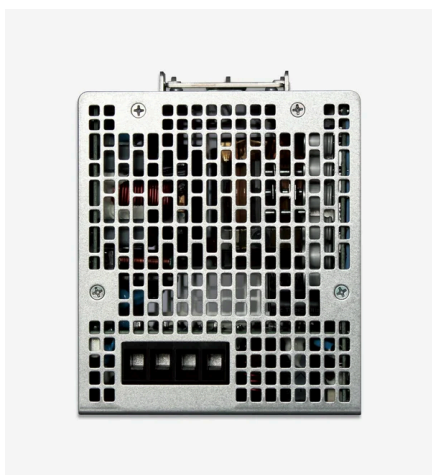


POWER 3AC 48-20

High-efficiency 3-Phase DIN Rail Power Supply 48V DC / 20A



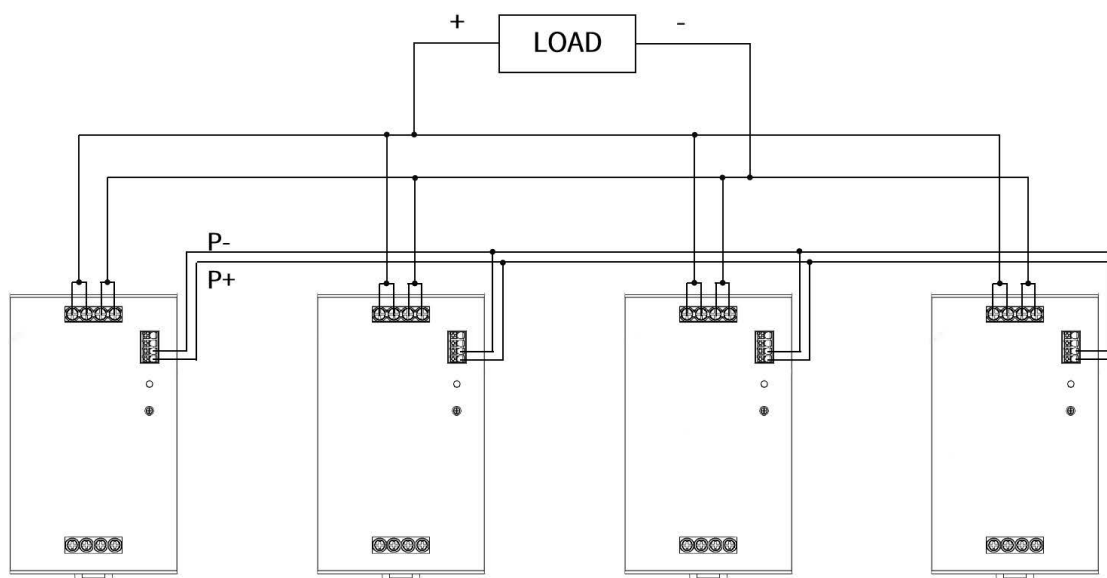
3-phase power supply with AC/DC input (320...600VAC/450...850VDC), 48VDC Output, 960W, 20A, Built-in DC OK relay contact, 150% peak load capability for 7s

The POWER 3AC 48-20 is a three-phase AC/DC DIN-rail power supply delivering 960 W at 48 VDC with an adjustable output range from 48 to 56 V and a rated current of 20 A, making it ideal for 48 V control, I/O, and drive systems. With a wide input range of 320...600 VAC (450...850 VDC) and the ability to withstand 600 VAC for 60 seconds without damage, it supports global three-phase grids and robust industrial environments. The unit achieves up to 96% efficiency, operates from -30 to +70 °C (start-up at -40 °C), and provides a 20 ms hold-up time to ensure stable DC power under fluctuating mains conditions. Integrated protection functions including over-voltage, over-current, short-circuit, and over-temperature with auto-recovery, as well as enhanced conformal coating and a built-in DC OK relay contact, increase system availability and diagnostics capability. For higher power requirements, up to four units can be connected in parallel with active current sharing to achieve up to 3840 W (3+1), while compliance with IEC/EN/UL 61010 and IEC/EN/UL 62368 safety standards and EMC class B emissions supports use in industrial control, semiconductor manufacturing, and renewable energy applications.

Parallel Use:

POWER 3AC 48-20 has built-in active current sharing function and can be connected in parallel, up to 4 units, to provide higher output power as exhibited below :

1. The power supplies should be paralleled using short and large diameter wiring and then connected to the load;
2. When parallel use, ensure that all P+ on the signal connectors of each power module are connected together, and all P- also connected together;
3. Difference of output voltages among parallel units should be less than 0.2V.

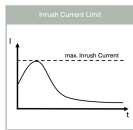
**ORDER DETAILS**

Function: Three-phase DIN-rail power supply, 960 W, 48 VDC output, adjustable voltage, high efficiency, wide temperature range, complete protections, DC OK relay, parallel operation up to 4 units.

SKU/Order No.: SA-P-3A-48-20-00

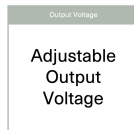


Features



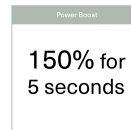
Built-in Inrush Current Limiting

Thermistor, thyristor technique or active power relay circuit is used in the inrush current limiting circuit.



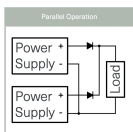
Adjustable Output Voltage with Potentiometer

To increase an output voltage, turn a built-in potentiometer clockwise. To decrease the output voltage, turn it counterclockwise.



Power Boost 150%

A power boost of 150% for 5 seconds means that the power supply can temporarily deliver 150% of its rated output power for a short duration, specifically for 5 seconds. This feature is useful in applications where the connected load occasionally requires more power than the normal operating conditions.



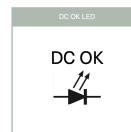
Parallel Operation

To increase availability you can use the Power Supply in parallel operation mode. Refer the attached image on product page.



Ultra Slim Dimensions

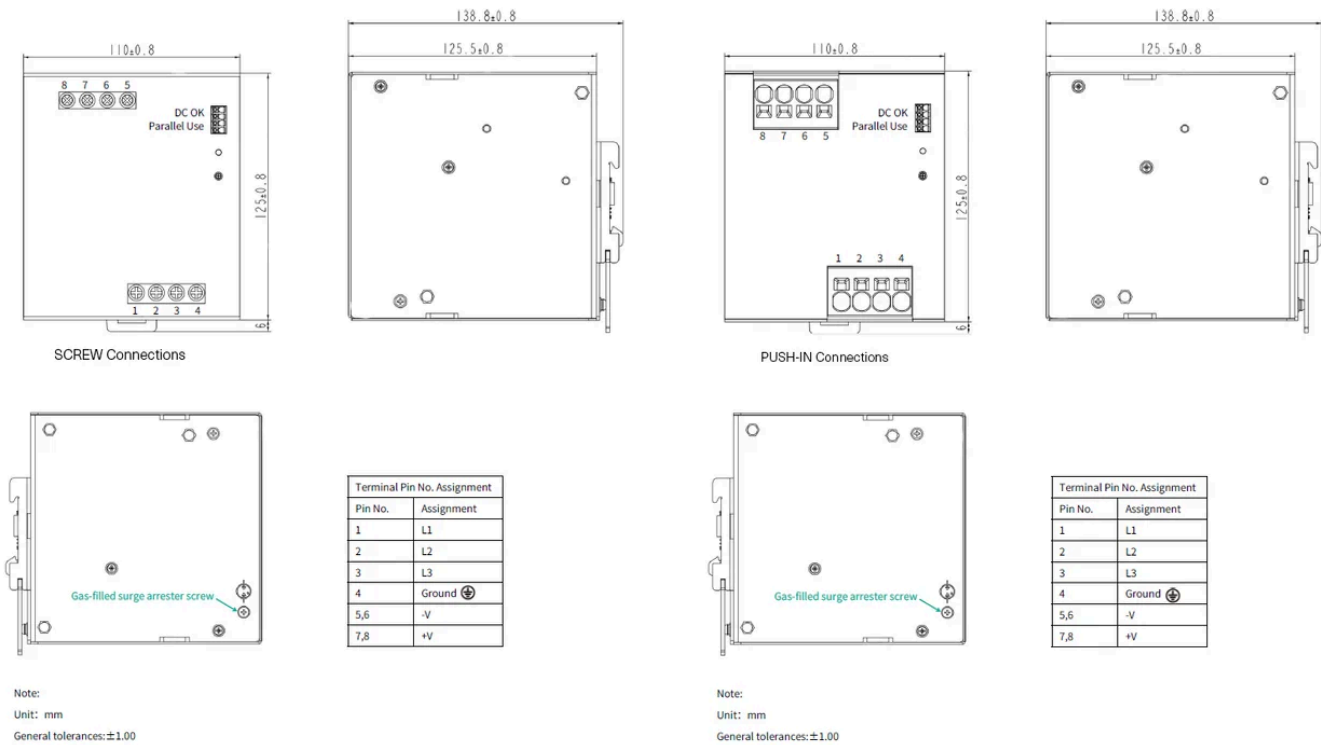
To save space in your control cabinet, our power supplies are designed to reduce size.



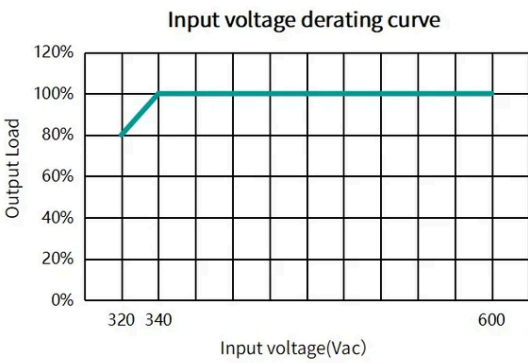
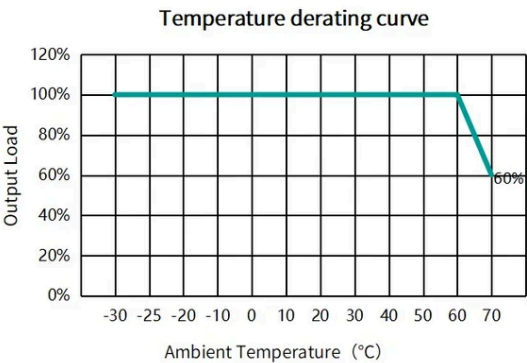
DC OK LED

If output voltage is decreasing the DC OK LED turns off. In "normal" output voltage condition the LED is on.

Mechanical Dimensions



Drawings



Technical Data

Input Data

Input Voltage Range AC	320...600VAC
Input Voltage Range DC	450...850VDC
Input Current (typ.)	MAX. 2A @380 VAC, MAX. 1.6A @500 VAC
Frequency	47 ... 63 Hz
Efficiency (typ.)	96 %
Power Factor (cos φ)	NA
Inrush Current (typ.)	15A @ 500 VAC, Cold Start

Output Data

Output Voltage	48 VDC
Output Voltage Range	48 ... 56 V DC
Output Current	20 A
Power Output	960W
Power Boost	150% peak load capability for 7 sec.
Line Regulation	$\pm 0.5\%$
Load Regulation	$\pm 1\%$
Ripple (typ.)	$\leq 250\text{mVp-p}$
Ripple Noise (typ.)	$\leq 250\text{mVp-p}$

Protection Circuit

Overcurrent Protection	105%-150% rated output power for more than 7 seconds and then constant current limiting without shut down($V_{out} > 50\%$), Auto-Recovery when the fault is removed
Overvoltage protection	Hiccup mode, Auto-Recovery when the fault is removed, ≤ 63 VDC
Over Temperature Protection	Shut down output, Auto-Recovery after temperature goes down
Short Circuit Protection	Hiccup mode, Auto-Recovery when the fault is removed
DC OK Signalling	LED (Green)
DC OK Contact	Yes

Isolation

Input/Output Isolation (at room temperature)	$\geq 100\text{M}\Omega$ (500VDC /70% RH/Non-Condensing)
Input/PE Isolation (at room temperature)	$\geq 100\text{M}\Omega$ (500VDC /70% RH/Non-Condensing)
Output/PE Isolation (at room temperature)	$\geq 100\text{M}\Omega$ (500VDC /70% RH/Non-Condensing)

Ambient Condition

Ambient Temperature (operating)	Operating -30°C ... 70°C
Ambient Temperature (start-up type tested)	-40 °C
Ambient Temperature (storage/transport)	-40°C ... +85°C
Operating Humidity (non-condensing)	5 ... 95 % RH
Storage Humidity (non-condensing)	5 ... 95 % RH
Degree of Protection	IP20
Operating Altitude (max. above sea level)	up to 5000 meters

Mechanical Data

Tightening Moment (min. / max.)	max. 1 Nm
Housing	Metal
Mounting DIN Rail according EN 60715	TH35
Weight (typ.)	1900 g
Cooling Method	Convection

Dimensions

Width (mm)	110 mm
Depth (mm)	125.5 mm
Height (mm)	125 mm

Commercial Data

Customs Tariff Number	85044030
GTIN	4262552160052

Characteristics

Max. Rise Time	20ms (typical)
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Safety Standards

Protection Rating	I (Protection Class I)
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Standards and Regulations

In Compliance With	CE, UL, FCC, ROHS
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Lifetime

MTBF (MIL-HTBK-217F) at 25°C	≥200,000hrs
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