

CONNECT AND PROTECT

Power Supply Systems

12/2022



SCHROFF

Power supplies – Overview

OVERVIEW

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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

Power supplies – Overview



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"



PSUS FOR COMPACTPCI, COMPACTPCI Serial AND VME64X APPLICATIONS

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



Overview 9.0

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

AC/DC linear regulators

- Single, 8 - 60 W 9.9
- Dual, 10 - 58 W 9.10
- Triple, 7 - 39 W 9.11

DC/DC switch-mode PSUs

- Single, 100 W 9.12
- Dual, 100 W 9.13
- Triple, 100 W 9.14

Accessories

- Z-rail, 4 HP 9.15
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- Connector 9.15
- Connector H 15 F 9.15
- Keying/coding 9.15
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PSUs for MicroTCA

- MTCA double, with management 9.17
- MTCA double, without management 9.18

PSUs for VMEbus

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

PSUs for CompactPCI, CompactPCI Serial, and VME64x

- CPCI Serial, 19", AC/DC, 3 U, 300 W 9.20
- 19" AC/DC, 3 U, 300 W 9.21
- 19" AC/DC, 6 U, 500 W 9.22
- 19" DC/DC, 3 U, 250 W 9.23
- 19" DC/DC, 6 U, 500 W 9.24

Power supplies – 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

11302001

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

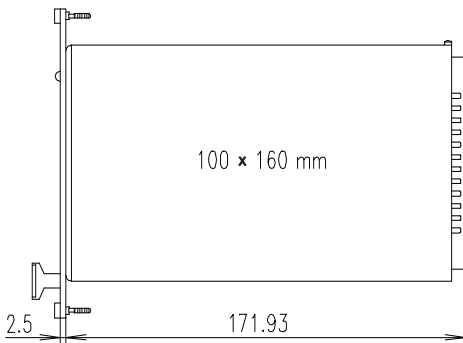
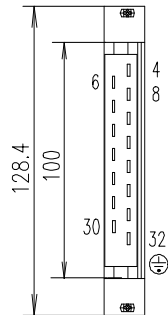
21101-705

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

69001-733

Note

- **Please order front panel separately**
- Output data at T_A = 0 ... 50 °C
- Further accessories see page 9.15


11302054

TE = HP

Connector pin-out

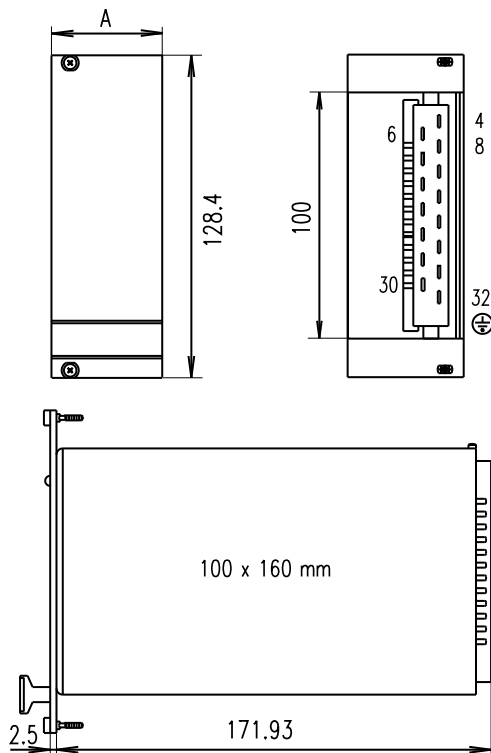
Pin	Connection
4	Output + V ₁
6	Output + V ₁
8	Sense line + V ₁
10	Sense line 0 V ₁
12	Output 0 V ₁
14	Output 0 V ₁
16	-
18	-
20	-
22	-
24	Output OK
26	-
28	L
30	N
32	PE ⊕

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

Maxpower 50 W, single



11317001



D1JM0084

Connector pin-out

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

- Wide input voltage range 90 to 253 V_{AC} and 130 to 340 V_{DC}
- 1 output voltage
- Signaling: Output voltage OK
- Includes installed front panel
- Efficiency up to 88%
- Standby (no load) power output < 1.5 W
- Redundancy operation
 - With hot swap function
 - With active OR decoupling
 - 24 V, 48 V version with decoupling diode - hot swap
 - No base load required
 - Automatic load distribution depending on power supply unit (PSU) temperature
 - No current share line between the power supplies necessary
 - Quasi-resonant topology reduces emissions that affect electromagnetic compatibility (EMC)



DELIVERY INCLUDES

Qty.	Description
1	19" compatible power supply with installed front plate height 3 U width A: 6 HP depth 171.93 mm (160 mm board depth) H15M connector coding strip (fitted) EMC seal (included)

ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
5	10	50 1)	MAX50-105	13100-170
12	4.2	51	MAX50-112	13100-171
15	3.4	51	MAX50-115	13100-172
24	2.1	51	MAX50-124	13100-173
48	1.1	53	MAX50-148	13100-174

Accessories

Connector H 15 F FASTON connection, 1 piece	69001-733
Coding PU (1 keying/coding strip, 2 pieces keying/coding pins)	60800-123
Coding PU (Female strip)	60800-122

Note

- Output data at TU = -25 ... 50 °C
- Customized front panels available at www.frontplattenexpress.eu

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

MAXPOWER 100 W, SINGLE



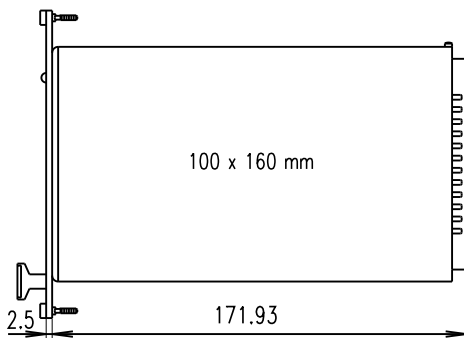
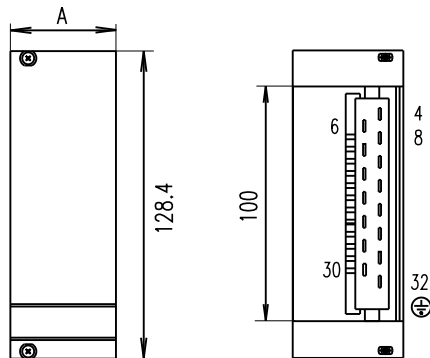
- Wide input voltage range 90 ... 254 V_{AC} and 100 ... 360 V_{DC} with active power factor correction (PFC)
- High power density
- Single output voltage
- Integrated decoupling diode for redundancy operation
- Active current share bus (CSB)
- Signalling: Output voltage OK



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)

11399005



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 ⊕

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**

Coding PU (Female strip) **60800-122**

Note

- **Please order front panel separately**
- Output data for mains voltage > 190 V_{AC}, T_A = 0 ... 50 °C
- Further accessories see page 9.15

DJLM0084

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

MAXPOWER 100 W, ADJUSTABLE, SINGLE

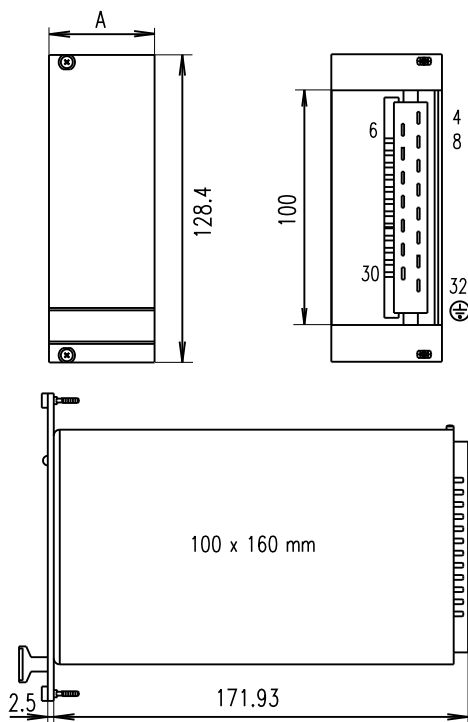


- Wide adjustment range of output voltage
- Wide input voltage range 90 ... 264 V_{AC} and 100 ... 360 V_{DC} with active Power Factor Correction (PFC)
- Single output voltage
- Integrated decoupling diode for redundancy operation
- Active Current Share Bus (CSB)
- Signalling: Output voltage OK



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)

11303001


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
Coding PU (Female strip)				60800-122

Note

- **Please order front panel separately**
- Output data for mains voltage > 190 V_{AC}, T_A = 0 ... 50 °C
- Further accessories see page 9.15

D1UM0084

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 supplies – 19" AC/DC switch-mode PSUs

MAXPOWER 180 W, SINGLE



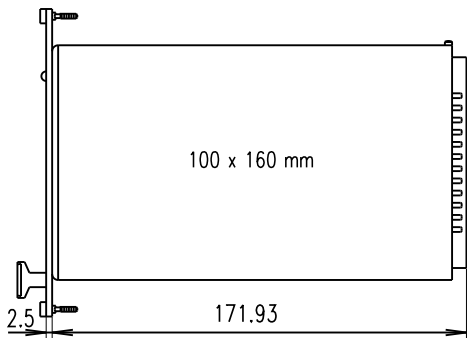
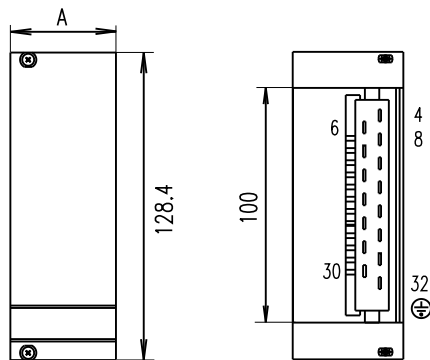
- Wide input voltage range 90 ... 254 V_{AC} and 100 ... 360 V_{DC} with active Power Factor Correction (PFC)
- Single output voltage
- Integrated active decoupling for redundancy operation
- Active Current Share Bus (CSB)
- Signalling: Output voltage OK
- Efficiency up to 87 %



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)

11308005



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

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**

Coding PU (Female strip) **60800-122**

Note

- **Please order front panel separately**
- Output data for mains voltage > 190 V_{AC}, T_A = 0 ... 50 °C
- Further accessories see page 9.15

DJLM0084

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 supplies – 19" AC/DC switch-mode PSUs

MAXPOWER 100 W, DUAL



- Wide input voltage range 90 ... 254 V_{AC} and 100 ... 360 V_{DC} with active power-factor correction (PFC)
- High power density
- 2 output voltages
- Efficiency up to 80%



DELIVERY COMPRISES

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

11300010

ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
V1: 5 V2: 12	I ₁ : 9 I ₂ : 4	93	MAX 2512	13100-112
V1: 5 V2: 24	I ₁ : 9 I ₂ : 2	93	MAX 2524	13100-114
V1: 12 V2: -12	I ₁ : 4.2 I ₂ : 4.2	101	MAX 212	13100-115
V1: 15 V2: -15	I ₁ : 3.4 I ₂ : 3.4	102	MAX 215	13100-116

Front panel 8 HP, Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit, 1 piece

21006-945

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

21101-705

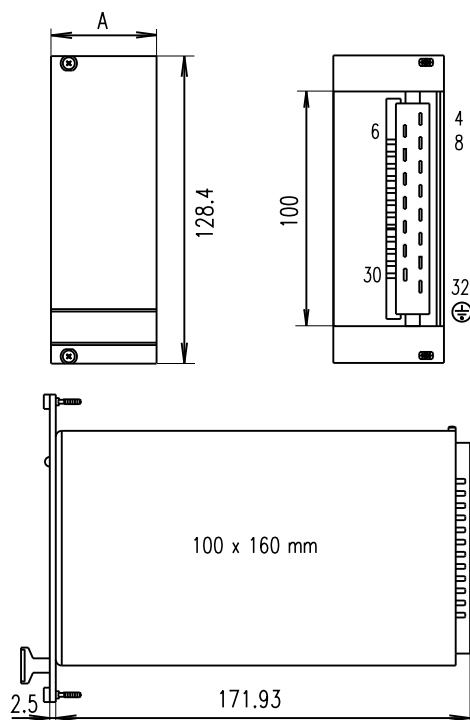
Connector H 15 F Mating connector (female) for wiring inputs/ outputs (6.3 mm FASTON), 1 piece

69001-733

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

60800-123

Coding PU (Female strip)

60800-122


Connector pin-out

Pin	Connection
4	–
6	–
8	–
10	–
12	–
14	–
16	Output + V ₁
18	Output 0 V ₁
20	Output + V ₂
22	Output 0 V ₂
24	–
26	–
28	L
30	N
32	PE ⊕

Note

- **Please order front panel separately**

DUM0084

- Output data for mains voltage > 190 V_{AC}, T_A = 0 ... 50 °C
- Further accessories see page 9.15

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

MAXPOWER 100 W, TRIPLE



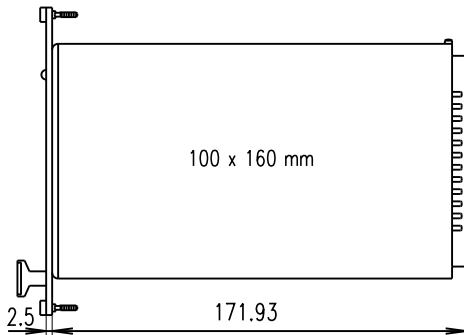
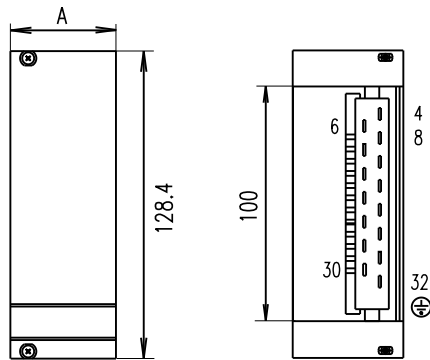
- Wide input voltage range 90 ... 254 V_{AC} and 100 ... 360 V_{DC} with active power-factor correction (PFC)
- High power density
- 3 output voltages
- Signalling: Output voltage OK



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)

11300011



Connector pin-out

Pin	Connection
4	Output + V ₁
6	Output + V ₁
8	Sense line + V ₁
10	Sense line 0V V ₁
12	Output 0V V _{1,2}
14	Output 0V V _{1,2}
16	Output + V ₂
18	Output 0V V _{1,2}
20	Output 0V V ₃
22	Output - V ₃
24	Output OK
26	-
28	L
30	N
32	PE ⊕

DJLM0084

ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
V ₁ : 5	I ₁ : 8	100	MAX 312	13100-122
V ₂ : 12	I ₂ : 2.5			
V ₃ : -12	I ₃ : 2.5			
V ₁ : 5	I ₁ : 8	100	MAX 315	13100-123
V ₂ : 15	I ₂ : 2			
V ₃ : -15	I ₃ : 2			
Front panel 8 HP, Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit, 1 piece				21006-945
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
Coding PU (Female strip)				60800-122

Note

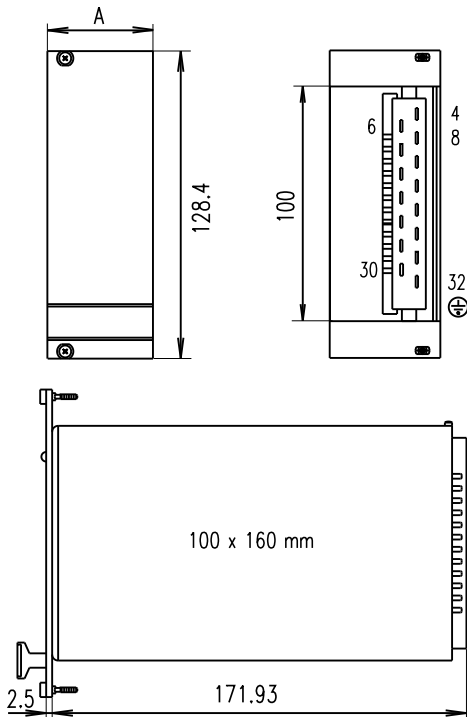
- **Please order front panel separately**
- Output data for mains voltage > 190 V_{AC}, T_A = 0 ... 50 °C
- Further accessories see page 9.15

Power supplies – 19" AC/DC linear regulators

LINEAR REGULATORS, SINGLE



11397001



DLJM0084

Connector pin-out

Pin	PSK single	PSM, PSG single
4	Sense line + V ₁	Sense line + V ₁
6	Output + V	Output + V
8	Output + 0 V ₁	Output + 0 V ₁
10	Sense line 0 V ₁	Sense line 0 V ₁
12	–	Optional: redundancy diode
14	–	External on/off
16	–	GND
18	–	V remote input + V _c
20	–	V-shunt + V _s
22	–	V-shunt – V _s
24	–	–
26	–	–
28	L	L
30	N	N
32	PE ⊕	PE ⊕

- Mains/line voltage 230 V_{AC} (can be switched to 115 V_{AC} with mains/line voltage conversion kit)
- High control accuracy, low residual ripple and low interference, suitable for medical applications (8 mm safety clearances)
- PSM, PSG
 - Output voltage can be remote controlled externally (1 ... 10 V)
 - Switching of control curve for sensitive loads (U/I - Fold Back)
 - Current measurement via shunt


EN 62368-1
approved

DELIVERY COMPRISES

Qty	Description
1	19" compatible power supply height 3 U width A: 6, 10, 14 HP depth 171.93 mm (160 mm deep boards) connector H 15 M (fitted) keying/coding peg (fitted)

ORDER INFORMATION

Voltage V	Current A	Power W	Width HP	Description	Part no.
5	1.5	8	6	PSK 105	13105-001
5	4	20	10	PSM 105	13105-006
5	6	30	14	PSG 105	13105-011
12	1.1	13	6	PSK 112	13105-002
12	2.8	31	10	PSM 112	13105-007
12	4.2	50	14	PSG 112	13105-012
15	1	15	6	PSK 115	13105-003
15	2.2	33	10	PSM 115	13105-008
15	3.5	53	14	PSG 115	13105-013
24	0.6	16	6	PSK 124	13105-004
24	1.5	36	10	PSM 124	13105-009
24	2.5	60	14	PSG 124	13105-014
Front panel for PSK 6 HP, 1 piece					21005-475
Front panel for PSM 10 HP, 1 piece					21005-473
Front panel for PSG 14 HP, 1 piece					21005-474
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
Coding PU (Female strip)					60800-122
Mains voltage conversion kit 230 V to 115 V, 1 piece					43105-999

Note

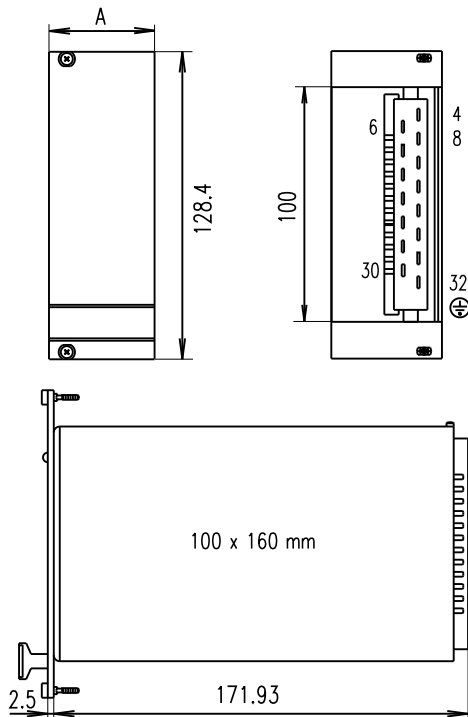
- **Please order front panel separately** (Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit)
- PSK without case
- Output data at T_A = 0 ... 50 °C
- Further accessories see page 9.15

Power supplies – 19" AC/DC linear regulators

LINEAR REGULATORS, DUAL



11300001



DLJM0084

Connector pin-out

Pin	Connection
4	Sense line + V ₁
6	Output + V ₁
8	Output 0 V ₁
10	Sense line 0 V ₁
12	Sense line + V ₂
14	Output + V ₂
16	Output 0 V ₂
18	Sense line 0 V ₂
20	–
22	–
24	–
26	–
28	L
30	N
32	PE ⊕

- Mains/line voltage 230 V_{AC} (can be switched to 115 V_{AC} with mains/line voltage conversion kit)
- 2 output voltages, galvanically separated
- High control accuracy, low residual ripple and very low interference
- Suited for medical applications (8 mm safety clearances)

CE EN 62368-1
approved

DELIVERY COMPRISES

Qty	Description
1	19" compatible power supply Height 3 U Width A: 6, 10, 14 HP Depth 171.93 mm (160 mm board depth) Connector H 15M Coding strip (fitted)

ORDER INFORMATION

Voltage V	Current A	Power W	Width HP	Description	Part no.
V1: 5 V2: 5	I ₁ : 1.4 I ₂ : 1.4	14	10	PSM 205	13105-021
V1: 12 V2: 12	I ₁ : 0.4 I ₂ : 0.4	10	6	PSK 212	13105-017
V1: 12 V2: 12	I ₁ : 1 I ₂ : 1	24	10	PSM 212	13105-022
V1: 12 V2: 12	I ₁ : 1.5 I ₂ : 1.5	36	14	PSG 212	13105-027
V1: 15 V2: 15	I ₁ : 0.4 I ₂ : 0.4	12	6	PSK 215	13105-018
V1: 15 V2: 15	I ₁ : 1 I ₂ : 1	30	10	PSM 215	13105-023
V1: 15 V2: 15	I ₁ : 1.5 I ₂ : 1.5	45	14	PSG 215	13105-028
V1: 24 V2: 24	I ₁ : 1.2 I ₂ : 1.2	58	14	PSG 224	13105-029
Front panel for PSK 6 HP, 1 piece					21005-476
Front panel for PSM 10 HP, 1 piece					21005-477
Front panel for PSG 14 HP, 1 piece					21005-478
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
Coding PU (Female strip)					60800-122
Mains voltage conversion kit 230 V to 115 V, 1 piece					43105-999

Note

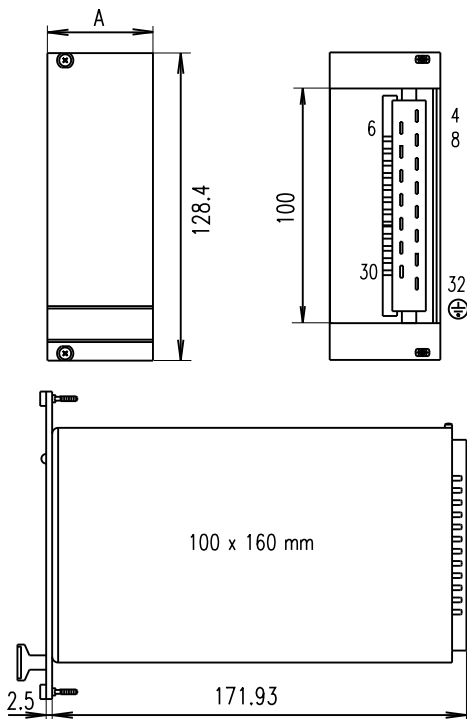
- **Please order front panel separately** (Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit)
- PSK without case
- Output data at T_A = 0 ... 50 °C
- Further accessories see page 9.15

Power supplies – 19" AC/DC linear regulators

LINEAR REGULATORS, TRIPLE



11300002



Connector pin-out

Pin	Connection
4	Sense line + V ₁ (PSM, PSG)
6	Output + V ₁
8	Output 0 V ₁
10	Sense line 0 V ₁ (PSM, PSG)
12	Output + V ₂
14	Output 0 V ₂
16	Output + V ₃
18	Output 0 V ₃
20	Data save
22	Power failure
24	0 V for pin 20, 22
26	-
28	L
30	N
32	PE ⊕

DILM0084

- Mains/line voltage 230 V_{AC} (can be switched to 115 V_{AC} with mains/line voltage conversion kit)
- 3 output voltages, galvanically separated
- High control accuracy, low residual ripple and very low interference
- Suited for medical applications (8 mm safety clearances)

CE EN 62368-1
approved

DELIVERY COMPRISES

Qty	Description
1	19" compatible power supply height 3 U width A: 6, 10, 14 HP depth 171.93 mm (160 mm board depth) connector H 15 M coding strip (fitted)

ORDER INFORMATION

Voltage V	Current A	Power W	Width HP	Description	Part no.
V ₁ : 5	I ₁ : 0.5	8	6	PSK 312	13105-051
V ₂ : 12	I ₂ : 0.2				
V ₃ : 12	I ₃ : 0.2				
V ₁ : 5	I ₁ : 1.5	20	10	PSM 312	13105-052
V ₂ : 12	I ₂ : 0.5				
V ₃ : 12	I ₃ : 0.5				
V ₁ : 5	I ₁ : 3	39	14	PSG 312	13105-053
V ₂ : 12	I ₂ : 1				
V ₃ : 12	I ₃ : 1				
Front panel for PSK 6 HP, 1 piece					21005-470
Front panel for PSM 10 HP, 1 piece					21005-451
Front panel for PSG 14 HP, 1 piece					21005-439
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
Coding PU (Female strip)					60800-122
Mains voltage conversion kit 230 V to 115 V, 1 piece					43105-999

Note

- **Please order front panel separately** (Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit)
- PSK without case
- Output data at T_A = 0 ... 50 °C
- Further accessories see page 9.15

Power supplies – 19" DC/DC converters

coolpower 100 W, single



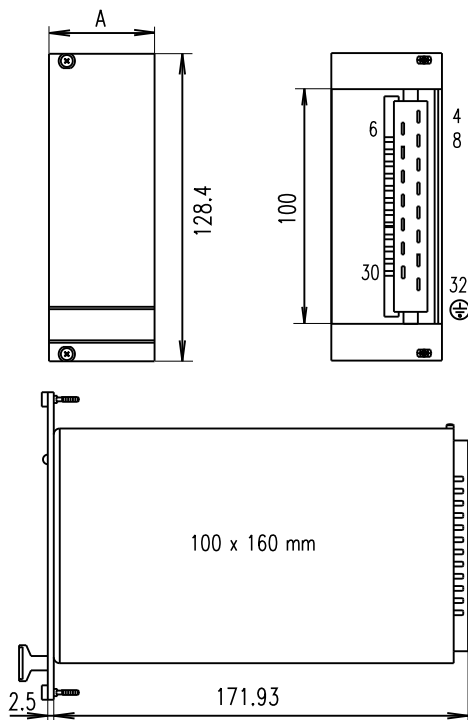
- Wide input voltage range from 20 to 72 V_{DC}
- High power density
- Single output voltage, redundancy diode fitted
- External ON/OFF
- Galvanic separation between primary and secondary circuits
- Passive current-share operation



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)

11301001



ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
5 ¹⁾	20	100	CPDC 105	13103-002
12 ¹⁾	8.5	102	CPDC 112	13103-003
15 ¹⁾	6.7	100	CPDC 115	13103-004
24 ²⁾	4.5	108	CPDC 212	13103-007

1) Front panel 6 HP, Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit, 1 piece **21006-955**

2) Front panel 6 HP, Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit, 1 piece **21006-956**

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**

Coding PU (Female strip) **60800-122**

Connector pin-out

Pin	5, 12, 15 V Connection
4	Output + V ₁
6	Output + V ₁
8	Sense line + V ₀
10	Sense line 0V V ₁
12	Output 0V V ₁
14	Output 0V V ₁
16	
18	
20	
22	Internally engaged
24	Output OK
26	Ext. ON/OFF*
28	+V _E
30	0V V _E
32	PE ⊕

Pin	24 V Connection
4	
6	Output + 24 ... 30 V via diode
8	
10	Output 0 V
12	Output 0 V
14	Output 0 V
16	Internally engaged
18	Internally engaged
20	Internally engaged
22	Internally engaged
24	
26	
28	+V _E
30	0V V _E
32	PE ⊕

DLM0084

Note

- **Please order front panel separately**
- Power supply with CPDC 212, dual output voltages 24, 30 V (2 x 12 V, 2 x 15 V)
- Front panel for 13103-007: 21006-956
- For higher input voltages (100 ... 360 V_{DC}) see maxpower single, page 9.4
- Further accessories see page 9.15

Power supplies – 19" DC/DC converters

COOLPOWER 100 W, DUAL



- Wide input voltage range from 20 to 72 V_{DC}
- High power density
- 2 output voltages (or single output voltage 24 – 30 V via internal redundancy diode V₁D)
- Galvanic separation between primary and secondary circuit



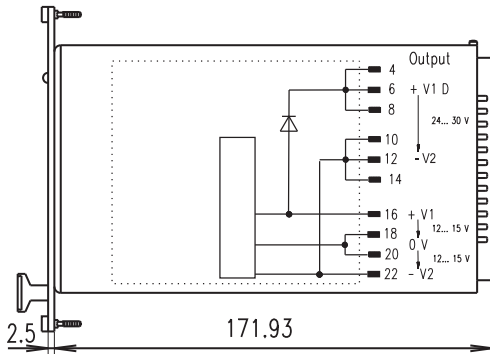
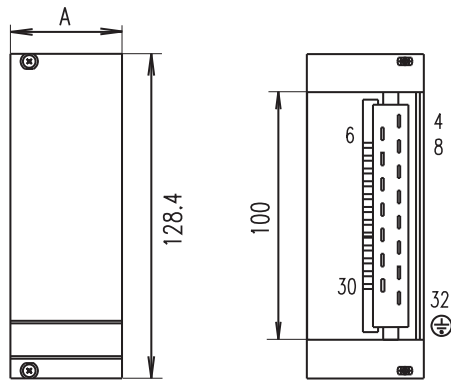
DELIVERY COMPRISES

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)

11302003

ORDER INFORMATION

Voltage min. ... max. V	Current A	Power W	Description	Part no.
V ₁ : 12 ... 15 V ₂ : -12 ... -15	I ₁ : 4.5 I ₂ : 4.5	108	CPDC 212	13103-007
Front panel 6 HP, Al, front anodised, rear iridescent green chromated, with vertical grooves for EMC gaskets, incl. assembly kit, 1 piece				21006-956
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
Coding PU (Female strip)				60800-122



Connector pin-out

Pin	Connection
4	Output + V ₁ D
6	Output + V ₁ D
8	Output + V ₁ D
10	Output - V ₂
12	Output - V ₂
14	Output - V ₂
16	Output + V ₁
18	Output V ₁ /V ₂ 0 V
20	Output V ₁ /V ₂ 0 V
22	Output - V ₂
24	-
26	-
28	Input +V _i
30	Input 0 V
32	PE ⊕

11302053

Note

- **Please order front panel separately**
- 1 output voltage via output pins V₁D 24 V ... 30 V, I₁D 4.5 A, 108 W
- Output data at T_A = 50 °C
- Adjustment range 12 V ... 15 V
- For higher input voltages (100 ... 360 V_{DC}), see maxpower single, page 9.7
- Further accessories see page 9.15

Power supplies – 19" DC/DC converters

COOLPOWER 100 W, TRIPLE



- Wide input voltage range from 20 to 72 V_{DC}
- High power density
- 3 output voltages, galvanically separated
- Galvanic separation between primary and secondary circuit
- External ON/OFF



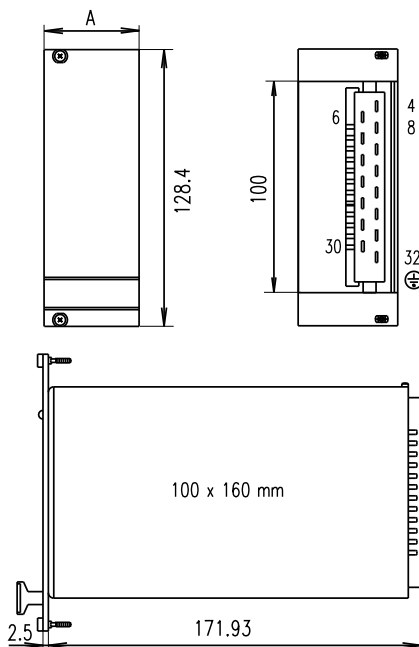
DELIVERY COMPRISES

Qty	Description
1	19" compatible power supply height 3 U width A: 6 HP depth 171.93 mm (160 mm deep boards) connector H15M (fitted) keying/coding peg (fitted)

11302004

ORDER INFORMATION

Voltage min. ... max. V	Current A	Power W	Description	Part no.
V ₁ : 5 V ₂ : 12 ... 15V ₃ : 12 ... 15	I ₁ : 10 I ₂ : 2 I ₃ : 2	98	CPDC 312	13103-016
Front panel 6 HP, Al, front anodised, rear colourless chromated, with vertical grooves for EMC gaskets, incl. assembly kit, 1 piece				21006-957
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
Coding PU (Female strip)				60800-122



Connector pin-out

Pin	Connection
4	Output + V
6	Output + V ₁
8	Sense line + V ₂
10	Sense line V ₁ 0 V
12	Output V ₁ 0 V
14	Output V ₁ 0 V
16	Output + V ₂
18	Output V ₂ 0 V
20	Output + V ₃
22	Output V ₃ 0 V
24	–
26	External ON/OFF
28	Input +V _i
30	Input 0 V
32	PE ⊕

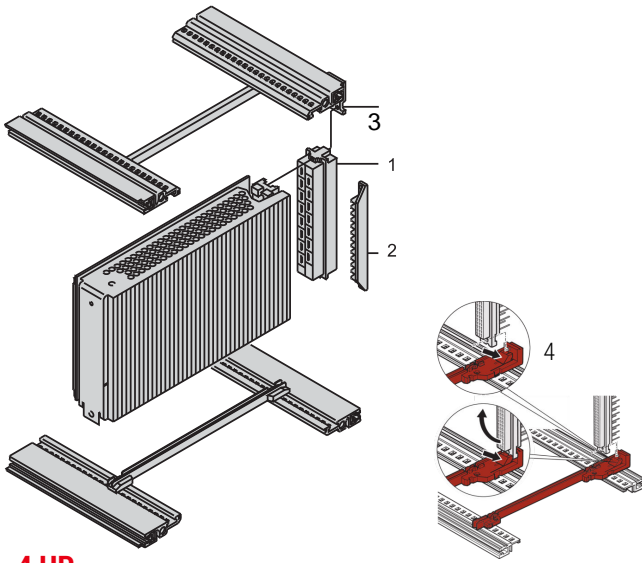
01JM0084

Note

- **Please order front panel separately**
- Output data at T_A = 50 °C
- Adjustment range V₂, V₃ 12 ... 15 V
- Input voltage 100 ... 360 V_{DC}, see maxpower triple, page 9.8
- Further accessories see page 9.15

Power supplies – Accessories

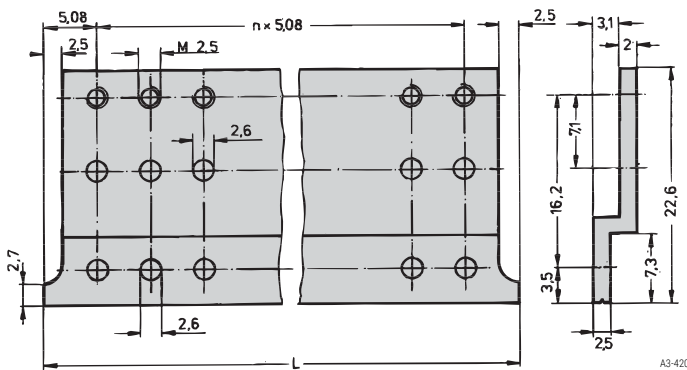
ACCESSORIES



- For slimpower, maxpower, coolpower and linear regulators
- Z-rail (item 3)
- Guide rail for DIN connector assembly (item 4)
- Mating connector female H 15 F (item 1)
- Coding (item 2). More details on page 9.17
- Wall/horizontal rail mounting

PSA45379

Z-RAIL, 4 HP



- For bolting a H15 F connector to the rear horizontal rail/case (item 3)
- Provides the standard plug-in depth of the PSUs

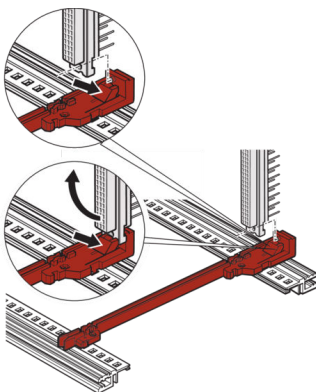
ORDER INFORMATION

Description	Qty/PU	Part no.
Z-rail, 4 HP (20.32 mm)	1	30822-166
Screw, M2.5x7, Torx 8, For the assembly of the connector to the Z-rail	PU 100	24560-147

Note

- Two Z-rails are required per connector

GUIDE RAIL FOR DIN CONNECTOR FIXING



- Connector is clipped directly onto the guide rails
- For Euroboards (3U) only 100 x 160 mm

ORDER INFORMATION

Description	Qty/PU	Qty/PU	Part no.
Guide rail DIN connector assembly	PBT, UL94V-0, red	1 pair, PU 10 pair	64560-074

CONNECTOR H 15 F



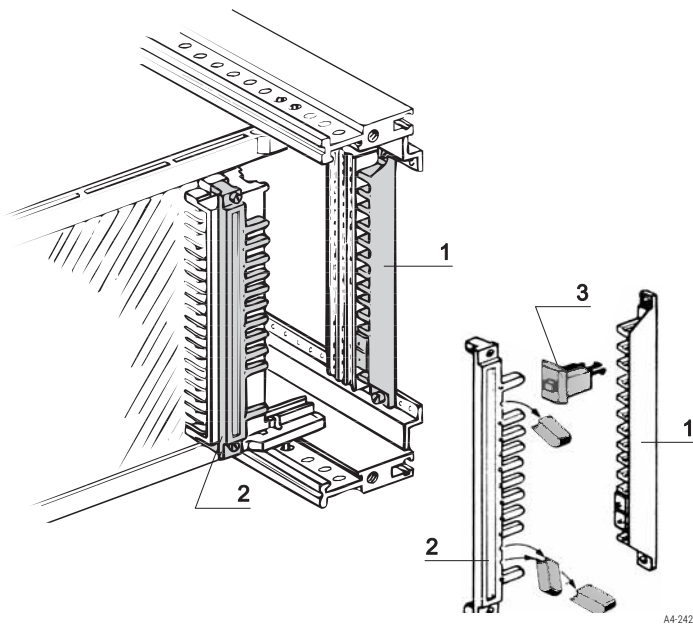
- Connector EN 60603 (DIN 41612) H15 F for 6.3 mm FASTON
- In 19" power supply units the H 15 male connector is fitted, PIN 32 with capacitive earthing contact
- Compatible with connector H15 M of e.g. 19" plug-in equipment

ORDER INFORMATION

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

Power supplies – Accessories

KEYING/CODING

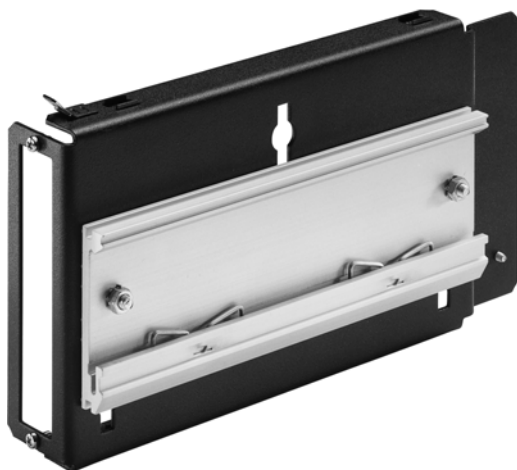


- Mechanical coding prevents a PSU being fitted on the wrong slot, space requirement 4 HP
- Coding:
 - Female strip (item 2), fitted on PSU (except slimpower)
 - Coding strip (item 1) mounts on the Z/horizontal rail
 - Placement of coding pins (item 3) in the coding strip (item 1)
 - Removal of studs 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
Female strip (item 2), fitted on PSU (except slimpower)	60800-122

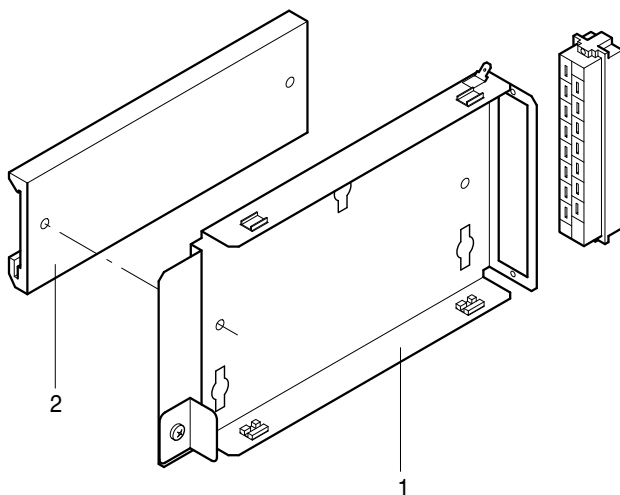
WALL/HORIZONTAL RAIL MOUNTING



- 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



PSA45389

Power supplies–MicroTCA

AC/DC, DOUBLE FULL-SIZE, WITH POWER MANAGEMENT (EMMC)



11316001

- Mains input at front with wide input voltage range for AC voltages with IEC locking system
- Construction compatible with AdvancedMC double full-size
- Supports N+1 and 2+2 redundancy, load sharing and hot swap
- Power management for 16 current channel (12 AMC, 2 CU and 2 MCHs)
- High efficiency
- Visual performance display

The MTCA PSU 600 is an exceptionally efficient power module (PM) for MicroTCA[®] applications. This 600W power supply is the most efficient available in double-width full-size format. This PM's integrated management controller makes it ideally suited for use in complex communications systems running the latest generations of processors and an increased number of AMC modules. The MTCA PSU 600 provides the power required for 12 AMCs, 2 Cooling Units (CUs) and 2 MicroTCA[®] Carrier Hubs (MCHs).

DELIVERY INCLUDES

Qty.	Description
1	PSU for MicroTCA Double height (148.3 mm) Full-size width (6 HP) Depth 186.65 mm Connector MicroTCA Power 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 : 6.8 I ₂ : 0.18	600	MTCA PSU 600	11098-547

Power supplies – for MicroTCA

AC/DC, DOUBLE FULL-SIZE, WITHOUT MANAGEMENT



- 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

DELIVERY COMPRISES

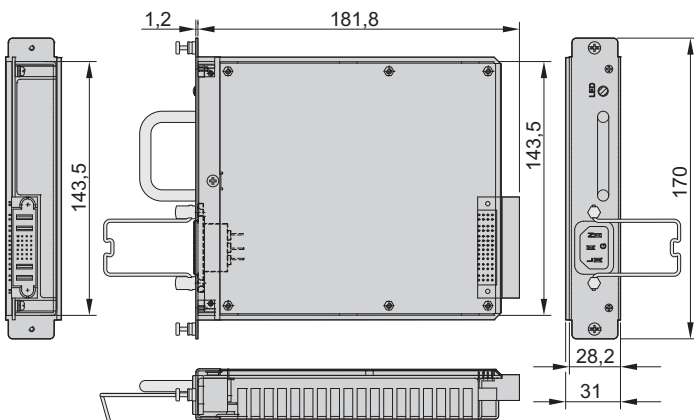
Qty	Description
1	PSU for MicroTCA height double (148.3 mm) width full-size (6 HP) depth 186.65 mm connector Molex SSI front panel with handle and EMC gasket (fitted)

ORDER INFORMATION

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

Note

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



11309004

11312050

Power supplies – for VMEbus

AC/DC, 19", 6 U, TRIPLE



- Wide input voltage range 90 ... 264 V_{AC} and 130 ... 350 V_{DC} with active power factor correction (PFC)
- 3 output voltages
- VMEbus signalling

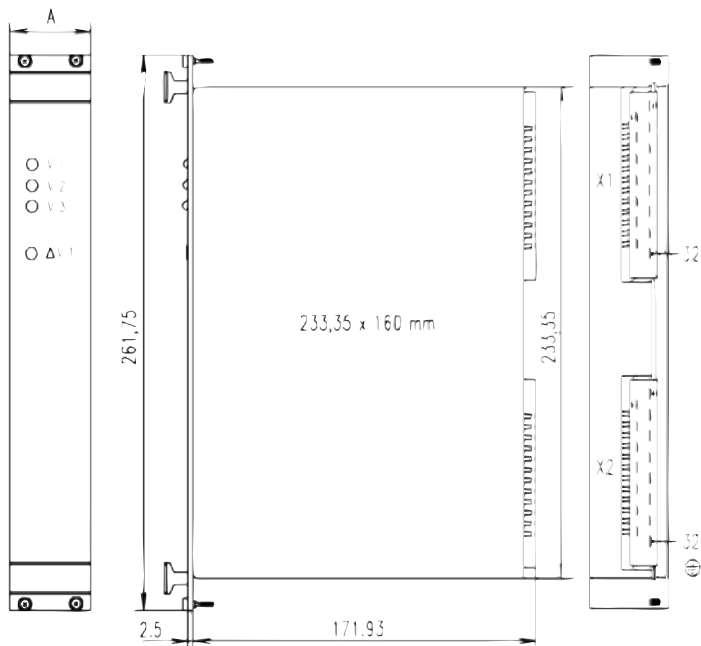


DELIVERY COMPRISES

Qty	Description
1	19" compatible power supply height 6 U width A: 8, 12 HP depth 171.93 mm (160 mm board depth) front panel with handles (fitted) connector H 15 M (2 pieces) coding strip (2 pieces, fitted)

ORDER INFORMATION

Voltage V	Current A	Power W	Width HP	Description	Part no.
V1: 5 V2: 12 V3: -12	I1: 20 I2: 4 I3: 3	150 (60)	8	MPS 015	13100-205
V1: 5 V2: 12 V3: -12	I1: 28 I2: 7 I3: 3	224 (84)	12	MPS 022	13100-203
V1: 5 V2: 15 V3: -15	I1: 28 I2: 5.6 I3: 2.4	224 (84)	12	MPS 022/15	13100-204
EMC gaskets (stainless steel) 6 U, 232 mm, stainless steel, 2 pieces necessary per front panel, PU 10 pieces					21101-707
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
Coding PU (Female strip)					60800-122



Connector pin-out

Pin	Connection x1 (at top)	Connection x2 (at bottom)
4	Output + V ₁	ACFAIL
6	Output + V ₁	SYSRESET
8	Output + V ₁	–
10	Output + V ₁	Current Share Bus
12	Output + V ₁	Shutdown 4 ... 28 V
14	Sense line + V ₁	GND Shutdown
16	Output - V ₃	–
18	Output 0 V _{1,2,3}	–
20	Output 0 V _{1,2,3}	–
22	Output 0 V _{1,2,3}	–
24	Output 0 V _{1,2,3}	–
26	Output 0 V _{1,2,3}	–
28	Output + V ₂	L
30	Output + V ₂	N
32	Sense line 0 V ₁	PE y

Note

- Output data at T_A = 0 ... 40 °C
- Values in brackets: Output power V₂ + V₃
- Further accessories see page 9.15

Power supplies – for CompactPCI Serial

19" SWITCHED-MODE POWER SUPPLY FOR COMPACTPCI SERIAL



- 19" pluggable PSU for CompactPCI Serial applications
- Very wide input voltage range for both AC and DC
- Active power factor correction and active current-share function
- N+1 redundancy, hot swap
- Output signaling: PS present, power failure, PO ON and enable
- I2C interface
- Temperature monitoring
- Sense line
- UL, cUL and DEMKO certificates, CE-compliant


CompactPCI®

108231127

DELIVERY INCLUDES

Qty	Description
1	19"-compatible PSU Height 3 U Width 8 HP 160 mm board depth PwrBlade connector (fitted) Front panel with handle and EMC contact strip (fitted)



ORDER INFORMATION

Voltage V	Current A	Power W	Input voltage	Part no.
V ₁ : 12	I ₁ : 25	300	AC: 90 ... 264 V	11098-538
V ₂ : 5	I ₂ : 2.5			

Accessories

CompactPCI Serial power backplane, 3 U, 8 HP, 1 slot	1 piece	23098-397
Guide rail with keying/coding, groove width 2.0 mm, with 0.1" offset, green, 1kit = 10 pieces		24568-359



Power supplies – for CompactPCI and VME64x

AC/DC, 19", 3 U, QUAD



- Wide input voltage range 90 ... 264 V_{AC} with power factor correction (PFC)
- 4 output voltages
- Connector P 47
- Redundant operation with Current Share Bus (CSB), hot-swap
- CompactPCI signalling

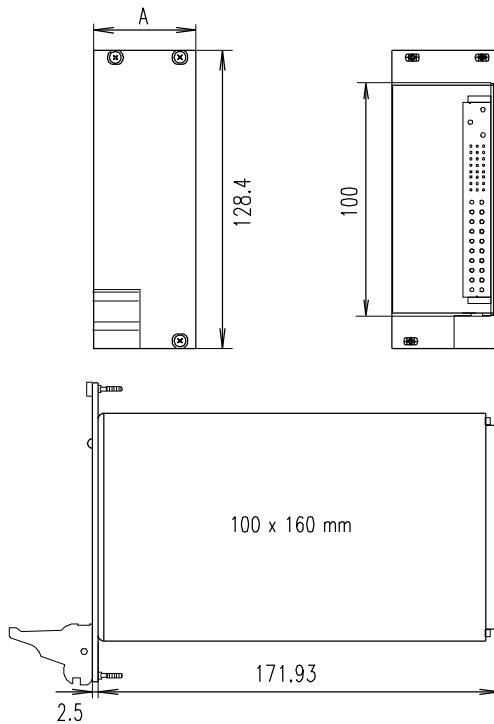


CompactPCI®

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 P 47 front panel with handles and EMC gasket fitted

11302005



ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
V1: 5 V2: 3.3 V3: 12 V4: -12	I ₁ : 40 I ₂ : 40 I ₃ : 10 I ₄ : 2	300	CPCI 300 AC	13100-143
Power backplane with P47 connector 3 U, width 39.6 mm, 1 x connector position P47, 1 piece				23098-393
Power backplane with P47 connector 3 U, width 80.3 mm, 2 x connector positions P47 (side-by-side), 1 piece				23098-394
Power backplane with P47 connector 6 U, width 39.6 mm, 1 x connector position P47, top, 1 piece				23098-395
Power backplane with P47 connector 6 U, width 39.6 mm, 2 x connector position P47, one above the other, 1 piece				23098-396
Guide rail with keying/coding, groove width 2.0 mm, with 0.1" offset, green, 1kit = 10 pieces				24568-359

Note

- Output data at T_A = 0 ... 50 °C with forced air cooling of 2 m/s
- 47-pin CompactPCI connector to PICMG 2.11 specification

11302052

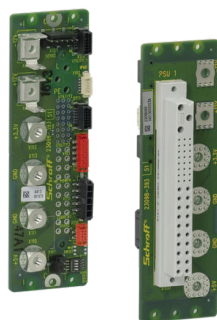


Image shows Power Backplane 23098-393

Power supplies – for CompactPCI and VME64x

AC/DC, 19", 6 U, QUAD



- Wide input voltage range 90 ... 264 V_{AC} with power factor correction (PFC)
- 4 output voltages
- Connector P 47
- Redundant operation with Current Share Bus (CSB), hot-swap
- CompactPCI signalling



DELIVERY COMPRISES

Qty	Description
1	19" compatible power supply height 6 U width A: 8 HP depth 171.93 mm (160 mm board depth) connector P 47 front panel with handles and textile EMC gasket fitted

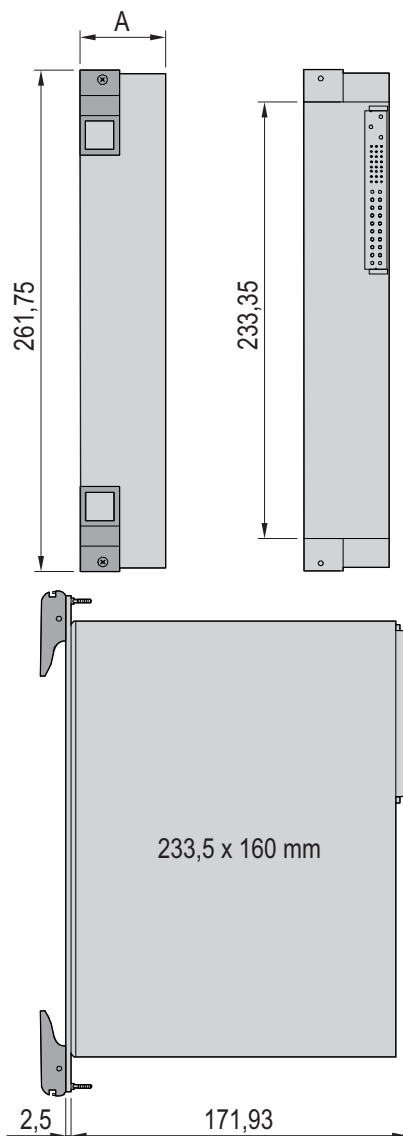
11308007

ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
V1: 5 V2: 3.3 V3: 12 V4: -12	I1: 50 I2: 60 I3: 12 I4: 4	500	CPCI 500 AC	13100-145
Power backplane with P47 connector 6 U, width 39.6 mm, 1 x connector position P47, top, 1 piece				23098-395
Guide rail with keying/coding, groove width 2.0 mm, with 0.1" offset, green, 1kit = 10 pieces				24568-359

Note

- Output data at T_A = -25 ... 55 °C with forced air cooling of 1.5 m/s
- 47-pin CompactPCI connector to PICMG 2.11 specification



11302051

Power supplies – for CompactPCI and VME64x

DC/DC, 19", 3 U, QUAD



- Input voltage 48 V_{DC} (36 ... 75 V_{DC})
- 4 output voltages
- Connector P 47
- Redundant outputs with Current Share Bus (CSB), hot-swap
- CompactPCI signalling

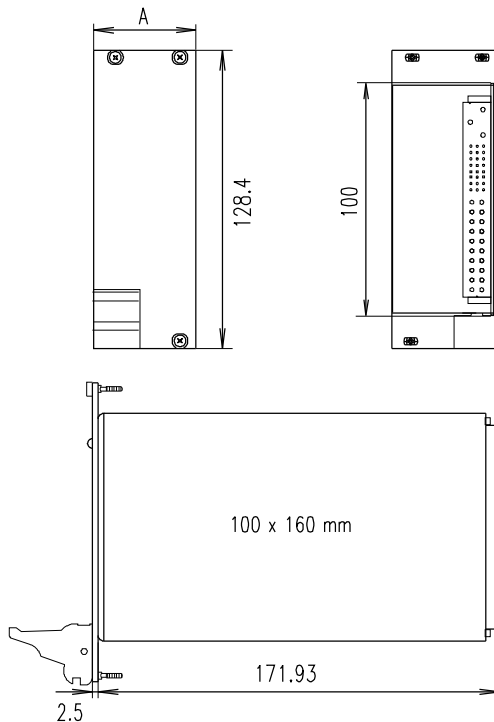


CompactPCI®

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 P 47 front panel with handle and EMC contact strips (fitted)

11302005



ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
V1: 5	I ₁ : 40	250	CPCI 250 DC	13100-142
V ₂ : 3.3	I ₂ : 40			
V ₃ : 12	I ₃ : 5.5			
V ₄ : -12	I ₄ : 2			
Power backplane with P47 connector 3 U, width 39.6 mm, 1 x connector position P47, 1 piece				23098-393
Power backplane with P47 connector 3 U, width 80.3 mm, 2 x connector positions P47 (side-by-side), 1 piece				23098-394
Power backplane with P47 connector 6 U, width 39.6 mm, 1 x connector position P47, top, 1 piece				23098-395
Power backplane with P47 connector 6 U, width 39.6 mm, 2 x connector position P47, one above the other, 1 piece				23098-396
Guide rail with keying/coding, groove width 2.0 mm, with 0.1" offset, green, 1kit = 10 pieces				24568-359

Note

- Output data at T_A = 0 ... 50 °C, with forced air cooling of 2 m/s
- 47-pin CompactPCI connector to PICMG 2.11 specification

11302052

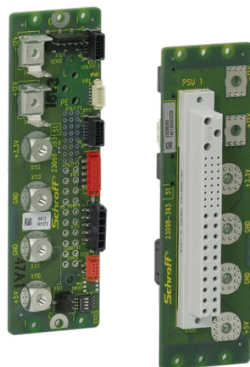


Image shows Power Backplane 23098-393

Power supplies – for CompactPCI and VME64x

DC/DC, 19", 6 U, QUAD



- Input voltage range 48 V_{DC} (36 ... 72 V_{DC})
- 4 output voltages
- Connector P 47
- Redundant outputs with Current Share Bus (CSB), hot-swap
- Compact PCI signalling



DELIVERY COMPRISES

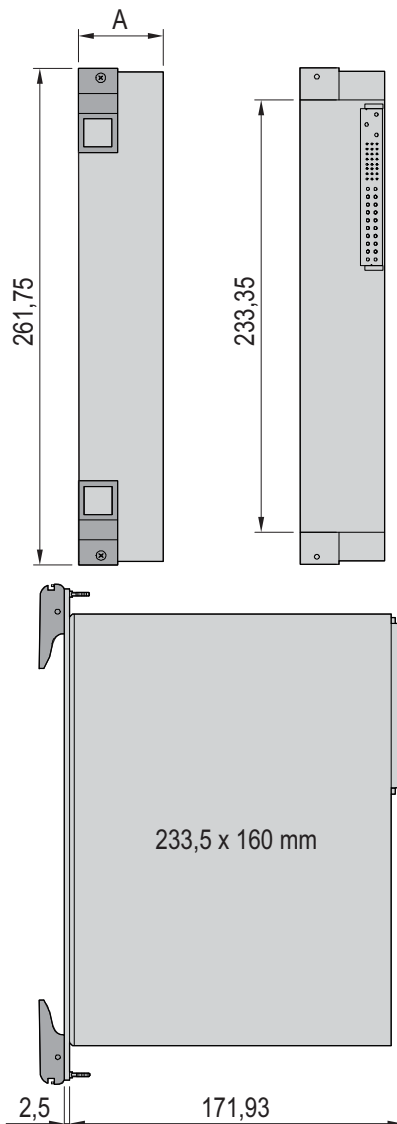
Qty	Description
1	19" compatible power supply height 3 U width A: 8 HP depth 171.93 mm (160 mm deep boards) connector P 47 (fitted) front panel with handles and EMC contact strip (fitted)

ORDER INFORMATION

Voltage V	Current A	Power W	Description	Part no.
V ₁ : 5 V ₂ : 3.3 V ₃ : 12 V ₄ : -12	I ₁ : 50 I ₂ : 60 I ₃ : 12 I ₄ : 4	500	CPCI DC-6U-500	13100-146
Power backplane with P47 connector 6 U, width 39.6 mm, 1 × connector position P47, top, 1 piece			23098-395	
Guide rail with keying/coding, groove width 2.0 mm, with 0.1" offset, green, 1kit = 10 pieces			24568-359	

Note

- Output data at T_A = -10 ... 55 °C with forced air cooling of 2 m/s
- 47-pin CompactPCI connector to PICMG 2.11 specification



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Power supplies – 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

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