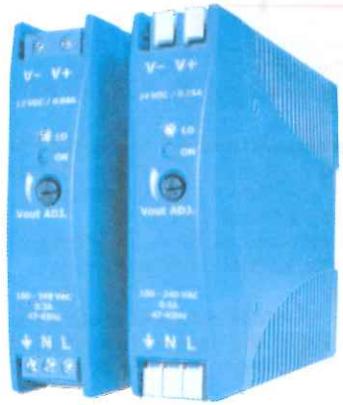
DIN Rail Mountable Switching Power Supply



Technical Data
Installation and Operation

ig. 1

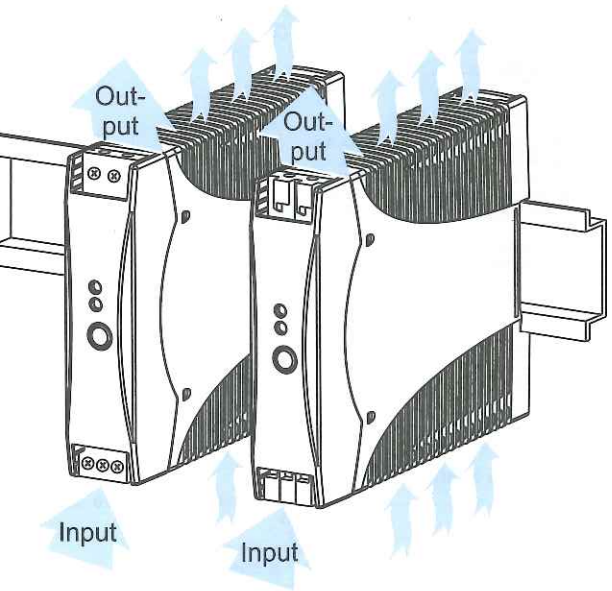


Fig. 2

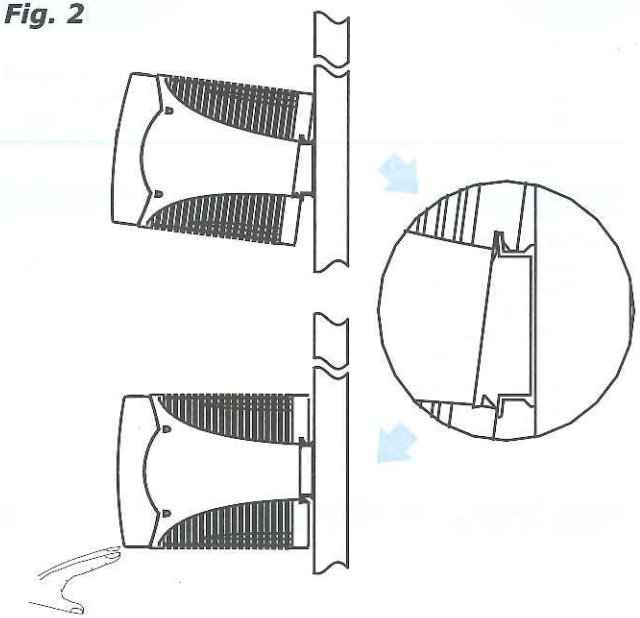
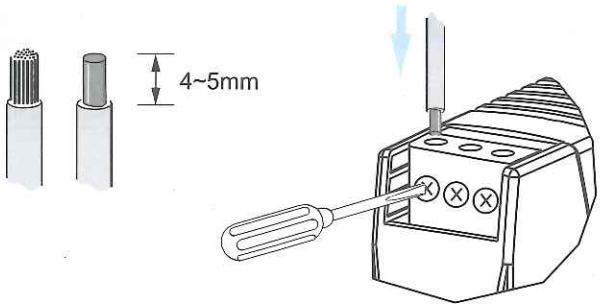


Fig. 3 Screw Terminal Type



Connector size range
* AWG26 - 12
- Connector can withstand torque at maximum 5 pound-inches

Use copper conductors only, 60/75 °C

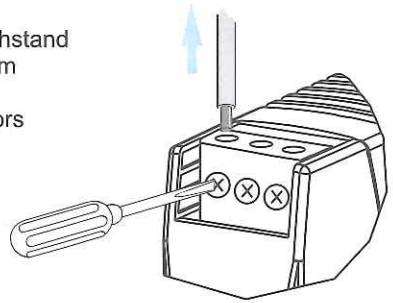
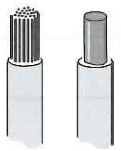
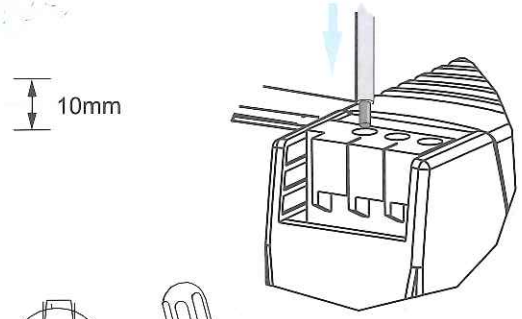
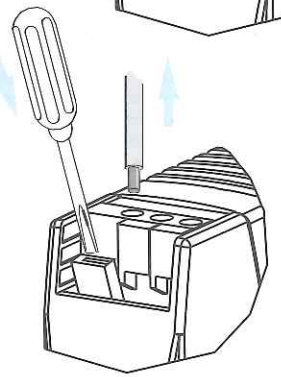


Fig. 4 Spring Terminal Type

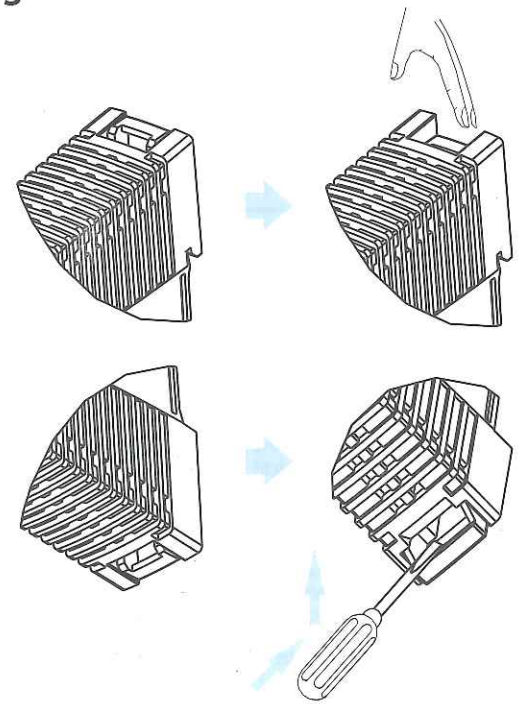






Connector size range
*AWG24 - 14
Use copper conductors only, 60/75 °C

Fig. 5



Safety notes

d Instructions!

ore working with this unit, read these instructions carefully and pletely. Make sure that you have understood all the information!

onnect system from supply network

re any installation, maintenance or modification work:
onnect your system from the supply network. Ensure that cannot e-connected inadvertently!

re start of operation

ure appropriate installation

ning! Improper installation / operation impair safety and result perational difficulties or complete failure of the unit.
unit must be installed and put into service appropriately by qualified onnel. Compliance with the relevant regulations must be ensured.
re operation is begun the following conditions must be ensured, articular:
nnection to main power supply in compliance with VDE0100 d EN50178.
ch stranded wires: all strands must be secured in the terminal cks (Potential danger of short circuit).
it and power supply cables must be properly fused; if necessary anually controlled disconnecting element must be used to disengage m supply mains.
e non-fused earth conductor must be connected to the " ⏚ " minal (protection class 1).
output lines must be rated for the power supply output current d must be connected with the correct polarity.
fficient air-cooling must be ensured.
e in a pollution degree 2 environment.
s equipment is suitable for use in class I, division 2, groups A, B, and D or non hazardous locations only.
rning-explosion hazard-substitution of components may impair tability for class I, division 2.
rning-explosion hazard-do not disconnect equipment unless power been switched off or it is known to be the non-hazardous area.

peration: No modifications!

ng as the unit is in operation: do not modify the llation! The same applies also to the secondary side. Risk of ric arcs and electric shock (fatal)!

y (dis) connect plug connectors when power is off!

vection cooling

ot cover any ventilation holes!
ve sufficient space around the unit **for cooling!**
supplementary sheet "Technical Data" and Fig. 1

ing: High voltage! Store energy!

unit contains unprotected conductors carrying a lethal high voltage, components storing substantial amounts of energy. Improper ling may result in an electric shock or serious burn!
unit must not be opened except appropriately trained sonnel!
not introduce any object into the unit!
p away from fire and water!

Installation

Application

This unit is a primary switched-mode power supply designed **for use in panel-board installations or building-in applications** where access to the supply is restricted (shock-hazard protection). It must only be installed and put into service appropriately by qualified personnel.

Mounting

Mounting

Permissible mounting position: see Fig. 1 keep free ventilation hole, leave space for cooling! Recommended to have 25mm free space at all sides for ventilation / cooling:
see supplementary sheet "Technical Data".

Snap on support rail (See Fig. 2)

- Tilt the unit slightly rearwards.
- Fit the unit over top hat rail.
- Slide it downward until it hits the stop.
- Press against the bottom front side for locking.
- Shake the unit slightly to check the locking action.

Front elements

Operation indicator

The green LED lights up while the PSU working properly.

DC output low indicator

The red LED lights up while the output voltage is too low.

Potentiometer

Setting the output voltage.

Connection / Internal fuse

Connection

- Data for permitted loads, cable cross-sections and stripping: see enclosed leaflet " Technical Data " (See Fig. 3).
- Use only commercial cables designed for the indicated voltage and current values!
- With flexible cables: make sure that all stranded cable are secured in the terminal.
- Ensure proper polarity at output terminals!

Grounding

- **Do not operate without PE connection!** To comply with EMC and safety standards (CE mark, approvals), the unit must only be operated if the PE terminal ⏚ is connected to the non-fused earth conductor.
- Secondary side is not earthed; if necessary the ⊕ or ⊖ terminal can be earthed optionally.

Internal fuse

The internal input fuse serves to protect the unit and must not be replaced by the user. In case of an internal defect, the unit must be returned to the manufacturer for safety reasons.

Removal

Removal Detaching from support rail

Before removal : Switch mains power off and disconnect your system from the supply network.
See Fig. 4 push the slider downwards (unlock). Gently lift lower front edge of the unit (tipping) and remove.

Technical Data

All specifications are typical at norminal line, full load, 25°C; Unless otherwise noticed.

MODEL	Po [W]	VO [V]	Io [mA]	Eff. [typ.]	Inrush Current 115Vac	Inrush Current 230Vac
DRA05-05(A)	5	5	1000	69%	< 10A	< 18A
DRA05-12(A)	5	12	420	72%		
DRA05-15(A)	5	15	340	72%		
DRA05-24(A)	5	24	210	72%		
DRA10-05(A)	10	5	2000	73%		
DRA10-12(A)	10	12	840	75%		
DRA10-15(A)	10	15	670	76%		
DRA10-24(A)	10	24	420	76%		
DRA18-05(A)	15	5	3000	75%		
DRA18-12(A)	18	12	1500	77%		
DRA18-15(A)	18	15	1200	77%		
DRA18-24(A)	18	24	750	77%		

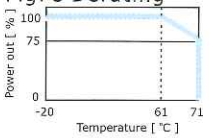
DRA05 - 05 A

- DRA05: Wattage
- 05 : 5V OUT, 12 : 12V OUT, 15 : 15V OUT, 24 : 24V OUT
- BLANK : SPRING TERMINAL TYPE, A : SCREW TERMINAL TYPE

General Specification

Isolation ..... 3000 Vac / 4242 Vdc
Isolation Resistance..... 100 M ohm
Operation amb. Temperature.... -20 ~ +71°C
Derating..... +61 ~ +71°C (see Fig. 5)
Storage Temperature..... -25 ~ +85°C
Relative Humidity..... 20 ~ 95% RH
Cooling..... Free air convection
Temperature Coefficient..... 0.03% / °C
Dimension..... L90xW22.5xD114 [mm]
Weight..... 120 ~ 150g

Fig. 5 Derating



Input Specification

Rated Input Voltage..... 100 ~ 240 Vac
Input Voltage Range..... 90 ~ 264 Vac or 120 ~ 375 Vdc
Rated Input Current..... 5W : 200mA
10W : 300mA
15W & 18W : 500mA
Line Frequency..... 47 ~ 63Hz
Power Factor..... 0.4@230 Vac

Output Specification

Output Accuracy..... +0 ~ 1%
Line Regulation ..... ± 1%
Load Regulation..... ± 2%
Ripple & Noise ..... 50 mV
Voltage Trim Range..... -10% ~+15%
-10% ~ +20% for 24Vout
DC ON Indicator..... Green LED
DC LOW Indicator..... Red LED
Turn on time..... <1000ms
Fall time..... <150ms
Rise time..... <150ms
Hold up time..... >20ms
Case Material..... Plastic

Control And Protection

Input Internal Fuse..... T2A / 250 Vac
Output Short Circuit ..... Hiccup mode
Output Over Load..... 110 % ~ 145 %

Approvals And Standard

UL / cUL..... UL 508 Listed / UL 60950-1, UL 1310 Class 2 power ISA 12.12.01
TUV ..... EN 60950-1
CE..... EN 61000-6-3, EN 55022 class B
EN 61000-3-2, EN61000-3-3
EN 61000-6-2, EN 55024
EN 61000-4-2, -3, -4, -5, -6, -8, -11
EN 61204-3