

# **CONNECT AND PROTECT**







## SCHROFF

### OVERVIEW

#### MAIN KATALOG

Cabinets . . . . . . 1

Wall mounted cases ..... 2

Accessories for cabinets and wall mounted cases . . 3

Climate control . . 4

Electronics cases ..... 5

Subracks/ 19" chassis . . . . 6

Front panels, plug-in units .... 7 Systems ..... 8

Power supply units ..... 9

Backplanes . . . . 10

Connectors, front panel component system ..... 11

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#### **STANDARDS**

- Internal dimensions in accordance with IEC 60297-3-100
- Type of protection IP 20 in accordance with IEC 60529

 Protective ground connections in accordance with: DIN EN 50178/VDE 0160 DIN EN 62368-1/VDE 0805 DIN EN 61010-1/VDE 0411 part 1 DIN EN 61010-1A2/VDE 0411 part 1/A1



Overview ..... 5.100

## **OVERVIEW**

### CASE TO ACCEPT 19" SUBRACKS OR 19" CHASSIS

- Internal assemblies of up to 40 kg
- Up to six rows of ventilation slots in the base plate for optimal air inlet
- High stability
- Front and rear identical, depth-symmetrical construction
- With handle strip or recessed grip

#### CASE

- Al die-cast frame front and rear
- Top cover and base plate can be subsequently removed
- Top cover and base plate fitted with hidden GND/earth connections
- Case height 3, 4, 6, 7 and 9 U (cladding parts in steel)
- Case height 9 U and 12 U (cladding parts in aluminium)



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#### **SERVICEPLUS**

- e.g. modifications (cut-outs, special colours)
- e.g. custom solutions (special sizes)
- e.g. assembly service from 1 piece

#### comptec 3, 4 U, St . . . . . . 5.102 6, 7, 9 U, St . . . . . 5.103 9, 12 U, Al . . . . . 5.104

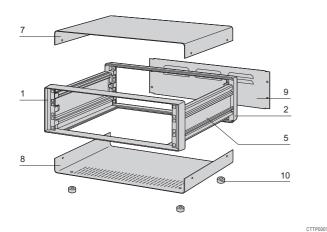
#### Accessories

Folding handle	5.105
Slide rails	5.105
Earthing kit	5.106
Assembly kit	5.106
Tip-up feet	5.107

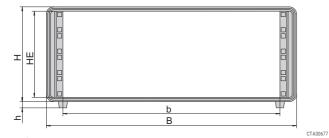


## 19" CASE, 3 U, 4 U

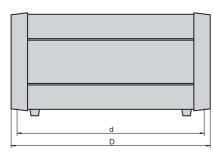




Front view



h = case foot height, HE = U, internal usable height Side view



Usable width b = B - 69 mm, h = height of case foot

- Desk-top case (pre-fitted)
- Top cover, base plate and rear panel in steel
- Front and rear frames in die-cast Al
- · Ventilation slits in base plate
- Ventilation gills in rear panel
- Side panel with integral handle function

#### DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	Front frame, Al die-cast, RAL 7016, with 19" grid
2	1	Rear frame, Al die-cast, RAL 7016, with 19" grid
5	2	Side panel, Al extrusion, RAL 7016
7	1	Cover plate, Al, 1 mm, RAL 9006, with GND/earthing tag
8	1	Base plate, Al, 1 mm, RAL 9006, with GND/earthing tag
9	1	Rear panel, St, 1 mm, RAL 9006, with GND/earthing tag
10	4	Case foot with anti-slip protection, PC, black, UL 94 V-0
11	1	Assembly kit
Items 1, 2	, 5 and 9 fit	ted.

#### **ORDER INFORMATION**

Part no.	Width B	Usable depth d	Depth D		nt H	Heig
	mm	mm	mm	mm	mm	U
10225-601	520	276	300	13.0	153	3
10225-612	520	376	400	13.0	153	3
10225-623	520	476	500	13.0	153	3
10225-602	520	276	300	13.0	198	4
10225-613	520	376	400	13.0	198	4
10225-624	520	476	500	13.0	198	4

#### NOTE

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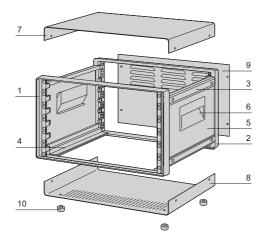
- Please order GND/earthing kit separately, see page 5.106
- The case foot, item 10, can be replaced by a tip-up foot, see page. 5.107
- Please order slide rails separately, see page 5.105

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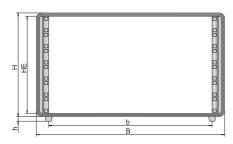


## 19" CASE, 6 U, 7 U, 9U



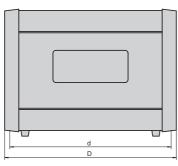


Front view



h = case foot height, HE = U, internal usable height

Side view



Usable depth d = D - 24 mm

- Desk-top case (pre-fitted)
- With handle shell
- Top cover, base plate and rear panel in steel
- Front and rear frames in die-cast Al
- · Ventilation slits in rear panel and base

#### DELIVERY COMPRISES (kit)

ltem	Qty	Description
1	1	Front frame, Al die-cast, RAL 7016, with 19" grid
2	1	Rear frame, Al die-cast, RAL 7016, with 19" grid
3	2	Side profile at top, Al extrusion, RAL 7016
4	2	Side profile at bottom, Al extrusion, RAL 7016
5	2	Side panel, St, 1.5 mm, RAL 9006, with GND/earthing tag
6	2	Handle shell, ABS, RAL 9005, UL 94 V-0, load-carrying capacity: 60 kg/pair
7	1	Cover plate, St, 1 mm, RAL 9006, with GND/earthing tag
8	1	Base plate, St, 1 mm, RAL 9006, with GND/earthing tag
9	1	Rear panel, St, 1 mm, RAL 9006, with GND/earthing tag
10	4	Case foot with anti-slip protection, PC, black, UL 94 V-0
11	1	Assembly kit

Items 1, 2, 3, 4, 5, 6 and 9 fitted.

#### **ORDER INFORMATION**

Height	tΗ	h	Depth D	Usable depth d	Width B	Part no.
U	mm	mm	mm	mm	mm	
6	286	13	300	276	520	10225-604
6	286	13	400	376	520	10225-615
6	286	13	500	476	520	10225-626
6	286	13	600	576	520	10225-637
7	331	13	400	376	520	10225-616
7	331	13	500	476	520	10225-627
7	331	13	600	576	520	10225-638
9	420	13	400	376	520	10225-618
9	420	13	500	476	520	10225-629
9	420	13	600	576	520	10225-640

#### NOTE

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• Please order GND/earthing kit separately, see page 5.106

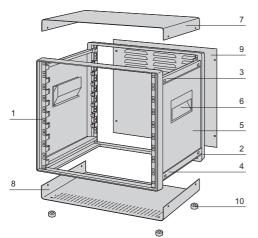
- The case foot, item 10, can be replaced by a tip-up foot, see page 5.107
- Please order slide rails separately, see page 5.105
- Handle shell, item 6, can be replaced by a folding handle, see page 5.105

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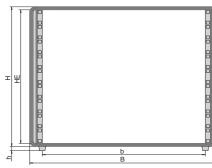


### 19" CASES 9 AND 12 U, ALUMINIUM

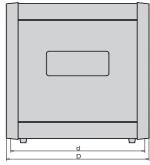




Front view



Usable width b = B - 69 mm, h = height of case footSide view



Usable depth d = D - 24 mm

- Desk-top case (pre-fitted)
- With handle shell
- Top cover, base plate and rear panel in Al
- Front and rear frames in die-cast Al
- Ventilation slots in base plate
- Air vents in rear panel

#### DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	Front frame, Al die-cast, RAL 7016, with 19" grid
2	1	Rear frame, Al die-cast, RAL 7016, with 19" grid
3	2	Side profile at top, Al extrusion, RAL 7016
4	2	Side profile at bottom, Al extrusion, RAL 7016
5	2	Side panel, Al, 1.5 mm, RAL 9006, with GND/earthing tag
б	2	Handle shell, ABS, RAL 9005, UL 94 V-0, load-carrying capacity: 60 kg/pair
7	1	Cover plate, Al, 1 mm, RAL 9006, with GND/earthing tag
8	1	Base plate, Al, 1 mm, RAL 9006, with GND/earthing tag
9	1	Rear panel, Al, 1 mm, RAL 9006, with GND/earthing tag
10	4	Case foot with anti-slip protection, PC, black, UL 94 V-0
11	1	Assembly kit

Items 1, 2, 3, 4, 5, 6 and 9 fitted.

#### **ORDER INFORMATION**

Heigh	nt H	h	Depth D	Usable depth d	Width B	Part no.
U	mm	mm	mm	mm	mm	
9	420	13	400	376	520	10225-667
9	420	13	500	476	520	10225-682
9	420	13	600	576	520	10225-693
12	553	13	400	376	520	10225-670
12	553	13	500	476	520	10225-685
12	553	13	600	576	520	10225-696

#### NOTE

CTTP0003

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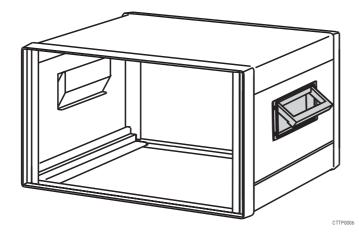
- Please order GND/earthing kit separately, see page 5.106
- The case foot, item 10, can be replaced by a tip-up foot, see page 5.107
- Please order slide rails separately, see page 5.105
- Handle shell, item 6, can be replaced by a folding handle, see page 5.105

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### **FOLDING HANDLE**

**SLIDE RAILS** 



- Folding handles can be used instead of the pre-fitted handle shells
- Load-carrying capacity: 50 kg/pair

#### DELIVERY COMPRISES (kit)

Item	Qty	Description
1	2	Folding handle, Al die-cast, RAL 7016
2	1	Assembly kit

#### **ORDER INFORMATION**

Description	Part no.
Folding handle	20225-439

• Slide rails are suitable as support for 19" subracks and 19" chassis

#### **DELIVERY COMPRISES**

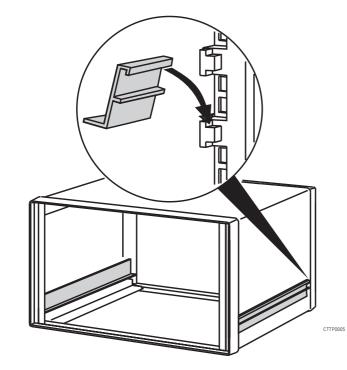
Item	Qty	Description
1	1	Slide rail, Al extrusion, 2 mm, anodised, cut edges plain,
		static load-carrying capacity 10 kg

#### **ORDER INFORMATION**

For case depth	Part no.
mm	
300	30225-089
400	30225-090
500	30225-091
600	30225-092

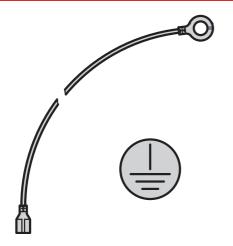
#### NOTE

- 2 slide rails are required per subrack or 19" chassis
- Slide rail cannot be used for shielded 19" subracks; special slide rails available on request





### **GND/EARTHING KIT**



- The GND/earthing kit allows VDE compliant earthing of cases in accordance with:
  EN 50178/VDE 0160
  EN 62368-1/VDE 0805
  EN 61010-1/VDE 0411 part 1
  EN 61010-1A2/VDE 0411 part 1/A
- VDE tested

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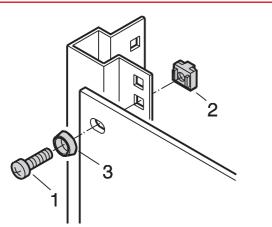
#### **DELIVERY COMPRISES** (kit)

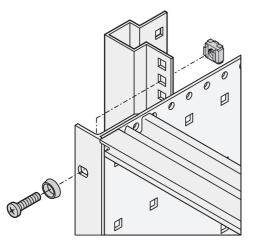
Item	Qty	Description
1	1	GND/earthing kit, Cu wire, 1.5 mm <sup>2</sup> , PVC sheathing, green/
		yellow, connects side panels, cover, base plate and rear panel

#### **ORDER INFORMATION**

Description	Up to 4 U Part no.	bigger than 4 U Part no.
GND/earthing kit for cases with steel covers	21100-490	21100-448
GND/earthing kit for cases with aluminium covers	-	21100-347

#### **19" FIXING**





• For fitting subracks or 19" chassis in a comptec case

• For fixing 19" front panels

#### **DELIVERY COMPRISES**

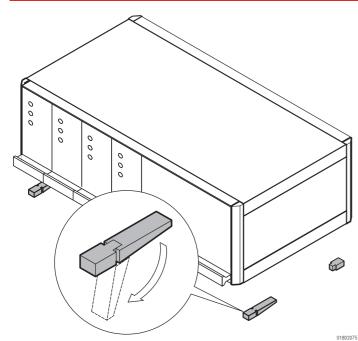
Item	Description
1	Screw M6 × 16, zinc-plated with Pozidrive
2	Cage nut M6, zinc-plated
3	Plastic washer, ABS, black

#### **ORDER INFORMATION**

Description	Part no.
PU = 8 × screw, washer, nut	21100-435
PU = 50 each of M6 screw, washer and cage nut	21101-809
PU = 100 each of M6 screw, washer and cage nut	21101-810



### PLASTIC TIP-UP FEET



- Static load-carrying capacity 25 kg per foot
- Tip-up feet can be used instead of the case feet fitted as standard
- Fixing holes provided in bottom of case

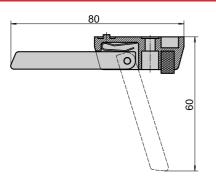
#### DELIVERY COMPRISES (kit)

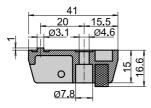
Item	Qty	Description
1	4	Foot, PA, UL 94 V-0
2	4	Anti-slip protection, TPE
3	2	Tip-up device, PA, UL 94 V-0
4	1	Assembly kit

#### **ORDER INFORMATION**

Description	RAL 7016 an- thracite Part no.	RAL 9006 sil- ver Part no.
Plastic tip-up foot	20603-002	20603-001

#### **TIP-UP FOOT IN DIE-CAST AL**







- Static load-carrying capacity 50 kg per foot
- Tip-up feet can be used instead of the case feet fitted as standard
- Fixing holes provided in bottom of case

#### **ORDER INFORMATION**

Description	Qty	Part no.
Foot with tip-up, Al die-cast, silver	1 piece (SPQ 10) <sup>1)</sup>	10603-002
Foot without tip-up, Al die-cast, silver	1 piece (SPQ 10) <sup>1)</sup>	10603-001
Cheesehead screw with slot M4 × 12, St, zinc-plated, PU 100 pieces		21101-211
Hexagon nut M4, St, zinc-plated, PU 100 pieces		21100-211
Spring washer A4, St, zinc-plated, PU 100 pieces		21100-207
1) Part no. comprises 1 piece;	(0.2.0)	

delivery is in standard pack quantity (SPQ):

please order a minimum of 10 feet or a multiple

AZA43836

## Desk-top cases – Introduction



### CASE TYPES: DESK-TOP ENCLOSURE/19" CASE



Desk-top enclosure, ratiopacPRO



19" case, comptec

#### **Desk-top enclosures**

Our desk-top cases are used to house PCBs (euroboards) or individual components

The choice is yours:

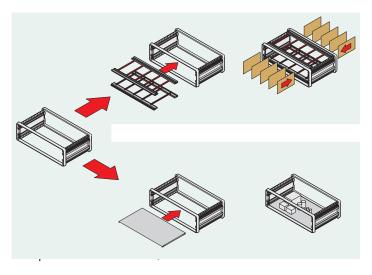
- ratiopacPRO, the universal case with 19" compatible dimensions and high EMC shielding,
- e.g. for CompactPCI and VME64x applications
- propacPRO, the robust case with high EMC shielding for 19"-compatible or custom electronics assemblies
- compacPRO, Desk-top or portable case for unshielded applications

#### 19" cases

Our comptec cases are comparable with small cabinets and are used to house 19" components such as subracks, 19" fan trays or 19" front panels

All desk-top enclosures have a very low weight owing to the materials used and are also suitable for mobile use

#### APPLICATIONS FOR DESK-TOP ENCLOSURES



#### The most important user domains for desk-top enclosures are:

Fitting with euroboards in accordance with IEC 60297



Fitting with individual electrical or mechanical components, e.g.on mounting plates



#### ONE PRODUCT PLATFORM AND EXTENSIVE ACCESSORIES







 Practical technology without time-consuming assembly. The modular product platform of these cases allows a wide range of possible uses with only a small number of components.

The intelligent design of all components results in an astonishingly quick and easy assembly of the components.

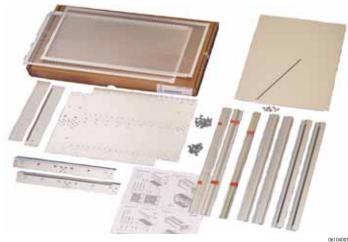
With our PRO product platform we offer you full compatibility of all individual components and accessories, also with our europacPRO subracks.

Standard desk-top enclosures can also be adapted easily and with little effort for mobile applications.

## Desk-top cases – Introduction



FORMS OF DELIVERY FOR DESK-TOP ENCLOSURES



Flat pack delivery to save space

#### **GUIDE RAIL**

Supplied in space-saving packs. Simply unpack parts and screw together - done.

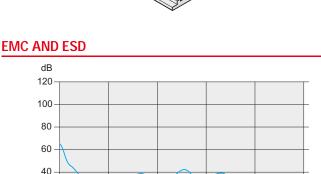
Depending on the kit chosen the threaded insert, the perforated rail or the EMC gasket is pre-assembled on the horizontal rail.

We offer you three forms of delivery:

- Pre-assembled kit for use with 160 mm deep euroboards, frame fitted, cladding parts and guide rails supplied loose.
- Pre-assembled kit for individual configuration, frame assembled, cladding parts supplied loose.
- Ready assembled cases to your specifications. With our ServicePLUS option you can order ready-assembled cases, with drilled holes and cutouts and individual front panels if necessary even by express service.
- Guide rails form the interface between the mechanics of the case and the electronics assembled (PCBs, plug-in units, frame type plug-in units, drive unit modules, etc.).

Robust snap-in fixings on the plastic rails assure that the components are held securely, even when exposed to vibrations.

Guide rails can also be screwed on.



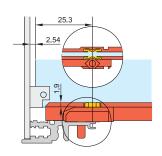
- Our case product platforms offer standard solutions for achieving electromagnetic compatibility (EMC) and to avoid electrostatic interference (ESD)
- Shielding on the front and rear of the case is effected by front panels with EMC gaskets
- To prevent electrostatic discharge when inserting PCBs, ESD contacts are clipped into the guide rails. These provide a conductive connection between board and case earth/ground
- · Test reports are available on our website www.schroff.biz for download

Shielding

20

0 + 30

400



800

1200

Mhz

1600

2000

Position of the ESD clip

04503050

06108081

06108084

Part number in bold face type: ready for despatch within 2 working days Part number in normal type: ready for despatch within 10 working days

## Desk-top cases – ServicePLUS



**Application examples** 



Application: ratiopacPRO-air case in special colour, shielded board cage, filter mat top and bottom

01809001

02009001

02109001



Application: ratiopacPRO-air case with processed front and rear panels



Application: compacPRO case, modified



Application: compacPRO case with fitted horizontal rail with lip and hinged front panel



Application: compacPRO case with fitted horizontal rail with lip and folding front panel



Application: compacPRO with tip-up carrying handle and front panel (without visible screws)



Application: inpac case with hinged and modified front and rear panels



Application: propacPRO, EMC case in special colour with mounting plates for individual construction

02009004

## Desk-top cases – ServicePLUS



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