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

1. Safety instructions
   - Switch main power off before connecting or disconnecting the device. Risk of explosion!
   - Do not introduce any objects into the unit.
   - The unit must be installed in an IP54 enclosure or cabinet in the final installation.
   - Danger – Do not disconnect equipment or adjust switch unless the power has been switched off or the area is known to be non-hazardous.

2. Equipment description (Fig. 1)
   - Input / Output terminal block connector
   - Signal terminal block connector
   - Select switch (operation mode)
   - LED display status
   - Universal mounting rail system

3. Mounting (Fig. 2)
The unit can be mounting on 35 mm DIN rails in accordance with EN 60715. The device should be installed with input / output terminal block on the top.

4. Dismounting (Fig. 3)
   - To uninstall, pull or slide down the latch as shown in Fig. 3. Then, slide the unit in the opposite direction, release the latch and pull out the unit from the rail.

5. Connection
   - The terminal block connectors allow easy and fast wiring. The terminal block is IP20 compliant thus provides the user safety and protection from electrical shock hazards.
   - Use appropriate copper cables that are designed to sustain operating temperature of:
     - 60°C, 60°C / 75°C for USA
     - 60°C for Canada
     - 70°C, 70°C / 85°C for Canada

6. Wiring schematics
   - To secure reliable and shock proof connections, the stripping length should be 7 mm (see Fig. 4 (1)).
   - Use proper wire gauge cables that are designed to sustain operating temperature of:
     - 60°C, 60°C / 75°C for USA
     - 60°C for Canada
   - Stranded / Solid: (mm²) / (AWG) / (Kgf-cm) / (b-in)
     - (1) 3.3-5.3 / 12-10 / 7.3 / 6.3
     - (2) 0.21-5.3 / 24-10 / 7.3 / 6.3

7. Connectable power supplies
   - The buffer module is recommended to be connected with the following power supplies:
     - PSG60E24SP
     - PSG480E24RM
     - PSG240E24RM
     - PSG240E
     - PSG480E

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### TECHNICAL DATA FOR PSG480B24RM

#### Input (DC)
- **Nominal input voltage**: 24 VDC
- **Voltage range**: 22.8-28.8 VDC
- **Max. input voltage**: 35 VDC
- **Max. signal input (inhibit)**: 35 V / 10 mA
- **Input current**:
  - Charging Mode: < 0.6 A
  - Discharging Mode: 20 A Max.
- **Inrush current max. (cold start)**: < 20 A
- **Buffer time**:
  - > 250 ms Min. @ 20A Load
  - > 5 sec Min. @ 1A Load

#### Output (DC)
- **Nominal output voltage**: 24 VDC typ. (depends on $V_{in}$)
- **Adjustment range of the voltage**: 22-28 VDC
  - (Switch = “Fix 22 V” buffering starts if terminal voltage falls below 22 V)
  - (Factory Setting, Switch = “Vin-1 V” buffering starts if terminal voltage is decreased by > 1 V)
- **Max. output voltage**: 35 VDC
- **Output current**:
  - Max.: 20 A

#### General Data
- **Type of housing**: Aluminum
- **Dimensions (L x W x H)**: 121 mm x 70 mm x 120.1 mm
- **Weight**: 0.76 kg
- **Connection method**: Screw connection
- **Stripping length**: 7 mm
- **Operating temperature (surrounding air temperature)**: -25°C to +75°C (Refer to Fig. 6)
- **Storage temperature**: -25°C to +85°C
- **Humidity at +25°C, no condensation**: < 95% RH
- **Vibration (non-operating)**: 10 to 500 Hz, 0.35 mm acc. 30 m/s², single amplitude (3 G max.) for 60 min. in each X, Y & Z directions, in acc. with IEC 68-2-6
- **Shock (in all directions)**: 30 G (300 m/s²) in all directions according to IEC 68-2-27
- **Altitude (operating)**: 2,500 Meters
- **Pollution degree**: 2

#### Certification and Standards
- **Electrical equipments of machines**: IEC 60204-1
- **Electronic equipment for use in electrical power installations**: EN 50178 / IEC 62103
- **Safety entry low voltage**: PELV (EN 60204), SELV (EN 60950)
- **Industrial control equipment**:
  - cULus 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**:
  - cCSAus to CSA C22.2 No.213-M1987, ANSI / ISA 12.12.01:2007 [Class I, Division 2, Group A,B,C,D T4, $T_{a} = -25^\circ C$ to +75°C (> +70°C derating)]
- **Protection against electric shock**: DIN 57100-4-10
- **CE**: In conformance with EMC directive 2004/108/EC and low voltage directive 2006/95/EC
- **Component Power Supply for general use**:
  - ITE: EN 61204-3
  - EN 55022, 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
- **Isolation voltage**:
  - Input & Output / PE: 1.5 kVAC
  - Signal / PE: 1.5 kVAC
- **Polarity protection**: Yes
- **Protection degree**: IP20
- **Safety class**: Class I with PE connection