

Features

Full brick, base plate cooled package
90-264VAC wide input range
700W with active PFC
Long hold-up time
-40°C to +100°C case temperature range
±5% output voltage trimming
3000VAC reinforced insulation, up to 90% efficiency
OVP, OCP, OTP and SCP protection
Operates at 50/60/400Hz, parallel operation optional
3-year warranty

28ACFS700 Series

700W Full Brick AC/DC Power Supply (PSU)



Image for illustration purposes only.



Description

The 28ACFS700 Series is a 700W isolated, regulated AC/DC converter with active PFC in a full brick package and long hold-up time set by external capacitors. It offers efficiency of up to 90%, a wide operating case temperature range of -40°C to +100°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	F	S700	240	S	700	PL
Series Name	Package	Watt	Output Voltage (VDC)	Output Quantity	Actual Watt	Parallel Mode (Optional)

Models

Part Number	Input Voltage (V)	Output Voltage (V)	Output Current (A)	Output Power (W)	Efficiency Typ. (%)
28ACFS700-120S-600-IP	90 - 264	12	50	600	87
28ACFS700-240S-700-IP		24	29.17	700	90
28ACFS700-280S-700-IP		28	25	700	90
28ACFS700-360S-700-IP		36	19.44	700	90
28ACFS700-480S-700-IP		48	14.58	700	90

Input Specifications

Parameter	Specification
Operating Input Voltage Range	90 - 264 VAC (230 VAC nominal)
Operating Input Frequency Range (50/60Hz mode)	47 - 63 Hz (50/60Hz nominal)
Operating Input Frequency Range (400Hz mode)	Typ. 400 Hz
Input Current	Typ. 7.0A at 115VAC / 3.4A at 230VAC (100% load)
Inrush Current	Limited by external components (thermistor); cold start at 230VAC, 25°C
Power Factor (50/60Hz)	Typ. 0.99 at 115VAC / 0.97 at 230VAC (100% load)
Power Factor (400Hz)	Typ. 0.99 at 115VAC / 0.94 at 230VAC (400Hz, 100% load)
Leakage Current	≤0.75 mA at 240VAC, 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% (10-100% load, as stated in supplier source)
Output Ripple & Noise Voltage	≤2 %Vpk-pk (20MHz bandwidth, 10μF+0.1μF MLCC output capacitor)
Output Voltage Adjustment Range	≤±5% (adjustable by external resistor)
Minimum Load	0 A (no minimum load required)
Hold-Up Time	Set by external capacitors between +BC and -BC (at full load, 115VAC)

Protection

Parameter	Specification
Over Voltage Protection	120 - 140% of rated output voltage
Over Current Protection	120 - 160% of rated output current, hiccup mode
Short-Circuit Protection	Hiccup mode, auto-recovery

Environmental Characteristics

Parameter	Specification
Storage Temperature Range	-55°C to +125°C (all models)
Operating Case Temperature	-40°C to +100°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	Meets EN55032 Class A and Class B standards with external components (per supplier source; no test chart provided)

Reliability

Parameter	Specification
Calculated MTBF	1.0 M hours (BellCore TR-332 @ 50°C, Ground Benign)

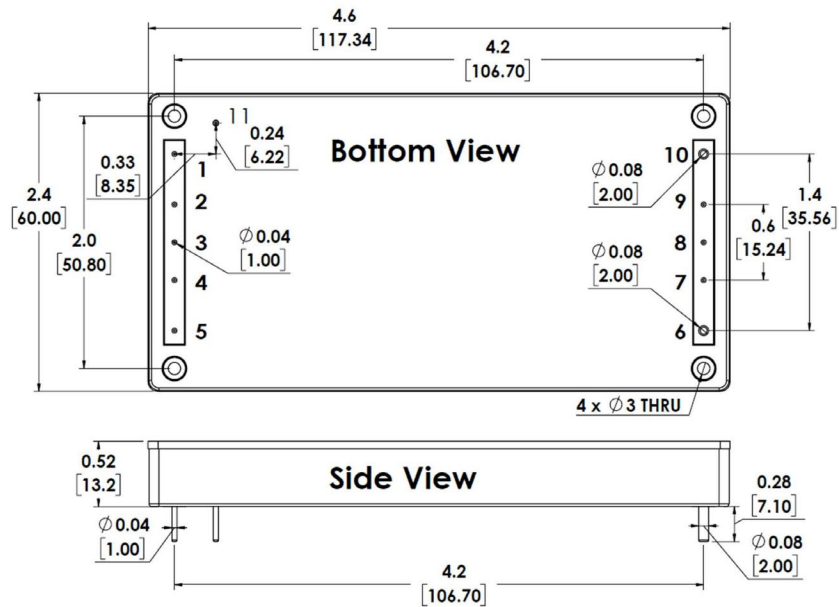
General Specifications

Parameter	Specification
Switching Frequency	Typ. 133 kHz (PFC) / 120 kHz (LLC)
Case Material	Aluminium base with plastic case

Weight & Dimensions

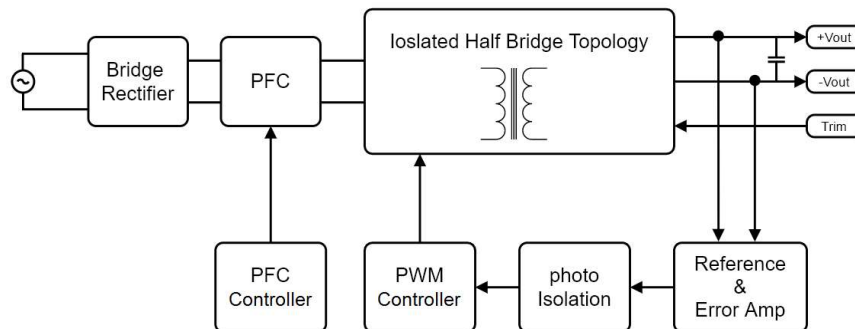
Parameter	Specification
Weight	220g net / pcs (gross weight not stated in source)
Dimensions	4.60" x 2.40" x 0.52" (117.3 x 60.0 x 13.2mm)

Mechanical Drawing



1	BC-	10	-Vo
2	BC+	9	-S
3	EN	8	Trim
4	AC1	7	+S
5	AC2	6	+Vo
11	R	Other	Base

Block Diagram



Notes

1. All parameters are typical at Ta=+25°C under nominal line voltage conditions unless otherwise noted.
2. It is recommended to protect the input with fuses or other protection devices.
3. Only single output models have a trim function; if the trim function is not used, leave the trim pin open.
4. Aluminium base can be connected to FG through the M3 mounting screw holes.
5. 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.