



CATALOGUE

2007-2008

PRODUCTS AND SYSTEMS  
FOR ELECTRICAL INSTALLATIONS  
AND INFORMATION NETWORKS





# Industrial enclosures and equipment

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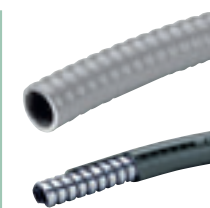


**Marina cabinets and enclosures**  
- cabinets (p. 273)  
- enclosures (p. 275)

## New in 2007



**Heat regulation:**  
- ventilators (p. 286)  
- exchangers (p. 288)  
- air-conditioners (p. 288)



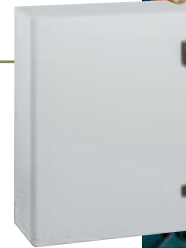
**Flexible conduits**  
- polyamide (p. 300)  
- PVC and metalloplastic (p. 304)

# The right material for your environment

For each ambient environment, Legrand has the right enclosure for you, made of the appropriate material

## POLYESTER COATED STEEL

Steel is suitable for commercial and industrial premises that have no special requirements, and no excessive corrosion



■ Industrial environments, service areas, public buildings: Atlantic cabinet (p. 268)

## STAINLESS STEEL

Stainless steel is suitable for the most demanding environments: depending on the types of corrosion encountered, Legrand offers two qualities of stainless steel, including 316 L stainless steel, which is recommended for very harsh environments (salting, offshore, etc.)



■ Laboratories, food processing industry, special hygiene requirements: stainless steel Atlantic cabinets (p. 273)

## GLASS REINFORCED POLYESTER RESIN

For corrosive environments: fibreglass reinforced polyester resin



■ Coast, petrochemicals, very harsh environments: Marina cabinets and enclosures (p. 274 to 276)

## cabinets and enclosures: the right material for your environment

### ■ Polyester coated steel: Atlantic

For industrial environments that have no special requirements, and no excessive corrosion  
IP 55 according to standard IEC EN 60529  
Hinges and pins of cabinets with high performance anti-corrosion treatment

#### Resistance of the coating according to tests

Mechanical characteristics:

- Adhesion (grid and adhesive tape) EN ISO 2409: class 0 to 1
- Persoz hardness EN ISO 1522: 320"
- Bending on cylindrical mandrel EN ISO 1519: 6 mm, no cracks
- Erichsen stamping EN ISO 1520: 8 mm
- Impact strength EN ISO 6272: 1 kg - 50 cm

Climatic conditions:

- NSS salt spray test according to ISO 9227, Ka test according to EN 60068-2-11: 1000 h
- Sulphur dioxide SO<sub>2</sub>: 500 h
- Heat 100°C for 168 h: very good maintenance of sheen
- Heat 150°C for 3 h: very good maintenance of sheen
- Cold: - 40°C

#### Coating process

Main steps in the process:

- Phosphate coating: the coat of iron phosphate encourages bonding of the coating
- Neutralisation
- Passivation
- Neutralisation
- Application of a 60 µm thick coating of pure polyester by electrostatic dusting

### ■ Stainless steel: Atlantic

For very harsh environments  
IP 66 allowing jet washing, amongst other things

	304 L (catalogue standard) as a %	316 L (on request) as a %
Carbon	< 0.03	< 0.03
Chromium	18 to 19	16.5 to 18
Nickel	9 to 11	10 to 12
Molybdenum	-	2 to 2.25

#### Surface condition (brushing)

Polygrain 180 according to EN ISO 4287  
- Ra between 0.25 and 0.35 µm  
- Rt between 2.5 and 4 µm

#### Corrosion resistance

	304 L	316 L
To salt spray	1000 h	2000 h
To sulphur dioxide (SO <sub>2</sub> )	1000 h	1000 h

#### 304 L, resistant to chemical agents:

- Nitric acid up to 52% at all temperatures and 98% cold
- Diluted organic acids cold
- Alkaline solutions (except hot and above 50%)
- Saline solutions other than chlorides, sulphurs and sulphates
- Fresh water and natural atmosphere with low chloride content
- Foodstuffs (except mustard and white wine)

#### 316 L (on request), resistant to chemical agents:

- Phosphoric acid, all concentrations up to 40°C
- Sulphuric acids below 10% and above 80% at 20°C
- Sulphonic mixtures up to 70°C
- Sulphur solutions and vapours, even boiling
- Saline solutions except for chlorides
- Alkaline solutions, all concentrations below 100°C
- Fresh water and natural atmospheres including marine environments
- Organic, food and pharmaceutical products

#### Physical properties

- Specific gravity - density: 8
- Coefficient of expansion: 16 µm/°C
- Specific heat: 500 J/kg°C
- Electrical resistivity: 0.75 µΩ mm<sup>2</sup>
- Temperature: - 65°C to + 100°C in continuous duty and + 125°C peak
- Thermal conductivity: 15 W/m°C
- Only the low carbon content (< 0.03%) of 304 L and 316 L stainless steels can provide excellent resistance to intergranular corrosion

### ■ Legrand solutions 100% compatible: EMC

Under normal conditions of use Legrand metal enclosures and cabinets provide EMC attenuation of 20 dB: the electrical and electronic components are protected against the damaging effects of electromagnetic fields

### ■ Limitation of radiated interference



Designed for a standard environment, Legrand enclosures provide a 20 dB shielding level: the interfering signal will be 10 times less



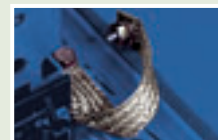
For an environment subject to interference, 40 dB shielding provided on request: interfering signal is 100 times less, doors seals copper/beryllium on standard steel, metallised polyamide elastomer seal on stainless steel

#### Name according to country

		304 L	316 L
France	AFNOR <sup>(1)</sup>	Z3 CN 18-10	Z3 CND 17-11-02
	NF EN	X 2 CNI 19-11	X 2 CNI Mo 17-12-2
Germany	DIN	X 2 CNI 19-11 (W.Nr 1-4 306)	X 2 CNI Mo 17-13-2 (W.Nr 1-4 404)
USA	AISI	304 L	316 L

(1) According to standard EN 10088-2

### ■ Increased equipotentiality



Accessories ensuring perfect electrical continuity for equipment that all has the same reference potential

### ■ Fibreglass reinforced polyester resin: Marina

- IP 66 according to standard IEC EN 60529
  - Hot polymerised resin
  - Self-extinguishing at 960°C according to IEC EN 60695-2-11
  - Excellent UV resistance
  - Excellent resistance to corrosion and to salt spray
  - Good scratch resistance
  - Good resistance to petrol, oil and grease
  - Temperature: - 40°C to + 85°C in continuous duty, + 100°C peak
  - Stainless steel hinges and pins
- After degreasing and application of a bonding primer, the polyester resin enclosures can be painted with a polyurethane paint (apart from non-stick cabinets)

### ■ Selection guide:

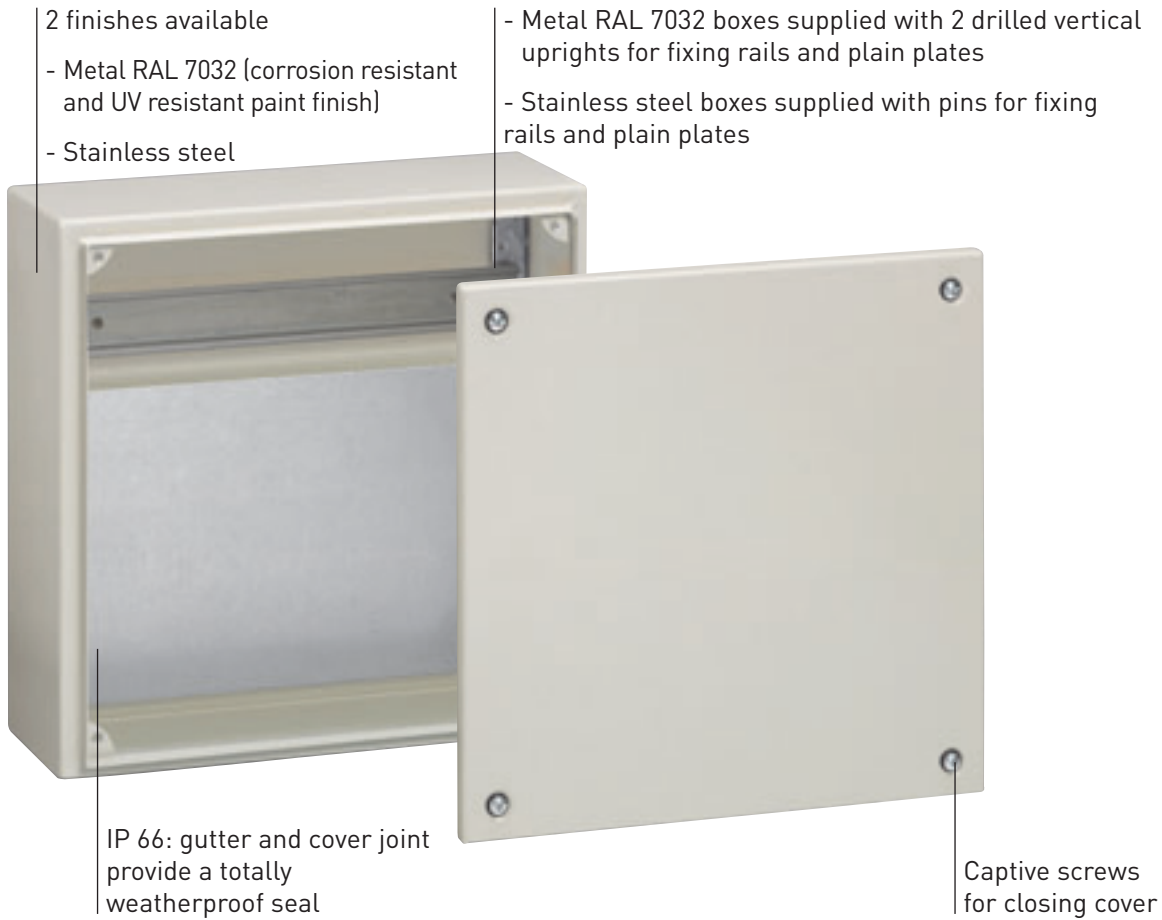
• • • Excellent • • Very good • Good

		Materials	Atlantic		Marina	
			Coated steel	304 L st. steel	316 L st. steel	Polyester
Environment	Indoor	Dry	• • •	• • •	• • •	
		Damp	• • •	• • •	• • •	
		Damp + harsh	•	• •	• • •	• •
	Outdoor	Rural	• • •	• • •	• • •	• • •
		Urban	• •	• • •	• • •	• • •
		Industrial	• •	• • •	• • •	• • •
Climates	Tropical	(1)	• • •	• • •	• •	
	Marine		• •	• • •	• • •	
	Cold		• •	• • •	• • •	
	Very cold			• • •	• • •	
	Temperate		• • •	• • •	• • •	
	Hot and dry		• • •	• • •	• • •	
	Equatorial		• •	• • •	• • •	

(1) Provide special treatment on request

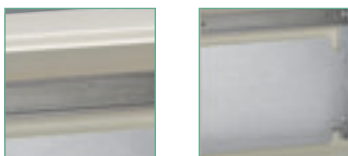


# Atlantic boxes, the answer for use in harsh environments



## > Equipment fixing

- Symmetrical rails
- Galvanized steel plain plates



## > Accessories

- Stainless steel wall mounting lugs for horizontal or vertical installation of box
- Zamak hinges for cover (for metal and stainless steel boxes)

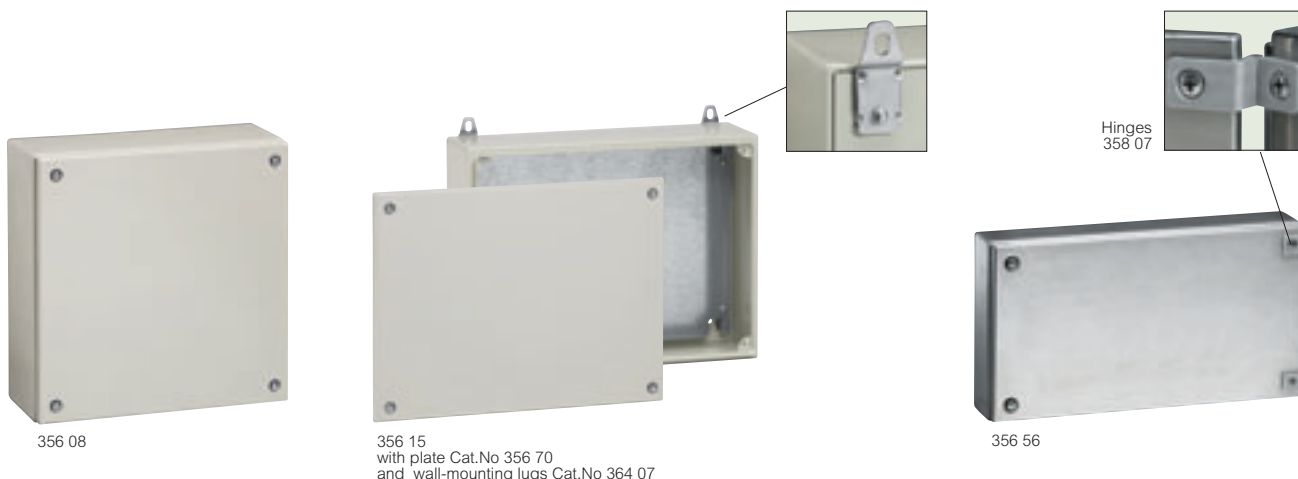


**Industrial boxes also available in plastic version**

> see p. 264

# Atlantic industrial metal boxes

IP 66 - IK 10 - Nema 4



**Technical characteristics (p. 262)**

IP 66 according to standards IEC EN 60529  
 IK 10 according to standards IEC EN 62262  
 Nema 4  
 Reversible boxes, 2 fixing methods:  
 - Direct fixing  
 - Fixing via stainless steel lugs Cat.No 364 07  
 Captive screws  
 Solid galvanized steel plates  
 Anti-corrosion paint finish

Pack	Cat.Nos	<b>Metal RAL 7032</b>
		Supplied with 2 drilled vertical uprights (3 uprights for width 800 mm) for fixing rails and plain plates Textured paint finish RAL 7032
		<b>Square version</b>
		Height x Width x Depth (mm)
1	356 00	150 x 150 x 80
1	356 03	200 x 200 x 80
1	356 04	200 x 200 x 120
1	356 08	300 x 300 x 120
1	356 12	400 x 400 x 120
		<b>Rectangular version</b>
1	356 02	150 x 200 x 80
1	356 05	150 x 300 x 120
1	356 07	200 x 300 x 120
1	356 10	200 x 400 x 120
1	356 14	200 x 500 x 120
1	356 15	300 x 500 x 120
1	356 17	200 x 600 x 120
1	356 18	300 x 600 x 120
1	356 19	400 x 600 x 120
1	356 22	400 x 800 x 120

Pack	Cat.Nos	<b>304 L stainless steel</b>
		Stainless steel screws Supplied with pins for fixing rails and plain plates
		<b>Square version</b>
		Height x Width x Depth (mm)
1	356 50	150 x 150 x 80
1	356 53	200 x 200 x 120
		<b>Rectangular version</b>
1	356 56	200 x 400 x 120
		Other dimensions, version 316 L, Please contact us

Pack	Cat.Nos	<b>Accessories</b>
1	358 07	<b>Hinges</b> Set of 2 hinges moulded zamak, nickel-coated IP 66 maintained
		<b>Galvanized steel</b>
		Height x Width of box (mm):
1	356 60	150 x 150
1	356 62	200 x 200
1	356 65	300 x 300
1	356 68	400 x 400
1	356 61	150 x 200
1	356 63	150 x 300
1	356 64	200 x 300
1	356 66	200 x 400
1	356 69	200 x 500
1	356 70	300 x 500
1	356 71	200 x 600
1	356 72	300 x 600
1	356 73	400 x 600
1	356 75	400 x 800
		<b>Symmetrical rails</b>
		Zinc steel
		Box width (mm)   Rail dimensions (mm)   Rail depth (mm)
5	367 90	150   130   7.5
5	367 91	200   180   7.5
5	367 92	300   280   7.5
5	367 93	400   380   7.5
5	367 94	500   480   15
5	367 95	600   580   15
5	367 96	800   780   15
1	364 07	<b>Wall-mounting lugs</b> Set of 4 stainless steel lugs for horizontal or vertical installation on box

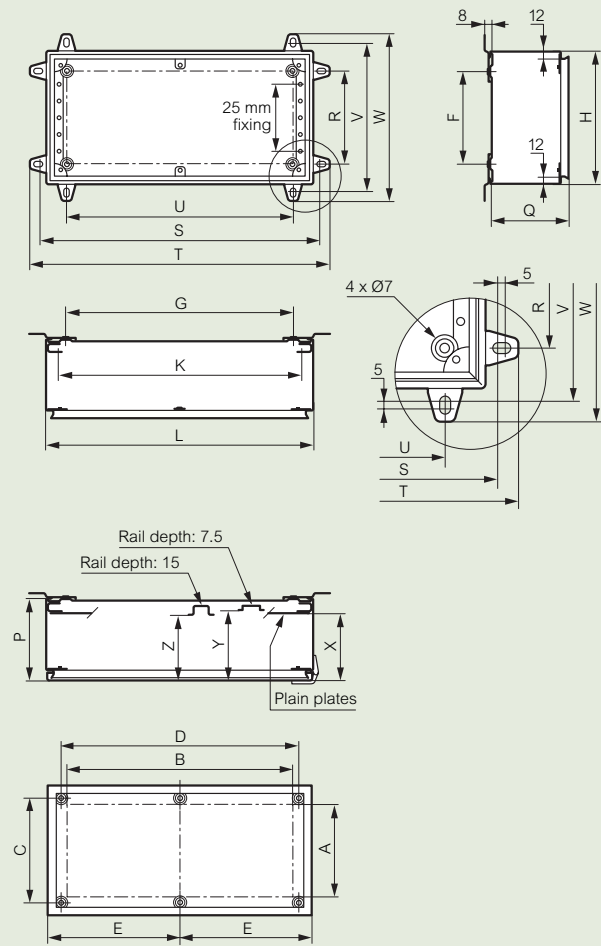
**RAL 7032 boxes:**  
Other dimensions, grid plates

**please consult us**

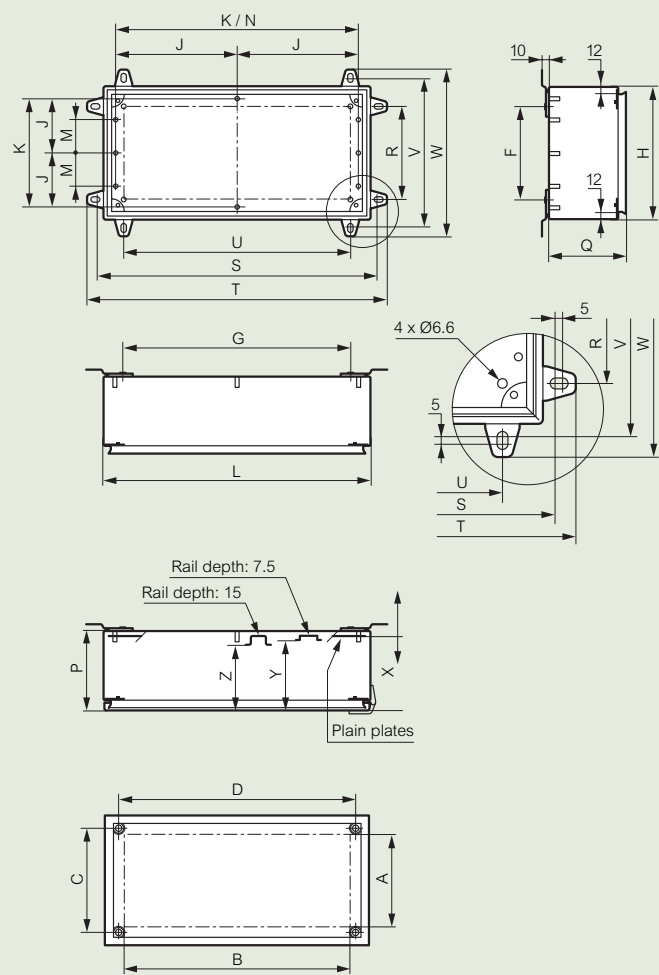
Atlantic industrial metal boxes

■ Dimensions

RAL 7032 metal boxes



304 L stainless steel boxes



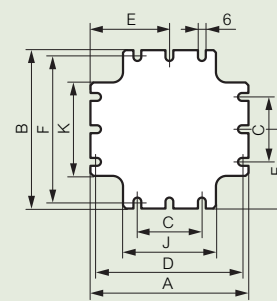
Slot for pins

Cat.No 356 50    Cat.No 356 53    Cat.No 356 56

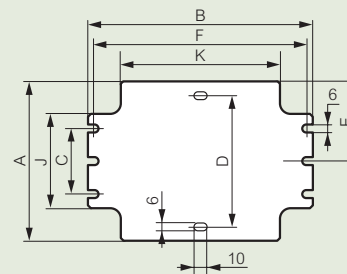


■ Plain plates

Square



Rectangular



Cat.Nos	Boxes dimensions H x W (mm)	A	B	C	D	E	F	J	K
356 60	150 x 150	122	122	-	112	61	112	72	72
356 62	200 x 200	172	172	100	162	86	162	122	122
356 65	300 x 300	272	272	150	262	136	262	222	222
356 68	400 x 400	372	372	300	362	-	362	322	322

Cat.Nos	Boxes dimensions H x W (mm)	A	B	C	D	E	F	J	K
356 61	150 x 200	122	172	-	-	61	162	72	122
356 63	150 x 300	122	272	-	-	61	262	72	222
356 64	200 x 300	172	272	100	-	86	262	122	222
356 66	200 x 400	172	372	100	-	86	362	122	322
356 69	200 x 500	172	472	100	-	-	462	122	422
356 70	300 x 500	272	472	200	-	-	462	222	422
356 71	200 x 600	172	572	100	-	-	562	122	522
356 72	300 x 600	272	572	200	-	-	562	222	522
356 73	400 x 600	372	572	300	-	-	562	322	522
356 75	400 x 800	372	772	300	350	-	762	322	722

Cat.Nos	Boxes dimensions (mm)			Useful surface and cover fixing (mm)					Wall mounting (mm)		Equipment (mm)						Dimensions with wall-mounting lugs (mm)							
	Height	Width	Depth	Q	A	B	C	D	E	F	G	J	K	M	N	X	Y	Z	R	S	T	U	V	W
356 00	150	150	80	76	88	88	107	107	-	90	90	-	114	-	-	61	55	47.5	90	170	200	90	170	200
356 02	150	200	80	76	88	138	107	157	-	90	140	-	164	-	-	61	55	47.5	90	220	250	140	170	200
356 05	150	300	120	116	88	238	107	257	-	90	240	-	264	-	-	101	95	87.5	90	320	350	240	170	200
356 03	200	200	80	76	138	138	157	157	-	140	140	-	164	-	-	61	55	47.5	140	220	250	140	220	250
356 04	200	200	120	116	138	138	157	157	-	140	140	-	164	-	-	101	95	87.5	140	220	250	140	220	250
356 07	200	300	120	116	138	238	157	257	-	140	240	-	264	-	-	101	95	87.5	140	320	350	240	220	250
356 10	200	400	120	116	138	338	157	357	-	140	340	-	364	-	-	101	95	87.5	140	420	450	340	220	250
356 14	200	500	120	116	138	438	157	457	-	140	440	-	464	-	-	101	95	87.5	140	520	550	440	220	250
356 08	300	300	120	116	238	238	257	257	-	240	240	-	264	-	-	101	95	87.5	240	320	350	240	320	350
356 15	300	500	120	116	238	438	257	457	-	240	440	-	464	-	-	101	95	87.5	240	520	550	440	320	350
356 12	400	400	120	116	338	338	357	357	-	340	340	-	364	-	-	101	95	87.5	340	420	450	340	420	450
356 17	200	600	120	116	138	538	157	-	278.5	140	540	-	564	-	-	101	95	87.5	140	620	650	540	220	250
356 18	300	600	120	116	238	538	257	-	278.5	240	540	-	564	-	-	101	95	87.5	240	620	650	540	320	350
356 19	400	600	120	116	338	538	357	-	278.5	340	540	-	564	-	-	101	95	87.5	340	620	650	540	420	450
356 22	400	800	120	116	338	738	357	-	378.5	340	740	-	764	-	-	101	95	87.5	340	820	850	740	420	450
356 50 <sup>(1)</sup>	150	150	80	76	88	88	107	107	-	90	90	57	114	-	-	70	64	56.5	90	170	200	90	170	200
356 53 <sup>(2)</sup>	200	200	120	116	138	138	157	157	-	140	140	-	-	50	164	110	104	96.5	140	220	250	140	220	250
356 56 <sup>(2)</sup>	200	400	120	116	138	338	157	357	-	140	340	-	-	50	364	110	104	96.5	140	420	450	340	220	250

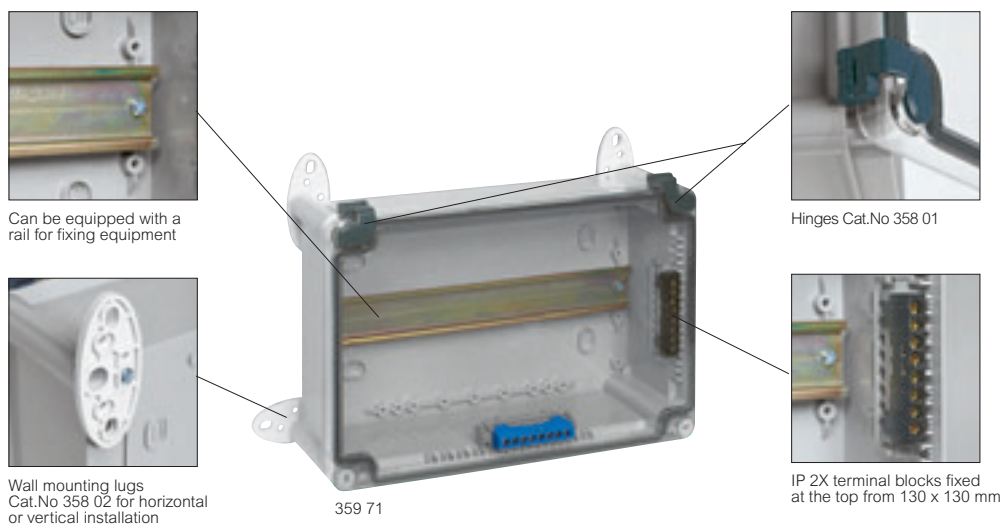
(1) 4 pins  
(2) 6 pins



The right material for your environment

see p. 258-259

## plastic industrial boxes



Can be equipped with a rail for fixing equipment

Hinges Cat.No 358 01

Wall mounting lugs  
Cat.No 358 02 for horizontal  
or vertical installation

359 71

IP 2X terminal blocks fixed  
at the top from 130 x 130 mm

Smooth surfaces

Choice of fixing:

- Internal: 4 oblong holes at back of box
- At the 4 corners outside the wiring space, with Ø4 screws
- Using wall mounting lugs Cat.No 358 02 (except boxes 130 x 75 x 74 mm)

Class II provided by protective caps for the fixing screws (supplied)

Equipment can be fixed on rail or solid plate. IP 2X terminal blocks fixed at the top from 130 x 130 mm size (p. 232)

Cover opened/closed with 1/4 turn of a flat screwdriver. Indication of closed/open position: I/O

Captive covers with ties, except boxes 310 x 240 mm and 360 x 270 mm. Adaptable hinges on all models from 130 x 130 mm size

Pack	Cat.Nos		IP 55 - IK 07 grey RAL 7035
	Opaque cover	Transparent cover	Internal dimensions Height x Width x Depth (mm)
<b>5/50</b>	921 28		80 x 80 x 45
<b>5/50</b>	921 38		105 x 105 x 55
1	359 00		130 x 75 x 74
1	359 30		130 x 130 x 74
1	359 40		135 x 110 x 74
1	359 50		180 x 140 x 86
1	359 60	359 61	220 x 170 x 86
1	359 70	359 71	270 x 170 x 86
1	359 80		310 x 240 x 124

Pack	Cat.Nos	IP 55 - grey RAL 7035 - huge depth
2	921 22	<b>Box depth 140 mm</b> IK 07 220 x 170 x 240 mm with 4 locks
		<b>Box depth 154 mm</b> IK 08 359 x 265 x 154 mm with hinges and 2 locks
1	350 58	<b>Box depth 160 mm</b> IK 08 310 x 240 x 160 mm with 4 locks

**Nylobloc auto** (see p. 764)

Pack	Cat.Nos	Accessoires
1	358 00	<b>Hinges</b> RAL 7016 Set of 2 for boxes from 130 x 130 to 270 x 170 mm
1	358 01	Set of 2 for 310 x 240 mm boxes
		<b>Metal mounting plates</b> Galvanized steel 15/10 thick for boxes:
5	358 10	130 x 130 mm
5	358 11	155 x 110 mm
5	358 12	180 x 140 mm
5	358 13	220 x 170 mm
5	358 14	270 x 170 mm
5	358 15	310 x 240 mm
1	358 02	<b>Wall mounting lugs</b> Set of 4 for boxes from width 110 mm



**IP 66 - IK 08 plastic industrial boxes**

**Please consult us**



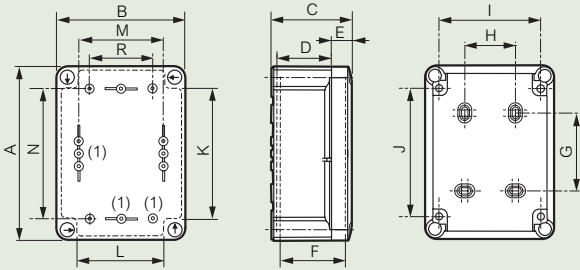
# plastic industrial boxes

## Characteristics - IP 55 - IK 07 boxes

Box: - IP 55: polypropylene  
 Cover: - opaque: polypropylene (except 359 80: polycarbonate)  
 - transparent: polycarbonate  
 Operating temperature: - 25 °C to + 40 °C  
 Self-extinguishing: 750 °C (EN 60695-2-11)

## Dimensions

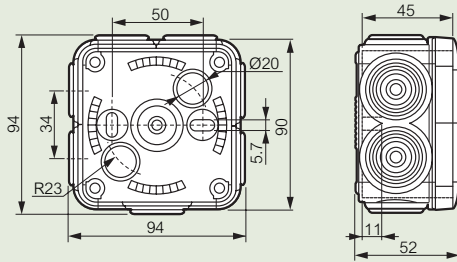
### Boxes



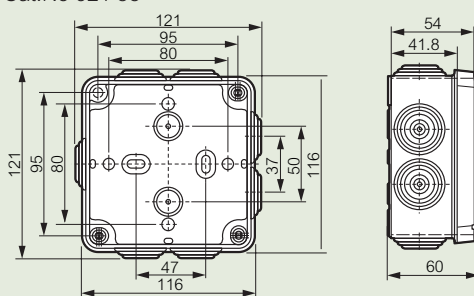
(1) Fixing for accessories (rail, mounting plates)

Cat.Nos	Dimensions (mm)						Box fixing (mm)				Accessories fixing (Ø4 mm screw supplied)					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	R	
359 00	140	85	81	56	18	67	70	-	65	120	-	-	51	106	-	
359 30	150	150	81	56	18	67	54	70	120	103	102	87	106	106	84	
359 40	175	130	81	56	18	67	79	50	100	128	112	88	86	131	64	
359 50	200	160	94	69	18	80	104	50	130	153	137	112	116	156	94	
359 60/61	240	190	94	69	18	80	144	80	160	193	175	142	146	196	124	
359 70/71	290	190	94	69	18	80	194	80	160	243	226	142	146	246	122	
359 80	332	262	132	97	27	116	220	160	222	276	248	198	200	260	150	

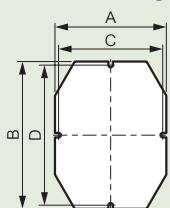
### Cat.No 921 28



### Cat.No 921 38



## Metal mounting plates



Cat.Nos	A	B	C	D
358 10	114	114	106	106
358 11	94	139	86	131
358 12	124	164	116	156
358 13	154	204	146	196
358 14	154	254	146	246
358 15	211	271	200	260

## Maximum length of terminals

Box dimensions (mm)	Number of holes
130 x 130 x 74	8
155 x 110 x 74	13
180 x 140 x 86	13
220 x 170 x 86	22
310 x 240 x 124	28

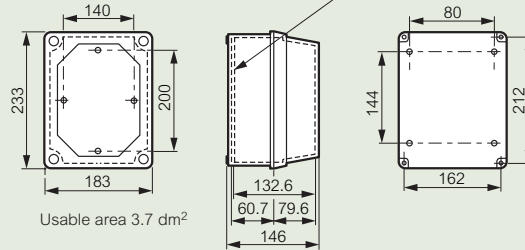
## Characteristics - IP 55 - huge depth boxes

Operating temperature: - 20 °C to + 50 °C  
 Self-extinguishing: 750 °C (EN 60695-2-11)

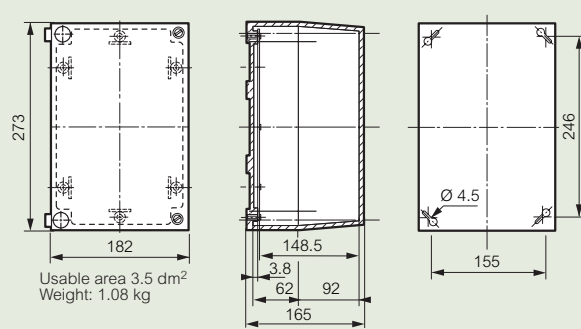
## Dimensions

### Boxes

#### Cat.No 921 22



#### Cat.No 350 58



#### Cat.No 922 84

