



Schroff®

MAIN CATALOG

EQUIPMENT PROTECTION SOLUTIONS

24TH EDITION | OCTOBER 2012

09 Power supply units

Power supply systems - Overview

- Overview 0
- 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
- Appendix 12



19" AC/DC switch-mode PSUs

- Compact PSUs with high efficiency level

19" AC/DC linear regulators

- Very low interference, optimised for medical applications



19" DC/DC switch-mode PSUs

- Large DC input voltage range and high performance



PSUs for MicroTCA applications

- Plug-in PSUs in double full-size format with and without management



PSUs for VMEbus applications

- AC/DC and DC/DC switch-mode PSUs in 19" or open frame design



PSUs for CompactPCI and VME64x applications

- AC/DC and DC/DC switch-mode PSUs in 19" or open frame design



19" AC/DC switch-mode PSUs AC/DC regulators

Single, 42 W 9.2

Single, 50 W 9.3

Single, 100 W ... 9.4

Single, adjustable, 100 W 9.5

Single, 180 W ... 9.6

Dual, 100 W 9.7

Triple, 100 W 9.8

Triple, 130 W 9.9

AC/DC linear regulators

Single, 8 - 60 W . 9.10

Dual, 10 - 58 W .. 9.11

Triple, 7 - 39 W .. 9.12

DC/DC switch-mode PSUs

Single, 100 W ... 9.13

Dual, 100 W 9.14

Triple, 100 W 9.15

Accessories

Z-rail, 4 HP 9.16

Connector H 15 F 9.16

Keying/coding .. 9.17

Wall/horizontal rail mounting ... 9.17

PSUs for MicroTCA

MTCA double, without management ... 9.18

PSUs for VMEbus

19", AC/DC, triple, 150/224 W 9.19

Open frame, AC/DC, triple, 444 ... 800 W ... 9.20

PSUs for CompactPCI, CompactPCI Serial, and VME64x

CPCI Serial, 19", AC/DC, 3 U, 300 W 9.21

19" AC/DC, 3/6 U, 250/500 W 9.22

AC/DC open frame, triple, 300/600 W 9.24

19" DC/DC, 3/6 U, 250/500 W 9.26

ServicePLUS 9.28

Power supply – 19" AC/DC switch-mode PSUs

slimpower 42 W, single



- Width only 3 HP
- Wide input voltage range
85 ... 254 VAC and 120 ... 360 VDC
- Single output voltage with low interferences
(low ripple < 10 mV_{PP})
- Integrated decoupling diode for redundancy operation
(can be activated)
- Passive Current Share Bus
- Signalling: Output voltage OK



Delivery comprises

| Qty | Description |
|-----|--|
| 1 | 19"-compatible power supply unit height 3 U width 3 HP depth 171.93 mm (160 mm board depth) connector H 15 M |

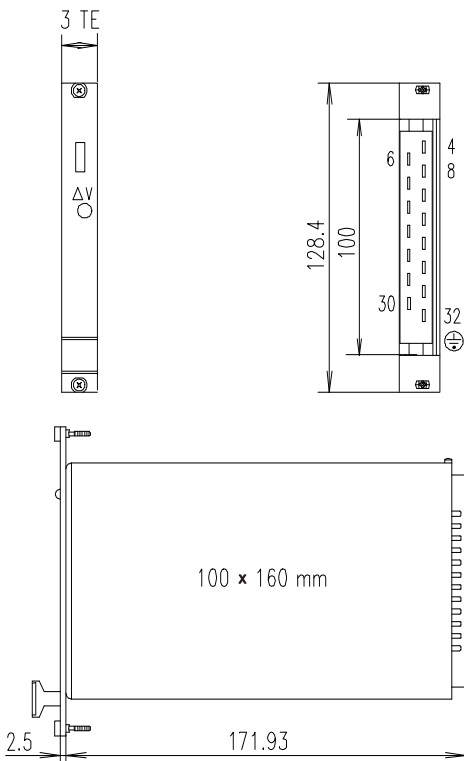
Order Information

| Voltage V | Current A | Power W | Description | Part no. |
|--------------|--------------|------------|-------------|-----------|
| 5 | 6 | 30 | SLE 105 | 13100-136 |
| 12 | 3.5 | 42 | SLE 112 | 13100-137 |
| 15 | 2.8 | 42 | SLE 115 | 13100-138 |
| 24 | 1.7 | 41 | SLE 124 | 13100-139 |

Front panel 3 HP, Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit, 1 piece 21006-959

EMC gaskets (stainless steel) 3 U, 97 mm, stainless steel, two pieces necessary per front panel, PU 10 pieces 21101-705

Connector H 15 F Mating connector (female) for wiring inputs/outputs (6.3 mm FASTON), 1 piece 69001-733



11302054

TE = HP

Connector pin-out

| Pin | Connection |
|-----|-----------------------------|
| 4 | Output + V ₁ |
| 6 | Output + V ₁ |
| 8 | Sense line + V ₁ |
| 10 | Sense line 0 V ₁ |
| 12 | Output 0 V ₁ |
| 14 | Output 0 V ₁ |
| 16 | – |
| 18 | – |
| 20 | – |
| 22 | – |
| 24 | Output OK |
| 26 | – |
| 28 | L |
| 30 | N |
| 32 | PE ⊕ |

Power supply – 19" AC/DC switch-mode PSUs

maxpower 50 W, single



11396002

- Wide input voltage range
90 ... 264 VAC and 130 ... 340 VDC
- Single output voltage
- Integrated decoupling diode for redundancy operation
- Active Current Share Bus (CSB)
- Signalling: Output voltage OK
- Efficiency up to 80 %



Delivery comprises

| Qty | Description |
|-----|---|
| 1 | 19" compatible power supply height 3 U width A: 6 HP depth 171.93 mm (160 mm board depth) connector H 15 M coding strip (fitted) |

Order Information

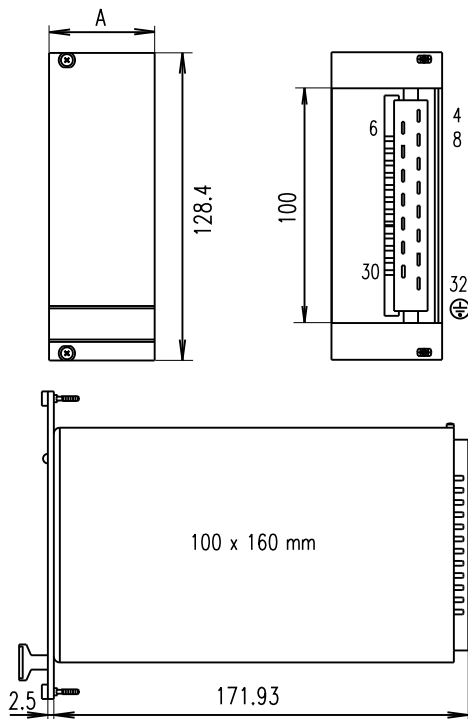
| Voltage V | Current A | Power W | Description | Part no. |
|--------------|--------------|------------|-------------|-----------|
| 5 | 9 | 45 | SEK 105 | 13100-043 |
| 12 | 4.2 | 51 | SEK 112 | 13100-044 |
| 15 | 3.4 | 51 | SEK 115 | 13100-041 |
| 24 | 2.1 | 51 | SEK 124 | 13100-045 |
| 48 | 1.1 | 53 | SEK 148 | 13100-046 |

Front panel 6 HP, Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, 21006-943 incl. assembly kit, 1 piece

EMC gaskets (stainless steel) 3 U, 97 mm, stainless steel, two pieces necessary per front panel, PU 10 pieces 21101-705

Connector H 15 F Mating connector (female) for wiring inputs/outputs (6.3 mm FASTON), 1 piece 69001-733

Coding PU (1 keying/coding strip, 2 pieces keying/coding pins) 60800-123



DJM0084

Connector pin-out

| Pin | Connection |
|-----|-----------------------------|
| 4 | Output + V ₁ |
| 6 | Output + V ₁ |
| 8 | Sense line + V ₁ |
| 10 | Sense line 0 V ₁ |
| 12 | Output 0 V ₁ |
| 14 | Output 0 V ₁ |
| 16 | - |
| 18 | - |
| 20 | - |
| 22 | CSB |
| 24 | Output OK |
| 26 | - |
| 28 | L |
| 30 | N |
| 32 | PE ⊕ |

Power supply – 19" AC/DC switch-mode PSUs

maxpower 100 W, single



11399005

- Wide input voltage range 90 ... 254 V_{AC} and 100 ... 360 V_{DC} with active power factor correction (PFC)
- High power density
- Single output voltage
- Integrated decoupling diode for redundancy operation
- Active current share bus (CSB)
- Signalling: Output voltage OK



Delivery comprises

| Qty | Description |
|-----|---|
| 1 | 19" compatible power supply height 3 U width A: 6 HP depth 171.93 mm (160 mm board depth) connector H 15 M coding strip (fitted) |

Order Information

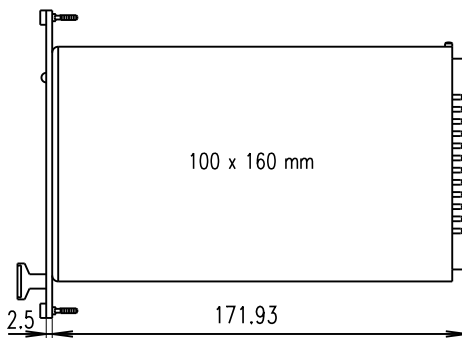
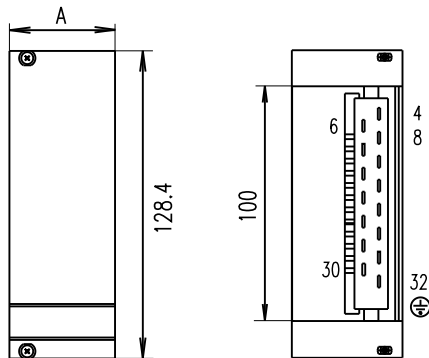
| Voltage V | Current A | Power W | Description | Part no. |
|--------------|--------------|------------|-------------|-----------|
| 5 | 16 | 80 | MAX 105 | 13100-102 |
| 12 | 8.3 | 100 | MAX 112 | 13100-103 |
| 15 | 6.6 | 99 | MAX 115 | 13100-104 |
| 24 | 4.2 | 101 | MAX 124 | 13100-105 |

Front panel 6 HP, Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit, 1 piece 21006-943

EMC gaskets (stainless steel) 3 U, 97 mm, stainless steel, two pieces necessary per front panel, PU 10 pieces 21101-705

Connector H 15 F Mating connector (female) for wiring inputs/outputs (6.3 mm FASTON), 1 piece 69001-733

Coding PU (1 keying/coding strip, 2 pieces keying/coding pins) 60800-123



DJM0084

Connector pin-out

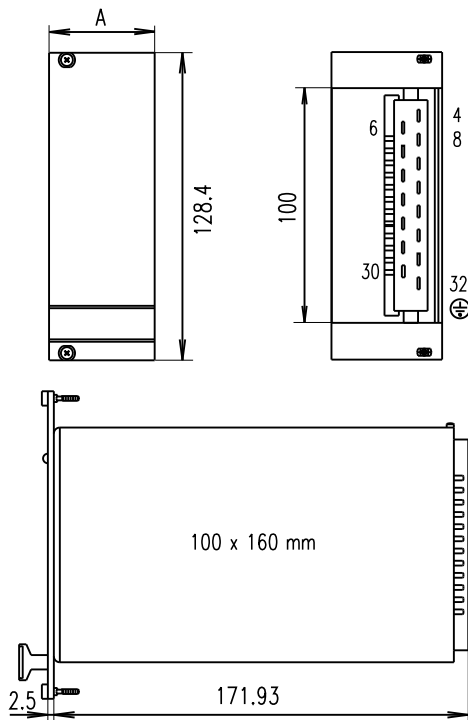
| Pin | Connection |
|-----|-----------------------------|
| 4 | Output + V ₁ |
| 6 | Output + V ₁ |
| 8 | Sense line + V ₁ |
| 10 | Sense line 0 V ₁ |
| 12 | Output 0 V ₁ |
| 14 | Output 0 V ₁ |
| 16 | – |
| 18 | – |
| 20 | – |
| 22 | CSB |
| 24 | Output OK |
| 26 | – |
| 28 | L |
| 30 | N |
| 32 | PE ⊕ |

Power supply – 19" AC/DC switch-mode PSUs

maxpower 100 W, adjustable, single



11303001



- Wide adjustment range of output voltage
- Wide input voltage range 90 ... 264 V_{AC} and 100 ... 360 V_{DC} with active Power Factor Correction (PFC)
- Single output voltage
- Integrated decoupling diode for redundancy operation
- Active Current Share Bus (CSB)
- Signalling: Output voltage OK



Delivery comprises

| Qty | Description |
|-----|--|
| 1 | 19" compatible power supply height 3 U width A: 6 HP depth 171.93 mm (160 mm board depth), output voltage factory preset to 12 V / 24 V Connector H 15 M Coding strip (fitted) |

Order Information

| Voltage V | Current A | Power W | Description | Part no. |
|--|--------------|------------|-------------|-----------|
| 4.5–17 | 5.9 | 100 | MAX LR | 13100-133 |
| 16–30 | 3.4 | 102 | MAX UR | 13100-134 |
| Front panel 6 HP, Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit, 1 piece | | | | 21006-954 |
| EMC gaskets (stainless steel) 3 U, 97 mm, stainless steel, two pieces necessary per front panel, PU 10 pieces | | | | 21101-705 |
| Connector H 15 F Mating connector (female) for wiring inputs/outputs (6.3 mm FASTON), 1 piece | | | | 69001-733 |
| Coding PU (1 keying/coding strip, 2 pieces keying/coding pins) | | | | 60800-123 |

Connector pin-out

| Pin | Connection |
|-----|-----------------------------|
| 4 | Output + V ₁ |
| 6 | Output + V ₁ |
| 8 | Sense line + V ₁ |
| 10 | Sense line 0 V ₁ |
| 12 | Output 0 V ₁ |
| 14 | Output 0 V ₁ |
| 16 | – |
| 18 | – |
| 20 | – |
| 22 | CSB |
| 24 | Output OK |
| 26 | – |
| 28 | L |
| 30 | N |
| 32 | PE ⊕ |

DJM0084

Power supply – 19" AC/DC switch-mode PSUs

maxpower 180 W, single



11308005

- Wide input voltage range 90 ... 254 V_{AC} and 100 ... 360 V_{DC} with active Power Factor Correction (PFC)
- Single output voltage
- Integrated active decoupling for redundancy operation
- Active Current Share Bus (CSB)
- Signalling: Output voltage OK
- Efficiency up to 87 %



Delivery comprises

| Qty | Description |
|-----|---|
| 1 | 19" compatible power supply height 3 U width A: 8 HP depth 171.93 mm (160 mm board depth) connector H 15 M coding strip (fitted) |

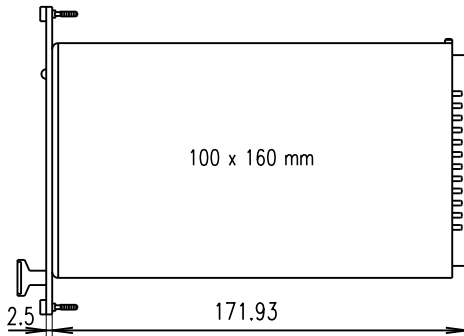
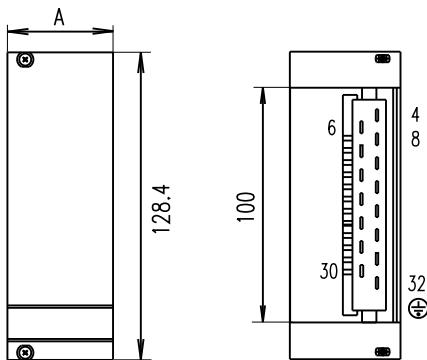
Order Information

| Voltage V | Current A | Power W | Description | Part no. |
|--------------|--------------|------------|-------------|-----------|
| 5 | 30 | 150 | MAX 180-105 | 13100-150 |
| 12 | 13 | 156 | MAX 180-112 | 13100-151 |
| 15 | 11 | 165 | MAX 180-115 | 13100-152 |
| 24 | 7 | 168 | MAX 180-124 | 13100-153 |

Front panel 8 HP, Al extrusion, front anodised, rear iridescent green chromated, shielded with fixed textile gasket, incl. assembly kit, 1 piece
31006-677

Connector H 15 F Mating connector (female) for wiring inputs/outputs (6.3 mm FASTON), 1 piece
69001-733

Coding PU (1 keying/coding strip, 2 pieces keying/coding pins)
60800-123



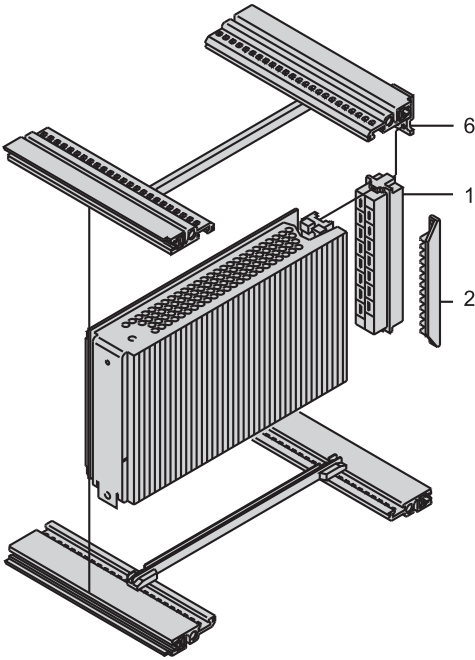
DUM0084

Connector pin-out

| Pin | Connection |
|-----|--------------------------|
| 4 | Output + V ₁ |
| 6 | Output + V ₁ |
| 8 | Sense + V ₁ |
| 10 | Sense 0V V ₁ |
| 12 | Output 0V V ₁ |
| 14 | Output 0V V ₁ |
| 16 | Output + V ₁ |
| 18 | Output 0V V ₁ |
| 20 | Test |
| 22 | CSB |
| 24 | DC output OK |
| 26 | – |
| 28 | L |
| 30 | N |
| 32 | PE ⊕ |

Power supply - Accessories

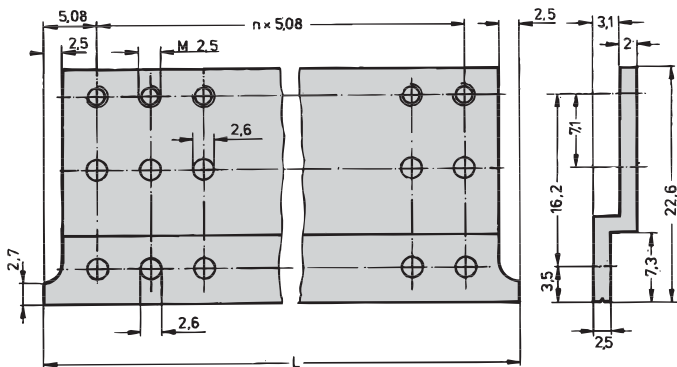
Accessories



PSA45379

- For slimpower, maxpower, coolpower and linear regulators
- Z-rail (item 6)
- Mating connector female H 15 F (item 1)
- Coding (item 2)
- Wall/horizontal rail mounting

Z-rail, 4 HP



A3-420

- For bolting a H15 F connector to the rear horizontal rail/case (item 6)
- Provides the standard plug-in depth of the PSUs

Order Information

| Description | Qty/PU | Part no. |
|-------------------------|--------|-----------|
| Z-rail, 4 HP (20.32 mm) | 1 | 30822-166 |

Note

- Two Z-rails are required per connector

Connector H 15 F



05592018

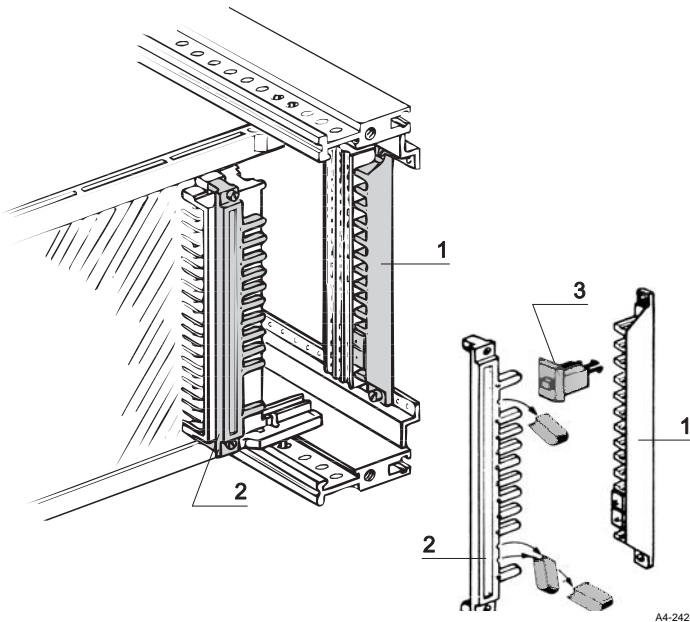
- Connector EN 60603 (DIN 41612) H15 F for 6.3 mm FASTON
- In 19" power supply units the H 15 male connector is fitted, PIN 32 with capacitive earthing contact
- Compatible with connector H15 M of e.g. 19" plug-in equipment

Order Information

| Item | Description | Qty/PU | Part no. |
|------|-------------|--------|-----------|
| 1 | Type H | 1 | 69001-733 |

Power supply - Accessories

Keying/coding



- Mechanical coding prevents a PSU being fitted on the wrong slot, space requirement 4 HP
- Coding:
 - Female strip (item 2), fitted on PSU (except slimpower)
 - Coding strip (item 1) mounts on the Z/horizontal rail
 - Placement of coding pins (item 3) in the coding strip (item 1)
 - Removal of studs at the appropriate place in the female strip
- With 2 coding pins there are 66 coding possibilities

Order Information

| Description | Part no. |
|--|-----------|
| Keying/coding strip, Crastin (UL 94 V-0) 1 piece, keying/coding pins, Crastin (UL 94 V-0), 2 pieces | 60800-123 |

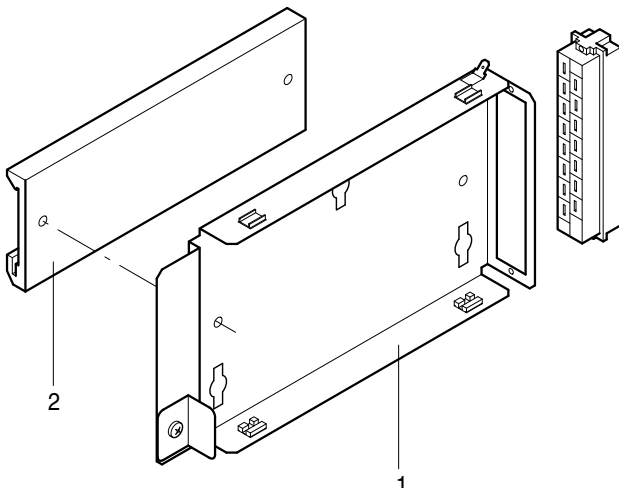
Wall/horizontal rail mounting



- Suitable for 19"-compatible 3 U PSUs
- 2 mounting options
 - Wall mounting bracket can be fitted in any position with screws and PSU is inserted
 - Horizontal rail adaptor is bolted to wall mounting bracket, then the 19" PSU can be clipped to a horizontal rail

Order Information

| Item | Description | Qty/PU | Part no. |
|--|-------------------------------------|--------|-----------|
| 1 | Wall mounting bracket, St | 1 | 11000-001 |
| 2 | Horizontal rail adaptor bracket, Al | 1 | 11000-002 |
| Connector H 15 F FASTON connection, 1 piece | | | 69001-733 |



Power supply – for MicroTCA

AC/DC, double full-size,
without management



11309004

- Wide input voltage range 90 ... 264 V_{AC}
- Active power factor correction
- Construction compatible with AdvancedMC double full-size
- Single-wire current share cable for redundancy operation
- 2 output voltages, 12 V and 3.3 V
- Corresponds to EMC class B as per EN 55022
- Without MicroTCA power management controller
- Mains input at front

NEW

Delivery comprises

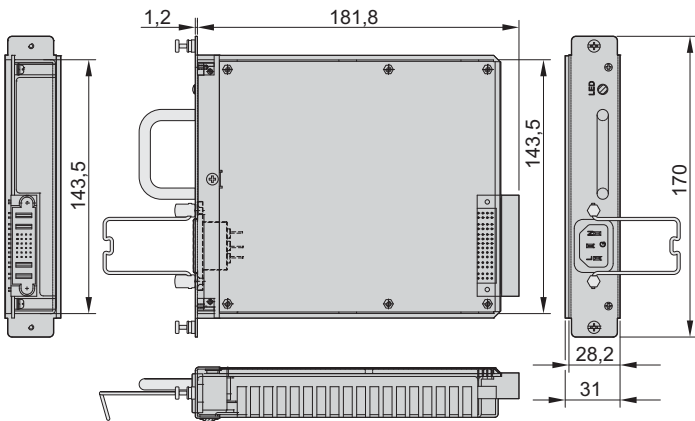
| Qty | Description |
|-----|---|
| 1 | PSU for MicroTCA height double (148.3 mm) width full-size (6 HP) depth 186.65 mm connector Molex SSI front panel with handle and EMC gasket (fitted) |

Order Information

| Voltage V | Current A | Power W | Description | Part no. |
|-------------------|---|------------|-------------|-----------|
| V1: 12 V2: 3.3 | I ₁ : 25 I ₂ : 3 | 300 | MCA 300 AC | 11098-392 |
| V1: 12 V2: 3.3 | I ₁ : 45.8 I ₂ : 3 | 550 | MCA 550 AC | 11098-416 |

Note

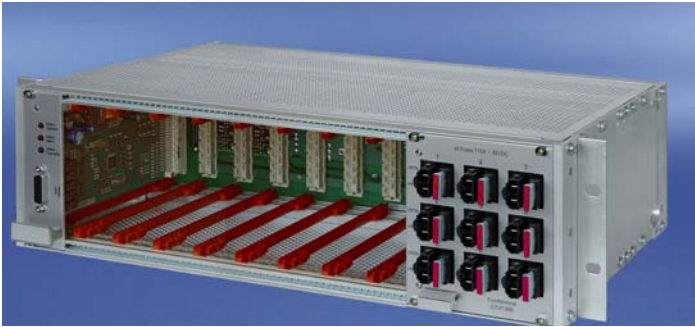
- Output data for T_A = -25 ... 55 °C with forced cooling of 20 cfm
- Connector FCI 51720-10202402AA or Molex 87631-2019



11312050

Power supply - ServicePLUS

Application examples and special devices created to customer specifications



Application: Redundant and uninterruptible 19" DC power supply units

11308002 11309004



Application: AC/DC switch-mode PSU for power supply to video monitoring systems

11309002



Application: AC/DC switch-mode power supply for telecommunications applications

11309003



Application: AC/DC linear regulator for communications systems (defence systems)

11309001



Application: DC/DC converter for railway applications

11309005



Application: DC/DC converter for supply power to fans (with monitoring)

11309005