

Features

- 1/2 brick, base plate cooled package
- 90-264VAC wide input range
- 350W with active PFC
- Long hold-up time
- 40°C to +85°C case temperature range
- 3000VAC reinforced insulation, up to 91% efficiency
- Optional output voltage trimming
- OVP, OCP, OTP and SCP protection
- 3-year warranty

28ACO250 Series

250W / 350W Open Frame AC/DC Power Supply (PSU)



Image for illustration purposes only.



Description

The 28ACO250 Series is a 250W / 350W isolated, regulated AC/DC converter with active PFC in a half-brick package and long hold-up time set by external capacitors. It offers efficiency of up to 91%, a wide operating case temperature range of -40°C to +85°C, no minimum load requirement, and 3kVAC reinforced insulation, together with OVP, OCP, SCP and OTP protection.

These power modules use advanced power processing, control and packaging technologies and are suitable for a wide range of applications, including medical, railway, industrial, automation, semiconductor, network/telecom, military, boat, aviation, automobile and charger equipment, particularly where harsh environments, wide temperature variation and space limitations must be accommodated.

Part Number Breakdown

28AC	O	250	120	S	350
Series Name	Package	Watt	Output Voltage (VDC)	Single Output	Actual Watt

Models

Part Number	Input Voltage (V)	Output Voltage (V)	Output Current (A)	Output Power (W)	Efficiency Typ. (%)
28ACO250-120S-250-IP	90 - 264	12	20.80	250	90
28ACO250-240S-250-IP		24	10.4	250	91
28ACO250-280S-250-IP		28	8.93	250	91
28ACO250-360S-250-IP		36	6.94	250	91
28ACO250-480S-250-IP		48	5.20	250	90
28ACO250-120S-350-IP		12	2.91	350	91
28ACO250-240S-350-IP		24	14.58	350	91
28ACO250-280S-350-IP		28	12.50	350	91
28ACO250-360S-350-IP		36	9.72	350	90
28ACO250-480S-350-IP		48	7.29	350	90

Input Specifications

Parameter	Specification
Operating Input Voltage Range	90 - 264 VAC
Operating Input Frequency Range	47 - 63 Hz
Input Current	Typ. 2.4A at 115VAC / 1.2A at 230VAC (100% load)
Power Factor	Typ. 0.99 at 115VAC / 0.99 at 230VAC (100% load)
Leakage Current	≤3.5 mA at 264VAC, 60Hz, 100% load

Output Specifications

Parameter	Specification
Output Voltage Accuracy	≤±1.5% (100% load)
Line Regulation	≤±0.5% (high line to low line)
Load Regulation	≤±1% (0-100% load)
Output Ripple & Noise Voltage	≤2 %Vpk-pk (20MHz bandwidth, 10μF MLCC output capacitor)
Minimum Load	0 A (no minimum load required)
Hold-Up Time	Typ. 12 (unit not stated in source), at full load, 115VAC/230VAC

Protection

Parameter	Specification
Over Voltage Protection	110 - 140% of rated output voltage
Short-Circuit Protection	Hiccup mode, auto-recovery

Environmental Characteristics

Parameter	Specification
Storage Temperature Range	-55°C to +100°C (all models)
Operating Case Temperature	-40°C to +85°C (on aluminium base plate)
Humidity (non-condensing)	≤95% (all models)

Safety Standards

Parameter	Specification
Certifications (per unit label)	CE
Isolation Voltage	Input-Output: 3000VAC / Input-Base: 1500VAC / Output-Base: 500VAC

Electromagnetic Compatibility (EMC)

Parameter	Specification
EMC Emission	Conducted EMI tested (see Performance Graphs); limit-line standard not labelled in source chart

Reliability

Parameter	Specification
Calculated MTBF	TBD (stated as "TBD" in supplier source; BellCore TR-332 @ 50°C, Ground Benign basis)

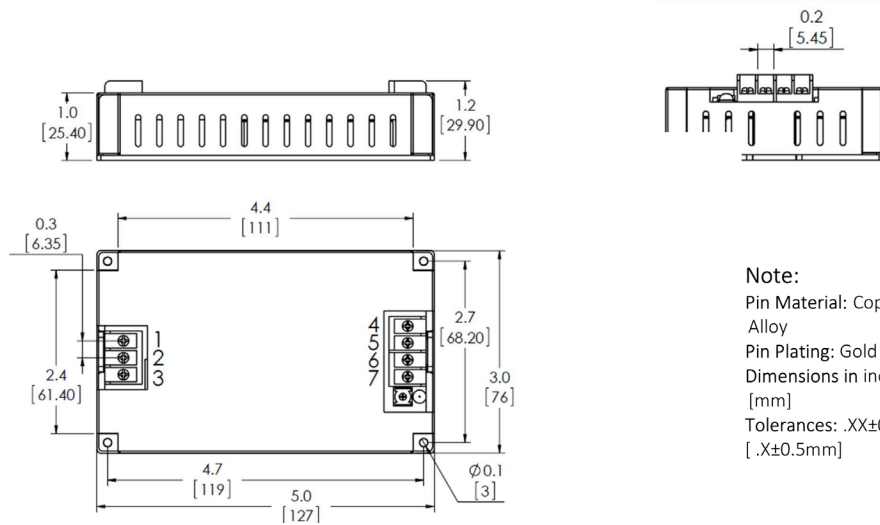
General Specifications

Parameter	Specification
Switching Frequency	Typ. 100 kHz (PFC) / 130 kHz (AC-DC)
Case Material	Metal

Weight & Dimensions

Parameter	Specification
Weight	380g net / pcs (gross weight not stated in source)
Dimensions	5.00" x 3.00" x 1.00" (127.0 x 76.2 x 25.4mm)

Mechanical Drawing

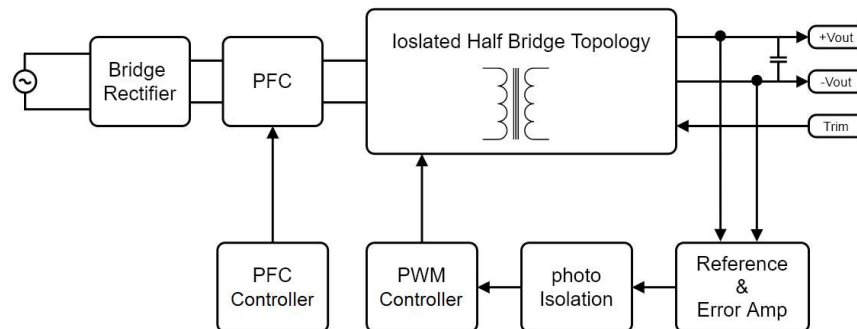


Note:

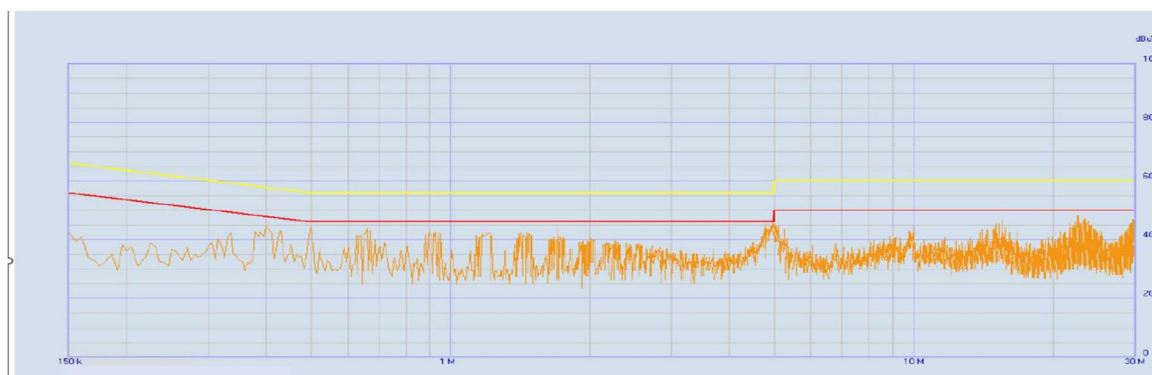
Pin Material: Copper Alloy
Pin Plating: Gold
Dimensions in inches [mm]
Tolerances: .XX±0.02 [.X±0.5mm]

1	ACL	4	-VO
2	ACN	5	-VO
3	FG	6	+VO
		7	+VO

Block Diagram



Performance Graphs



Conducted EMI, input terminal (typ.), 28ACO250-120S-350-IP @ $V_{in}=230VDC$, $I_{out}=20.83A$ (input condition printed as VDC in supplier source). Fundamental switching frequency: 100kHz.

Notes

1. All parameters are typical at $T_a=+25^{\circ}C$ under nominal line voltage conditions unless otherwise noted.
2. It is recommended to protect the input with fuses or other protection devices.
3. Specifications are subject to change without notice. No rights under any patent accompany the sale of this product or the information contained in this datasheet.