

Overview



PS48VDC-5A is an economical 240W Din rail power supply installed on TS-35/7.5 or TS-35/15 mounting rails. The body is 63 mm in width, which allows space saving inside the cabinets. AC input from 90VAC to 264VAC and conforms to BS EN/EN61000-3-2.

PS48VDC-5A is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 90%, the entire series can operate at the ambient temperature between -20°C and 70°C under air convection. It is equipped with constant current mode for over-load protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for industrial control apparatus (UL508, TUV BS EN/EN 62368-1, etc.) make PS48VDC-5A a very competitive power supply solution for industrial applications.

Features

- ✓ Universal AC input / Full range
- ✓ Built in active PFC function
- ✓ Protections: Short circuit / Overload / Over Voltage / Over temperature
- ✓ Cooling by free air convection
- ✓ Can be installed on DIN rail TS-35/7.5 or 15
- ✓ UL 508 (industrial control equipment) approved
- ✓ BS EN/EN61000-6-2(BS EN/EN50082-2) industrial immunity level
- ✓ 100% full load burn-in test
- ✓ 3 years warranty

Applications

- ✓ PoE industrial switch and appliances
- ✓ Industrial control system
- ✓ Semiconductor fabrication equipment
- ✓ Factory automation
- ✓ Electro-mechanical

Specifications

OUTPUT	
DC VOLTAGE	48V
RATED CURRENT	5A
CURRENT RANGE	0 - 5A
RATED POWER	240W
RIPPLE & NOISE {max.} Note.2	150mVp-p
VOLTAGE ADJ. RANGE	48 - 55V
VOLTAGE TOLERANCE Note.3	±1.0%
LINE REGULATION	±0.5%
LOAD REGULATION	±1.0%
SETUP, RISE TIME	1500ms, 100ms/230VAC 3000ms, 100ms/115VAC at full load
HOLD UP TIME (Typ.)	28ms/230VAC, 22ms/115VAC at full load

INPUT	
VOLTAGE RANGE Note.4	100 - 240VAC
FREQUENCY RANGE	50/60Hz
POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC at full load
EFFICIENCY (Typ.)	88.5%, 90%
AC CURRENT (Typ.)	2.5A/115VAC, 1.3A/230VAC
INRUSH CURRENT (Typ.)	20N115VAC, 35A/230VAC
LEAKAGE CURRENT	<1m A / 240VAC

PROTECTION	
OVERLOAD	105 ~ 130% rated output power Protection type: Constant current limiting, recovers automatically after fault condition is removed
OVER VOLTAGE	29~33V 56~ 65V Protection type: Shut down o/p voltage, re-power on to recover
OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down

ENVIRONMENT	
WORKING TEMP.	-20 - +70°C {Refer to 'Derating Curve'}
WORKING HUMIDITY	20 - 95% RH non-condensing
STORAGE TEMP, HUMIDITY	-40 - +85°C, 10~95%RH
TEMP. COEFFICIENT	± 0.03%/°C (0 -50°C)
VIBRATION	10 - 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6

SAFETY & EMC (NOTE 4)	
SAFETY STANDARDS	UL508, TUV BS EN/EN62368-1, EAC TP TC 004, BSMI CNS14336-1, BIS IS13252(Part1): 2010nEC 60950-1:2005(NOTE 8), KC K60950-1 (for 48V only) approved; (meet BS EN/EN60204-1)
WITHSTAND VOLTAGE	VP-O/P:3KVAC, I/P-FG:2KVAC, O/P-FG:0.SKVAC
ISOLATION RESISTANCE	VP-O/P, VP-FG, O/P-FG:>1 100Ohms/ 500VDC / 25°C/ 70% RH
EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32), BS EN/ENS 1204-3 Class B, BS EN/ENS 1000-3-2,-3, EAC TP TC 020, CNS13438, KSC 9832(for 48V only)
EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN5008 2-2), BS EN/EN61204-3, heavy industry level, EAC TP TC 020, KSC 9835 (br 48V only)

OTHERS	
MTBF	1645.2K hrs min., Telcordia SR-332 (Bellcore); 230.2K hrs min., MIL-HDBK-217F (25°C)
DIMENSION	125.2 x 63 x 113.5mm (4.9 x 2.5 x 4.5 in) (HxWxD)
WEIGHT	1Kg (35 oz)

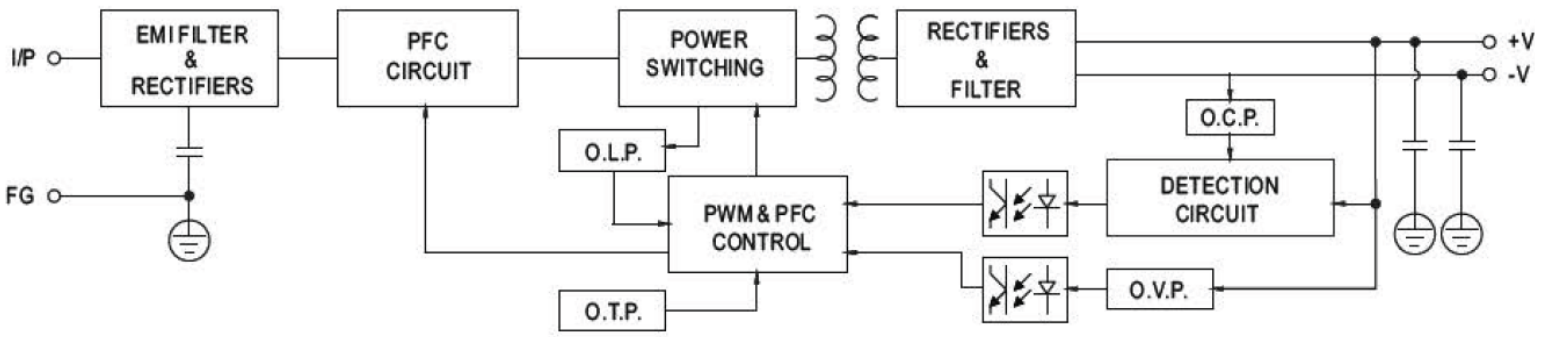
Ordering Information	
Part Number	PS48VDC-5A

Notes

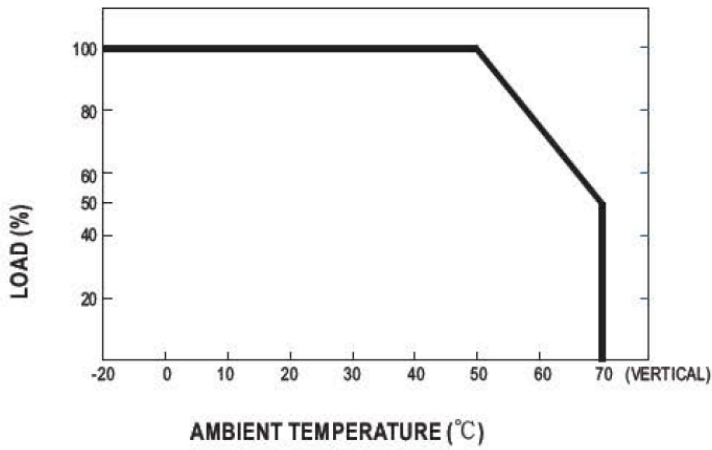
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12” twisted pair-wire terminated with a 0.1 μ F & 47 μ F parallel capacitor.
3. Tolerance: Includes setup tolerance, line regulation and bad regulation.
4. Derating may be needed under low input voltage. Please check the derating curve for more details.
5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power.
6. In case the adjacent device is a heat source, 15mm clearance is recommended.
7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C /1000m with fan models for operating altitude higher than 2000m).
8. Some model may not have the BIS logo, please contact sales for more information.

Block Diagram

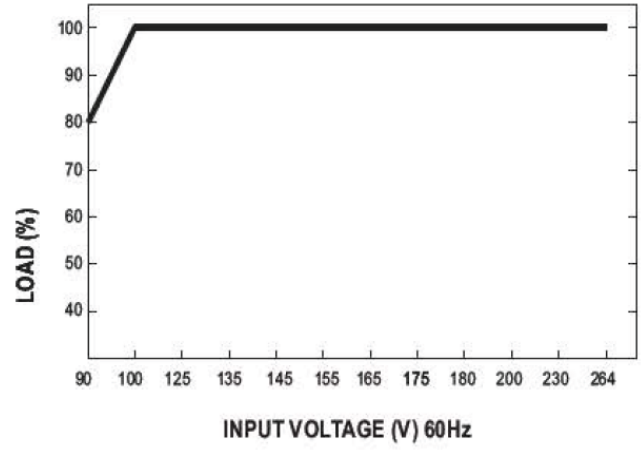
fosc : 70KHz



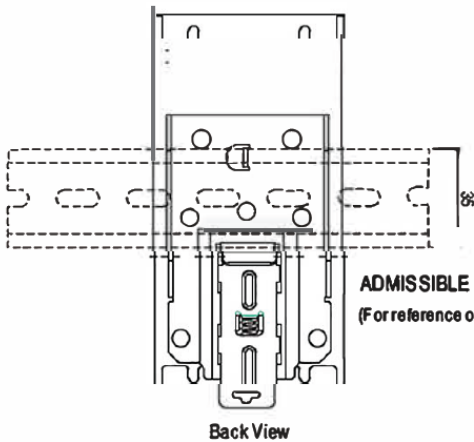
Derating Curve



Output derating VS input voltage



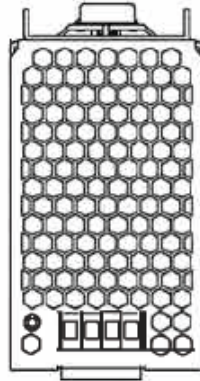
Installation Instruction



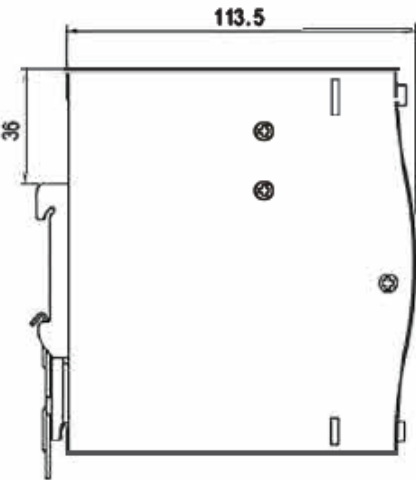
ADMISSIBLE DIN-RAIL : TS35/7.5 OR TS35/15
 (For reference only. Not included with unit.)

This series fits DIN rail TS35/7.5 or TS35/15.
 For installation details, please refer to the Instruction manual.

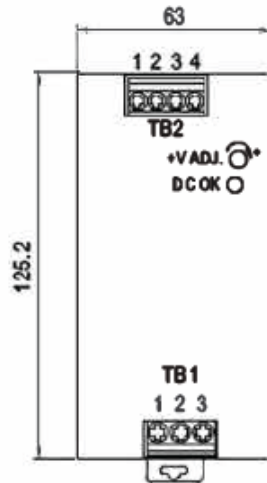
Case No.979C Unit:mm



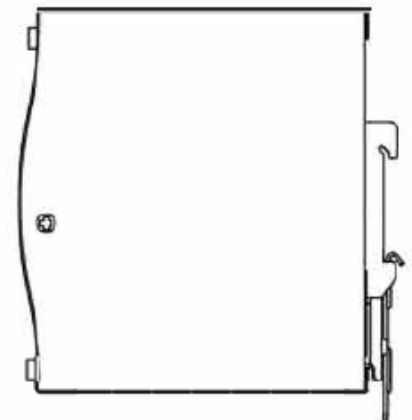
Top View



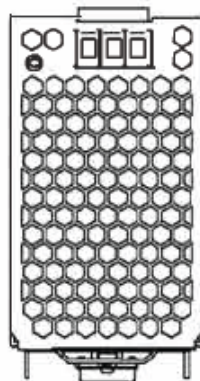
Side View



Front View



Side View



Bottom View

Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	FG ⊕
2	AC/N or DC -
3	AC/L or DC +

Terminal Pin No. Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT -V
3,4	DC OUTPUT+V