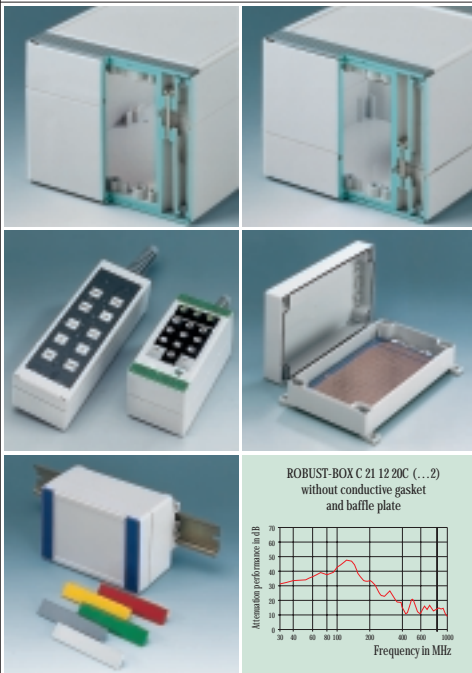


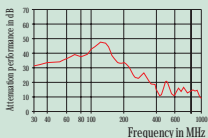


## YOUR ADVANTAGE

- Two standard materials: ABS – approved as a terminal mounting case or as polycarbonate – a solid and robust case, with high heat resistance for use in adverse environments.
- Easy-assembly construction. The case shells can be used as either top or base section.
- Solid and sealed up to IP 66.
- The cover fixings are outside of the sealed area. The fixing screws are rust proof and captured in the cover.
- There is an area recessed by min. 0.031" for the mounting of membrane keyboards.
- Colourful cover strips for coding (as an alternative to the standard version in light grey).
- Variable. 11 basic dimensions in 2 and / or 3 different heights.
- Applicable as desk top case and wall-mounting case.
- Large variety of accessories, e.g. case feet, wall-mounting brackets, PCB support etc.



ROBUST-BOX C 21 12 20C (...2)  
without conductive gasket  
and baffle plate



## SEALED, ROBUST, CONVINCING DESIGN.

Two case ranges available in ABS and polycarbonate with the same easy-assembly construction and a wide range of applications.

The construction, using cover strips in the screw areas, gives the user various identification options. This means that by using different coloured cover strips, the user can code his equipment, e.g. installation cases for ventilation with blue cover strips, for heating with red cover strips etc.

## APPLICATIONS

This case system is especially suitable for a wide range of electric installations, e.g. heating, climate, ventilation, machine building and construction units. The system is also ideal for many electronic applications.

Further applications are control units, machine controller, internal and external sensors, hand-held control units etc.

## EMC

Cases marked with  $\neq$  are available with aluminium metallization on demand. The shielding effect amounts to approx 30-35 dB (please refer to diagram). The bonding can be improved by contact strips. See pages 207-209.

## MODIFICATIONS AS PER CUSTOMER'S REQUIREMENTS

Machining on modern CNC-controlled machines.  
Lacquering. Silk screen and tampon printing.

Important: Please appoint the parts with or without groove.

See pages 210-213.

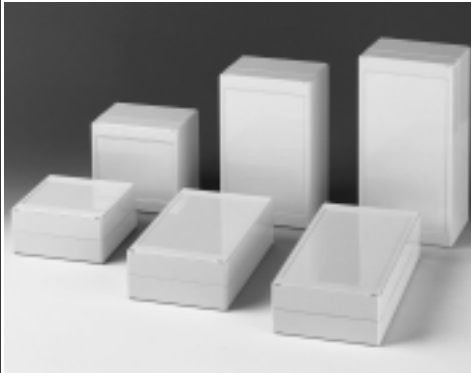
## ROBUST-BOX WIDTH 3.150"

Outside dimensions in inch		
Length	Width	Height
3.150	3.150	2.362 / 3.150
4.724	3.150	2.362 / 3.150
6.299	3.150	2.362 / 3.150
9.449	3.150	2.362 / 3.150



## ROBUST-BOX WIDTH 4.724"

Outside dimensions in inch		
Length	Width	Height
4.724	4.724	2.362 / 3.543
7.874	4.724	2.362 / 3.543
9.449	4.724	2.362 / 3.543



## ROBUST-BOX WIDTH 6.299"

Outside dimensions in inch		
Length	Width	Height
6.299	6.299	2.362 / 3.543
9.449	6.299	2.362 / 3.543
<i>new:</i>		
9.449	6.299	4.724



ROBUST-BOX in polycarbonate with transparent top on demand.

## STANDARD COLOURS

One-coloured: light grey, RAL 7035.

Two-coloured: case light grey, RAL 7035; cover strips alternatively in silver grey, RAL 7001 / red, RAL 3020 / yellow, RAL 1023 / green, RAL 6024 or blue, RAL 5017.

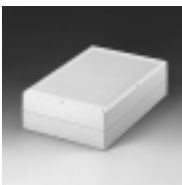
(Colourful cover strips see accessories on page 89).

See also colour chart page 214.

## MATERIAL

ABS (UL 94 HB) or polycarbonate (UL 94 HB). Please refer to the specifications pages 215-217.

*NEW  
IN PROGRAM*



## ROBUST-BOX WIDTH 7.874"

11.811 x 7.874 x 3.150/4.724/6.299



## ROBUST-BOX WIDTH 9.449"

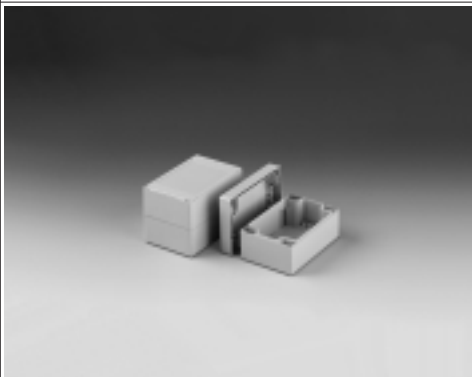
14.173 x 9.449 x 3.150/4.724/6.299

## VERSION I

Top and base  
ABS (UL 94 HB);  
colour: light grey, RAL 7035.

## VERSION II

Top and base  
polycarbonate (UL 94 HB);  
colour: light grey, RAL 7035.

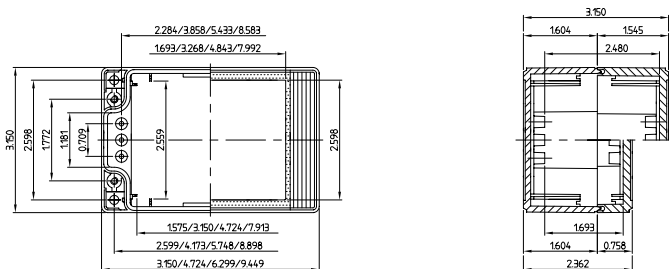


## SUPPLY

Two case shells (one with groove, one with tongue) with gasket; each with two pairs of cover strips (the base ones with two holes for the rubber feet) in light grey.  
Assembly kit.

Detailed drawing available on demand in dwg or dxf format.

⊕ ⊕ = Type of screw for case fixing: cross head



(Part-No. with  $\neq$  see EMC page 82)

⊕ Z (PZZ)

Part-No.	CASE LENGTH 3.150"			CASE LENGTH 6.299"			Part-No.		
	Version	Outside dim. in inch			Version	Outside dim. in inch			
		L	W	H		L	W	H	
C 20 08 081 $\neq$	I	3.150	3.150	2.362	I	6.299	3.150	2.362	C 20 08 161 $\neq$
C 21 08 081 $\neq$	I	3.150	3.150	3.150	I	6.299	3.150	3.150	C 21 08 161 $\neq$
C 20 08 082 $\neq$	II	3.150	3.150	2.362	II	6.299	3.150	2.362	C 20 08 162 $\neq$
C 21 08 082 $\neq$	II	3.150	3.150	3.150	II	6.299	3.150	3.150	C 21 08 162 $\neq$
Part-No.	CASE LENGTH 4.724"			CASE LENGTH 9.449"			Part-No.		
	Version	Outside dim. in inch			Version	Outside dim. in inch			
		L	W	H		L	W	H	
C 20 08 121 $\neq$	I	4.724	3.150	2.362	I	9.449	3.150	2.362	C 20 08 241 $\neq$
C 21 08 121 $\neq$	I	4.724	3.150	3.150	I	9.449	3.150	3.150	C 21 08 241 $\neq$
C 20 08 122 $\neq$	II	4.724	3.150	2.362	II	9.449	3.150	2.362	C 20 08 242 $\neq$
C 21 08 122 $\neq$	II	4.724	3.150	3.150	II	9.449	3.150	3.150	C 21 08 242 $\neq$

# ROBUST-BOX, WIDTH 4.724"

## SUPPLY

Two case shells (one with groove, one with tongue) with gasket; each with two pairs of cover strips (the base ones with two holes for the rubber feet) in light grey.  
Assembly kit.



## VERSION I

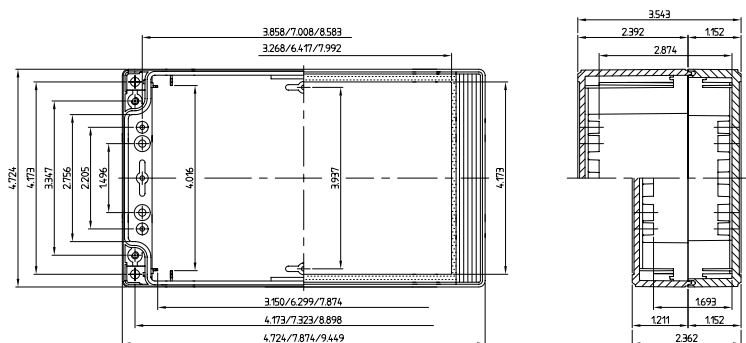
Top and base  
ABS (UL 94 HB);  
colour: light grey, RAL 7035.

## VERSION II

Top and base  
polycarbonate (UL 94 HB);  
colour: light grey, RAL 7035.

Detailed drawing available on demand in dwg or dxf format.

⊕ ⊗ = Type of screw for case fixing: cross head



(Part-No. with  $\neq$  see EMC page 82)

⊕ Z (PZZ)

Part-No.	CASE LENGTH 4.724"			CASE LENGTH 7.874"			Part-No.		
	Version	Outside dim. in inch		Version	Outside dim. in inch				
		L	W	H		L	W	H	
C 20 12 121 $\neq$	I	4.724	4.724	2.362	I	7.874	4.724	2.362	C 20 12 201 $\neq$
C 21 12 121 $\neq$	I	4.724	4.724	3.543	I	7.874	4.724	3.543	C 21 12 201 $\neq$
C 20 12 122 $\neq$	II	4.724	4.724	2.362	II	7.874	4.724	2.362	C 20 12 202 $\neq$
C 21 12 122 $\neq$	II	4.724	4.724	3.543	II	7.874	4.724	3.543	C 21 12 202 $\neq$
ACCESSORIES (separately available, see pages 89-90.)				CASE LENGTH 9.449"				Part-No.	
Case feet for desktop applications		Robust hinge		Version		Outside dim. in inch			
Wall-mounting brackets		Security kit						C 20 12 241 $\neq$	
Fastening elements to DIN-rails		PCB supports		I		9.449 4.724 2.362			C 21 12 241 $\neq$
Cover strips		Punched plates with clips to insert PCBs		I		9.449 4.724 3.543		C 20 12 242 $\neq$	
Securing hinge for the cover		DIN-rails		II		9.449 4.724 2.362			C 21 12 242 $\neq$
				II		9.449 4.724 3.543			

ROBUST-BOXES

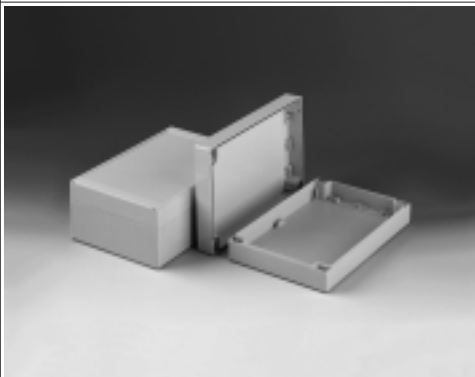
ROBUST-BOXES

## VERSION I

Top and base  
ABS (UL 94 HB);  
colour: light grey, RAL 7035.

## VERSION II

Top and base  
polycarbonate (UL 94 HB);  
colour: light grey, RAL 7035.



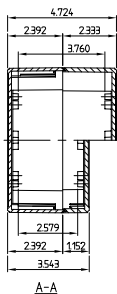
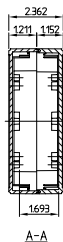
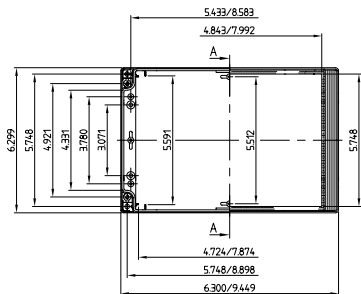
## SUPPLY

Two case shells (one with groove, one with tongue) with gasket; each with two pairs of cover strips (the base ones with two holes for the rubber feet) in light grey. Assembly kit.



Detailed drawing available on demand in dwg or dxf format.

⊕ ⊗ = Type of screw for case fixing: cross head



(Part-No. with ♣ see EMC page 82)

⊕ Z (PZZ)

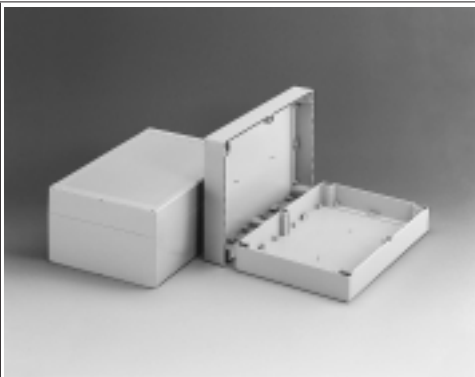
Part-No.	CASE LENGTH 6.299"				CASE LENGTH 9.449"				Part-No.
	Version	Outside dim. in inch			Version	Outside dim. in inch			
		L	W	H		L	W	H	
C 20 16 161 ♣	I	6.299	6.299	2.362	I	9.449	6.299	2.362	C 20 16 241 ♣
C 21 16 161 ♣	I	6.299	6.299	3.543	I	9.449	6.299	3.543	C 21 16 241 ♣
					I	9.449	6.299	4.724	C 24 16 241 ♣
C 20 16 162 ♣	II	6.299	6.299	2.362	II	9.449	6.299	2.362	C 20 16 242 ♣
C 21 16 162 ♣	II	6.299	6.299	3.543	II	9.449	6.299	3.543	C 21 16 242 ♣
					II	9.449	6.299	4.724	C 24 16 242 ♣

# ROBUST-BOX, WIDTH 7.874"



## SUPPLY

Two case shells (one with groove, one with tongue) with gasket; cover strips (the base ones with holes for the rubber feet) in light grey.  
Assembly kit.



## VERSION I

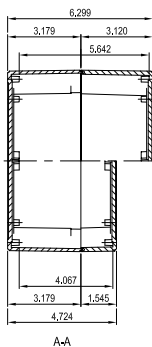
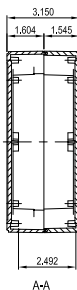
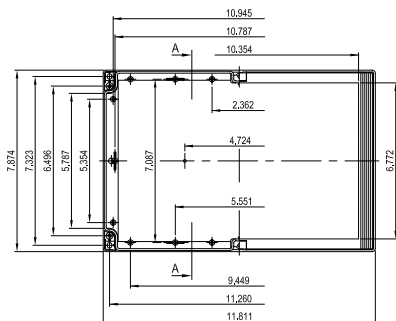
Top and base  
ABS (UL 94 HB);  
colour: light grey, RAL 7035.

## VERSION II

Top and base  
polycarbonate (UL 94 HB);  
colour: light grey, RAL 7035.

Detailed drawing available on demand in dwg or dxf format.

⊕ ⊕ = Type of screw for case fixing: cross head



## ACCESSORIES (separately available, see pages 89-90.)

Case feet for desktop applications      Robust hinge  
Wall-mounting brackets                      Security kit  
PCB supports

## CASE LENGTH 11.811"

Version Outside dim. in inch

Version	L	W	H
I	11.811	7.874	3.150
I	11.811	7.874	4.724
I	11.811	7.874	6.299
II	11.811	7.874	3.150
II	11.811	7.874	4.724
II	11.811	7.874	6.299

Part-No.

C 21 20 301
C 24 20 301
C 25 20 301
C 21 20 302
C 24 20 302
C 25 20 302

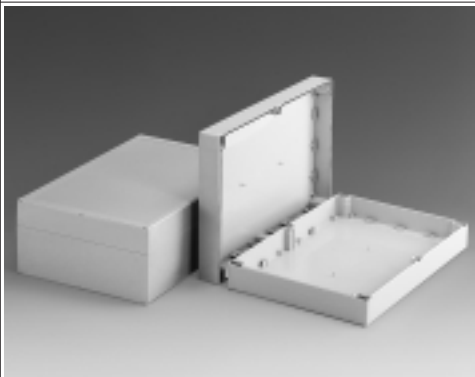


## VERSION I

Top and base  
ABS (UL 94 HB);  
colour: light grey, RAL 7035.

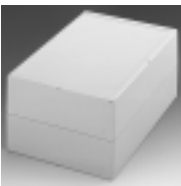
## VERSION II

Top and base  
polycarbonate (UL 94 HB);  
colour: light grey, RAL 7035.



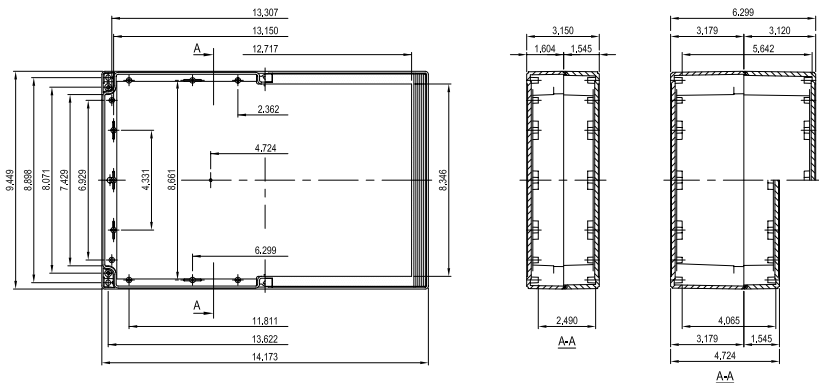
## SUPPLY

Two case shells (one with groove, one with tongue) with gasket; cover strips (the base ones with holes for the rubber feet) in light grey. Assembly kit.



Detailed drawing available on demand in dwg or dxf format.

⊕ ⊗ = Type of screw for case fixing: cross head



⊕ Z (PZZ)

Part-No.	CASE LENGTH 14.173"			ACCESSORIES (separately available, see pages 89-90.)		
	Version	Outside dim. in inch		Case feet for desktop applications	Robust hinge	
		L	W	H	Wall-mounting brackets	Security kit
C 21 24 361	I	14.173	9.449	3.150	PCB supports	
C 24 24 361	I	14.173	9.449	4.724		
C 25 24 361	I	14.173	9.449	6.299		
C 21 24 362	II	14.173	9.449	3.150		
C 24 24 362	II	14.173	9.449	4.724		
C 25 24 362	II	14.173	9.449	6.299		



# ROBUST-BOX ACCESSORIES

<p>When using the case for desktop applications. Because of levelling out the length's tolerance of the cover strips we recommend to glue the case feet of sizes 200x300 and 240x360 mm.</p> <p>Supply: 4 pieces</p>		<p>CASE FEET</p> <p>Part-No. C 22 99 018</p>																																	
<p>Elements for exterior wall-mounting after assembly of the unit.</p> <p>Supply: 4 pieces, fixing screws</p>		<p>WALL-MOUNTING-BRACKETS</p> <p>Part-No. C 22 99 028</p>																																	
<p>For fastening the cases to DIN-rails according to DIN EN 50 022 and DIN EN 50 035.</p> <p>Supply: 2 fastening elements, assembly kit</p> <p>DIN-rails see page 90.</p>		<p>FASTENING ELEMENTS TO DIN-RAILS</p> <table border="1"> <thead> <tr> <th>for ROBUST-BOX</th> <th>Part-No.</th> </tr> </thead> <tbody> <tr> <td>width 3.150"</td> <td>C 22 01 088</td> </tr> <tr> <td>width 4.724"</td> <td>C 22 03 128</td> </tr> <tr> <td>width 6.299"</td> <td>C 22 04 168</td> </tr> </tbody> </table>	for ROBUST-BOX	Part-No.	width 3.150"	C 22 01 088	width 4.724"	C 22 03 128	width 6.299"	C 22 04 168																									
for ROBUST-BOX	Part-No.																																		
width 3.150"	C 22 01 088																																		
width 4.724"	C 22 03 128																																		
width 6.299"	C 22 04 168																																		
<p>For securing the cover, e.g. during servicing. Can be fitted to any case side. Cannot be used with PCB mounting kit. Not applicable for sizes 200x300 and 240x360.</p> <p>Supply: 2 securing hinges, fixing screws</p>		<p>SECURING HINGE FOR THE COVER</p> <p>Part-No. C 22 99 031</p>																																	
<p>Suitable for case 4.724", 6.299", 7.874" and 9.449" length or width. Additional machining (drilling) required.</p> <p>Supply: 2 complete hinges</p>		<p>HINGE</p> <p>Part-No. C 22 99 088</p>																																	
<p>For use with lead tags.</p> <p>Supply as security kit: 4 plugs, 2 cover strips with holes for the top, standard colour</p> <p>Supply security plug as a single part: 1 plug</p>		<p>SECURITY KIT* / SECURITY PLUG**</p> <table border="1"> <thead> <tr> <th>for ROBUST-BOX</th> <th>Part-No.</th> </tr> </thead> <tbody> <tr> <td>width 3.150"</td> <td>C 22 99 048</td> </tr> <tr> <td>width 4.724"</td> <td>C 22 99 042*</td> </tr> <tr> <td>width 6.299"</td> <td>C 22 99 046*</td> </tr> <tr> <td>all sizes</td> <td>C 22 99 040**</td> </tr> </tbody> </table>	for ROBUST-BOX	Part-No.	width 3.150"	C 22 99 048	width 4.724"	C 22 99 042*	width 6.299"	C 22 99 046*	all sizes	C 22 99 040**																							
for ROBUST-BOX	Part-No.																																		
width 3.150"	C 22 99 048																																		
width 4.724"	C 22 99 042*																																		
width 6.299"	C 22 99 046*																																		
all sizes	C 22 99 040**																																		
<p>Optionally supplied to the light grey coloured standard versions. Simply clip into top or base. Pair of cover strips with 2 holes to put in rubber feet or security plug.</p> <table border="1"> <thead> <tr> <th rowspan="2">Colour</th> <th colspan="3">Part numbers of the cover strips:</th> <th rowspan="2">Colour</th> </tr> <tr> <th>width 3.150"</th> <th>width 4.724"</th> <th>width 6.299"</th> </tr> </thead> <tbody> <tr> <td>silver grey, RAL 7001</td> <td>C 22 01 082</td> <td>C 22 03 123</td> <td>C 22 04 162</td> <td>silver grey, RAL 7001</td> </tr> <tr> <td>red, RAL 3020</td> <td>C 22 01 084</td> <td>C 22 03 124</td> <td>C 22 04 164</td> <td>red, RAL 3020</td> </tr> <tr> <td>yellow, RAL 1023</td> <td>C 22 01 085</td> <td>C 22 03 125</td> <td>C 22 04 165</td> <td>yellow, RAL 1023</td> </tr> <tr> <td>green, RAL 6024</td> <td>C 22 01 086</td> <td>C 22 03 126</td> <td>C 22 04 166</td> <td>green, RAL 6024</td> </tr> <tr> <td>blue, RAL 5017</td> <td>C 22 01 087</td> <td>C 22 03 127</td> <td>C 22 04 167</td> <td>blue, RAL 5017</td> </tr> </tbody> </table>	Colour	Part numbers of the cover strips:			Colour	width 3.150"	width 4.724"	width 6.299"	silver grey, RAL 7001	C 22 01 082	C 22 03 123	C 22 04 162	silver grey, RAL 7001	red, RAL 3020	C 22 01 084	C 22 03 124	C 22 04 164	red, RAL 3020	yellow, RAL 1023	C 22 01 085	C 22 03 125	C 22 04 165	yellow, RAL 1023	green, RAL 6024	C 22 01 086	C 22 03 126	C 22 04 166	green, RAL 6024	blue, RAL 5017	C 22 01 087	C 22 03 127	C 22 04 167	blue, RAL 5017		<p>COVER STRIPS</p> <p>Supply: 2 cover strips with holes 2 cover strips without holes</p>
Colour		Part numbers of the cover strips:				Colour																													
	width 3.150"	width 4.724"	width 6.299"																																
silver grey, RAL 7001	C 22 01 082	C 22 03 123	C 22 04 162	silver grey, RAL 7001																															
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yellow, RAL 1023	C 22 01 085	C 22 03 125	C 22 04 165	yellow, RAL 1023																															
green, RAL 6024	C 22 01 086	C 22 03 126	C 22 04 166	green, RAL 6024																															
blue, RAL 5017	C 22 01 087	C 22 03 127	C 22 04 167	blue, RAL 5017																															

ROBUST-BOXES

ROBUST-BOXES

## PCB SUPPORT



For mounting pre-assembled PCB units.  
Case size 7.874 x 4.724" will accept Eurocard size (3.937 x 6.299").

Supply:  
2 supports (Eurocard size and width 4.724") or 4 supports (all other sizes), fixing kit

Part-No.

C 22 99 058

C 22 99 068

for ROBUST-BOX

7.874 x 4.724", for Eurocard size and all other cases width 4.724", 2 pieces

for all other sizes, 4 pieces

## PCB MOUNTING KIT



For horizontally or vertically mounting of PCBs.

Supply:  
2 punched plates,  
12 clips

Part-No.

2.362" high

3.150" high

C 22 99 019

C 22 99 029

C 22 99 039

C 22 99 049

C 22 99 059

C 22 99 069

C 22 99 079

C 22 99 089

2.362" high

3.543" high

C 22 99 099

C 22 99 049

C 22 99 119

C 22 99 129

C 22 99 139

C 22 99 089

C 22 99 159

C 22 99 069

C 22 99 139

C 22 99 089

for ROBUST-BOX

L x W

Rows

Outside dim. in inch

A B

3.150 x 3.150"

2

1.772 1.988 / 2.776

4.724 x 3.150"

3

3.346 1.988 / 2.776

6.299 x 3.150"

5

4.921 1.988 / 2.776

9.449 x 3.150"

9

8.071 1.988 / 2.776

4.724 x 4.724"

3

3.346 1.693 / 2.776

7.874 x 4.724"

5

6.496 1.693 / 2.874

9.449 x 4.724"

9

8.071 1.693 / 2.776

6.299 x 6.299"

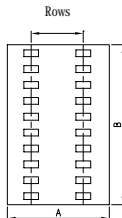
5

4.921 1.693 / 2.776

9.449 x 6.299"

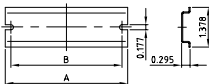
9

8.071 1.693 / 2.776

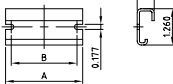


## DIN-RAIL

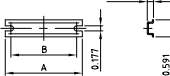
DIN EN 50 022



DIN EN 50 035



DIN EN 50 045



For fixings of clamps in the case.

Supply:  
1 DIN-Rail

Part-No.

DIN EN 50 022

DIN EN 50 035

DIN EN 50 045

for ROBUST-BOX

Outside dim. in inch

A B

C 22 99 419

C 22 99 519

C 22 99 609

length 3.150"

2.677 2.283

C 22 99 429

C 22 99 529

C 22 99 619

length 4.724"

4.252 3.858

C 22 99 439

C 22 99 539

C 22 99 629

length 6.299"

5.827 5.433

C 22 99 449

C 22 99 549

C 22 99 639

length 7.874"

7.402 7.008

C 22 99 459

C 22 99 549

C 22 99 649

length 9.449"

8.976 8.583

C 22 99 469

C 22 99 559

C 22 99 659

width 4.724"

4.331 3.937

C 22 99 469

C 22 99 569

C 22 99 669

width 6.299"

5.906 5.512