



960ACDRP_SC series

960W - Single Output AC-DC Converter - Universal Input - Isolated & Regulated Industrial DIN Rail Power Supply

AC-DC Converter 960 Watt

- ⊕ Higher peak load capability
- ⊕ Built-in DC Ok relay contact
- ⊕ DC Output voltage adjustable
- ⊕ Current sharing up to 3840W (3+1)
- ⊕ Built-in active PFC function
- ⊕ Three years warranty

GAPTEC higher performance family of single phase din rail power supplies were designed with metal housing and for full range AC input from 180VAC to 264VAC. With higher efficiency, current sharing up to 3840W (3+1), the entire series have built-in DC OK relay contact an higher peak load-capability, they also operate in wide temperature range.

The series offer diverse solutions for demanding automation around the world.



Common specifications	
Short circuit protection:	Long-term mode, automatic recovery
Operation temperature range:	-30°C~+70°C
Storage temperature range:	-40°C ~+85°C
Storage humidity range:	10~ 95% RH
Temperature coefficient:	±0.03%/°C (0 ~ 50°C)
MTBF (using MIL-HDBK-217F):	+25°C >561,170 hours
Safety standards:	UL61010, BS/EN62368-1
Vibration:	Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6
DC OK REALY CONTACT RATINGS:	60VDC/0.3A, 30VDC/ A, 30VAC/0.5A resistive load
Cooling:	Free air convection
Case material:	Heat-resistant Plastic (UL94-V0) and metal
Dimensions (L*W*H):	125.2mm x 110mm x 150mm
Weight:	2470g

Input specifications	
Input voltage range	180 ~ 264VAC, 254 ~ 370VDC
Input frequency	47~63Hz
Power factor	0.95/230VAC at full load
AC current	6A/230VAC
Inrush current	Cold start 50A/230VAC
Leakage current	<3.5mA / 240VAC

Example: 960ACDRP_245C

960 = 960 Watts, AC = AC/DC, DR = Din Rail, P = High performance; 24 = 24Vout; S = Single Output C = PFC (Power Factor Correction)

Note:

- All parameters NOT specially mentioned are measured at rated input, rated load and 25°C of ambient temperature.

Output specifications					
Item	Test conditions	Min	Typ	Max	Units
Voltage tolerance	±2.0%				
Line regulation				±0.5	%
Load regulation				±1	%
Ripple + Noise	180mVp-p (960ACDRP_245C) 250mVp-p (960ACDRP_485C)				
Set-up time	1000ms, 100ms/230VAC at full load				
Hold-up time	14ms/230VAC at full load				
Overshoot and undershoot				5	%
Switching frequency			100		KHz

Protection specifications	
Over-load protection	Normally works within 105 ~ 130% rated output power for more than 3 seconds and then shut down o/p voltage with auto- recovery after 30 seconds if the peak load condition is removed. Constant current limiting within 130 ~ 150% rated output power for more than 3 seconds and then shut down o/p voltage, re-power on to recover.
Over-voltage protection	29 ~ 33V (960ACDRP_245C) 56 ~ 65V (960ACDRP_485C) Protection type: Shut down o/p voltage, recovers automatically after temperature goes down
Over-temperature protection	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down

Isolation specifications					
Item	Test condition	Min	Typ	Max	Units
Withstand voltage*	1/P-O/P: 3kVAC - 1/P-FG: 2kVAC O/P-FG: 0.5kVAC - O/P-DC OK: 0.5kVAC				
Isolation resistance	1/P-O/P, I/P-FG, O/P-FG >100M Ohms / 500VDC / 25°C/ 70% RH				

* Input-Output, tested for 1 minute, 500VDC and leakage current less than 1mA

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EMC specifications

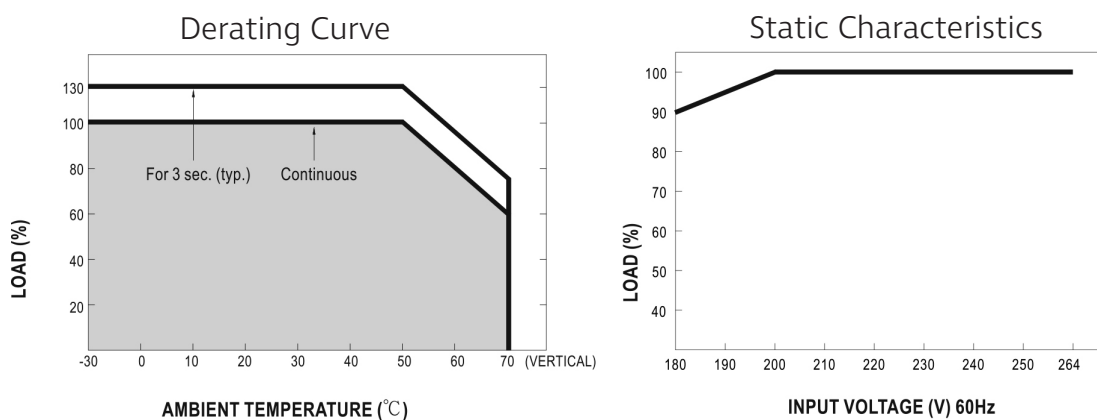
EMC / Emission	Comp lance to BS EN/EN55032 , BS EN/EN61000-3-2,-3
EMC / Immunity	Comp lance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, BS EN/EN61000-6-2 (BS EN/EN50082-2)

The power supply is considered as a component which will be installed into a final equipment.
The final equipment must be re-confirmed that it still meets EMC directives.

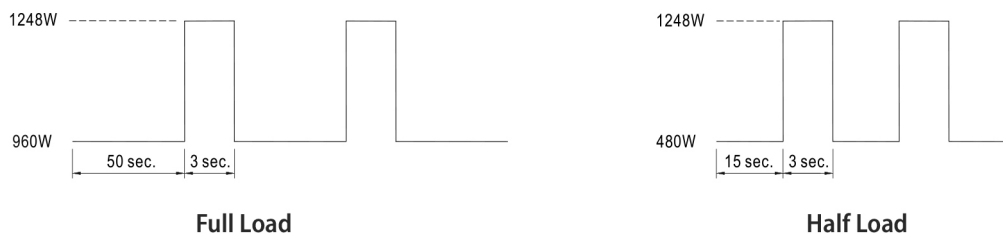
Product Selection Guide

Model	Voltage [VDC]	Rated Power [W]	Rated Current [A]	Peak Power [W]	Voltage Adj. Range	Efficiency [% , typ]
960ACDRP_24SC	24V	960	40A	1248W (3sec)	24-28V	94%
960ACDRP_48SC	48V	960	20A	1248W (3sec)	48-55V	94%

Typical characteristics



Peak Loading



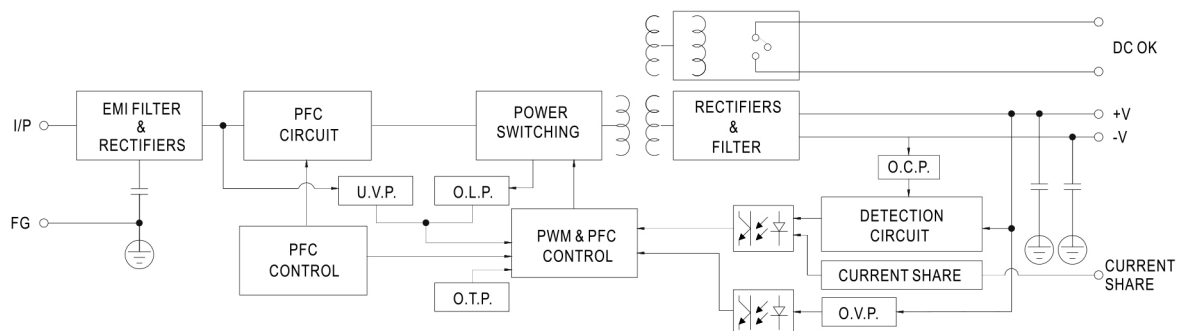
DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

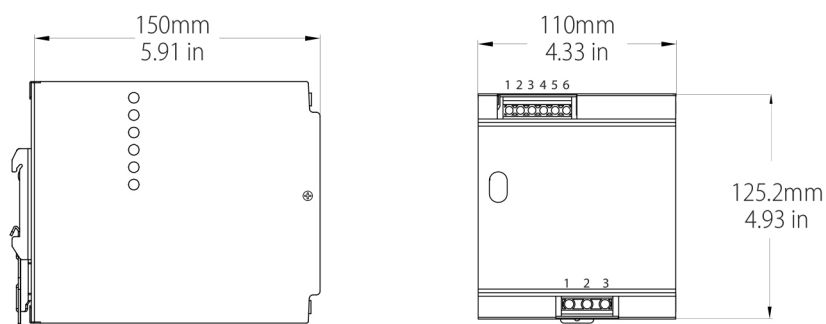
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Functional block diagram



Mechanical dimensions



Input

No.	Description
1	FG ⚡
2	AC/N
3	AC/L

Output

No.	Description
1,2,3	DC OUTPUT +V
4,5,6	DC OUTPUT -V