth terminal blocks No of holes x Ø holes (mm) + No of holes x Ø holes (mm)		
<b>12 880</b>	2x4.5 + 3x5.6	2x4.5 + 3x5.6	12 644 –12 684	10/60
<b>12 882</b>	6x4.5 + 5x5.6	2x4.5 + 3x5.6	12 646 –12 686	10/60
<b>12 884</b>	6x4.5 + 5x5.6	2x4.5 + 3x5.6	12 650 –12 690	10/40
<b>12 886</b>	2 (6x4.5 + 5x5.6)	2 (2x4.5 + 3x5.6)	12 652 –12 692 –12 654	10/40

### Module covers



Code	Colour	No modules	Box/pack No items
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Wall brackets



Code	Description	For consumer units with	Box/pack No items
<b>12 858</b>	in insulating material	8,10 modules	20/240

# IP 55 wall-mounting consumer units

## Accessories for IP 55 Europa Series

### Lock with key



Code	Description	Box/pack No items
<b>12 865</b>	coded type	10/300

### Spare transparent smoky door

Spring closing



Code	For consumer units type	Box/pack No items
<b>12 696</b>	12 644 – 12 684	10/40
<b>12 697</b>	12 646 – 12 686	10/40
<b>12 698</b>	12 650 – 12 690	10/20
	12 652 – 12 692 – 12 654	

Residential/tertiary/industrial application





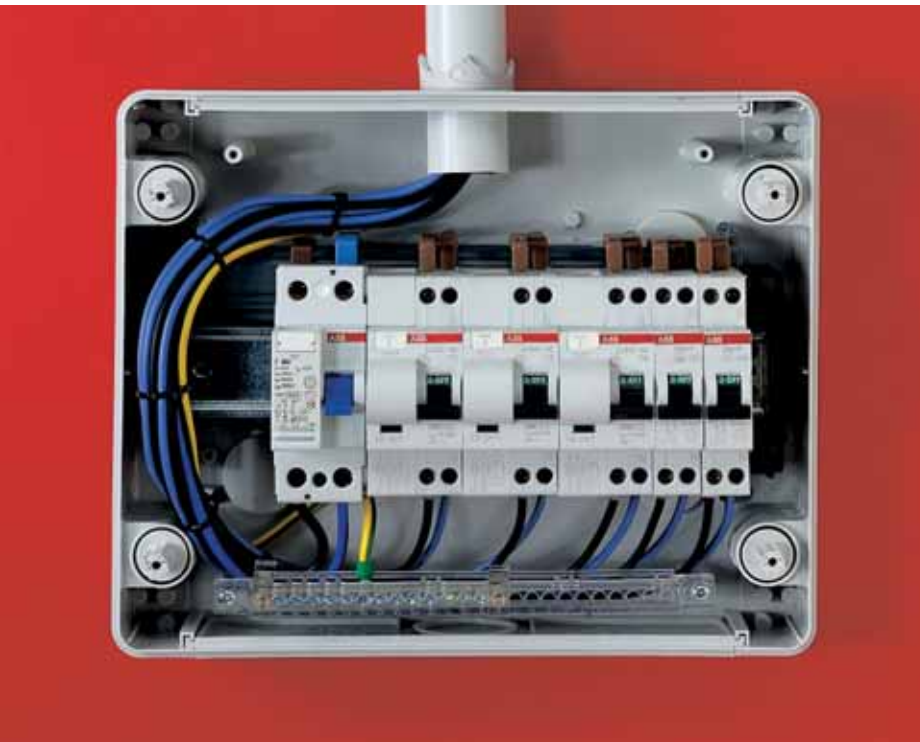
PLC0955

# IP 65 wall-mounting consumer units

## IP 65 Fly Series

### Technical characteristics

- protection degree IP 65
- insulation class II 
- consumer units fitted with transparent, smoky horizontally hinged doors for each row of devices, designed to be fitted with coded lock and key, code 12 866
- available in RAL 7035 grey
- in thermoplastic material, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- operating temperature from -25 °C to +115 °C
- resistant to heat: ball thermopressure up to +85 °C
- shock resistance 6 Joules (IK level 08)
- extractable DIN rail frame to facilitate bench cabling. It can also be dismantled (and snapped on to reassemble it) to make it easier to cable the individual wires
- possibility of installing devices with depths of 53, 68 and 75 mm
- models with 8 modules and more fitted with one rigid and one bi-material flange for facilitated input of conduits and cables
- models with 8 modules and more designed to be used with rapid UNIFIX L cabling system
- consumer units made and produced in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
- consumer units are supplied complete with:
  - module covers
  - 4 screw cover caps for guarantee 
  - 1 plate for CEI 23-51 certification
  - instruction sheet
- resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), to atmospheric agents and UV rays



15LCC001018F0001



# IP 65 wall-mounting consumer units

## IP 65 Fly Series

2-4 modules

8 modules

12 modules

With transparent, horizontally hinged door

RAL 7035 grey

2



FLC09072

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 742</b>	105x175x100	1/33
<b>12 722<sup>(1)</sup></b>	105x175x100	1/33



FLC09073

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 743</b>	205x220x140	1/8



FLC09074

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 745</b>	275x220x140	1/6

<sup>(1)</sup> Version with opaque door.

# IP 65 wall-mounting consumer units

## IP 65 Fly Series

24 modules

36 modules

With transparent, horizontally hinged door

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 746</b>	275x370x140	1/4



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 747</b>	275x570x140	1/2

# IP 65 wall-mounting consumer units

## Accessories for IP 65 Fly Series

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders.

Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.

2



Code	Description	Box/pack No items
<b>12 491</b>	for 8 modules – composed of 12539x2 + 12531x2	10/60
<b>12 492</b>	for 12 modules – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 494</b>	for 24 modules – composed of 12540x2 + 12533x2	10/40
<b>12 493</b>	for 36 modules (3 rows) – composed of 12540x2 + 12534x2	10/40

### Terminal holders



### Terminal bars



Code	Description	For consumer units type	Box/pack No items
<b>12 539</b>	for 8 modules	12 743	12/144
<b>12 540</b>	for 12 modules per row	12 745 – 12 746 – 12 747	12/144

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separated from each other.

Code	Description	Box/pack No items
No of holes x Ø holes (mm) + No of holes x Ø holes (mm)		
<b>12 531</b>	5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table.

All the possible configurations that can be created for each type of consumer unit given in the technical details.

# IP 65 wall-mounting consumer units

## Accessories for IP 65 Fly Series

### Module covers



Code	Colour	No modules	Box/pack No items
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Plastic wall brackets



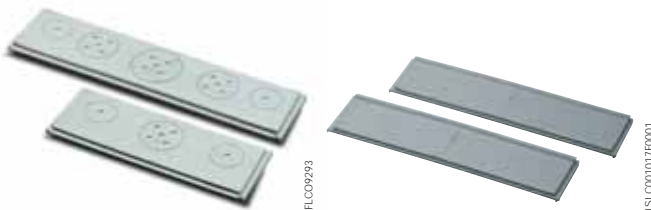
Code	Description	Box/pack No items
<b>12 858</b>	in insulating material	20/240

### Screw lead sealing accessories



Code	Box/pack No items
<b>12 860</b>	50/1500

### Spare flanges



Code	For consumer units type	Box/pack No items
<b>12 600</b>	8 modules, bi-material	30/120
<b>12 601</b>	12, 24, 36 (12x3 rows) modules, bi-material	20/80
<b>1SL0550A00</b>	rigid flange, 8 modules per row	30/120
<b>1SL0551A00</b>	rigid flange, 12 modules per row	20/80

### Spare doors



Code	Description	For consumer units type	Box/pack No items
<b>12 567</b>	opaque RAL 7035 grey for 2 mod.	12 722	10/60
<b>12 577</b>	transparent for 2 mod.	12 742	10/60
<b>12 565</b>	transparent for 8 mod.	12 743	10/60
<b>12 566</b>	transparent for 12, 24, 36 (12x3 rows) mod.	12 745 – 12 746 12 747	8/16

### Semi-flush-mounting frames



Code	For consumer units type	Box/pack No items
<b>12 591</b>	12 743	5/20
<b>12 592</b>	12 745	5/20
<b>12 593</b>	12 746	5/20
<b>12 594</b>	12 747	5/5

### Lock with key



Code	Description	Box/pack No items
<b>12 866</b>	coded type	10/300

Residential/tertiary/industrial application





ELCO9804

# IP 65 wall-mounting consumer units

## IP 65 Europa Series

### Technical characteristics

- protection degree IP 65
- insulation class II 
- available in two versions: with opaque door and with transparent, smoky vertically hinged door
- available in RAL 7035 grey
- in thermoplastic material, self-extinguishing and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- operating temperature from -25 °C to +115 °C
- resistant to heat: ball thermopressure up to +85 °C
- shock resistance 6 Joules (IK level 08)
- door designed to be fitted with coded lock and key, code 12 866
- extractable DIN rail frame to facilitate bench cabling. It can also be dismantled (and snapped on to reassemble it) to make it easier to cable the individual wires
- possibility of installing devices with depths of 53, 68 and 75 mm
- perfectly symmetrical consumer units with the possibility of attaching the door hinge onto the front (by means of the special articulated screws supplied) on the right or left with 140° opening
- models with 8 modules and more designed to be used with the UNIFIX L cabling system
- models with 8 modules and more fitted with one rigid and one bi-material flange to facilitate input of conduits and cables
- consumer units made and produced in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
- consumer units are supplied complete with:
  - module covers
  - 4 screw-cover caps to guarantee 
  - accessories for attaching the hinges to the front
  - 1 plate for CEI 23-51 certification
  - instruction sheet



1SLC001020F0001

IMQ mark 

IP 65 Europa Series wall-mounting consumer units obtained the IMQ mark of approval

# IP 65 wall-mounting consumer units

## IP 65 Europa Series

4 modules

8 modules

12 modules

18 modules

With opaque, vertically hinged door

RAL 7035 grey

2



FLCO9089



FLCO9090



FLCO9091



FLCO9092

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 724</b>	140x220x140	1/14

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 728</b>	205x220x140	1/9

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 732</b>	275x220x140	1/6

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 733</b>	380x220x140	1/5

With transparent, smoky vertically hinged door

RAL 7035 grey



FLCO9097



FLCO9098



FLCO9099



FLCO9100

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 744</b>	140x220x140	1/14

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 748</b>	205x220x140	1/9

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 752</b>	275x220x140	1/6

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 753</b>	380x220x140	1/5

# IP 65 wall-mounting consumer units

## IP 65 Europa Series

24 modules

36 modules

36 modules

54 modules

With opaque, vertically hinged door

RAL 7035 grey



FLC09093



FLC09094



FLC09095



FLC09096

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 734</b>	275x370x140	1/4

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 735</b>	380x370x140	1/2

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 736</b>	275x570x140	1/2

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 738</b>	380x570x140	1/2

With transparent, smoky vertically hinged door

RAL 7035 grey



FLC09101



FLC09102



FLC09103



FLC09104

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 754</b>	275x370x140	1/4

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 755</b>	380x370x140	1/2

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 756</b>	275x570x140	1/2

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 758</b>	380x570x140	1/2

# IP 65 wall-mounting consumer units

## Accessories for Europa Series

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders. Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.



Code	Description	Box/pack No items
<b>12 490</b>	for 4 modules – composed of 12538x2 + 12531x2	10/60
<b>12 491</b>	for 8 modules – composed of 12539x2 + 12531x2	10/60
<b>12 492</b>	for 12 modules – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 498</b>	for 18 modules – composed of 12543x1 + 12531x1 + 12535x1	10/40
<b>12 494</b>	for 24 modules – composed of 12540x2 + 12533x2	10/40
<b>12 493</b>	for 36 modules (3 rows) – composed of 12540x2 + 12534x2	10/40
<b>12 507</b>	for 36 modules (2 rows) – composed of 12543x2 + 12534x2	10/40
<b>12 497</b>	for 54 modules – composed of 12543x2 + 12535x2	10/40

### Terminal holders



### Terminal bars



Code	Description	For consumer units type	Box/pack No items
<b>12 538</b>	for 4 modules	12 724 –12 744	12/360
<b>12 539</b>	for 8 modules	12 728 –12 748	12/360
<b>12 540</b>	for 12 modules per row	12 732 –12 752	12/144
		12 734 –12 754	
		12 736 –12 756	
<b>12 543</b>	for 18 modules per row	12 733 –12 753	12/108
		12 735 –12 755	
		12 738 –12 758	

Code	Description	Box/pack No items
<b>12 531</b>	5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separate from each other.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table. All the possible configurations that can be created for each type of consumer unit are given in the technical details.

# IP 65 wall-mounting consumer units

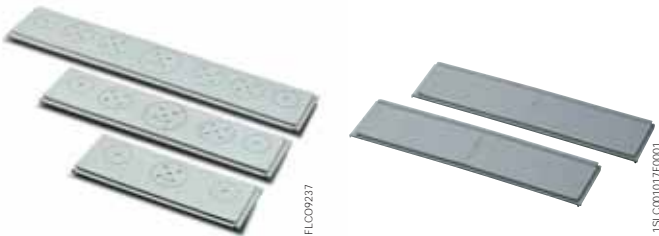
## Accessories for Europa Series

### Module covers



Code	Colour	No modules	Box/pack No items
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Spare flanges



Code	For consumer units type	Box/pack No items
<b>12 600</b>	8 modules, bi-material	30/120
<b>12 601</b>	12, 24, 36 (12x3 rows) modules, bi-material	20/80
<b>12 602</b>	18, 36 (18x2 rows), 54 modules, bi-material	20/80
<b>1SL0550A00</b>	rigid flange, 8 modules per row	30/120
<b>1SL0551A00</b>	rigid flange, 12 modules per row	20/80
<b>1SL0552A00</b>	rigid flange, 18 modules per row	20/80

### Lock with key



Code	Description	Box/pack No items
<b>12 866</b>	coded type	10/300

### Plastic wall brackets



Code	Description	Box/pack No items
<b>12 858</b>	in insulating material	20/240

### Semi-flush-mounting frames



Code	For consumer units type	Box/pack No items
<b>12 590</b>	12 724 –12 744	5/20
<b>12 591</b>	12 728 –12 748	5/20
<b>12 592</b>	12 732 –12 752	5/20
<b>12 593</b>	12 734 –12 754	5/20
<b>12 594</b>	12 736 –12 756	5/5
<b>12 595</b>	12 738 –12 758	5/5
<b>12 596</b>	12 733 –12 753	5/5
<b>12 597</b>	12 735 –12 755	5/5

### Spare doors



Opaque RAL 7035 grey	Transparent smoky	For consumer units type	Box/pack No items
<b>12 568</b>	<b>12 578</b>	12 724 –12 744	1/8
<b>12 569</b>	<b>12 579</b>	12 728 –12 748	1/10
<b>12 570</b>	<b>12 580</b>	12 732 –12 752	1/8
<b>12 571</b>	<b>12 581</b>	12 734 –12 754	1/5
<b>12 572</b>	<b>12 582</b>	12 736 –12 756	1/10
<b>12 573</b>	<b>12 583</b>	12 738 –12 758	1/8
<b>12 584</b>	<b>12 586</b>	12 733 –12 753	1/20
<b>12 585</b>	<b>12 587</b>	12 735 –12 755	1/8

Tertiary/Industrial application



FLC09B14



FLC09B13




# Panel fronts

## IP 40 and IP 55 panel fronts


### IP 40 panel fronts

#### Technical characteristics

- protection degree IP 40
- insulation class II 
- in **thermoplastic**, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- available in RAL 7035 grey
- resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), to atmospheric agents and UV rays
- operating temperature from -20 °C to +85 °C
- fronts are supplied with:
  - module covers
  - instruction sheet

### IP 55 panel fronts

#### Technical characteristics

- protection degree IP 55
- insulation class II 
- available with transparent, smoky horizontally hinged door in the version with lock and lead-sealable spring
- door designed to take a lock with coded key code 12 865
- available in RAL 7035 grey
- in **thermoplastic**, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- operating temperature from -20 °C to +85 °C
- shock resistance 6 Joules
- resistant to chemical agents (water, saline solutions, acids, mineral bases and oils), to atmospheric agents and UV rays
- fronts are supplied with:
  - module covers
  - instruction sheet



FLC09856

# IP 40 and IP 55 panel fronts

## IP 40 and IP 55 panel fronts

### 2 modules

### 3 modules

### 4 modules

#### IP 40 panel fronts

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 362</b>	81x90x50	10/40

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 363</b>	99x90x50	10/40

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 364</b>	117x90x50	6/24

### 4 modules

### 6 modules

### 10 modules

#### IP 55 panel fronts

RAL 7035 grey

Spring closing



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 658</b>	125x180x80	1/10

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 659</b>	160x180x80	1/10

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 660</b>	230x180x80	1/7

# IP 40 and IP 55 panel fronts

## Accessories for IP 55 panel fronts

### Module covers



Code	Colour	No modules	Box/pack No items
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Lock with key



Code	Description	Box/pack No items
<b>12 865</b>	coded type	10/300

### Spare transparent smoky doors

Spring closing



Code	For fronts type	Box/pack No items
<b>12 696</b>	12 658	10/40
<b>12 697</b>	12 659	10/40
<b>12 698</b>	12 660	10/20





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Tertiary/Industrial application



FLECO9818

# Emergency consumer units

## Livorno Series flush- and wall- mounting consumer units

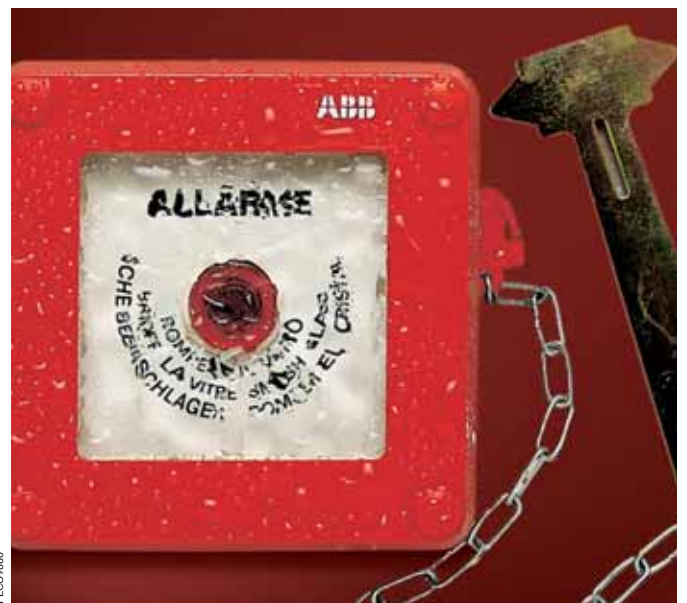
### Livorno Series flush- and wall- mounting consumer units Technical characteristics

- protection degree IP40, IP55 or IP65 depending on the version
- available in the colours RAL3000 red and RAL7035 grey
- operating temperature from -20 °C to +85 °C
- resistance to chemical (water, saline solutions, acids, mineral bases and oils) and environmental agents
- door front with breakable glass 0.75 Joules (IK level 05)
- in thermoplastic material, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- consumer units fitted with lock and coded key
- consumer units are supplied complete with:
  - module covers
  - 4 screw-cover caps
  - 1 certification plate

### Livorno Series consumer units with emergency button Technical characteristics

- protection degree IP55
  - flush and wall-mounting versions
  - available in colour RAL 3000 red
  - operating temperature from -20 °C to +85 °C
  - door front with breakable glass 0.75 Joules (IK level 05)
  - in thermoplastic material, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
  - with luminous button, with 1 NO contact + 1 NC contact (2 A, 250 V)
  - they can be fitted with E10: 12 V incandescence, 24 V incandescence or 250 V fluorescence
  - complete with glass-breaking hammer
- in compliance with EN 60947-5-1 Standard
  - operational rated voltage: Ue 250 V
  - utilization category AC 12
  - operational rated current Ie 2 A
  - rated insulation voltage Ui 250 V
  - pollution degree: 3
  - utilization type and data of fuses Legrand 10 A, type gG, 10.3 x 38 mm

3



IMQ mark



Livorno Series emergency consumer units with luminous button obtained the IMQ mark of approval

# Emergency consumer units

## Livorno Series flush- and wall- mounting consumer units

100x100x50 mm

200x245x82 mm

200x245x82 mm

### Flush-mounting version

IP 55

RAL 3000 red

Possibility of installing on flush-mounting enclosure with inter-axis of 83.5 mm. With luminous button (E10 -12/24 V incandescence and 250 V fluorescence), with 1 NO contact + 1 NC contact (2 A, 250 V) complete with glass-breaking hammer.



Code	Box/pack No items
13 183	1/13

IP 40

RAL 3000 red



Code	Description	Box/pack No items
13 144	with DIN rail x 6 mod.	1/7
13 154	with panel	1/7

IP 40

RAL 7035 grey



Code	Description	Box/pack No items
13 143	with DIN rail x 6 mod.	1/7
13 153	With panel	1/7

100x100x50 mm

205x220x140 mm

205x220x140 mm

165x180x110 mm

### Wall-mounting version

IP 55

RAL 3000 red

With luminous button (E10-12/24 V incandescence and 250 V fluorescence), with 1 NO contact + 1 NC contact (2 A, 250 V) complete with glass-breaking hammer.



Code	Box/pack No items
13 180	1/14

IP 65

RAL 3000 red

Fitted with flanges for facilitated branch connections.



Code	Description	Box/pack No items
13 171	with DIN rail x 8 mod.	1/6
13 175	with panel	1/6

IP 65

RAL 7035 grey

Fitted with flanges for facilitated branch connections.



Code	Description	Box/pack No items
13 170	with DIN rail x 8 mod.	1/6
13 174	with panel	1/6

IP 55

RAL 3000 red



Code	Description	Box/pack No items
13 161	with DIN rail x 8 mod.	1/12
13 165	with panel	1/12

# Emergency consumer units

## Livorno Series flush- and wall- mounting consumer units

165x180x110 mm

170x210x110 mm

170x210x110 mm

### Wall-mounting version

IP 55  
RAL 3075 grey

IP 40  
RAL 3000 red

IP 40  
RAL 3075 grey



FLC09281



FLC09120



FLC09283

Code	Description	Box/pack No items
<b>13 160</b>	with DIN rail x 8 mod.	1/12
<b>13 164</b>	With panel	1/12

Code	Description	Box/pack No items
<b>13 141</b>	with DIN rail x 8 mod.	1/6
<b>13 151</b>	with panel	1/6

Code	Description	Box/pack No items
<b>13 140</b>	with DIN rail x 8 mod.	1/6
<b>13 150</b>	with panel	1/6

# Emergency consumer units

## Accessories

### Spare lid



1SLC001024F0001

### E10 with emergency button



1SLC001025F0001

3

Code	Description	Box/pack No items
<b>13 190</b>	for consumer units fitted with emergency button	10/40

Code	Description	Box/pack No items
<b>13 187</b>	E10 12 V – incandescence	10/120
<b>13 188</b>	E10 24 V – incandescence	10/120
<b>13 189</b>	E10 250 V – fluorescence	10/120

### Glass-breaking hammer



1SLC001026F0001

### Wall brackets



FLC09235

Code	Description	Box/pack No items
<b>13 186</b>	glass-breaking hammer	10/300

Code	Description	Box/pack No items
<b>12 858</b>	only for IP 65 consumer units in insulating material	20/240



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# Unifix cabling system

## Introduction

### Unifix cabling system: the ideal complement for the ABB consumer units

Unifix is the ABB cabling system which makes the work of installers and switchboard builders easier: with its standard connectors, Unifix effects simple, quick and safe wiring of System pro *M* modular devices in ABB consumer units.

For this reason, it is the ideal solution for exploiting the fact that ABB products for low voltage applications can be perfectly integrated whilst at the same time guaranteeing safety and full compliance with Standards.

The system consists of two **series H** and **L**. Each one is suitable for specific applications both for the installation of devices and installation in switchboards. In detail:

- the **H series**, intended for more demanding applications, is used for wiring SACE Isomax S1 and S2 and Tmax T1...T3 moulded-case circuit-breakers and System pro *M* modular devices in ArTu® switchboards (rated currents up to 400 A and short-circuit currents up to 50 kA);

- the **L series** is the universal solution for wiring System pro *M* modular devices in ArTu® switchboards and polycarbonate consumer units (rated currents up to 100 A and short-circuit currents up to 25 kA).

### Special features

The main feature of Unifix lies with the possibility of combining different types of circuits (one-phase/three-phase/auxiliary) in a single module. Pre-wiring can be effected at the workbench and installed in the switchboard subsequently, with no limits to the type or combination of devices which can be installed.

Unifix has adjustable pitch which replaces traditional wiring harnesses which means that circuit-breakers with different polarities can be placed in the same row as well as auxiliary modular devices.

4



WEUN9017



WEUN9018

The Unifix cabling system can be used with ABB SACE devices only.

# Unifix cabling system

## Introduction

### ONE SYSTEM, MANY ADVANTAGES



Considerable **reduction in wiring times**: by using rigid lock connectors which are standardized for the different types of device, each device does not have to be connected using cables.



**Greater standardization of low voltage switchboards and consumer units**: the rigid connectors enable the **results of the type tests** (overheating and short-circuit) effected by ABB **to be extended** also on input wiring of devices.



A more **advanced** and, at the same time, **cheaper technical solution** compared with traditional wiring. This is made possible by cutting down on materials (wires and wire terminals) and space required, thus affecting operating times.



**Can be used on all ABB** standard devices, without modifying or adding accessories and without using special equipment.



**Adjustable pitch**: Unifix uses adjustable pitch unlike traditional wiring harnesses; in this way, circuit-breakers with different polarity can be placed in the same row as well as auxiliary devices.

# Unifix cabling system

## Unifix L

### Unifix L: the universal solution for switchboards and consumer units

With its special features, the Unifix L version is extremely versatile in its use and meets the demands of installations which vary a great deal with regard to function and size. Unifix L is suitable for wiring System pro *M* modular devices in ArTu® switchboards and ABB polycarbonate consumer units, for rated currents up to 100 A and short-circuit currents up to 25 kA. The devices are supplied top-down by way of special standard rigid connectors.

#### TECHNICAL CHARACTERISTICS

##### Busbars

The busbars consist of a support which contains a system of 100 A capacity conductors (central supply) and 25 kA short-circuit current (conditioned). They are available in two-pole and four-pole versions for widths of 12, 18, 24 or 36 modules which can be installed in the ArTu switchboards with widths of 400, 600 and 800 mm respectively (18 modules excluded).

Fixing is carried out by dove-tailing on the rear of the DIN rail and installation is in two modules with H=200 mm.

The busbar system is structured in such a way that it is possible to attach special supports for ducts with max. dimensions 60x80 mm on the rear.

##### Power supply module with cable

The 63 A power supply module can be inserted directly in the busbar conductors in the two-pole and four-pole versions. Its dimensions are equivalent to two base modules (17.5 mm) and direct supply the busbars when there is no main circuit-breaker in the row.

The four-pole version, with a cross-section of 16mm<sup>2</sup>, is supplied with the following cable lengths:

- 400 mm;
- 600 mm;
- 800 mm;
- 1500 mm;
- 2500 mm.



WEUN9037



WEUN9039



WEUN9038



WEUN9040

##### Power supply module without cable

The one-pole 100 A supplier module in the L1, L2, L3, N versions is directly inserted in the busbar conductors. Its dimensions are equivalent to a base module (17.5 mm) and it directly supplies the busbars when there is no main circuit-breaker in the row. It is equipped with a terminal which enables connection of a conductor with a cross-section of 35 mm<sup>2</sup>.

##### Connections for devices

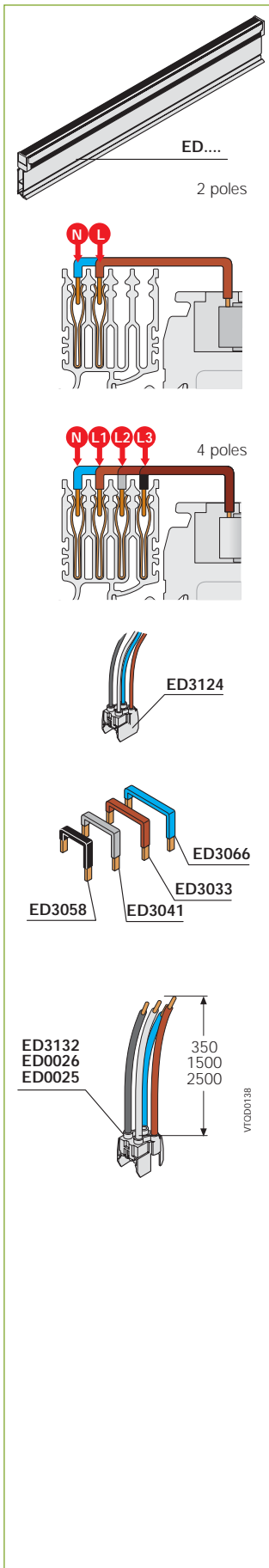
The connections consist of insulated copper busbars, cut and bent to size. They supply each terminal of the System pro *M* modular devices and the busbar system. The connections are supplied according to the polarity of the device which must be wired (connectors are available for L1, L2, L3, N and in the version for 1P + N devices in a DIN module). Supports with a cable are also available for supplying auxiliary devices so that devices on the same row can be wired to the modular circuit-breakers.



WEUN9035

# Unifix cabling system

## Unifix L system components



Code	Description	Pck./Pieces
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### 2-pole busbars

ED2985	Busbars 100A 2P 8 modules	1/6
ED2993	Busbars 100A 2P 12 modules (W=400 mm)	1/6
ED3009	Busbars 100A 2P 18 modules	1/6
ED3017	Busbars 100A 2P 24 modules (W=600 mm)	1/6
ED3025	Busbars 100A 2P 36 modules (W=800 mm)	1/6

### 4-pole busbars

ED2944	Busbars 100A 4P 12 modules (W=400 mm)	1/6
ED2951	Busbars 100A 4P 18 modules	1/6
ED2969	Busbars 100A 4P 24 modules (W=600 mm)	1/6
ED2977	Busbars 100A 4P 36 modules (W=800 mm)	1/6

### Connections for different devices

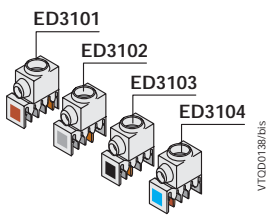
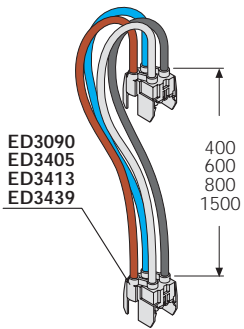
ED3108	Connection with 2 cables L/N 16A	1/6
ED3116	Connection with 3 cables L1/L2/L3 16A	1/6
ED3124	Connection with 4 cables L1/L2/L3/N 16A	1/6
ED3355	Connection with 2 cables L1/N 40A	1/6
ED3363	Connection with 3 cables L1/L2/L3 40A	1/6
ED3371	Connection with 4 cables L1/L2/L3/N 40A	1/6

### Connection for devices

ED3272	10 connection L1-N 40 A	1/10
ED3280	10 connection L2-N 40 A	1/10
ED3298	10 connection L3-N 40 A	1/10
ED3033	10 connection L 1 100A	1/10
ED3041	10 connection L 2 100A	1/10
ED3058	10 connection L 3 100A	1/10
ED3066	10 connection N 100A	1/10
ED3132	Power supplies with cable 4P 100A (W=350 mm)	1/6
ED0026	Power supplies with cable 4P 100A (W=1500 mm)	1/6
ED0025	Power supplies with cable 4P 100A (W=2500 mm)	1/6

# Unifix cabling system

## Unifix L system components



Code	Description	Pck./Pieces
------	-------------	-------------

### Power supply modules with cable

ED3082	Supply modules 2P 100A with cable W=600mm	1/6
ED3405	Supply modules 4P 100A with cable W=400mm	1/6
ED3090	Supply modules 4P 100A with cable W=600mm	1/6
ED3413	Supply modules 4P 100A with cable W=800mm	1/6
ED3439	Supply modules 4P 100A with cable W=1500mm	1/6

### Power supply modules without cable In 100A

ED3101	10 one-pole supply modules L 1	1/10
ED3102	10 one-pole supply modules L 2	1/10
ED3103	10 one-pole supply modules L 3	1/10
ED3104	10 one-pole supply modules N	1/10

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Tertiary/Industrial application



# Switchboards

## Europa Series switchboards for industrial applications

### Technical characteristics

- protection degree IP 65
- insulation class II 
- available in the versions with opaque and transparent, smoky vertically hinged doors
- available in RAL 7035 grey
- in polycarbonate material, self-extinguishing and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- operating temperature from -25 °C to +115 °C
- shock resistance 20 Joules (IK level 10)
- high resistance to UV rays
- perfectly symmetrical switchboards with the possibility of attaching the door hinge onto the front (by means of the special articulated screws supplied) on the right or left with 140° opening
- doors designed to take lock with coded key, code 12 866
- designed for the insertion of an extractable frame with pre-drilled panelling for mounting 100, 125 and 160 A circuit breakers
- all models (except for code 12 764 and 12 784) are fitted with one rigid and one bi-material flange to facilitate insertion of conduits and cables
- switchboards made and produced in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
- switchboards are supplied complete with:
  - 4 screw-cover caps to guarantee 
  - accessories for hinging the front part
  - 1 certification plate
  - instruction sheet



F.L.C. 09/09

IMQ mark



Europa Series switchboards for industrial applications obtained the IMQ mark of approval

# Switchboards

## Europa Series switchboards for industrial applications

140x220x140 mm

205x220x140 mm

275x220x140 mm

### Opaque, vertically hinged door

RAL 7035 grey



FLCOP146



FLCOP145



FLCOP143

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 764</b>	140x220x140	1/14

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 768</b>	205x220x140	1/9

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 772</b>	275x220x140	1/6

### Transparent, smoky vertically hinged door

RAL 7035 grey



FLCOP138



FLCOP136



FLCOP137

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 784</b>	140x220x140	1/14

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 788</b>	205x220x140	1/9

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 792</b>	275x220x140	1/6

# Switchboards

## Europa Series switchboards for industrial applications

275x370x140 mm

275x570x140 mm

380x570x140 mm

Opaque, vertically hinged door

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 774</b>	275x370x140	1/4

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 776</b>	275x570x140	1/2

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 778</b>	380x570x140	1/2

5

Transparent, smoky vertically hinged door

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 794</b>	275x370x140	1/4

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 796</b>	275x570x140	1/2

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 798</b>	380x570x140	1/2

# Switchboards

## Accessories for Europa Series switchboards for industrial applications

### Kit for modular circuit breakers

Circuit breakers 100, 125 160 A on DIN rail



Code	For switchboards type	No modules	Box/pack No items
<b>12 820</b>	12 774 – 12 794	12 for 1 rows	1/8
<b>12 821</b>	12 776 – 12 796	24 for 2 rows	1/5
<b>12 822</b>	12 778 – 12 798	36 for 2 rows	1/5

### DIN section bars

Completed with screws



Code	For switchboards type	Box/pack No items
<b>12 852</b>	12 764 – 12 784	50/600
<b>12 854</b>	12 768 – 12 788	30/360
<b>12 855</b>	12 772 – 12 792 12 774 – 12 794 12 776 – 12 796	50/200
<b>12 856</b>	12 778 – 12 798	50/200

5

### Base plates

In aluminium-plated metal



Code	For switchboards type	Box/pack No items
<b>12 842</b>	12 764 – 12 784	10/120
<b>12 844</b>	12 768 – 12 788	10/10
<b>12 845</b>	12 772 – 12 792	10/10
<b>12 846</b>	12 774 – 12 794	5/5
<b>12 847</b>	12 776 – 12 796	5/5
<b>12 848</b>	12 778 – 12 798	5/5

### Base plates

In insulating material



Code	For switchboards type	Box/pack No items
<b>12 832</b>	12 764 – 12 784	10/10
<b>12 834</b>	12 768 – 12 788	10/10
<b>12 835</b>	12 772 – 12 792	10/10
<b>12 836</b>	12 774 – 12 794	5/5
<b>12 837</b>	12 776 – 12 796	5/5
<b>12 838</b>	12 778 – 12 798	5/5

### Inner doors



Code	For switchboards type	Box/pack No items
<b>12 825</b>	12 774 – 12 794	1/10
<b>12 826</b>	12 776 – 12 796	1/10
<b>12 827</b>	12 778 – 12 798	1/10

# Switchboards

## Accessories for Europa Series switchboards for industrial applications

### Module covers



FLCO928

Code	Colour	No modules	Box/pack No items
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

### Wall brackets



FLCO925

Code	Description	Box/pack No items
<b>12 858</b>	in insulating material	20/240

### Key lock



FLCO926

Code	Description	Box/pack No items
<b>12 866</b>	coded type	10/300

### Universal cutter

For drill



FLCO924

Code	Description	Box/pack No items
<b>12 894</b>		1/30

To use for side branch connections.

# Switchboards

## Accessories for Europa Series switchboards for industrial applications

### Spare doors



### Semi-flush-mounting frames



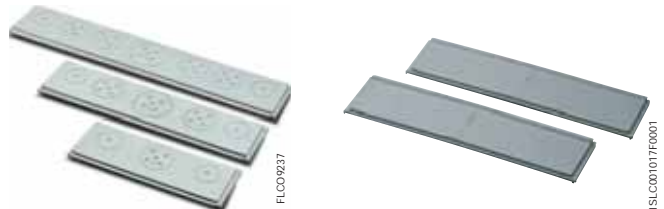
Opaque RAL 7035 grey	Transparent smoky	For switchboards type	Box/pack
<b>12 568</b>	<b>12 578</b>	12 764 – 12 784	8/32
<b>12 569</b>	<b>12 579</b>	12 768 – 12 788	10/20
<b>12 570</b>	<b>12 580</b>	12 772 – 12 792	8/16
<b>12 571</b>	<b>12 581</b>	12 774 – 12 794	5/10
<b>12 572</b>	<b>12 582</b>	12 776 – 12 796	10/10
<b>12 573</b>	<b>12 583</b>	12 778 – 12 798	8/8

Code	For switchboards type	Box/pack
<b>12 590</b>	12 764 – 12 784	5/20
<b>12 591</b>	12 768 – 12 788	5/20
<b>12 592</b>	12 772 – 12 792	5/20
<b>12 593</b>	12 774 – 12 794	5/20
<b>12 594</b>	12 776 – 12 796	5/5
<b>12 595</b>	12 778 – 12 798	5/5

### Plastic spacer



### Spare flanges



Code	Dimensions (mm)	Box/pack
<b>12 851</b>	20 modules H30	10/60

Code	For switchboards type	Box/pack No items
<b>12 600</b>	12 768 – 12 788, bi-material	30/120
<b>12 601</b>	12 772 – 12 792, bi-material	20/80
	12 774 – 12 794, bi-material	
	12 776 – 12 796, bi-material	
<b>12 602</b>	12 778 – 12 798, bi-material	20/80
<b>1SL0550A00</b>	rigid flange 8 modules per row	30/120
<b>1SL0551A00</b>	rigid flange 12 modules per row	20/80
<b>1SL0552A00</b>	rigid flange 18 modules per row	20/80

# Switchboards

## Accessories for Europa Series switchboards for industrial applications

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders.

Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.



Code	Description	Box/pack No items
<b>12 490</b>	for switchboards 12764 e 12784 – composed of 12538x2 + 12531x2	10/60
<b>12 491</b>	for switchboards 12768 e 12788 – composed of 12539x2 + 12531x2	10/60
<b>12 492</b>	for switchboards 12772 e 12792 – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 494</b>	for switchboards 12774 e 12794 – composed of 12540x2 + 12533x2	10/40
<b>12 493</b>	for switchboards 12776 e 12796 – composed of 12540x2 + 12534x2	10/40
<b>12 497</b>	for switchboards 12778 e 12798 – composed of 12543x2 + 12535x2	10/40

5

### Terminal holders



Code	For switchboards type	Box/pack No items
<b>12 538</b>	12764 - 12784	12/360
<b>12 539</b>	12768 - 12788	12/360
<b>12 540</b>	12772 - 12774 - 12776 - 12792 12794 - 12796	12/144
<b>12 543</b>	12778 - 12798	12/108

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separate from each other.

### Terminal bars



Code	Description No of holes x Ø holes (mm) + No of holes x Ø holes (mm)	Box/pack No items
<b>12 531</b>	5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips for bar, through two holes made at the ends of the bar itself.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table.

All the possible configurations that can be created for each type of consumer unit are given in the technical details.

Tertiary/Industrial application



FLCC09858

# Switchboards

## Switchboards for industrial applications with blank front

### Technical characteristics

- protection degree IP 65
  - insulation class II
  - available in RAL 7035 grey
  - available in the versions with transparent, smoky doors
  - in polycarbonate material, self-extinguishing and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
  - operating temperature from -25 °C to +115 °C
  - shock resistance 20 Joules (IK level 10)
  - perfectly symmetrical switchboards with possibility of hinging the door onto the front (by means of the special articulated screws supplied) on the right or left with 140° opening
  - doors designed to take lock with coded key, code 12 866 (page 5/7)
- all models (except for code 13 200) are fitted with one rigid and one bi-material flange for the facilitated insertion of conduits and cables
  - switchboards made and produced in compliance with CEI 23-48, CEI 23-49 and IEC 60 670 Standards
  - switchboards are supplied complete with:
    - 4 screw-cover caps to guarantee
    - accessories for hinging the front part
    - 1 certification plate
    - instruction sheet



IMQ mark



The switchboards for industrial application with blank front obtained the IMQ mark of approval

# Switchboards

Switchboards for industrial applications with blank front

4 modules

12 modules

12 modules

Transparent, smoky door

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 200</b>	136x540x110	1/8

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 204</b>	275x370x140	1/4

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 205</b>	275x455x140	1/3

12 modules

18 modules

Transparent, smoky door

RAL 7035 grey



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 206</b>	275x570x140	1/3

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 208</b>	380x570x140	1/2

# Switchboards

## Accessories for switchboards for industrial applications with blank front

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders.

Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.



Code	Description	Box/pack No items
<b>12 492</b>	for 12 modules – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 498</b>	for 18 modules – composed of 12543x1 + 12531x1 + 12535x1	10/40

5

### Terminal holders



Code	Description	F boards type	Box/pack No items
<b>12 540</b>	for 12 modules	13 204 – 13 205 – 13 206	12/144
<b>12 543</b>	for 18 modules	13 208	12/108

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separate from each other.

### Terminal bars



Code	Description	Box/pack No items
No of holes x Ø holes (mm) + No of holes x Ø holes (mm)		
<b>12 531</b>	5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

Terminal holders and terminal bars are supplied separately. In this way, by inserting one or two terminal bars into the terminal holder you can create the best terminal for your requirements, with the advantage of obtaining a terminal block that is cheap as well as personalised, due to the fact that you only need to use material that is really necessary. Some standard configurations are illustrated in the table.

All the possible configurations that can be created for each type of consumer unit are given in the technical details.

# Switchboards

Accessories for switchboards for industrial applications with blank front

## Semi-flush-mounting frames



Code	For switchboards	
<b>12 598</b>	13 200	5/20
<b>12 593</b>	13 204	5/20
<b>12 599</b>	13 205	5/5
<b>12 594</b>	13 206	5/5
<b>12 595</b>	13 208	5/5

## Universal cutter



Code	Box/pack	No items
<b>12 894</b>		1/30

To use for side branch connections.

## Wall brackets



Code	Description	Box/pack	No items
<b>12 858</b>	in insulating material	20/240	

# Switchboards

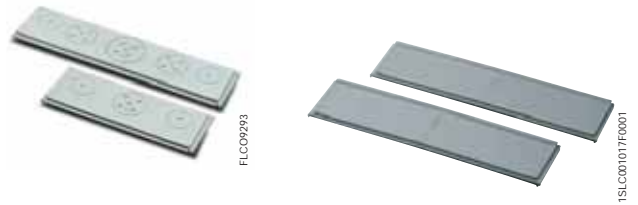
Accessories for switchboards for industrial applications with blank front

## Module covers



Code	Description	For switchboards type	Box/pack No items
<b>12 861</b>	RAL 7035 grey	1	50/1500
<b>12 863</b>	RAL 7035 grey	4	50/600

## Spare flanges



Code	For switchboards type	Box/pack No items
<b>12 601</b>	13 204 – 13 205 – 13 206, bi-material	20/80
<b>12 602</b>	13 208, bi-material	20/80
<b>1SL0551A00</b>	rigid flange 12 modules per row	20/80
<b>1SL0552A00</b>	rigid flange 18 modules per row	20/80

## Key lock



Code	Description	Box/pack No items
<b>12 866</b>	coded type	10/300

Tertiary/Industrial application





FELCO9838

# Switchboards

## Marostica Series modular switchboards

### Technical characteristics

- protection degree IP, depending on the installed sockets and plates
- insulation class II 
- available in the version that can be fitted with sockets with sloped consumer unit and with vertical flush-mounting socket with locking switch
- available in RAL 7035 grey
- in polycarbonate material, self-extinguishing and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- operating temperature from -25 °C to +115 °C
- shock resistance 20 Joules (IK level 10)
- high resistance to UV rays
- depth of socket compartment: 85 mm
- perfectly symmetrical switchboards with possibility of hinging the door onto the front (by means of the special articulated screws supplied) on the right or left with 140° opening
- doors designed to take lock with coded key, code 12 866
- designed to be mounted with the main sockets on the market complying with IEC 309-1 Standards through the use of universal plates
- all models (except for code 13 210) are fitted with one rigid and one bi-material flange for the facilitated insertion of conduits and cables
- switchboards made and produced in compliance with CEI 23-48, and IEC 60 670 Standards
- switchboards are supplied complete with:
  - 4 screw-cover caps to guarantee 
  - accessories for hinging the front part
  - 1 certification plate
  - instruction sheet



ELPR9811



# Switchboards

## Marostica Series modular switchboards

### 4 modules

Can be equipped with 3 plates

RAL 7035 grey



FLCO9157

### 12 modules

Can be equipped with 4 plates

RAL 7035 grey



FLCO9154

### 12 modules

Can be equipped with 6 plates

RAL 7035 grey



FLCO9148

### 18 modules

Can be equipped with 9 plates

RAL 7035 grey



FLCO9153

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 210</b>	136x540x110	1/8

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 215</b>	275x455x140	1/3

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 216</b>	275x570x140	1/3

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 218</b>	380x570x140	1/2

## Dedicated switchboards for vertical flush-mounting sockets with block circuit breaker

### 12 modules

Can be equipped with 2 sockets

RAL 7035 grey



FLCO9149

### 12 modules

Can be equipped with 4 sockets

RAL 7035 grey



FLCO9152

### 18 modules

Can be equipped with 6 sockets

RAL 7035 grey



FLCO9150

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 224</b>	275x370x140	1/4

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 226</b>	275x570x140	1/3

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>13 228</b>	380x570x140	1/2

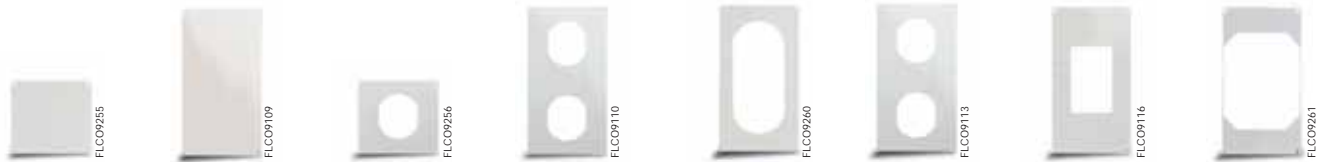
Fixed directly without plates.

# Switchboards

## Accessories for Marostica Series modular switchboards

### Plates for switchboards

Plates for switchboards code 13 210 – 13 215 – 13 216 – 13 218 suitable to take angled consumer unit sockets.



Code	Type plate	Description	Box/pack No items
13 251	S	blank	10/60
13 261	D	blank	10/40
13 253	S	for 1 socket	10/60
13 263	D	for 2 socket	10/40
13 255	S	for 1 socket	10/60
13 265	D	for 2 socket	10/40
13 257	S	for 1 socket	10/60
13 267	D	for 2 socket	10/40
13 245*	S	216R.../216U for 1 socket	10/60
13 246*	S	316R.../316U.../416R.../416U... for 1 socket	10/40
13 247*	S	232.../332U.../432R... for 1 socket	10/60

S = Single suitable to take one IEC 309-1 16 A or 32 A sockets.  
 D = Double suitable to take 2 IEC 309-1 16 A or 32 A sockets.  
 \* ABB CEWE socket (snap-on fixing).

### Plates for switchboards

Plates for switchboards code 13 210 – 13 215 – 13 216 – 13 218 suitable to take vertical, flush-mounting sockets with block circuit breakers.

Code	Type plate	Description	Box/pack No items
13 273	D	ABB compact interlocked 16 A 113x226 mm	10/40
13 283	D	GEWISS compact interlocked 16 A - 32 A without fuse holder base series 66 IB 103x220 mm	10/40
13 285	D	GEWISS compact interlocked 16 A - 32 A without fuse holder base series 66 IB 155x115 mm	10/40
13 275	D	ILME compact interlocked 16 A - 32 A series BK 113x226 mm	10/40
13 279	D	ILME compact interlocked 16 A - 32 A series SQ 145x115 mm	10/40
13 281	D	SCAME compact interlocked 16 A series BK 115x45 mm	10/40
13 287	D	OVA horizontal interlocked 16 A 155x115 mm	10/40

D = Double suitable for taking 1 IEC 309-1, flush-mounting socket with block circuit breaker.

5

Table for selecting correct combination of angled consumer units sockets and plates

Rated cur. (In)	Type of socket IP level	No Poles	Type of plate						
			Type of plate	For sockets ABB CEWE	For sockets Gewiss	For sockets Scame	For sockets Ilme	For sockets Palazzoli	For sockets Legrand
16 A	IP44	2P+T	S	13 245	13 253	13 253	13 253	13 253	13 253
			D		13 263	13 263	13 263	13 263	13 263
		3P+T	S	13 246	13 253	13 253	13 253	13 253	13 253
			D		13 263	13 263	13 263	13 263	13 263
		3P+N+T	S	13 246	13 253	13 253	13 253	13 255	13 255
			D		13 263	13 263	13 265	13 265	13 265
	IP67	2P+T	S		13 253	13 253	13 253	13 253	13 253
			D		13 263	13 263	13 263	13 263	13 263
		3P+T	S		13 253	13 253	13 253	13 253	13 253
			D		13 263	13 263	13 263	13 263	13 263
		3P+N+T	S		13 253	13 253	13 253	13 255	13 255
			D		13 263	13 263	13 265	13 265	13 265
32 A	IP44	2P+T	S	13 247	13 255	13 257	13 255	13 255	
			D		13 265	13 267	13 265	13 265	
		3P+T	S	13 247	13 255	13 257	13 255	13 255	
			D		13 265	13 267	13 265	13 265	
		3P+N+T	S	13 247	13 257	13 257	13 257	13 257	
			D		13 267	13 267	13 267	13 267	
	IP67	2P+T	S		13 255	13 257	13 255	13 255	
			D		13 265	13 267	13 265	13 265	
		3P+T	S		13 255	13 257	13 255	13 255	
			D		13 265	13 267	13 265	13 265	
		3P+N+T	S		13 257	13 257	13 257	13 257	
			D		13 267	13 267	13 267	13 267	

S = Single suitable to take one IEC 309-1 16 A or 32 A sockets.  
 D = Double suitable to take 2 IEC 309-1 16 A or 32 A sockets.

# Switchboards

## Accessories for Marostica Series modular switchboards

### Plates for switchboards

Plates for switchboards code 13 210 – 13 215 – 13 216 – 13 218 suitable to take residential devices.



Code	Type plate	Description	Box/pack No items
13 259	S	for 1 single or double sealed command	10/60
13 269	D	for 2 single or double sealed commands	10/40
13 271	D	for modular device supports with inter-axis of 83.5 mm	10/40

**S = Single** suitable to take a single or double sealed command (see page 5/16 and 5/17).  
**D = Double** suitable to take two single or double sealed commands (see page 5/16 and 5/17) and supports for modular devices with inter-axis of 83.5 mm.

### Plates for switchboards

Plates for switchboards code 13 224 – 13 226 – 13 228.



Code	Description	Box/pack No items
13 240	blank	10/60

### Wall brackets



Code	Description	Box/pack No items
12 858	in insulating material	20/240

### Module covers



Code	Colour	No modules	Box/pack No items
12 861	RAL 7035 grey	1	50/1500
12 863	RAL 7035 grey	4	50/600

### Semi-flush-mounting frames



Code	For switchboards type	Box/pack
12 598	13 210	5/20
12 593	13 224	5/20
12 599	13 215	5/5
12 594	13 216 – 13 226	5/5
12 595	13 218 – 13 228	5/5

# Switchboards

## Accessories for Marostica Series modular switchboards

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders.

Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.



Code	Description	Box/pack No items
<b>12 492</b>	for 12 modules – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 498</b>	for 18 modules – composed of 12543x1 + 12531x1 + 12535x1	10/40

### Terminal-holders



Code	Description	For switchboards type	Box/pack No items
<b>12 540</b>	for 12 modules	13 215 – 13 224 13 216 – 13 226	12/144
<b>12 543</b>	for 18 modules	13 218 – 13 228	12/108

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separate from each other.

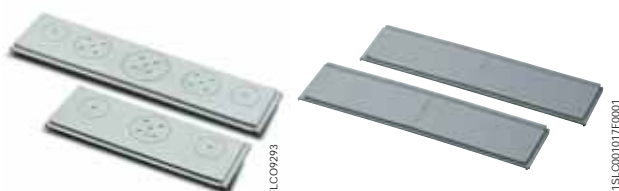
### Terminal bars



Code	Description	Box/pack No items
<b>12 531</b>	5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

### Spare flanges



Code	For switchboards type	Box/pack No items
<b>12 601</b>	13 322 – 13 323 – 13 224 – 13 325 – 13 326 13 327 – 13 228 – 13 329 – 13 330 – 13 335, bi-material	20/80
<b>12 602</b>	13 350 – 13 356 – 13 357, bi-material	20/80
<b>1SL0551A00</b>	rigid flange 12 modules per row	20/80
<b>1SL0552A00</b>	rigid flange 18 modules per row	20/80

### Lock with key



Code	Description	Box/pack No items
<b>12 866</b>	coded type	10/300

Tertiary/Industrial application



# Switchboards

## Marostica Series cabled switchboards

### Technical characteristics

- protection degree IP 44 and IP 55, depending on the version
- insulation class II
- available in RAL 7035 grey
- in polycarbonate material, self-extinguishing and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- material with low halogen content
- operating temperature from -25 °C to +115 °C
- shock resistance 20 Joules (IK 10 level)
- high resistance to UV rays
- possibility of hinging the door onto the front (by means of the special articulated screws supplied) on the right or left with 140° opening
- possibility of installation in environments with major risk in the event of fire (CEI 64-8 part 7 section 751 Standard) and in AD-FT environments (CEI 64-2 Standard, IV edition)
- made with IMQ mark sockets and circuit breakers
- other types of configurations available on request
- all models (except for code 13 291 and 13 292) are fitted with one rigid and one bi-material flange for the facilitated insertion of conduits and cables
- switchboards are supplied complete with:
  - 4 screw-cover caps to guarantee
  - accessories for hinging the front part
  - 1 cable clamp + 1 nut for cable clamp
  - 1 lock with coded key
  - 1 certification plate
  - instruction sheet



FLP0810

# Switchboards

## Marostica Series cabled switchboards

### IP 44



### IP 44 - IP 55



#### IP44 Switchboards

Code	Socket		6 kA automatic circuit breakers		Box/pack No items
	Q.ty	Type	Q.ty	Type	
<b>13 291</b>	1	16 A Bi-socket	1	2p 16 A	1/1
	1	16 A Schuko			
	1	2p+E 16 A 220 V			
<b>13 292</b>	1	16 A Bi-socket	1	4p 16 A	1/1
	1	16 A Schuko			
	1	3p + E 16 A 380 V			

Code	Socket		6 kA automatic circuit breakers		Box/pack No items
	Q.ty	Type	Q.ty	Type	
<b>13 322</b>	1	interlocked	1	1p+N 16 A	1/1
		2p+E 16 A 220 V	1	3p 16 A	
	1	interlocked		3p+E 16 A 380 V	
<b>13 323</b>	1	interlocked	1	1p+N 16 A	1/1
		2p+E 16 A 220 V	1	3p 32 A	
	1	interlocked		3p+E 32 A 380 V	
<b>13 324</b>	2	interlocked	2	1p+N 16 A	1/1
		2p+E 16 A 220 V			

#### IP55 Switchboards

Code	Socket		6 kA automatic circuit breakers		Box/pack No items
	Q.ty	Type	Q.ty	Type	
<b>13 325</b>	1	interlocked	1	1p+N 16 A	1/1
		2p+E 16 A 220 V	1	3p 16 A	
	1	interlocked		3p+E 16 A 380 V	
<b>13 326</b>	1	interlocked	1	1p+N 16 A	1/1
		2p+E 16 A 220 V	1	3p 32 A	
	1	interlocked		3p+E 32 A 380 V	
<b>13 327</b>	2	interlocked	2	1p+N 16 A	1/1
		2p+E 16 A 220 V			

Note: other configurations are available on request

# Switchboards

## Marostica Series cabled switchboards

IP 44



1SLC001030F0001

Code	Socket		6 kA automatic circuit breakers		Box/pack No items
	Q.ty	Type	Q.ty	Type	
<b>13 328</b>	1	Bi-socket 16 A	1	1p+N 16 A	1/1
	1	Schuko 16 A	1	3p 16 A	
	1	2p+E 16 A 220 V	1	4p 16 A	
	1	3p+E 16 A 380 V			
	1	3p+N+E 16 A 380 V			

IP 44 - IP 55



FLC09161

### IP44 Switchboards

Code	Socket		6 kA automatic circuit breakers		Box/pack No items
	Q.ty	Type	Q.ty	Type	
<b>13 329</b>	1	2p+E 16 A 220 V	1	1p+N 16 A	1/1
	2	3p+E 16 A 380 V	1	3p 16 A	
	1	3p+N+T 16 A 380 V	1	4p 16 A	
<b>13 330</b>	1	2p+E 16 A 220 V	1	1p+N 16 A	1/1
	1	3p+E 16 A 380 V	1	3p 16 A	
	1	3p+N+T 16 A 380 V	1	4p 16 A	
	1	3p+E 32 A 380 V	1	3p 32 A	

### IP55 Switchboards

Code	Socket		6 kA automatic circuit breakers		Box/pack No items
	Q.ty	Type	Q.ty	Type	
<b>13 335</b>	1	2p+E 16 A 220 V	1	1p+N 16 A	1/1
	1	3p+E 16 A 380 V	1	3p 16 A	
	1	3p+N+T 16 A 380 V	1	4p 16 A	
	1	3p+E 32 A 380 V	1	3p 32 A	

IP 55



FLC09162

Code	Socket		6 kA automatic circuit breakers		Box/pack No items
	Q.ty	Type	Q.ty	Type	
<b>13 350</b>	1	Schuko 16 A	1	1p+N 16 A	1/1
	2	2p+E 16 A 220 V	2	3p 16 A	
	3	3p+E 16 A 380 V	1	4p 16 A	
	1	3p+N+E 16 A 380 V	1	3p 32 A	
	2	3p+E 32 A 380 V			

IP 55



FLC09163

Code	Socket		6 kA automatic circuit breakers		Box/pack No items
	Q.ty	Type	Q.ty	Type	
<b>13 356</b>	1	interlocked	1	1p+N 16 A	1/1
	2	2p+E 16 A 220 V	1	4p 16 A	
<b>13 357</b>	1	interlocked			1/1
	1	interlocked			
	1	interlocked	1	3p 16 A	
	1	interlocked	1	4p 16 A	
	1	interlocked	1	3p 32 A	

# Switchboards

## Accessories for Marostica Series cabled switchboards

### Wall brackets



FLC09235

### Spare flanges



FLC09293



1SLC001017F0001

Code	Description	Box/pack No items
<b>12 858</b>	in insulating material	20/240

Code	For switchboards type	Box/pack No items
<b>12 601</b>	13 244 – 13 216 – 13 226, bi-material	20/80
<b>12 602</b>	13 218 – 13 228, bi-material	20/80
<b>1SL0551A00</b>	rigid flange 12 modules per row	20/80
<b>1SL0552A00</b>	rigid flange 18 modules per row	20/80



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Tertiary/Industrial application



FLC09811

# Boxes, equipment and various components

## IP 44 and IP 55 junction boxes in thermoplastic material

### Technical characteristics

- protection degree:
  - IP 44 for press-on lid boxes
  - IP 55 for screw-on lid boxes
- available in RAL 7035 grey
- boxes with press-on lids in thermoplastic material, self-extinguishing in compliance with UL 94 HB Standard and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- boxes with opaque screw-on lids in thermoplastic material, self-extinguishing in compliance with UL 94 V-O Standard and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 695-2-1 Standard
- boxes with screw-on covers in transparent polycarbonate material, self-extinguishing in compliance with UL 94 V-2 Standard and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- operating temperature from -25 °C to +75 °C
- shock resistance 6 Joules
- high resistance to heat and chemical and atmospheric agents
- wide range with press on lids, lids with stainless steel screws and lids with rapid-pitch, safety screws in thermoplastic insulating material
- boxes with protection degree IP 55 are composed of a patented lid produced in a single pressing phase together with its seal
- all the boxes with cable-way inlets are suitable to be installed with mini-trunkings by using special connectors ABB
- when fitted with special housings, the base of the box can be equipped with terminals and various accessories
- boxes measuring 160x135, 220x170 and 310x240 mm can be mounted on the wall with brackets code 12 858
- junction boxes made in compliance with CEI 23-48 and IEC 60 670 Standards



IP 44 and IP 55 junction boxes in thermoplastic material obtained the IMQ mark of approval



Type approval Italian Naval Register ELE/8998/2

# Boxes, equipment and various components

## IP 44 and IP 55 junction boxes in thermoplastic material

### IP 44 boxes

With cable glands and press-on lid



Code	Internal dimensions (mm)	Box/pack No items
<b>00 800</b>	Ø 60 - H 35	240/240
<b>00 802</b>	Ø 80 - H 40	144/144
<b>00 808</b>	65x65x32	168/168
<b>00 810</b>	80x80x40	100/100

Also available, on request, in self-extinguishing version in compliance with UL 94 VO Standard and resistant to abnormal heat and to fire up to 960 °C in compliance with IEC 60695-2-1.

### IP55 waterproof boxes with plastic 1/4 turn screws

With cable glands and low screw-on lid RAL 7035

With smooth sides and low screw-on lid RAL 7035

With smooth sides and transparent low screw-on lid



Code	Internal dimensions (mm)	Box/pack No items
<b>1SL0816A00</b>	100x100x50	1/54
<b>1SL0820A00</b>	105x70x50	1/70
<b>1SL0821A00</b>	100x100x80	1/40
<b>1SL0822A00</b>	153x110x66	1/32
<b>1SL0824A00(*)</b>	160x135x77	1/18
<b>1SL0826A00(*)</b>	220x170x80	1/12
<b>1SL0828A00(*)</b>	310x240x110	1/6

Code	Internal dimensions (mm)	Box/pack No items
<b>1SL0846A00</b>	100x100x50	1/60
<b>1SL0850A00</b>	105x70x50	1/100
<b>1SL0851A00</b>	100x100x80	1/40
<b>1SL0852A00</b>	151x108x66	1/32
<b>1SL0854A00(*)</b>	160x137x77	1/24
<b>1SL0856A00(*)</b>	220x170x80	1/12
<b>1SL0858A00(*)</b>	310x240x110	1/6

Code	Internal dimensions (mm)	Box/pack No items
<b>1SL0872A00</b>	153x110x66	1/34
<b>1SL0874A00(*)</b>	160x135x77	1/24
<b>1SL0876A00(*)</b>	220x170x80	1/12
<b>1SL0878A00(*)</b>	310x240x110	1/6

(\*) Can be wall-mounted using wall brackets code 12 858.

(\*) Can be wall-mounted using wall brackets code 12 858.

(\*) Can be wall-mounted using wall brackets code 12 858.

# Boxes, equipment and various components

## IP 44 and IP 55 junction boxes in thermoplastic material

### IP55 waterproof boxes with steel screws

With cable glands and high screw-on lid RAL 7035



FLC09198

With smooth sides and high screw-on lid RAL 7035



FLC09204

With smooth sides and transparent high screw-on lid



1SLC001031F0001

Code	Internal dimensions (mm)	Box/pack No items
<b>00 816</b>	100x100x50	1/54
<b>00 820</b>	105x70x50	1/70
<b>00 821</b>	100x100x80	1/40
<b>00 822</b>	151x108x66	1/32

Code	Internal dimensions (mm)	Box/pack No items
<b>00 846</b>	100x100x50	1/60
<b>00 850</b>	105x70x50	1/100
<b>00 851</b>	100x100x80	1/40
<b>00 852</b>	151x108x66	1/34

Code	Internal dimensions (mm)	Box/pack No items
<b>00 872</b>	151x108x66	1/34

6

### IP55 waterproof boxes with plastic 1/4 turn screws

With cable glands and high screw-on lid RAL 7035



1SLC001086F0001

With smooth sides and high screw-on lid RAL 7035



1SLC001087F0001

With smooth sides and transparent high screw-on lid



1SLC001088F0001

Code	Internal dimensions (mm)	Box/pack No items
<b>1SL0830A00</b>	160x135x150	1/16
<b>1SL0832A00</b>	220x170x150	1/8
<b>1SL0834A00</b>	310x240x160	1/4

Code	Internal dimensions (mm)	Box/pack No items
<b>1SL0860A00</b>	160x135x150	1/16
<b>1SL0862A00</b>	220x170x150	1/8
<b>1SL0864A00</b>	310x240x160	1/4

Code	Internal dimensions (mm)	Box/pack No items
<b>1SL0880A00(*)</b>	160x135x150	1/16
<b>1SL0882A00(*)</b>	220x170x150	1/8
<b>1SL0884A00(*)</b>	310x240x160	1/4

<sup>\*)</sup> Can be wall-mounted using wall brackets code 12 858.

# Boxes, equipment and various components

## Accessories for IP 44 and IP 55 junction boxes in thermoplastic material

### Cable glands and nuts - PG pitch



Code		Pitch	Torque values N x m	Cable clamp Box/pack No items	For cables diameter		Nuts x cable Box/pack No items
cable gland	nut x cable gland	Pg			Min. (mm)	Max. (mm)	
00 931	00 941	9	3.75	100/500	6.5	8.5	100/3000
00 932	00 942	11	3.75	100/500	8	10	100/3000
00 933	00 943	13.5	3.75	50/500	8	11	50/1500
00 934	00 944	16	5	50/250	11	14	50/1500
00 935	00 945	21	7.5	50/250	14.5	18	50/1500
00 936	00 946	29	7.5	25/150	19	26	50/600
00 937	00 947	36	7.5	25/75	30	34	25/300
00 938	00 948	42	7.5	15/60	30	38	25/300

In compliance with CEI EN 50262 Standard.

### Cable glands and nuts - metric pitch



Code		Pitch	Torque values N x m	Cable diameter		Box/pack No items	Cable clamp Box/pack No items
cable gland	nut	M		Min. (mm)	Max. (mm)		
00 951	00 961	12 x 1.5	2.7	3.5	7	100/1200	100/3000
00 952	00 962	16 x 1.5	5	5.5	10	100/500	100/3000
00 953	00 963	20 x 1.5	7	7	13	100/500	50/1500
00 954	00 964	25 x 1.5	7.5	10	17	50/250	50/1500
00 955	00 965	32 x 1.5	8	12	21	25/150	50/500
00 956(*)	00 966	40 x 1.5	8	19	28	25/75	25/300
00 957(*)	00 967	50 x 1.5	10	27	35	15/60	25/300
00 958(*)	00 968	63 x 1.5	10	34	45	10/40	20/100

(\*) Cable clamps and M40, M50 and M63 nuts are available on request.

In compliance with CEI EN 50262 Standard.

#### Technical characteristics of metric cable clamps

Protection degree IP 68

Material: polyamide 6.6, self-extinguishing material according to UL94 V2 Standard and resistant to abnormal heat and to fire up to 750 °C (glow wire test) according to IEC 60695-2-1 Standard

Operational temperature: from -20 °C up to +120 °C (short period of time)

Colour: RAL 7035 grey

Thread pitch: 1.5 mm

Thread angle: 60°

Neoprene seal

Tightening with a plate crown on the whole diameter of cable (excluded the possibility to damage the cable itself)

Possibility to recover the cable clamp without compromising its efficiency.

#### Technical characteristics nuts of with metric pitch collar

Material: polyamide 6.6, self-extinguishing material according to UL94 V2 Standard and resistant to abnormal heat and to fire up to 750 °C (glow wire test) according to IEC 60695-2-1 Standard

Operational temperature: from -20 °C up to +120 °C (continuous) from -20 °C up to +120 °C (short period of time)

Colour: RAL 7035 grey

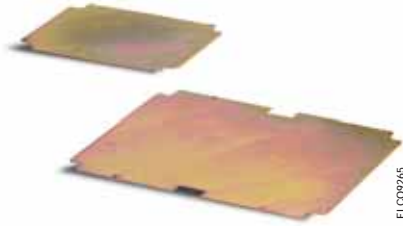
Thread pitch: 1.5 mm

Thread angle: 60°.

# Boxes, equipment and various components

## Accessories for IP 44 and IP 55 junction boxes in thermoplastic material

### Metal base plates



Code	For boxes type	Box/pack No items
<b>00 900</b>	00 824 – 00 830 – 00 874 00 854 – 00 860 – 00 880	1/10
<b>00 902</b>	00 826 – 00 832 – 00 876 00 856 – 00 862 – 00 882	1/5
<b>00 904</b>	00 828 – 00 834 – 00 878 00 858 – 00 864 – 00 884	1/5

All metal base plates listed above are equipped with fixing screws type

### Cable clamps

Protection degree: IP 55



Code	For conduit Ø (mm)	Box/pack No items
<b>00 908</b>	20	100/1500
<b>00 910</b>	25	100/1000
<b>00 912</b>	32	50/400

### Conduit clamps - Box connector

Protection degree: IP 67



Code	For conduit Ø (mm)	Box/pack No items
<b>00 430</b>	16	500/500
<b>00 431</b>	20	300/300
<b>00 432</b>	25	150/150
<b>00 433</b>	32	100/100
<b>00 434</b>	40	50/50
<b>00 435</b>	50	50/50

### Unions

Protection degree: IP 55



Code	Ø (mm)	Box/pack No items
<b>13 874</b>	23	10/500
<b>13 875</b>	28.5	100/400
<b>13 876</b>	37	100/200

Tertiary/Industrial application





FLC009812

# Boxes, equipment and various components

## IP 65 junction boxes in polycarbonate

### Technical characteristics

- protection degree IP 65
- insulation class II 
- available in RAL 7035 grey
- in polycarbonate material, self-extinguishing and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- operating temperature from -25 °C to +115 °C
- shock resistance 20 Joules (IK level 10)
- high resistance to UV rays
- perfectly symmetrical junction boxes with possibility of attaching the lid hinges, (using the special articulated screws supplied) on the right or left with 140° opening
- boxes code 12 808, 12 812, 12 814, 12 816 and 12 818 fitted with one rigid and one bi-material flange for facilitated input of conduits and cables
- junction boxes produced in compliance with CEI 23-48 and IEC 60 670 Standards
- boxes are supplied complete with:
  - 4 screw-cover caps to guarantee 
  - accessories for attaching the hinges on the front
  - 1 certification plate
  - instruction sheet



FLCOM2

IMO mark



IP 65 junction boxes in polycarbonate material obtained the IMO mark of approval

# Boxes, equipment and various components

## IP 65 junction boxes in polycarbonate

140x220x140 mm



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 804</b>	140x220x140	1/14

205x220x140 mm



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 808</b>	205x220x140	1/9

275x220x140 mm



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 812</b>	275x220x140	1/6

6

275x370x140 mm



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 814</b>	275x370x140	1/4

275x570x140 mm



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 816</b>	275x570x140	1/2

380x570x140 mm



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>12 818</b>	380x570x140	1/2

# Boxes, equipment and various components

## Accessories for IP 65 junction boxes in polycarbonate

### Base plates

In aluminium-plated metal



Code	For boxes type	Box/pack No items
<b>12 842</b>	12 804	10/120
<b>12 844</b>	12 808	10/10
<b>12 845</b>	12 812	10/10
<b>12 846</b>	12 814	5/5
<b>12 847</b>	12 816	5/5
<b>12 848</b>	12 818	5/5

### Base plates

Protection degree: IP 67



Code	For boxes type	Box/pack No items
<b>12 832</b>	12 804	10/10
<b>12 834</b>	12 808	10/10
<b>12 835</b>	12 812	10/10
<b>12 836</b>	12 814	5/5
<b>12 837</b>	12 816	5/5
<b>12 838</b>	12 818	5/5

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### DIN metal section bars

Complete with screws



Code	For boxes type	Box/pack No items
<b>12 852</b>	12 804	50/600
<b>12 854</b>	12 808	30/360
<b>12 855</b>	12 812 – 12 814 – 12 816	50/200
<b>12 856</b>	12 818	50/200

### Wall brackets



Code	Description	Box/pack No items
<b>12 858</b>	in insulating material	20/240

# Boxes, equipment and various components

## Accessories for IP 65 junction boxes in polycarbonate

### Terminal blocks

The complete terminal blocks are composed of a combination of terminal holders and terminal bars as indicated in the description, with the terminal bars already mounted on terminal holders. Configuration of the complete terminal block is standard. For different requirements (customized terminal block), the terminal holders and bars must be procured separately in the versions indicated in the table.



Code	Description	Box/pack No items
<b>12 490</b>	for box 12804 – composed of 12538x2 + 12531x2	10/60
<b>12 491</b>	for box 12808 – composed of 12539x2 + 12531x2	10/60
<b>12 492</b>	for box 12812 – composed of 12540x1 + 12531x1 + 12532x1	10/40
<b>12 494</b>	for box 12814 – composed of 12540x2 + 12533x2	10/40
<b>12 493</b>	for box 12816 – composed of 12540x2 + 12534x2	10/40
<b>12 497</b>	for box 12818 – composed of 12543x2 + 12535x2	10/40

### Terminal holders



### Terminal bars



Code	For boxes type	Box/pack No items
<b>12 538</b>	12 804	12/360
<b>12 539</b>	12 808	12/360
<b>12 540</b>	12 812 – 12 814 – 12 816	12/144
<b>12 543</b>	12 818	12/108

The terminal block is completed by combining the necessary terminal bars to the terminal holders, taking care to keep the terminal bars separated from each other.

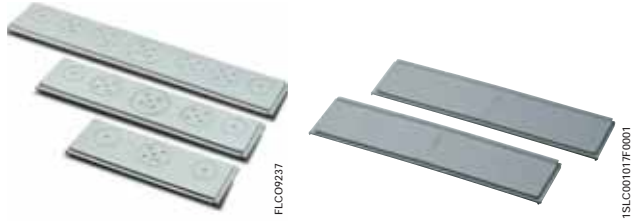
Code	Description No of holes x Ø holes (mm) + No of holes x Ø holes (mm)	Box/pack No items
<b>12 531</b>	5x4.5	20/240
<b>12 532</b>	10x4.5 + 3x5.6	20/240
<b>12 533</b>	16x4.5 + 3x5.6	20/240
<b>12 534</b>	15x4.5 + 6x5.6	20/240
<b>12 535</b>	19x4.5 + 6x5.6	20/240

The terminal bars can be installed on any kind of terminal holder; they are snapped onto these with 2 clips per bar, through two holes made at the ends of the bar itself.

# Boxes, equipment and various components

## Accessories for IP 65 junction boxes in polycarbonate

### Spare flanges



Code	For boxes type	Box/pack No items
<b>12 600</b>	12 808, bi-material	30/120
<b>12 601</b>	12 812 – 12 814 – 12 816, bi-material	20/80
<b>12 602</b>	12 818, bi-material	20/80
<b>1SL0550A00</b>	rigid flange, 8 modules per row	30/120
<b>1SL0551A00</b>	rigid flange, 12 modules per row	20/80
<b>1SL0552A00</b>	rigid flange, 18 modules per row	20/80

### Semi-flush-mounting frames



Code	For boxes type	Box/pack No items
<b>12 590</b>	12 804	5/20
<b>12 591</b>	12 808	5/20
<b>12 592</b>	12 812	5/20
<b>12 593</b>	12 814	5/20
<b>12 594</b>	12 816	5/5
<b>12 595</b>	12 818	5/5

### Universal cutter

For drill



Code	Box/pack No items
<b>12 894</b>	1/30

To be used for side branch connections.

Residential/tertiary/industrial application



FLC09815



FLC09816




# Boxes, equipment and various components

## IP 40 and IP 55 equipment and empty enclosures


### IP 40 equipment and empty enclosures

#### Technical characteristics

- IP 40 equipment and empty enclosures composed of base and cover, joined with safety screws with bivalent slotted head in stainless steel
- equipment and empty enclosures with cable gland on the top
- equipment and empty enclosures designed to be installed with conduits and, using special accessories, with mini-trunkings ABB
- empty enclosures suitable for:
  - wiring accessories in the Élos series
  - wiring accessories in the 8000 Vimar and Magic BTicino series
  - wiring accessories in the Idea Vimar and Living BTicino series
- protection degree IP 40
- insulation class II 
- enclosures available in RAL 7035 grey
- in thermoplastic material, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- operating temperature from -20 °C to +85 °C
- high resistance to shocks heat and chemical and atmospheric agents
- empty enclosures made in compliance with CEI 23-48 and IEC 670 Standards
- enclosures equipped with control devices made in compliance with CEI 23-9 Standard
- enclosures equipped with bypass sockets made in compliance with CEI 23-16 Standard

### IP 55 equipment and empty enclosures

#### Technical characteristics

- IP 55 equipment and empty enclosures composed of base and cover, joined with safety screws with bivalent slotted head in stainless steel
- equipment and empty enclosures fitted with seal between the base and the cover; lid with transparent elastic membrane so that controls can be used even when the lid is closed
- equipment and empty enclosures with cable gland on the top
- equipment and empty enclosures designed to be installed with conduits and, using special accessories, with mini-trunkings ABB
- empty enclosures suitable for:
  - wiring accessories in the Élos series
  - wiring accessories in the 8000 Vimar and Magic BTicino series
  - wiring accessories in the Idea Vimar and Living BTicino series
- protection degree IP 55
- insulation class II 
- containers available in RAL 7035 grey
- in thermoplastic material, self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- operating temperature from -20 °C to +85 °C
- high resistance to shocks, heat and chemical and atmospheric agents
- empty enclosures made in compliance with CEI 23-48 and IEC 670 Standards
- enclosures equipped with control equipment made in compliance with CEI 23-9 Standard
- enclosures equipped with bypass sockets made in compliance with CEI 23-16 Standard
- lid/cover opening angle: 120°



1SLC001034F0001

IMQ mark



IP 40 and IP 55 equipment and empty enclosures obtained the IMQ mark of approval

# Boxes, equipment and various components

## IP 40 equipment and empty enclosures

### IP 40 equipment

For ABB Élos Soft/Smart series wiring accessories



Equipped with Vimar 8000 series wiring accessories



Code	Description	Box/pack No items
<b>2CSE2240EL</b>	2 compartments enclosure, IP40	10/40
<b>2CSE2340EL</b>	3 compartments enclosure, IP40	10/30
<b>2CSE2440EL</b>	4 compartments enclosure, IP40	10/20
<b>2CSE2840EL</b>	8 compartments enclosure, IP40	5/10

Code	Description	Box/pack No items
<b>00 500</b>	10 A circuit breaker	10/40
<b>00 501</b>	10 A switch	10/40
<b>00 502</b>	10 A inverter	10/40
<b>00 503</b>	16 A bi-polar circuit breaker	10/40
<b>00 504</b>	10 A NO push button	10/40
<b>00 505</b>	10 A double switch	10/40
<b>00 510</b>	bypass socket 2x16 A + earth	10/40
<b>00 511</b>	double bypass socket 2x16 A + earth	10/40
<b>00 512</b>	bipolar circuit breaker + bypass socket 2x16 A + earth	10/40
<b>00 513</b>	Schuko <sup>†</sup> socket 10/16 A + side earth	10/40

(\*) Schuko socket Niessen.

### IP 40 empty enclosures

For Vimar 8000 series and Magic BTicino (\*) wiring accessories



Code	Description	Box/pack No items
<b>00 541</b>	1 compartment enclosure, IP40	10/40
<b>00 542</b>	2 compartments enclosures, IP40	10/40
<b>00 543</b>	3 compartments enclosures, IP40	10/30
<b>00 544</b>	4 compartments enclosures, IP40	10/20
<b>00 546</b>	6 compartments enclosures, IP40	10/20

Code	Description	Box/pack No items
<b>00 641</b>	1 compartment enclosure, IP40	10/40
<b>00 642</b>	2 compartments enclosures, IP40	10/40
<b>00 643</b>	3 compartments enclosures, IP40	10/30
<b>00 644</b>	4 compartments enclosures, IP40	10/20
<b>00 646</b>	6 compartments enclosures, IP40	10/20

<sup>†</sup> Can be equipped with Magic BTicino wiring accessories using the adapter supplied

<sup>†</sup> Can be equipped with Living BTicino wiring accessories using the adapter supplied.

# Boxes, equipment and various components

## IP 55 equipment and empty enclosures

### IP 55 equipment

For ABB Élos Soft/Smart series wiring accessories



1SLC001093F0001

Code	Description	Box/pack No items
<b>2CSE2255EL</b>	2 compartments enclosure, IP55	10/40
<b>2CSE2355EL</b>	3 compartments enclosure, IP55	10/30
<b>2CSE2455EL</b>	4 compartments enclosure, IP55	10/20
<b>2CSE2855EL</b>	8 compartments enclosure, IP55	5/10

Equipped with Vimar 8000 series wiring accessories



1SLC001035F0001



1SLC001036F0001

Code	Description	Box/pack No items
<b>00 520</b>	10 A circuit breaker	10/40
<b>00 521</b>	10 A switch	10/40
<b>00 522</b>	10 A inverter	10/40
<b>00 523</b>	16 A bi-polar circuit breaker	10/40
<b>00 524</b>	10 A NO push button	10/40
<b>00 525</b>	10 A double switch	10/40
<b>00 530</b>	bypass socket 2x16 A + earth	10/40
<b>00 531</b>	double bypass socket 2x16 A + earth	10/40
<b>00 532</b>	bipolar circuit breaker + bypass socket 2x16 A + earth	10/40
<b>00 533</b>	Schuko (*) socket 10/16 A + side earth	10/40

(\*) Schuko socket Niessen.

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### IP 55 empty enclosures

For Vimar 8000 series and Magic BTicino (†) wiring accessories



FLC09178



FLC09179



FLC09180



FLC09181



FLC09182

Code	Description	Box/pack No items
<b>00 551</b>	1 compartment enclosures, IP55	10/40
<b>00 552</b>	2 compartments enclosures, IP55	10/40
<b>00 553</b>	3 compartments enclosures, IP55	10/30
<b>00 554</b>	4 compartments enclosures, IP55	10/20
<b>00 556</b>	6 compartments enclosures, IP55	10/20

(†) Can be equipped with Magic BTicino wiring accessories using the adapter supplied

### IP 55 empty enclosures

For Vimar Idea series and Living BTicino (†) wiring accessories



1SLC001037F0001



1SLC001038F0001



1SLC001039F0001



1SLC001040F0001

Code	Description	Box/pack No items
<b>00 651</b>	1 compartment enclosures, IP55	10/40
<b>00 652</b>	2 compartments enclosures, IP55	10/40
<b>00 654</b>	4 compartments enclosures, IP55	10/20
<b>00 656</b>	6 compartments enclosures, IP55	10/20

(†) Can be equipped with Living BTicino wiring accessories using the adapter supplied.

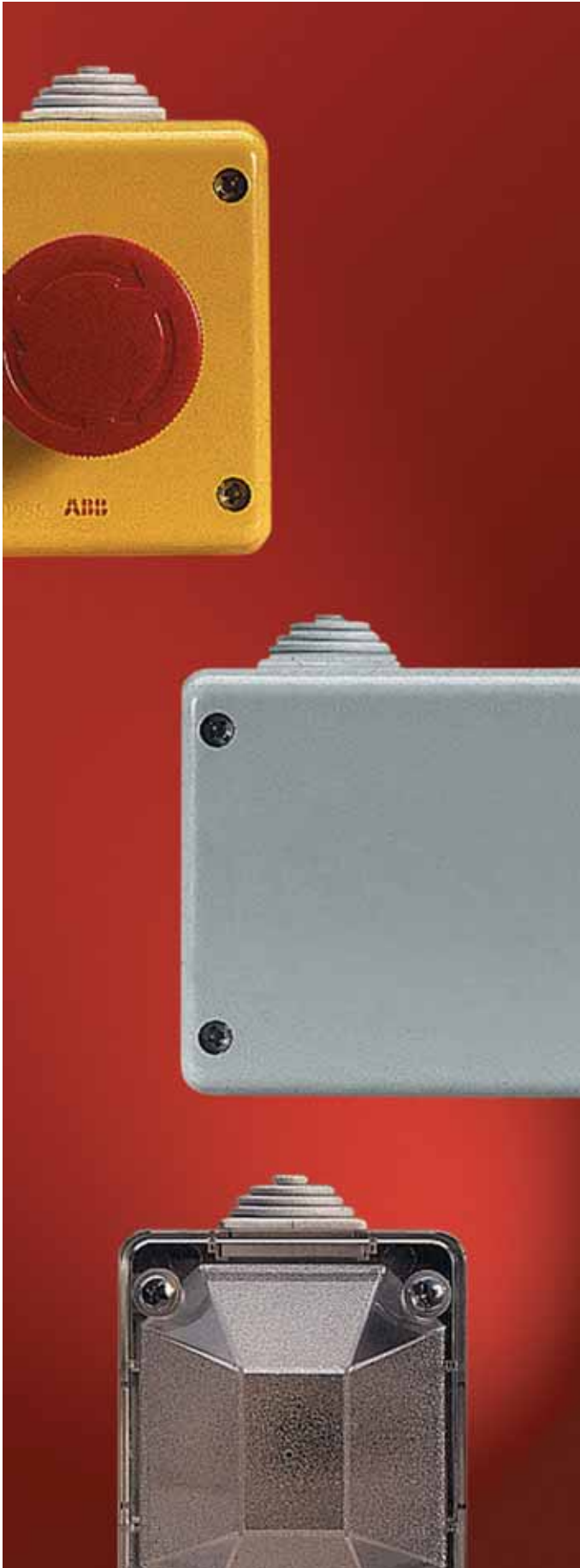
# Boxes, equipment and various components

## Various equipment and components

### Technical characteristics

ABB ensures a complete and varied supply of useful components to complete the installation of circuits. Some of the available components are:

- wall sockets
- mushroom push buttons
- warning lights
- flush-mounting enclosures and boxes



Overall dimensions .....page 10/38

# Boxes, equipment and various components

## Various equipment and components

### IP 40 warning lights

Equipped for E14 incandescence lamp



FLC09189



FLC09193

Code	Description	Box/pack No items
00 570	transparent diffuser	10/30
00 572	red diffuser	10/30
00 573	green diffuser	10/30

### IP 55 mushroom push buttons



FLC09188



FLC09192

Code	Description	Box/pack No items
00 770	red mushroom push button on grey flange	8/32
00 771	red mushroom push button on yellow flange with rotating reset	8/32

Contacts : 1NO +1NC  
 Rated current (In) : 10 A  
 Rated voltage (Vn) : 380 V  
 Dimensions : 80x65x88 mm

### IP 55 junction boxes



FLC09190



FLC09194

Code	Dimensions (mm) WxHxD	IMQ	Box/pack No items
00 580	63x78x55		10/40
00 581	128x78x55		10/20

IMQ mark in compliance with CEI 23-48 Standard.

### IP 55 empty, flush-mounting enclosures

For Vimar 8000 series and Magic BTicino wiring accessories



FLC09196

Code	Colour	Description	Box/pack No items
00 578	grey	3 compartments	10/40
00 579	white	3 compartments	10/40

### Flush-mounting boxes

For IP40 and IP55 equipment and empty



FLC09197

Code	Description	Box/pack No items
00 583	2 compartments	10/60

### Connector elements



FLC09204

FLC09117

Code	Colour	Description	Box/pack No items
00 585	grey	cable gland x conduits Ø 16-20 mm	100/600
00 587	grey	adapter x conduit clamp Ø 16-20 mm	100/600
00 591	grey	union joint	100/600
00 592	-	earth terminal	100/6000
00 595	grey	threaded connector M16x1.5	100/600
00 596	grey	threaded connector M20x1.5	100/600

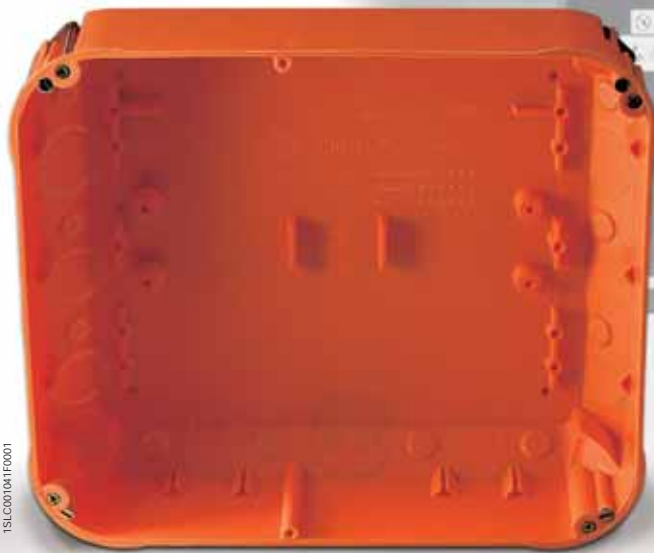




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Wiring accessories and junction boxes in thermoplastic material .....	7/7

Residential/tertiary application



1S.LC.001041.F0001



# Wiring accessories and junction boxes

## Enclosures and boxes for light prefabrication

### Technical characteristics

- execution in self-extinguishing thermoplastic material
- IP 40
- installation on plastered panels, of masonite, and so on, of 7- 35 mm thickness
- possibility to accommodate the wiring accessories of the 8000 Vimar Series and Idea Vimar



# Wiring accessories and junction boxes

## Enclosures and boxes for light prefabrication

### Junction boxes



Code	Description	Box/pack No items
<b>10 801</b>	wiring accessories box Ø 60 mm, P 45 mm(*)	1/75
<b>10 807</b>	wiring accessories box Ø 60 mm, P 35 mm(*)	1/100
<b>10 802</b>	wiring accessories and junction box Ø 60 mm, P 61 mm(*)	1/50
<b>10 803</b>	junction box increased with lid Ø 74 mm, P 50 mm(*)	1/60

Code	Description	Box/pack No items
<b>10 808</b>	junction box with lid W 100 mm x H 100 mm x D 45 mm(*)	1/36
<b>10 811</b>	box lid 10808, with 2 fixing screws	10/540

Code	Description	Box/pack No items
<b>10 804</b>	wiring accessories modular box W 100 mm x H 62 mm x D 40 mm(*)	1/85
<b>10 805</b>	wall light box with lid W 65 mm x H 35 mm x D 40 mm(*)	1/100

(\*) To make the holes, use ABB cutters:

- cutter code 10840 for boxes code 10808 and 10805
- cutter code 10841 for boxes item code 10801, 1807 and 10802
- cutter code 10842 for boxes code 10803
- cutter code 10843 for boxes code 10804

### 7 Boxes for consumer units



Code	Description	Box/pack No items
<b>10 821</b>	box for consumer units 8 modules W 160 mm x H 160 mm x D 65 mm	1/10
<b>10 822</b>	box for consumer units 12 modules W 235 mm x H 205 mm x D 70 mm	1/7
<b>10 831</b>	lid in plastic material for box 10821, with 4 fixing screws	10/200
<b>10 832</b>	lid in plastic material for box 10822, with 4 fixing screws	5/100

### Fronts for consumer units with polycarbonate transparent smoky



Code	Description	Box/pack No items
<b>10 833</b>	RAL 7035 grey fronts for consumer unit 8 modules with DIN rail and fixing screws	1/20
<b>10 834</b>	RAL 7035 grey fronts for consumer unit 12 modules with DIN rail and fixing screws	1/12

# Wiring accessories and junction boxes

## Accessories for enclosures and boxes for light prefabrication

### Cutters



15LCC001049F0001

Code	Description	Box/pack No items
<b>10 840</b>	cutter with marginal countersink Ø 35 mm, H adjustable (*)	1
<b>10 841</b>	cutter with marginal countersink Ø 68 mm, H adjustable (*)	1
<b>10 842</b>	cutter with marginal countersink Ø 74 mm, H adjustable (*)	1
<b>10 843</b>	cutter with marginal countersink Ø 62 mm, H 18 mm	1

(\*) Adjustable for execution of holes in panels of 7 – 20 mm in thickness.

### Spare ribs for cutters



15LCC001056F0001

Code	Description	Box/pack No items
<b>10 844</b>	spare rib for cutter 10840, H 18 mm	10/120
<b>10 845</b>	spare rib for cutter 10841, H 18 mm	9/108
<b>10 846</b>	spare rib for cutter 10842, H 18 mm	9/108

### Spare marginal countersinks for cutters



15LCC001051F0001

Code	Description	Box/pack No items
<b>10 847</b>	marginal countersink for cutter 10840	10/120
<b>10 848</b>	marginal countersink for cutter 10841	10/120
<b>10 849</b>	marginal countersink for cutter 10842	10/120
<b>10 850</b>	marginal countersink for cutter 10843	10/120

### Helicoidal point



15LCC001052F0001

Code	Description	Box/pack No items
<b>10851</b>	helical point with hexagonal queue Ø 8 mm	1/10

Residential/tertiary application



FLCO9845

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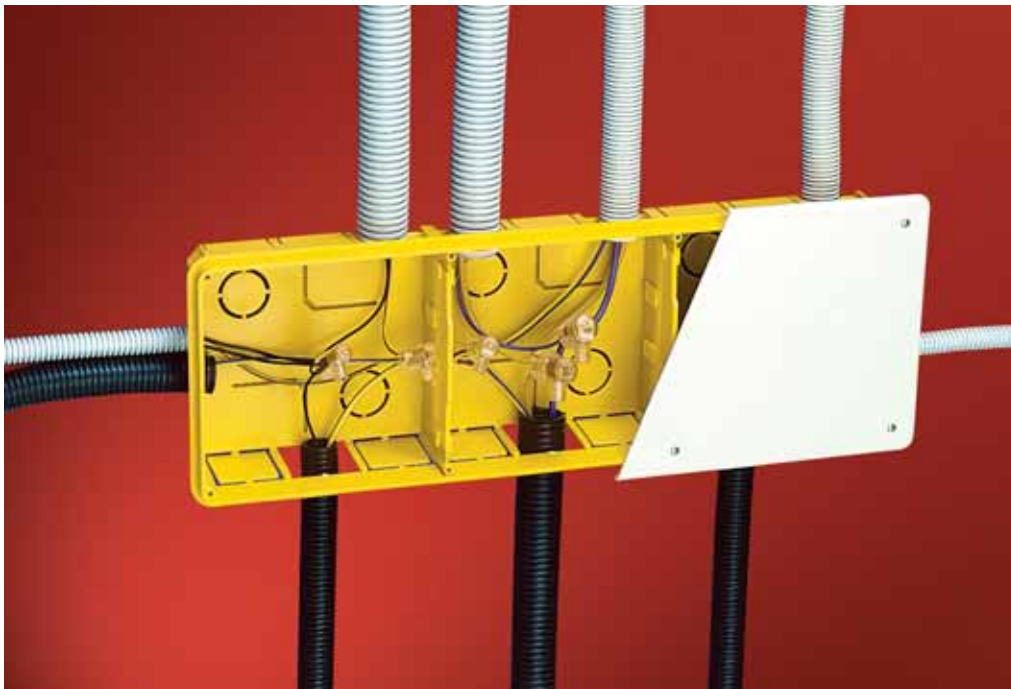
# Wiring accessories and junction boxes

## Wiring accessories and junction boxes in thermoplastic material

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### Technical characteristics

- in thermoplastic material self-extinguishing and resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with IEC 60695-2-1 Standard
- large push-in windows
- lid in RAL 9016 with self-threaded screws included in the supply
- wiring accessories and junction boxes made in compliance with CEI 23-48 and IEC 60 670 Standards



FLCOPR15

# Wiring accessories and junction boxes

## Wiring accessories and junction boxes in thermoplastic material

### Truncated-conical box for wiring



Code	Description	Box/pack No items
<b>00 050</b>	truncated-conical box Ø 65 mm	350/350

### Round box for wiring accessories



Code	Description	Box/pack No items
<b>00 051</b>	round box Ø 85 mm	230/230

### Rectangular for wiring accessories



Code	Description	Box/pack No items
<b>1SL0060A00</b>	rectang. box 3 wiring accessories MAXI inter. 83.5 mm	10/400
<b>1SL0061A00</b>	protective cover for box 1SL0060A00	20/90
<b>1SL0062A00</b>	spacer for box 1SL0060A00	20/200
<b>1SL0063A00</b>	separator for box 1SL0060A00	100/100
<b>00 052</b>	rectang. box 3 wiring accessories inter. 83.5 mm	500/500
<b>00 053</b>	rectang. box 4 wiring accessories inter. 108 mm	150/150
<b>1SL0064A00</b>	rectang. box 6 wiring accessories inter. 100 mm	1/200

### Box for telephone jack



Code	Description	Box/pack No items
<b>00 054 (*)</b>	box for telephone jacks	189/189

(\*) Complete with lid.

### Junction boxes



Code	Dimensions (mm) WxHxD	Box/pack No items
<b>00 070</b>	92x92x45	1/105
<b>00 071</b>	120x100x50	1/72
<b>00 072</b>	120x100x70	1/48
<b>00 073</b>	152x100x70	1/42
<b>00 074</b>	160x130x70	1/32

Code	Dimensions (mm) WxHxD	Box/pack No items
<b>00 075</b>	196x152x70	1/19
<b>00 076</b>	294x152x70	1/15
<b>00 077</b>	392x152x70	1/11
<b>00 078</b>	480x160x70	1/10

The separator code 00 090 can be inserted for all articles.

# Wiring accessories and junction boxes

## Accessories for wiring accessories and junction boxes in thermoplastic material

### Spare lids for wiring accessories boxes



FLC09218



FLC09219

Code	Description	Box/pack No items
00 055	lid with clips for Ø 65 mm box	25/250
00 056	lid with clips for Ø 85 mm box	20/160

Code	Description	Box/pack No items
00 059	rectangular lid for box inter. 83.5 mm	20/300

### Spare covers for junction boxes



FLC09272

Code	For boxes type	Box/pack No items
00 091	00 070	20/200
00 092	00 071 – 00 072	20/160
00 093	00 073	10/100
00 094	00 074	10/80
00 095	00 075	10/40
00 096	00 076	10/40
00 097	00 077	10/40
00 098	00 078	10/40

All codes complete with self-tapping screws.

### Separator for junction boxes



FLC09271

Code		Box/pack No items
00 090		100/400





## Index

Metal rails .....	8/2
Cable-ties and spirals .....	8/4
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Steel wall plugs .....	8/9
Fastening elements .....	8/10

# Installation material

## Metal rails

### Technical characteristics

- made from cold-rolled steel strips
- electric zinc plated with subsequent trivalent passivation with minimum zinc thickness (6/8 microns) in accordance with new RoHS Standards
- axial dimples on the rails without holes, to facilitate the drilling of installation holes
- strict control of the dimensions as required by the Standard EN 60715
- application area: industrial

#### Top hat section rail

TH 35 - 7.5



Code	Dimensions (mm) BxbxHxS (*)	Length (m)	Box/pack (m)
<b>12 839</b>	35x27x7.5x1	2	20/40

#### Top hat section rail

TH 35 - 15



Code	Dimensions (mm) BxbxHxS(*)	Length (m)	Box/pack (m)
<b>12 840</b>	35x27x15x1.5	2	2/20

#### "G" section rail

G 32



Code	Dimensions (mm) BxbxHxS(*)	Length (m)	Box/pack (m)
<b>12 841</b>	32x16.5x15x1.5	2	2/20

#### Top hat section rail

TH 35 - 7.5 with holes



Code	Dimensions (mm) BxbxHxS(*)	Length (m)	Box/pack (m)
<b>12 849</b>	35x27x7.5x1	2	2/40

#### Top hat section rail

TH 35 - 15 with hole:



Code	Dimensions (mm) BxbxHxS(*)	Length (m)	Box/pack (m)
<b>12 850</b>	35x27x15x1.5	2	2/20

#### "G" section rail

G 32 with holes



Code	Dimensions (mm) BxbxHxS(*)	Length (m)	Box/pack (m)
<b>12 853</b>	32x16.5x15x1.5	2	2/20

(\*) B = external base; b = internal base; H = height of rail; S = thickness of rail.

# Installation material

## Accessories for metal rails

### Supporting bracket for metal rails



Code	Box/pack No items
<b>12 892</b>	50/300

### Plastic base for wiring ducts



Code	Box/pack No items
<b>05 210</b>	100/200

### Universal plastic connector



Code	Box/pack No items
<b>12 893</b>	50/3000

### Universal metal connector



12 829



12 828

Code	Box/pack No items
<b>12 828</b>	50/1500
<b>12 829</b>	50/1500

# Installation material

## Cable-ties and spirals

### Technical characteristics

#### Polyamide cable-ties 6/6

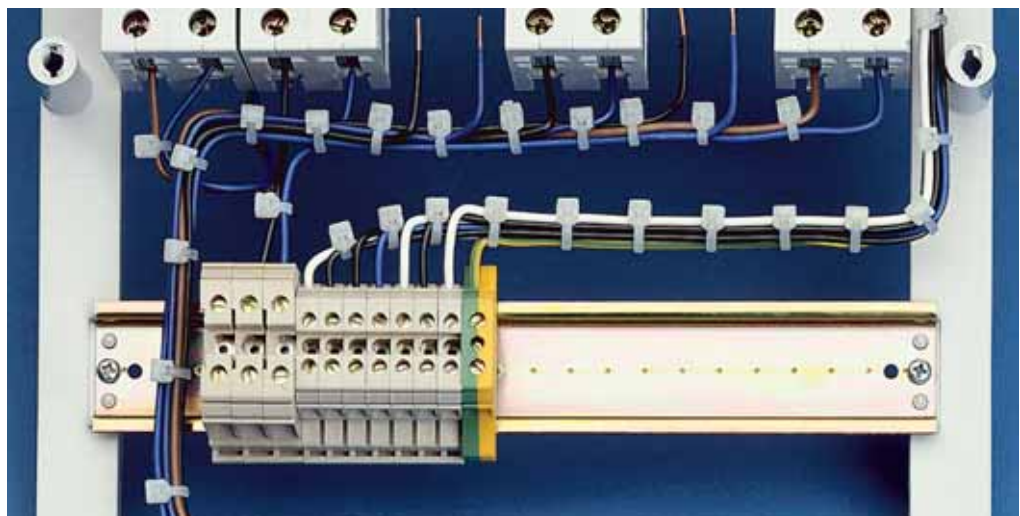
- available in two versions:
  - transparent
  - carbon black, UV resistant
- operating temperature from -40 °C to +85 °C
- self-extinguishing class according to UL 94: V2
- softening point VICAT (50N): 238 °C
- dielectric rigidity 23,000 V/mm
- strong resistance to bases, greases, hydrocarbons, acetone and chlorates
- soluble in phenolic and formic acids
- limited resistance to concentrated acids
- flexing resistance: 90 MPa
- traction module: 3030 MPa
- resilience to 20 °C: 5,4 kJ/m<sup>2</sup>
- yield strength: 83 MPa
- elongation to breaking: 70%
- cable-ties made according to regulations IEC 92-101 EN 50146
- tightening is easy without tearing thanks to the special pitch of the indentations
- the side edges have anti-scratching protection so as not to damage the hands of the operator and not to nick the cable insulation
- rounded point to ease insertion in the countersunk head
- available in boxes of 100 to 1000 items
- particularly suited to the cabling of control panels
- type approval Italian Naval Register ELE/8998/1
- application area: tertiary/industrial

#### Polyamide cable-ties

- available in black, UV resistant
- operating temperature from -40 °C to +65 °C
- made in UV resistant material
- self-extinguishing class according to UL 94: HB
- strong resistance to bases, greases, hydrocarbons, acetone and chlorates
- soluble in phenolic and formic acids
- limited resistance to concentrated acids
- flexing resistance: 40 Mpa
- traction module: 950 Mpa
- ultimate tensile tearing strenght: 55 Mpa
- resilience to 20 °C: 83 kJ/m<sup>2</sup>
- yield strength: 50 Mpa
- elongation to breaking : >100%
- softening point VICAT (50N): 221 °C
- high resistance to tearing thanks to the special tightening mechanism
- the side edges have anti-scratching protection so as not to damage the hands of the operator and not to nick the cable insulation
- available in boxes of 100 items
- particularly suited to external use
- application area: tertiary/industrial

#### Spirals

- available in two versions:
  - transparent polyethylene
  - self-extinguishing polyethylene
- suitable for forming bundles of cables and for making cabling look neat and tidy
- they mechanically protect the conductors allowing them to exit from any point through the coils
- application area: tertiary/industrial



Type approval Italian Naval Register ELE/8998/1

FL009012

# Installation material

## Cable-ties and spirals

### 6/6 transparent polyamide cable-ties



Code	Dimensions (mm) WxL	Resistance to tensile strength (N) <sup>(*)</sup>	Ø tightening min.(mm) max.(mm)	No items	Box/pack
18 010	100x2.5	82	2 24	100	1/80
18 011	135x2.5	82	2 35	100	1/60
18 013	160x2.5	82	2 42	100	1/50
18 012	140x3.5	135	2.5 36	100	1/50
18 014	200x3.5	135	2.5 55	100	1/40
18 017	280x3.5	135	2.5 80	100	1/30
18 015	180x4.5	225	3 45	100	1/30
18 018	280x4.5	225	5 76	100	1/25
18 020	360x4.5	225	5 101	100	1/15
18 024	200x7.5	533	5 51	100	1/20
18 026	280x7.5	533	5 76	100	1/20
18 028	360x7.5	533	5 102	100	1/20
18 034	430x9.0	781	5 110	100	1/20
18 036	550x9.0	781	5 140	100	1/20
18 038	780x9.0	781	5 190	100	1/8

<sup>(\*)</sup> N = Newton

### Polyamide cable-ties for external use



Code	Dimensions (mm) WxL	Resistance to tensile strength (N) <sup>(*)</sup>	Ø tightening min.(mm) max.(mm)	No items	Box/pack
18 210	115x6	240	5 22	100	1/30
18 212	175x6	280	10 40	100	1/20
18 218	115x9	350	5 22	100	1/20
18 220	190x9	350	10 45	100	1/20
18 222	265x9	510	15 63	100	1/10
18 224	360x9	510	25 93	100	1/8

<sup>(\*)</sup> N = Newton

### 6/6 black polyamide cable-ties



Code	Dimensions (mm) WxL	Resistance to tensile strength (N) <sup>(*)</sup>	Ø tightening min.(mm) max.(mm)	No items	Box/pack
18 110	100x2.5	82	2 24	100	1/80
18 111	135x2.5	82	2 35	100	1/60
18 113	160x2.5	82	2 42	100	1/50
18 112	140x3.5	135	2.5 36	100	1/50
18 114	200x3.5	135	2.5 55	100	1/40
18 117	280x3.5	135	2.5 80	100	1/30
18 115	180x4.5	225	3 45	100	1/30
18 118	280x4.5	225	5 76	100	1/25
18 120	360x4.5	225	5 101	100	1/15
18 124	200x7.5	533	5 51	100	1/20
18 126	280x7.5	533	5 76	100	1/10
18 128	360x7.5	533	5 102	100	1/20
18 134	430x9.0	781	5 110	100	1/20
18 136	550x9.0	781	5 140	100	1/20
18 138	780x9.0	781	5 190	100	1/8

<sup>(\*)</sup> N = Newton

### Spirals



Code	Dimensions (mm) <sup>(*)</sup> Ø x a	For bundle of cables Ø min. (mm) max. (mm)	No items	Box/pack
<b>In transparent polyethylene</b>				
18 370	3x5	2 12	25	1/10
18 372	6x8	5 56	25	1/12
18 374	10x11	12 100	25	1/4
18 376	12x13	14 130	25	1/4
<b>In self-extinguishing polyethylene</b>				
18 380	3x5	2 12	50	1/10
18 382	6x8	5 56	50	1/12
18 384	10x11	12 100	50	1/4
18 386	12x13	14 130	50	1/4

<sup>(\*)</sup> Ø = diameter  
a = width of spiral

# Installation material

## Accessories for cable-ties

### Self-adhesive supports for cable-ties



1S/C001059F0001

### Screw supports for cable-ties



FLM9019

Code	Description	No items	Box/pack
<b>18 250</b>	transparent plate	50	1/30
<b>18 251</b>	black plate	50	1/30

For cable-ties 2.4-4.8 mm wide.  
Made in 6/6 transparent or black polyamide.  
Fast to mount due to its self-adhesive snap on base or it can be fixed with a central Ø 4 mm screw.

Code	Description	No items	Box/pack
<b>18 252</b>	transparent plate	100	1/60
<b>18 253</b>	black plate	100	1/60

For cable-ties 2.4-4.8 mm wide.  
Made in 6/6 transparent or black polyamide.  
Fix with Ø 4 mm o screw or Ø 2 mm.

### Pincer for cable-ties



FLM9020

### Screw supports for external cable-ties



FLM9021

Code	Box/pack No items
<b>18 270</b>	1/10

For tightening and cutting cable-ties 2.4-4.8 mm wide.  
Made in thermoplastic, shock proof material with internal steel mechanism.  
Tightening tension can be adjusted by a special nut above the handle.

Code	Description	No items	Box/pack
<b>18 280</b>	black plate	25	1/60

For cable-ties 6-9 mm wide.  
Made in 6/6 black polyamide.  
Fix with screw wall-plug max Ø 8 mm or with a nail.

# Installation material

## Accessories for cable-ties

### Pivot support for external cable-ties



Code	Description	No items	Box/pack
<b>18 282</b>	black plate	25	1/60

For cable-ties 6-9 mm wide.  
Made in 6/6 black polyamide.

### Pincer for external cable-ties



Code	Box/pack
	No items
<b>18 290</b>	10/30

For tightening and cutting cable-ties 6-9 mm wide.  
Made in painted metal.

# Installation material

## Polyamide wall plugs

### Technical characteristics

- wall-plugs made in 6/6 polyamide
- available in RAL 7035 grey and RAL 9001 white
- wall plugs with nickel-plated steel Allen screws
- resistant to atmospheric agents, gas and ageing
- don't change in temperatures ranging from -30 °C and +90 °C
- suitable for use with various materials (from cement to wood) with a high holding level

Technical details .....page 9/1

Overall dimensions .....page 10/44

### Wall plugs



### Wall plugs with screws



Code	Colour	Dimensions (mm) diam.x L	No items	Box/pack
<b>18 405</b>	grey	5x25	200	1/60
<b>18 406</b>	grey	6x30	100	1/60
<b>18 408</b>	grey	8x40	100	1/30
<b>18 410</b>	grey	10x50	50	1/30

Code	Colour	Dimensions (mm) wall plug diam.	screws diam. x L	No items	Box/pack
<b>18 415</b>	grey	5	3.5 x 25	100	1/30
<b>18 416</b>	grey	6	4 x 30	100	1/30
<b>18 418</b>	grey	8	5 x 40	50	1/30
<b>18 420</b>	grey	10	6 x 50	50	1/30

### Wall plugs with nail/screw



### Wall plugs with hooks



Code	Colour	Dimensions (mm) wall plug diam.	screws diam. x L	No items	Box/pack
<b>18 430</b>	white	5	3.5 x 27	100	1/30
<b>18 432</b>	white	6	4 x 35	100	1/30
<b>18 434</b>	white	6	4 x 55	50	1/30
<b>18 436</b>	white	8	5 x 70	50	1/30
<b>18 440</b>	white	8	5 x 72	50	1/30

Code	Colour	Description	No items	Box/pack
<b>18 450</b>	grey	screw M4	50	1/30
<b>18 452</b>	grey	short angled hook M4	50	1/30
<b>18 454</b>	grey	medium angled hook M4	50	1/30
<b>18 456</b>	grey	open angled hook M4	50	1/12
<b>18 458</b>	grey	closed angled hook M4	50	1/12

For quick fixing.  
Expansion with hammering of the nail/screw, can be unscrewed.  
With a neck to hold the element to be fastened.

Hooks nickel-plated steel.  
Thread M4 – hole Ø 9x36 mm.

# Installation material

## Steel wall plugs

### Technical characteristics

- screw anchors made in burnished passivated zinc
- thread M4 – hole Ø 8x42 mm
- thread M5 – hole Ø 10x50 mm
- suitable for use with masonry (in cement, tiles etc.)

Technical details.....page 9/1

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### Wall plugs with hooks

With washer



Code	Description	No items	Box/pack
18 460	screw with M4 Philips countersunk head	50	1/30
18 461	screw with M5 Philips countersunk head	50	1/30
18 464	short angled hook M4	50	1/30
18 465	short angled hook M5	25	1/30
18 466	medium angled hook M4	50	1/30
18 467	medium angled hook M5	25	1/30
18 470	hook with open eyelet M4	50	1/30
18 471	open angled hook M5	25	1/30
18 472	hook with closed eyelet M4	50	1/30
18 473	hook with closed eyelet M5	25	1/30

### Wall plugs with hooks

With washer



Code	Description	No items	Box/pack
18 476	flat hook M4	50	1/30
18 477	flat hook M5	25	1/30
18 478	medium angled hook M4	25	1/30
18 479	medium angled hook M5	25	1/30

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### Wall anchors

Thread M4 – hole Ø14



Code	Description	No items	Box/pack
18 490	screw with M4 Philips countersunk head	10	1/30
18 492	M4 head	10	1/30
18 494	hook with open eyelet M4	10	1/30
18 496	hook with closed eyelet M4	10	1/30

### Screws with wall plugs



Code	Description	No items	Box/pack
18 486	screw with hexagonal head M6x50	20	1/30
18 487	screw with hexagonal head M8x55	10	1/30
18 488	screw with hexagonal head M10x60	10	1/30
18 489	screw with hexagonal head M10x70	5	1/30

# Installation material

## Fastening elements

### Technical characteristics

In order to simplify and speed up the laying of conduits and cables in any situation, the following products are available:

- thermo-plastic snap-on and collar conduit holders
- thermo-plastic U-bolt conduit holders
- conduit holder guides
- thermo-plastic strap holders
- thermo-plastic cable holders
- steel conduit holders

- thermo-plastic and steel collar conduit holders
- self-extinguishing insulated poly-carbonate cable-clamps
- thermo-plastic fastening elements resistant to abnormal heat and fire up to 650 °C (glow wire test) in compliance with the IEC 60695-2-1 Standard
- thermo-plastic fastening elements with operating conditions from -30 °C to +70 °C
- application area: tertiary/residential

Technical details .....page 9/1

Overall dimensions .....page 10/44

### Snap-on conduit holders



Code	Colour	For conduits Ø (mm)	No items	Box/pack
<b>05 700</b>	grey	16	100	1/12
<b>05 701</b>	grey	20	100	1/12
<b>05 702</b>	grey	25	50	1/12
<b>05 703</b>	grey	32	25	1/12
<b>05 704</b>	grey	40	25	1/12

Self-extinguishing thermo-plastic.  
Fixed to the wall using a wall-plug or a suitable guide.

### Collar conduit holders



Code	Colour	For conduits Ø (mm)	No items	Box/pack
<b>05 720</b>	grey	16	100	1/12
<b>05 721</b>	grey	20	50	1/12
<b>05 722</b>	grey	25	50	1/12
<b>05 723</b>	grey	32	25	1/12

Self-extinguishing thermo-plastic.  
Fixed to the wall using a wall-plug or a suitable guide.

### U-bolt conduit holders



Code	Colour	For conduits Ø (mm)	No items	Box/pack
<b>05 694</b>	grey	12–16	50	1/12
<b>05 695</b>	grey	16–25	50	1/12
<b>05 696</b>	grey	25–32	20	1/12
<b>05 697</b>	grey	32–40	15	1/12
<b>05 698</b>	grey	40–50	10	1/12

Self-extinguishing thermo-plastic.  
Fixed to the wall using a wall-plug or a suitable guide.

### Strap holders



Code	Colour	For straps BxH (mm)	No items	Box/pack
<b>05 760</b>	grey	6x3.5	200	1/60
<b>05 761</b>	grey	8x3.5	200	1/60
<b>05 762</b>	grey	11x5	100	1/60
<b>05 763</b>	white	6x3.5	200	1/60
<b>05 764</b>	white	8x3.5	200	1/60
<b>05 765</b>	white	11x5	100	1/60

Self-extinguishing thermo-plastic.

# Installation material

## Fastening elements

### Conduit clamps



Code	For conduits Ø (mm)	No items	Box/pack
05 730	10	100	1/30
05 731	12	100	1/30
05 732	13	100	1/30
05 733	14	100	1/30
05 734	16	50	1/30
05 735	19–20	50	1/30
05 736	22	50	1/30
05 737	25–26	50	1/12
05 738	32	50	1/12
05 739	38	25	1/12
05 740	40	25	1/12
05 741	50	25	1/12

In galvanised steel.

### Conduit clamp collars



Code	For conduits Ø (mm)	No items	Box/pack
05 745	10	50	1/30
05 746	12	50	1/30
05 747	13	50	1/30
05 748	14	50	1/30
05 749	16	50	1/30
05 750	19–20	25	1/30
05 751	22	25	1/30
05 752	25–26	25	1/30
05 753	32	25	1/12
05 754	38	25	1/12
05 755	40	25	1/12
05 756	50	25	1/12

In galvanised steel.

### Rail for conduit-clamps



Code	Box/pack
05 727	1/1

Self-extinguishing thermo-plastic.  
Supplied in sections of 400 pieces from 200 mm.

### Insulated cable-clamps



Code	Clamping capacity (mm <sup>2</sup> )	No items	Box/pack
05 950	4	100	1/30
05 951	10	50	1/30
05 952	16	25	1/30

Self-extinguishing poly-carbonate.  
Operating temperature from -30 °C to +85 °C.  
Brass clamps.

### Cable holders



Code	Colour	For conduits and cables Ø (mm)	No items	Box/pack
05 770	grey	4	200	1/60
05 771	grey	5	200	1/60
05 772	grey	6	200	1/60
05 773	grey	7	100	1/60
05 774	grey	8	100	1/60
05 775	grey	9	100	1/30
05 776	grey	10	100	1/30
05 777	grey	12	100	1/30
05 778	grey	13	100	1/30
05 779	grey	14	100	1/30
05 780	grey	16	50	1/30
05 781	grey	19–20	25	1/30
05 782	grey	22	25	1/30
05 783	grey	25–26	25	1/12
05 784	grey	32	25	1/12
05 788	white	4	200	1/60
05 789	white	5	200	1/60
05 790	white	6	200	1/60
05 791	white	7	100	1/60
05 792	white	8	100	1/60
05 793	white	9	100	1/60
05 794	white	10	100	1/30
05 795	white	12	100	1/30
05 796	white	13	100	1/30

Self-extinguishing thermo-plastic.





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# Further technical information and applications

Definition of IP protection degree, IK degree of mechanical shock protection, double insulation and self-extinguishing protection degree

## IP protection degree for enclosures\*

First number: protection against the penetration of solid bodies

Second number: protection against the penetration of water

IP	Full description
0	No protection is provided
1	It must be impossible for a large surface area, for example, the hand, to penetrate (voluntary protection is not provided, however) or solid bodies larger than 50 mm in diameter
2	It must be impossible for fingers or similar objects with a maximum length of 80 mm or solid bodies with a diameter greater than 12 mm, to penetrate
3	It must be impossible for tools, wires, etc. with a diameter or thickness greater than 2.5 mm or solid bodies with a diameter greater than 2.5 mm, to penetrate
4	It must not be possible for wires or plates with a thickness greater than 1.0 mm or solid bodies with a diameter greater than 1.0, to penetrate
5	Not totally dust proof, but the quantity that penetrates is not such to prevent the material from functioning well
6	No dust can penetrate

IP	Full description
0	No protection is provided
1	Vertically-falling drops of water must not cause damage
2	Vertically-falling drops of water will not cause damage when angled at a maximum of 15° from vertical
3	Rain water falling from a direction creating a maximum angle of 60° from vertical must not cause damage
4	Water sprayed onto the covering from any direction must not cause damage
5	Water projected with a nozzle from all directs must not cause damage
6	In the case of waves or powerful water jets must not penetrate the covering in harmful quantities
7	Harmful quantities of water must not penetrate inside the immersed covering in specific conditions of pressure or duration
8	The material is suitable to remain constantly immersed in water in the conditions specified by the manufacturer

1<sup>st</sup> number defined by Standards CEI 70-1 - IEC 60529

2<sup>nd</sup> number defined by Standards CEI 70-1 - IEC 60529

\* Consumer unit with IP 40 protection degree

In a consumer unit, protection degree IP 40 (it is impossible to introduce a wire with a diameter of 1 mm) is obtained by installing equipment with protection degree IP 40 and by using the relative accessories (module-covers).

## Double insulation

This symbol shown on the consumer units/switchboards/boxes/enclosures indicates that they have been constructed so that they will provide protection against indirect contacts by means of complete insulation. To this end they must be installed correctly, following the instructions that accompany the product and using the accessories supplied (screw covering caps).

## Further technical information and applications

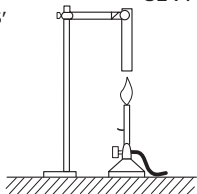
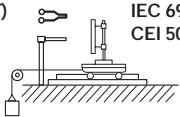
Definition of IP protection degree, IK degree of mechanical shock protection, double insulation and self-extinguishing protection degree

### Degree of mechanical shock protection IK conforming to the CEI EN 50102 Standard

Code IK	Shock energy (Joule)
00	not protected
01	0.15 Joule
02	0.2 Joule
03	0.35 Joule
04	0.5 Joule
05	0.7 Joule
06	1 Joule
07	2 Joule
08	5 Joule
09	10 Joule
10	20 Joule

Text equipment used includes a spring hammer, a pendulum hammer and a vertical hammer.

### Self-extinguishing protection degree

Test text	Equipment required	Compliance with Standards	Purpose of the test	Test results	Heat source	Test conditions	Characteristic elements
UL (UNDERWRITERS' LABORATORIES)		UL 94	A classification is given to the various types of behaviour that the materials may have following contact with the Bunsen flame	V0 if the test specimen burns for less than 5 seconds before going out V1 if it burns for less than 25 seconds V2 if it burns for less than 25 seconds, dripping glowing material HB if it burns for more than 25 seconds (horizontal test specimen with a maximum burning speed of 38 mm per minute) Can be assimilated with ASTM D-635	Bunsen burner flame 10 sec	Flame applied for 10 seconds and for two consecutive times	Duration of combustion
(GLOW-WIRE TEST)		IEC 695-2-1 CEI 50-11	Simulates the types of thermal stress that may be produced by the sources of heat or ignition (glowing elements or overcharged resistors for short periods) in order to assess the danger of fire using this simulation	Any manifestation of a flame must stop within 30 seconds of removing the glow-wire TEST TEMPERATURES 650 °C 750 °C 850 °C 960 °C	Glow-wire 4 mm in diameter	Wire applied for 30 seconds	Time it takes the flame to extinguish

# Further technical information and applications

## Consumer units for modular circuit breakers – summarised technical data

### Flush-mounting consumer units IP 40 Unibox Series

CODE	1SL0500A00 <sup>(1)</sup> 1SL0510A00 <sup>(2)</sup>	1SL0501A00 <sup>(1)</sup> 1SL0511A00 <sup>(2)</sup>	1SL0502A00 <sup>(1)</sup> 1SL0512A00 <sup>(2)</sup>	1SL0503A00 <sup>(1)</sup> 1SL0513A00 <sup>(2)</sup>	1SL0504A00 <sup>(1)</sup> 1SL0514A00 <sup>(2)</sup>
NUMBER OF MODULES	8	12	24	36	54
COLOUR	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white
DOUBLE INSULATION	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 65 °C	GWT 650 °C
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	10 Joule	10 Joule	10 Joule	10 Joule	10 Joule
OPERATING TEMPERATURE	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C
PROTECTION DEGREE	IP 40	IP 40	IP 40	IP 40	IP 40
MAX DISSIPATION POWER <sup>(3)</sup>	25 W	29 W	45 W	68 W	85 W
EXTRACTABLE FRAME	YES	YES	YES	YES	YES

(1) With opaque door.

(2) With transparent door.

(3) Data concerning dissipation power have been obtained by following the instructions of CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

### Flush-mounting consumer units IP 40 Estetica Series without door

CODE	1SL2004A00	1SL2008A00	1SL2012A00	1SL2013A00	1SL2014A00	1SL2016A00
NUMBER OF MODULES	4	8	12	18	24	36
COLOUR	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white
WITHOUT DOOR	YES	YES	YES	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule
OPERATING TEMPERATURE	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C
PROTECTION DEGREE	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40
MAX DISSIPATION POWER <sup>(1)</sup>	25 W	37 W	40 W	55 W	72 W	96 W
EXTRACTABLE FRAME	-	YES	YES	YES	YES	YES

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

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### Reaction to chemical agents (\*)

IP 40 Estetica and Europa Series flush-mounting consumer units	Cold water	Hot water	Sulphuric acid 40%	Hydrochloric acid 35%	Acetic acid 10%	Benzole	Gasoline	Acetone	Ethyl alcohol	Ammonia liquid	Dichloromethane	Diesel oil- naphtha	Mineral oils and grasses	Food oils and grasses	Perchloroethylene	Trichloroethylene	Ethylether	Ozone	Toluene	Methanol	Spirits	Milk	Fruit juices	Fluoride hydrocarbons	Lye-washes	Cleansings	Water solution	
	■	■	▲	▲	■	●	■	●	▲	■	●	■	■	■	●	●	●	■	●	●	▲	■	■	■	●	■	■	■

■ resistant ▲ partially resistant ● not resistant

VLC00654

(\*) Indications concerning the resistance of the products to chemical agents must be considered as an indication only, and refer to standard conditions (40 °C, integral product).

# Further technical information and applications

## Consumer units for modular circuit breakers – summarised technical data

### Flush-mounting consumer units IP 40 Estetica Series with door and Europa Series consumer units

CODE	1SL2028A00 - 12 037	1SL2028A00 - 12 038 1SL2040A00 - 12 026 1SL2057A00 - 12 058	1SL2032A00 - 12 042 1SL2004A00 - 12 027 1SL2061A00 - 12 062	1SL2033A00 - 12 043	1SL2034A00 - 12 044 1SL2045A00 - 12 030 1SL2063A00 - 12 064	1SL2036A00 - 12 046 1SL2048A00 - 12 031 1SL2065A00 - 12 066	1SL2052A00 - 12 035 1SL2067A00 - 12 068
NUMBER OF MODULES	4	8	12	18	24	36	54
COLOUR	RAL 9016 white RAL 7021 grey	RAL 9016 white RAL 7021 grey	RAL 9016 white RAL 7021 grey	RAL 9016 white RAL 7021 grey	RAL 9016 white RAL 7021 grey	RAL 9016 white RAL 7021 grey	RAL 9016 white
WITH TRANSPARENT DOOR	YES	YES	YES	YES	YES	YES	YES
WITH OPAQUE DOOR	-	YES	YES	-	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule
OPERATING TEMPERATURE	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C
PROTECTION DEGREE	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40
MAX DISSIPATION POWER <sup>(1)</sup>	19 W	25 W	29 W	40 W	45 W	68 W	85 W
EXTRACTABLE FRAME	-	YES	YES	YES	YES	YES	YES

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of  $\Delta t = 30$  °C.

# Further technical information and applications

## Consumer units for modular circuit breakers – summarised technical data

### Wall-mounting consumer units IP 40 Unibox Series without door

CODE	12 208 – 12 228	12 212 – 12 232	12 214 – 12 234	12 216 – 12 236	12 217 – 12 237
NUMBER OF MODULES <sup>(1)</sup>	8 + 1	12 + 1	24 + 2	36 + 3	54 + 3
COLOUR	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey
WITHOUT DOOR	YES	YES	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	10 Joule (IK 09)	10 Joule (IK 09)	10 Joule (IK 09)	10 Joule (IK 09)	10 Joule (IK 09)
OPERATING TEMPERATURE	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C
PROTECTION DEGREE	IP 40	IP 40	IP 40	IP 40	IP 40
MAX DISSIPATION POWER <sup>(2)</sup>	22 W	34 W	58 W	70 W	83 W
CABLE HOLDING SYSTEM	YES	YES	YES	YES	YES
DESIGNED FOR INPUT	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm
EXTRACTABLE FRAME	-	-	YES	YES	YES

(1) Extra modules see characteristics on page 2/23.

(2) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

### Wall-mounting consumer units IP 40 Unibox Series with door

CODE	12 238 – 12 248 12 258 – 12 268	12 242 – 12 252 12 262 – 12 272	12 244 – 12 254 12 264 – 12 274	12 246 – 12 256 12 266 – 12 276	12 247 – 12 257 12 267 – 12 277
NUMBER OF MODULES	8 + 1	12 + 1	24 + 2	36 + 3	54 + 3
COLOUR	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey	RAL 9016 white RAL 7035 grey
WITHOUT DOOR	-	-	-	-	-
WITH TRANSPARENT DOOR	YES	YES	YES	YES	YES
WITH OPAQUE DOOR	YES	YES	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	10 Joule (IK 09)	10 Joule (IK 09)	10 Joule (IK 09)	10 Joule (IK 09)	10 Joule (IK 09)
OPERATING TEMPERATURE	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C
PROTECTION DEGREE	IP 40	IP 40	IP 40	IP 40	IP 40
MAX DISSIPATION POWER <sup>(1)</sup>	20 W	30 W	40 W	45 W	54 W
CABLE HOLDING SYSTEM	YES	YES	YES	YES	YES
DESIGNED FOR INPUT	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm	CONDUITS Ø 25÷32 mm TRUNKINGS up to 200X60 mm
EXTRACTABLE FRAME	-	-	YES	YES	YES

(1) Extra modules see characteristics on page 2/23.

(2) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

### Reaction to chemical agents (\*)

Chemical agent	Reaction
Cold water	resistant
Hot water	resistant
Sulphuric acid 40%	partially resistant
Hydrochloric acid 35%	partially resistant
Acetic acid 10%	resistant
Benzole	resistant
Gasoline	resistant
Acetone	resistant
Ethyl alcohol	resistant
Ammonia liquid	resistant
Dichloromethane	resistant
Diesel oil- naphtha	resistant
Mineral oils and grases	resistant
Food oils and grases	resistant
Perchloroethylene	resistant
Trichloroethylene	resistant
Ethylether	resistant
Ozone	resistant
Toluene	resistant
Methanol	resistant
Spirits	resistant
Milk	resistant
Fruit juices	resistant
Fluoride hydrocarbons	resistant
Lye-washes	resistant
Cleansings	resistant
Water solution	resistant

IP 40 Unibox and Europa Series wall-mounting consumer units and IP 40 wall-mounting covers

■ resistant ▲ partially resistant ● not resistant

VLC00065

(\*) Indications concerning the resistance of the products to chemical agents must be considered as an indication only, and refer to standard conditions (40 °C, integral product).

# Further technical information and applications

## Consumer units for modular circuit breakers – summarised technical data

### Covers and wall-mounting consumer units IP 40 Europa Series without door

CODE	1SL2402A00 12 422	1SL2404A00 12 424	1SL2406A00 12 426	1SL2408A00 12 428	1SL2412A00 12 432	1SL2414A00 12 434	1SL2416A00 12 436	1SL2417A00 12 437	
NUMBER OF MODULES	2	4	6	8	12	24	36	54	
COLOUR	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white	
	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	
WITHOUT DOOR	YES	YES	YES	YES	YES	YES	YES	YES	
DOUBLE INSULATION	YES	YES	YES	YES	YES	YES	YES	YES	
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	
SHOCK RESISTANCE	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule	
OPERATING TEMPERATURE	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +8 °C	
PROTECTION DEGREE	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40	
MAX DISSIPATION POWER <sup>(1)</sup>	10 W	14 W	16 W	22 W	28 W	50 W	72 W	96 W	
DESIGNED FOR INPUT	-	-	-	CONDUITS Ø 25÷32 mm	CONDUITS Ø 25÷32 mm	CONDUITS Ø 25÷32 mm	CONDUITS Ø 25÷32 mm	CONDUITS Ø 25÷32 mm	Direct branch connection Conduits-cables Ø 5÷35 mm
DESIGNED FOR MOULDED-CASE CIRCUIT BREAKERS	-	-	-	-	-	-	YES	YES	
DESIGNED FOR RAPID CABLING	-	-	-	-	-	-	-	UNIFIX L	

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

### Wall-mounting consumer units IP 40 Europa Series with door

CODE	1SL2438A00 – 12 448 12 458 – 12 468	1SL2442A00 – 12 452 12 462 – 12 472	1SL2444A00 – 12 454 12 464 – 12 474	1SL2446A00 – 12 456 12 466 – 12 476	1SL2447A00 – 12 457 12 467 – 12 477
NUMBER OF MODULES	8	12	24	36	54
COLOUR	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white	RAL 9016 white
	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey
WITH TRANSPARENT DOOR	YES	YES	YES	YES	YES
WITH OPAQUE DOOR	YES	YES	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	6 Joule	6 Joule	6 Joule	6 Joule	6 Joule
OPERATING TEMPERATURE	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C
PROTECTION DEGREE	IP 40	IP 40	IP 40	IP 40	IP 40
MAX DISSIPATION POWER <sup>(1)</sup>	19 W	27 W	31 W	45 W	56 W
DESIGNED FOR INPUT	CONDUITS Ø 25÷32 mm	CONDUITS Ø 25÷32 mm	CONDUITS Ø 25÷32 mm	CONDUITS Ø 25÷32 mm	Direct branch connections Conduits-cables Ø 5÷35 mm
DESIGNED FOR MOULDED-CASE CIRCUIT BREAKERS	-	-	-	YES	YES
DESIGNED FOR RAPID CABLING	-	-	-	-	UNIFIX L

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

### Reaction to chemical agents (\*)

Chemical agent	Reaction
Cold water	resistant
Hot water	partially resistant
Sulphuric acid 40%	partially resistant
Hydrochloric acid 35%	partially resistant
Acetic acid 10%	resistant
Benzole	resistant
Gasoline	resistant
Acetone	resistant
Ethyl alcohol	resistant
Ammonia liquid	resistant
Dichloromethane	resistant
Diesel oil- naphtha	resistant
Mineral oils and grases	resistant
Food oils and grases	resistant
Perchloroethylene	resistant
Trichloroethylene	resistant
Ethylether	resistant
Ozone	resistant
Toluene	resistant
Methanol	resistant
Spirits	resistant
Milk	resistant
Fruit juices	resistant
Fluoride hydrocarbons	resistant
Lye-washes	partially resistant
Cleansings	partially resistant
Water solution	resistant

IP 40 Europa Polycarbonate Series wall-mounting consumer units

■ resistant ▲ partially resistant ● not resistant

VLC00065

(\*) Indications concerning the resistance of the products to chemical agents must be considered as an indication only, and refer to standard conditions (40 °C, integral product).

# Further technical information and applications

## Consumer units for modular circuit breakers – summarised technical data

### Wall-mounting consumer units IP 40 Europa Series

CODE	12 702	12 704	12 708	12 712	12 714	12 716	12 718
NUMBER OF MODULES	2	4	8	12	24	36	54
COLOUR	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey
WITHOUT DOOR	YES	YES	YES	YES	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)
OPERATING TEMPERATURE	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C
RESISTENCE TO HEAT	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C
PROTECTION DEGREE	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40	IP 40
MAX DISSIPATION POWER <sup>(1)</sup>	15 W	17 W	25 W	40 W	55 W	75 W	96 W
FLANGE FOR DIRECT BRANCH	-	-	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm
EXTRACTABLE FRAME	-	YES	YES	YES	YES	YES	YES
DESIGNED FOR MOULDED-CASE CIRCUIT BREAKERS	-	YES	YES	YES	YES	YES	YES
DESIGNED FOR RAPID CABLING	-	-	UNIFIX L	UNIFIX L	UNIFIX L	UNIFIX L	UNIFIX L

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

### Wall-mounting consumer units IP 55 Europa Series

CODE	12 644 – 12 684	12 646 – 12 686	12 650 – 12 690	12 652 – 12 692	12 654
NUMBER OF MODULES	4	6	10	20	10
COLOUR	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey
WITH TRANSPARENT DOOR	YES	YES	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 650 °C grey	GWT 650 °C grey	GWT 650 °C grey	GWT 650 °C grey	GWT 650 °C grey
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)
OPERATING TEMPERATURE	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C	-20 °C ÷ +85 °C
RESISTENCE TO HEAT	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C
PROTECTION DEGREE	IP 55	IP 55	IP 55	IP 55	IP 55
MAX DISSIPATION POWER <sup>(1)</sup>	13 W	17 W	20 W	35 W	35 W
DESIGNED FOR INPUT	Ø 16 ÷ 40 mm	Ø 16 ÷ 40 mm	Ø 16 ÷ 40 mm	Ø 16 ÷ 40 mm	Ø 16 ÷ 40 mm

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

### Reaction to chemical agents (\*)

Chemical Agent	Reaction
Cold water	resistant
Hot water	resistant
Sulphuric acid 40%	partially resistant
Hydrochloric acid 35%	partially resistant
Acetic acid 10%	resistant
Benzole	resistant
Gasoline	resistant
Acetone	resistant
Ethyl alcohol	resistant
Ammonia liquid	resistant
Dichloromethane	resistant
Diesel oil- naphta	resistant
Mineral oils and grases	resistant
Food oils and grases	resistant
Perchloroethylene	resistant
Trichloroethylene	resistant
Ethylether	resistant
Ozone	resistant
Toluene	resistant
Methanol	resistant
Spirits	resistant
Milk	resistant
Fruit juices	resistant
Fluoride hydrocarbons	resistant
Lye-washes	resistant
Cleansings	resistant
Water solution	resistant

IP 55 Europa Series wall-mounting consumer units

■ resistant ▲ partially resistant ● not resistant

VL00067

(\*) Indications concerning the resistance of the products to chemical agents must be considered as an indication only, and refer to standard conditions (40 °C, integral product).

# Further technical information and applications

## Consumer units for modular circuit breakers – summarised technical data

### Wall-mounting consumer units IP 65 Fly Series

CODE	12 722-12 742	12 743	12 745	12 746	12 747
NUMBER OF MODULES	2/4	8	12	24	36
COLOUR	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey
WITH TRANSPARENT DOOR	YES	YES	YES	YES	YES
WITH OPAQUE DOOR	YES	-	-	-	-
DOUBLE INSULATION	YES	YES	YES	YES	YES
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)
RESISTANCE TO HEAT	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C
OPERATING TEMPERATURE	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C
PROTECTION DEGREE	IP 65	IP 65	IP 65	IP 65	IP 65
MAX DISSIPATION POWER <sup>(1)</sup>	11 W	15 W	19 W	31 W	45 W
FLANGE FOR DIRECT BRANCH	-	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm
EXTRACTABLE FRAME	-	YES	YES	YES	YES
DESIGNED FOR MOULDED-CASE					
CIRCUIT BREAKERS	-	YES	YES	YES	YES
DESIGNED FOR RAPID CABLING	-	UNIFIX L	UNIFIX L	UNIFIX L	UNIFIX L

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

### Wall-mounting consumer units IP 65 Europa Series

CODE	12 724 – 12 744	12 728 – 12 748	12 732 – 12 752	12 733 – 12 753	12 734 – 12 754	12 735 – 12 755 12 736 – 12 756	12 738 – 12 758
NUMBER OF MODULES	4	8	12	18	24	36	54
COLOUR	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey
WITH TRANSPARENT DOOR	YES	YES	YES	YES	YES	YES	YES
WITH OPAQUE DOOR	YES	YES	YES	YES	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C	GWT 650 °C
TYPE OF MATERIAL	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic	Thermo-plastic
SHOCK RESISTANCE	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)	6 Joule (IK 08)
OPERATING TEMPERATURE	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C
RESISTANCE TO HEAT	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C	up to +85 °C
PROTECTION DEGREE	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65
MAX DISSIPATION POWER <sup>(1)</sup>	15 W	20 W	30 W	32 W	34 W	45 W	56 W
FLANGE FOR DIRECT BRANCH	-	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm
EXTRACTABLE MOULDED-CASE	YES	YES	YES	YES	YES	YES	YES
DESIGNED FOR MOULDED-CASE							
CIRCUIT BREAKERS	YES	YES	YES	YES	YES	YES	YES
DESIGNED FOR RAPID CABLING	-	UNIFIX L	UNIFIX L	UNIFIX L	UNIFIX L	UNIFIX L	UNIFIX L

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of Dt = 30 °C.

### Reaction to chemical agents (\*)

	Cold water	Hot water	Sulphuric acid 40%	Hydrochloric acid 35%	Acetic acid 10%	Benzole	Gasoline	Acetone	Ethyl alcohol	Ammonia liquid	Dichloromethane	Diesel oil- naphtha	Mineral oils and grases	Food oils and grases	Perchloroethylene	Trichloroethylene	Ethylether	Ozone	Toluene	Methanol	Spirits	Milk	Fruit juices	Fluoride hydrocarbons	Lye-washes	Cleansings	Water solution
IP 65 Fly and Europa Series wall-mounting consumer units	■	■	▲	▲	■	●	■	■	▲	■	■	■	■	■	●	●	●	■	●	▲	■	■	■	●	■	■	■

■ resistant ▲ partially resistant ● not resistant

VLLC00055

(\*) Indications concerning the resistance of the products to chemical agents must be considered as an indication only, and refer to standard conditions (40 °C, integral product).

# Further technical information and applications

## Consumer units for modular circuit breakers – summarised technical data

### IP 65 Marostica Series switchboards for industrial application with blank front

CODE	13 200	13 204	13 205	13 206	13 208
NUMBER OF MODULES	4	12	12	12	18
DIMENSIONS (mm)	136x540x110	275x370x140	275x455x140	275x570x140	380x570x140
COLOUR	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey
WITH TRANSPARENT DOOR	YES	YES	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 960 °C	GWT 960 °C	GWT 960 °C	GWT 960 °C	GWT 960 °C
TYPE OF MATERIAL	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
SHOCK RESISTANCE	20 Joule (IK 10)	20 Joule (IK 10)	20 Joule (IK 10)	20 Joule (IK 10)	20 Joule (IK 10)
OPERATING TEMPERATURE	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C
PROTECTION DEGREE	IP 65	IP 65	IP 65	IP 65	IP 65
MAX DISSIPATION POWER <sup>(1)</sup>	13 W	24 W	23 W	27 W	37 W
FLANGE FOR DIRECT BRANCH TRUNK	-	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of  $Dt = 30$  °C.

### IP 65 Europa Series switchboard for industrial applications

CODE	12 764-12 784	12 768-12 788	12 772-12 792	12 774-12 794	12 776-12 796	12 778-12 798
DIMENSIONS (mm)	140x220x140	205x220x140	275x220x140	275x370x140	275x570x140	380x570x140
COLOUR	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey	RAL 7035 grey
WITH TRANSPARENT DOOR	YES	YES	YES	YES	YES	YES
WITH OPAQUE DOOR	YES	YES	YES	YES	YES	YES
DOUBLE INSULATION	YES	YES	YES	YES	YES	YES
RESISTANCE TO HEAT	GWT 960 °C	GWT 960° C	GWT 960° C	GWT 960° C	GWT 960° C	GWT 960° C
TYPE OF MATERIAL	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
SHOCK RESISTANCE	20 Joule (IK 10)	20 Joule (IK 10)	20 Joule (IK 10)	20 Joule (IK 10)	20 Joule (IK 10)	20 Joule (IK 10)
OPERATING TEMPERATURE	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C	-25 °C ÷ +115 °C
PROTECTION DEGREE	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65
MAX DISSIPATION POWER <sup>(1)</sup>	10 W	19 W	25 W	40 W	61 W	75 W
FLANGE FOR DIRECT BRANCH TRUNK	-	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm	COND. AND TRUNK Ø 5÷35 mm
FIT FOR INSTALLING MCBS MOUNTING KIT	-	-	-	YES	YES	YES
FIT FOR INSTALLING BASE PLATE	YES	YES	YES	YES	YES	YES
FIT FOR INSTALLING FIXED COUNTER-DOOR	-	-	-	YES	YES	YES

(1) Data concerning dissipative power have been obtained by following the instructions in CEI 23-49 Standard, with a temperature difference of  $Dt = 30$  °C.

# Further technical information and applications

## Switchboards and boxes – reaction to chemical agents

Reaction to chemical agents (\*)

	Cold water	Hot water	Sulphuric acid 40%	Hydrochloric acid 35%	Acetic acid 10%	Benzole	Gasoline	Acetone	Ethyl alcohol	Ammonia liquid	Dichloromethane	Diesel oil- naphta	Mineral oils and grases	Food oils and grases	Perchloroethylene	Trichloroethylene	Ethylether	Ozone	Toluene	Methanol	Spirits	Milk	Fruit juices	Fluoride hydrocarbons	Lye-washes	Cleansings	Water solution	
IP 65 Europa Series and blank front switchboards	■	▲	■	▲	■	●	■	●	■	●	●	▲	■	■	●	●	●	■	●	●	■	■	■	■	●	▲	▲	■
IP 65 Marostica Series switchboards	■	▲	■	▲	■	●	■	●	■	●	●	▲	■	■	●	●	●	■	●	●	■	■	■	■	●	▲	▲	■
IP 44 junction boxes with press-on lid	■	■	▲	▲	■	▲	▲	■	■	■	▲	■	■	■	●	●	▲	▲	●	■	■	■	■	■	▲	■	■	■
IP 44 junction boxes with screw-on lid	■	▲	■	■	■	●	■	●	■	■	●	■	■	■	●	●	●	▲	●	■	■	■	■	■	●	■	■	■
IP 65 junction boxes in polycarbonate	■	▲	■	▲	■	●	■	●	■	●	●	▲	■	■	●	●	●	■	●	●	■	■	■	■	●	▲	▲	■
Wiring accessories boxes	■	■	▲	▲	■	●	●	●	■	■	●	▲	▲	■	●	●	●	■	●	■	■	■	■	■	●	■	■	■

■ resistant ▲ partially resistant ● not resistant

(\*) Indications concerning the resistance of the products to chemical agents must be considered as an indication only and refer to standard conditions (40 °C, integral product).

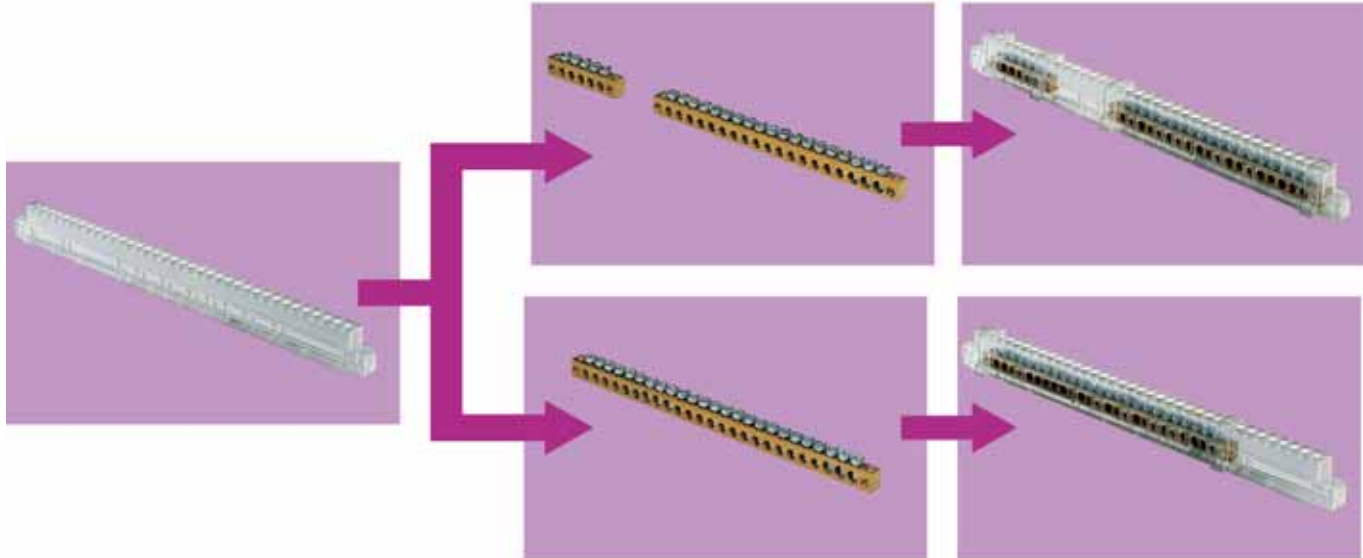
VL C000859

## Further technical information and applications

### Possible configurations of terminal holders – terminal bars for consumer units

Terminal holders and bars are supplied separately; in this way, by inserting one or two terminal bars in the terminal holders, you can create the best terminal for your requirements. All the possible configurations for creating each type of container are

given in the table below. Not only do you have the advantage of being able to create a personalised terminal but clearly there will be an economic advantage from using only that which is really necessary.



#### IP 40 Estetica Series flush-mounting consumer units

#### IP 40 Europa Series flush-mounting consumer units

#### IP 40 Unibox Series flush and wall-mounting consumer units

#### IP 40 Europa Series wall-mounting consumer units

For consumer units Number of modules	Terminal holder Code	Terminal bars Code x q.ty
8	12 540	12 531x1
	12 540	12 531x2
	12 540	12 531x1 with 12 532x1
	12 540	12 532x1
	12 540	12 533x1
	12 540	12 534x1
12	12 541	12 531x1
	12 541	12 531x2
	12 541	12 531x1 with 12 532x1
	12 541	12 531x1 with 12 533x1
24	12 541	12 531x1 with 12 534x1
	12 541	12 531x1 with 12 535x1
36 (12 modules x 3 rows)	12 541	12 532x1
	12 541	12 532x2
	12 541	12 533x1
	12 541	12 534x1
	12 541	12 535x1
18	12 542	12 531x1
	12 542	12 531x2
	12 542	12 531x1 with 12 532x1
	12 542	12 531x1 with 12 533x1
	12 542	12 531x1 with 12 534x1
	12 542	12 531x1 with 12 535x1
54	12 542	12 532x1
	12 542	12 532x2
	12 542	12 532x1 with 12 533x1
	12 542	12 532x1 with 12 534x1
	12 542	12 533x1
	12 542	12 534x1
	12 542	12 535x1

For consumer units Number of modules	Terminal holder Code	Terminal bars Code x q.ty
8	12 540	12 531x1
	12 540	12 531x2
	12 540	12 531x1 with 12 532x1
	12 540	12 532x1
	12 540	12 533x1
	12 540	12 534x1
12	12 541	12 531x1
	12 541	12 531x2
	12 541	12 531x1 with 12 532x1
	12 541	12 531x1 with 12 533x1
24	12 541	12 531x1 with 12 534x1
	12 541	12 531x1 with 12 535x1
36 (12 modules x 3 rows)	12 541	12 532x1
	12 541	12 532x2
	12 541	12 533x1
	12 541	12 534x1
	12 541	12 535x1
54	12 543	12 531x1
	12 543	12 531x2
	12 543	12 531x1 with 12 532x1
	12 543	12 531x1 with 12 533x1
	12 543	12 531x1 with 12 534x1
	12 543	12 531x1 with 12 535x1
	12 543	12 532x1
	12 543	12 532x2
	12 543	12 532x1 with 12 533x1
	12 543	12 532x1 with 12 534x1
	12 543	12 532x1 with 12 535x1
	12 543	12 533x1
	12 543	12 533x2
	12 543	12 533x1 with 12 534x1
12 543	12 533x1 with 12 535x1	

# Further technical information and applications

## Possible configurations of terminal holders – terminal bars for consumer units

IP 40 Europa Series wall-mounting consumer units  
 IP 65 Europa Series wall-mounting consumer units  
 IP 65 Fly Series wall-mounting consumer units

For consumer units Number of modules	Terminal holder Code	Terminal bars Code x q.ty
4	12 538	12 531x1
8	12 539	12 531x1
12	12 540	12 531x1
24	12 540	12 531x2
36	12 540	12 531x1 with 12 532x1
(12 mod. x 3 rows)	12 540	12 532x1
	12 540	12 533x1
	12 540	12 534x1
	12 543	12 531x1
	12 543	12 531x2
	12 543	12 531x1 with 12 532x1
	12 543	12 531x1 with 12 533x1
18	12 543	12 531x1 with 12 534x1
	12 543	12 531x1 with 12 535x1
36	12 543	12 532x1
(18 mod.x 2 rows)	12 543	12 532x2
	12 543	12 532x1 with 12 533x1
	12 543	12 532x1 with 12 534x1
54	12 543	12 532x1 with 12 535x1
	12 543	12 533x1
	12 543	12 533x2
	12 543	12 533x1 with 12 534x1
	12 543	12 534x1
	12 543	12 534x2
	12 543	12 535x1

Europa Series consumer units for industrial applications

For boxes dimensions	Terminal holder Code	Terminal bars Code x q.ty
140x220x140	12 538	12 531x1
205x220x140	12 539	12 531x1
	12 540	12 531x1
	12 540	12 531x2
275x220x140	12 540	12 531x1 with 12 532x1
275x370x140	12 540	12 532x1
275x570x140	12 540	12 533x1
	12 540	12 534x1
	12 543	12 531x1
	12 543	12 531x2
	12 543	12 531x1 with 12 532x1
	12 543	12 531x1 with 12 533x1
	12 543	12 531x1 with 12 534x1
	12 543	12 531x1 with 12 535x1
	12 543	12 532x1
380x570x140	12 543	12 532x2
	12 543	12 532x1 with 12 533x1
	12 543	12 532x1 with 12 534x1
	12 543	12 532x1 with 12 535x1
	12 543	12 533x1
	12 543	12 533x2
	12 543	12 533x1 with 12 534x1
	12 543	12 534x1
	12 543	12 534x2
	12 543	12 535x1

# Further technical information and applications

## Possible configurations of terminal holders – terminal bars for consumer units

### Switchboards with blank front for industrial applications

For boxes dimensions	Terminal holder Code	Terminal bars Code x q.ty		
<b>275x370x140</b>	12 540	12 531x1		
	12 540	12 531x2		
	12 540	12 531x1 with 12 532x1		
	<b>275x455x140</b>	12 540	12 532x1	
		<b>275x570x140</b>	12 540	12 533x1
			12 540	12 534x1
	<b>380x570x140</b>	12 543	12 531x1	
		12 543	12 531x2	
		12 543	12 531x1 with 12 532x1	
		12 543	12 531x1 with 12 533x1	
12 543		12 531x1 with 12 534x1		
12 543		12 531x1 with 12 535x1		
12 543		12 532x1		
12 543		12 532x2		
12 543		12 532x1 with 12 533x1		
12 543		12 532x1 with 12 534x1		
12 543		12 532x1 with 12 535x1		
12 543		12 533x1		
12 543		12 533x2		
12 543		12 533x1 with 12 534x1		
12 543		12 534x1		
12 543		12 534x2		
12 543		12 535x1		

### Marostica Series modular switchboards

For boxes dimensions	Terminal holder Code	Terminal bars Code x q.ty		
<b>275x370x140</b>	12 540	12 531x1		
	12 540	12 531x2		
	12 540	12 531x1 with 12 532x1		
	<b>275x455x140</b>	12 540	12 532x1	
		<b>275x570x140</b>	12 540	12 533x1
			12 540	12 534x1
	<b>380x570x140</b>	12 543	12 531x1	
		12 543	12 531x2	
		12 543	12 531x1 with 12 532x1	
		12 543	12 531x1 with 12 533x1	
12 543		12 531x1 with 12 534x1		
12 543		12 531x1 with 12 535x1		
12 543		12 532x1		
12 543		12 532x2		
12 543		12 532x1 with 12 533x1		
12 543		12 532x1 with 12 534x1		
12 543		12 532x1 with 12 535x1		
12 543		12 533x1		
12 543		12 533x2		
12 543		12 533x1 with 12 534x1		
12 543		12 534x1		
12 543		12 534x2		
12 543		12 535x1		

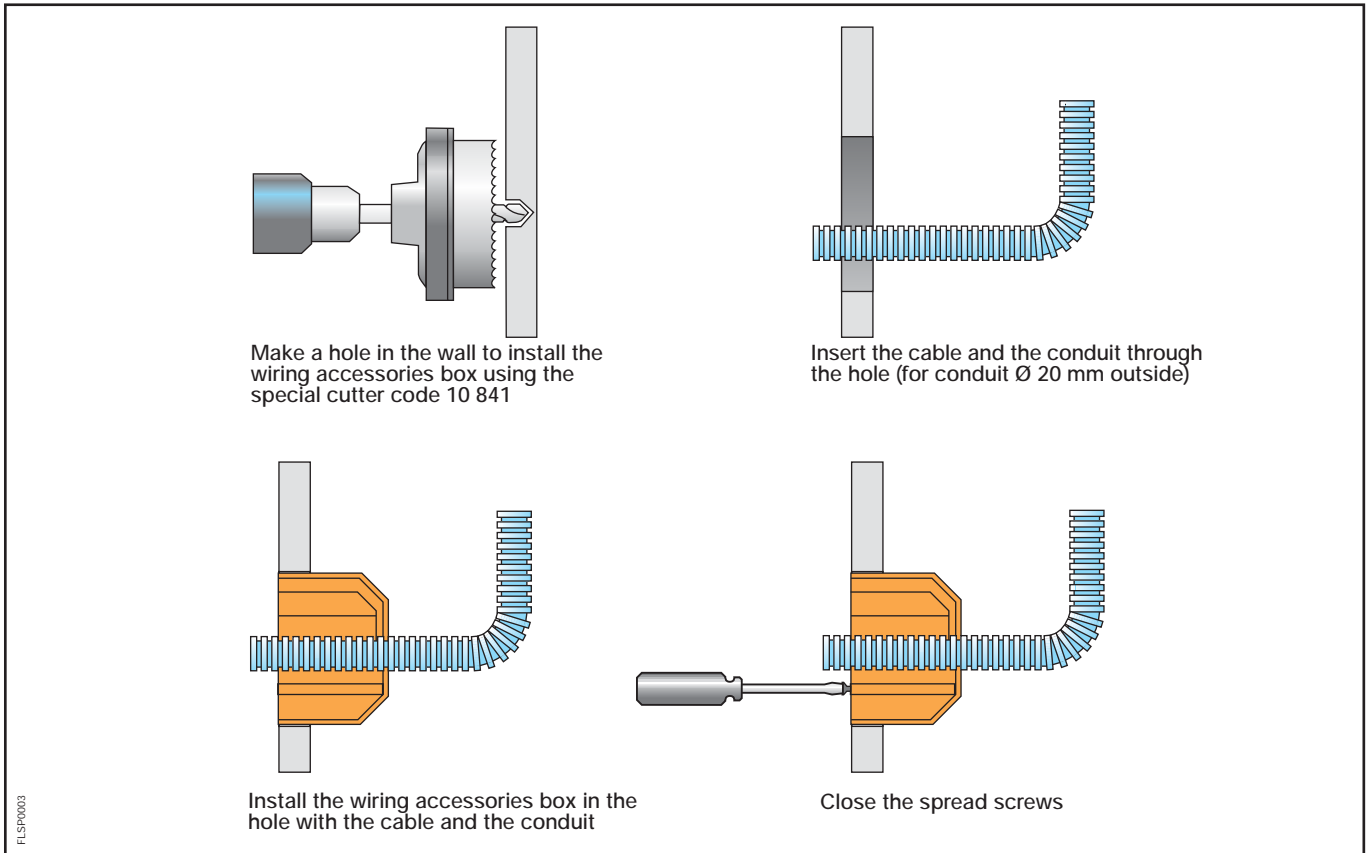
### IP65 junction boxes in polycarbonate

For boxes dimensions	Terminal holder Code	Terminal bars Code x q.ty		
<b>140x220x140</b>	12 538	12 531x1		
<b>205x220x140</b>	12 539	12 531x1		
<b>275x220x140</b>	12 540	12 531x1		
	12 540	12 531x2		
	12 540	12 531x1 with 12 532x1		
	<b>275x370x140</b>	12 540	12 532x1	
		<b>275x570x140</b>	12 540	12 533x1
			12 540	12 534x1
	<b>380x570x140</b>	12 543	12 531x1	
		12 543	12 531x2	
		12 543	12 531x1 with 12 532x1	
		12 543	12 531x1 with 12 533x1	
12 543		12 531x1 with 12 534x1		
12 543		12 531x1 with 12 535x1		
12 543		12 532x1		
12 543		12 532x2		
12 543		12 532x1 with 12 533x1		
12 543		12 532x1 with 12 534x1		
12 543		12 532x1 with 12 535x1		
12 543		12 533x1		
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12 543		12 533x1 with 12 534x1		
12 543		12 534x1		
12 543		12 534x2		
12 543		12 535x1		

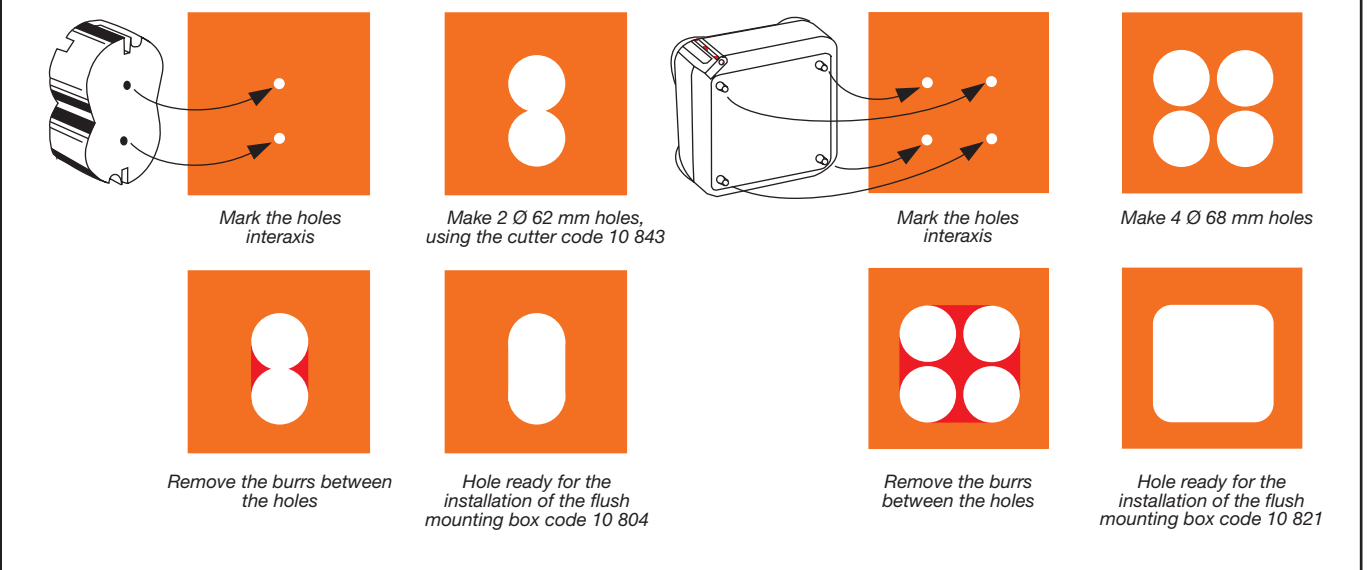
# Further technical information and applications

## Enclosures and boxes for light prefabrication

To install the wiring accessories boxes in light prefabricated walls, a wide range of special cutters is available; the mounting sequence is indicated as follows.



The same cutters can be used to install wiring accessories modular boxes and boxes for operating consumer units, as shown in the following pictures.



# Further technical information and applications

## Mounting examples and functional details

### Flush-mounting Unibox, Europa and Estetica Series



1SLC001064F0001

▲ By combining the copper terminal bars to the corresponding plastic terminal holders, according to the configuration, the consumer unit terminal can be fitted with Neutral (N) or Earth (E).



1SLC001064F0001



1SLC001062F0001

▲ An extractable frame is available also in the single row version, making bench cabling operations easier.



1SLC001063F0001

▲ The handy slots made to attach the unit to the frame guarantee correct alignment even when the flush-mounting box has not been installed on perfectly flat surfaces.

# Further technical information and applications

## Mounting examples and functional details

### Flush-mounting Europa Series



▲ The extractable DIN rail frame makes bench cabling easy.



▲ The two housings on the sides of the front ensure that the door is completely reversible and therefore it can be mounted on the right or on the left according to specific requirements.

◀ The roomy interiors make cabling easy and simple.

# Further technical information and applications

## Mounting examples and functional details

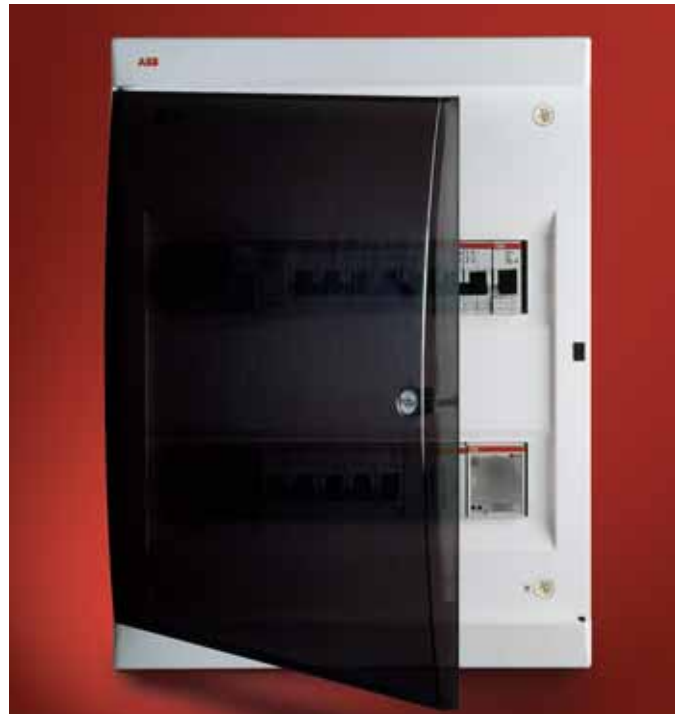
### Wall-mounting Unibox Series



FLCO9881

▲ The knockout cut halfway down the module on both sides makes it possible to fit an extra module corresponding to each row of circuit breakers.

The cover is fitted using rapid ► pitch screws in insulating thermo-plastic that can be lead-sealed if



FLCO9910



FLCO9840

▲ The push-pull mechanism means that the door can be closed easily.



FLCO9874

▲ The door can be fitted with a lock with a coded key.



FLCO9876

▲ The knockouts in the cover give maximum flexibility in trunking branch connections.



FLCO9877

▲ The accurate alignment system engraved on the top and bottom of the base of the consumer unit makes it easy to position the branch connection trunking.



FLCO9838

▲ The consumer unit is designed with a flange so that it can be used for branch connection using a conduit; the knockouts make it possible to make branch connections with conduits with a maximum diameter of 40 mm.



FLCO9879

# Further technical information and applications

## Mounting examples and functional details

### Wall-mounting Unibox Series



FLC09819



FLC09839

▲ Thanks to plenty of room under the DIN rail it is possible to install the cables tidily and rationalise their paths.



FLC09872

▲ A characteristic of consumer units in the UNIBOX Series is the frame, which can be kept in an angled position thanks to practical wires, making it easier to work on the connection cables.



FLC09873

▲ The modular, snap-on frame is easy to extract and is therefore ideal for bench cabling.



FLC09837

▲ The special caps used to cover the holes for attaching to the wall ensure that the consumer unit is double insulated.



FLC09875

▲ The base, on which push-in inlets have been made, is specially designed for the installation of corrugated conduits coming from the wall.



FLC09880

▲ The practical holding system secures the incoming and outgoing cables to a special comb accessory, which not only keeps the cables tidy but also protects the devices' terminals from any direct mechanical

# Further technical information and applications

## Mounting examples and functional details

### IP 65 Fly and Europa Series



1SLC001068F0001



FLC09824

▲ Thanks to the expanded polyurethane seal inserted between the door and the front of the consumer unit, using the continuous casting process, the IP 65 protection degree is guaranteed, also making it impossible to lose the seal itself.

▲ The door is designed so that a lock with a coded key can be fitted.



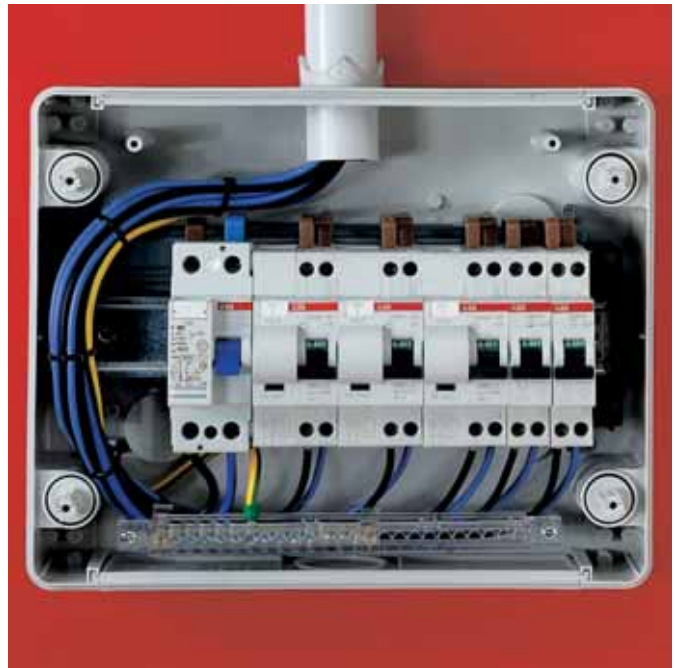
1SLC001069F0001



FLC09821

▲ Models with 8 modules and more have been designed to use the UNIFIX L rapid cabling system.

By combining the copper terminal bars to the corresponding plastic terminal holders, according to the configuration, the consumer unit terminal can be fitted with Neutral (N) or Earth (E).



1SLC001070F0001



1SLC001071F0001

The push-in flange makes it possible to carry out direct conduit and cable branch connections without having to use cable clamps, conduit clamps or connectors, with an obvious saving in terms of time and cabling costs.



1SLC001072F0001

# Further technical information and applications

## Mounting examples and functional details

### IP 65 Fly and Europa Series



▲ When fixing the unit to the wall from the inside, the special hole caps ensure double insulation is maintained.



▲ Using the brackets it is easy to fix the consumer unit in any



▲ The frame that can be fitted onto the consumer unit makes semi-flush mounting possible, guaranteeing an attractive finish.



◀ Using the special hinges supplied the cover can be secured to the frame to make maintenance work

◀ The snap-on, extractable DIN rail frame simplifies and speeds up bench cabling operations.

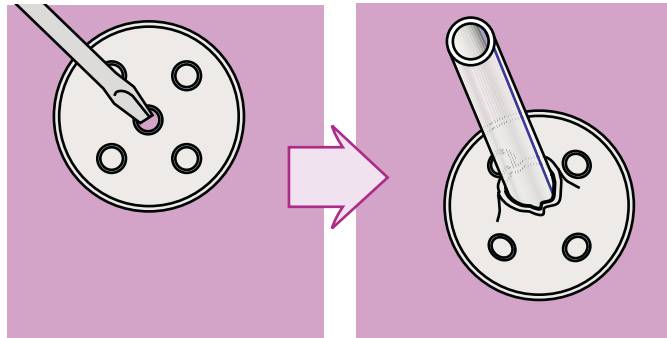
## Further technical information and applications

### Branch connections using the bi-material flange

DIRECT APPLICATION WITH CONDUIT OR CABLE

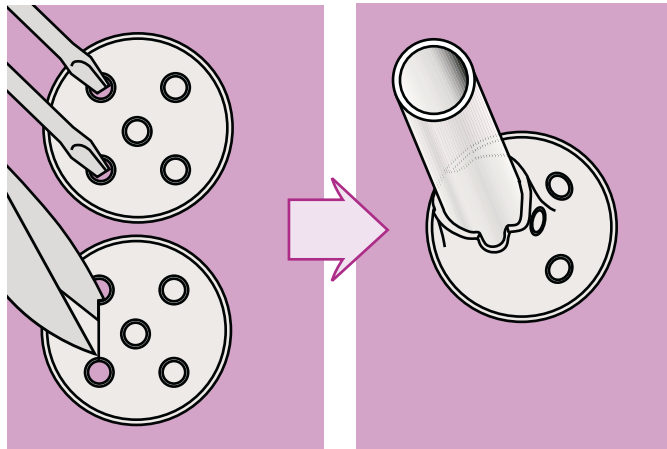
#### from 5 to 16 mm

Make a hole where indicated using a screw driver to insert cables or conduits with a diameter of from 5 to 16 mm



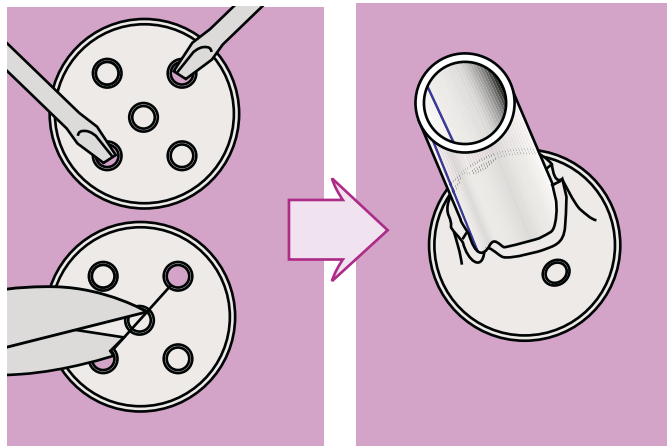
#### from 17 to 20 mm

To insert cables or conduits up to 20 mm, make holes in the points indicated using a screwdriver and cut the rubber using scissors



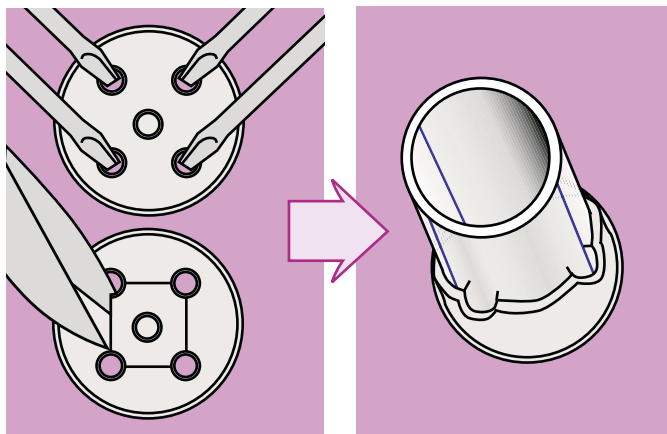
#### from 21 to 24 mm

To insert cables or conduits up to 24 mm, make holes in the points indicated using a screwdriver and cut the rubber using scissors

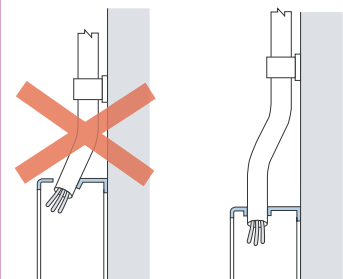


#### from 25 to 35 mm

To insert cables with a diameter up to 35 mm and conduits up to 32 mm, make holes in the points indicated using a screwdriver and cut the rubber using scissors



How to insert cables and conduits.



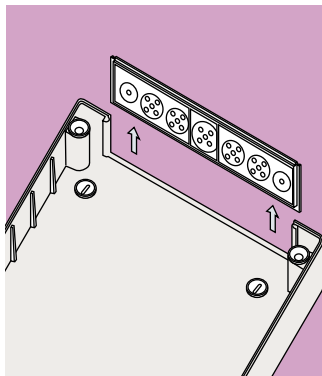
# Further technical information and applications

## Branch connections using the bi-material flange

### APPLICATION WITH CONDUIT OR CABLE CLAMPS

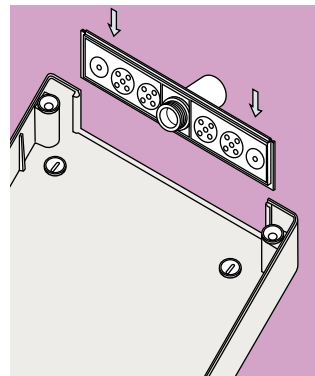
1

Possible extraction of the flange



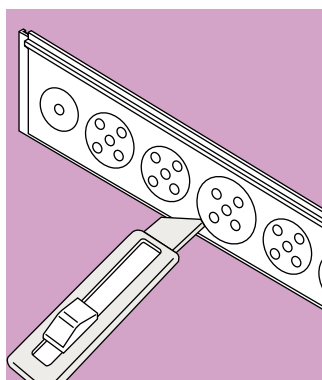
4

Inserting the flange into the base of the enclosure



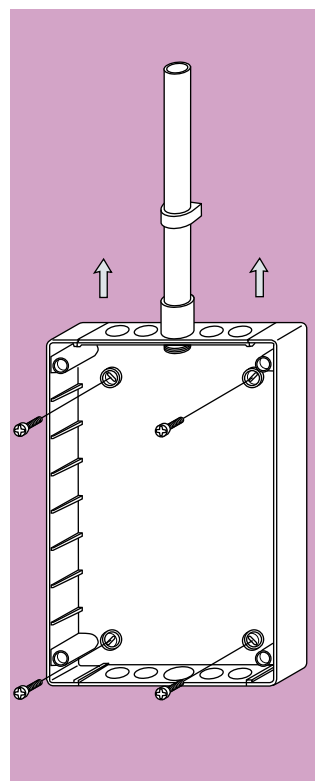
2

Identification and cutting of the suitable inlet (you must remove all the soft part)



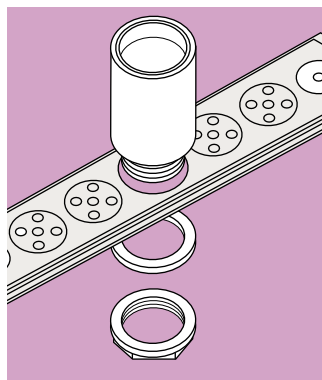
5

Fixing the base of the enclosure to the wall



3

Branch connection using the conduit/cable clamp box connector



9

### Suitable ABB codes for branch connection with flange in bi-material

Inlets for flange [mm]	Cable-gland [mm]	Conduit clamp - box connector [mm]
Ø 23.5	<b>00 934 - 00 944</b> PG 16 (Ø 13/16)	<b>00 431</b> Ø 20
Ø 30	<b>00 935 - 00 945</b> PG 21 (Ø 17/29)	<b>00 432</b> Ø 25
Ø 37.5	<b>00 936 - 00 946</b> PG 29 (Ø 21/26)	<b>00 433</b> Ø 32





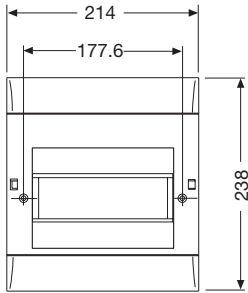
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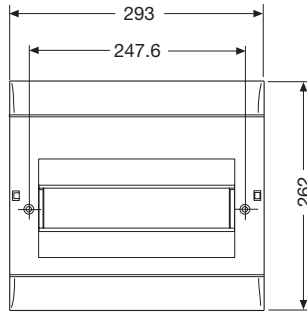
# Overall dimensions

## IP 40 Unibox Series flush-mounting consumer units

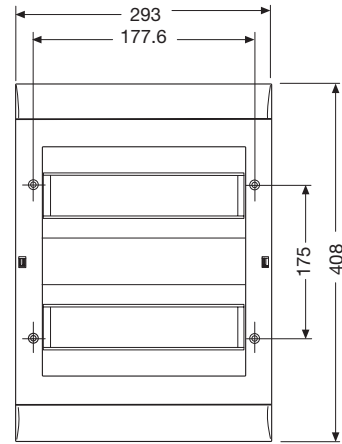
### Front view



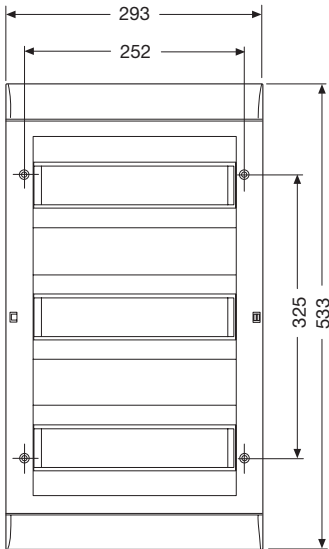
8 modules



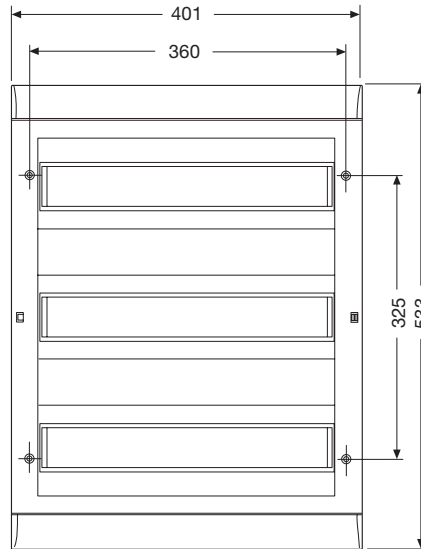
12 modules



24 modules

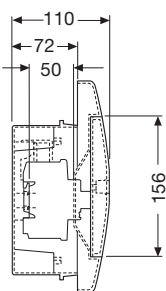


36 modules

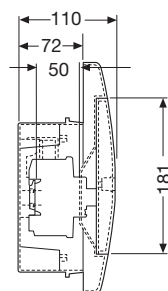


54 modules

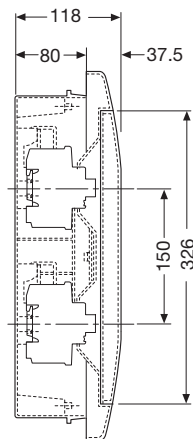
### Side view



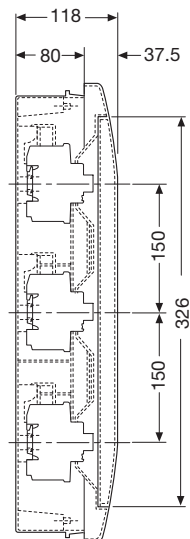
8 modules



12 modules



24 modules



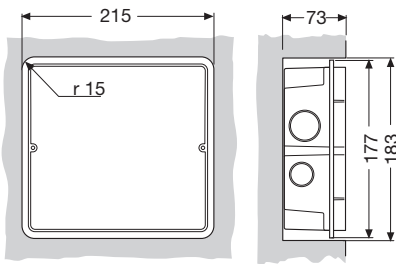
36/54 modules

XC00665

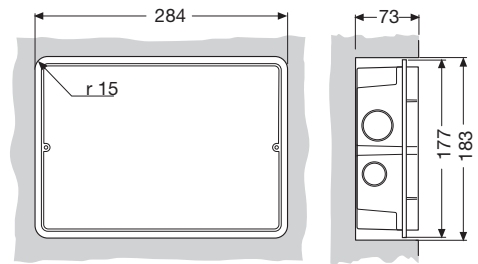
# Overall dimensions

## IP 40 Unibox Series flush-mounting consumer units

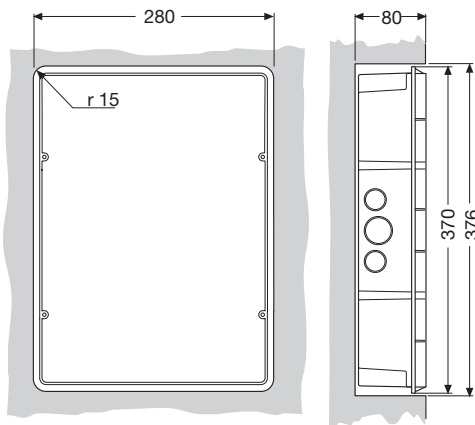
### Drilling sheets



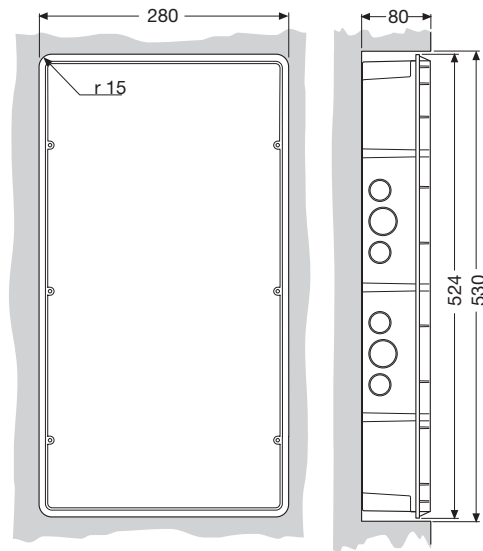
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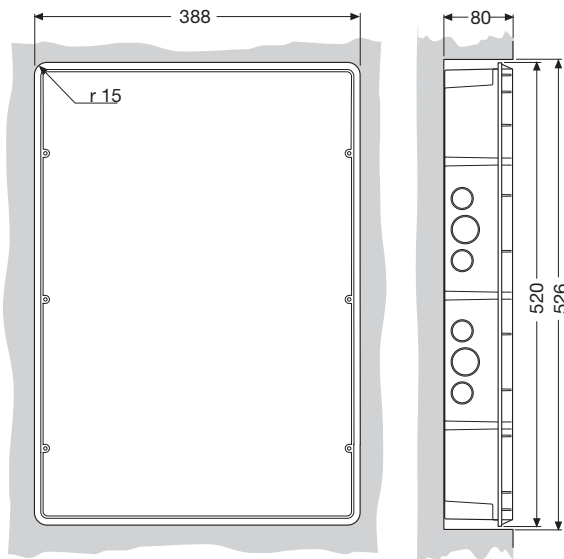
12 modules



24 modules



36 modules



54 modules

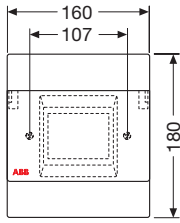
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12 modules	1SL0511A00 - 1SL0522A00 - 1SL0536A00 - 1SL0501A00 - 1SL0522A00 - 1SL0537A00
24 modules	1SL0512A00 - 1SL0502A00
36 modules	1SL0513A00 - 1SL0503A00
54 modules	1SL0514A00 - 1SL0504A00

VIC000066

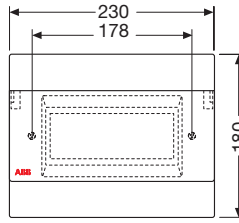
# Overall dimensions

## IP 40 Estetica Series flush-mounting consumer units

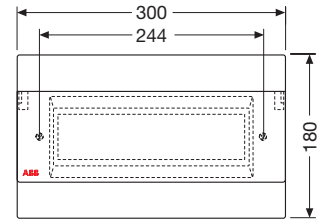
### Front view



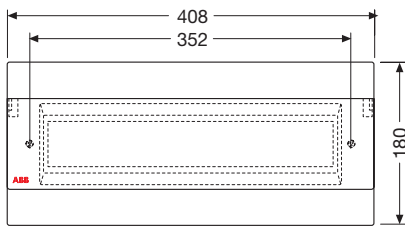
4 modules



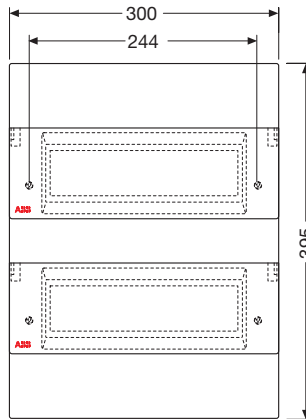
8 modules



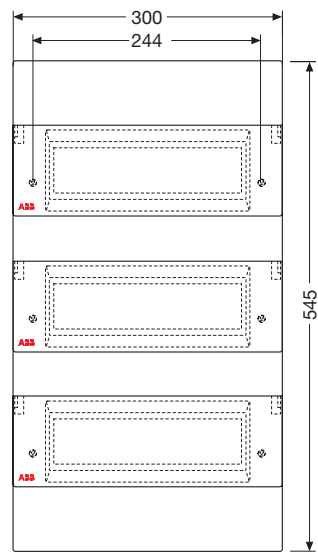
12 modules



18 modules

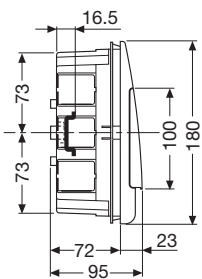


24 modules

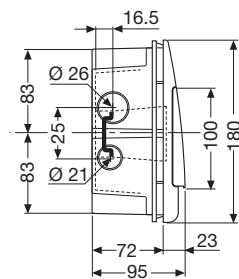


36 modules

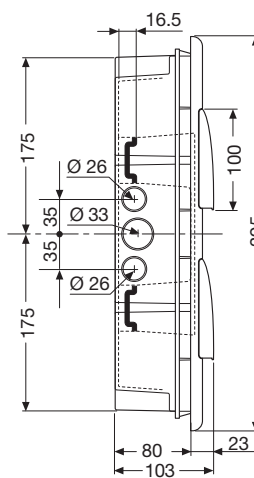
### Side view



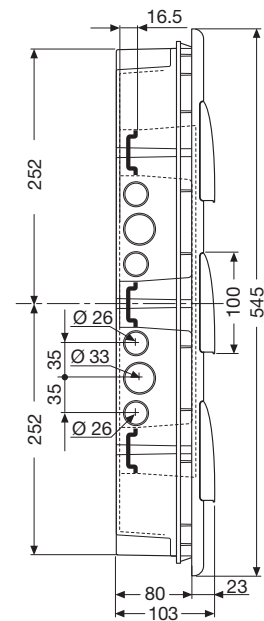
4 modules



8/12/18 modules



24 modules

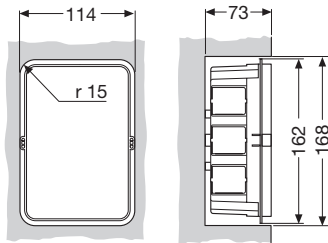


36 modules

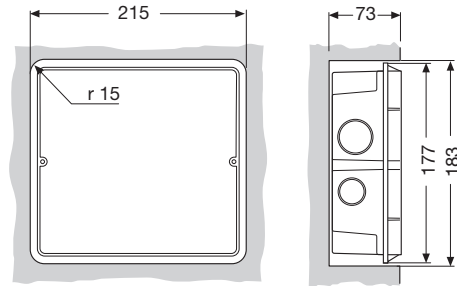
# Overall dimensions

## IP 40 Estetica Series flush-mounting consumer units

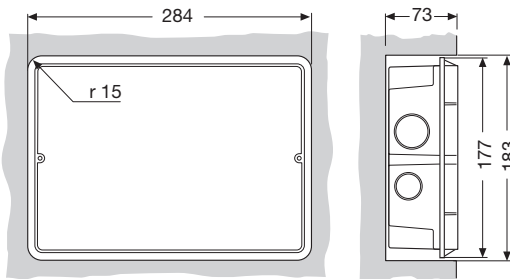
### Drilling sheet



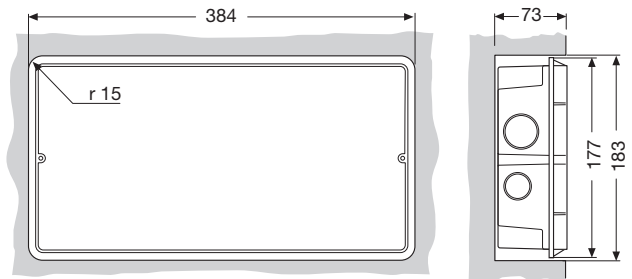
4 modules



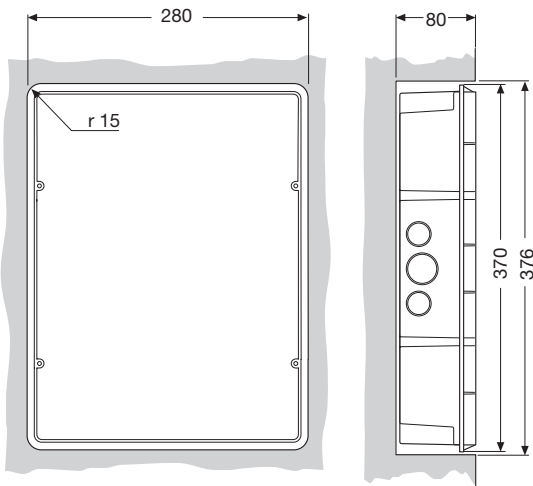
8 modules



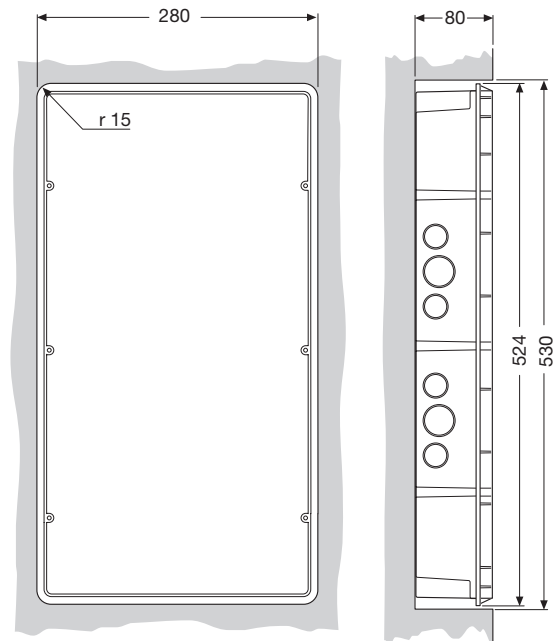
12 modules



18 modules



24 modules



36 modules

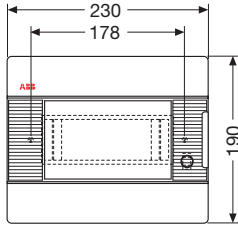
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8 modules	1SL2008A00 - 1SL2028A00 - 12 038 - 1SL0521A00 - 1SL0534A00 - 1SL0535A00 - 1SL0554A00
12 modules	1SL2012A00 - 1SL2032A00 - 12 042 - 1SL0522A00 - 1SL0538A00 - 1SL0539A00 - 1SL0555A00
18 modules	1SL2013A00 - 1SL2033A00 - 12 043 - 1SL0523A00 - 1SL0540A00 - 1SL0541A00 - 1SL0556A00
24 modules	1SL2014A00 - 1SL2034A00 - 12 044
36 modules	1SL2016A00 - 1SL2036A00 - 12 046

VLCC0002

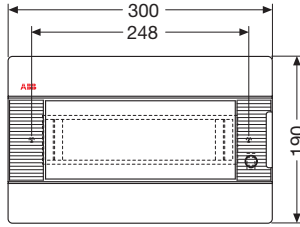
# Overall dimensions

## IP 40 Europa Series flush-mounting consumer units

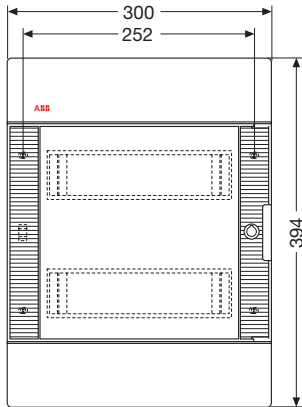
### Front view



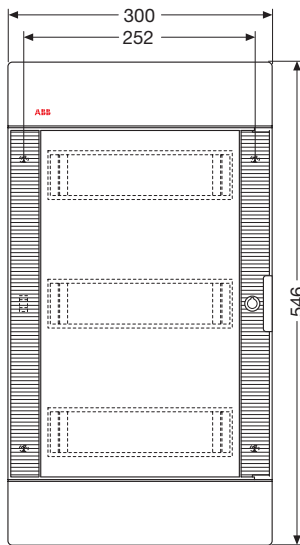
8 modules



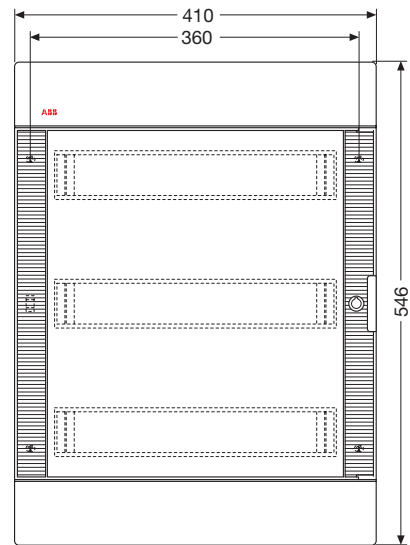
12 modules



24 modules

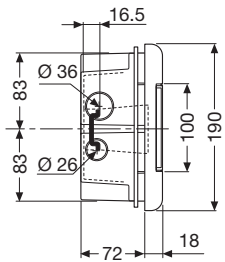


36 modules

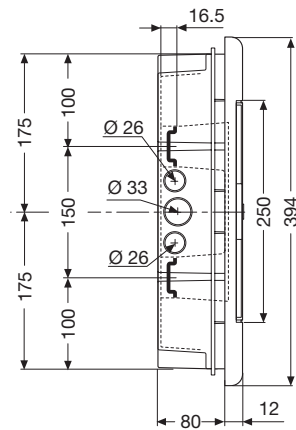


54 modules

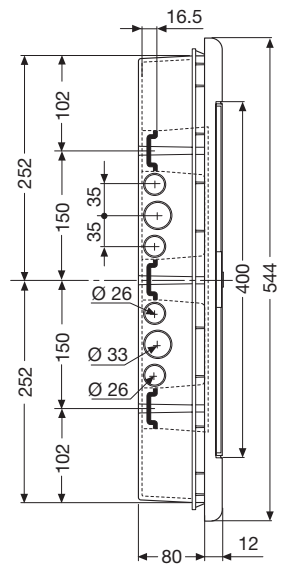
### Side view



8/12 modules



24 modules

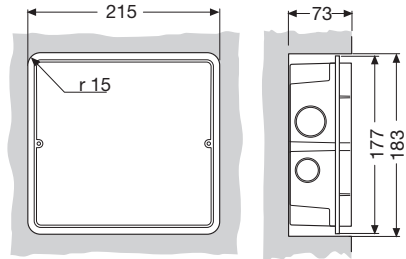


36/54 modules

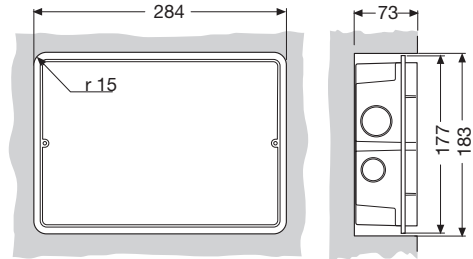
# Overall dimensions

## IP 40 Europa Series flush-mounting consumer units

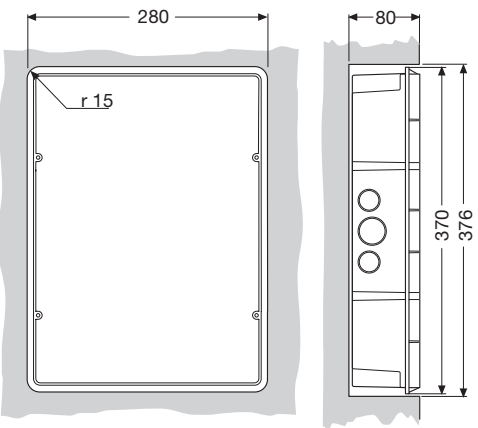
### Drilling sheets



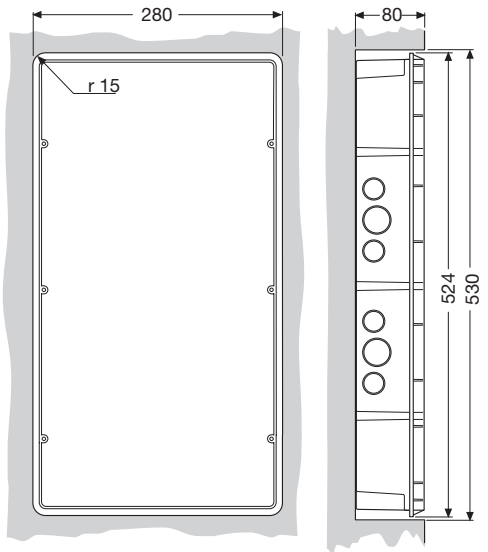
8 modules



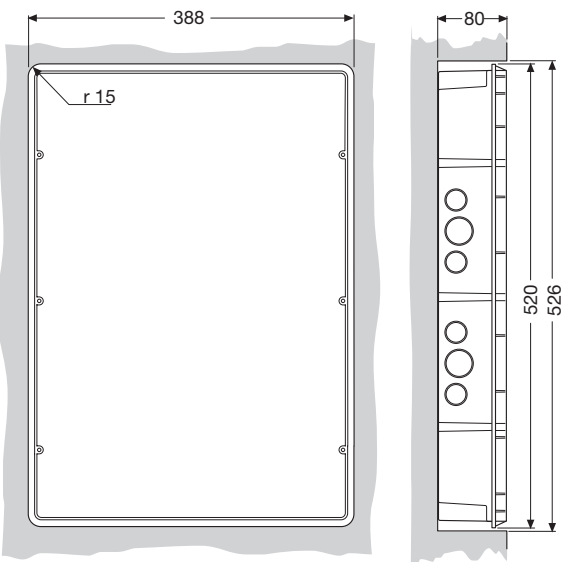
12 modules



24 modules



36 modules



54 modules

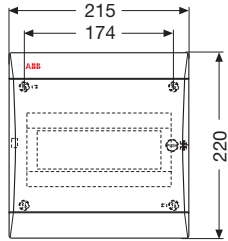
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24 modules	1SL2045A00 - 12 030 - 1SL2063A00 - 12 064
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1LCC0004

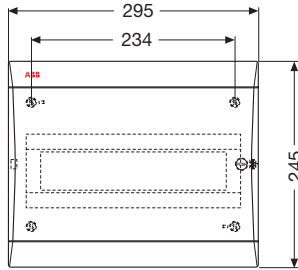
# Overall dimensions

## IP 40 Unibox Series wall-mounting consumer units

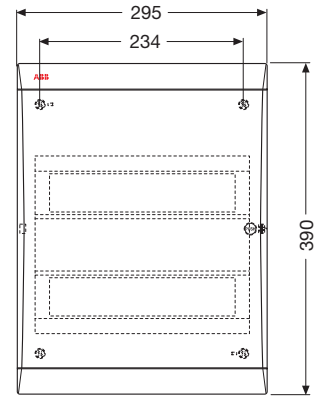
### Front view



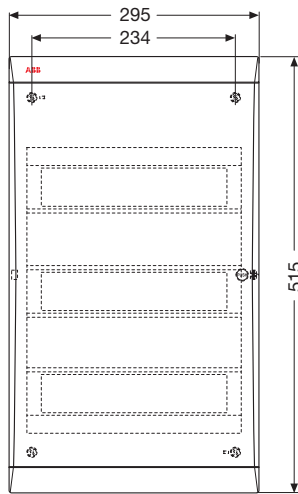
8 modules



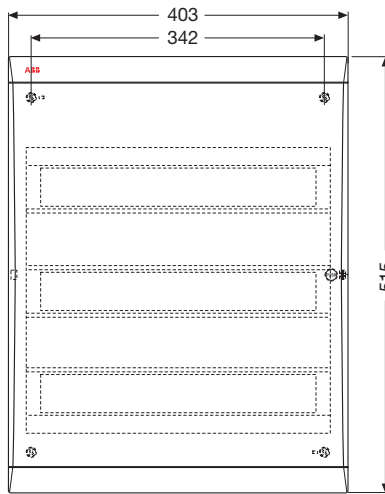
12 modules



24 modules

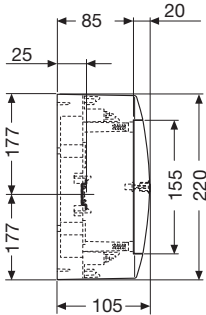


36 modules

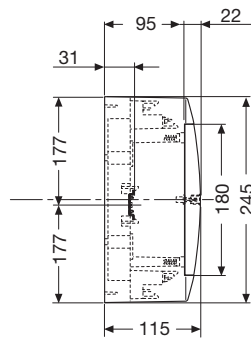


54 modules

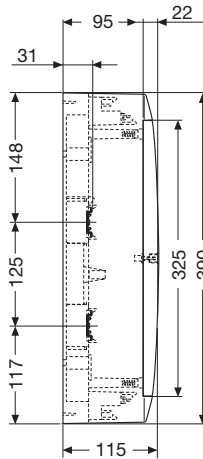
### Side view



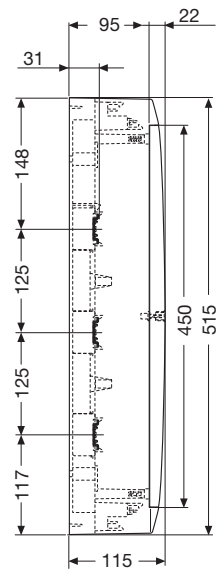
8 modules



12 modules



24 modules



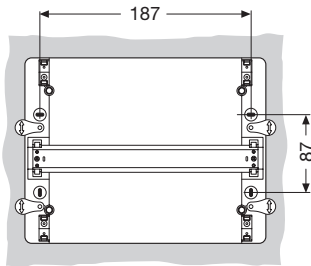
36-54 modules

VLC00005

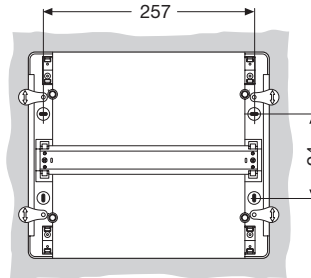
# Overall dimensions

## IP 40 Unibox Series wall-mounting consumer units

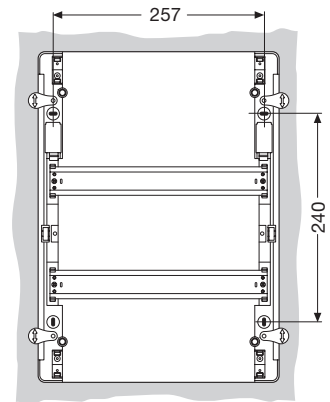
### Drilling sheets



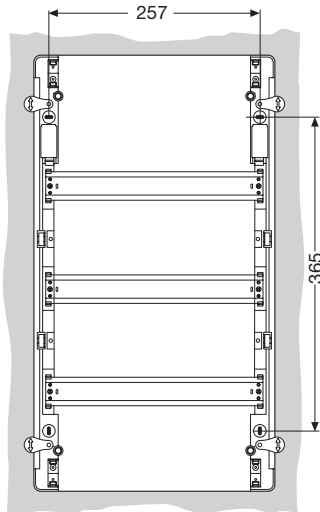
8 modules



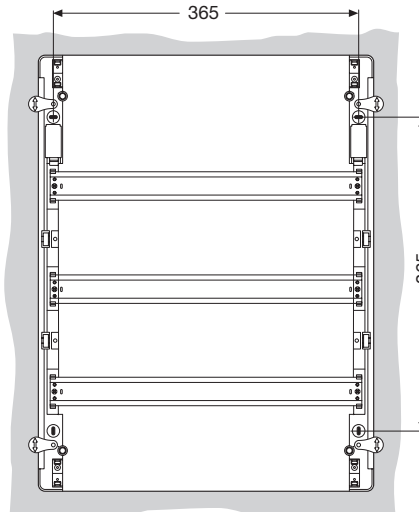
12 modules



24 modules



36 modules



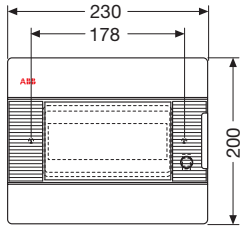
54 modules

modules	code
8 modules	12 208 - 12 228 - 12 238 - 12 248 - 12 258 - 12 268
12 modules	12 212 - 12 232 - 12 242 - 12 252 - 12 262 - 12 272
24 modules	12 214 - 12 234 - 12 244 - 12 254 - 12 264 - 12 274
36 modules	12 216 - 12 236 - 12 246 - 12 256 - 12 266 - 12 276
54 modules	12 217 - 12 237 - 12 247 - 12 257 - 12 267 - 12 277

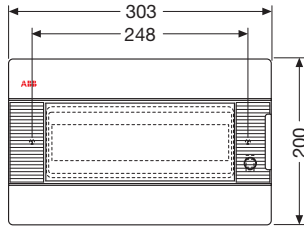
# Overall dimensions

## IP 40 Europa Series wall-mounting consumer units

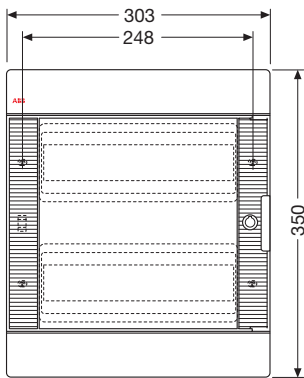
### Front view



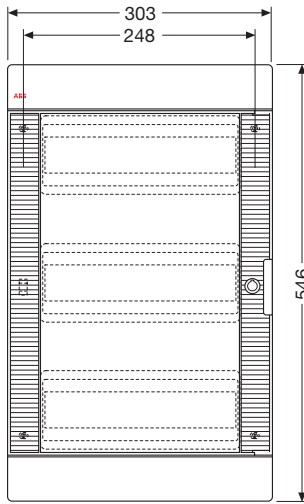
8 modules



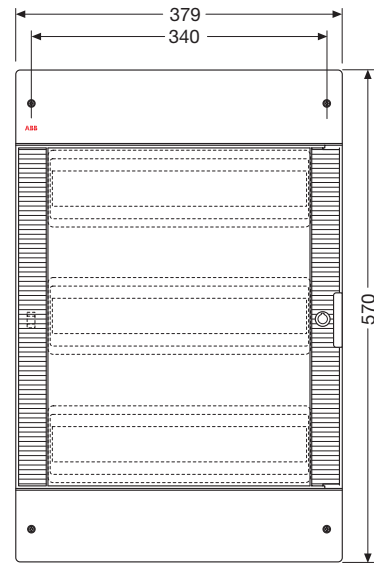
12 modules



24 modules

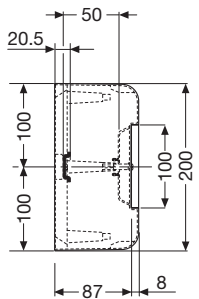


36 modules

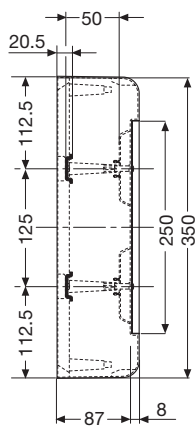


54 modules

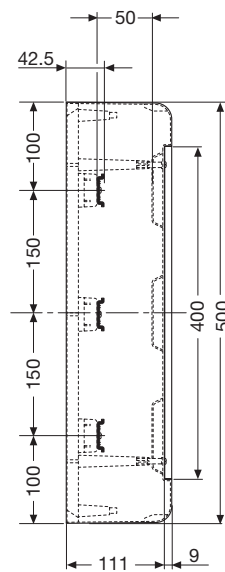
### Side view



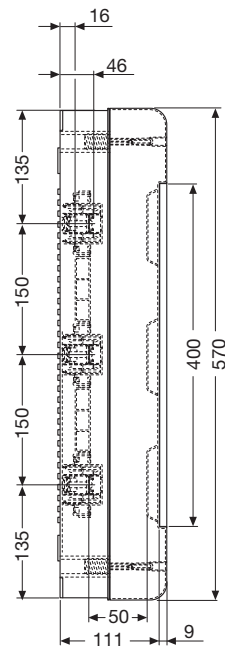
8/12 modules



24 modules



36 modules



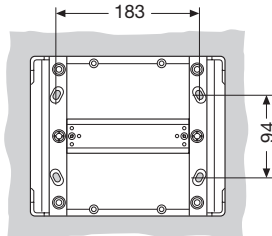
54 modules

VLL00007

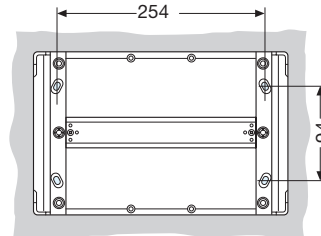
# Overall dimensions

## IP 40 Europa Series wall-mounting consumer units

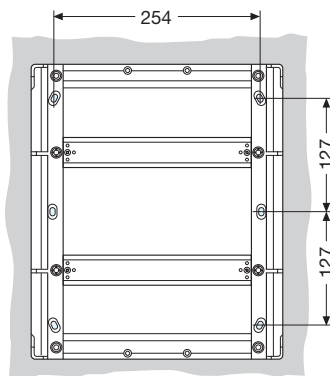
### Drilling sheets



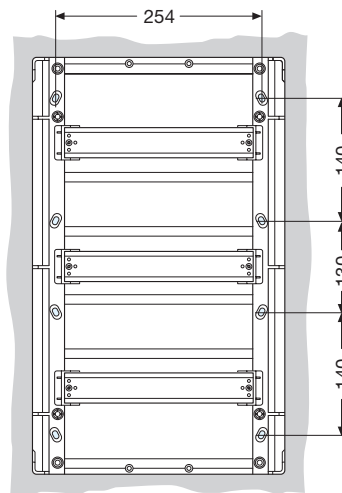
8 modules



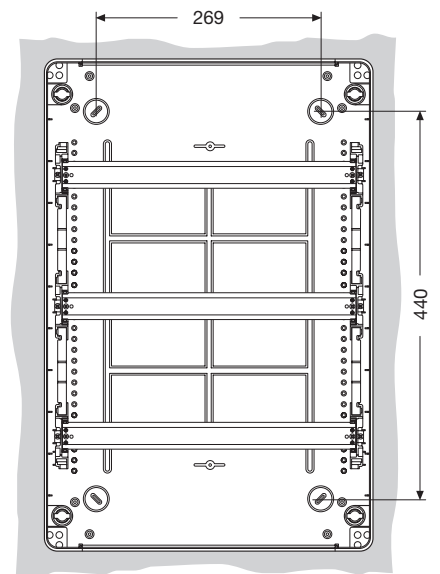
12 modules



24 modules



36 modules



54 modules

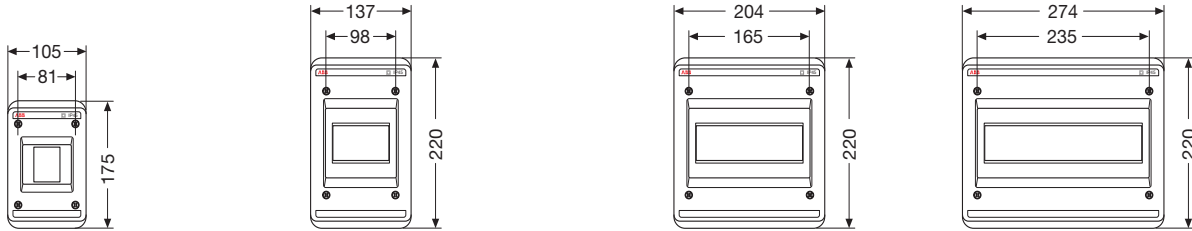
modules	code
8 modules	1SL2408A00 - 12 428 - 1SL2438A00 - 12 448 - 1SL2458A00 - 12 468
12 modules	1SL2412A00 - 12 432 - 1SL2442A00 - 12 452 - 1SL2462A00 - 12 472
24 modules	1SL2414A00 - 12 434 - 1SL2444A00 - 12 454 - 1SL2464A00 - 12 474
36 modules	1SL2416A00 - 12 436 - 1SL2446A00 - 12 456 - 1SL2466A00 - 12 476
54 modules	1SL2417A00 - 12 437 - 1SL2447A00 - 12 457 - 1SL2467A00 - 12 477

VLCO0008

# Overall dimensions

## IP 40 Europa Polycarbonate Series wall-mounting consumer units

### Front view

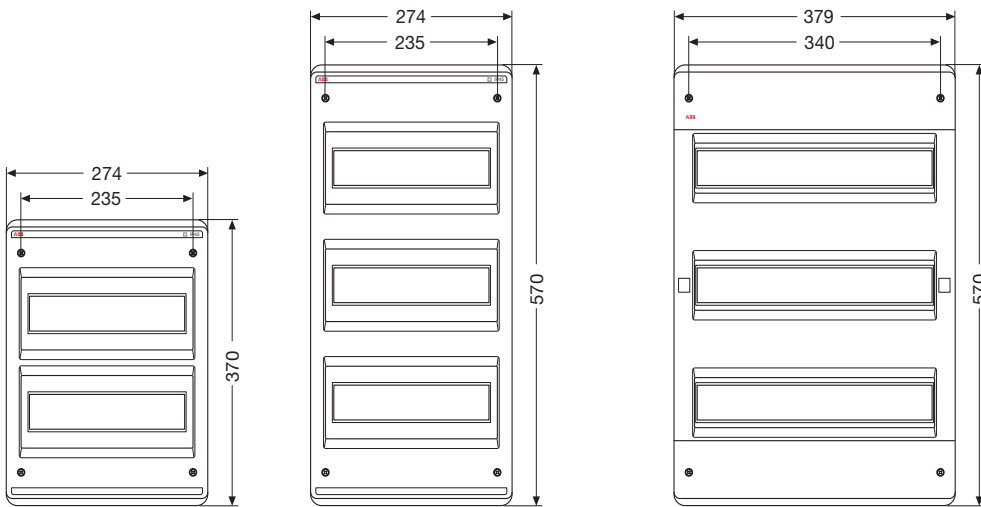


2-4 modules

4 modules

8 modules

12 modules

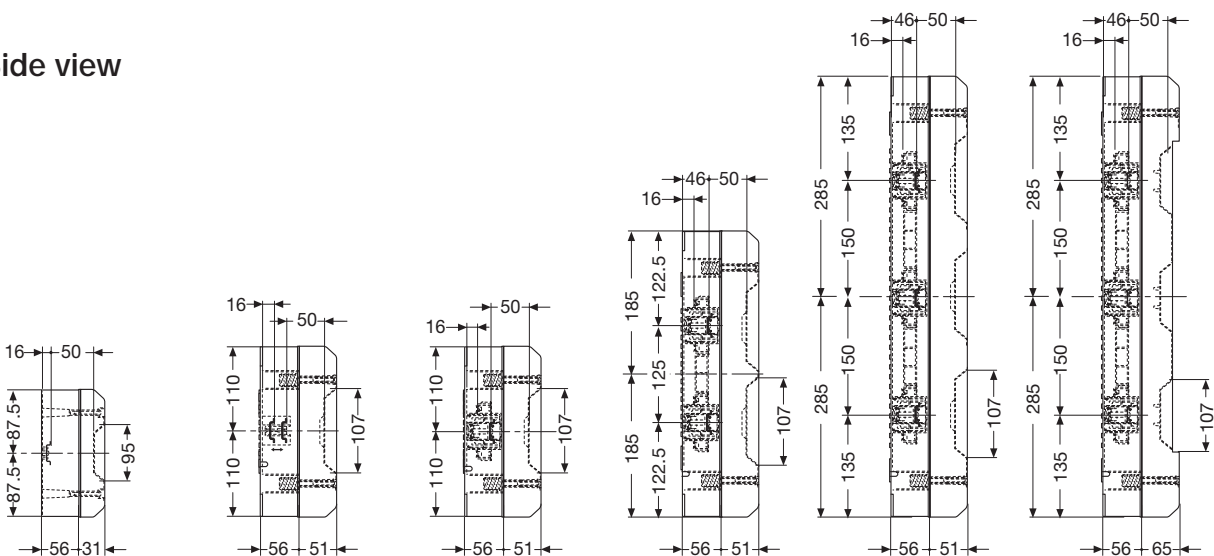


24 modules

36 modules

54 modules

### Side view



2-4 modules

4 modules

8-12 modules

24 modules

36 modules

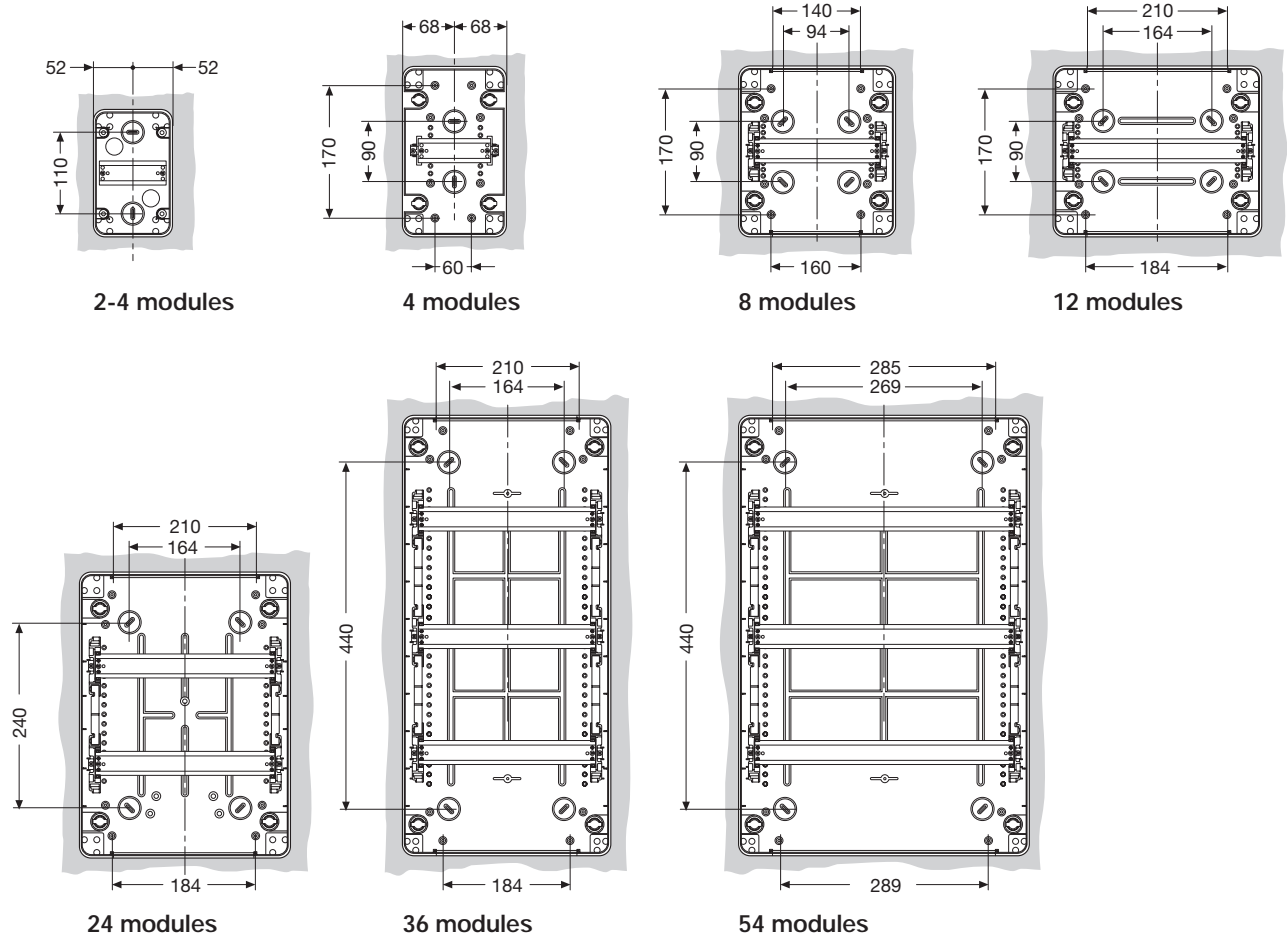
54 modules

VLC00009

# Overall dimensions

## IP 40 Europa Polycarbonate Series wall-mounting consumer units

### Drilling sheets



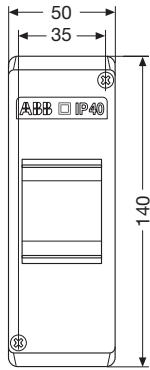
modules	code
2-4 modules	12 702
4 modules	12 704
8 modules	12 708
12 modules	12 712
24 modules	12 714
36 modules	12 716
54 modules	12 718

VLC00010

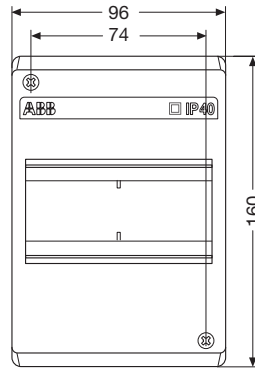
# Overall dimensions

## IP 40 wall-mounting covers

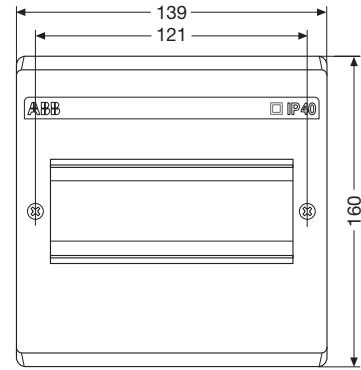
### Front view



2 modules

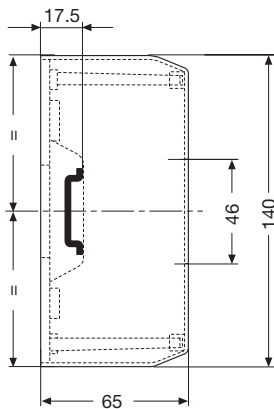


4 modules

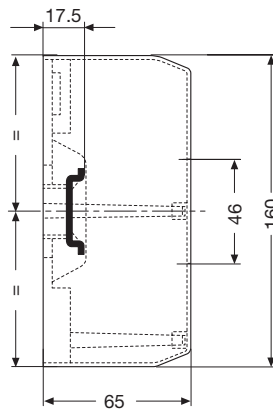


6 modules

### Side view



2 modules

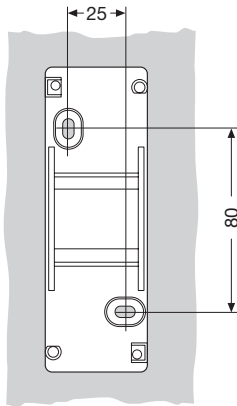


4-6 modules

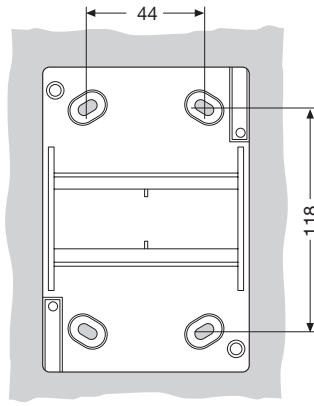
# Overall dimensions

## IP 40 wall-mounting covers

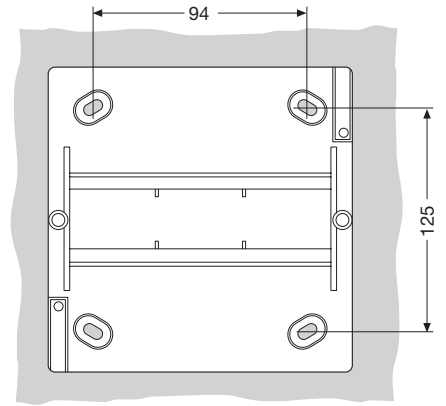
### Drilling sheets



2 modules



4 modules



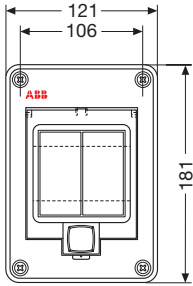
6 modules

modules	code
2 modules	1SL2402A00 - 12 422
4 modules	1SL2404A00 - 12 424
6 modules	1SL2406A00 - 12 426

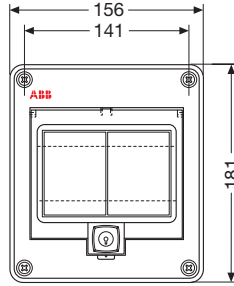
# Overall dimensions

## IP 55 Europa Series wall-mounting consumer units

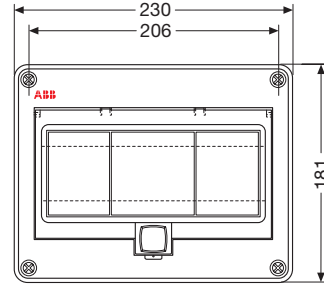
### Front view



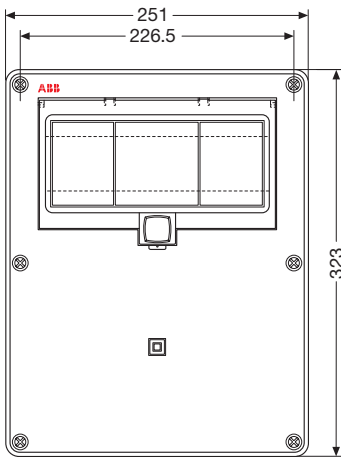
4 modules



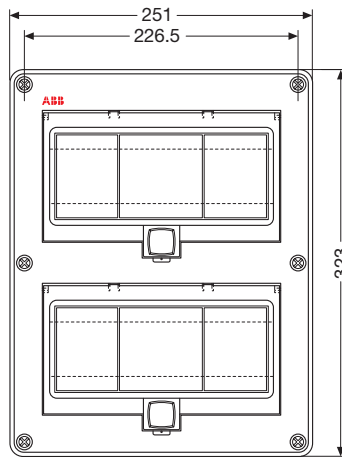
6 modules



10 modules

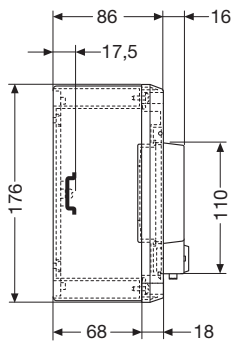


10 special modules

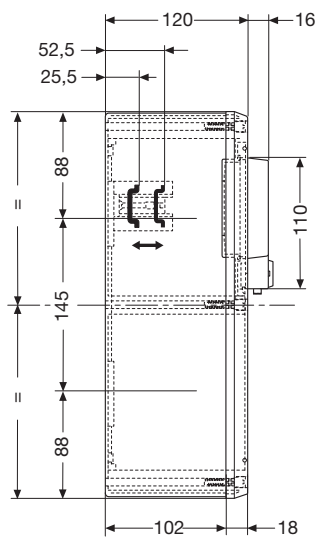


20 modules

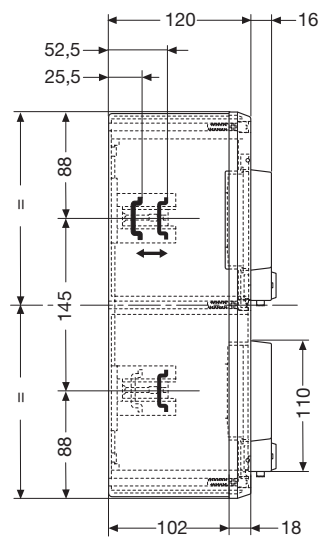
### Side view



4-6-10 modules



10 modules

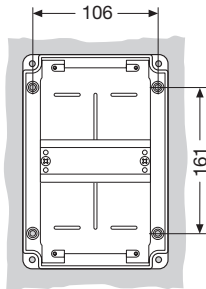


20 modules

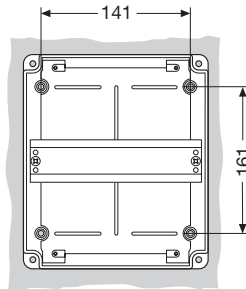
# Overall dimensions

## IP 55 Europa Series wall-mounting consumer units

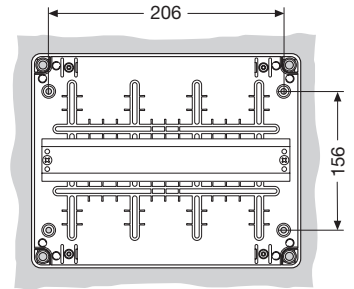
### Drilling sheets



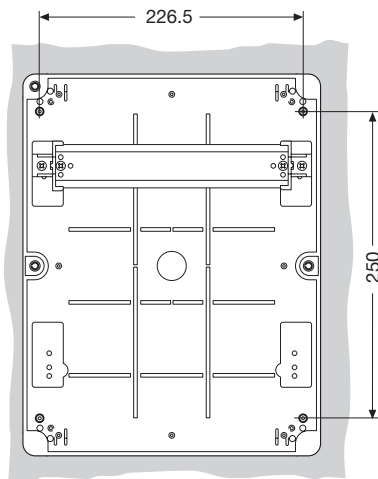
4 modules



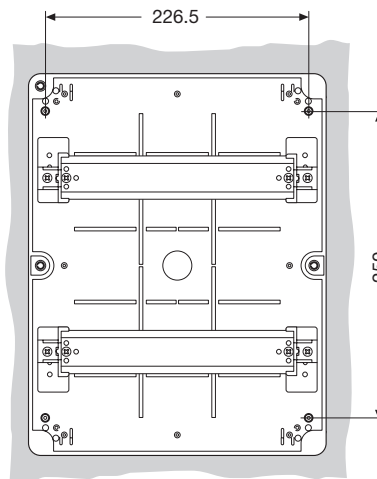
6 modules



10 modules



10 modules



20 modules

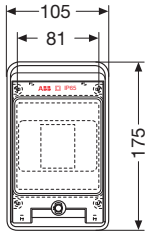
modules	code
4 modules	12 644 - 12 684
6 modules	12 646 - 12 686
10 modules	12 650 - 12 690 - 12 654
20 modules	12 652 - 12 692

VLC00014

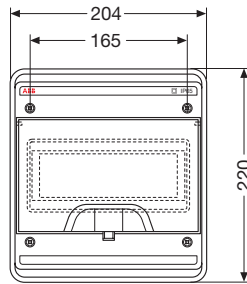
# Overall dimensions

## IP 65 Fly Series wall-mounting consumer units

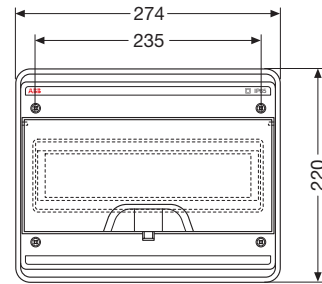
### Front view



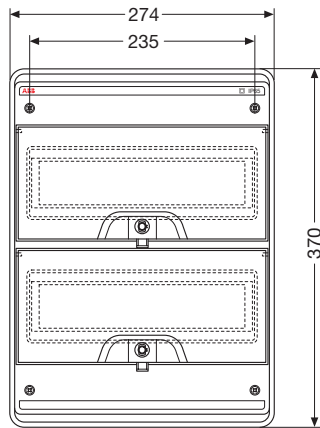
2-4 modules



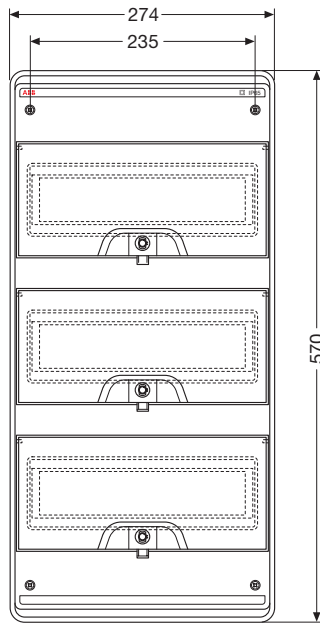
8 modules



12 modules

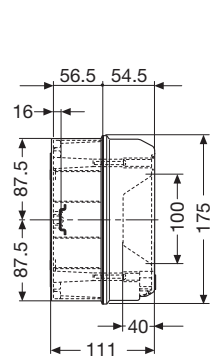


24 modules

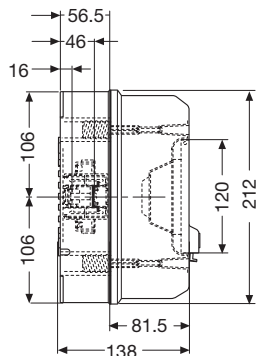


36 modules

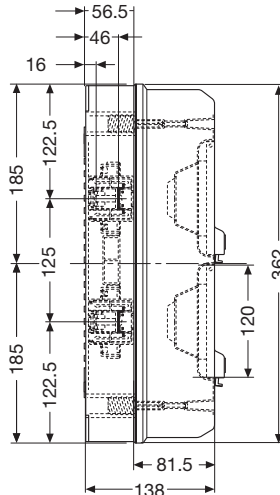
### Side view



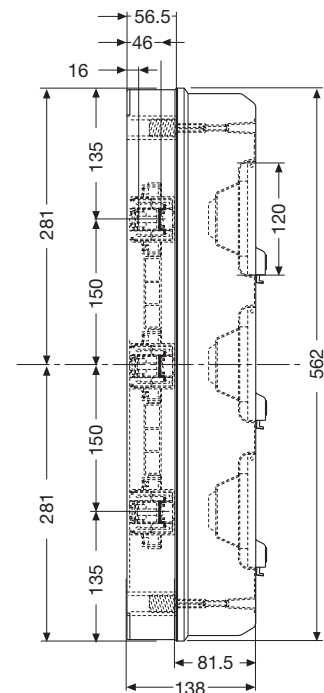
2-4 modules



8-12 modules



24 modules



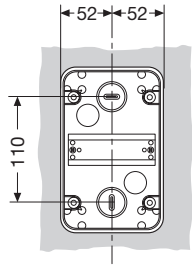
36 modules

VLC00015

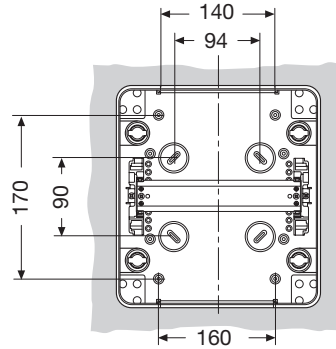
# Overall dimensions

## IP 65 Fly Series wall-mounting consumer units

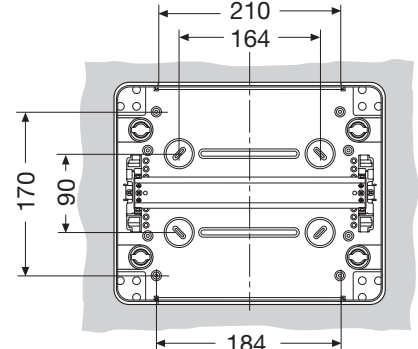
### Drilling sheets



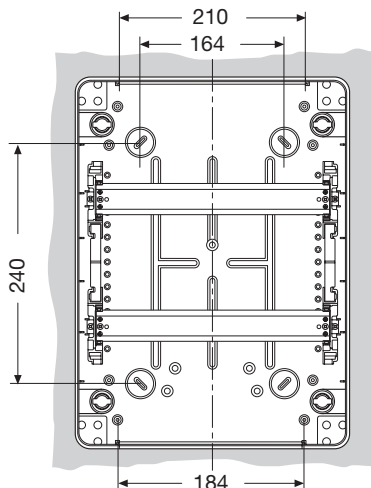
2-4 modules



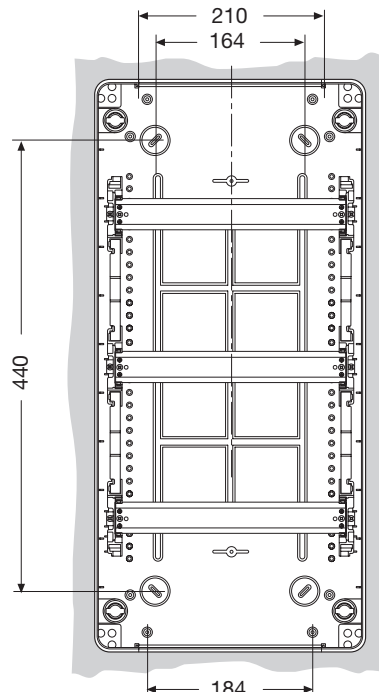
8 modules



12 modules



24 modules



36 modules

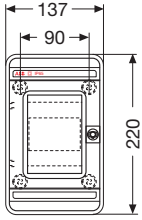
modules	code
2-4 modules	12 742 – 12 722
8 modules	12 743
12 modules	12 745
24 modules	12 746
36 modules	12 747

VLC00016

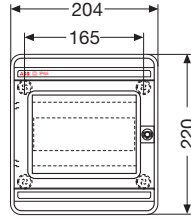
# Overall dimensions

## IP 65 Europa Series wall-mounting consumer units

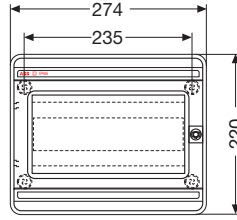
### Front view



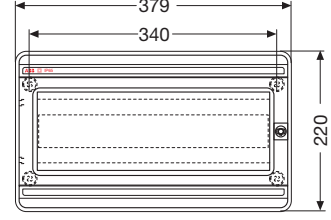
4 modules



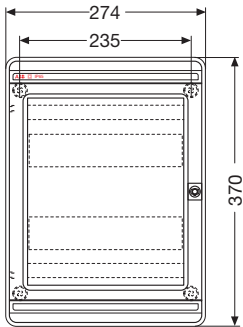
8 modules



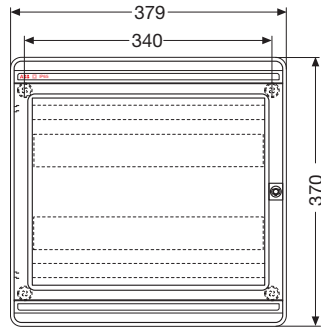
12 modules



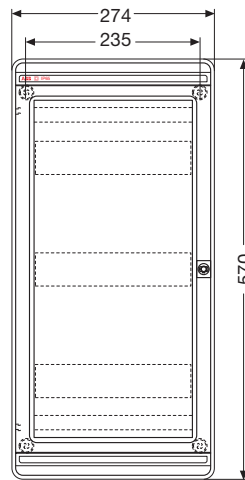
18 modules



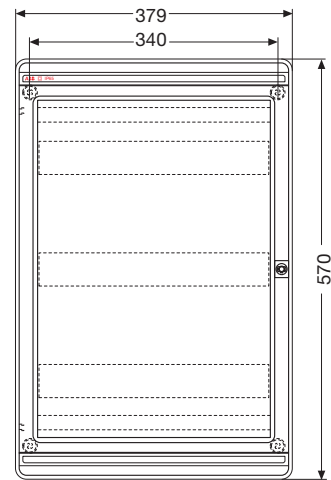
24 modules



36 modules

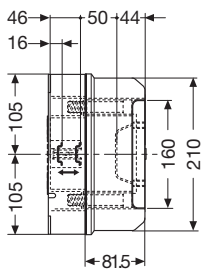


36 modules

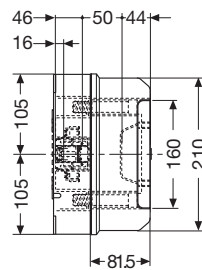


54 modules

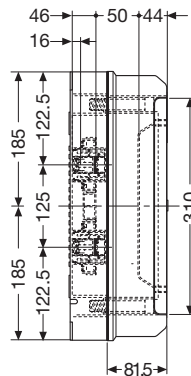
### Side view



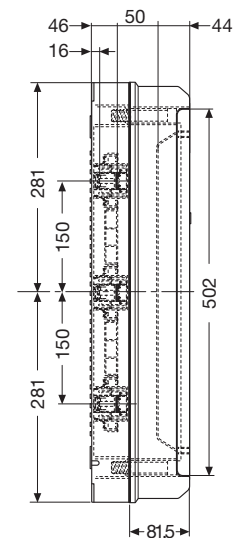
4-8-12 modules



18 modules



24 modules

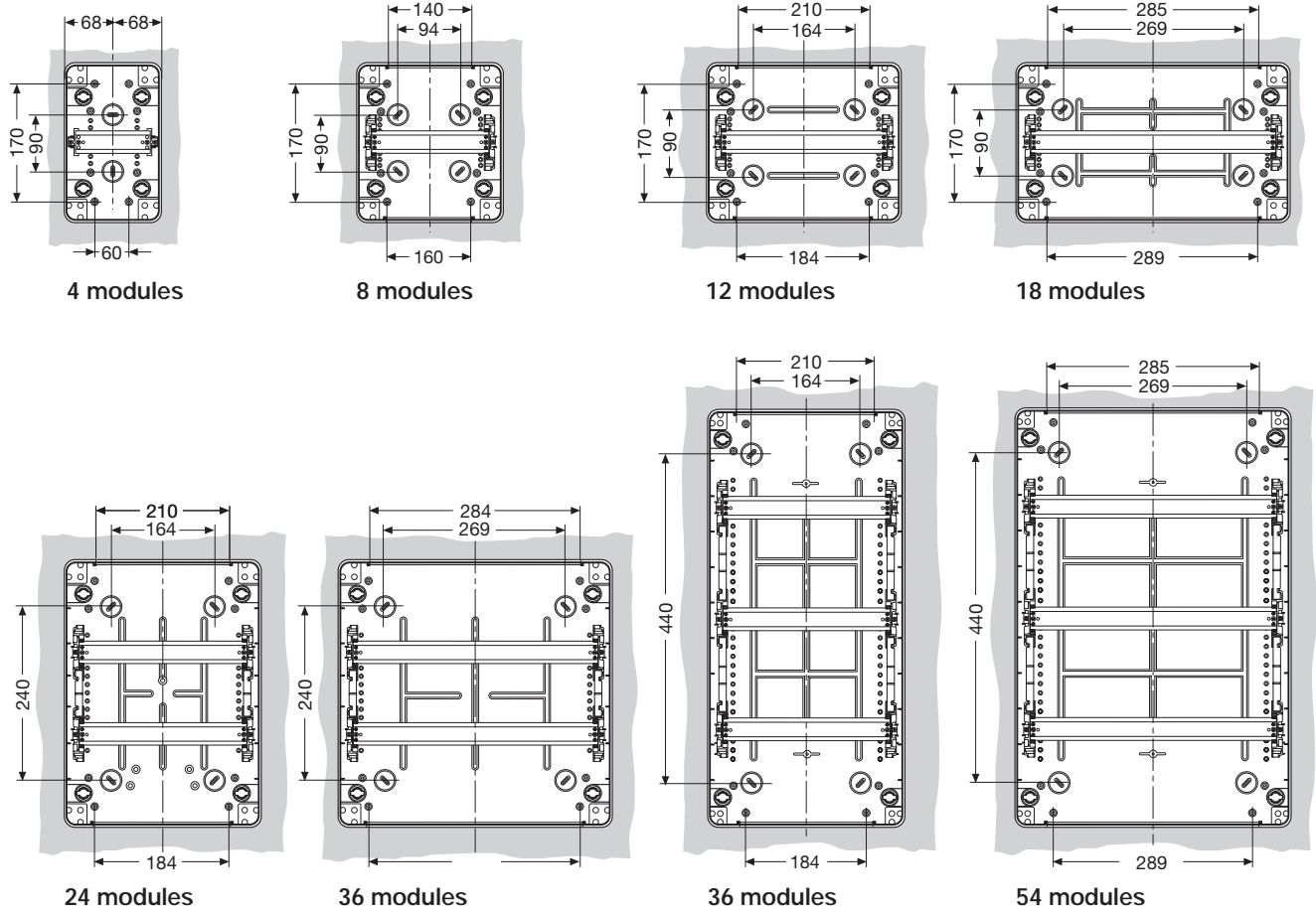


36-54 modules

# Overall dimensions

## IP 65 Europa Series wall-mounting consumer units

### Drilling sheets



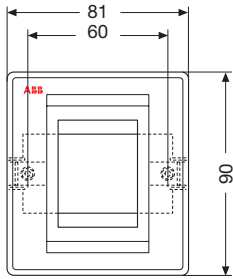
modules	code
4 modules	12 724 – 12 744
8 modules	12 728 – 12 748
12 modules	12 732 – 12 752
18 modules	12 733 – 12 753
24 modules	12 734 – 12 754
36 modules (18x2)	12 735 – 12 755
36 modules (12x3)	12 736 – 12 756
54 modules	12 738 – 12 758

MLC00018

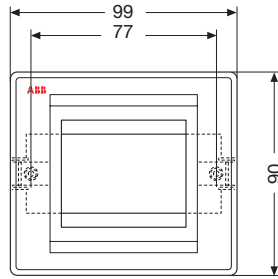
# Overall dimensions

## IP 40 panel fronts

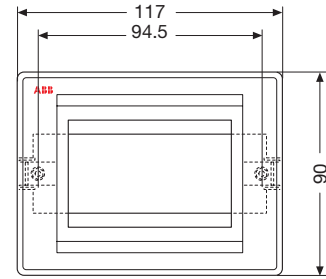
### Front view



2 modules

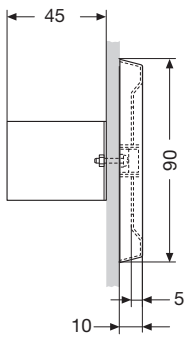


3 modules

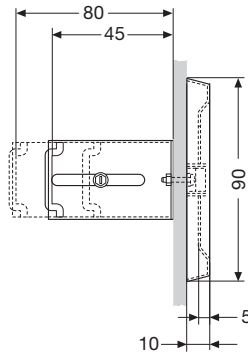


4 modules

### Side view

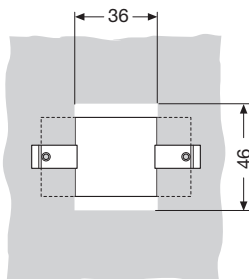


2-3 modules

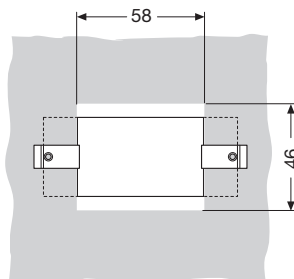


4 modules

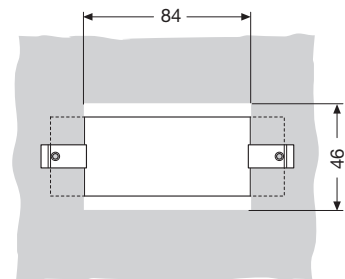
### Drilling sheets



2 modules



3 modules



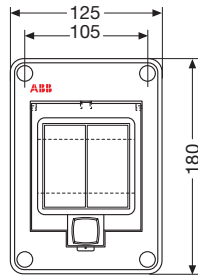
4 modules

modules	code
2 modules	12 362
3 modules	12 363
4 modules	12 364

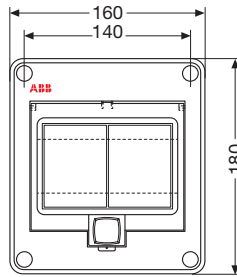
# Overall dimensions

## IP 55 panel fronts

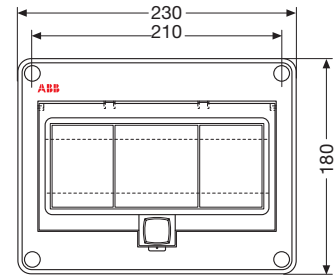
### Front view



4 modules

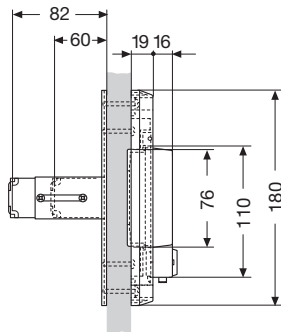


6 modules



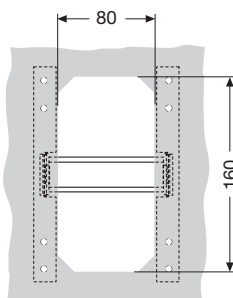
10 modules

### Side view

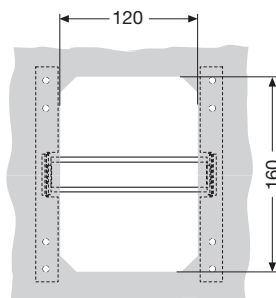


4-6-10 modules

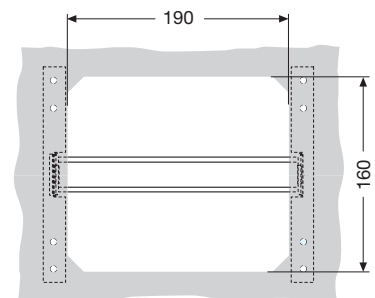
### Drilling sheets



4 modules



6 modules



10 modules

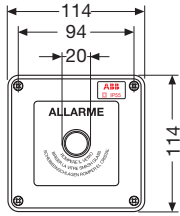
modules	code
4 modules	12 658
6 modules	12 659
10 modules	12 660

VL000930

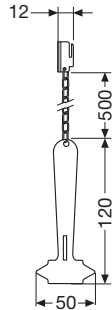
# Overall dimensions

Livorno Series flush- and wall- mounting emergency consumer units

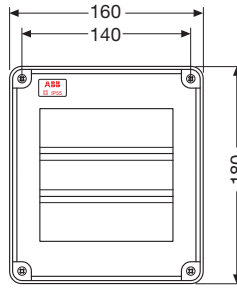
## Front view



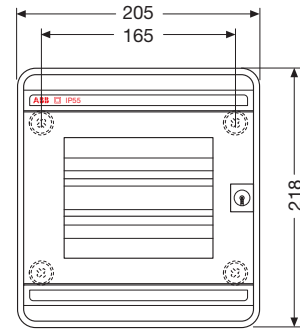
13 180 – 13 183



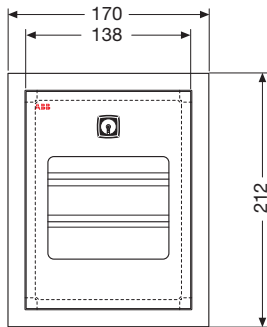
13 186



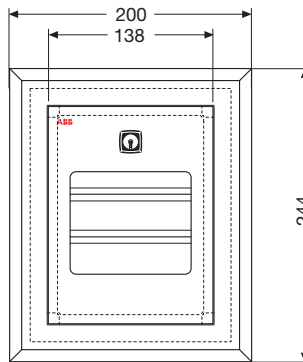
13 161 – 13 165  
13 160 – 13 164



13 171 – 13 175  
13 170 – 13 174

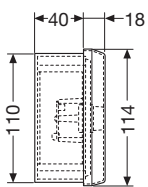


13 141 – 13 151  
13 140 – 13 150

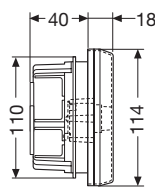


13 144 – 13 154  
13 143 – 13 153

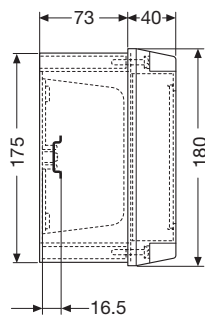
## Side view



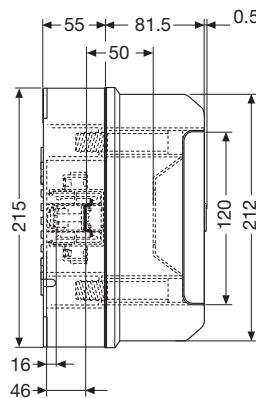
13 180



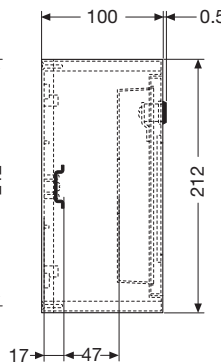
13 183



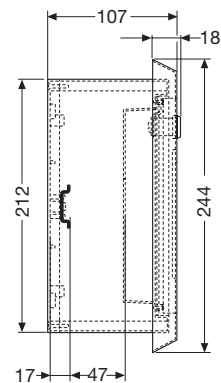
13 161 – 13 165  
13 160 – 13 164



13 171 – 13 175  
13 170 – 13 174



13 141 – 13 151  
13 140 – 13 150

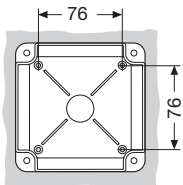


13 144 – 13 154  
13 143 – 13 153

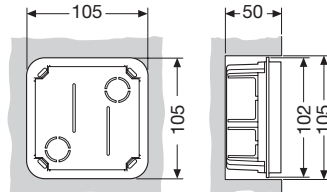
# Overall dimensions

Livorno Series flush- and wall- mounting emergency consumer units

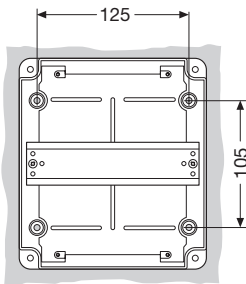
## Drilling sheets



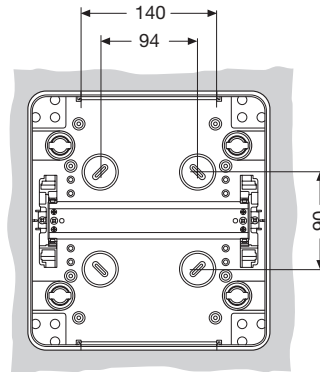
13 180



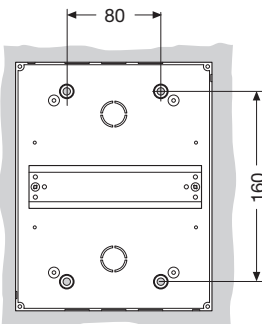
13 183



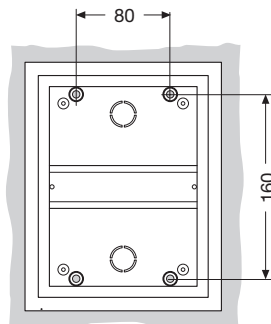
13 161 – 13 165  
13 160 – 13 164



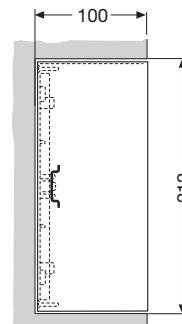
13 171 – 13 175  
13 170 – 13 174



13 141 – 13 151  
13 140 – 13 150



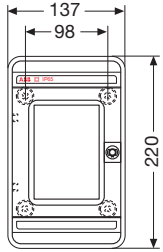
13 144 – 13 154  
13 143 – 13 153



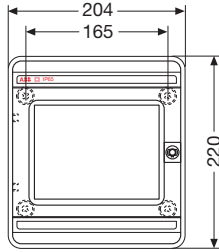
# Overall dimensions

## Europa Series switchboards for industrial applications

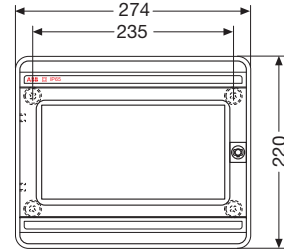
### Front view



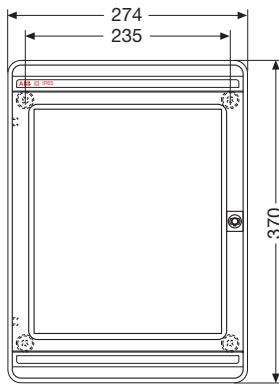
12 764 - 12 784



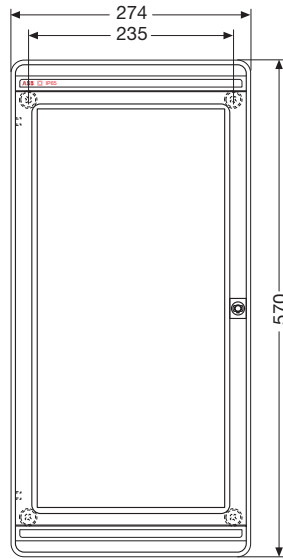
12 768 - 12 788



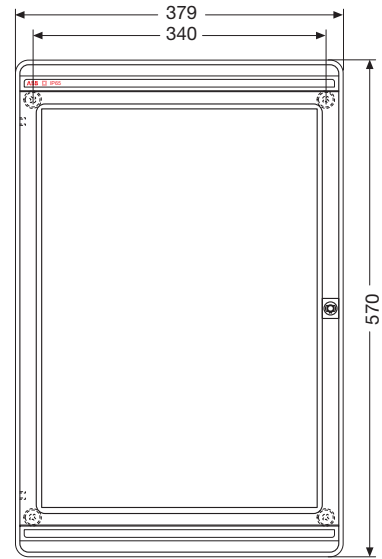
12 772 - 12 792



12 774 - 12 794

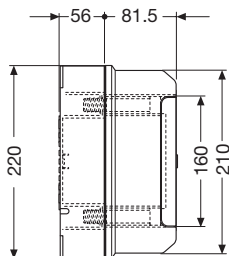


12 776 - 12 796

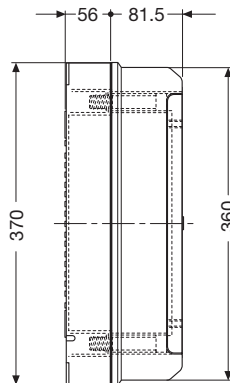


12 778 - 12 798

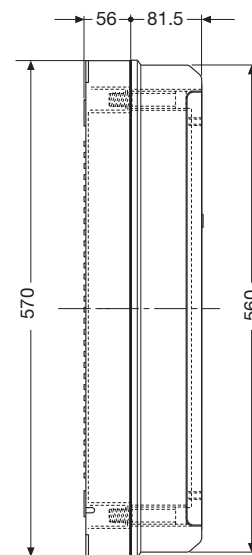
### Side view



12 768 - 12 788  
12 764 - 12 784  
12 772 - 12 792



12 776 - 12 796

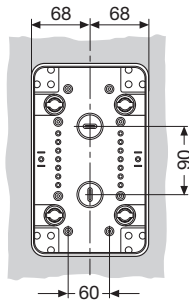


12 778 - 12 798

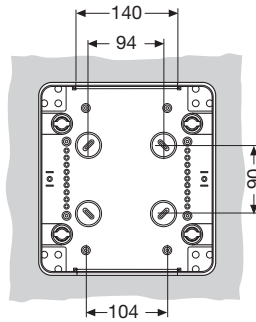
# Overall dimensions

## Europa Series switchboards for industrial applications

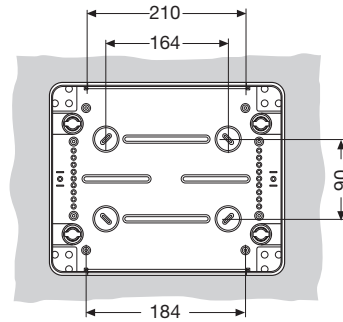
### Drilling sheets



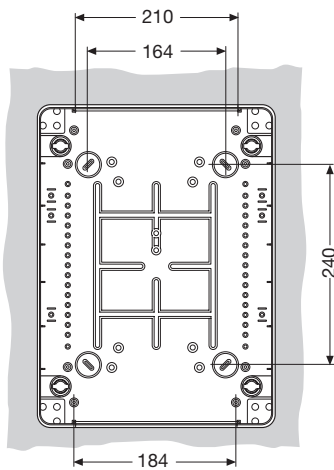
12 764 - 12 784



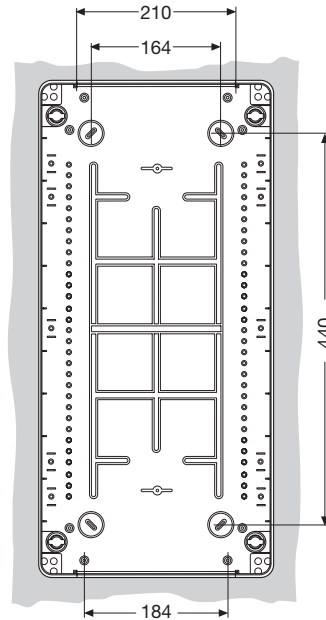
12 768 - 12 788



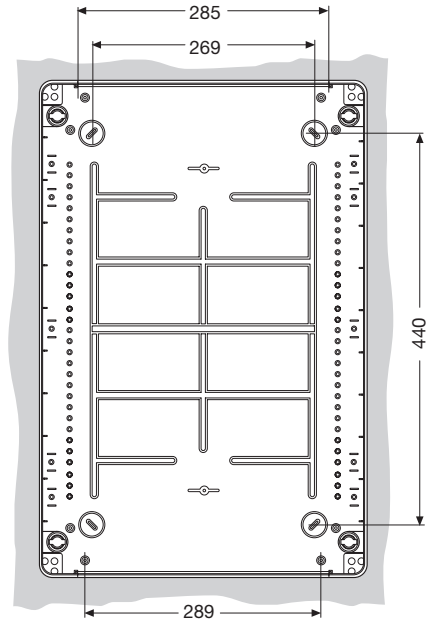
12 772 - 12 792



12 774 - 12 794



12 776 - 12 796

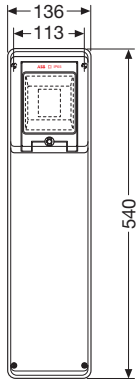


12 778 - 12 798

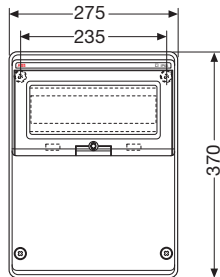
# Overall dimensions

## Switchboards for industrial applications with blank front

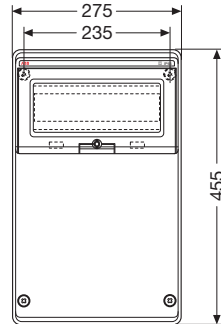
### Front view



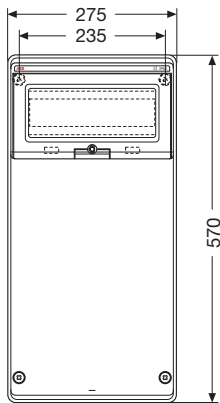
13 200



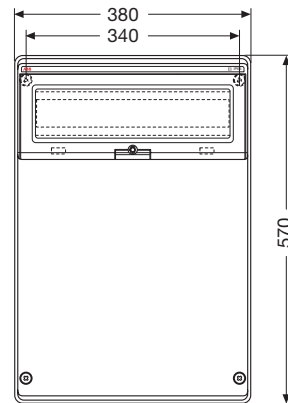
13 204



13 205

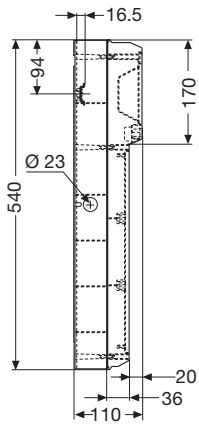


13 206

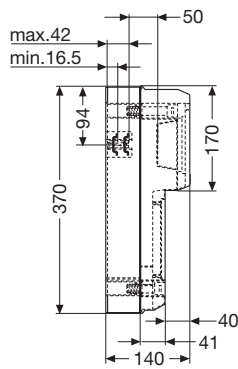


13 208

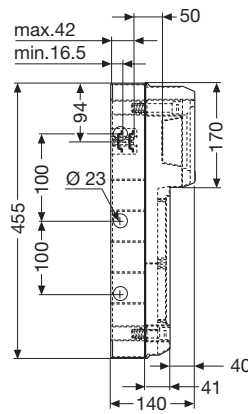
### Side view



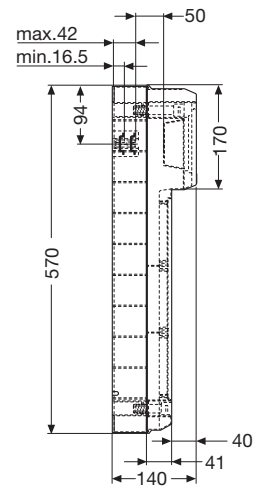
13 200



13 204



13 205

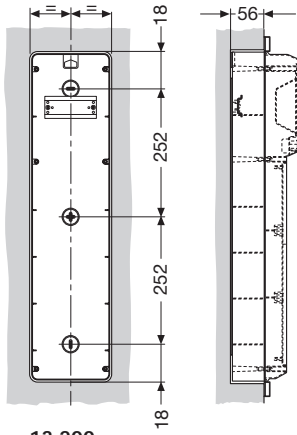


13 206 - 13 208

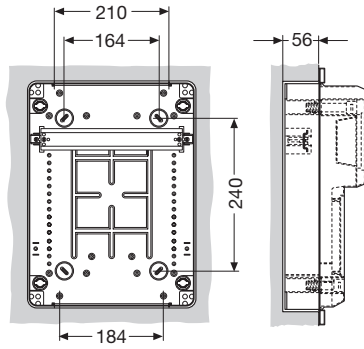
# Overall dimensions

Switchboards for industrial applications with blank front

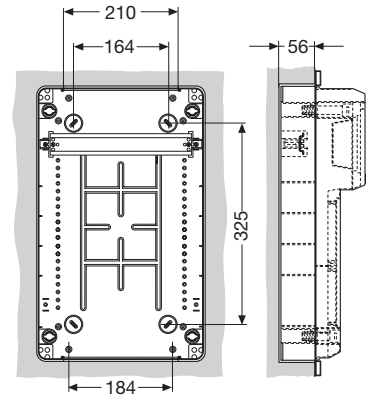
## Drilling sheets



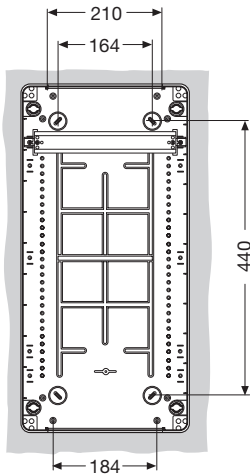
13 200



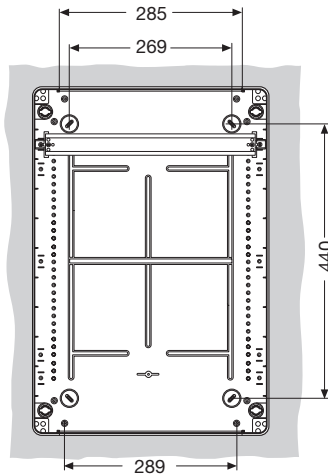
13 204



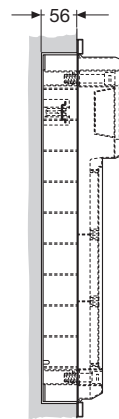
13 205



13 206



13 208

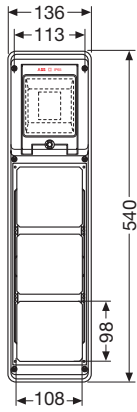


13 206  
13 208

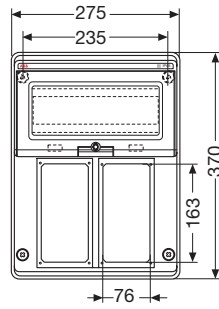
# Overall dimensions

## Marostica Series modular switchboards

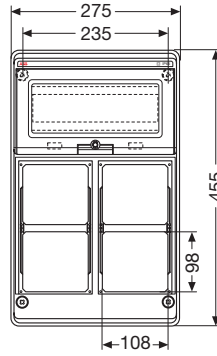
### Front view



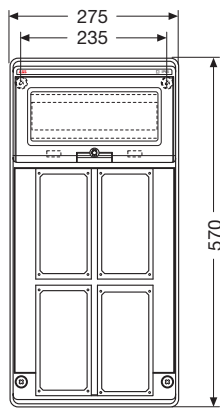
13 210



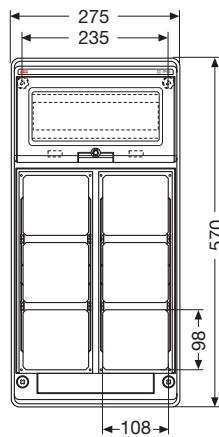
13 224



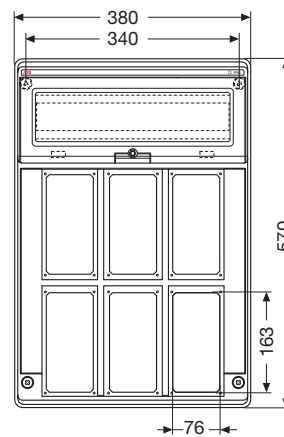
13 215



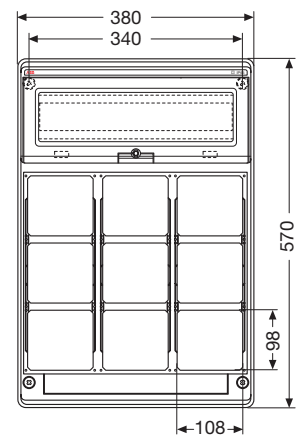
13 226



13 216

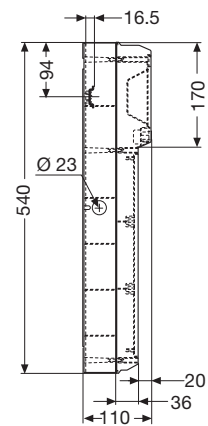


13 228

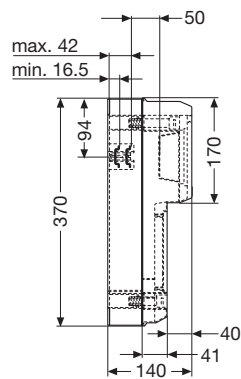


13 218

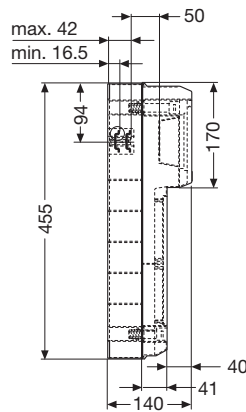
### Side view



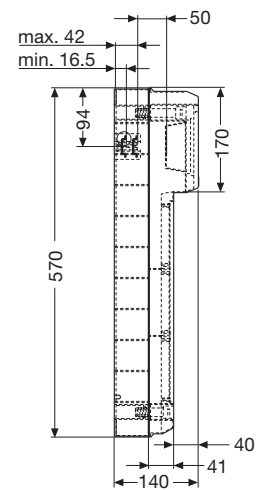
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13 224



13 215

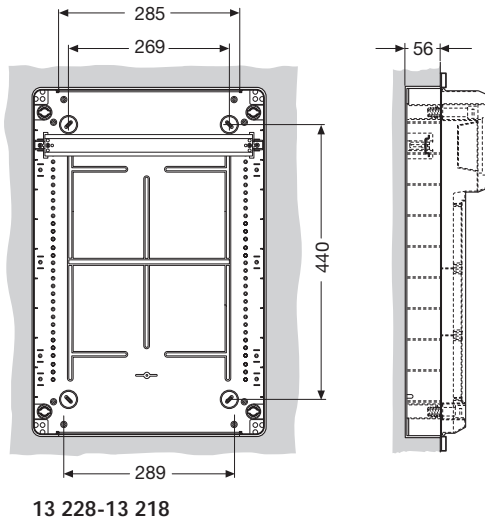
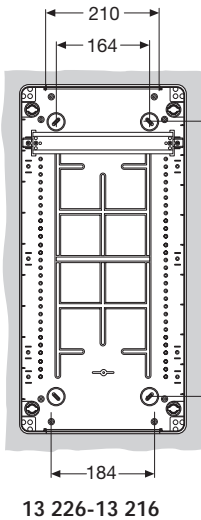
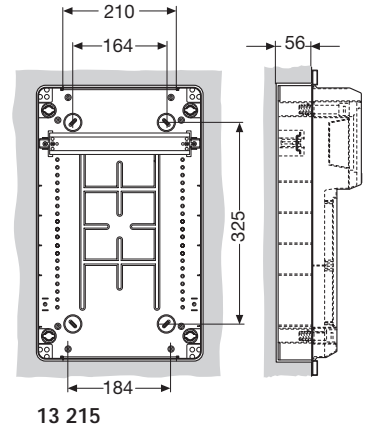
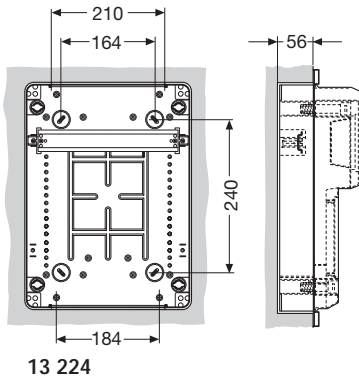
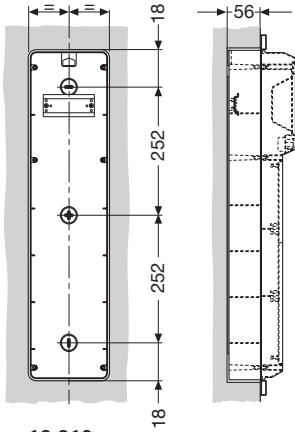


13 226 - 13 216  
13 228 - 13 218

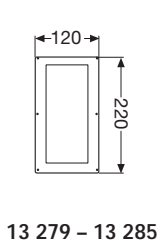
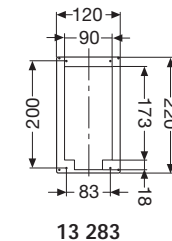
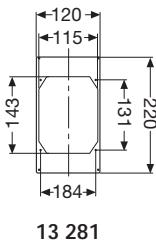
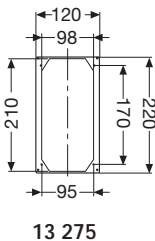
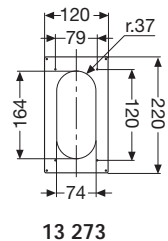
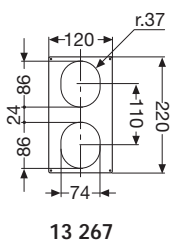
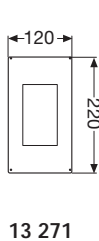
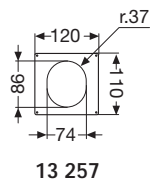
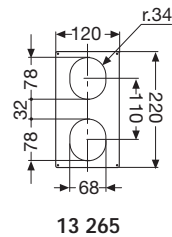
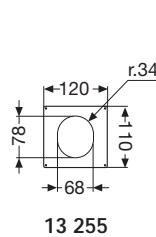
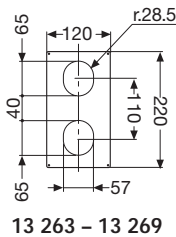
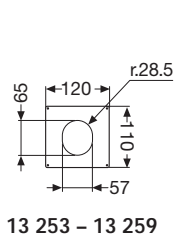
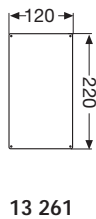
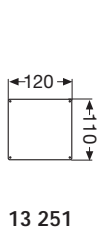
# Overall dimensions

## Marostica Series modular switchboards

### Drilling sheets



### Plates for switchboards

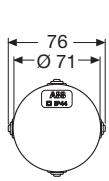


82000371A

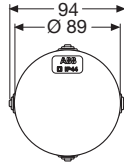
# Overall dimensions

IP 44 and IP 55 junction boxes in thermoplastic material

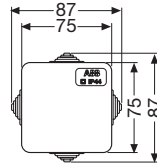
## Front view



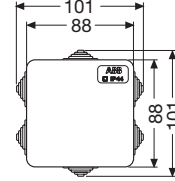
00 800



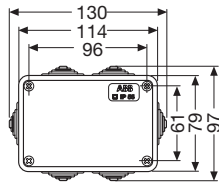
00 802



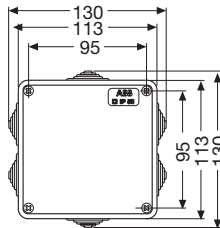
00 808



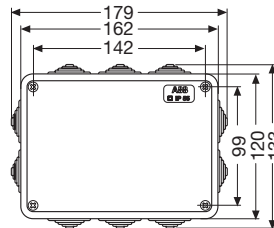
00 810



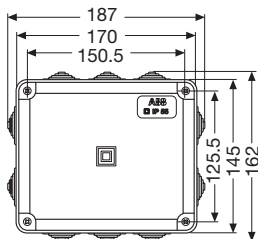
00 820 - 00 850  
1SL0820A00 - 1SL0850A00



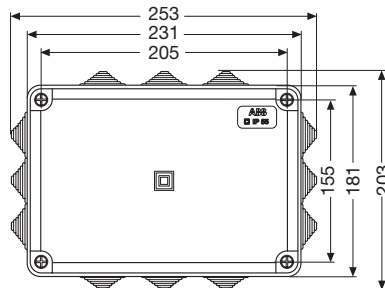
00 816 - 00 821  
00 846 - 00 851  
1SL0816A00 - 1SL0821A00  
1SL0846A00 - 1SL0851A00



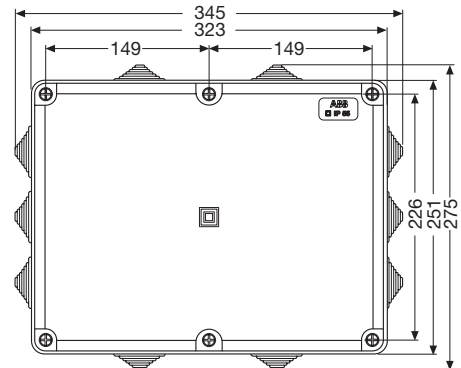
00 822 - 00852 - 00 872  
1SL0822A00 - 1SL0852A00  
1SL0872A00



1SL0830A00 - 1SL0824A00  
1SL0874A00 - 1SL0854A00  
1SL0860A00 - 1SL0880A00

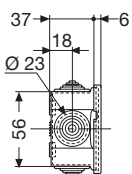


1SL0826A00 - 1SL0832A00  
1SL0876A00 - 1SL0856A00  
1SL0862A00 - 1SL0884A00

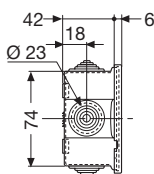


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1SL0878A00 - 1SL0858A00  
1SL0864A00 - 1SL0884A00

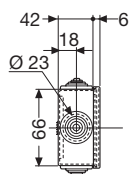
## Side view



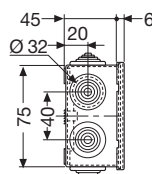
00 800



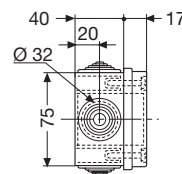
00 802



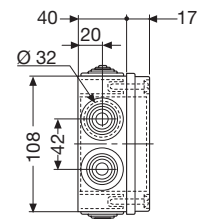
00 808



00 810



00 820 - 00 850  
1SL0820A00  
1SL0850A00



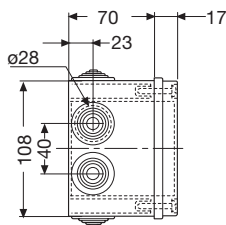
00 816 - 00 846  
1SL0816A00  
1SL0846A00

VLC00029

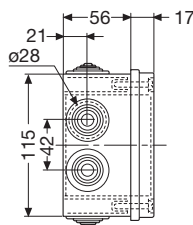
# Overall dimensions

IP 44 and IP 55 junction boxes in thermoplastic material

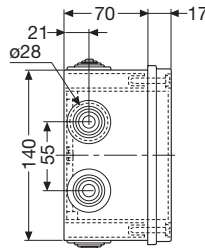
## Side view



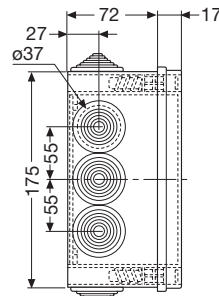
00 821 - 00 851  
1SL0821A00 -  
1SL0851A00



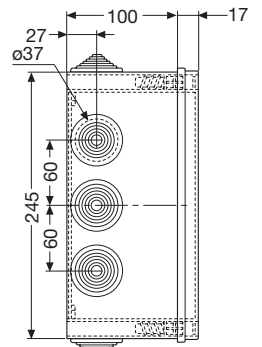
00 822 - 00 852  
00 872 - 1SL0822A00  
1SL0852A00 - 1SL0872A00



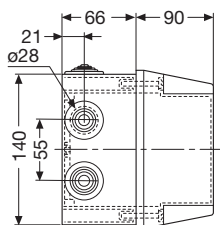
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1SL0874A00



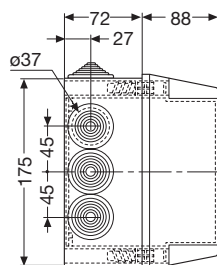
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1SL0856A00  
1SL0876A00



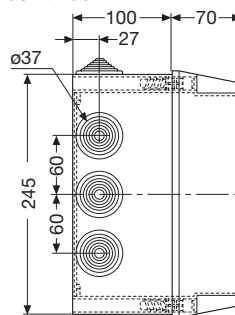
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1SL0858A00  
1SL0878A00



1SL0830A00  
1SL0860A00  
1SL0880A00

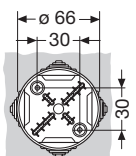


1SL0832A00  
1SL0862A00  
1SL0882A00

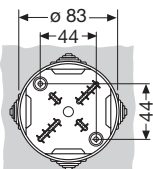


1SL0834A00  
1SL0864A00  
1SL0884A00

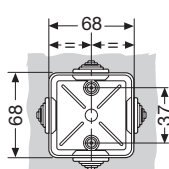
## Drilling sheets and internal dimensions



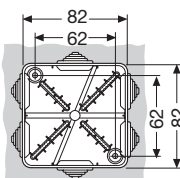
00 800 - 00 581



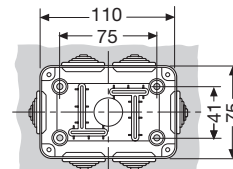
00 802



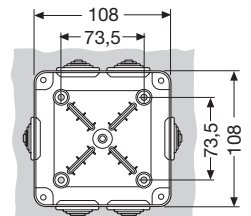
00 808



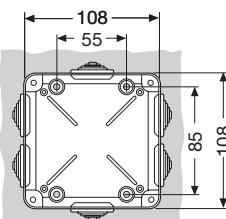
00 810



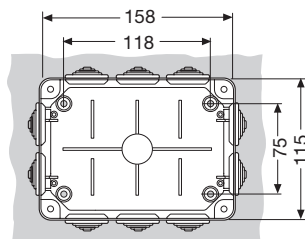
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1SL0850A00



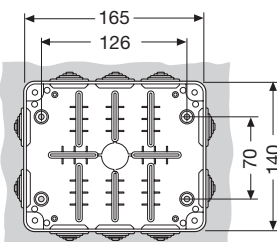
00 816 - 00 846  
1SL0816A00  
1SL0846A00



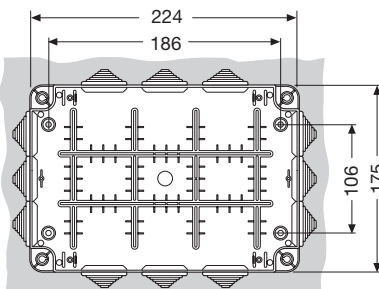
00 821 - 00 851  
1SL0821A00  
1SL0851A00



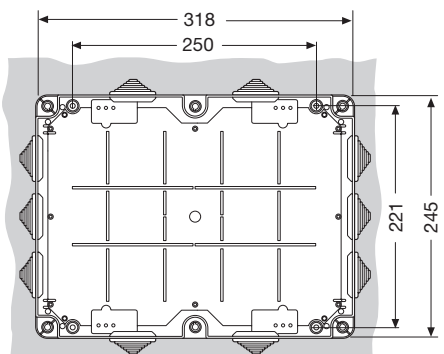
00 822 - 00 852 - 00 872  
1SL0822A00 - 1SL0852A00 - 1SL0872A00



1SL0824A00 - 1SL0830A00  
1SL0874A00 - 1SL0854A00  
1SL0860A00 - 1SL0880A00



1SL0826A00 - 1SL0832A00  
1SL0876A00 - 1SL0856A00  
1SL0862A00 - 1SL0884A00



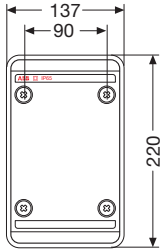
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1SL0878A00 - 1SL0858A00  
1SL0864A00 - 1SL0884A00

VLC00020

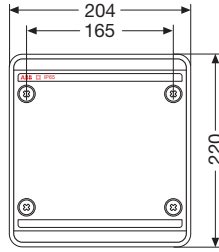
# Overall dimensions

## IP 65 junction boxes in polycarbonate

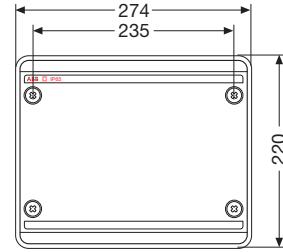
### Front view



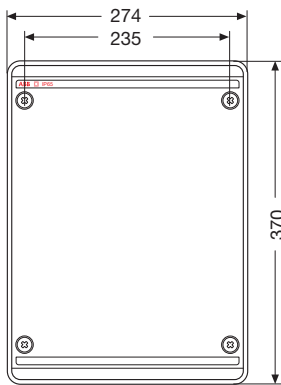
12 804



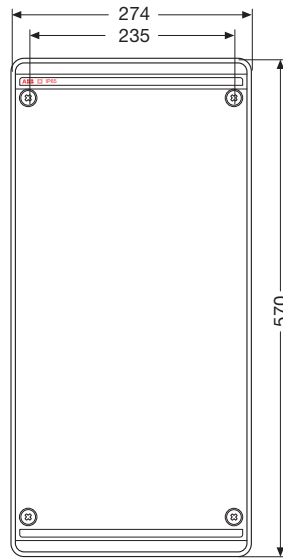
12 808



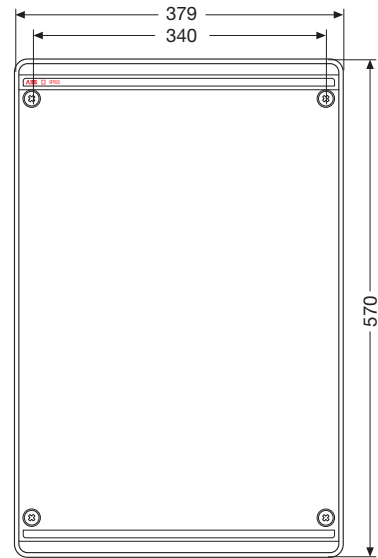
12 812



12 814

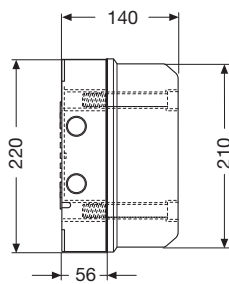


12 816

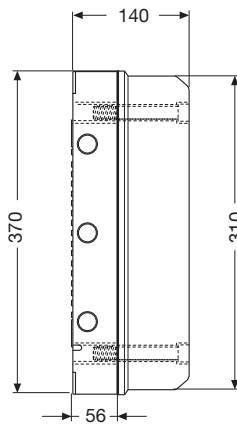


12 818

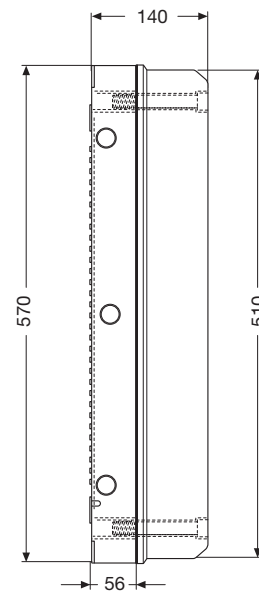
### Side view



12 804 - 12 808 - 12 812



12 814



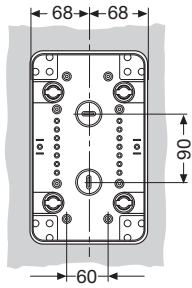
12 816 - 12 818

VLCO0031

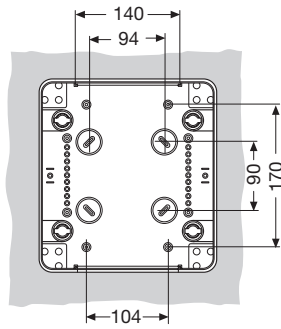
# Overall dimensions

## IP 65 junction boxes in polycarbonate

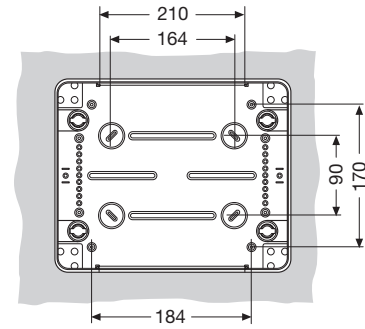
### Drilling sheet



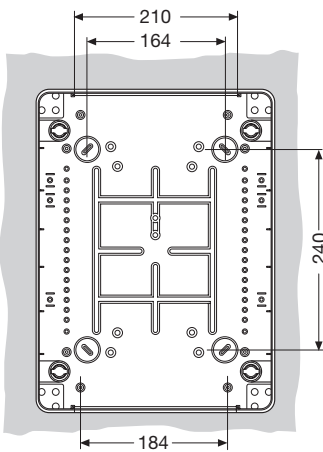
12 804



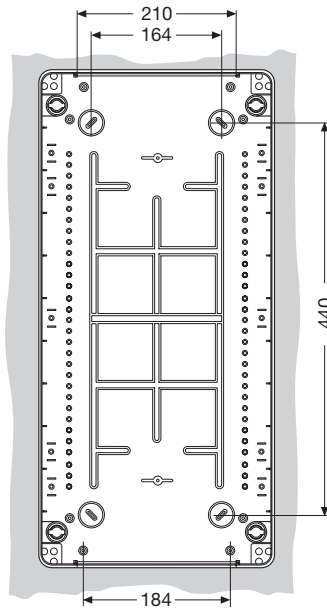
12 808



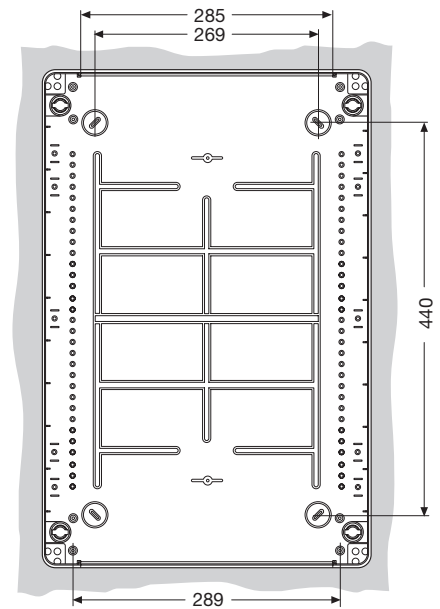
12 812



12 814



12 816



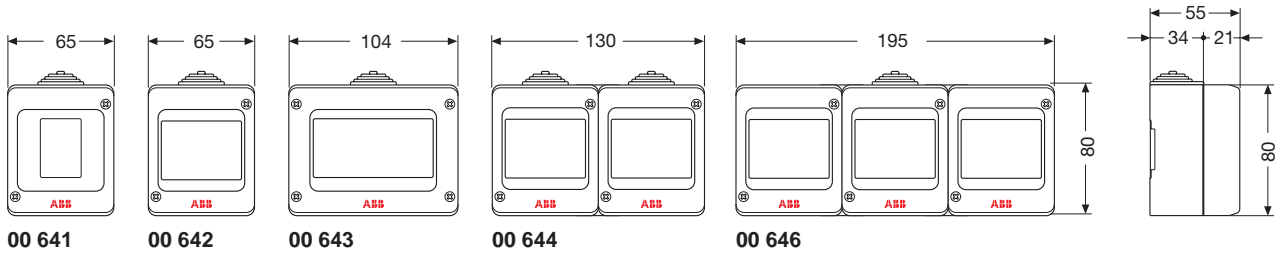
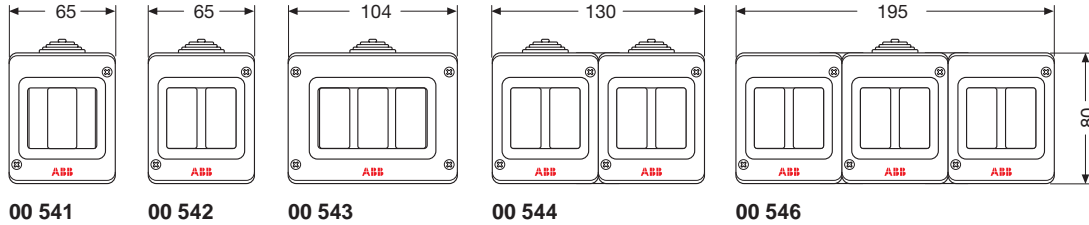
12 818

# Overall dimensions

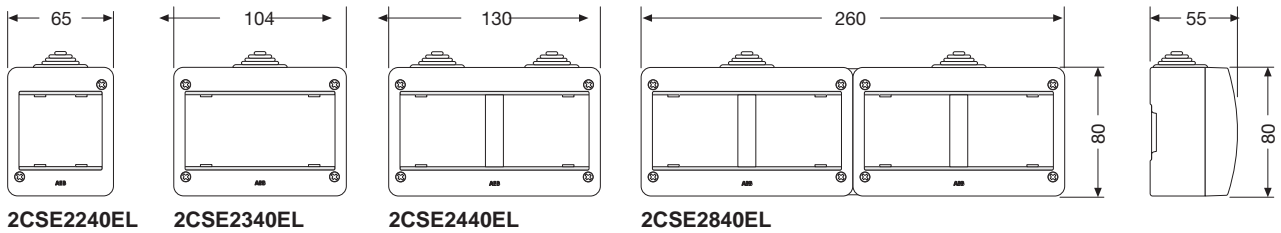
## IP 40 equipment and empty enclosures

### Front view

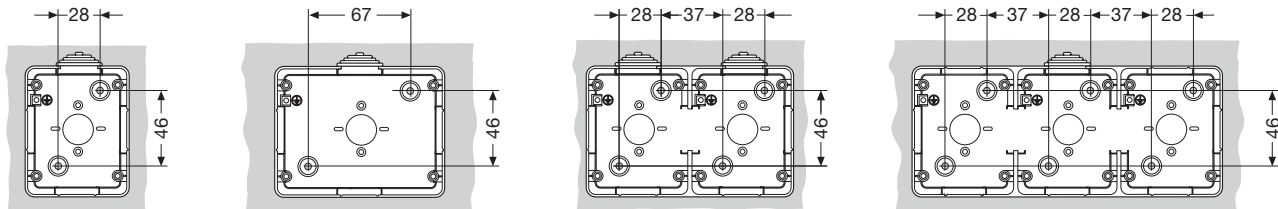
### Side view



### Boxes for ABB Élos Series



### Drilling sheets



00 541 - 00 542  
00 641 - 00 642

00 543 - 00 643

00 544 - 00 644

00 546 - 00 646

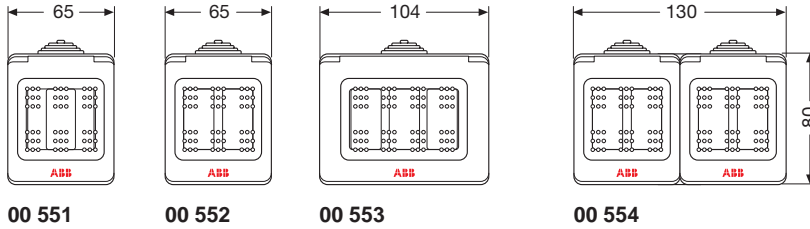
N.B.: IP 40: 00 500 – 00 501 – 00 502 – 00 503 – 00 504 – 00505 – 00 510 – 00 511 – 00512 – 00 513 codes are composed of Vimar wiring accessories installed in 1/2 compartment empty enclosures.

# Overall dimensions

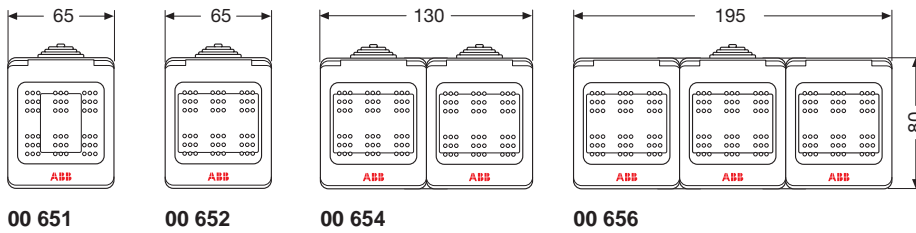
## IP 55 equipment and empty enclosures

### Front view

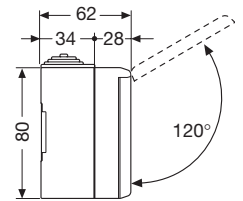
### Side view



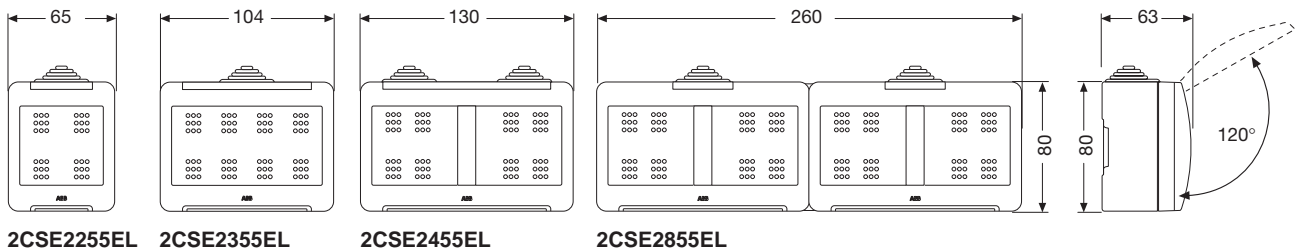
00 551      00 552      00 553      00 554



00 651      00 652      00 654      00 656

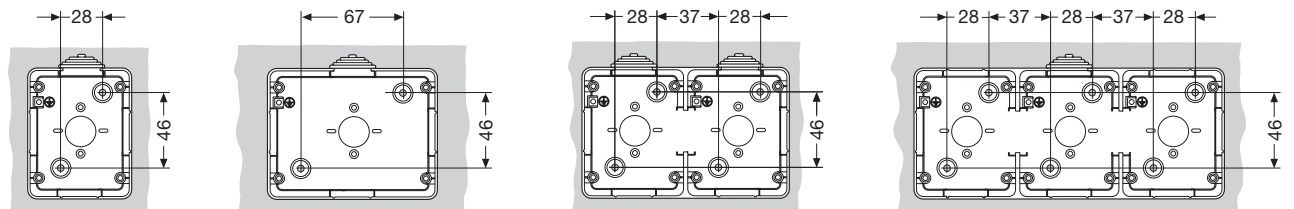


### Boxes for ABB Élos Series



2CSE2255EL    2CSE2355EL    2CSE2455EL    2CSE2855EL

### Drilling sheets



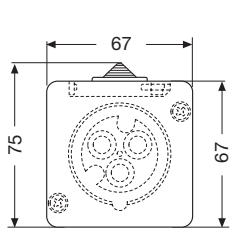
00 551 - 00 552      00 553      00 554 - 00 654      00 656  
00 651 - 00 652

N.B.: IP 55: 00 520 – 00 521 – 00 522 – 00 523 – 00 524 – 00525 – 00 530 – 00 531 – 00532 – 00 533 codes are composed of Vimar wiring accessories installed in 1/2 compartment empty enclosures.

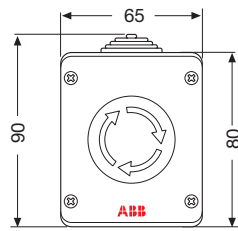
# Overall dimensions

## Various components

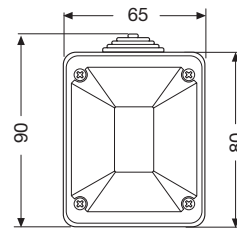
### Front view



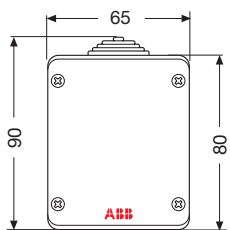
00 562 – 00 564



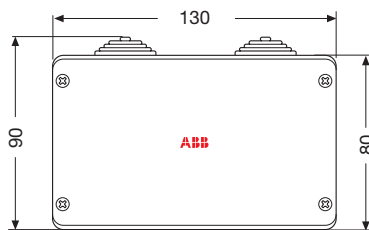
00 770 – 00 771



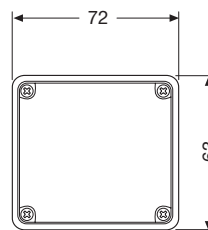
00 570 – 00 572  
00 573



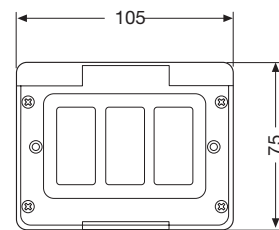
00 580



00 581

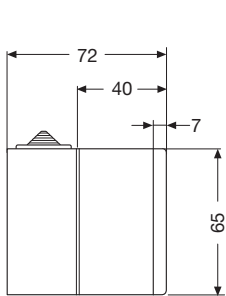


00 583

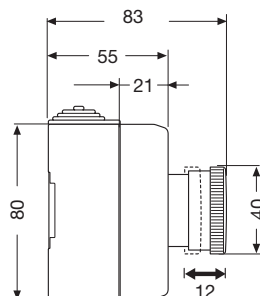


00 578 – 00 579

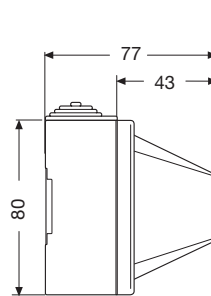
### Side view



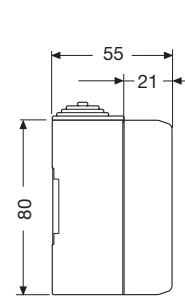
00 562 – 00 564



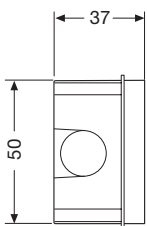
00 770 – 00 771



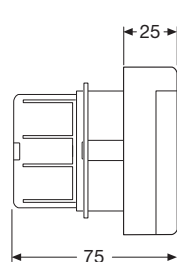
00 570 – 00 572  
00 573



00 580 – 00 581



00 583

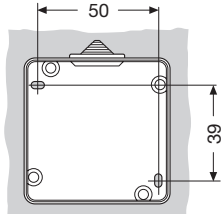


00 578 – 00 579

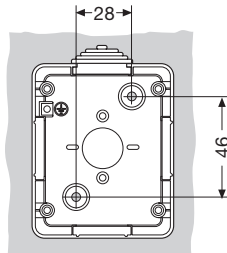
# Overall dimensions

## Various components

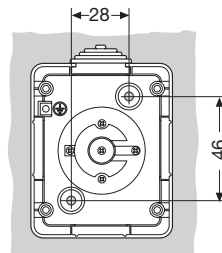
### Drilling sheets



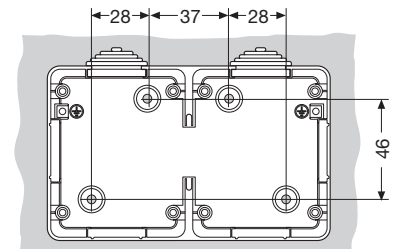
00 562 – 00 564



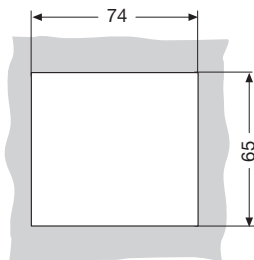
00 770 – 00 771  
00 580



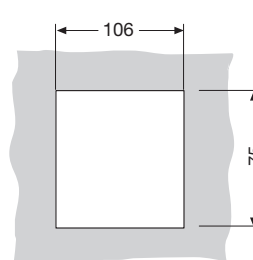
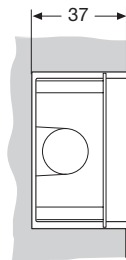
00 570 – 00 572  
00 573



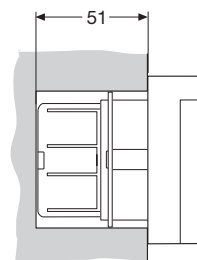
00 581



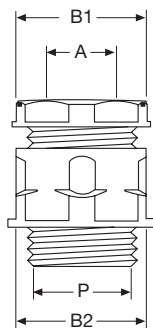
00 583



00 578 – 00 579

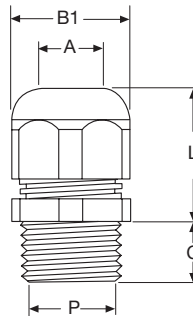


### Cable glands PG



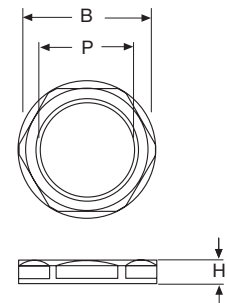
code	P	B1	Ø A
00 931	Pg 9	17	5–8
00 932	Pg 11	19	7–10
00 933	Pg 13.5	21	9–13
00 934	Pg 16	24	13–16
00 935	Pg 21	30	17–20
00 936	Pg 29	40	21–26
00 937	Pg 36	50	30–34
00 938	Pg 42	55	40–43

### Metric glands clamp



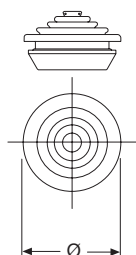
code	P	B1	Ø A	L	C
00 951	M12x1.5	15	3.5–7	18–22	8
00 952	M16x1.5	19	5.5–10	22–27	8
00 953	M20x1.5	25	7–13	24–30	9.5
00 954	M25x1.5	30	10–17	30–41	10
00 955	M32x1.5	36	12–21	33–44	10
00 956*	M40x1.5	46	19–28	36–45	10
00 957*	M50x1.5	55	27–35	43–52	12
00 958*	M63x1.5	66	34–45	45–55	12

### Metric nut



code	P	B
00 961	M12x1.5	17
00 962	M16x1.5	22
00 963	M20x1.5	27
00 964	M25x1.5	32
00 965	M32x1.5	41
00 966*	M40x1.5	50
00 967*	M50x1.5	60
00 968*	M63x1.5	75

### Cable clamps



code	Ø
00 908	20
00 910	25
00 912	32

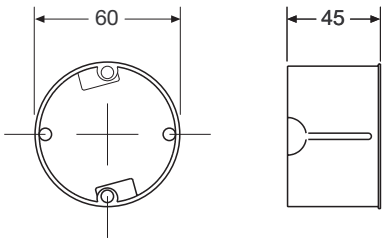
VLCC00036

# Overall dimensions

## Enclosures and boxes for light prefabrication

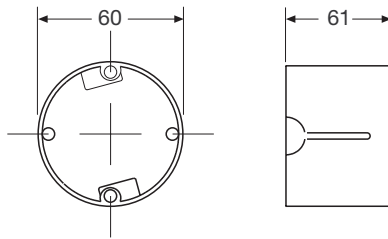
### Junction box

Wiring accessories box  $\varnothing$  60 mm



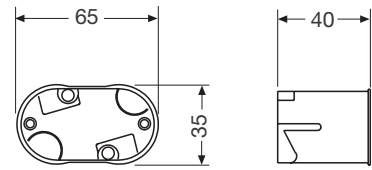
code  
10 801

Wiring accessories and junction box  $\varnothing$  60 mm



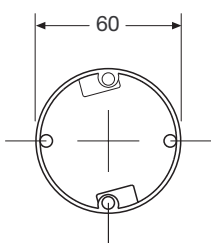
code  
10 802

Wall light box 65x35 mm



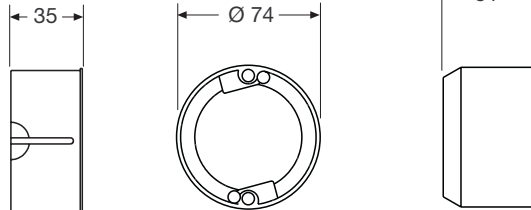
code  
10 805

Wiring accessories box  $\varnothing$  60 mm



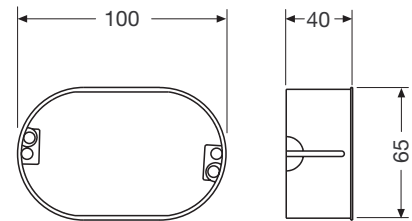
code  
10 807

Increased junction box  $\varnothing$  74 mm



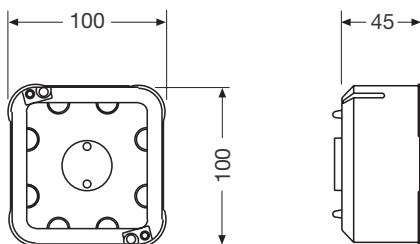
code  
10 803

Wiring accessories modular box 100x62 mm



code  
10 804

Junction box 100x100 mm



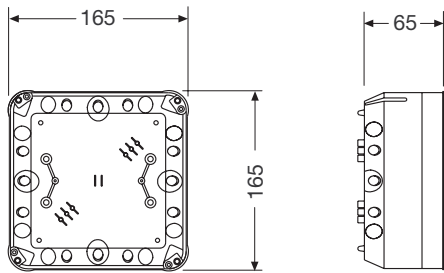
code  
10 808

# Overall dimensions

## Enclosures and boxes for light prefabrication

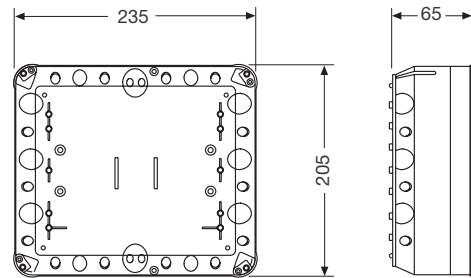
### Boxes for consumer units

Box for consumer unit with 8 modules



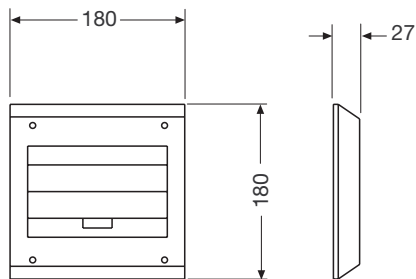
code  
10 821

Box for consumer units with 12 modules



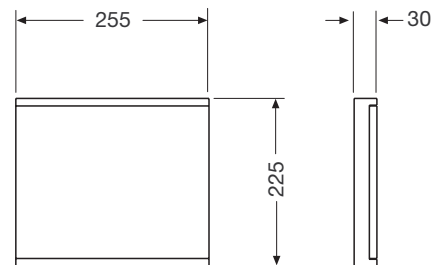
code  
10 822

Front for consumer unit with 8 modules



code  
10 833

Front for consumer units with 12 modules

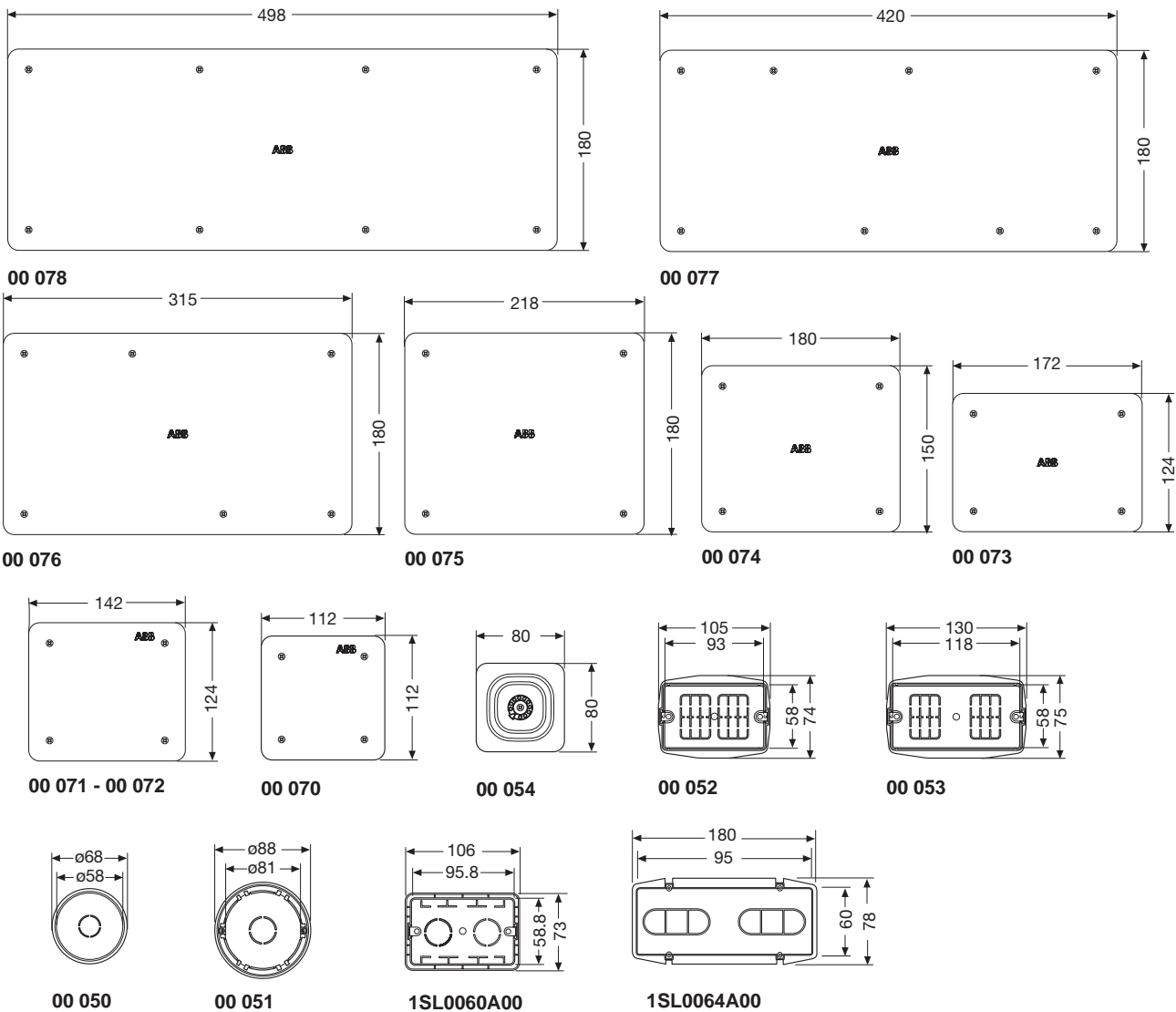


code  
10 834

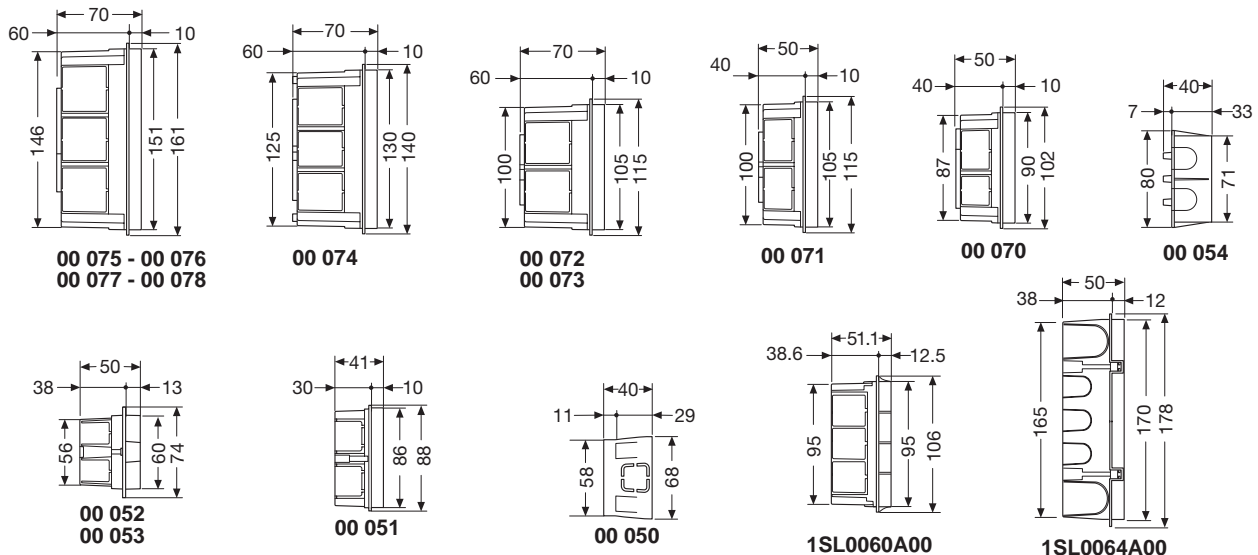
# Overall dimensions

Wiring accessories and junction boxes in thermoplastic material

## Front view



## Side view

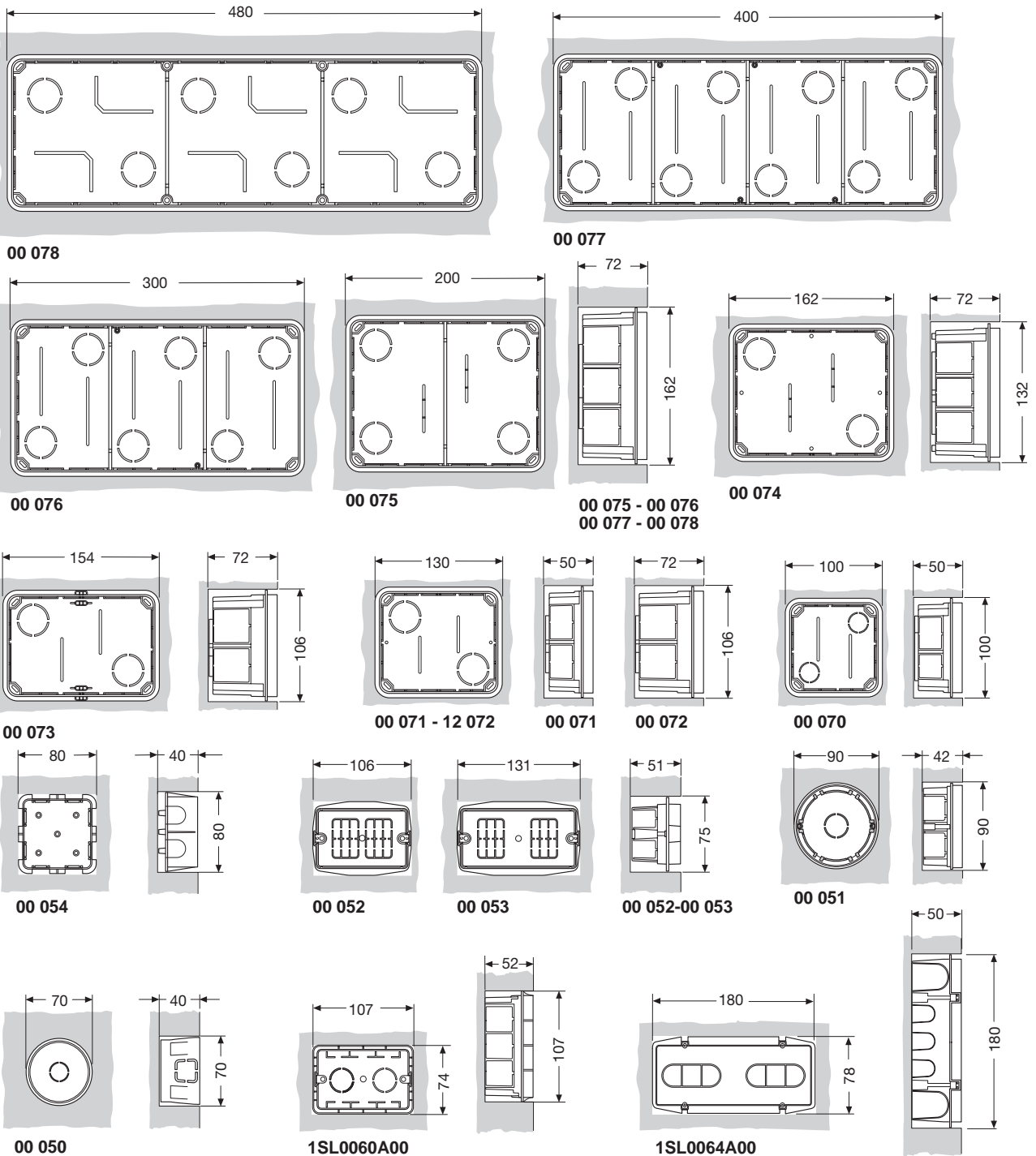


VLC00037

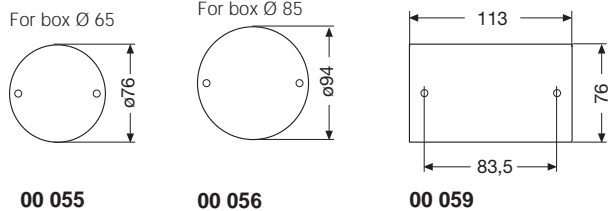
# Overall dimensions

Wiring accessories and junction boxes in thermoplastic material

## Drilling sheets



## Covers



## Spare covers

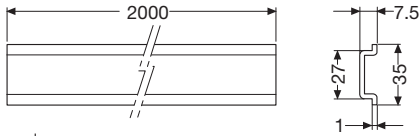
code	A	B
00 091	110	110
00 092	140	125
00 093	170	125
00 094	180	150
00 095	220	182
00 096	320	182
00 097	425	182
00 098	500	182

# Overall dimensions

## Installation material

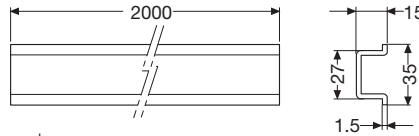
### Metal rails

Top hat section rail TH 35-7.5



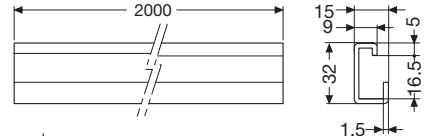
code  
**12 839**

Top hat section rail TH 35-15



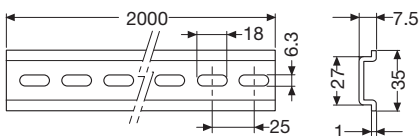
code  
**12 840**

"G" section rail G 32



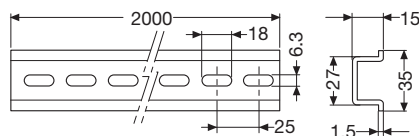
code  
**12 841**

Top hat section rail TH 35-7.5 with holes



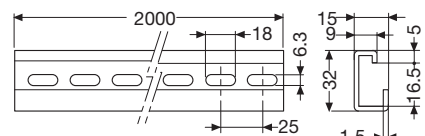
code  
**12 849**

Top hat section rail TH 35-15 with holes



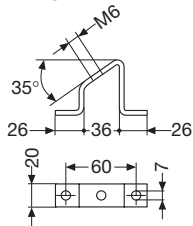
code  
**12 850**

"G" section rail G 32 with holes



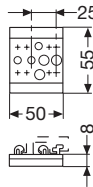
code  
**12 853**

Supporting bracket for metal rails



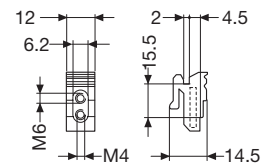
code  
**12 892**

Plastic base for wiring ducts



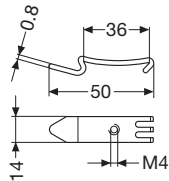
code  
**05 210**

Universal plastic connector

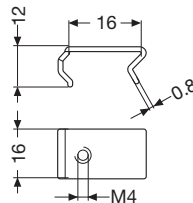


code  
**12 893**

Universal metal connector

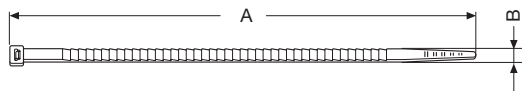


code  
**12 828**

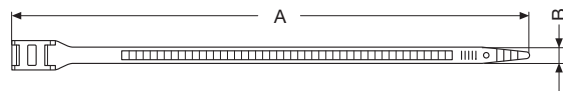


code  
**12 829**

Polyamide cable-ties



Transparent polyamide	Black polyamide	A	B	Ø tightening	
				min.	max.
18 010	18 110	100	2.5	2	24
18 013	18 113	160	2.5	2	42
18 012	18 112	140	3.5	2.5	36
18 011	18 111	135	2.5	2	35
18 014	18 114	200	3.5	2.5	55
18 015	18 115	180	4.5	3	45
18 017	18 117	280	3.5	2.5	80
18 018	18 118	280	4.5	5	76
18 020	18 120	360	4.5	5	101
18 024	18 124	200	7.5	5	51
18 026	18 126	280	7.5	5	76
18 034	18 134	430	9	5	110



Transparent polyamide	Black polyamide	A	B	Ø tightening	
				min.	max.
18 036	18 136	550	9	5	140
18 038	18 138	780	9	5	190
18 028	18 128	360	7.5	5	102

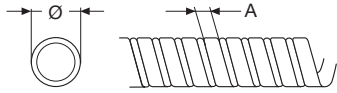
  

Black polyamide	A	B	Ø tightening	
			min.	max.
18 210	115	6	5	20
18 212	175	6	10	40
18 218	115	9	5	20
18 220	180	9	10	45
18 222	265	9	15	70
18 224	360	9	25	100

# Overall dimensions

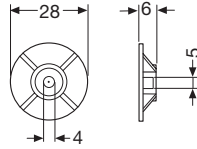
## Installation material

### Spirals



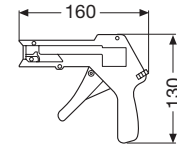
Transparent polyethylene	Self-extinguishing polyethylene	Ø	x	A
18 370	18 380	3		5
18 372	18 382	6		8
18 374	18 384	10		11
18 376	18 386	12		13

### Self-adhesive supports for cable-ties



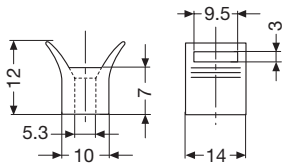
Transparent base	Black base
18 250	18 251

### Pincer for cable-ties



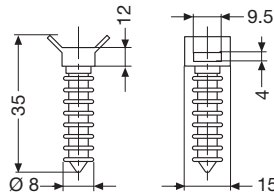
code
18 270

### Screw support for external cable-ties



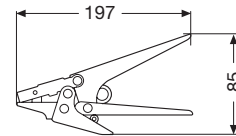
code
18 280

### Pivot support for external cable-ties



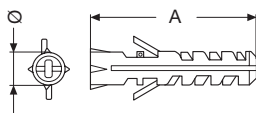
code
18 282

### Pincer for external cable-ties



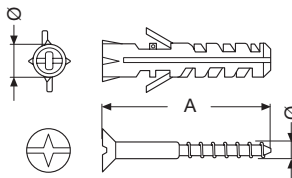
code
18 290

### Wall plugs



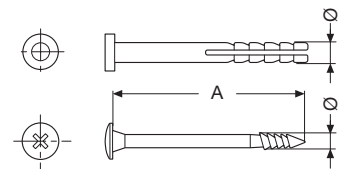
code	Ø	x	A
18 405	5		25
18 406	6		30
18 408	8		40
18 410	10		50

### Wall plugs with screws



code	wall plug Ø	screw Ø x A
18 415	5	3.5 x 25
18 416	6	4 x 30
18 418	8	5 x 40
18 420	10	6 x 50

### Wall plugs with nail-screw

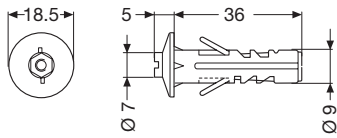


code	wall plug Ø	nail-screw Ø x A
18 430	5	3.5 x 27
18 432	6	4 x 35
18 434	6	4 x 55
18 436	8	5 x 70
18 440	8	5 x 72

# Overall dimensions

## Installation material

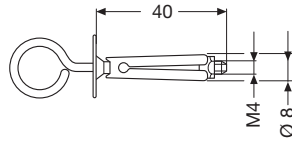
### Wall plugs with hooks



code

18 450 - 18 452 - 18 454 - 18 456 - 18 548

### Stainless-steel wal plugs with hooks

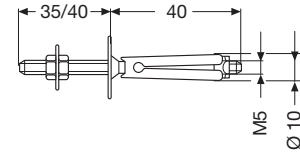


code

18 460 - 18 461 - 18 464 - 18 465 - 18 466

18 467 - 18 470 - 18 471 - 18 472 - 18 473

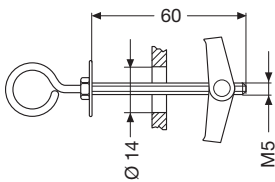
### Stainless-steel wal plugs with hooks



code

18 476 - 18 477 - 17 478 - 18 479

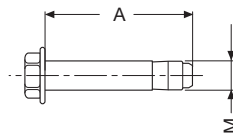
### Stainless-steel wall anchor



code

18 490 - 18 492 - 17 494 - 18 496

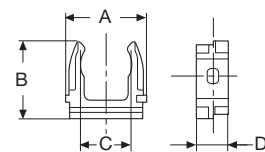
### Screws with stainless-steel wall plugs



code

	M	x	A
18 486	6		50
18 487	8		55
18 488	10		60
18 489	10		70

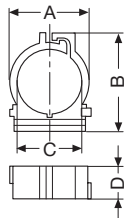
### Snap-on conduit holders



code

	A	B	C	D
05 700	29	26	16	10
05 701	33	28	20	12
05 702	35	32	25	12
05 703	50	42	32	14
05 704	55	50	40	14

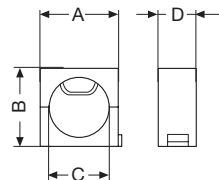
### Collar conduit holders



code

	A	B	C	D
05 720	29	26	16	10
05 721	33	28	20	12
05 722	35	32	25	12
05 723	50	42	32	14

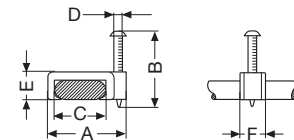
### U-bolt conduit holders



code

	A	B	C	D
05 694	28	29	12-16	17
05 695	35	35	16-25	17
05 696	47	47	25-32	17
05 697	56	56	32-40	17
05 698	70	70	40-50	17

### Strap holders



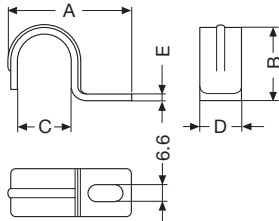
code

	A	B	C	D	E	F
05 760	11	18	6	2	3.5	5.5
05 761	14	18	8	2	3.5	7
05 762	17	18	11	2	5	7.5
05 763	11	18	6	2	3.5	5.5
05 764	14	18	8	2	3.5	7
05 765	17	18	11	2	5	7.5

# Overall dimensions

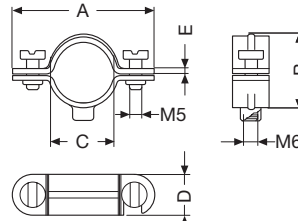
## Installation material

### Conduit clamps



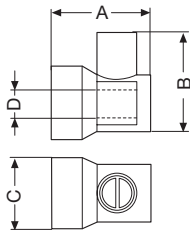
code	A	B	C	D	E
05 730	31	11.5	10	14	1.2
05 731	35	13	12	15	1.5
05 732	35	14	13	15	1.5
05 733	36	16	14	15	1.5
05 734	38	17	16	15	1.5
05 735	42	21	19-20	15	1.5
05 736	44	24	22	16	1.5
05 737	50	27	15-26	16	1.5
05 738	58	27	32	16	1.5
05 739	67	40	38	16	2
05 740	69	42	40	16	2
05 741	82	53	50	17	2

### Conduit clamp collars



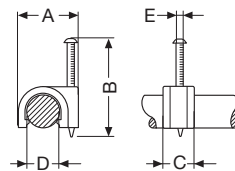
code	A	B	C	D	E
05 745	34	15	10	12	0.8
05 746	37	18	12	12	0.8
05 747	38	19	13	12	0.8
05 748	38	19	14	12	0.8
05 749	42	22	16	13	1.2
05 750	45	26	19-20	13	1.2
05 751	48	29	22	14	1.2
05 752	51	32	25-26	14	1.2
05 753	58	40	32	16	1.5
05 754	67	45	38	16	1.5
05 755	64	48	40	16	1.5
05 756	78	55	50	16	1.5

### Insulated cable clamps



code	A	B	C	D
05 950	19.5	18.5	13.5	4.5
05 951	24	24	16.5	6.5
05 952	29	31	20.5	8

### Cable holders

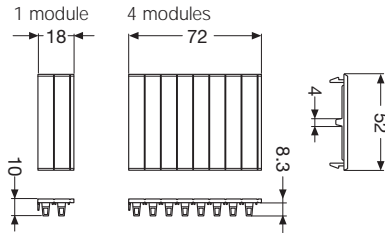


code	A	B	C	D	E
05 770-05 788	9.5	18	6	4	2
05 771-05 789	11.5	18	6	5	2
05 772-05 790	12	18	6	6	2
05 773-05 791	12	24	7.5	7	2
05 774-05 792	14	24	8.5	8	2
05 775-05 793	15	29	9.5	9	2
05 776-05 794	17	29	10	10	2
05 777-05 795	20	29	10	12	2
05 778-05 796	21	29	11	13	2
05 779	22	29	11	14	2
05 780	24	35	12	16	2
05 781	27	45	14	19-20	2.5
05 782	30	45	15	22	2.5
05 783	37	60	20	25-26	2.7
04 784	43	60	25.6	32	2.7

# Overall dimensions

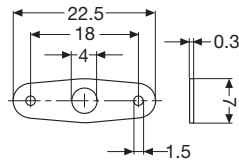
## Accessories

### Module covers



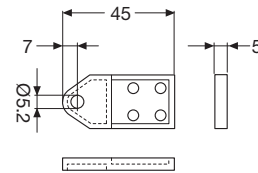
code	No modules
1SL2857A00 – 12 895 – 12 861	1
1SL2859A00 – 12 896 – 12 863 – 12 555	4

### Screw lead sealing accessory



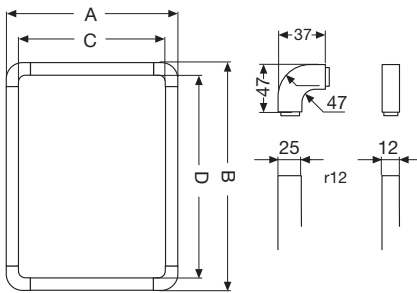
code
12 860

### Brackets



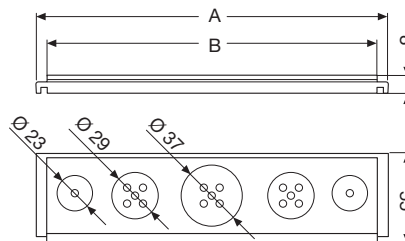
code
12 858

### Semi-flush-mounting frame



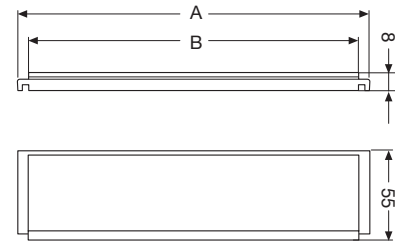
code	A	B	C	D
12 590	187	270	137	220
12 591	254	270	204	220
12 592	325	270	275	220
12 593	325	420	275	370
12 594	325	622	275	572
12 595	430	622	380	572
12 596	430	270	380	220
12 597	430	420	380	370
12 598	136	548	86	498
12 599	275	455	225	405

### Bi-material flange



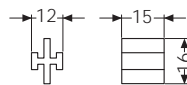
code	A	B
12 600	140	146
12 601	216	210
12 602	292	285

### Rigid flange



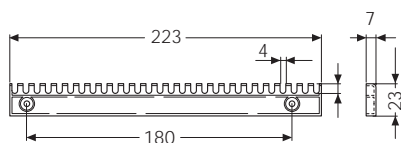
code	A	B
1SL0550A00	140	146
1SL0551A00	216	210
1SL0552 A00	292	285

### Unibox Series coupling accessory



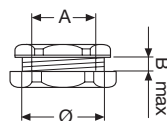
code
12 556

### Unibox Series cable holder



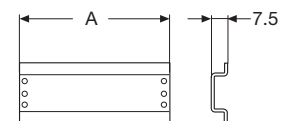
code
12 530

### Plug/box unions element



code	Ø	A	B
13 874	23	18	7
13 875	28.5	22	7
13 876	37	30	10

### DIN rails

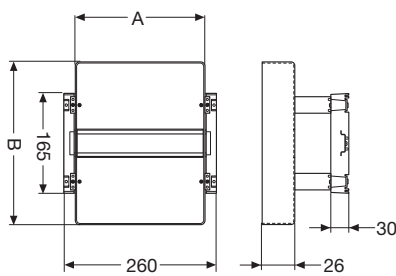


code	A
12 852	86
12 854	164
12 855	224
12 856	330

# Overall dimensions

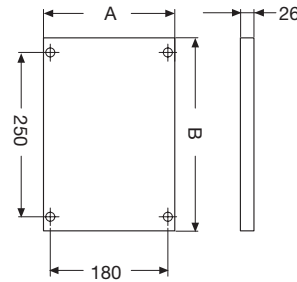
## Accessories

### Kit for MCBs connectors



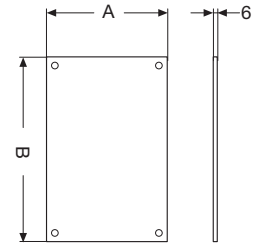
code	A	B
12 820	217	273
12 821	217	474
12 822	321	474

### Fixed counter-doors



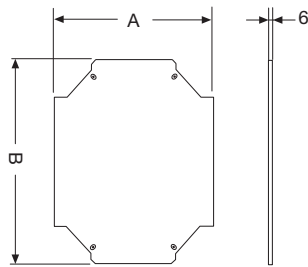
code	A	B
12 825	217	273
12 826	217	474
12 827	827	321

### Insulating material base plates



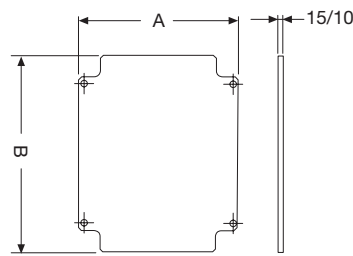
code	A	B
12 832	80	116
12 834	147	116
12 835	217	116
12 836	217	266
12 837	217	466
12 838	322	466

### Metal base plates for IP 65 box



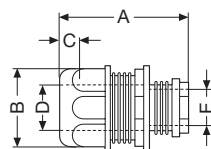
code	A	B
12 842	80	116
12 844	145	116
12 845	215	116
12 846	215	266
12 847	215	466
12 848	320	466

### Metal base plates for IP 55 water-proof box

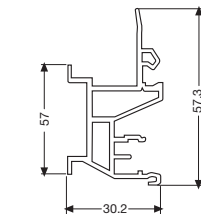


code	A	B
00 900	120	149
00 902	153	200
00 904	222	290

### Conduit clamps-connector box Plastic spacer

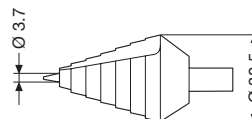


code	A	B	C	D	E
00 430	37	28	4.8	16.5	11.9
00 431	37	33.4	4.9	20.8	15.9
00 432	37.7	38.9	5	25.5	19.8
00 433	46.6	51	5.5	32.1	20.2
00 434	49.6	56.2	5.5	40.4	33.5
00 435	49.9	67.4	5.5	50.5	44



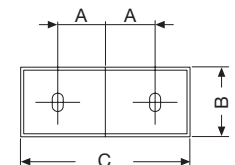
code
12 851

### Universal cutter



code
12 894

### Module covers



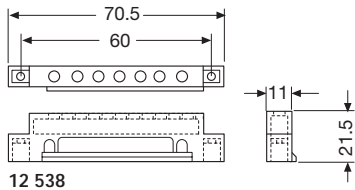
code	A	B	C
12 868	35	36	100.5
12 869	35	36	100.5

VLC00050

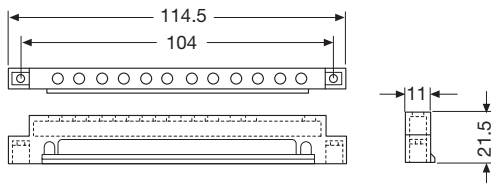
# Overall dimensions

## Accessories

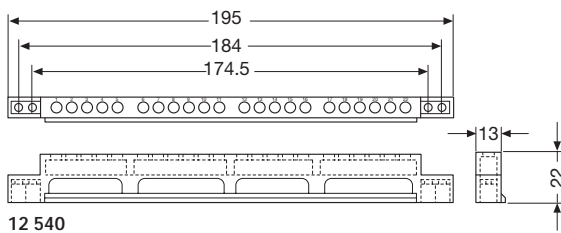
### Terminal holders



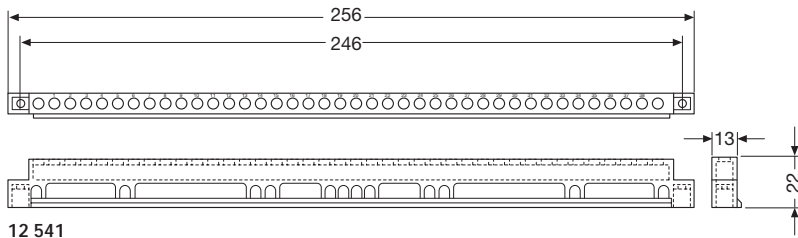
12 538



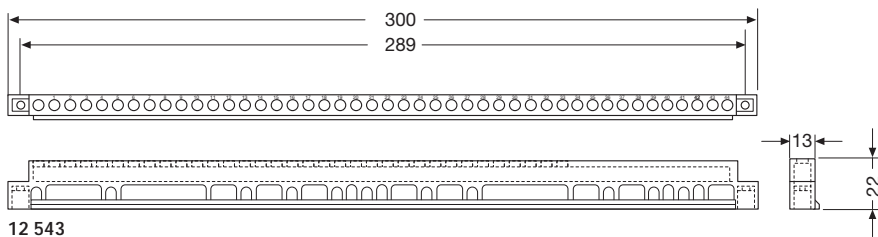
12 539



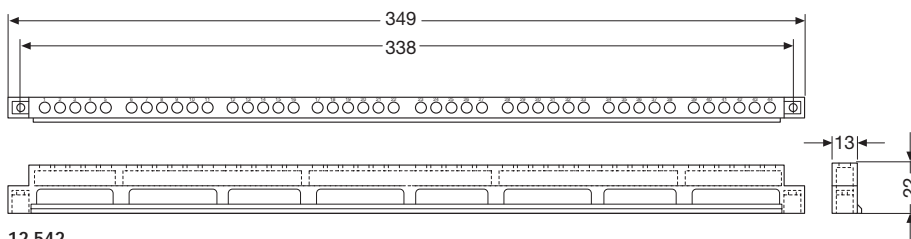
12 540



12 541



12 543



12 542

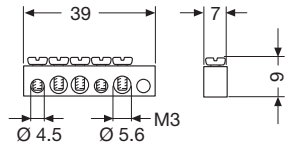
10

VI.CC00860

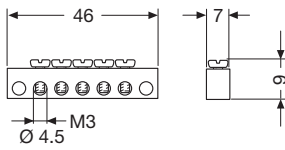
# Overall dimensions

## Accessories

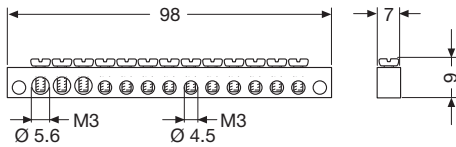
### Terminal bars



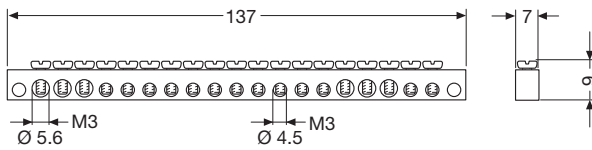
12 502



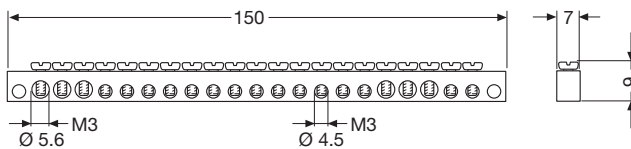
12 531



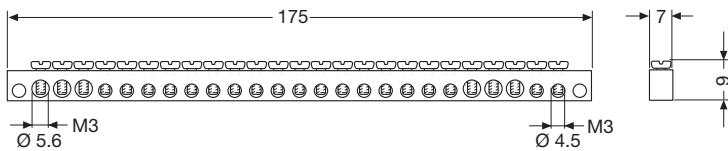
12 532



12 533



12 534



12 535





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10804	7/4	00 546	6/16	00 944	6/6
10805	7/4	00 551	6/17	00 945	6/6
10807	7/4	00 552	6/17	00 946	6/6
10808	7/4	00 553	6/17	00 947	6/6
10811	7/4	00 554	6/17	00 948	6/6
10821	7/4	00 556	6/17	00 951	6/6
10822	7/4	00 570	6/19	00 952	6/6
10831	7/4	00 572	6/19	00 953	6/6
10832	7/4	00 573	6/19	00 954	6/6
10833	7/4	00 578	6/19	00 955	6/6
10834	7/4	00 579	6/19	00 956	6/6
10840	7/5	00 580	6/19	00 957	6/6
10841	7/5	00 581	6/19	00 958	6/6
10842	7/5	00 583	6/19	00 961	6/6
10843	7/5	00 585	6/19	00 962	6/6
10844	7/5	00 587	6/19	00 963	6/6
10845	7/5	00 591	6/19	00 964	6/6
10846	7/5	00 592	6/19	00 965	6/6
10847	7/5	00 595	6/19	00 966	6/6
10848	7/5	00 596	6/19	00 967	6/6
10849	7/5	00 641	6/16	00 968	6/6
10850	7/5	00 642	6/16	05 210	8/3
10851	7/5	00 643	6/16	05 694	8/10
00 050	7/8	00 644	6/16	05 695	8/10
00 051	7/8	00 646	6/16	05 696	8/10
00 052	7/8	00 651	6/17	05 697	8/10
00 053	7/8	00 652	6/17	05 698	8/10
00 054	7/8	00 654	6/17	05 700	8/10
00 055	7/9	00 656	6/17	05 701	8/10
00 056	7/9	00 770	6/19	05 702	8/10
00 059	7/9	00 771	6/19	05 703	8/10
00 070	7/8	00 800	6/4	05 704	8/10
00 071	7/8	00 802	6/4	05 720	8/10
00 072	7/8	00 808	6/4	05 721	8/10
00 073	7/8	00 810	6/4	05 722	8/10
00 074	7/8	00 816	6/4	05 723	8/10
00 075	7/8	00 820	6/4	05 727	8/11
00 076	7/8	00 821	6/4	05 730	8/11
00 077	7/8	00 822	6/5	05 731	8/11
00 078	7/8	00 824	6/5	05 732	8/11
00 090	7/9	00 826	6/5	05 733	8/11
00 091	7/9	00 828	6/5	05 734	8/11
00 092	7/9	00 830	6/5	05 735	8/11
00 093	7/9	00 832	6/5	05 736	8/11
00 094	7/9	00 834	6/5	05 737	8/11
00 095	7/9	00 846	6/4	05 738	8/11
00 096	7/9	00 850	6/4	05 739	8/11
00 097	7/9	00 851	6/4	05 740	8/11
00 098	7/9	00 852	6/5	05 741	8/11
00 430	6/7	00 854	6/5	05 745	8/11
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00 432	6/7	00 858	6/5	05 747	8/11
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00 434	6/7	00 862	6/5	05 749	8/11
00 435	6/7	00 864	6/5	05 750	8/11
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00 501	6/16	00 874	6/5	05 752	8/11
00 502	6/16	00 876	6/5	05 753	8/11
00 503	6/16	00 878	6/5	05 754	8/11
00 504	6/16	00 880	6/5	05 755	8/11
00 505	6/16	00 882	6/5	05 756	8/11
00 510	6/16	00 884	6/5	05 760	8/10
00 511	6/16	00 900	6/7	05 761	8/10
00 512	6/16	00 902	6/7	05 762	8/10
00 513	6/16	00 904	6/7	05 763	8/10
00 520	6/17	00 908	6/7	05 764	8/10
00 521	6/17	00 910	6/7	05 765	8/10
00 522	6/17	00 912	6/7	05 770	8/11
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00 524	6/17	00 932	6/6	05 772	8/11
00 525	6/17	00 933	6/6	05 773	8/11
00 530	6/17	00 934	6/6	05 774	8/11
00 531	6/17	00 935	6/6	05 775	8/11
00 532	6/17	00 936	6/6	05 776	8/11
00 533	6/17	00 937	6/6	05 777	8/11
00 541	6/16	00 938	6/6	05 778	8/11

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05 788	8/11	12 424	2/42	12 515	2/9
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05 790	8/11	12 428	2/30	12 516	2/27
05 791	8/11	12 432	2/30	12 517	2/27
05 792	8/11	12 434	2/30	12 518	2/27
05 793	8/11	12 436	2/31	12 519	2/27
05 794	8/11	12 437	2/31	12 520	2/27
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05 796	8/11	12 452	2/30	12 521	2/27
05 950	8/11	12 454	2/30	12 522	29
05 951	8/11	12 456	2/31	12 522	2/27
05 952	8/11	12 457	2/31	12 523	2/9
12 026	2/18	12 468	2/30	12 523	2/27
12 027	2/18	12 472	2/30	12 524	2/9
12 030	2/18	12 474	2/30	12 524	2/27
12 031	2/19	12 476	2/31	12 525	2/9
12 035	2/19	12 477	2/31	12 525	2/27
12 037	2/12	12 490	2/60	12 530	2/9
12 038	2/12	12 490	5/9	12 530	2/27
12 042	2/12	12 490	6/12	12 531	2/8
12 043	2/13	12 491	2/54	12 531	2/14
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12 046	2/13	12 491	5/9	12 531	2/26
12 051	2/15	12 491	6/12	12 531	2/54
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12 060	2/15	12 492	2/26	12 531	5/21
12 062	2/18	12 492	2/32	12 531	6/12
12 064	2/18	12 492	2/54	12 532	2/8
12 066	2/19	12 492	2/60	12 532	2/14
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12 070	2/21	12 492	5/13	12 532	2/26
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12 071	2/21 - 2/33	12 492	6/12	12 532	2/60
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12 073	2/21 - 2/33	12 493	2/60	12 532	5/13
12 074	2/21 - 2/33	12 493	5/9	12 532	5/21
12 075	2/21 - 2/33	12 493	6/12	12 532	6/12
12 076	2/21 - 2/33	12 494	2/54	12 533	2/8
12 077	2/21 - 2/33	12 494	2/60	12 533	2/14
12 087	2/21	12 494	5/9	12 533	2/20
12 089	2/21	12 494	6/12	12 533	2/26
12 094	2/33	12 495	2/8	12 533	2/54
12 096	2/33	12 495	2/14	12 533	2/60
12 208	2/24	12 495	2/20	12 533	5/9
12 212	2/24	12 495	2/26	12 533	5/13
12 214	2/24	12 495	2/32	12 533	5/21
12 216	2/25	12 497	2/32	12 533	6/12
12 217	2/25	12 497	2/60	12 534	2/8
12 228	2/24	12 497	5/9	12 534	2/14
12 232	2/24	12 497	6/12	12 534	2/20
12 234	2/24	12 498	2/60	12 534	2/26
12 236	2/25	12 498	5/13	12 534	2/54
12 237	2/25	12 498	5/21	12 534	2/60
12 238	2/24	12 501	2/26	12 534	5/9
12 242	2/24	12 502	2/43	12 534	5/13
12 244	2/24	12 503	2/14	12 534	5/21
12 246	2/25	12 504	2/8	12 534	6/12
12 247	2/25	12 504	2/14	12 535	2/8
12 248	2/24	12 504	2/20	12 535	2/14
12 252	2/24	12 504	2/26	12 535	2/20
12 254	2/24	12 504	2/32	12 535	2/26
12 256	2/25	12 505	2/8	12 535	2/54
12 257	2/25	12 505	2/14	12 535	2/60
12 258	2/24	12 505	2/20	12 535	5/9
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12 267	2/25	12 506	2/20	12 538	2/60
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