



The modular dimensions and the breadth of the products allows an easy combination

The products seen in the Distribution boxes section is completed by the vast range of Modular boxes, suitable for the installation of modular devices, which certainly may be used in areas where a high degree of protection is needed.

Modularity

The Modular boxes Series has been planned to solve the low voltage control and distribution problems with an additional characteristic: the modularity. In fact these products may be assembled in banks which may be later implemented into bigger ones, maintaining the original protection degree.

Resistance

The chosen degree of protection level, IP44, IP55, IP65, may assure up to an almost total protection of live parts to accidental contacts, therefore their use is particularly suitable in those areas where particular attention has to be given to mechanical stresses and chemical corrosion.

Fast cabling

In order to give an easy access, rapid mounting and time save in installing, these products have fair leads, knock outs and knock out windows which enable the fast entrance of tubes, cables and bus bars.



DISTRIBUTION BOXES

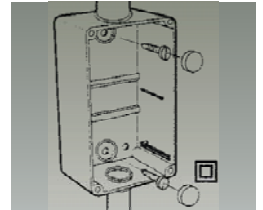
WORKING FACILITIES

The special shape of these boxes enables safe operation on the terminal blocks in order to have the connecting terminals in line with the cable holes. Furthermore the snap on cover guarantees an accidental opening as it is only possible through a tool.

INDUSTRIAL BOXES

INSULATION

The total insulation of the boxes assure an almost total safety against accidental contacts with live parts. These boxes are available in six different sizes and the covers have three depth, they may be chose in two different versions RAL 7035 or transparent.



STABILITY AND STRENGTH

The impact strength is guaranteed even at low temperatures, together with the other mechanical features. The material with wich they are made of assures high dimensional stability within the range of - 25 °C to + 90 °C.



HEAVY DUTY BOXES

FAST ACCESS

In order to facilitate the use and to speed up the access to the devices kept inside the box, the captive screws of the cover are available in different versions:

- with single-slot head in case the opening has to be done with a crew-driver (standard version)
- with flexible hinge both right and left or in nikel plated brass
- with winged head suitable for a hand and frequent use with the possibility of sealing
- with winged head 1/4 turn suitable for a fast and frequent use with the possibility of sealing.



KNOCK OUT WINDOWS

These boxes are supplied with closed walls but, if necessary, thanks to knockable windows on each side of the walls it is possible to allow the entrance of cables.

These windows can be closed by means of suitable plaques.

Windows dimensions: 110 x 72 mm, 194 x 72 mm, 290 x 72 mm.

ASSOCIABILITY

Their dimension pof modular boxes enable the associability of different boxes in various combinations, by type and size, in order to create distribution, protection and comand banks perfectly watertight and with a superior mechanical and chemical resistance as they are made of thermoplastic material reinforced with fiber glass.



**DISTRIBUTION
BOXES WITH
GROMMETS**

The special shape of these boxes enables safe operation on the terminal blocks in order to have the connecting terminals in line with the cable holes.
(Terminal blocks are not included)



These distribution boxes are meant for connecting and shunting of electrical lines in electrical, process and control plants. They may be used also on board.
Arranged before hand for mounting terminal blocks.

**Snap on cover
Screw fixing cover**

Fair lead made of insulating material 4 mm² terminal block 4 or 5 poles.

Standards
Construction according IEC 670 and CEI 23-48.

High quality housing
Made of **selfextinguishing** material classed to Grade V-1 and UL94 standards.

High fire resistance
All parts pass the Glow wire test with a temperature of 650° a target over the IEC 695-2-1 limit.

High mechanical resistance
IK08 protection degree against external mechanical impacts, according to EN 50 102.


IP44 – Snap-on cover

Dimensions	Nr. inlets with fair-lead	RAL 7035
box Ø 60 × 35	4 × max Ø tube 16 mm	93060
box Ø 70 × 37	4 × max Ø tube 20 mm	93070
box 80 × 80 × 37	5 × max Ø tube 20 mm 2 × max Ø tube 16 mm	93080
box 80 × 80 × 37		93081

IP55 – Screw fixing cover

Dimensions h × w × d	Nr. inlets with fair-lead	RAL 7035
120 × 80 × 60	6 × max Ø tube 25 mm	93086
100 × 100 × 60	6 × max Ø tube 25 mm	93087
150 × 110 × 70	10 × max Ø tube 25 mm	93088
190 × 140 × 70	10 × max Ø tube 25 mm	93089
240 × 190 × 90	12 × max Ø tube 32 mm	93090
300 × 220 × 120	12 × max Ø tube 32 mm	93091
380 × 300 × 120	12 × max Ø tube 45 mm	93092

INDUSTRIAL BOXES – IP66

The total insulation of the boxes assure an almost total safety against accidental contacts with live parts.
May be assembled in mini-bancks.



High quality housing
Made of insulating thermoplastic material that guarantees a high resistance to temperature and to chemical agents.



High fire resistance
All parts pass the Glow wire test with a temperature of 750° a target over the IEC 695-2-1 limit.

High mechanical resistance
IK08 protection degree against external mechanical impacts, according to EN 50 102.



High dimensional stability
within the range of – 25 °C / 110 °C.

IP66 – Smooth walls

Dimensions h × w × d	RAL 7035
90 × 90 × 85	93203
90 × 180 × 85	93205

IP66 – Knock outs

Dimensions h × w × d	Nr. inlets with fair-lead	RAL 7035
90 × 90 × 85	4 × Pg21	93103
90 × 180 × 85	8 × Pg21	93105

Are designed for use in conjunction with the COMPACT sockets with interlock switch.

IP66 – Knock outs panel/embedded

Dimensions h × w × d	Nr. inlets with fair-lead	RAL 7035
90 × 180 × 85	4 × Pg21	93805

Is designed for use in conjunction with the COMPACT sockets with interlock switch.

**INDUSTRIAL BOXES – IP55
SMOOTH WALLS**

The total insulation of the boxes assure an almost total safety against accidental contacts with live parts.
Six different size of boxes and covers with three depth.



High quality housing
Made of selfextinguishing material classed to Grade V-1 and UL94 standards.



High fire resistance
All parts pass the Glow wire test with a temperature of 960° a target over the IEC 695-2-1 limit.

High mechanical resistance
IK08 protection degree against external mechanical impacts, according to EN 50 102.



High dimensional stability
within the range of – 25 °C / 90 °C.

IP55 – Low cover h = 15 mm RAL 7035 gray

Dimensions h × w × d	Cover	
	RAL 7035	Transparent
75 × 110 × 65	93210	
110 × 110 × 65	93220	
110 × 150 × 75	93234	93239
150 × 150 × 75	93264	93269
150 × 220 × 75	93244	93249
220 × 300 × 75	93254	93259

IP55 – Medium cover h = 40 mm RAL 7035 gray

Dimensions h × w × d	Cover	
	RAL 7035	Transparent
110 × 150 × 100	93230	93235
150 × 150 × 100	93260	93265
150 × 220 × 100	93240	93245
220 × 300 × 100	93250	93255

IP55 – High cover h = 62 and 90 mm RAL 7035 gray

Dimensions h × w × d	Cover	
	RAL 7035	Transparent
110 × 110 × 112	93221	
110 × 150 × 150	93231	93236
150 × 150 × 150	93261	93266
150 × 220 × 150	93241	93246
220 × 300 × 150	93251	93256

INDUSTRIAL BOXES WITH KNOCK-OUTS PG

The total insulation of the boxes assure an almost total safety against accidental contacts with live parts.
Six different size of boxes and covers with three depth.



IP55 – Low cover h = 15 mm RAL 7035 gray

Dimensions h × w × d	Nr. inlets with knock-outs	Cover RAL 7035
75 × 110 × 65	2 × Pg21 + 4 × Pg16/21	93110
110 × 110 × 65	4 × Pg21 + 4 × Pg16/21	93120
110 × 150 × 75	4 × Pg21 + 4 × Pg29	93134
150 × 150 × 75	8 × Pg29	93164
150 × 220 × 75	8 × Pg21 + 4 × Pg29	93144
220 × 300 × 75	8 × Pg21 + 8 × Pg29	93154

High quality housing
Made of **selfextinguishing** material classed to Grade V-1 and UL94 standards.

High fire resistance
All parts pass the Glow wire test with a temperature of 960° a target over the IEC 695-2-1 limit.

High mechanical resistance
IK08 protection degree against external mechanical impacts, according to EN 50 102.

High dimensional stability
within the range of – 25 °C / 90 °C.



IP55 – Medium cover h = 40 mm RAL 7035 gray

Dimensions h × w × d	Nr. inlets with knock-outs	Cover RAL 7035
110 × 150 × 100	4 × Pg21 + 4 × Pg29	93130
150 × 150 × 100	8 × Pg29	93160
150 × 220 × 100	8 × Pg21 + 4 × Pg29	93140
220 × 300 × 100	8 × Pg21 + 8 × Pg29	93150

IP55 – High cover h = 62 and 90 mm RAL 7035 gray

Dimensions h × w × d	Nr. inlets with knock-outs	Cover	
		RAL 7035	Transparent
110 × 110 × 112	4 × Pg21 + 4 × Pg16/21	93121	
110 × 150 × 150	4 × Pg21 + 4 × Pg29	93131	93136
150 × 150 × 150	8 × Pg29	93161	93166
150 × 220 × 150	8 × Pg21 + 4 × Pg29	93141	93146
220 × 300 × 150	8 × Pg21 + 8 × Pg29	93151	93156



INDUSTRIAL BOXES WITH KNOCK-OUTS M20

The total insulation of the boxes assure an almost total safety against accidental contacts with live parts.
Six different size of boxes and covers with three depth.



IP55 – Low cover h = 15 mm RAL 7035 gray

Dimensions h × w × d	Nr. inlets with knock-outs	Cover RAL 7035
75 × 110 × 65	6 × M20	93810
110 × 110 × 65	8 × M20	93820
110 × 150 × 75	8 × M20	93834
150 × 150 × 75	8 × M20	93864
150 × 220 × 75	12 × M20	93844

High quality housing
Made of **selfextinguishing** material classed to Grade V-1 and UL94 standards.

High fire resistance
All parts pass the Glow wire test with a temperature of 960° a target over the IEC 695-2-1 limit.

High mechanical resistance
IK08 protection degree against external mechanical impacts, according to EN 50 102.

High dimensional stability
within the range of – 25 °C / 90 °C.



IP55 – Medium cover h = 40 mm RAL 7035 gray

Dimensions h × w × d	Nr. inlets with knock-outs	Cover RAL 7035
110 × 150 × 100	8 × M20	93830
150 × 150 × 100	8 × M20	93860
150 × 220 × 100	12 × M20	93840

IP55 – High cover h = 62 and 90 mm RAL 7035 gray

Dimensions h × w × d	Nr. inlets with knock-outs	Cover	
		RAL 7035	Transparent
110 × 110 × 112	8 × M20	93821	93826
110 × 150 × 150	8 × M20	93831	93836
150 × 150 × 150	8 × M20	93861	93866
150 × 220 × 150	12 × M20	93841	93846



ACCESSORIES FOR INDUSTRIAL BOXES



Symmetrical appliance-holding

Description	Code
length 88 mm for boxes: 110 × 75; 110 × 110; 100 × 150 mm	93331
length 126 mm for boxes: 150 × 110; 150 × 150 mm	93332
length 158 mm for boxes: 90 × 180 mm	93339
length 196 mm for boxes: 220 × 150; 220 × 300	93333
length 276 mm for boxes: 320 × 220 mm	93334

Nylon conduit with Pg thread end



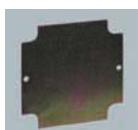
Description	Code
for tubes Ø 16 mm - Pg 13.5	10039
for tubes Ø 25 mm - Pg 21	10036
for tubes Ø 32 mm - Pg 29	10037
for tubes Ø 40 mm - Pg 36	10038



Cable-clamp - IP66

Description	Code
Pg21, max Ø clamping 20mm	10055

15/10 End plaque in tropicalized zinc



Description	Code
for box 110 × 110 mm	93320
for box 110 × 150 mm	93330
for box 150 × 150 mm	93360
for box 150 × 220 mm	93340
for box 220 × 300 mm	93350

Nylon cable clamping screw



Description	Code
Pg 16, max clamping Ø6 mm	10004
Pg 21, max clamping Ø20 mm	10005
Pg 29, max clamping Ø26 mm	10006

Plastic - fair-leads



Description	Code
for holes Ø 21 - Pg 13.5	93301
for holes Ø 23 - Pg 16	93302
for holes Ø 28.5 - Pg 21	93303
for holes Ø 37.5 - Pg 29	93304

Nylon nipples for joining boxes



Description	Code
for holes Ø 23 - Pg 16	93311
for holes Ø 28.5 - Pg 21	93312
for holes Ø 37.5 - Pg 29	93313

Hexagonal nuts



Description	Code
Pg 13.5	10040
Pg 16	10041
Pg 21	10042
Pg 29	10043
Pg 36	10044

Channel for fitting □ 15 × 8



Description	Code
channel for fitting 2 mt	10032

Stirrups for wall fixing



Description	Code
Supplied with screws	93315

Square nuts and bolts



Description	Code
4 screws and relevant square nuts	10033

Terminal blocks



Description	Code
suitable for 4 × 4 mm ²	93344
suitable for 5 × 4 mm ²	93354

HEAVY DUTY BOXES – IP65

The total insulation of the boxes assure an almost total safety against accidental contacts with live parts.



High quality housing
Made of **selfextinguishing** material reinforced with fiber glass classed Grade V-1 and UL94 standards.

High fire resistance
All parts pass the Glow wire test with a temperature of 960° a target well over the IEC 695-2-1 limit.

High mechanical resistance
IK08 protection degree against external mechanical impacts, according to EN 50 102.

High dimension stability:
– 25 °C to 120 °C
125 °C reached in the ball pressure test.

Cover screw:
– plastic single slot screws
– plastic winged screws for sealing
– plastic screws fast tightening
– plastic screws with flexible hinges
– nikel-plated brass hinges

Special spacers offer the possibility to vary the depth of box of 55 mm for increasing box working depth.



Cover fixed with screws

Dimensions h × w × d	Windows to be knocked out	Cover	
		RAL 7035	Transparent
270 × 180 × 165	2 × F1 + 2 × F2	67011	67001
270 × 270 × 165	4 × F2	67012	67002
360 × 270 × 165	2 × F3 + 2 × F2	67014	67004
540 × 270 × 165	6 × F2	67016	67006
540 × 360 × 165	2 × F3 + 4 × F2	67018	67008

Cover fixed with hinges

Dimensions h × w × d	Windows to be knocked out	Cover	
		RAL 7035	Transparent
270 × 180 × 165	2 × F1 + 2 × F2	67031	67021
270 × 270 × 165	4 × F2	67032	67022
360 × 270 × 165	2 × F3 + 2 × F2	67034	67024
540 × 270 × 165	6 × F2	67036	67026
540 × 360 × 165	2 × F3 + 4 × F2	67038	67028

Accessories



Spacers

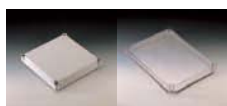
For boxes h × w	RAL 7035
270 × 180	67101
270 × 270	67102
360 × 270	67103
540 × 270	67104
540 × 360	67105

They increase the working depth of the box of 55 mm
All supplies wit gaskets and screws.

End plaques



For boxes h × w	Material	
	steel 20/10 tropicalized	insulating
270 × 180	67401	67406
270 × 270	67402	67407
360 × 270	67403	67408
540 × 270	67404	67409
540 × 360	67405	67410

Cover


For boxes h × w	Cover	
	RAL 7035	Transparent
270 × 180	67306	67301
270 × 270	67307	67302
360 × 270	67308	67303
540 × 270	67309	67304
540 × 360	67310	67305

Plaques for windows


Description	Cover	
	Flat	Schaped
without knock outs for F1 window	67201	67215
without knock outs for F2 window	67206	67218
without knock outs for F3 window	67212	67221

all supplied with gaskets and screws

Screw for cover


Description	Code
winged screws with hole for sealing	67314
single sloted	67315
1/4 - turn fast tightening	67316
made of plastic, flexible hinge	67317
ambidextrous hinge nikelated brass	67318
2 m. gaskets for hinge cover art 67318	67319

Nylon cable clamping


Description	Code
Pg 9, max Ø clamping 16 mm	10001
Pg 11, max Ø clamping 16 mm	10002
Pg 13.5, max Ø clamping 16 mm	10003
Pg 16, max Ø clamping 16 mm	10004
Pg 21, max Ø clamping 20 mm	10005
Pg 29, max Ø clamping 26 mm	10006
Pg 36, max Ø clamping 38 mm	10007
Pg 42, max Ø clamping 41 mm	10008
Pg 48, max Ø clamping 44 mm	10009

Ventilation


Description	Code
mounting on hole Ø 22,2 mm	10030
mounting on hole Ø 25,5 mm	10031

Gaskets for joining boxes


Description	Code
for F1 window	67311
for F2 window	67312
for F3 window	67313