

IL125010EN

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Installation Instructions for PSG60F24RM POWER SUPPLY

READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. **KEEP FOR FUTURE REFERENCE.**

(3) (4) (1)Figure 1

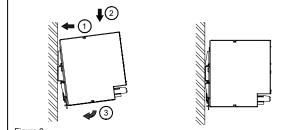
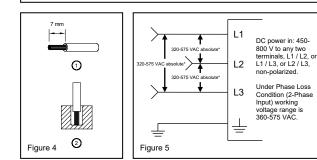
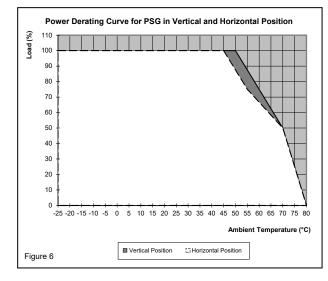


Figure 2

13 (2)T.E.D Ļ (1)Figure 3





1. Safety instructions

- Switch main power off before connecting or disconnecting the device. Risk of explosion!
- To guarantee sufficient convection cooling, please keep a distance of 50 mm above and below the device as well as a lateral distance of 5 mm to other units. Note that the enclosure of the device can become very hot depending on the ambient temperature
- and load of the power supply. Risk of burns! The main power must be turned off before connecting or disconnecting wires to the terminals!
- Do not introduce any objects into the unit! Dangerous voltage present for at least 5 minutes after disconnecting all sources of power
- The power supplies are built-in units and must be installed in a cabinet or room (condensation free environment and indoor location) that is relatively free of conductive contaminants.
- The unit must be installed in an IP54 enclosure or cabinet in the final installation. Warning: Explosion Hazard Substitution of components may impair suitability for Class I, Division 2. Warning: Explosion Hazard Do not disconnect equipment or adjust potentiometer unless the power has been switched off or the area is known to be non-hazardous.
- CAUTION: "FOR USE IN A CONTROLLED ENVIRONMENT".

- 2. Device description (Fig. 1)
 (1) Input terminal block connector
 (2) Output terminal block connector

 - (3) DC voltage adjustment potentiometer
 (4) DC OK control LED (green)
 - (5) Universal mounting rail system
- 3. Mounting (Fig. 2)

The power supply unit can be mounting on 35 mm DIN rails in accordance with EN 60715. In Vertical Position, the device should be installed with input terminal block on the bottom. In Horizontal Position, the device should be installed with input terminal block on the left side

Each device is delivered ready to install.

- Snap on the DIN rail as shown in Fig. 2
 - Tilt the unit slightly upwards and put it onto the DIN rail.
 Push downwards until stopped.
 - Press against the bottom front side for locking
 - Shake the unit slightly to ensure that it is secured.

4. Dismounting (Fig. 3)

To uninstall, pull or slide down the latch as shown in Fig. 3. Then, slide the PSU in the opposite direction, release the latch and pull out the PSU from the rail.

Connection

3

The terminal block connectors allow easy and fast wiring.

You can use flexible (stranded wire) or solid cables with cross sections:

Table	Stranded / Solid		Torque	
	(mm²)	(AWG)	(Kgf-cm)	(lb in)
(1)	0.82-3.3	18-12	9.3	8.1
(2)	0.82-3.3	18-12	6.2	5.4

To secure reliable and shock proof connections, the stripping length should be 7 mm (see Fig. 4 (1)). Please ensure that wires are fully inserted into the connecting terminals as shown in Fig. 4 (2). In accordance to EN 60950 / UL 60950, flexible cables require ferrules. Use appropriate copper cables that are designed to sustain operating temperature of:

- 60°C, 60°C / 75°C for USA
 Vertical Position: At least 75°C for ambient not exceeding 60°C, and 90°C for ambient exceeding 60°C for Canada. Horizontal Position: At least 75°C for ambient not exceeding 55°C, and 90°C for ambient exceeding 55°C for Canada.

.1. Input connection (Fig. 1, Fig. 5)

Use L1, L2, L3 and PE connections of input terminal connector to establish the 3 x 400-500 VAC

Connection. Fig. 5 shows the connection to the various network types. In the event of a phase failure, unrestricted operation is possible with nominal capacity. The unit is protected with internal fuse (not replaceable) at L pin and it has been tested and approved on 20A (UL) and 16A (IEC) branch circuits without additional protection device. An external protection device is only required if the supplying branch has an ampacity greater than above. Thus, if an external protective device is necessary, or, utilized, a minimum value of 13A B- or 6A C- characteristic breaker should be used.

The internal fuse must not be replaced by the user. In case of internal defect, please call 1 - 877 - ETN - CARE

5.2. Output connection (Fig. 1 (2)) Use the "+" and "-" screw connections to establish the 24Vdc connection. The output provides 24 VDC. The output voltage can be adjusted from 24 to 28 VDC on the potentiometer. The green LED DC OK displays correct function of the output (Fig. 1 (4)). The device has a short circuit and overload protection and an overvoltage protection limited to 35 VDC.

5.3. Output characteristic curve

The device functions normal under operating line and load conditions. In the event of a short circuit or overload the output voltage and current collapses (I_{OL} or I_{SIC} is > I_{surge} (150%)). The secondary voltage is reduced and bounces until short circuit or overload on the secondary side has been removed.

5.4. Thermal behavior (Fig. 6). Vertical Position: In the case of ambient temperatures above +50°C, the output capacity has to be reduced by 2.5% per degree Celsius increase in temperature. Horizontal Position: In the case of ambient temperatures above +45°C, the output capacity has to be reduced by 2.5% per degree Celsius increase in temperature. At +55°C to +70°C, the output capacity has to be reduced by 2.5% per degree Celsius increase in temperature. In both Vertical and Horizontal Position, at +70°C to +80°C, the output capacity has to be reduced by 1.6% per degree Celsius increase in temperature. In both Vertical and Horizontal Position, at +70°C to +80°C, the output capacity has to be reduced by 5% per degree Celsius increase in temperature. In both Vertical and Horizontal Position, at +70°C to +80°C, the output capacity has to be reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. If the output capacity is not reduced by 5% per degree Celsius increase in temperature. when $T_{Amb} > 50^{\circ}$ C (Vertical) or > 45°C (Horizontal), the device will run into thermal protection by switching off i.e. device will go in bouncing mode and will recover when ambient temperature is lowered or load is reduced as far as necessary to keep device in working condition

FOR TECHNICAL ASSISTANCE CALL 1 - 877 - ETN - CARE



IL125010EN

TECHNICAL DATA FOR PSG60F24RM

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Humidity at +25°C, no condensation < 95% RH		
Vibration (non-operating) 10 to 500 H2 @ 30 m/s ²) in al displacement of 0.35 mm; 60 min. per axis for all X, Y. Z directions in acc. with IEC 600682-6 Shock (in all directions) 30 G (300 m/s ²) in al directions according to IEC 600682-27 Alltude (operating) 2.000 Meters for industrial application 2.000 Meters for industrial application 2.000 Meters for industrial application Pollution degree 2 Contribution of the application 33 according to EN 60721 Contribution of the application 33 according to EN 60721 Electronic equipment for use in electrical power installations EN 62477-1 / IEC 6203 Safety entry low voltage PELV (EN 60204), SELV (EN 60950) Industria control equipment cultus listed to UL 508 and CSA C22 2 No. 107. +0.1 Industria control equipment cols CSA C22 2 No. 107. +0.1 (File No. 250468) Hazardous location coCSA us to CSA C22 2 No. 213-M1987, ANSI ISA 12.12.01:2007 [Class I, Drivison 2, Group A.B.(C. D.T 4, T _a = .25°C to +80°C (Vertical: > +50°C derating, Horizontal: > +45°C derating)] Protection against electric shock DIN 57100-410 CE In conformance with EMC directive 2014/30/EU and low voltage directive 2014/35/EU Component Power Supply for general use EN 55001 ITE EN 55001 <t< td=""><td></td><td></td></t<>		
Shock (in all directions) 30 G (300 m/s ²) in all directions according to IEC 60068-2-27 Altitude (operating) 2.000 Meters for industrial application 2.500 Meters for industrial application 2.500 Meters for industrial application Pollution degree 2 Certification and Standards 3K3 according to EN 60721 Certification and Standards Electroic equipment of machines Electroic equipment of use in electrical power installations EN 62477-1 / IEC 62103 Safety entry low voltage PELV (EN 60204). SELV (EN 60950) Industrial control equipment clus itsel to UL 508 and CSA C222 No.107.1-01, CSA to CSA 122 No.107.1-01, CSA to CSA 122 No.107.1-01 (File No. 250468) Hazardous location cCSA viso CSA C22 No.107.1-01 (File No. 250468) Protection against electric shock DIN 57100-410 Certer In conformance with EMC directive 2014/30/EU and low voltage directive 2014/35/EU Component Power Supply for general use EN 55011 Industrial EN 55032, EN 61000-3-2, EN 61000-3-3, EN 55024 Industrial EN 55011 Limitation of mains harmonic currents EN 61000-3-2 Safety and Protection Yes Safety and Protection VARISTOR Surge voltage protection against interna		
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2,500 Meters for ITE application Pollution degree 2 Climatic class 3K3 according to EN 60721 Certification and Standards Electrical equipment for use in electrical power installations EIC 60204-1 (over voltage category III) Electronic equipment for use in electrical power installations EN 62477-1 (Fe 62103 Safety entry low voltage PELV (EN 60204), SELV (EN 60950) Industrial control equipment cllus listed to UL 508 and CSA C22.2 No. 107.1-01, CSA to CSA C22.2 No. 107.1-01, (File No. 250468) Hazardous location CCSA to CSA C22.2 No. 213.M1987, ANSI 1/SA 12.12.01:2007 [Class I, Division 2, Group AB, C, D T4, Ta = -25°C to +80°C (Vertical: > +50°C derating, Horizontal: > +45°C derating)] Protection against electric shock DIN 57100-410 Component Power Supply for general use EN 61204-3 ITE EN 55032, EN 61000-3-2, EN 61000-3-3, EN 55024 Industrial EN 61000-3-2 Industrial EN 61000-3-2 RoHS Compliant Yes Safety and Protection VARISTOR Current limitation at short-circuits approx. Image 150 % of Pomax typically. Surge voltage protection against internal surge voltages Yes Safety and Protection VARISTOR Surge voltage protection against internal surge voltages Yes Isolation voltage: 150 % of Pomax typi		
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Electronic equipment for use in electrical power installations EN 62477-1 / IEC 62103 Safety entry low voltage PELV (EN 60204), SELV (EN 60950) Industrial control equipment COLLus listed to LU 508 and CSA C22.2 No.107.1-01, CSA to CSA C22.2 No.107.1-01 (File No. 250468) Hazardous location CCSA us CSA C22.2 No.107.1-01 (File No. 250468) Protection against electric shock Dilv S7100 CA CE In conformance with EMC directive 2014/30/EU and low voltage directive 2014/35/EU Component Power Supply for general use EN 61204-3 TE EN 55032, EN 61000-3-2, EN 61000-3-3, EN 55024 Industrial EN 55011 Limitation of mains harmonic currents EN 61000-3-2 RoHS Compliant Yes Safety and Protection Variant and thermal surge voltage protection Transient surge voltage protection Variant and thermal surge voltage servers Surge voltage protection against internal surge voltages Yes Isolation voltage: Input / PE Input / PE 2 kVAC Output / PE 1 kVAC Protection degree IP20		
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Industrial EN 55011 Limitation of mains harmonic currents EN 61000-3-2 Image: Compliant Image: Class 1, Div. 2, Group A, B, C, D, T4 RoHS Compliant Yes Safety and Protection VARISTOR Transient surge voltage protection against internal surge voltages VARISTOR Surge voltage protection against internal surge voltages Yes Isolation voltage: Yes Input / output 4 kVAC Input / PE 2 kVAC Output / PE 1.5 kVAC Protection degree IP20		
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Protection degree IP20		
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satety class Class I with PE connection		
	Salety class	Class I with PE connection



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