



ComNet™ model PS48VDC-10A is a high-quality, low-noise switching mode power supply ideally suited to those applications requiring PoE (Power over Ethernet). This rugged unit may be either DIN-rail or shelf-mounted, providing an identical mounting configuration to the mating PoE switch. Up to 24 PoE field devices may be powered from a single supply, and the high output current capacity provides an adequate safety margin. A maximum of three of these units may be paralleled together to triple the number of PoE devices supported. The wide ambient operating temperature range permits installation in most out-of-plant and unconditioned environments, such as those found in intelligent transportation systems or factory automation/industrial control applications. Unconditional line and load protection is provided.

## FEATURES

- › Universal AC input: 90 to 264 VAC, 47-63Hz
- › Mounts on standard 7.5 or 15 mm DIN-rail
- › Automatic power factor correction (PFC)
- › High operating efficiency; up to 90%
- › Small package for limited space installations
- › Natural convection cooling; no troublesome fans

## APPLICATIONS

- › Power Supply for Ethernet Switches with PoE

## SPECIFICATIONS

## Electrical

|                                       |                       |
|---------------------------------------|-----------------------|
| Line regulation                       | ± 0.5%                |
| Load regulation,<br>Non-parallel mode | ± 0.5%                |
| Load regulation,<br>Parallel mode     | ± 5%                  |
| Output Voltage accuracy               | 1% (factory adjusted) |
| Ripple and Noise                      | 100 mV                |
| Hold up time $V_i = 230V_{ac}$        | 30 ms                 |
| Minimum load                          | 0%                    |
| Parallel Operation                    | 3 units max.          |

## Input Data

|                                      |               |
|--------------------------------------|---------------|
| Rated input voltage range            |               |
| AC                                   | 90 - 264 Vac  |
| DC                                   | 120 - 370 Vdc |
| Rated input current<br>(115/230 VAC) | 7 / 3.5A      |
| Frequency range                      | 47 to 63 Hz   |
| Inrush current                       |               |
| $V_i = 115V_{ac}$                    | 25A           |
| $V_i = 230V_{ac}$                    | 50A           |

## Controls and Protections

|                                 |                                    |
|---------------------------------|------------------------------------|
| Input Fuse                      | T10A/250 VAC internal <sup>1</sup> |
| Output Overvoltage Protection   | 57 to 63 VDC                       |
| Output Short Circuit Protection | Current limit                      |
| Rated Overload Protection       | 120-140%                           |

[1] When S/P switch is set to parallel, it is not possible to trim output voltage.

[2] For complete compliance information contact ComNet for manufacturer's data sheet.

## General Data

(@ Nominal Line, Full Load, 25°C)

|                               |                                            |
|-------------------------------|--------------------------------------------|
| Ambient operating temperature | -25° to +71°C                              |
| Derating (>56°C to +71°C)     | 2.5%/°C                                    |
| Ambient humidity              | 20 - 95%RH, non-condensing                 |
| Storage                       | -25° to +85°C                              |
| Dimensions L × W × D          |                                            |
| screw terminal connector:     | 4.9 × 6.9 × 4.8 in (12.5 × 17.5 × 12.3 cm) |
| plug connector version:       | 5.6 × 6.9 × 4.8 in (14.2 × 17.5 × 12.3 cm) |
| Cooling                       | Natural convection                         |
| Case material                 | Aluminium, Powder Coat Finish              |
| Weight                        | < 4.3 lb / 1.9 kg                          |
| Protection                    | IP20                                       |

Approvals And EMC Compliance<sup>2</sup>

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Insulation voltage I/O                | 3.000Vac                            |
| Insulation resistance I/O<br>@ 500VDC | 100Mohm                             |
| UL / cUL                              | UL508 listed, UL60950-1, Recognised |
| TUV                                   | EN60950-1                           |
| CE                                    | EN61000-6-3                         |
|                                       | EN55022 class B                     |
|                                       | EN61000-3-2                         |
|                                       | EN61000-3-3                         |
|                                       | EN61000-6-2                         |
|                                       | EN55024                             |



## Pin Assignment and Front Controls

| Pin # | Designation | Description                                          |
|-------|-------------|------------------------------------------------------|
| 1     | +           | Positive output terminal                             |
| 2     | +           | Positive output terminal                             |
| 3     | -           | Negative output terminal                             |
| 4     | -           | Negative output terminal                             |
| 5     | GND         | Ground terminal to minimise High frequency emissions |
| 6     | L           | Phase input ( no polarity with DC input )            |
| 7     | N           | Neutral input ( no polarity with DC input )          |
|       | DC ON       | DC output ready LED                                  |
|       | DC LO       | DC low indicator LED                                 |
|       | Vout ADJ.   | Trimmer for fine output voltage adjustment           |
|       | S/P         | Single parallel selection switch                     |

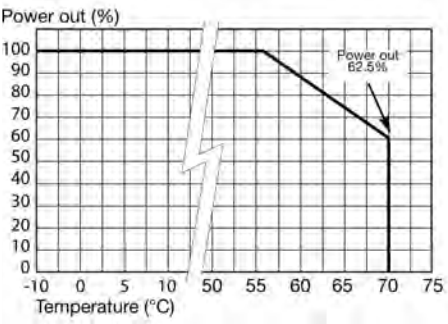
SPECIFICATIONS

Installation

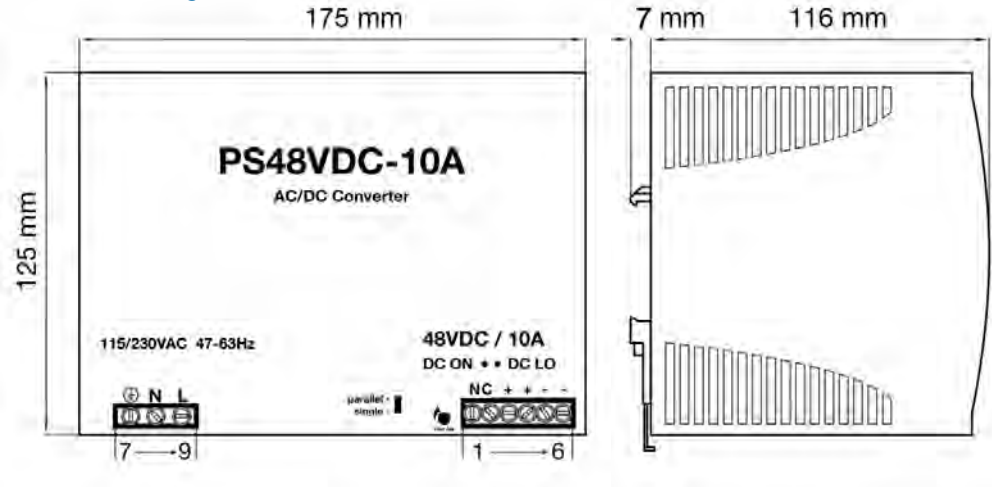
|                    |                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------|
| Cooling            | Natural air convection<br>Allow 25 mm of free space along all sides to ensure adequate cooling |
| Screw Connections  | 10 to 24AWG Flexible or solid cable                                                            |
| Plug In Connectors | 10 to 24AWG Flexible or solid cable                                                            |

NOTE: Specify desired connector style at time of order.

Derating Diagram



Outline Drawing



ORDERING INFORMATION

| Part Number | Output      | Voltage Trim Range <sup>1</sup> |          | DC OK @ Start Up (VDC) |      | DC Low After Start Up (VDC) |      | Typical Efficiency |
|-------------|-------------|---------------------------------|----------|------------------------|------|-----------------------------|------|--------------------|
|             | Current (A) | Min. VDC                        | Max. VDC | Min.                   | Max. | Min.                        | Max. |                    |
| PS48VDC-10A |             | 10                              | 47.0     | 56.0                   | 37.0 | 40.0                        | 37.0 | 40.0 90%           |

[1] When S/P switch is set to parallel, it is not possible to trim output voltage.

OPTIONAL FEATURES

| Code | Description        |
|------|--------------------|
| B    | Plug-in connectors |