



We make the difference



# A modern industrial facility



## AL - FÁBRICA DE MATERIAL ELÉCTRICO, S.A.

Located in Marinha Grande at an industrial plant equipped with modern technology, this design and production unit meets the highest international quality standards.

Incorporated on 9 April 1984 and transformed into a Public Limited Company on 6 November 1996, AL is a sound company with many years experience in the electrical and electronics sector.

It manufactures and markets a wide range of boxes and panels for electrical, water and gas circuits, as well as a complementary range of lighting and telecommunications equipment.

### Production is divided into various specific and independent processes:

- Injection and compression of polymers
- Production of electronic devices

In pursuit of its goal of

### ***making the difference.***

AL is independent and designs all of its own products.

To manufacture its products, AL uses raw materials such as PVC, ABS, Polycarbonate, Polystyrene, Polyamide and Polyester reinforced with glass fiber, guaranteed to be in compliance with prevailing national and international standards and safety regulations.

AL is currently among the leading domestic manufacturers of electrical material for the construction industry. In 1997 and 1998, it was selected as a "SME of Excellence" given the overall quality of its management and its economic and financial indicators.

### Since 2008, it has also been designated as a “Leading SME”

In order to increase the business, the company has been engaging in the foreign market with partnerships in Spain and Poland, in order to ensure an ongoing focus on quality vis-to-vis its customers.

In 1998, various investments were made, most notably in a new and modern plant that currently employs around 160 workers and is dedicated to improving working conditions in order to achieve productivity gains and optimise processes, as well as continuously improve products and after sales service. On 23 February 2000, AL's Quality System received Quality Certificate no. 2000/CEP.1081 under the NP EN ISO 9002:1995 Standard.

On 26 March 2003, its Quality Management System was certified under the new NP EN ISO 9001:2000 Standard. Since 2005, AL has maintained a trade/production agreement with the Spanish company Uriarte Safybox, which has expanded the range of products available in the market, as well as strengthening its global market presence, which now extends to over 60 countries.

In 2007, under a new initiative and in response to market demands, AL began offering pre-equipped boxes and panels, in particular centralised metering units, special low voltage (SLV) meters, pre-fitted junction and protection boxes and, recently, column panels. Due to the growth of this business, in 2009, AL acquired a water jet cutter boasting the latest technology for mechanising casings, also offering this type of service to its customers.

On 27 July 2010, AL's Quality Management System was certified under the new NP EN ISO 9001:2008 Standard.



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# ELECTRICITY



CLAMPS



# Clamps

## common clamp



### APPLICATIONS

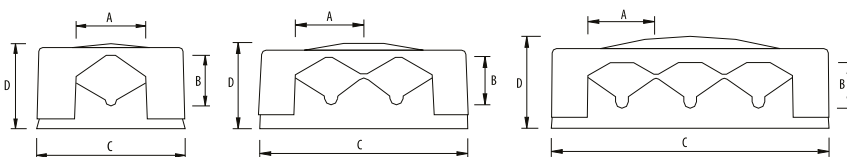
Fixation of tubes and cables by mechanical grip.

### MATERIALS

Base and cover clamp in white PVC, RAL 9003. Self-extinguishing material.  
Self-tapping screws in galvanised steel.

### APPLICABLE STANDARDS

EN 61386-25



Reference	Name	Min/max tightening lengths	A	B	C	D
01B105	Simple clamp 8/12 mm	8-12	12	9	29.5	16.5
01B106	Simple clamp 10/16 mm	10-16	18	13	39.0	16.5
01B107	Simple clamp 15/30 mm	15-30	30	19	50.5	22.0
01B108	Simple clamp 30/40 mm	30-40	40	28	67.0	32.0
01B109	Simple clamp 40/70 mm	40-70	70	47	102.5	50.5
01B105-2	Double clamp 8/12 mm	8-12	15	11	48.0	79.0
01B106-2	Double clamp 10/16 mm	10-16	20	14	64.0	19.5
01B105-3	Triple clamp 8/12 mm	8-12	16	10	64.0	24.5
01B106-3	Triple clamp 10/16 mm	10-16	20	12	83.0	22.5

All measurements in mm



# Clamps

## clip

CE

### APPLICATIONS

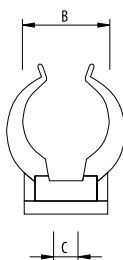
Fixation of tubes and cables by docking.

### MATERIALS

Clamp body in Polypropylene RAL 9003.  
Metallisation in brass to diameter 32, 40 and 50.

### APPLICABLE STANDARDS

EN 61386-25



Reference	Name	Min/max tightening lengths	B	C
01B12	Clip clamp 10/12 mm	10-12	10,7	M6
01B16	Clip clamp 14/16 mm	14-16	14,4	M6
01B20	Clip clamp 18/20 mm	18-20	18,3	M6
01B25	Clip clamp 23/25 mm	23-25	23,3	M6
01B32	Clip clamp 30/32 mm	30-32	30	M6
01B40	Clip clamp 38/40 mm	38-40	38,4	M6
01B50	Clip clamp 48/50 mm	48-50	48,3	M6

Fixing bracket with screws/bolts

All measurements in mm



# Docking clip clamps



## APPLICATIONS

Fixation of tubes and cables by docking.  
Groupable in all measures.

## MATERIALS

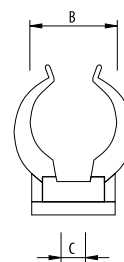
Clamp in polypropylene.  
Cream RAL 1015.  
Grey RAL 7035.  
Without halogen.

## APPLICABLE STANDARDS

EN 61386-25

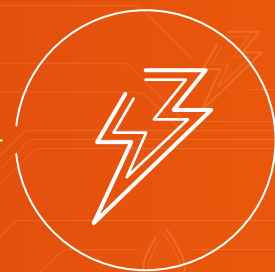


Reference	Name	Min/max tightening lengths	B	C
01BC16-CR	Docking clip clamp 14/16 mm cream	14-16	15	M6
01BC20-CR	Docking clip clamp 18/20 mm cream	18-20	18,7	M6
01BC25-CR	Docking clip clamp 23/25 mm cream	23-25	23,3	M6
01BC32-CR	Docking clip clamp 30/32 mm cream	30-32	30	M6
01BC40-CR	Docking clip clamp 38/40 mm cream	38-40	38,2	M6



Reference	Name	Min/max tightening lengths	B	C
01BC16-CZ	Docking clip clamp 14/16 mm grey	14-16	15	M6
01BC20-CZ	Docking clip clamp 18/20 mm grey	18-20	18,7	M6
01BC25-CZ	Docking clip clamp 23/25 mm grey	23-25	23,3	M6
01BC32-CZ	Docking clip clamp 30/32 mm grey	30-32	30	M6
01BC40-CZ	Docking clip clamp 38/40 mm grey	38-40	38,2	M6

All measurements in mm



RING TERMINALS  
SEALING CLAMPS  
END CAPS  
CONDUIT FITTINGS  
COUPLINGS



## Ring terminals, sealing clamps, end caps



### APPLICATIONS

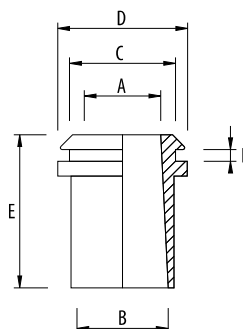
Indoor box and panel pipe openings.

### MATERIALS

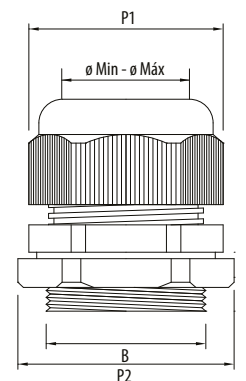
RAL 9003 plasticised PVC  
self-extinguishing material.

### APPLICABLE STANDARDS

EN 61386-1



Reference	Name	A	B	C	D	E	F
04BVD 16	Flexible ring 16 mm	14.5	16.0	18.5	22.5	26.0	2.0
04BVD 20	Flexible ring 20 mm	15.0	20.0	19.0	23.5	26.5	1.7



### APPLICATIONS

Indoor box and panel openings for cables and pipes.

### MATERIALS

Body fixing nut and lock nut in RAL 7035 grey or 9010 white rigid polyamide PVC.  
EPDM seal.

### APPLICABLE STANDARDS

EN 62444

### CHARACTERISTICS

IP68, IK08 classification 305  
Resistance to UVs not declared  
a hole seal.

### OPERATING CONDITIONS

-40°C to 100°C

Type	Reference RAL9010 (White)	Reference RAL7035 (Grey)	ø Min.	ø Max.	A	B	P1	P2
PG7	05BU07-BR	05BU07-CZ	2,5	6,5	9	12,5	16	19
PG9	05BU09-BR	05BU09-CZ	4,5	8	9	15,2	19	22
PG11	05BU11-BR	05BU11-CZ	5	10	9	18,6	22	24
PG13.5	05BU13,5-BR	05BU13,5-CZ	6	12	10	20,4	24	26
PG16	05BU16-BR	05BU16-CZ	7	14	10	22,5	27	30
PG21	05BU21-BR	05BU21-CZ	11	18	12	28,3	33	36
PG29	-	05BU29-CZ	17	25	13	37	42	46
PG36	-	05BU36-CZ	22	32	16	47	52	56
PG42	-	05BU42-CZ	26	39	17	54	60	65
PG48	-	05BU48-CZ	30	44	18	59,3	64	70



Reference	Name
05TP09-CZ	End cap IP68 PG9 grey
05TP11-CZ	End cap IP68 PG11 grey
05TP13,5-CZ	End cap IP68 PG13,5 grey
05TP16-CZ	End cap IP68 PG16 grey
05TP21-CZ	End cap IP68 PG21 grey

All measurements in mm



# Conduit fittings and couplings

CE

## APPLICATIONS

RV tube couplings.  
Conduit fittings for RV tube.

## MATERIALS

Rigid PVC self-extinguishing cream.

## APPLICABLE STANDARDS

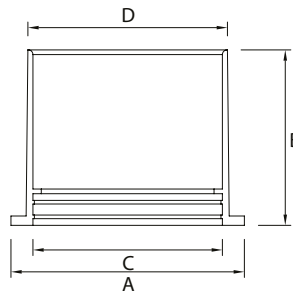
EN 61386-1  
EN 61386-21

## CHARACTERISTICS

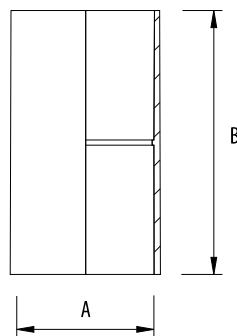
Compressive strength: 320N  
Impact strength: 2J

## OPERATING CONDITIONS

-5°C to 60°C



Reference	A	B	C	D
10BT20-CR	29	25	20	23
10BT25-CR	34	30	24	28
10BT32-CR	42	36	31	35
10BT40-CR	50	38	39	43
10BT50-CR	64	40	50	52
10BT63-CR	75	42	62	66

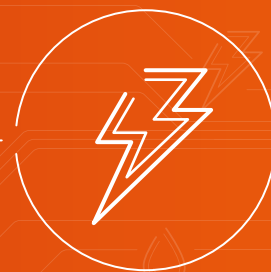


Reference	Name	A	B
10UVD 16	Coupling for 16 mm tube	16	56
10UVD 20	Coupling for 20 mm tube	20	44
10UVD 25	Coupling for 25 mm tube	25	69
10UVD 32	Coupling for 32 mm tube	32	69
10UVD 40	Coupling for 40 mm tube	40	77
10UVD 50	Coupling for 50 mm tube	50	89
10UVD 63	Coupling for 63 mm tube	63	100
10UVD 75	Coupling for 75 mm tube	75	120
10UVD 90	Coupling for 90 mm tube	90	130
10UVD 110	Coupling for 110 mm tube	110	150

All measurements in mm



ELECTRICITY



# EMERGENCY LIGHTING





# Series Elite



## APPLICATIONS

Emergency lighting.

## MATERIALS

White RAL 9003 ABS box.

RAL 9003 polycarbonate reflector.

Transparent V2 anti-UV polycarbonate diffuser.

## APPLICABLE STANDARDS

EN 60598-2-22

## CHARACTERISTICS

IP20, IK10

Supply voltage 230 VAC /50 Hz.

High temperature NiCd battery.

Storage battery charging system meter.

Charging time: 24 hours.

Autonomy for 1 to 3 hours, depending on the model.

Discharge limiter.

Input for universal remote control.

Protection fuse.

Consumption without permanent lamp <17 mA

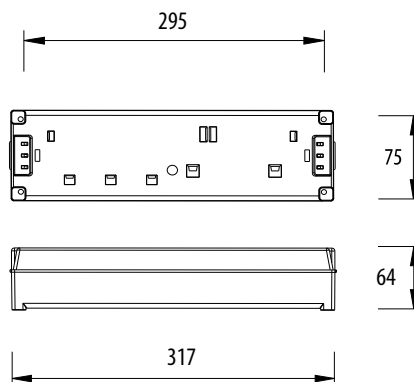
Insulation category: Category II



02EFP1-E



02EF1-E



Reference	Name	Lumens	Autonomy
02EF1-E	8W fluorescent emergency lamp	170 lm	1h
02EFP1-E	Permanent 8W fluorescent emergency lamp	170 lm	1h
02EF1L-E	8W fluorescent emergency lamp	240 lm	1h
02EFP1L-E	Permanent 8W fluorescent emergency lamp	240 lm	1h
02EF3-E	8W fluorescent emergency lamp	170 lm	3h
02EFP3-E	Permanent 8W fluorescent emergency lamp	170 lm	3h
02EF3L-E	8W fluorescent emergency lamp	240 lm	3h
02EFP3L-E	Permanent 8W fluorescent emergency lamp	240 lm	3h



# Series Slim



## APPLICATIONS

Emergency lighting.

## MATERIALS

White RAL 9003 ABS box.

RAL 9003 polycarbonate reflector.

Transparent V2 anti-UV polycarbonate diffuser.

## APPLICABLE STANDARDS

EN 60598-2-22

## CHARACTERISTICS

IP20, IK10

Supply voltage 230 VAC / 50 Hz.

High temperature NiCd battery.

Storage battery charging system meter.

Charging time: 24 hours.

Autonomy: > 1 hour.

Discharge limiter.

Input for universal remote control.

Protection fuse.

Consumption without permanent lamp <17 mA

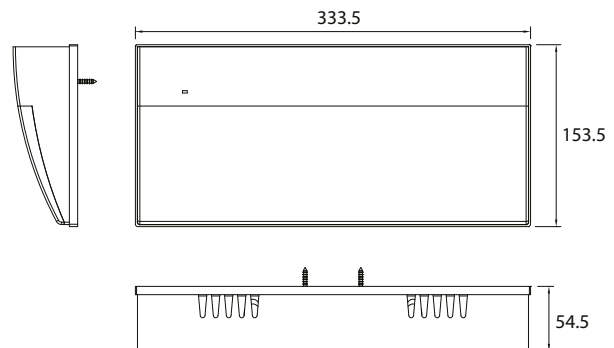
Insulation category: Category II



02EIP04S



02EIP01S



Reference	Name
02EI02S	Incandescent emergency lamp 2x1.62 W
02EI04S	Incandescent emergency lamp 4x1.62 W
02EIP02S	Incandescent emergency lamp 2x1.62 W / permanent 1x4.8 W
02EIP04S	Incandescent emergency lamp 4x1.62 W / permanent 1x4.8 W

Reference	Name
02EF01-S	Fluorescent emergency lamp 8 W
02EFP01-S	Fluorescent emergency lamp 8 W / permanent fluorescent 8 W
02EFIP01-S	Fluorescent emergency lamp 8 W / permanent incandescent 8 W



# Emergency kit for fluorescent lighting



## APPLICATIONS

Lighting fixtures with linear and compact 4-pin fluorescent lamps with power outputs of between 4 and 58W.

## MATERIALS

Housing in RAL 9003 V2 polycarbonate.

## APPLICABLE STANDARDS

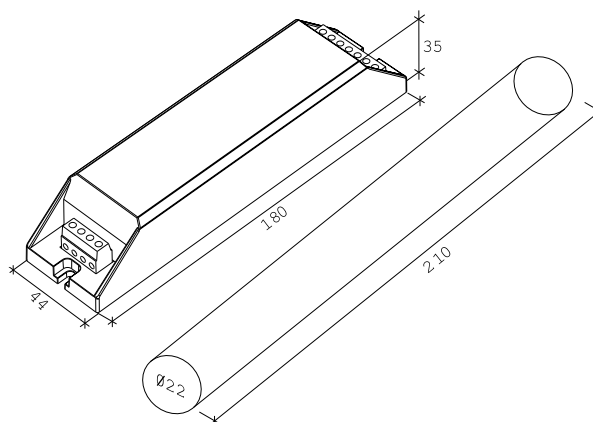
EN 60598-2-22

## CHARACTERISTICS

Supply voltage 230 VAC/50 Hz.  
High temperature NiCd battery.  
Battery charging system meter.  
Charging time 24 hours.  
Discharge limiter.  
Input for universal remote control.  
Prepared to work with electronic ballasts.  
Permanent, non-permanent and permanent serial assembly.



02KIT-K2



Reference	Name	Autonomy
02KIT-K2	Emergency kit for fluorescent lighting between 4 and 58 W	1h
02KIT-K3	Emergency kit for fluorescent lighting between 4 and 58 W (electronic ballasts)	1h

All measurements in mm

# Lighting accessories

CE

## APPLICATIONS

The Double Sided Diffuser (or pennant assembly) is applicable throughout the ELITE Series.

## CHARACTERISTICS

Transparent V2 anti-UV polycarbonate diffuser. Assembly by "slotting".

## NOTE

This article is sold as an accessory.



02AE-DB

Assembly example



02TIE01

CE

## APPLICATIONS

May be used to switch on or off an individual emergency lighting fitting or a group thereof (fluorescent or incandescent) in the event of a power failure, as well as to conduct functional testing on the emergency lighting without having to disconnect the entire power supply. The AL Remote Control applies to all locations where there is emergency lighting (public places, industrial sites, car parks, etc.). The advantages of using this equipment lies in the ease of checking the operating order of the emergency lighting, and the possibility of switching it on or off during a power failure.

## MATERIALS

Housing material: RAL 7035 grey V2 polycarbonate

## CHARACTERISTICS

Supply voltage 230 VAC/50 Hz.  
8.4V NiMH storage batteries.  
Storage battery charging system meter.  
Charging time: 16 hours.  
Output voltage: 9V DC.  
Consumption < 2.3 VA  
No. of controllable fixtures: 100.  
Connection terminal: cable up to 2.5 mm<sup>2</sup>.  
Space requirement 4 modules.  
Mounting on DIN rail.  
Insulation category: Category II



02GRELHA-AE

Assembly example

## APPLICATIONS

Metal protective grille for Elite series.

## CHARACTERISTICS

Metal grille in blue galvanised wire.

Reference	Name
02AE-D-B	Double sided diffuser for Elite Series lighting fixtures
02GRELHA-AE	Protective grille for Elite Series lighting fixture
02TIE01	Remote control for emergency lighting



# Lighting accessories



## APPLICATIONS

Recessed box for ceilings and hollow or masonry walls, for the Elite series.

## MATERIALS

White RAL 9003 ABS.

## CHARACTERISTICS

Dimensions with flap: 345×124×64 mm.

Dimensions for recessing: 335×100×61 mm.

Ventilation system.

Allows use of the D2AE-DB double sided diffuser.



**02AE-CE** Elite Series recessed emergency lamp box

# Pictograms



**39AUTPICTB**



**39AUTPICTC**



**39AUTPICTD**



**39AUTPICTDD**



**39AUTPICTSD**



**39AUTPICTE**



**39AUTPICTSE**



**39AUTPICTDE**

## Reference

## Name

**39AUTPICTB** Pictogram sticker downwards - PANTONE 342 C

**39AUTPICTC** Pictogram sticker upwards - PANTONE 342 C

**39AUTPICTD** Pictogram sticker rightwards - PANTONE 342 C

**39AUTPICTDD** Pictogram sticker downstairs rightwards - PANTONE 342 C

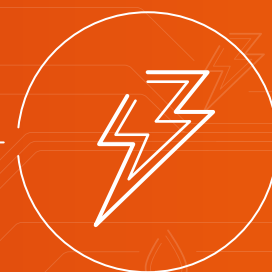
**39AUTPICTDE** Pictogram sticker downstairs leftwards - PANTONE 342 C

**39AUTPICTE** Pictogram sticker leftwards - PANTONE 342 C

**39AUTPICTSD** Pictogram sticker upstairs rightwards - PANTONE 342 C

**39AUTPICTSE** Pictogram sticker upstairs leftwards - PANTONE 342 C





BOXES FOR  
INSTALLATION  
EARTH MEASURING  
BOXES  
MANHOLE COVERS



# Embedded installation boxes



## APPLICATIONS

Indoor electrical installations.  
Boxes for control gear, branching  
and spot lights.

## MATERIALS

White RAL 9003 polystyrene.  
Self-tapping screws in galvanised steel.

## APPLICABLE STANDARDS

EN 60670-1

## CHARACTERISTICS

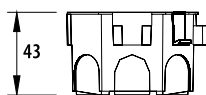
Detachable openings.  
IP20 IK06 in C100, C101, C103  
when installed with a lid and mounted recessed  
in walls or ceilings.  
IP40, IK06, Na C102  
Insulation voltage: 600v (with lid)  
Temperature range supported by the housing:  
-5°C to +60°C.

## ASSEMBLY INSTRUCTIONS

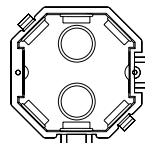
For integrated assembly, after the process  
of construction of the assembly surfaces.  
For assembly on solid, non-combustible walls.



06C100



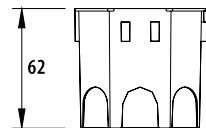
43



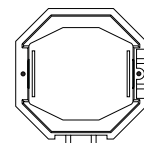
62



06C101



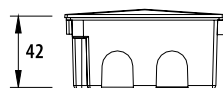
62



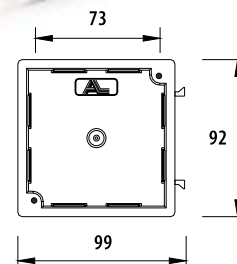
62



06C102



42



73

92

99



06C103



34.5



47

## Reference Name

06C100 Simple groupable controlgear box

06C101 Deep groupable controlgear box

06C102 Groupable junction box with cover

06C103 Wall fitting box

All measurements in mm

# Embedded installation boxes

CE

## APPLICATIONS

Box for recessed use.  
Multiple applications.

## MATERIALS

Box in black polystyrene or PVC.  
Cover in white RAL 9003 polystyrene.

## APPLICABLE STANDARDS

EN 60670-1

## CHARACTERISTICS

IP20  
Black base and white cover.  
Detachable openings.  
Screws provided.  
Insulation voltage: 600V  
Temperature range supported by the housing:  
-5°C to +60°C.

06CE100X100

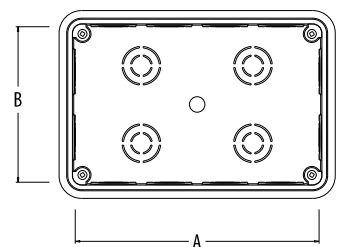


06CE160X100



## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process  
of construction of the assembly surfaces.  
For mounting on solid noncombustible walls.



Reference	Name	A	B	C
06CE100X100	CE junction box w/cover and screws	100	100	47.3
06CE160X100	CE junction box w/cover and screws	160	100	47.3
06CE200X130	CE junction box w/cover and screws	200	130	61.3
06CE200X200	CE junction box w/cover and screws	200	200	61.3
06CE80X80	CE junction box w/cover and screws	63	63	41

All measurements in mm



# Covers for embedded installation boxes



## APPLICATIONS

Covers for embedded installation boxes.

## MATERIALS

White RAL 9003 polystyrene.  
Self-tapping screws.

## APPLICABLE STANDARDS

EN 60670-1

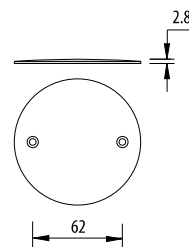
## CHARACTERISTICS

Insulation voltage: 600V

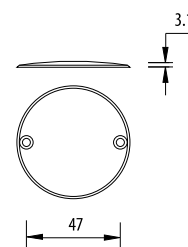
## OBSERVATIONS

The 14C103-T can also be supplied without holes, reference 14C103-T-SF.

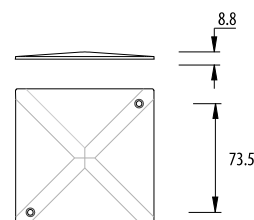
14C100-T



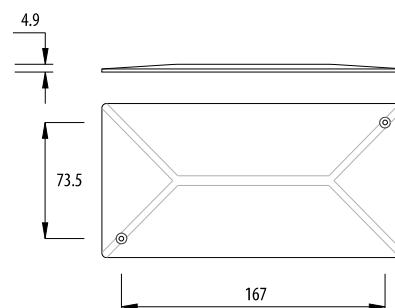
14C103-T



14C102-T



14C102-2-T



Reference	Name
14C100-T	Cover with screw for controlgear box
14C102-T	Cover with screw for junction box
14C102-2-T	Cover with screw for junction box
14C103-T	Cover with screw for wall fitting box

All measurements in mm



# Boxes for surfaces



## APPLICATIONS

External electrical installations.  
Water-resisting junction boxes

## MATERIALS

Grey PP RAL 7035 box and cover.  
TPE seal.  
Self-tapping screws.

## APPLICABLE STANDARDS

EN 60670-1

## CHARACTERISTICS

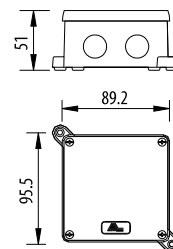
IP65, IK08  
Screws with anti-corrosion treatment.  
Insulation voltage: 600V  
Insulation category: Category II  
Temperature range supported by the housing:  
-5°C to +60°C.

## ASSEMBLY INSTRUCTIONS

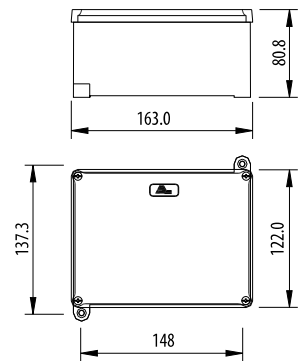
For surface assembly, after the process  
of construction of the assembly surfaces.  
For assembly on solid, non-combustible walls.



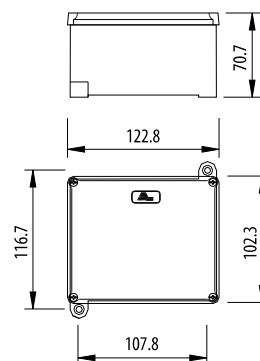
06C51



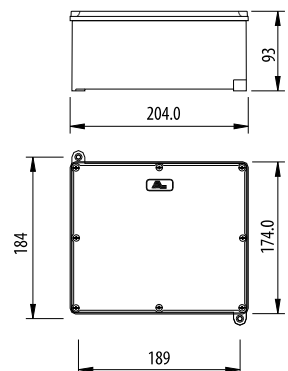
06C52



06C53



06C54



Reference	Name
06C51	Outside water-resisting box 80x80x42 mm
06C52	Outside water-resisting box 120x100x60 mm
06C53	Outside water-resisting box 160x120x70 mm
06C54	Outside water-resisting box 200x170x80 mm

All measurements in mm



# Water-resisting boxes for surfaces



## APPLICATIONS

External electrical installations.  
Water-resisting junction boxes.

## MATERIALS

Grey PP RAL 7035 box and cover.  
Black EPDM seal.  
RAL 7035 grey polyamide 6 screws.  
Grey plastic PVC plugs, RAL 7035.

## APPLICABLE STANDARDS

EN 60670-1

## CHARACTERISTICS

IP54, IK08  
¼ turn captive screws for closing and sealing the cover  
(in CEG80x80, cover closing by slotting).  
Insulation voltage: 600V  
Insulation category: Category II  
Temperature range supported by the housing:  
-5°C to +60°C.

06CEG100X100

06CEG80X80

06CEG170X220

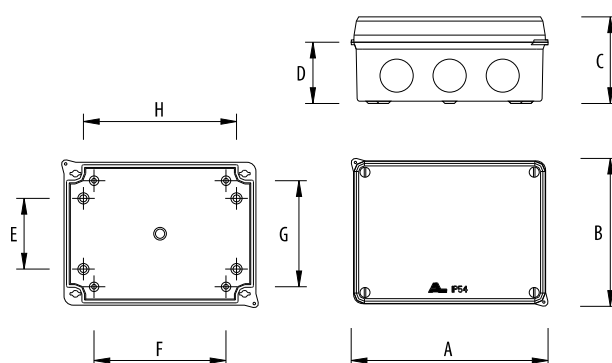
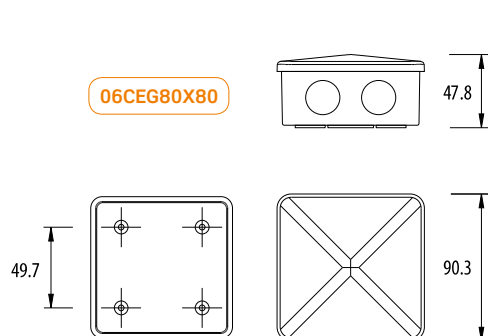
06CEG135X160

06CEG110X150



## ASSEMBLY INSTRUCTIONS

For surface assembly, after the process  
of construction of the assembly surfaces.  
For assembly on solid, noncombustible walls.



Reference	Name	A	B	C	D	E	F	G	H
06CEG100X100	Water-resisting grey box 100x100x56 mm	110	110	63	45.5	82	38	-	-
06CEG110X150	Water-resisting grey box 110x150x68 mm	162	120	73.5	52	60	112	90	130
06CEG135X160	Water-resisting grey box 135x160x78 mm	170	144	85.5	63	108	133.5	-	45.5
06CEG170X220	Water-resisting grey box 170x220x88 mm	231	181	92.5	67.5	143.4	190	-	100
06CEG80X80	Water-resisting grey box 80x80x40 mm								

All measurements in mm

# Earth measuring boxes



## APPLICATIONS

Earth measuring.  
Allows earth electrode(s) to be isolated by removal of the detachable terminal in order to perform the desired measurement.

## MATERIALS

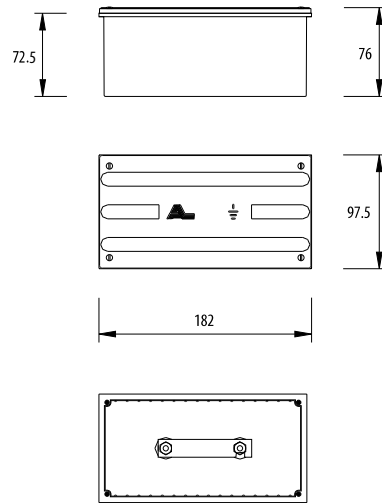
Box and cover in white RAL 9003 ABS.  
Self-tapping screws in blue galvanised steel.  
Detachable copper plate (15x3 mm)

## APPLICABLE STANDARDS

EN 60670-1

## CHARACTERISTICS

IP43, IK06 (if gland applied at open cable input)  
Insulation voltage: 600V  
Insulation category: Category II  
Temperature range supported by the housing:  
-5°C to +60°C.



All measurements in mm



**06CMT** Earth measuring boxes

## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of construction of the assembly surfaces. For mounting on solid noncombustible walls.

## APPLICATIONS

Base for cutting off and measuring earth.

## MATERIALS

Base in self-extinguishing RAL 7035 PC ABS.  
Detachable copper plate (20x2 mm).  
Bolts and nuts in galvanized steel.

## APPLICABLE STANDARDS

EN 60998-2-1

## CHARACTERISTICS

Section: 35 mm<sup>2</sup>  
Insulation voltage: 600V



**11BT00-S** Isolating earth base

## APPLICATIONS

As terminal boards or earth measuring.

## MATERIALS

Board in black polycarbonate.  
Detachable copper plate.  
Bolts and nuts in galvanized steel.

## APPLICABLE STANDARDS

EN 60998-2-1

## CHARACTERISTICS

Self-extinguishing material.  
Bolts and nuts with anti-corrosion treatment.



**08PB2** Board for earth measurement without terminal

**08PMT** Board for earth measurement with detachable terminal



# Manhole covers TR



## APPLICATIONS

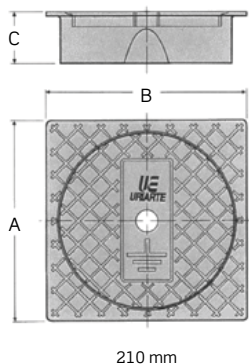
Cover allowing access to the point of connection of ground electrode, for periodic viewing of resistance values.

## MATERIALS

Made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass.

## CHARACTERISTICS

Easy handling due to light weight.  
May be used in damp and aggressive environments.



3923TRP-250

Reference	Name	A	B	C
3923TRP-250	Covers with ring for manhole earth electrode	250	250	60

## APPLICATIONS

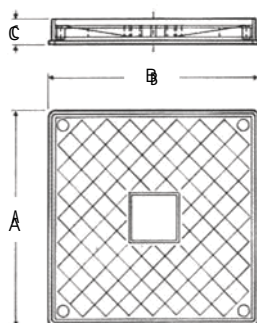
Multipurpose cover, for use in masonry, to visit electrical, hydraulic, sanitation, telecommunications systems, etc.  
May be deployed inside or outside buildings, in damp and aggressive environments.  
A binding between the rim and the cover prevents liquid from penetrating, and its light weight ensures easy handling.

## MATERIALS

Made of polyester reinforced with fibreglass.

## CHARACTERISTICS

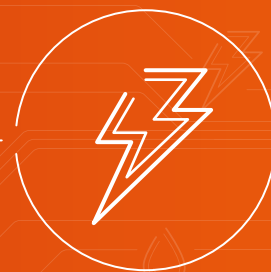
Easy handling due to light weight.  
May be used in damp and aggressive environments.  
Designed to withstand light vehicles.



3923TRM

Reference	Name	A	B	C
3923TRM-25	Covers with ring for manhole TRM-25	250	250	28
3923TRM-40	Covers with ring for manhole TRM-40	400	400	28

All measurements in mm



# METER BOXES TELEMETRY BOXES COLUMN BOXES



# Meter boxes



## APPLICATIONS

Surface assembled or recessed box for 2 single-phase meter.

## MATERIALS

Box, assembly plate and cover in reinforced polyester with grey self-extinguishing fibreglass, RAL 7035. Transparent anti-UV polycarbonate display. Display cover in RAL 7035 grey ABS. Black polyurethane sealant.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP44, IK08

Triangle lock in polyamide 6 grey RAL 7035.

Insulation voltage: 600V

Insulation category: Category II

Temperature range supported by the housing: -25°C to +60°C.

Thermal dissipation capacity: 28W

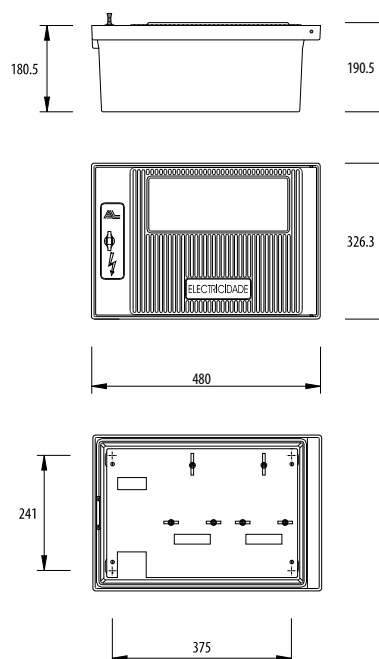


## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of construction of the assembly surfaces. This product was developed for the application of 2 single-phase meter so they must be assembled on the assembly plate supplied.

No heavy items must be placed on the box lid. The maximum weight of the equipment inside the box must not exceed 280 kg/m².

### 06C2CM Box for 2 single-phase meter



All measurements in mm



# Meter boxes



## APPLICATIONS

Surface assembled or recessed box for single-phase meter.  
Groupable box for modular panels for interiors.

## MATERIALS

Box, assembly plate and protective display cover in RAL 7035 grey ABS.  
Transparent CCM cover in anti-UV polycarbonate.  
Opaque CCM2 cover in V2 RAL 7035 polycarbonate.  
Sealing screws in nickel-plated steel.  
Black EPDM seal.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP54, IK08  
Insulation voltage: 600V  
Insulation category: Category II  
Temperature range supported by the housing: -25°C to +60°C.  
Thermal dissipation capacity: 11W



**06CCM2** Box for single-phase meter



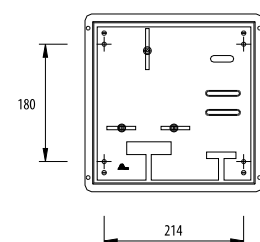
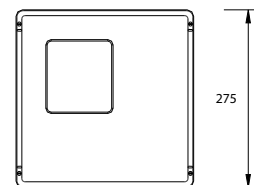
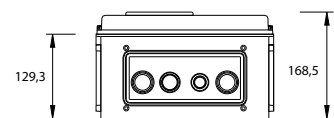
**08CCM-PM** Plate for 06CCM and 06CCM2



## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of construction of the assembly surfaces.  
This product was developed for the application of a single-phase meter and for this it should be assembled on the assembly plate provided.  
The maximum weight of the equipment inside the box should not exceed 220 kg/m².  
For surface assembly, bolts should be chosen according to the weight of the equipment to be used. Loads should not be applied on the cover.

**06CCM** Boxes for single-phase meter



All measurements in mm



# Single-phase/three-phase meter box



## APPLICATIONS

Integrated exterior box for a single or three-phase meter.

## MATERIALS

Box, frame/lid in reinforced polyester with grey self-extinguishing fibreglass, RAL 7035. Polycarbonate V2 assembly plate, RAL 7035. Sealing screws in grey V2 polycarbonate RAL 7035. Transparent anti-UV V2 polycarbonate display. Display protector in grey ABS RAL 7035. Black polyurethane sealant.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP54, IK08

Insulation voltage: 600V

Insulation category: Category II

Temperature range supported by the housing: -25°C to +60°C.

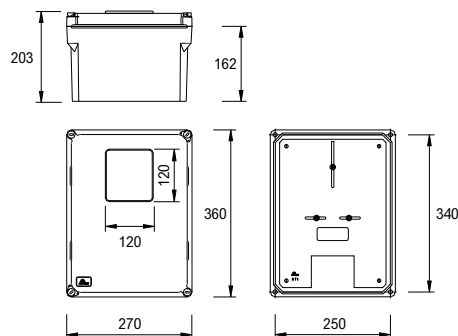
Thermal dissipation capacity: 16W

## NOTE

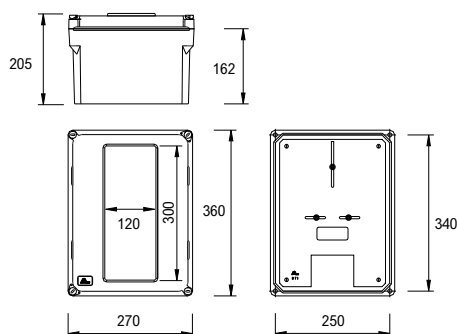
AL advises you to consult the energy provider if you want to install this product for a three-phase meter as there are meters that do not fit into the box.



**06CCMT** Box for a single or three-phase meter



**06CCMT-M** Box for a single or three-phase meter - wood



All measurements in mm

## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of construction of the assembly surfaces.

This product was developed for the application of a single or three-phase meter so they must be assembled on the assembly plate supplied.

The maximum weight of the equipment inside the box must not exceed 280 kg/m<sup>2</sup>.

When cables are passed through the lower wall, orifices must be made at the bottom of the box.

No heavy items must be placed on the box lid.

# Meter boxes



## APPLICATIONS

Integrated exterior box  
for a single or three-phase meter.

## MATERIALS

Box, frame/lid in reinforced polyester  
With grey self-extinguishing fibreglass, RAL 7035.  
Polycarbonate V2 assembly plate, RAL 7035.  
Transparent anti-UV polycarbonate display  
Black polyurethane sealant.  
Stainless steel sealing rings.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP54, IK09  
Insulation voltage: 600V  
Insulation category: Category II  
Temperature range supported by the housing:  
-25°C to +60°C.  
Thermal dissipation capacity: 14W

## NOTE

AL advises you to consult EDP if you want to install  
this product for a three-phase meter as there are  
meters that do not fit into the box.



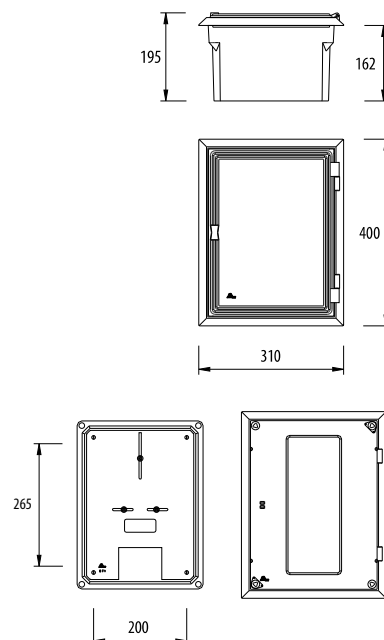
**06CCMT2** Box for single or three-phase meter with a door



**08CCMT-PM** Plate for 06CCMT, 06CCMT-M and 06CCMT2

## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of  
construction of the assembly surfaces. This  
product was developed for the application of  
a single or three-phase meter so they must be  
assembled on the assembly plate supplied.  
The maximum weight of the equipment inside the  
box must not exceed 280 kg/m<sup>2</sup>. When cables are  
passed through the lower wall, orifices must be  
made at the bottom of the box.  
No heavy items must be placed on the box lid.



All measurements in mm



# Meter boxes



## APPLICATIONS

Integrated exterior box for a single or three-phase meter.

## MATERIALS

Box, frame/lid and cover in reinforced polyester with grey self-extinguishing fibreglass, RAL 7035. Transparent anti-UV V2 polycarbonate display. Black polyurethane sealant. Stainless steel sealing rings. Self-extinguishing material.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP55, IK09

Insulation voltage: 600V

Insulation category: Category II

Temperature range supported by the housing: -25°C to +60°C.

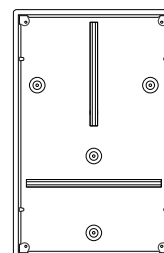
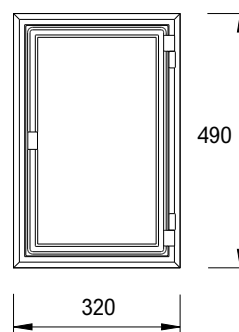
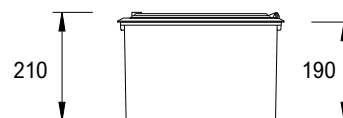
Thermal dissipation capacity: 23W

## NOTE

AL advises you to use this product with a single or three-phase meter.



**06CCTP** Box for a single or three-phase meter with door



## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of construction of the assembly surfaces. When cables are passed through the lower wall, orifices must be made at the bottom of the box. The maximum weight of the equipment inside the box must not exceed 280 kg/m<sup>2</sup>. No heavy items must be placed on the box lid.

All measurements in mm

# Meter boxes



## APPLICATIONS

Inside or outside box of surface mount for special tariff and other applications.

## MATERIALS

Box, assembly plate and cover in reinforced polyester with grey self-extinguishing fibreglass, RAL 7035.  
Sealing screws in polyamide 6.  
Transparent anti-UV polycarbonate display.  
Black polyurethane sealant.  
Stainless steel sealing rings and grey polyamide 6.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP54, IK09

Insulation voltage: 600V

Temperature range supported by the housing:  
-25°C to +60°C.

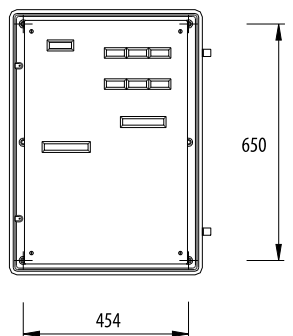
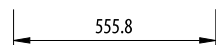
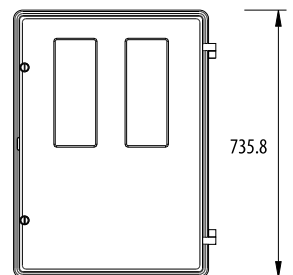
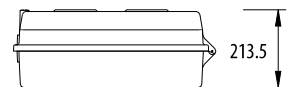
Thermal dissipation capacity: 47W



**06CTT** Special tariff meter box



**08CTT-PM** Assembly plate for 06CTT



## ASSEMBLY INSTRUCTIONS

For integrated assembly or surface mounting, after the process of construction of the assembly surfaces.

This product was developed for the application of three-phase meter so they must be assembled on the assembly plate supplied.

The maximum weight of the equipment inside the box must not exceed 280 kg/m<sup>2</sup>.

When cables are passed through the lower wall, orifices must be made at the bottom of the box.

For surface mounting screws should be chosen according to the weight of the equipment to be used. No heavy items must be placed on the box lid.

All measurements in mm



# Meter boxes



## APPLICATIONS

Exterior recessed box, semi-recessed or surface mounting for three-phase meter

## MATERIALS

Box, cover and mounting plate in polyester reinforced with fibreglass self-extinguishing grey RAL 7035.  
Sealing screws in polycarbonate V2 grey RAL 7035.  
Transparent anti-UV V2 polycarbonate display.  
Display protector in ABS grey RAL 7035.  
Black polyurethane sealant.  
**06CCT** - Cover in polycarbonate.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

**06CCT** - IP65, IK08

**06CCT-T0** - IP54, IK08

Insulation voltage: 600V

Insulation category: Category II

Temperature range supported by the housing:  
-25°C to +60°C.

Thermal dissipation capacity: 30W

## ASSEMBLY INSTRUCTIONS

For integrated assembly or surface mounting, after the process of construction of the assembly surfaces.

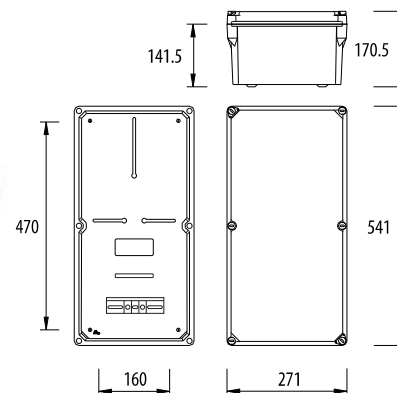
This product was developed for the application of a three-phase meter so they must be assembled on the assembly plate supplied.

The maximum weight of the equipment inside the box must not exceed 280 kg/m<sup>2</sup>.

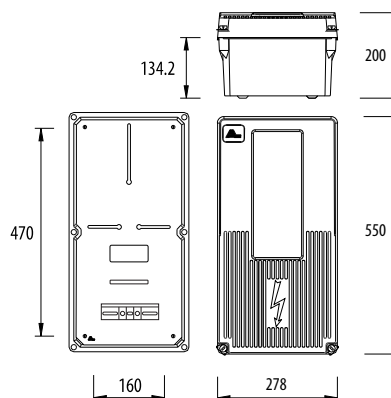
When cables are passed through the lower wall, orifices must be made at the bottom of the box. For surface mounting screws should be chosen according to the weight of the equipment to be used. No heavy items must be placed on the box lid.



**06CCT** Three-phase meter box



**06CCT-T0** Three-phase meter box with transparent cover



All measurements in mm



# Telemetry boxes



## APPLICATIONS

Meter box for indirect measurement for housing the meter and modem (supplied by EDP) with an EDP-qualified terminal block (DMA-C17-511/N) and door with 3-position locking system prepared for installation of a European lock barrel used by EDP

## MATERIALS

Made of polyester and reinforced with fibreglass  
Grey, self-extinguishing, RAL 7035

## APPLICABLE STANDARDS

EN 61439-2

DMA-C17-510/N, DMA-C62-701/N

## CHARACTERISTICS

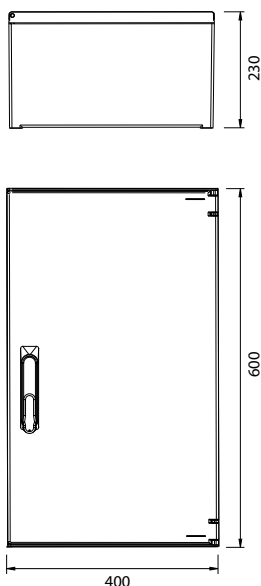
IP65, IK10

Category II RTISLV insulation

Secured to the surface or semi-integrated terminal block for measurement.

## 06CTEL-A-PT

230V unearthed socket and connection terminals RJ11 socket.



All measurements in mm

Reference	Name
06CTEL-A-BTE	Type A telemetry boxes for BTE
06CTEL-A-PT	Type A telemetry boxes for PT



Equipped according to  
EDP DMA-C62-701/N

06CTEL-A-BTE



Equipped according to  
EDP DMA-C17-510/N

06CTEL-A-PT



Qualified by EDP  
DMA-C17-511

18RT

Terminal block for indirect measurement EDP 10E-4T-6I EPI





# Column boxes



## APPLICATIONS

Collective building installation.  
Interior integrated assembly.

## MATERIALS

Box and door made of polyester reinforced with self-extinguishing fibreglass, RAL 7035.  
Black polycarbonate terminal plate.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

**06CAQ** - IP44, IK10

**06CAD** - IP43, IK08

Nominal voltage: 400V, 50Hz

Transitory overvoltage (Uimp): 4kV

Overvoltage category: CAT III

Insulation voltage: 600V

Nominal current: 100A

Short-circuit current: According to components

Neutral regime: VT

Diversity factor (RDF): 0.8 for 4 outputs / 0.9 for 2 outputs CEM

environment: B

Pollution level: 3

Insulation category: Category II

Internal separation method: Method 1

Connection type: FF

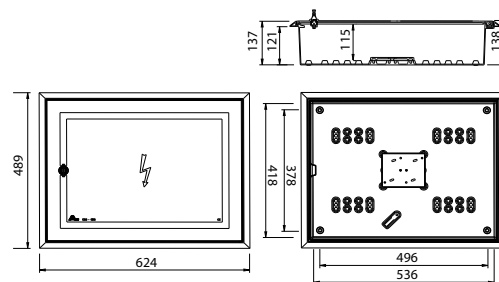
Fixed exterior installation at up to 2000 m high

Temperature range supported by the housing: -25°C to +60°C.

Thermal dissipation capacity: 21W



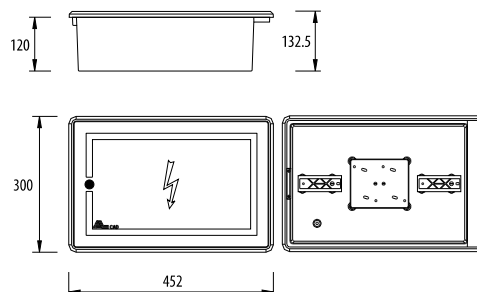
**06CAQ-F** Column box with lock for four three-phase circuits



Prepared for 08PDCM



**06CAD-F** Column box with lock for two three-phase circuits



All measurements in mm

## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of construction of the assembly surfaces.  
This product was developed for distributing energy along the upstream column in two units per floor.  
Fuses or circuit breakers must be used for this purpose. The maximum weight of the equipment inside the box must not exceed 280 kg/m<sup>2</sup>.  
No heavy items must be placed on the door.

**Options:** It can be sold already equipped.

## Reference Name

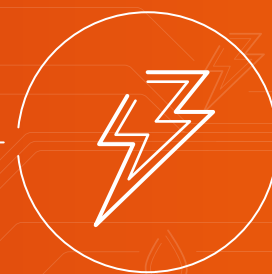
**06CAD** Each column for 2 three-phase circuits (2x32A)

**06CAD-F** Each column for 2 three-phase circuits with locks

**06CAQ** Each column for 4 three-phase circuits (4x32A)

**06CAQ-F** Each column for 4 three-phase circuits with locks

ELECTRICITY



# PROTECTION BOXES DISTRIBUTION BOXES



# Protection boxes



## APPLICATIONS

Main protection box for buildings, 3x100A  
Prepared for 3 NH00 bases with high cut-off power + neutral base and assembly of equipment on a DIN rail.  
Interior or exterior integrated assembly.

## MATERIALS

Box and door made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035.  
Black polyurethane sealant.

## APPLICABLE STANDARDS

EN 62208  
EN61439-2

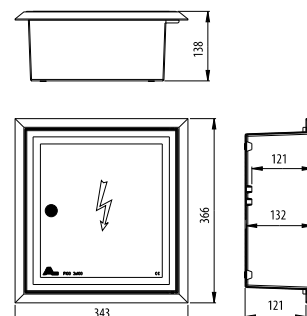
## CHARACTERISTICS

IP45, IK10  
Insulation voltage: 600V  
Insulation category: Category II  
Temperature range: -25°C to +60°C.  
Thermal dissipation capacity: 13W

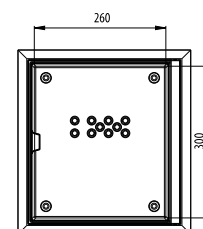
## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of construction of the assembly surfaces.  
This product was developed for the introduction of up to 3x100 building power supply cables.  
Protection and/or cut-off systems may be installed inside.  
The maximum weight of equipment in the interior must not exceed 250 kg/m<sup>2</sup> and no heavy item may be assembled on the door.  
When cables are passed through the inside wall, orifices must be made at the bottom of the box.

06P100 Box P100



06P100-3NH00-BN



All measurements in mm



Qualified by EDP  
DMA-C62-807/N

06P100-322X58E-BNS

06P100B-322X58E-BNS

**Options:** It can be sold equipped with bases NH00 or 22x58 Fuse Holders.

**NOTE:** Base fixtures can be changed to order.



Reference	Name
06P100-1NH00-BN	P100 fuse box equipped with 1 base for a NH00 fuse and neutral base
06P100-1NH00-BN-F	P100 fuse box equipped with 1 base for a NH00 fuse and neutral base and lock
06P100-1NH-N-FH7PT	P100 fuse box equipped with 1 base for a NH00 fuse and neutral base with triangular lock
06P100-322X58E-BNS	P100 fuse box equipped with 2258 fuse switch and sectionable neutral base
06P100-3NH00	P100 fuse box equipped with 3 bases for a NH00
06P100-3NH00-BN	P100 fuse box equipped with 3 bases for a NH00 and neutral base
06P100-3NH00-BN-F	P100 fuse box equipped with 3 bases for a NH00 and neutral base and lock
06P100-3NH00-BNS	P100 fuse box equipped with 3 bases for a NH00 and neutral base sectionnable
06P100-3NH00-F	P100 fuse box equipped with 3 bases for a NH00 and lock
06P100-3NH-N-FH7PT	P100 fuse box equipped with 3 bases for a NH00 fuse and neutral base and triangular Lock
06P100-F	Fuse box equipped with a metal triangular lock
06P100-FH7	Fuse box equipped with a plastic triangular lock
06P100	Fuse box P100

# Protection box



## APPLICATIONS

Main protection box for buildings, 3x100A  
Prepared for 3 NH00 bases with high cut-off power + neutral base and assembly of equipment on a DIN rail.  
Interior or exterior integrated assembly.

## MATERIALS

Box and door made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035.  
Black polyurethane sealant.

## APPLICABLE STANDARDS

EN 62208  
EN61439-2

## CHARACTERISTICS

IP45, IK10  
Insulation voltage: 600V  
Insulation category: Category II  
Temperature range -25 to +60°C.  
Thermal dissipation capacity: 13W

## ASSEMBLY INSTRUCTIONS

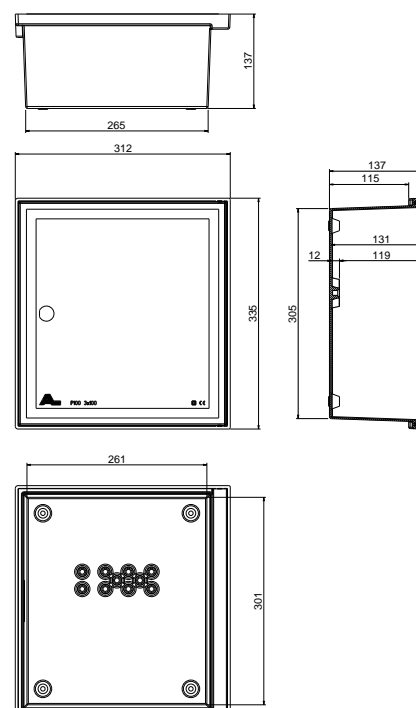
For integrated assembly, after the process of construction of the assembly surfaces.

**06P100** was developed for the introduction of up to 3x100 building power supply cables.

Reference	Name
<b>06P100-2</b>	Protection box P100-2



06P100-2



All measurements in mm



# Protection box



## APPLICATIONS

Main protection box for buildings, 3x100A  
Prepared for 3 NH00 bases with high cut-off power  
+ neutral base and assembly of equipment  
on a DIN rail.  
Interior or exterior integrated assembly.

## MATERIALS

Box and door made of polyester reinforced with  
grey self-extinguishing fibreglass, RAL 7035.  
End caps in plastified PVC grey RAL 7035.

## APPLICABLE STANDARDS

EN 61439-1

## CHARACTERISTICS

IP45, IK10  
Frequency: 50/60Hz  
Nominal voltage: 400V, 50Hz  
Nominal current: 50A



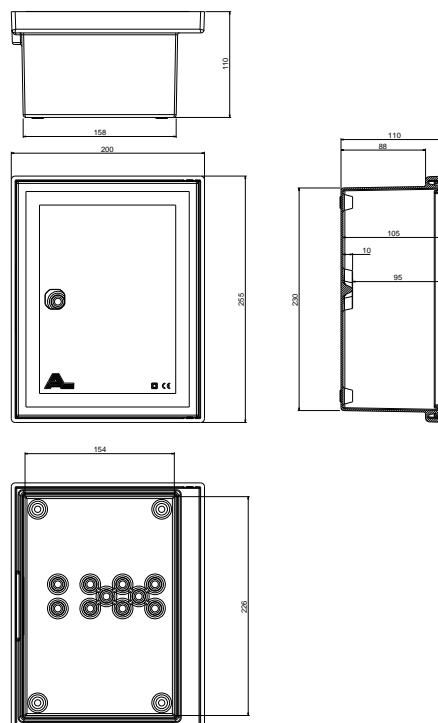
Qualifié par EDP  
DMA-C62-807/N

06P50-114X51E-BNS



## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process  
of construction of the assembly surfaces.  
06P50 was developed for the introduction  
of up to 3x100 building power supply cables.



### Reference

06P50

### Name

Protection box P50

06P50-114X51E-BNS

Protection box P50 equipped with a 14x51 fuse switch and sectionable neutral base

All measurements in mm



# Protection box



## APPLICATIONS

Used in low voltage electricity distribution networks, they allow for sectioning and facilitate interruption of the supply of electricity to facilities.

## MATERIALS

Made of SMC (polyester) 20% reinforced with grey self-extinguishable fibreglass, RAL 7035

## APPLICABLE STANDARDS

EN 61439-1

## CHARACTERISTICS

IP45, IK10

Integrated or surface assembly.

Copper busbars: phase 10x5 mm and neutral 50x5 mm

Door with a retractable lock prepared for a European barrel.

Screws, nuts and washers made of Category A2 stainless steel.

Frequency: 50/60Hz

Nominal voltage: 400V

Nominal current: 1000A

Insulation category: Category II

06P1000-DINO



## Reference

## Name

06P1000-DINO

Equipped fuse box P1000 in a DINO pavement cabinet

06P1000-BRES86

Equipped fuse box P1000 in BRES86



06P1000-BRES86

## ASSEMBLY INSTRUCTIONS

For integrated or surface assembly, after construction of assembly surfaces.

**06P1000** was developed for the introduction of up to 3x100 building power supply cables.

The maximum weight of equipment in the interior must not exceed 250 kg/m<sup>2</sup> and no heavy item may be assembled on the door.





# Protection box



## APPLICATIONS

Used in low voltage electricity distribution networks, they all for sectioning and facilitate interruption of the supply of electricity to facilities.

## MATERIALS

Made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035.  
Grey plastic PVC plugs, RAL 7035.

## APPLICABLE STANDARDS

EN 61439-2

**06P2X100:** DMA-C62-810/N

**06P400-3NH2-BNS:** DMA-C62-807/N

## CHARACTERISTICS

IP45, IK10

Integrated or surface assembly.

Door with a 3-position lock prepared for a European barrel (06P400/06P400-3NH2-BNS).

Prepared for a EDP lock, "Rónis" cylindrical barrel (06P2x100).

Inputs and outputs with adjustable conical plugs.

Frequency: 50/60Hz

Nominal voltage: 400V, 50Hz

Transitory overvoltage (Uimp): 6kV

Overvoltage category: CAT IV

Insulation voltage: 600V

Nominal current: 100A (06P2X100-15) / 400A (06P400)

Short-circuit current: 25kA

Neutral regime: TN

Diversity factor (RDF): 1

CEM environment: A

Pollution level: 3

Insulation category: Category II

Internal separation method: Method 1

Connection type: FF

Fixed exterior installation at up to 2000 m high



**06P400**

600x400x230mm



**Qualified by EDP  
DMA-C62-807/N**

**06P400-3NH2-BNS**

600x400x230mm  
3xNH2+BNS



**Qualified by EDP  
DMA-C62-810/N**

**06P2x100**

400x400x200mm  
3x2xNH00+BN



## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of construction of the assembly surfaces.

This product was developed for the introduction up to 3x100A/3x400A building power supply cables.

Protection and/or cut-off systems may be installed inside.

The maximum weight of equipment in the interior must not exceed 250 kg/m<sup>2</sup> and no heavy item may be assembled on the door.

When cables are passed through the lower wall, orifices must be made at the bottom of the box.

# Protection box



## APPLICATIONS

The micro and mini production units are interconnected by protection boxes in the installation.

## MATERIALS

Made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035.  
Grey plastic PVC plugs, RAL 7035.

## APPLICABLE STANDARDS

EN 61439-2

**06P100-PC-P:** DMA-C62-815/N

**06P400-PC-P:** DMA-C62-816/N

## CHARACTERISTICS

IP45, IK10

Integrated or surface assembly.

Prepared for a EDP lock, "Rónis" cylindrical barrel (06P100-PC-P e 06P100-PC-P-T).

Door with a 3-position lock prepared for a European barrel (06P400-PC-P).

Frequency: 50/60Hz

Insulation voltage: 600V

Insulation category: Category II

## ASSEMBLY INSTRUCTIONS

For integrated assembly, after the process of construction of the assembly surfaces.

### 06P100-PC-P

### 06P100-PC-P-T

Both products were developed for the introduction up to 3x100A building power supply cables.

**06P400-PC-P** This product was developed for the introduction up to 3x400A building power supply cables.

Protection and/or cut-off systems may be installed inside.

The maximum weight of equipment in the interior must not exceed 250 kg/m<sup>2</sup> and no heavy item may be assembled on the door.



Qualified by EDP  
DMA-C62-815/N



### 06P100-PC-P

Microproduction  
100A/25A  
400x300x200mm  
3x22x58x+BNS/2x10x38



Qualified by EDP  
DMA-C62-816/N



### 06P400-PC-P

Microproduction  
400A/25A  
600x400x230mm  
3xNH2+BNS/2x10x38



### 06P100-PC-P-T

Miniproduction  
100A/50A (three-phase production)  
400x400x200mm  
3x22x58x+BNS/4x14x51



# Distribution box T0



## APPLICATIONS

Box for the supply, protection, distribution and shunting of single or three-phase overhead branch lines or building façades.  
Exterior surface or semi-integrated assembly.

## MATERIALS

Box and lid made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035.  
DIN rail made of grey polycarbonate, RAL 7035.  
Grey plastic PVC plugs for cable input, RAL 7035.  
Sealing screws, key made of grey polyamide, RAL 7035.

## APPLICABLE STANDARDS

EN 62208  
EN 61439-5

## CHARACTERISTICS

IP44, IK08  
Nominal voltage: 400V, 50Hz  
Transitory overvoltage (Uimp): 6kV  
Overvoltage category: CAT IV  
Insulation voltage: 600V  
Nominal current: 100A  
Short-circuit current: 24kA  
Neutral regime: TN  
Diversity factor (RDF): 1  
CEM environment: A  
Pollution level: 3  
Insulation category: Category II  
Internal separation method: Method 1  
Connection type: FF  
Thermal dissipation capacity: 6W.  
Fixed exterior installation at up to 2000 m high.

## ASSEMBLY INSTRUCTIONS

For surface assembly, after the process of construction of the assembly surfaces.

The maximum weight of equipment in the interior must not exceed 250 kg/m<sup>2</sup> and no heavy item may be assembled on the door.

For surface assembly, bolts should be chosen according to the weight of the equipment to be used.

**Options:** It may be equipped according to customer specifications

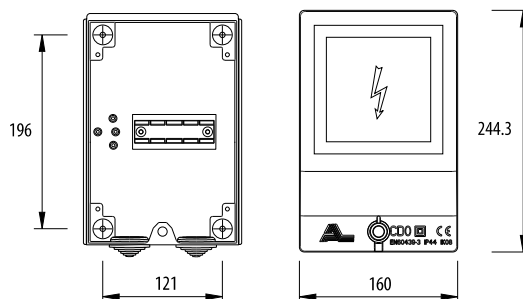
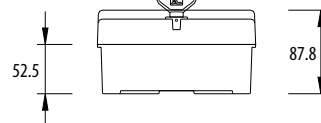
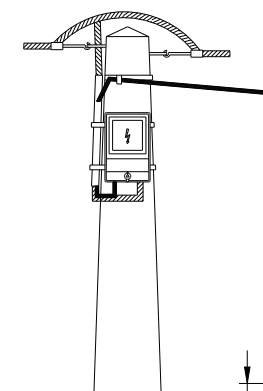
Reference	Name
06CD0	T0 aerial harness box
06CD0-M	Single-phase equipped T0 aerial harness box
06CD0-M-S	Single-phase equipped T0 aerial harness box with a sectionable neutral base
06CD0-T	Three-phase equipped T0 aerial harness box
06CD0-T-S	Three-phase equipped T0 aerial harness box with a sectionable neutral base

06CD0-T

06CD0-M

06CD0

Distribution box for T0 down-leads



All measurements in mm

# Distribution box T1



## APPLICATIONS

Box for the supply, protection, distribution and shunting of single or three-phase overhead branch lines or building façades. Exterior surface or semi-integrated assembly.

## MATERIALS

Box and lid made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035. DIN rail made of grey polycarbonate, RAL 7035. Grey plastic PVC plugs for cable input, RAL 7035. Sealing screws, key made of grey polyamide, RAL 7035.

## APPLICABLE STANDARDS

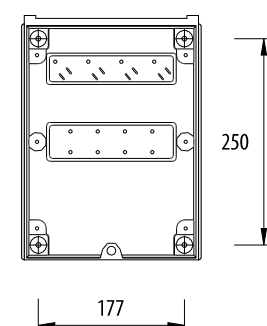
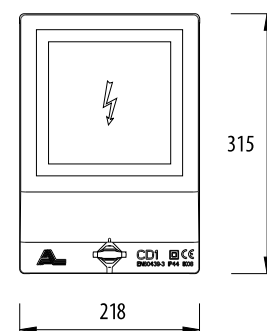
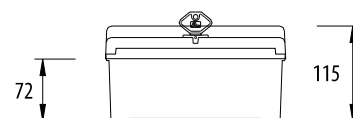
EN 62208  
EN 61439-5

## CHARACTERISTICS

IP44, IK08  
Nominal voltage: 400V, 50Hz  
Transitory overvoltage (Uimp): 6kV  
Overvoltage category: CAT IV  
Insulation voltage: 600V  
Nominal current: 100A  
Short-circuit current: 24kA  
Neutral regime: TN  
Diversity factor (RDF): 1  
CEM environment: A  
Pollution level: 3  
Insulation category: Category II  
Internal separation method: Method 1  
Connection type: FF  
Thermal dissipation capacity: 11W.  
Fixed exterior installation at up to 2000 m high.



O6CD1-T2258N



All measurements in mm

O6CD1 Distribution box for T1 down-leads

## ASSEMBLY INSTRUCTIONS

For surface assembly, after the process of construction of the assembly surfaces. The maximum weight of equipment in the interior must not exceed 250 kg/m<sup>2</sup> and no heavy item may be assembled on the door. For surface assembly, bolts should be chosen according to the weight of the equipment to be used.

**Options:** It may be equipped according to customer specifications.

Reference	Name
O6CD1	T1 aerial harness box
O6CD1-T	Three-phase with fuse base NH00+N equipped T1 aerial harness box
O6CD1-T1451N	Three-phase with fuse base 14x51+N equipped T1 aerial harness box
O6CD1-T2258N	Three-phase with fuse base 22x58+N equipped T1 aerial harness box





# Distribution box T2



## APPLICATIONS

Box for the supply, protection, distribution and shunting of single or three-phase overhead branch lines or building façades. Exterior surface or semi-integrated assembly.

## MATERIALS

Box and lid made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035. DIN rail made of grey polycarbonate, RAL 7035. Grey plastic PVC plugs for cable input, RAL 7035. Sealing screws, key made of grey polyamide, RAL 7035.

## APPLICABLE STANDARDS

EN 62208  
EN 61439-5

## CHARACTERISTICS

IP44, IK08  
Nominal voltage: 400V, 50Hz  
Transitory overvoltage (Uimp): 6kV  
Overvoltage category: CAT IV  
Insulation voltage: 600V  
Nominal current: 160A  
Short-circuit current: 24kA  
Neutral regime: TN  
Diversity factor (RDF): 1  
CEM environment: A  
Pollution level: 3  
Insulation category: Category II  
Internal separation method: Method 1  
Connection type: FF  
Thermal dissipation capacity: 31W.  
Fixed exterior installation at up to 2000 m high.

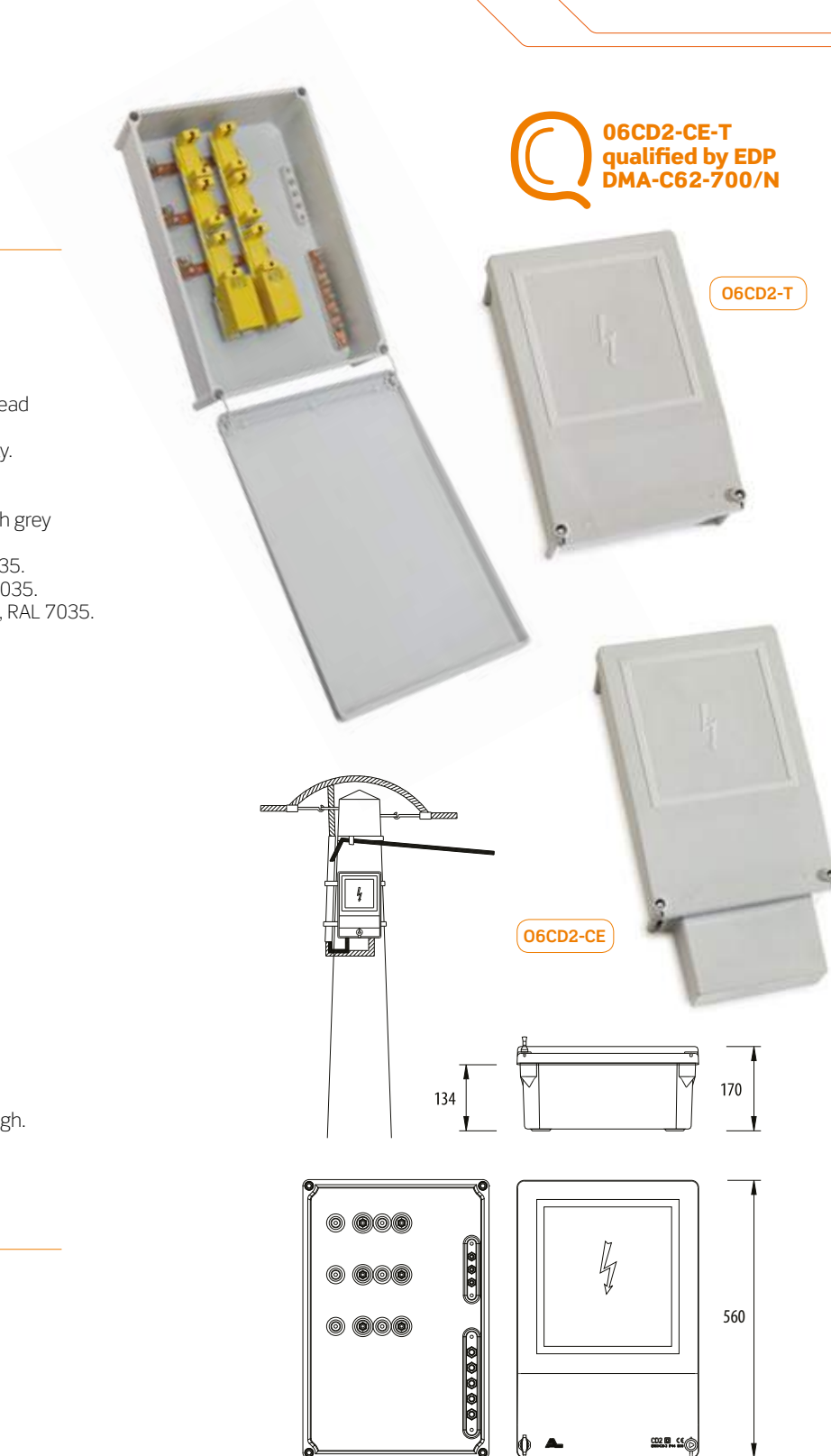
## ASSEMBLY INSTRUCTIONS

For surface assembly, after the process of construction of the assembly surfaces.

The maximum weight of equipment in the interior must not exceed 250 kg/m² and no heavy item may be assembled on the door.

For surface assembly, bolts should be chosen according to the weight of the equipment to be used.

**Options:** It may be equipped according to customer specifications.



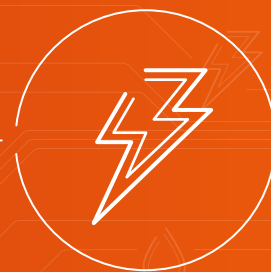
### Reference

### Name

06CD2	T2 aerial harness box
06CD2-2T	2 triblock, three-phase T2 aerial harness box
06CD2-3T	3 triblock, three-phase T2 aerial harness box
06CD2-CE	T2 aerial harness box with cable intake box
06CD2-CE-2T	T2 three-phase aerial harness box for 2 triblocks and cable intake box
06CD2-CE-3	T2 aerial harness box for 3 triblocks and cable intake box
06CD2-CE-3T	T2 three-phase aerial harness box for 3 triblocks and cable intake box
06CD2-CE-T	T2 three-phase aerial harness box with cable intake box (DMA-C62-700/N)

All measurements in mm

ELECTRICITY



CA BOXES



# CA boxes



## APPLICATIONS

Boxes for a variety of different industrial or residential uses.

High mechanical, electrical and humidity resistance level.

Easy to install due to their light weight.

## MATERIALS

Box made of polyamide 6 with fibreglass, RAL V2 in models CA-1515, CA-215, CA-220, CA-315.

Box made of polyester reinforced with self-extinguishing fibreglass, RAL 7035 in other models.

Transparent or opaque polycarbonate plugs, RAL 7035, anti-UV, V2.

Sealing orifice.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP65, IK10

Modular system

Thermal dissipation capacity: 45°C to 57°C

Wide range of measurements and accessories.

Lightweight.

Nominal voltage: 660V

Temperature range supported by the casing: -25 to 60°C

Acceptable load 280kg/m².

Insulation category: Category II



06CA-43-T

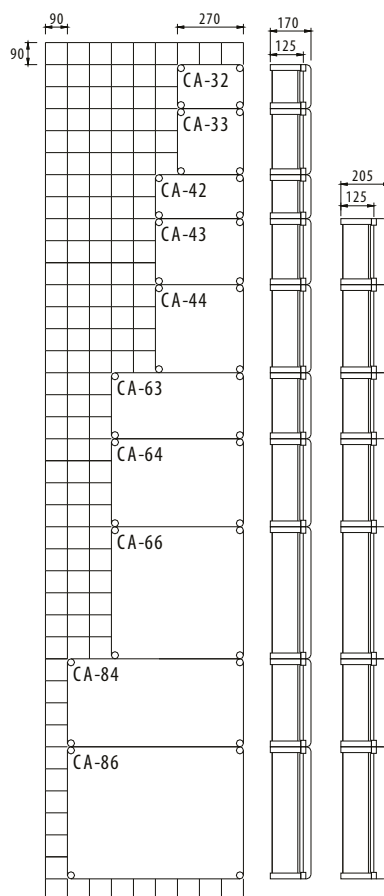


06CA-43-T0



## ASSEMBLY INSTRUCTIONS

Surface or integrated interior or exterior assembly.



All measurements in mm

Opaque lid	Transparent lid	Name	Height (h)	Width (w)	Depth
06CA-1515-T0	06CA-1515-T	Modular box CA-1515	135	135	130
06CA-215-T0	06CA-215-T	Modular box CA-215	180	135	130
06CA-220-T0	06CA-220-T	Modular box CA-220	180	180	130
06CA-315-T0	06CA-315-T	Modular box CA-315	270	135	130
06CA-32-T0	06CA-32-T	Modular box CA-32	270	180	170
06CA-33-T0	06CA-33-T	Modular box CA-33	270	270	170
06CA-42-T0	06CA-42-T	Modular box CA-42	360	180	170
06CA-43-T0	06CA-43-T	Modular box CA-43	360	270	170
06CA-43A-T0	06CA-43A-T	Modular box CA-43 high	360	270	205
06CA-44-T0	06CA-44-T	Modular box CA-44	360	360	170
06CA-44A-T0	06CA-44A-T	Modular box CA-44 high	360	360	205
06CA-63-T0	06CA-63-T	Modular box CA-63	540	270	170
06CA-63A-T0	06CA-63A-T	Modular box CA-63 high	540	270	205
06CA-64-T0	06CA-64-T	Modular box CA-64	540	360	170
06CA-64A-T0	06CA-64A-T	Modular box CA-64 high	540	360	205
06CA-66-T0	06CA-66-T	Modular box CA-66	540	540	170
06CA-66A-T0	06CA-66A-T	Modular box CA-66 high	540	540	205
06CA-84A-T0	06CA-84A-T	Modular box CA-84 high	720	360	205
06CA-86A-T0	06CA-86A-T	Modular box CA-86 high	720	540	205

## CA boxes accessories

**3923CCPD-03** Box for cable dual output with sealing



**3923BPD-03** Cable dual output



**3923OFC-4000** Pièce de support for coffret CA

Reference	Name
<b>3923BPD-03</b>	Cable dual output
<b>3923BPS-03</b>	Cable output
<b>3923CCPD-03</b>	Box for cable dual output with sealing
<b>3923CCPS-03</b>	Box for cable output with sealing

Reference	Name
<b>3923OFC-4000</b>	Support part for CA-1515/CA-315
<b>16OFC-400</b>	Support part for CA-32/CA-85

**3923BFI-MAN**

**3923BFI-DES**



**3923BTI-INT**

**16TFT-400**



**16RESPIRATEUR** Respirator for panels

Reference	Name
<b>3923BFI-MAN</b>	Flexible hinge manual drive
<b>3923BFI-DES</b>	Screw/Flexible hinge
<b>3923BRE-EXT</b>	Exterior rigid hinge
<b>3923BFE</b>	Exterior flexible hinge
<b>3923BTI-INT</b>	Interior telescopic hinge
<b>3923BRI-INT</b>	Interior rigid hinge
<b>16TFT-4000</b>	Screw for CA-1515/CA-315
<b>16TFT-400</b>	Screw for CA-32/CA-86
<b>16TFT-400-m</b>	Manual drive screw for CA-32/CA-86



**16DV-G** Big ventilation device



## CA boxes accessories



Reference	Name	A	B	C
3923CC-03-cj	Box for cable output closed with sealing	225	120	134
16CC-04	Box for cable output closed with sealing	310	120	167



Reference	Name	A	B	C
3923TC-02	Blind side cover TC-02	133	105	13
3923TC-03	Blind side cover TC-03	223	105	13
3923TC-04	Blind side cover TC-04	313	105	13



Reference	Name
08CA-1515-PM	Polyester assembly plate for CA1515
08CA-215-PM	Polyester assembly plate for CA-215
08CA-220-PM	Polyester assembly plate for CA-220
08CA-315-PM	Polyester assembly plate for CA-315
08CA-32-PM	Polyester assembly plate for CA32
08CA-33-PM	Polyester assembly plate for CA33
08CA-42-PM	Polyester assembly plate for CA42
08CA-43-PM	Polyester assembly plate for CA43
08CA-44-PM	Polyester assembly plate for CA44
08CA-63-PM	Polyester assembly plate for CA-63
08CA-64-PM	Polyester assembly plate for CA-64
08CA-66-PM	Polyester assembly plate for CA-66
08CA-84-PM	Polyester assembly plate for CA-84
08CA-86-PM	Polyester assembly plate for CA-86



Reference	Name	A	B	C
16UA-20	Coupling ring BA-20	132	105	17
16UA-30	Coupling ring BA-30	222	105	17
16UA-40	Coupling ring BA-40	312	105	17



Reference	Name
3923RE-63	Extension for CA-63
3923RE-64	Extension for CA-64
3923RE-66	Extension for our CA-66

ELECTRICITY



BRES BOXES





# BRES boxes



## APPLICATIONS

Box used in all types of private or public telecommunications, electricity, water, gas, traffic light and other industries and facilities.

## MATERIALS

Made of polyester reinforced with self-extinguishing fibreglass, RAL 7035.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP65, IK10

Adjustable to equipment on an assembly plate or DIN rail.

Door opening over 180°.

Temperature range -30 to +120°C.

Different measurements.

Other accessories.

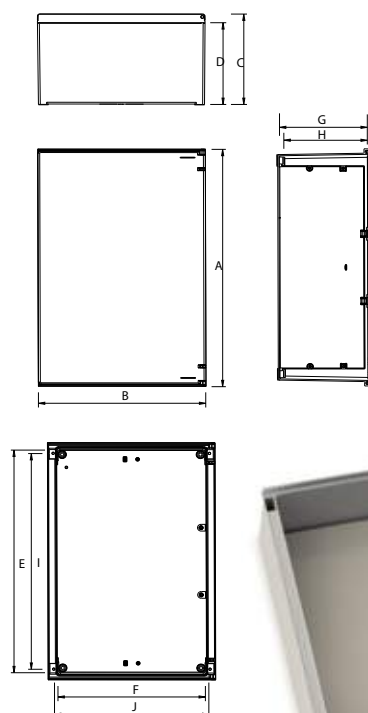
Thermal dissipation capacity: 12 to 75W

Insulation voltage: 600V

**06BRES64-PT** Transparent door box 06BRES64-PT



**06BRES325** Opaque door box 06BRES325



**06BRES64** Opaque door box 06BRES64

## ASSEMBLY INSTRUCTIONS

Surface, integrated or semi-integrated interior or exterior assembly.

Temperature range -25 to +60°C.

The maximum weight of the equipment inside the box must not exceed 280 kg/m<sup>2</sup>.

No heavy items must be placed on the door.

Opaque door	Transparent door	Triple lock opaque door	Name	maximum exterior				maximum interior				securing orifices	
				A	B	C	D	E	F	G	H	I	J
06BRES325	06BRES325-PT	-	Door box BRES-325	300	250	138	116	268	242	131	121	250	223
06BRES43	06BRES43-PT	-	Door box BRES-43	400	300	198	176	366	291	181	191	348	273
06BRES44	06BRES44-PT	-	Door box BRES-44	400	400	198	176	366	391	181	191	348	373
06BRES54	06BRES54-PT	06BRES54-FHT	Door box BRES-54	500	400	198	176	466	391	181	191	448	373
06BRES64	06BRES64-PT	06BRES64-FHT	Door box BRES-64	600	400	228	206	565	391	221	211	546	373
06BRES65	06BRES65-PT	06BRES65-FHT	Door box BRES-65	600	500	228	206	565	490	221	211	546	473
06BRES83	06BRES83-PT	06BRES83-FHT	Door box BRES-83	800	300	230	210	770	295	213	203	745	275
06BRES86	06BRES86-PT	06BRES86-FHT	Door box BRES-86	800	600	298	276	762	589	290	280	744	573

All measurements in mm

## BRES boxes accessories

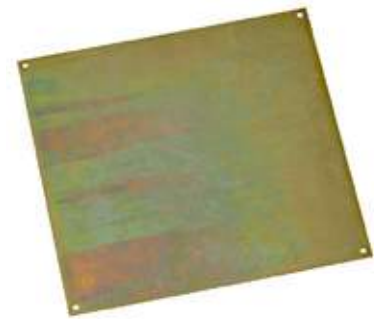
Reference	Name	Height	Width
08BRES325-PM	Polyester assembly plate for 06BRES325	262	198
08BRES43-PM	Polyester assembly plate for 06BRES43	360	248
08BRES44-PM	Polyester assembly plate for 06BRES44	360	348
08BRES54-PM	Polyester assembly plate for 06BRES54	460	348
08BRES64-PM	Polyester assembly plate for 06BRES64	558	348
08BRES65-PM	Polyester assembly plate for 06BRES65	558	448
08BRES83-PM	Polyester assembly plate for 06BRES83	758	248
08BRES86-PM	Polyester assembly plate for 06BRES86	756	548



### POLYESTER ASSEMBLY PLATE

Made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035. 4 mm thickness.

Reference	Name	Height	Width
08BRES325-PMM	Metallic assembly plate for 06BRES325	262	198
08BRES43-PMM	Metallic assembly plate for 06BRES43	360	248
08BRES44-PMM	Metallic assembly plate for 06BRES44	360	348
08BRES54-PMM	Metallic assembly plate for 06BRES54	460	348
08BRES64-PMM	Metallic assembly plate for 06BRES64	558	348
08BRES65-PMM	Metallic assembly plate for 06BRES65	558	448
08BRES83-PMM	Metallic assembly plate for 06BRES83	756	248
08BRES86-PMM	Metallic assembly plate for 06BRES86	756	548



### METALLIC ASSEMBLY PLATE

2mm thickness

Reference	Name
16BRES325-CHM	Chassi BRES325 for 20 modules (2 rows)
16BRES43-CHM	Chassi BRES43 for 24 modules (2 rows)
16BRES44-CHM	Chassi BRES44 for 36 modules (2 rows) modules
16BRES54-CHM	Chassi BRES54 for 54 modules (3 rows)
16BRES64-CHM	Chassi BRES64 for 72 modules (4 rows)
16BRES65-CHM	Chassi BRES65 for 92 modules (4 rows)
16BRES83-CHM	Chassi BRES83 for 50 modules (5 rows)
16BRES86-CHM	Chassi BRES86 for 130 modules (5 rows) modules



### CHASSIS FOR MODULAR EQUIPMENT

All measurements in mm



# BRES boxes accessories

## APPLICATIONS

Interior door for equipment assembly.

## MATERIALS

Made of polyester reinforced with self-extinguishing fibreglass, RAL 7035.

## CHARACTERISTICS

IK10

Surface or integrated assembly.



Assembly example

Reference	Name
16BRES325-PI-KIT	Interior door KIT for 06BRES325
16BRES43-PI-KIT	Interior door KIT for 06BRES43
16BRES44-PI-KIT	Interior door KIT for 06BRES44
16BRES54-PI-KIT	Interior door KIT for 06BRES54
16BRES64-PI-KIT	Interior door KIT for 06BRES64
16BRES65-PI-KIT	Interior door KIT for 06BRES65
16BRES83-PI-KIT	Interior door KIT for 06BRES83
16BRES86-PI-KIT	Interior door KIT for 06BRES86

## APPLICATIONS

Fixation accessories applicable on post or wall.

## MATERIALS

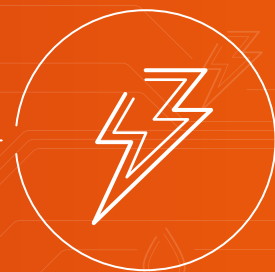
16FIXADOR-BRES Black polyamide 6.

16BRES-FIX-KIT Reinforced black polyamide 6.



16BRES-FIX-KIT

Reference	Name
16FIXADOR-BRES	Wall fixer BRES (4 units)
16BRES-FIX-KIT	Post fixer BRES (4 units)



TERMINAL PLATES  
BUSBARS  
TRANSITION POSTS  
CABLE PROTECTION PLATES  
EARTH ELECTRODES



# Terminal plates



## APPLICATIONS

Connection of conductors to the section specified by the terminal.

## MATERIALS

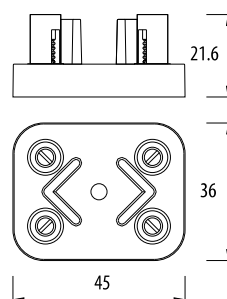
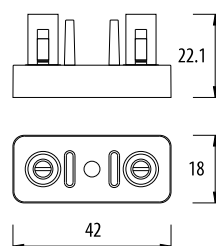
Polycarbonate V2 plate, RAL 7035.  
Nickel-plated brass terminals.  
Zinc steel metric screws.

## APPLICABLE STANDARDS

EN 60998-2-1

## CHARACTERISTICS

Insulation voltage: 400V  
Section: 6mm<sup>2</sup>



Reference	Name
08PB2X6	Plate with two 6mm <sup>2</sup> terminals
08PB2X6GR	Large plate with two 6mm <sup>2</sup> terminals
08PB3X6	Plate with three 6mm <sup>2</sup> terminals
08PB4X6	Plate with four 6mm <sup>2</sup> terminals

# Terminal plates

CE

## APPLICATIONS

Mounting column shunt.

## MATERIALS

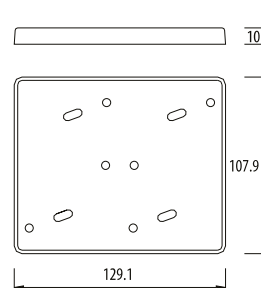
Self-extinguishing material, black.

## APPLICABLE STANDARDS

EN 60998-2-1



**08PB1** Plate without terminals



## APPLICATIONS

Mounting column shunt.

## MATERIALS

Base in RAL 9003 white ABS, anti-UV, and crystal polycarbonate lid. Brass terminals.

## APPLICABLE STANDARDS

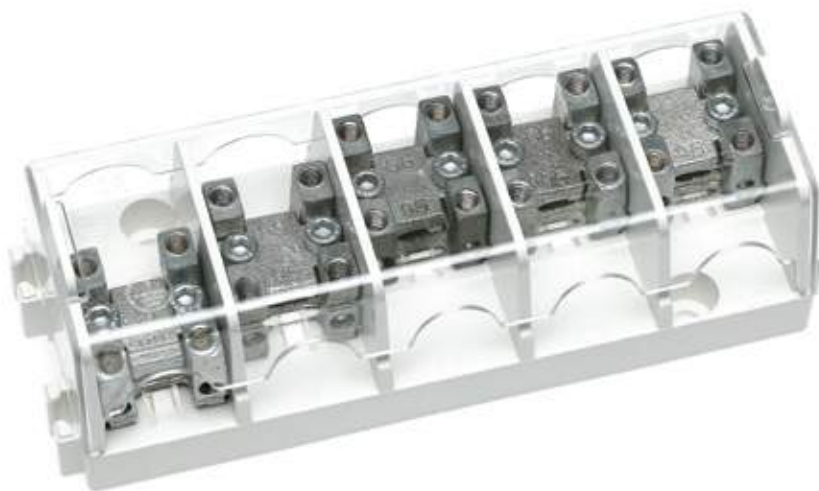
EN 60947-7-1

## CHARACTERISTICS

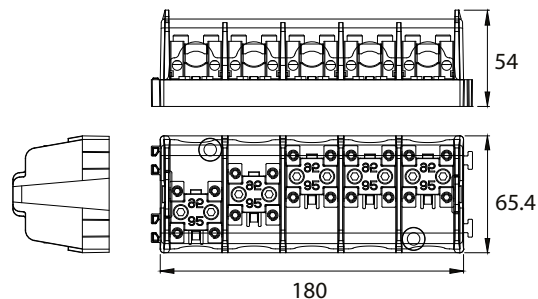
IP20

Post transition to 10mm<sup>2</sup> to 95mm<sup>2</sup> conductor with 4 tap devices for conductors up to 16mm<sup>2</sup>.

Insulation voltage: 600V



**08PDCM** Electric shunt plate column 5X95-4X16



All measurements in mm





# Busbars and transition posts

## Transition posts



### APPLICATIONS

Transition posts.

### MATERIALS

Nickel-plated steel.

### APPLICABLE STANDARDS

EN 60998-2-1

Reference	Name
16BP2,5	Transition posts 2,5 mm
16BP10	Transition posts 10 mm
16BP16	Transition posts 16 mm
16BP25	Transition posts 25 mm
16BP35	Transition posts 35 mm
16BP50	Transition posts 50 mm
16BP70	Transition posts 70 mm
16BP95	Transition posts 95 mm
16BP120	Transition posts 120 mm
16BP150	Transition posts 150 mm

## Posts with tap devices



### APPLICATIONS

Transition posts and tap devices in buildings' mounting columns.

### MATERIALS

Nickel-plated steel.

### APPLICABLE STANDARDS

EN 60998-2-1

Reference	Name
16BD16-2X5	16 mm posts with 2 tap devices 5mm <sup>2</sup>
16BD25-2X5	25 mm posts with 2 tap devices 5mm <sup>2</sup>
16BD35-2X5	35 mm posts with 2 tap devices 5mm <sup>2</sup>
16BD16-4X5	16 mm posts with 4 tap devices 5mm <sup>2</sup>
16BD25-4X5	25 mm posts with 4 tap devices 5mm <sup>2</sup>
16BD35-4X5	35 mm posts with 4 tap devices 5mm <sup>2</sup>

## Busbars

16B3x3-VD

16B4x4-VD

16B6x6-VD



### APPLICATIONS

Equipotential buses.

### MATERIALS

Brass bus.  
Zinc plate steel screws.  
Base Polypropylene.

### APPLICABLE STANDARDS

EN 60998-2-1

### CHARACTERISTICS

DIN rail mounting.  
Section: 5mm<sup>2</sup>  
Insulation voltage: 400V

Reference	Name
16B3X3-AZ	Busbar 6 holes - Neutral
16B3X3-PT	Busbar 6 holes - Phase
16B3X3-VD	Busbar 6 holes - Earth
16B4X4-AZ	Busbar 8 holes - Neutral
16B4X4-PT	Busbar 8 holes - Phase
16B4X4-VD	Busbar 8 holes - Earth
16B6X6-AZ	Busbar 12 holes - Neutral
16B6X6-PT	Busbar 12 holes - Phase
16B6X6-VD	Busbar 12 holes - Earth

# Cable protection plates

**Qualified  
by EDP  
DMA-C68-040/N**

CE

## APPLICATIONS

Signposting and mechanical protection plate for low and medium voltage insulated telecommunications cables and others to be installed in underground networks.

## MATERIALS

Yellow polypropylene, RAL 1018.

## APPLICABLE STANDARDS

DMA-C68-040/N

## CHARACTERISTICS

Free of heavy metals, halogens and volatile hydrocarbons.

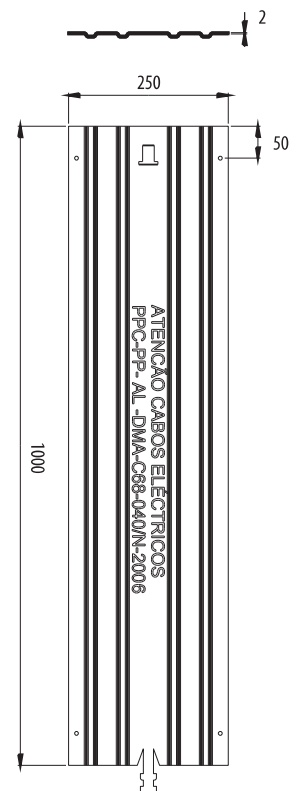


## ASSEMBLY INSTRUCTIONS

Plates must be placed directly above the sand-filled surface used as a cable bed in trenches. These can be joined together in both directions. The longitudinal connection is made using the inserts on the plates.

Lateral connections must be made using plastic rivets in orifices already made for this purpose. They must be used between -5 and +20°C.

08PPC





# Earth electrodes

## APPLICATIONS

Service and protection grounding systems, in HV, MV and LV installations to guarantee correct grounding of equipment and efficient protection of its users.

## MATERIALS

Electrodes and joints made of copper steel.  
Copper thickness 35 µm.  
Bronze bracket.

39PI5/8-B Union



39PI5/8-U Joint

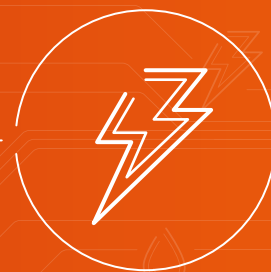


39PI500X5/8



Reference	Name
39PI1500X5/8	1500 mm x 518" Earth electrode
39PI2000X5/8	2000 mm x 518" Earth electrode
39PI5/8-B	518" Earth electrode bracket
39PI5/8-U	518" Earth electrode joint

ELECTRICITY



PANELS



# Surface mounting panels



## APPLICATIONS

Modular panel for interior surface mounted installations.

## MATERIALS

Base in white ABS RAL 9003 and anti-UV.  
Zinc plated DIN rail in Q24D.  
Zinc plated screws.  
Brass busbars.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP20, IK05  
Thermal dissipation capacity: 10W  
Insulation category: Category II  
Temperature range supported by the housing:  
-5°C to +35°C.

## OPERATING CONDITIONS

Maximum humidity: 50% RH to +40°C

### NOTE:

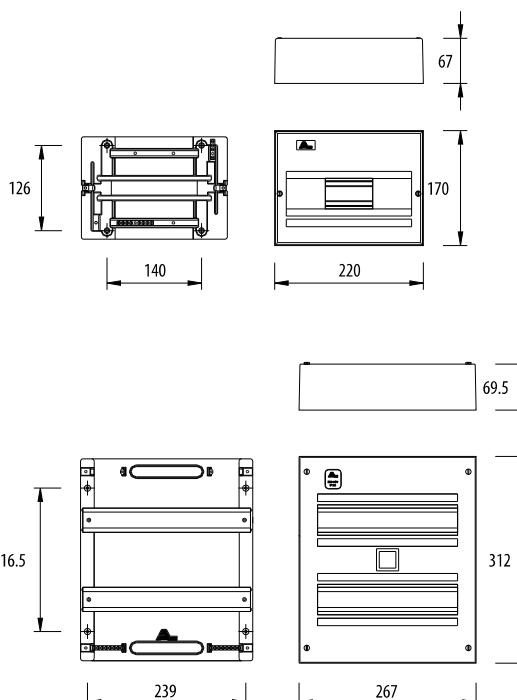
It must not be assembled in special risk places with the following conditions  
dust, smoke, corrosive vapour, extreme temperatures, high value electric fields, atmospheres subject to explosion, fire, vibrations or shocks.



**09Q10D** Exterior panel for 10 modules



**09Q24D** Exterior panel for 24 modules



All measurements in mm

# Integrated assembly panels



## APPLICATIONS

Modular panel for integrated interior installations.

## MATERIALS

Frame, door, lid made of white ABS, RAL 9003.  
DIN rail made of white polycarbonate, RAL 9003  
and anti-UV.

Casing made of reinforced polyester with grey  
self-extinguishing fibreglass, RAL 7035.  
Brass busbars.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP31, IK05

Thermal dissipation capacity: 12 W

Insulation category: Category II

Temperature range supported by the housing:  
-5°C to +35°C

## NOTE

Possibility of transparent brown doors.

### 09QI15-CT

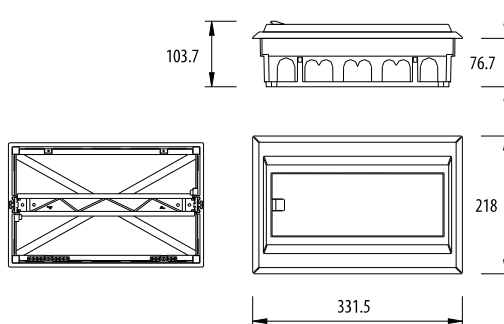
Interior panel for 15 modules, brown.

### 09QI28-CT

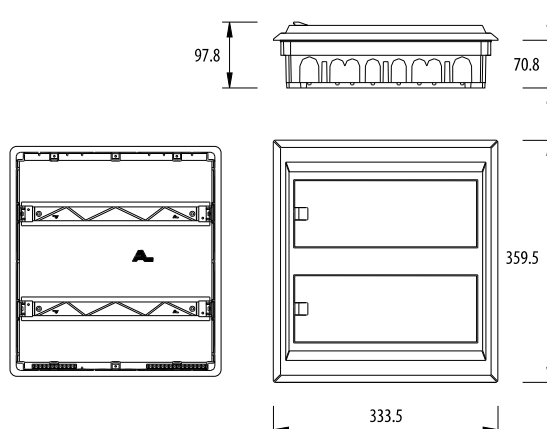
Interior panel for 28 modules, brown.



**09QI15D** Interior panel for 15 modules



**09QI28D** Interior panel for 28 modules



## OPERATING CONDITIONS

Maximum humidity: 50% HR to +40°C

## NOTE:

It must not be assembled in special risk  
places with the following conditions  
dust, smoke, corrosive vapour, extreme  
temperatures, high value electric fields,  
atmospheres subject to explosion, fire,  
vibrations or shocks.

All measurements in mm





# Integrated assembly panels



## APPLICATIONS

Modular panel for integrated interior installations.

## MATERIALS

Frame, doors, lids and DIN rails in white ABS, RAL 9003.  
Casing made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035.  
Sealing screws made of nickel-plated bronze.  
Bronze busbars.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

### 09QI2X10-D

IP41, IK06

Thermal dissipation capacity: 13 W

### 09QI2X15-D

IP41, IK05

Thermal dissipation capacity: 25 W

Temperature range supported by the housing:

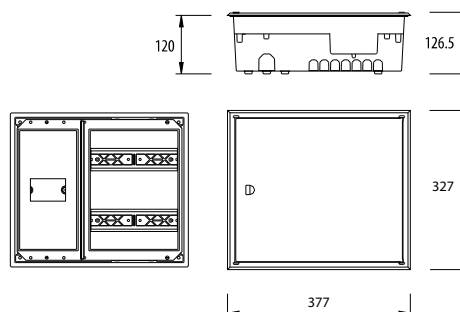
-5°C to 35°C.

Insulation category: Category III

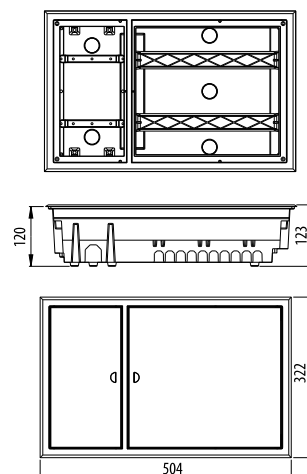
Circuit identification labels.



**09QI2X10-D** Interior panel for 20 modules + Differential



**09QI2X15-D** Interior panel for 30 modules + Differential



## OPERATING CONDITIONS

Maximum humidity: 50% HR to +40°C

### NOTE:

It must not be assembled in special risk places with the following conditions dust, smoke, corrosive vapour, extreme temperatures, high value electric fields, atmospheres subject to explosion, fire, vibrations or shocks.

All measurements in mm

# Integrated assembly panels



## APPLICATIONS

Modular panel for integrated interior installations.

## MATERIALS

Frame, door, lid made of white ABS, RAL 9003.  
DIN rail made of white polycarbonate, RAL 9003 and anti-UV.

Casing made of reinforced polyester with grey self-extinguishing fibreglass, RAL 7035.

Brass busbars.

### 09QI3X15D

Frame, door made of white ABS, RAL 9003.  
DIN rail made of white polycarbonate, RAL 9003 and anti-UV.

### 09QI2X17D

Frame, door, lid made of white ABS, RAL 9003 and anti-UV.

Zinc plated DIN rail.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

Insulation category: Category II

Temperature range supported by the housing:  
-5°C to +35°C

### 09QI3X15D

IP41, IK05

Thermal dissipation capacity: 20 W

### 09QI2X17D

IP41, IK05

Thermal dissipation capacity: 17 W

## NOTE

Possibility of brown transparent lids.

## OPERATING CONDITIONS

Maximum humidity: 50% HR to +40°C

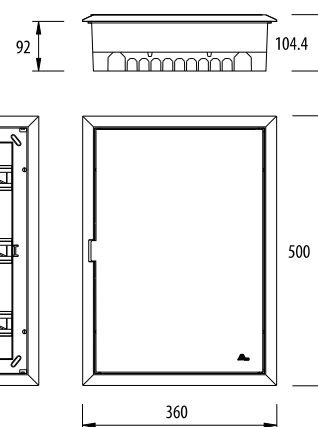
## NOTE:

It must not be assembled in special risk places with the following conditions dust, smoke, corrosive vapour, extreme temperatures, high value electric fields, atmospheres subject to explosion, fire, vibrations or shocks.

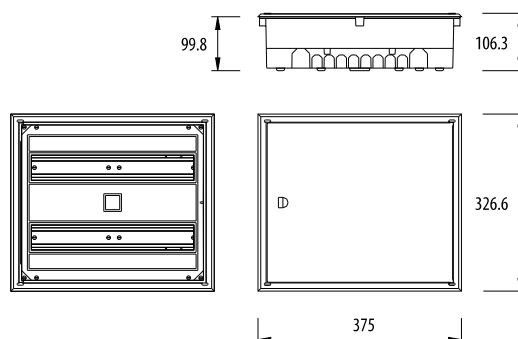
All measurements in mm



**09QI3X15** Interior panel for 45 modules



**09QI2X17D** Interior panel for 34 modules



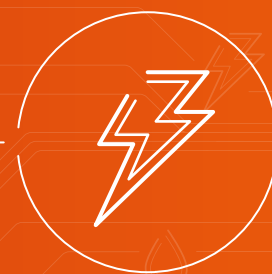


**DEMAG**

**DEMAG**

**M17**

ELECTRICITY



# SPECIAL PANELS WORK PANELS



# Special applications panels



## APPLICATIONS

Interior or exterior surface assembly box for temporary down-leads for special works and uses.

## MATERIALS

Box, door and assembly plate made of polyester reinforced with self-extinguishing fibreglass, RAL 7035.

Sealing screws made of polyamide 6.

V2 anti-UV polycarbonate display.

Polyurethane sealant.

Polyamide and zinc steel lock.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP44, IK09

Insulation voltage: 660V

Insulation category: Category II

Permissible load: 280 kg/m<sup>2</sup>

Temperature range supported by the housing: -25°C to +60°C.

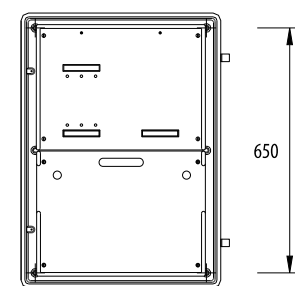
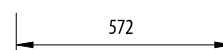
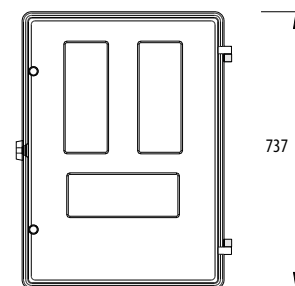
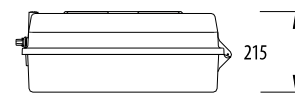
Thermal dissipation capacity: 62W



**09QO** Exterior panel for special uses



**08QO-PM** Plate for 09QO panel



## ASSEMBLY INSTRUCTIONS

For surface assembly, after the process of construction of the assembly surfaces.

All measurements in mm



# Work panels



## APPLICABLE STANDARDS

EN 61439-4  
RTIEBT

## CHARACTERISTICS

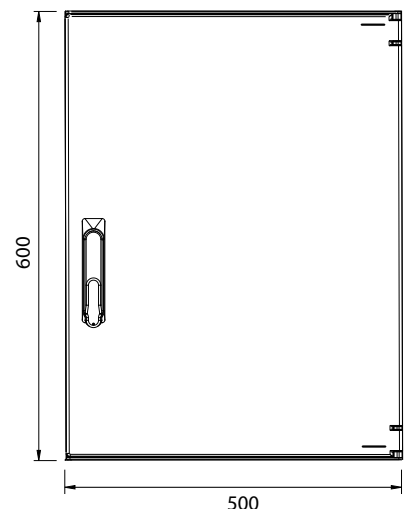
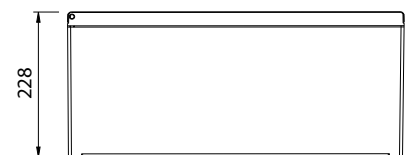
IP44, IK10  
General cut-off of 4 pole input.  
30 mA differential protection.  
Emergency trigger-off system with electromechanical interlock with a general cut-off device.  
Incorporated grounding measurement base (feed-through).  
Space for energy distributor current limiter.  
Casing made of polyester reinforced with grey fibreglass, RAL 7035.  
Door with a 3-position lock prepared for installing a barrel.  
Energy and grounding protection through glands.  
Direct wall fixture or mounting accessories (optional).  
Nominal voltage: 400V, 50Hz  
Transitory overvoltage (Uimp): 6kV  
Overvoltage category: CAT IV  
Insulation voltage: 600V  
Nominal current: 40 or 63A  
Short-circuit current: according to mounted components.  
Neutral regime: TT  
Diversity factor (RDF): 0.7 for 6 to 9 circuits and 0.8 for 4 to 5 circuits.  
CEM environment: B  
Pollution level: 3  
Insulation category: Category II  
Internal separation method: Method 1  
Connection type: FF  
Fixed exterior installation at up to 2000 m high

## NOTE

Configurations upon request.



All measurements in mm



### 03Q0-E65-4x16A

General 4x40 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
Two 16 A 3P+T three-phase sockets.

### 03Q0-E65-4x32A

General 4x63 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
One 16 A 3P+T three-phase socket.  
One 32A 3P+T three-phase socket.

### 03Q0-E65-5x16A

General 4x40 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
One 16 A 3P+T three-phase socket.  
One 16 A 3P+T three-phase socket.

### 03Q0-E65-5x32A

General 4x63 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
One 16 A 3P+T three-phase socket.  
One 32A 3P+T three-phase socket.





# Work panels



## APPLICABLE STANDARDS

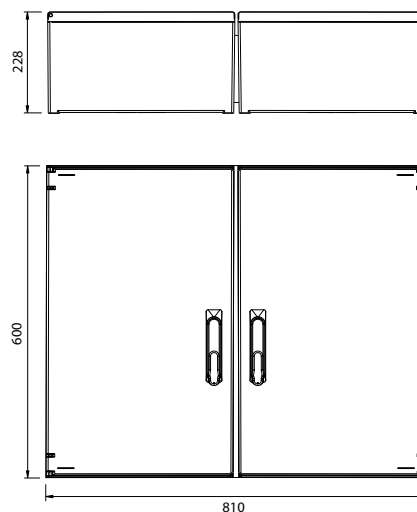
EN 61439-4  
RTIEBT

## CHARACTERISTICS

IP44, IK10  
General cut-off of 4 pole input.  
30 mA differential protection.  
Emergency trigger-off system with electromechanical interlock with a general cut-off device.  
Incorporated grounding measurement base (feed-through).  
Space for energy distributor current limiter.  
Casing made of polyester reinforced with grey fibreglass, RAL 7035.  
Door with a 3-position lock prepared for installing a barrel.  
Energy and grounding protection through glands.  
Direct wall fixture or mounting accessories (optional).  
Nominal voltage: 400V, 50Hz  
Transitory overvoltage (Uimp): 6kV  
Overvoltage category: CAT IV  
Insulation voltage: 600V  
Nominal current: 40 or 63A  
Short-circuit current: according to mounted components.  
Neutral regime: TT  
Diversity factor (RDF): 0.7 for 6 to 9 circuits and 0.8 for 4 to 5 circuits.  
CEM environment: B  
Pollution level: 3  
Insulation category: Category II  
Internal separation method: Method 1  
Connection type: FF  
Fixed exterior installation at up to 2000 m high.

## NOTE

Configurations upon request.



### 03QO-E64-4x16A

General 4x40 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
Two 16 A 3P+T three-phase sockets.

### 03QO-E64-4x32A

General 4x63 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
One 16 A 3P+T three-phase socket.  
One 32A 3P+T three-phase socket.

### 03QO-E64-5x16A

General 4x40 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
One 16 A 3P+T three-phase socket.  
One 16 A 3P+T three-phase socket.

### 03QO-E64-5x32A

General 4x63 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
One 16 A 3P+T three-phase socket.  
One 32A 3P+T three-phase socket.

All measurements in mm

# Work panels



## APPLICABLE STANDARDS

EN 61439-4  
RTIEBT

## CHARACTERISTICS

IP44, IK10  
General cut-off of 4 pole input.  
30 mA differential protection.  
Emergency trigger-off system with electromechanical interlock with a general cut-off device.  
Incorporated grounding measurement base (feed-through).  
Space for energy distributor current limiter.  
Casing made of polyester reinforced with grey fibreglass, RAL 7035.  
Door with a 3-position lock prepared for installing a barrel.  
Energy and grounding protection through glands.  
Direct wall fixture or mounting accessories (optional).  
Nominal voltage: 400V, 50Hz  
Transitory overvoltage (Uimp): 6kV  
Overvoltage category: CAT IV  
Insulation voltage: 600V  
Nominal current: 40 or 63A  
Short-circuit current: according to mounted components.  
Neutral regime: TT  
Diversity factor (RDF): 0.7 for 6 to 9 circuits and 0.8 for 4 to 5 circuits.  
CEM environment: B  
Pollution level: 3  
Insulation category: Category II  
Internal separation method: Method 1  
Connection type: FF  
Fixed exterior installation at up to 2000 m high.

## NOTE

Configurations upon request.



### 03Q0-E83-4x16A

General 4x40 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
Two 16 A 3P+T three-phase sockets.

### 03Q0-E83-5x16A

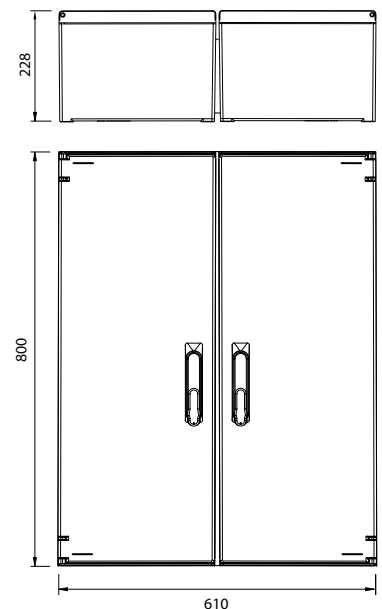
General 4x40 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
One 16 A 3P+T three-phase socket.  
One 16 A 3P+T three-phase socket.

### 03Q0-E83-4x32A

General 4x63 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
One 16 A 3P+T three-phase socket.  
One 32A 3P+T three-phase socket.

### 03Q0-E83-5x32A

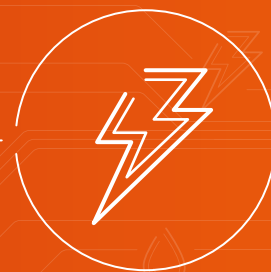
General 4x63 A multi-pole cut-off switch.  
Four 16 A Schuko single-phase sockets.  
One 16 A 3P+T three-phase socket.  
One 32A 3P+T three-phase socket.



All measurements in mm



ELECTRICITY



# LEVEL PANELS



# Level panels



## APPLICATIONS

Panel for level control installations or others for interior surface installations.

## MATERIALS

Box and bottom made of grey ABS, RAL 7035.  
Lid made of transparent or opaque polycarbonate.  
Hinges made of polyamide 6.  
Captive screws.  
Plastic PVC plugs.  
MEPD seal.

## APPLICABLE STANDARDS

EN 62208  
EN 61439-3  
(when equipped)

## CHARACTERISTICS

IP54, IK07  
Temperature range supported by the casing:  
-25 to +60°C.  
Thermal dissipation capacity: 10 W.

## OPTIONS

It can be sold equipped, single or three-phase.

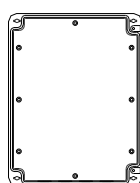
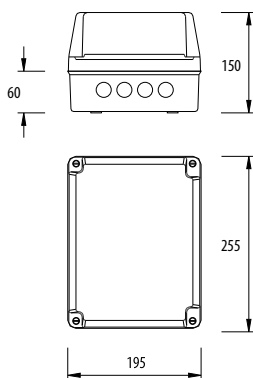
## ASSEMBLY INSTRUCTIONS

For surface assembly, after the process of construction of the assembly surfaces.  
The maximum weight of the equipment inside the box must not exceed 5 kg.  
Screws that match the weight of the equipment to be used must be chosen for assembly.



**02RN01** 230 VAC probe level control relay

**02RN02** 400 VAC probe level control relay



**09QN** Level panels



**08QN-PM** Assembly plate for level panel

Reference	Name
<b>09QN</b>	Box for level panel
<b>09QN-SF</b>	Box for level panel without holes
<b>09QN-E-M</b>	Single-phase equipped level panel
<b>09QN-PO</b>	Box for opaque level panel lid
<b>09QN-RN01-12-18</b>	Level control probe panel 230vac 1,2-1,8a
<b>09QN-RN01-18-27</b>	Level control probe panel 230vac 1,8-2,7a
<b>09QN-RN01-27-40</b>	Level control probe panel 230vac 2,7-4,0a
<b>09QN-RN01-40-60</b>	Level control probe panel 230vac 4,0-6,0a
<b>09QN-RN01-60-90</b>	Level control probe panel 230vac 6,0-9,0a
<b>09QN-RN01-A-10-16</b>	Level control probe panel 230vac 1,0-1,6a
<b>09QN-RN01-A-16-25</b>	Level control probe panel 230vac 1,6-2,5a
<b>09QN-RN01-A-25-40</b>	Level control probe panel 230vac 2,5-4,0a
<b>09QN-RN01-A-40-60</b>	Level control probe panel 230vac 4,0-6,0a
<b>09QN-RN01-A-55-80</b>	Level control probe panel 230vac 5,5-8,0a
<b>09QN-RN01-A-70-100</b>	Level control probe panel 230vac 7,0-10,0a
<b>09QN-RN01-A-90-130</b>	Level control probe panel 230vac 9,0-13,0a
<b>09QN-RN02-12-18</b>	Level control probe panel 400vac 1,2-1,8a
<b>09QN-RN02-18-27</b>	Level control probe panel 400vac 1,8-2,7a
<b>09QN-RN02-27-40</b>	Level control probe panel 400vac 1,8-2,7a
<b>09QN-RN02-40-60</b>	Level control probe panel 400vac 2,7-4,0a
<b>09QN-RN02-60-90</b>	Level control probe panel 400vac 4,0-6,0a
<b>09QN-RN01-A-10-16</b>	Level control probe panel 400vac 6,0-9,0a
<b>09QN-RN02-A-16-25</b>	Level control probe panel 400vac 1,0-1,6a
<b>09QN-RN02-A-25-40</b>	Level control probe panel 400vac 1,6-2,5a
<b>09QN-RN02-A-40-60</b>	Level control probe panel 400vac 4,0-6,0a
<b>09QN-RN02-A-55-80</b>	Level control probe panel 400vac 5,5-8,0a
<b>09QN-RN02-A-70-100</b>	Level control probe panel 400vac 7,0-10,0a
<b>09QN-RN02-A-90-130</b>	Level control probe panel 400vac 9,0-13,0a



ELECTRICITY



# FUSE BASES





# Fuse holder bases BUC NH



## APPLICATIONS

Single-pole bases for fuse NH.  
Used for protection and cut-off of energy distribution lines,  
industrial facilities, etc.

## MATERIALS

Base and lid made of grey self-extinguishing  
polyamide 6 without halogens, RAL 7035.  
Protector made of red polyamide 6, RAL 3001.  
Fuse base made of tinned copper.

## APPLICABLE STANDARDS

EN 60269-1  
EN 60947-3

## CHARACTERISTICS

IP43, IK10  
Fuses size NH00, NH1 and NH2, between 0 and 400 Amp.  
Electric arc extinguishing chamber.  
LED fusion indicator for identifying the state of the fuse.  
Opening and closing of the fuse being charged,  
with no danger for the user.  
Tilting crank on two shafts for accurate  
insertion of the fuse.  
Extractable crank.  
Upper and lower ventilation system.  
Orifice for measuring voltage at both ends.  
Insulation voltage: 1000V  
Thermal dissipation capacity: 23 to 75 W  
Insulation voltage: 500V



3923BUC1-B



3923BUC00-B

Reference	Name	Fuse type	Intensities
3923BUC00-B	Fuse holder NH size 00 connections underneath	NH00	160 A
3923BUC00-CB	Fuse holder NH size 00 connections underneath/above	NH00	160 A
3923BUC1-B	Fuse holder NH size 1 connections underneath	NH1	250 A
3923BUC1-CB	Fuse holder NH size 1 connections underneath/above	NH1	250 A
3923BUC1-BD	Fuse holder NH size 1 connections rightside underneath	NH1	250 A
3923BUC2-B	Fuse holder NH size 2 connections underneath	NH2	400 A
3923BUC2-CB	Fuse holder NH size 2 connections underneath/above	NH2	400 A
3923BUC2-BD	Fuse holder NH size 2 connections rightside underneath	NH2	400 A

# Single-pole bases for fuses NH



## APPLICATIONS

For use in distribution panels for protection.

## MATERIALS

Insulating base made of self-extinguishing thermoplastic (PC-ABS).

High conductivity tin-plated electrolytic copper contacts. Grips with steel springs with high resistance to corrosion. Category 2 black and white or stainless steel screws, washers and zinc nuts.

Self-extinguishing thermoplastic (PC-ABS) separator.

## APPLICABLE STANDARDS

EN 60269-2

EN 60998-2-1

## CHARACTERISTICS

For 160A (NH00), 250A (NH1) and 400A (NH2) currents.

12, 32 and 42 W dissipated current, respectively.

Insulation voltage: 690V

Reference	Name
11BF0	Fuse base T0
11BF00	Fuse base T00
11BF1	Fuse base T1
11BF2	Fuse base T2
11BF2-I	Fuse base T2 - Stainless steel
11BN00	Neutral base T00
11BN00-DF	Neutral base T00 - Double bore
11BN00-S	Sectionable neutral base T00
11BN00-S-I	Sectionable neutral base T00 - Stainless steel
11BN1	Neutral base T1
11BN2	Neutral base T2
11BN2-S	Sectionable neutral base T2
11BN2-S-I	Sectionable neutral base T2 - Stainless steel
11ST00	Separator T00
11ST00-XL	Separator T00 XL
11ST2	Separator T1/T2



11BN1



11BF1



11BF2



11BN00-DF



11BF00



11BN00-S



11BN00





# CENTRALISED METERING CABINETS PANEL BOX INDIRECT METERING CABINET (SLV)





# Meter centralisation



## APPLICATIONS

Centralisation of meters in a building or on each of its floors. It must remain close to the origin of the electrical installation (in use), more specifically:

- Outside the area occupied by the electrical installation (in use);

- In the entrance hall to the building or close by;

It is assembled on the surface or semi-integrated and is advantageous for the facility owner and electricity distributor.

## MATERIALS

Made of polyester reinforced with grey fibreglass, RAL 7035.

Lids made of transparent polycarbonate.

Category II insulation

General cut-off box with a triangular lock and prepared for EDP lock.

## APPLICABLE STANDARDS

EN 61439-2

Based on EDP normative document DIT-C14-140/N

## CHARACTERISTICS

IP41, IK10

General tetrapolar cut-off

Minimum busbars: 100 m<sup>2</sup>

Minimum section conductors: 10 m<sup>2</sup>

22x58 fused short-circuit device.

Outputs to terminals.

Ground busbars in the output box.

Removable connection box (option).

Nominal voltage: 400V, 50Hz

Transitory overvoltage (Uimp): 4kV

Overvoltage category: CAT III

Insulation voltage: 600V

Nominal current: according to order made

Short-circuit current: according to order made

Neutral regime: VT

Diversity factor (RDF): 0.8 for (4-5 outputs); 0.7 (for 6-9 outputs)

CEM environment: B

Pollution level: 3

Insulation category: Category II

Internal separation method: Forms 4A

Connection type: FF

Fixed exterior installation at up to 2000 m high

## NOTE

Customized product and on request.



For 16 single and three-phase 400 A cut-off meters  
Assembly example



For 5 single and three-phase 250 A cut-off meters  
Assembly example

# Panel box



## APPLICATIONS

Panel powered by a three-phase system, directly by a branch-line or common section and intended for supplying upstream columns and building inputs.

## MATERIALS

Boxes made of polyester reinforced with grey fibreglass, RAL 7035.

## APPLICABLE STANDARDS

EN 61439-2  
NP 1271 (obsolete since 21-10-2009)  
RTIEBT

## CHARACTERISTICS

IP65, IK10  
Secured to the surface or semi-integrated  
Output protection boxes, equipped with cylindrical NH fuses.  
Busbar box equipped with electrolytic copper busbars.  
General cut-off box, equipped with a general tetrapolar cut-off switch with a protection plate.  
Nominal voltage: 400V, 50Hz  
Transitory overvoltage (Uimp): 6kV  
Overvoltage category: CAT V  
Insulation voltage: 600V  
Nominal current: according to assembly type  
Short-circuit current: according to assembly type.  
Neutral regime: VT  
Diversity factor (RDF): 0.9  
CEM environment: B  
Pollution level: 3  
Insulation category: Category II  
Internal separation method: Forms 3B  
Connection type: FF  
Fixed exterior installation at up to 2000 m high

## NOTE

Customized product and on request.



Assembly example







# Indirect measurement cabinets for special low voltage (SLV)



## APPLICATIONS

Indirect measurement panel for Low Voltage facilities with a contracted power of over 41.4 KVA.

This panel is comprised of:

- Meter box for indirect measurement for housing the meter and modem (supplied by EDP) with an EDP- qualified terminal block (DMA-C17-511/N) and door with 3-position locking system prepared for installation of a European lock barrel used by EDP.
- Box for housing ITs comprised of copper busbars whose section matches the currents involved (125A, 250A and 400A).
- (Optional) Protection box P400 according to DMA-C62-807/N.

## MATERIALS

Box made of polyester reinforced with fibreglass.

## APPLICABLE STANDARDS

EN 61439-2

## CHARACTERISTICS

Category II RTISLV insulation.

## CT BOXES

Door prepared for EDP round "Ronis" lock

IT box with electrolytic copper busbars supported by insulators.

## MEASUREMENT BOX

Door with handle and 3-position closure prepared for EDP European barrel lock.

Terminal block for measurement.

## INPUT FUSE BOX

Door with handle and 3-position closure prepared for EDP European barrel lock.

Input fuse box according to DMA-C62-807/N.

## NOTE

Other configurations upon request.



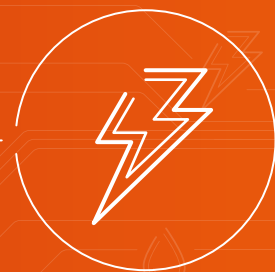
03BTE-P400-125A



03BTE-125A

Reference	Name		Reference	Name
03BTE-125A	125 AC SLV meter panel / CT and telemetry boxes	2 boxes (meter + CT)	03TI-125A	CT box 125A
03BTE-250A	250 AC SLV meter meter / CT and telemetry boxes		03TI-250A	CT box 250A
03BTE-400A	400 AC SLV meter meter / CT and telemetry boxes		03TI-400A	CT box 400A
03BTE-P400-125A	125 AC SLV meter meter / P400 CT and telemetry boxes	3 boxes (meter + CT + hatch)		
03BTE-P400-250A	250 AC SLV meter panel / P400 CT and telemetry boxes			
03BTE-P400-400A	400 AC SLV meter meter / P400 CT and telemetry boxes			

ELECTRICITY



AP CABINETS  
POLYESTER ASSEMBLY  
PLATES  
APM CABINETS

# AP pavement cabinet



## APPLICATIONS

Cabinet used in all types of private or public telecommunications, electricity, water, gas, traffic light and other industries and facilities.

## MATERIALS

Made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP43, IK10

Modular system

Door opening over 180°.

Excellent presentation and surface finish.

Different measurements.

With natural ventilation that prevents condensation.

Insulation voltage: 660V

Insulation category: Category II

Location: exterior and/or interior.

Permissible load: 280 kg/m<sup>2</sup>

Thermal dissipation capacity: 53 to 116 W

Temperature range supported by the housing: -25°C to +60°C.

**07AP55** Pavement cabinet 55



**07MF750X500** 750 mm high foundation block

## ASSEMBLY INSTRUCTIONS

Securing method: direct or with a foundation block

Reference	Name	Height	Width	Depth
<b>07AP55</b>	Pavement cabinet 55 500x500	500	500	300
<b>07AP57</b>	Pavement cabinet 57 500x750	500	750	300
<b>07AP75</b>	Pavement cabinet 75 750x500	750	500	300
<b>07AP77</b>	Pavement cabinet 77 750x750	750	750	300
<b>07AP105</b>	Pavement cabinet 105 1000x500	1000	500	300
<b>07AP107</b>	Pavement cabinet 107 1000x750	1000	750	300

All measurements in mm



**07AP75** Pavement cabinet 75

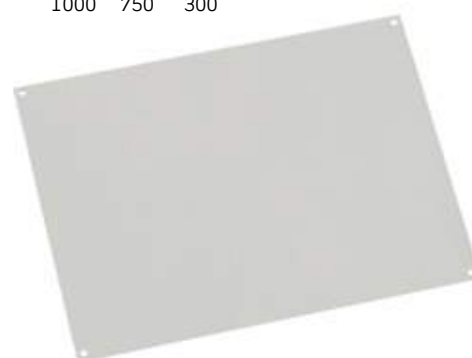
# AP pavement cabinet accessories



**07MF750X500** 750 mm high foundation block

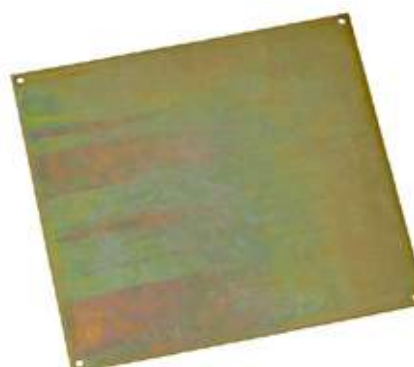
Reference	Name	Height	Width	Prof.
<b>07MF750X500</b>	750 mm high foundation block for 07AP55, 07AP75, 07AP105	750	500	300
<b>07MF750X750</b>	750 mm high foundation block for 07AP57, 07AP77, 07AP107	750	750	300
<b>07MF1000X500</b>	1000 mm high foundation block for 07AP55, 07AP75, 07AP105	1000	500	300
<b>07MF1000X750</b>	1000 mm high foundation block for 07AP57, 07AP77, 07AP107	1000	750	300

Reference	Name	Height	Width
<b>08AP55-PM</b>	Polyester assembly plate 07AP55	400	400
<b>08AP57-PM</b>	Polyester assembly plate 07AP57	400	650
<b>08AP75-PM</b>	Polyester assembly plate 07AP75	650	400
<b>08AP77-PM</b>	Polyester assembly plate 07AP77	650	650
<b>08AP105-PM</b>	Polyester assembly plate 07AP105	900	400
<b>08AP107-PM</b>	Polyester assembly plate 07AP107	900	650



**08AP75-PM** Polyester assembly plate

Reference	Name	Height	Width
<b>3923AP55-PMM</b>	Metallic assembly plate 07AP55	400	400
<b>3923AP57-PMM</b>	Metallic assembly plate 07AP57	400	650
<b>3923AP75-PMM</b>	Metallic assembly plate 07AP75	650	400
<b>3923AP77-PMM</b>	Metallic assembly plate 07AP77	650	650
<b>3923AP105-PMM</b>	Metallic assembly plate 07AP105	900	400
<b>3923AP107-PMM</b>	Metallic assembly plate 07AP107	900	650



**3923AP55-PMM** Metallic assembly plate

All measurements in mm

# Polyester assembly plate

## APPLICATIONS

Equipment installation.

## MATERIALS

Made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035.



Reference	Name
08PP-757X735X3	Polyester plate 757x735x3
08PP-757X735X4	Polyester plate 757x735x4
08PP-757X735X6	Polyester plate 757x735x6
08PP-757X735X10	Polyester plate 757x735x10
08PP-757X735X15	Polyester plate 757x735x15
08PP-2100X1100X4	Polyester plate 2100x1100x4

**08PP-757X735X4** Polyester assembly plate

All measurements in mm

# APM cabinets



## APPLICATIONS

Cabinets for various applications, including water, gas and electricity meters.  
Available with or without displays.

## MATERIALS

Made of polyester reinforced with grey self-extinguishing fibreglass, RAL 7035.  
V2 anti-UV polycarbonate display.

## APPLICABLE STANDARDS

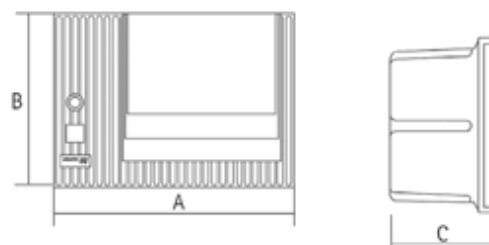
EN 62208

## CHARACTERISTICS

IP43, IK10  
Possibility of 3 point lock.  
Door opening over 180°.  
With or without display.  
Aesthetic uniformity.  
Insulation voltage: 660V  
Insulation category: Category II  
Temperature range supported by the housing:  
-25°C to +60°C.  
Permissible load: 280 kg/m²  
Thermal dissipation capacity: 31 to 118W.



**3923APM-2-2V** APM-2 cabinet with 2 displays



## ASSEMBLY INSTRUCTIONS

Fixing method: integrated or surface mount.  
Location: exterior and/or interior.

Reference	Name	A	B	C
<b>3923APM-0</b>	APM-0 cabinet	450	330	210
<b>3923APM-1</b>	APM-1 cabinet	535	520	220
<b>3923APM-2</b>	APM-2 cabinet	700	520	220
<b>3923APM-0-2V</b>	APM-0 cabinet with 2 displays	450	330	220
<b>3923APM-1-1V</b>	APM-1 cabinet with 1 display	535	520	220
<b>3923APM-1-2V</b>	APM-1 cabinet with 2 displays	535	520	220
<b>3923APM-2-2V</b>	APM-2 cabinet with 2 displays	700	520	220
<b>3923APM-2-3V</b>	APM-2 cabinet with 3 displays	700	520	220

All measurements in mm





# Telecommu- nications





# ITED telecommunications



## APPLICATIONS

Boxes for Telecommunications installations.  
Branching device for integrated assembly of  
electrical and telecommunications equipment.  
(I2E - Exterior mounting).

## MATERIALS

Boxes and covers in white polystyrene RAL 9003.  
Self-tapping screws in galvanized steel (I2E-In AGS).

## APPLICABLE STANDARDS

EN 60670

## CHARACTERISTICS

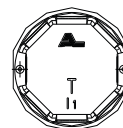
IP42, IK05

Insulation voltage: 600V with lid.

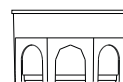
Temperature range supported by the housing:  
-5°C to +60°C.



**1511** Box I1



62



43.5

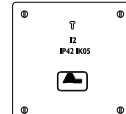
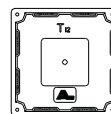


**1512** Box I2

42



45.2



99.8

## ASSEMBLY INSTRUCTIONS

For assembly on solid, non-combustible  
walls and ceilings.

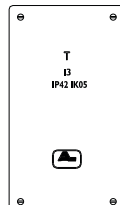
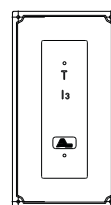


**1513** Box I3

60



63.2

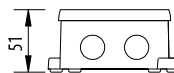


179.5

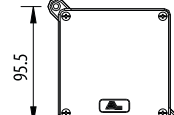
100



**1512E** Box I2 exterior



89.2



95.5

All measurements in mm

# ITED telecommunications



## APPLICATIONS

Boxes' covers for telecommunications installations.

## MATERIALS

White RAL 9003 polystyrene.  
Self-tapping screws in galvanized steel.

## APPLICABLE STANDARDS

EN 60670-1

## CHARACTERISTICS

Supply of 4 screws for cover.

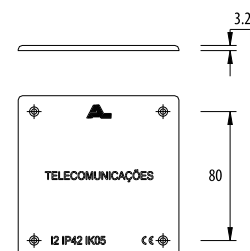


## ASSEMBLY INSTRUCTIONS

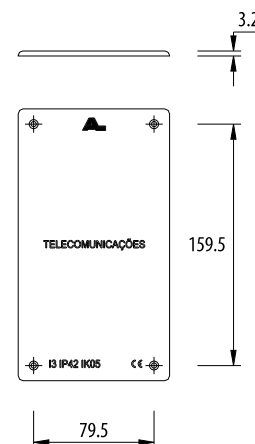
For assembly on solid, non-combustible walls and ceilings.



**14I2-T** I2 box cover



**14I3-T** I3 box cover



All measurements in mm



# ITED telecommunications



## APPLICATIONS

Boxes for Telecommunications installations.  
Branching device for integrated assembly of  
electrical and telecommunications equipment.

## MATERIALS

Box rim and door made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass.  
Base in RAL 7035 grey ABS.  
Nickel-plated brass sealing screws and earth terminal.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP44, IK10

Drilled holes designed for the majority  
of DDE and DDS on the market.

Insulation voltage: 660V

Location: interior and exterior.

Permissible load: 280 kg/m<sup>2</sup>

Thermal dissipation capacity: 25W

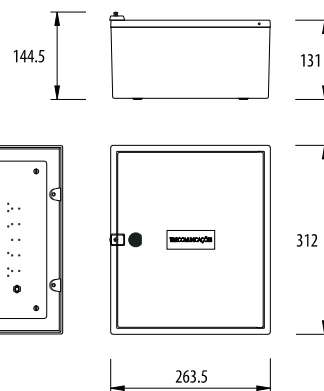
Temperature range supported by the housing:  
-25°C to +60°C.

Humidity: up to 100% Hx at 25°C



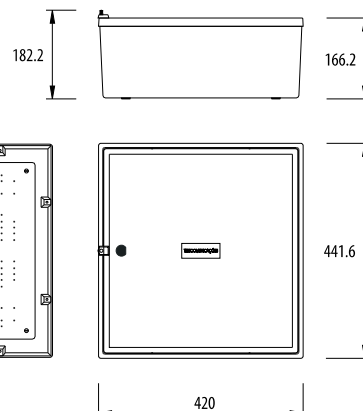
15C1/CEMU

C1 box



15C2

C2 box



## ASSEMBLY INSTRUCTIONS

For assembly on solid, noncombustible walls  
and ceilings.

# ITED telecommunications



## APPLICATIONS

Boxes for telecommunications installations.  
Branching device for integrated assembly of  
electrical and telecommunications equipment.

## MATERIALS

Box rim and door made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass.  
Base in RAL 7035 grey ABS.

## APPLICABLE STANDARDS

EN 62208

## CHARACTERISTICS

IP44, IK10

Drilled holes designed for the majority  
of DDE and DDS on the market.

Insulation voltage: 660V

Location: interior and exterior.

Permissible load: 280 kg/m<sup>2</sup>

Thermal dissipation capacity: 25W

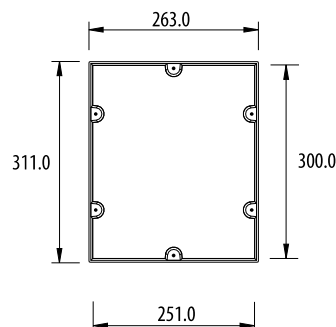
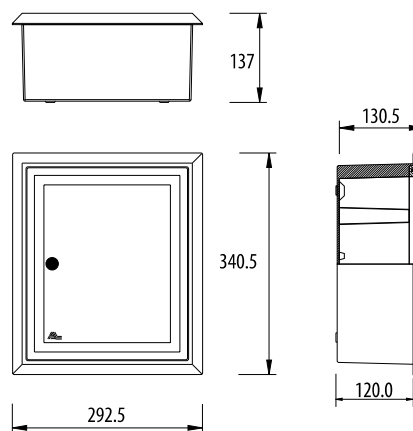
Temperature range supported by the housing:

-25°C to +60°C.

Humidity: up to 100% Hx at 25°C



**15C1A/CEMUA** Box with rim



## ASSEMBLY INSTRUCTIONS

For assembly on solid, noncombustible walls  
and ceilings.

All measurements in mm



# ATI telecommunications



## APPLICATIONS

ATI forms part of the individual conduit network, which usually consists of a box and its (active and passive) equipment for interconnecting the collective network and the individual cable network. It is installed inside the building unit, usually near the electrical panel of that unit, to which it is connected.

## MATERIALS

Box made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass.  
Rim, door and covers in white RAL 9003 ABS.

## CHARACTERISTICS

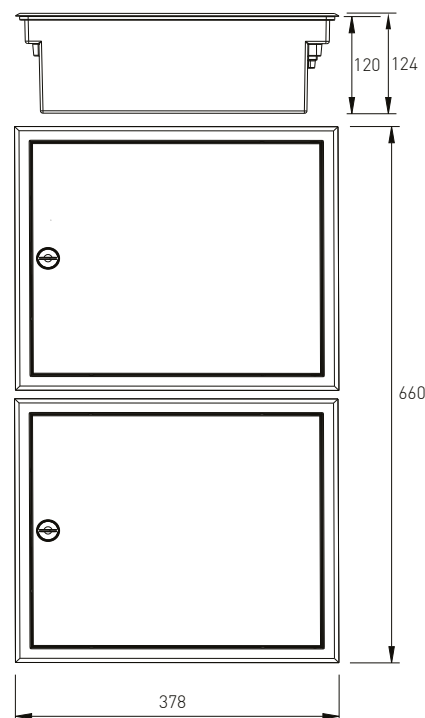
IP41, IK06  
Assemble in 8 PC/CC/FC configurations.  
Integrated assembly.  
Ventilation by natural convection.  
Design identical to the AL electrical panels (09QI2X15-D / 09QI2X10-D).  
Phased sale (box+CATI / other equipment).  
Box with openings ready for different diameters of conduit.  
Supplied with fibre optic box.  
Expandable.  
The ATI comprises a box (ATI2-C) and its IP41, IK06 equipment

## APPLICABLE STANDARDS

Developed according to the requirements of the ITED Manual, 2nd Edition, November 2009.



15ATI-PC



Reference	Name
15ATI-PC8-CC4	ATI 6 equipment with 8 twisted pair terminals and 4 coaxial terminals
15ATI-PC8-CC6	ATI 6 equipment with 8 twisted pair terminals and 6 coaxial terminals
15ATI-PC8-CC8	ATI 6 equipment with 8 twisted pair terminals and 8 coaxial terminals
15ATI-PC12-CC6	ATI 6 equipment with 12 twisted pair terminals and 6 coaxial terminals
15ATI-PC12-CC8	ATI 6 equipment with 12 twisted pair terminals and 8 coaxial terminals
15ATI-PC12-CC12	ATI 6 equipment with 12 twisted pair terminals and 12 coaxial terminals
15ATI-PC16-CC8	ATI 6 equipment with 16 twisted pair terminals and 8 coaxial terminals
15ATI-PC16-CC12	ATI 6 equipment with 16 twisted pair terminals and 12 coaxial terminals
15ATI2-C	Box for individual telecommunications cabinets 2

All measurements in mm

# ATI telecommunications



## APPLICATIONS

ATI forms part of the individual conduit network, which usually consists of a box and its (active and passive) equipment for interconnecting the collective network and the individual cable network. It is installed inside the building unit, usually near the electrical panel of that unit, to which it is connected.

## MATERIALS

Box made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass.  
Rim, door and covers in white RAL 9003 ABS.

## CHARACTERISTICS

IP41, IK06

Integrated assembly.

Ventilation by natural convection.

Design identical to the AL electrical panels (09QI2X15-D / 09QI2X10-D).

Phased sale (box+CATI / other equipment).

Box with openings ready for different diameters of conduit.

Copper pair network components, Cat 5e.

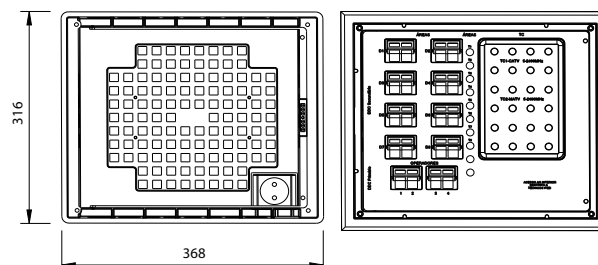
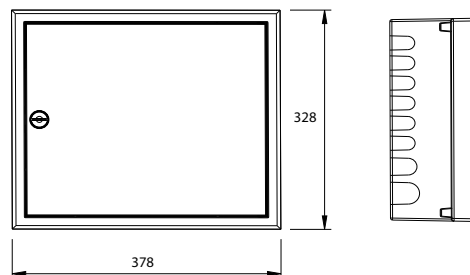
Coaxial network components, NQ2b.

Expandable.

The ATI comprises a box (ATI2-C) and its equipment.

## APPLICABLE STANDARDS

Developed according to the requirements of the ITED Manual, 1st Edition, July 2004.

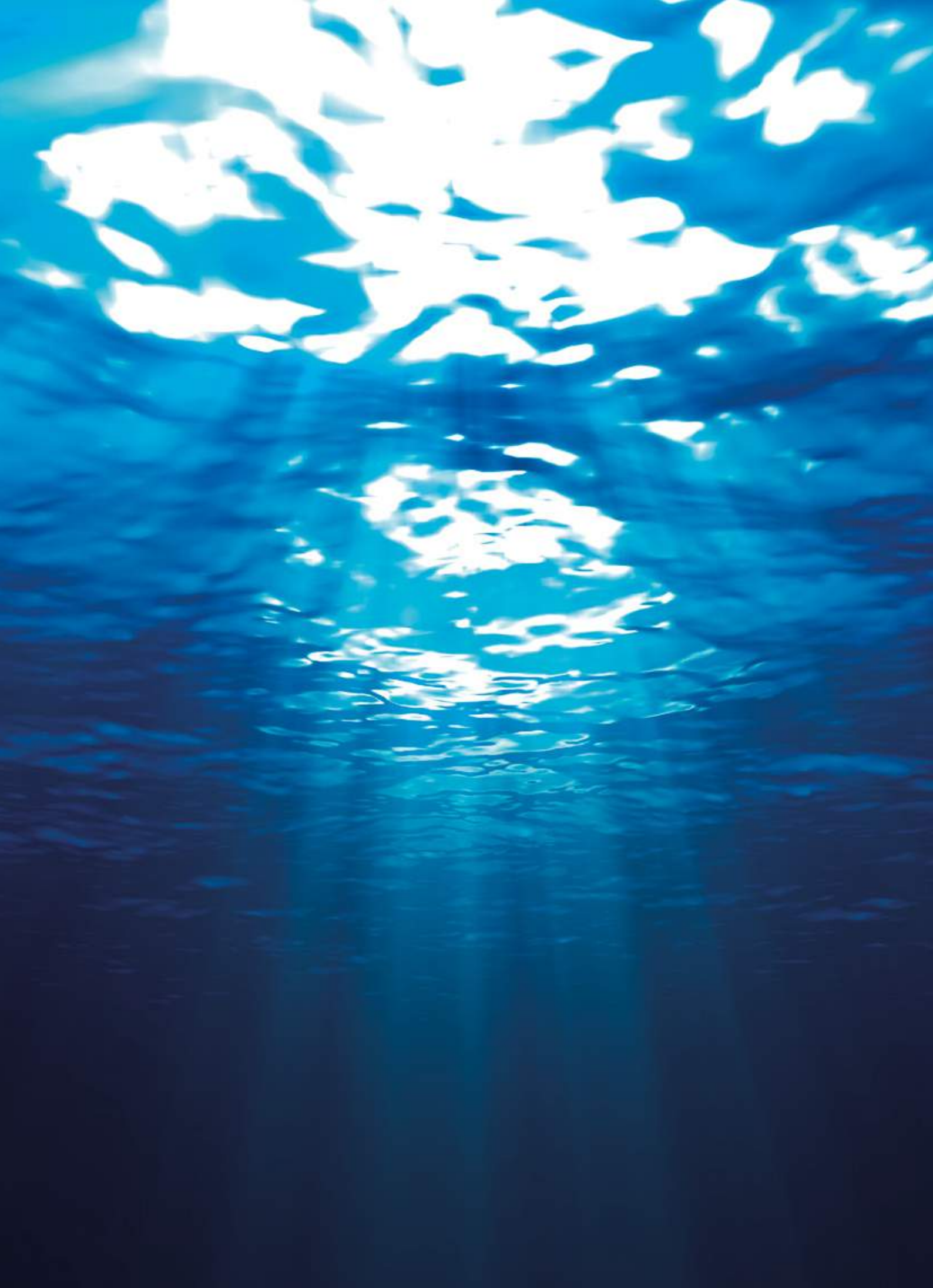


## Reference

## Name

15ATI-4S	Equipment for 4 ATI outputs
15ATI-6S	Equipment for 6 ATI outputs
15ATI-8S	Equipment for 8 ATI outputs
15ATI-C	Equipment for ATI
16ATI-A	ATI rim
16ATI-P	ATI door
16M2XRJ45	Module 2xRJ45 Cat.5e
16M2XRJ45P	Module 2xRJ45 Cat.5e parallel

All measurements in mm



# WATER





# Meter boxes

## APPLICATIONS

Water system meters.

## MATERIALS

Box and door made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass. V2 anti-UV polycarbonate display. RAL 7035 grey triangular polyamide 6 closing latch.

## APPLICABLE STANDARDS

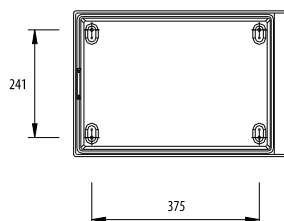
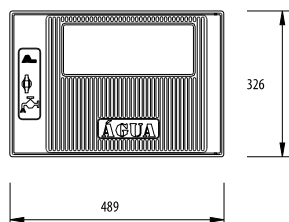
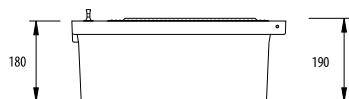
EN 60529  
EN 62262

## CHARACTERISTICS

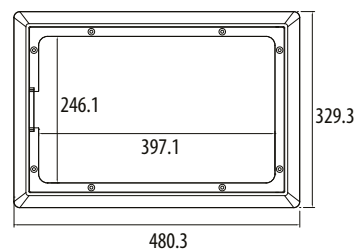
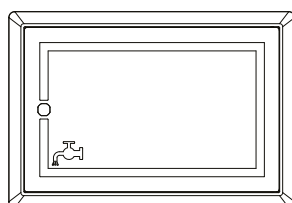
IP44, IK08



**12CCA** Box for water meter



**12CCA-AP** Rim and door for meter



## APPLICATIONS

Water system meters.

## MATERIALS

Rim and door made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass. RAL 7035 grey triangular polyamide 6 closing latch.

## APPLICABLE STANDARDS

EN 60529  
EN 62262

## CHARACTERISTICS

IP43, IK08

All measurements in mm



# Meter boxes

## APPLICATIONS

Meters of water networks installations.

## MATERIALS

Box and door made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass.  
V2 anti-UV polycarbonate display.  
RAL 7035 grey triangular polyamide 6 closing latch.

## APPLICABLE STANDARDS

EN 60529

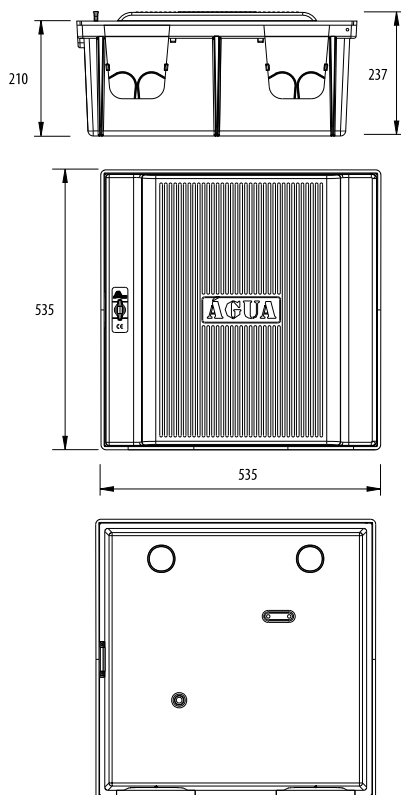
EN 62262

## CHARACTERISTICS

IP43, IK08



**12CCA2** Box for 2 water meters



**12CCA2-2V** Box with display for 2 water meters

All measurements in mm





# Meter boxes

## APPLICATIONS

Water system meters, for installation in the ground.

## MATERIALS

Box and Cover made of polyester reinforced with fibreglass.

## APPLICABLE STANDARDS

EN 60529

EN 62262

## CHARACTERISTICS

RAL 7035 grey colour.

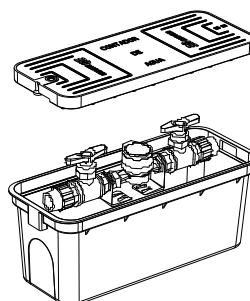
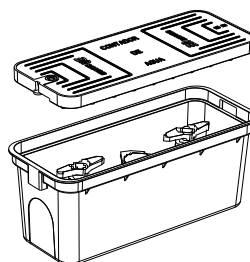
Self-extinguishing and non-corrosive material.

Metal lock.

When properly installed in the ground, it can withstand weights of up to 12.5 Tons.



12A-H20



Reference	Name	Cover			Box		
		Length	Width	Height	Length	Width	Height
12A-H20	Box for water meter	523	208	45	539	220	210

All measurements in mm





# GAS







# Boxes for gas network

## APPLICATIONS

Boxes for building gas networks.

Designed for:

- G4 meter (6m<sup>3</sup>/h)
- 4, 6 or 10 m<sup>3</sup>/h regulators
- 4, 6, 10, 25 or 65 m<sup>3</sup>/h regulators or battery
- Medium pressure flow switch
- ¼ flow return valve 15 or 25 gauge
- Pressure valve 15 or 25 gauge

## MATERIALS

Box and door made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass. Anti-UV2 polycarbonate display. RAL 7035 grey triangular polyamide 6 closing latch.

## APPLICABLE STANDARDS

EN 60529

EN 62262

## CHARACTERISTICS

IP43, IK09

## NOTE

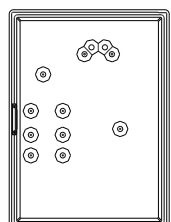
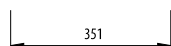
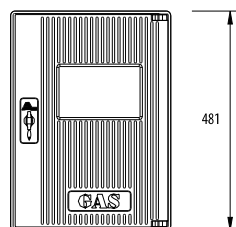
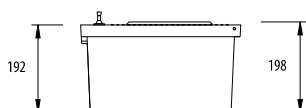
We recommend that you consult your gas supplier if you wish to install this product for the meter.



**13CCG** Box for gas network



**13CCG-V** Box for gas network with display



All measurements in mm

# Boxes for gas network

## APPLICATIONS

Boxes for building gas networks.

Designed for:

- G4 meter (6m³/h)
- 4, 6 or 10 m³/h regulators
- 4, 6, 10, 25 or 65 m³/h regulators or battery
- Medium pressure flow switch
- ¼ flow return valve 15 or 25 gauge
- Pressure valve 15 or 25 gauge

## MATERIALS

Box and door made of RAL 7035 grey self-extinguishing polyester reinforced with fibreglass.

Anti-UV2 polycarbonate display.

RAL 7035 grey triangular polyamide 6 closing latch.

## APPLICABLE STANDARDS

EN 60529

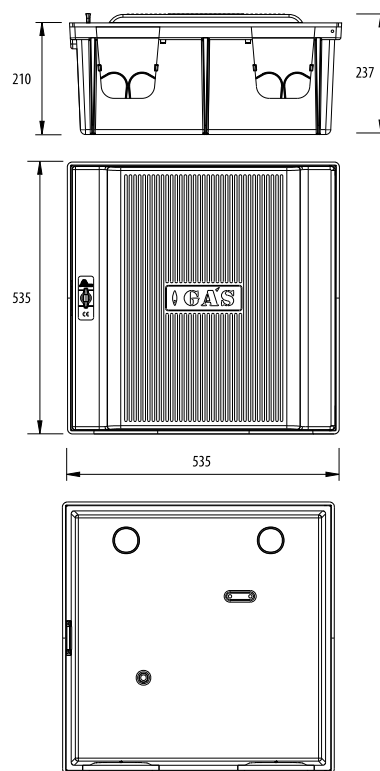
EN 62262

## CHARACTERISTICS

IP43, IK09



**13CCG2** Box for gas network



All measurements in mm



# IP and IK protection levels

Defines the degree of protection against dust, moisture and mechanical shock, according to the rules EN 60529 and EN62262

## Protection against solid objects

First digit

IP

0



Unprotected

1



Protection against solid objects superior to 50 mm (eg. involuntary hand contacts)

2



Protection against solid objects superior to 12.5 mm (eg. fingers)

3



Protection against solid objects superior to 2.5 mm (eg. tools, wires)

4



Protection against solid objects superior to 1 mm (eg. thin tools, thin wire)

5



Protected against dust penetration

6



Fully protected against dust penetration

## Protection against water

Second digit

IP

0



Unprotected

1



Protected against vertical water drops (condensation)

2



Protected against drops of water up to 15° vertically

3



Protected against drops of water up to 60° vertically

4



Protected against water spray from all directions

5



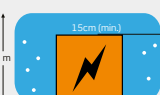
Protected against water jets from all directions

6



Protected against water spray similar to sea waves

7



Protected against immersion effects

8



Protected against continuous under pressure immersion effects

## Protection against mechanical impact

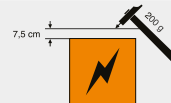
IK

0



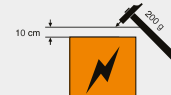
Unprotected

01



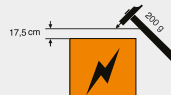
Impact energy 0,150 J

02



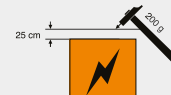
Impact energy 0,200 J

03



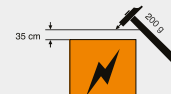
Impact energy 0,350 J

04



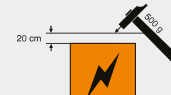
Impact energy 0,500 J

05



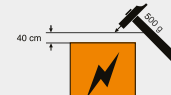
Impact energy 0,700 J

06



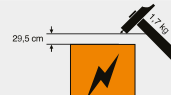
Impact energy 1,000 J

07



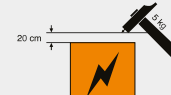
Impact energy 2,000 J

08



Impact energy 5,000 J

09



Impact energy 10,000 J

10



Impact energy 20,000 J

## Our certificates





### AL - Fábrica de Material Eléctrico, SA

Zona Industrial Casal da Lebre  
Rua da Alemanha, Lote 6B  
Apartado 218  
2431-968 Marinha Grande  
Portugal

+351 244 572 280

+351 244 572 290

geral@al-sa.pt  
comercial@al-sa.pt

### EN2015.EN

Unless misprint,  
product features may change  
without notice

### GPS

39°43'10.8"N / 8°55'41.8"W  
39.719666, -8.928264

[www.al-sa-pt](http://www.al-sa-pt)



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