

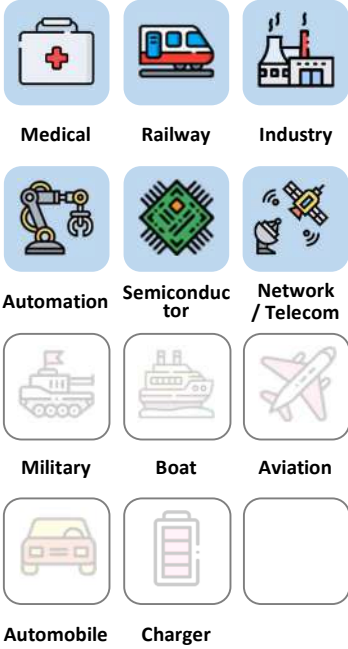


# ACO250 Series

## 250W & 350W /

### Open Frame AC/DC

#### Applications



**3** Years Warranty



#### Features

1/2 Brick	90~264VAC Input range	350W Active PFC	Long Hold-up Time	-40~85°C Case Temperature	3000 VAC Insulation	91 % High efficiency	Base plate cooled
Output Trimming (Optional)	OCP	OVP	OTP	SCP			

#### Model Number Structure

AC      O      250 -      120      S      -      350

Series Name	Package	Watt	Output Voltage (VDC)	Output Quantity	Actual Watt
AC series	Open Frame	250	120 : 12	S : Single	Actual Watt
			240 : 24		
			280 : 28		
			360 : 36		
			480 : 48		

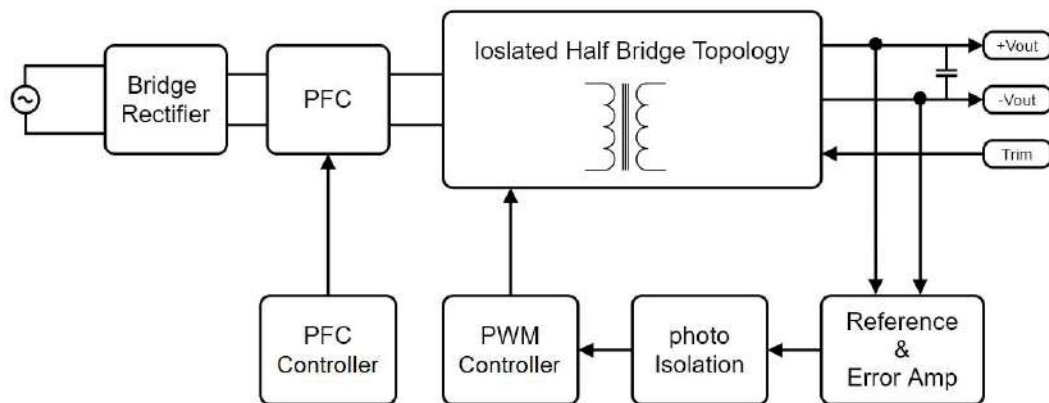
**Model Selection Guide**

Typical @ Ta=+25 °C under nominal line voltage conditions unless noted

Model	Input			Output			Efficiency
	Voltage (V)		Current (A)	Voltage	Current	Power	
	Range	Nominal	Full load	(V)	(A)	(W)	Typ.(%)
ACO250-120S-250	90-264	230	1.21	12	20.80	250	90
ACO250-240S-250	90-264	230	1.19	24	10.4	250	91
ACO250-280S-250	90-264	230	1.19	28	8.93	250	91
ACO250-360S-250	90-264	230	1.19	36	6.94	250	91
ACO250-480S-250	90-264	230	1.19	48	5.20	250	90
ACO250-120S-350	90-264	230	1.71	12	2.91	350	91
ACO250-240S-350	90-264	230	1.19	24	14.58	350	91
ACO250-280S-350	90-264	230	1.71	28	12.50	350	91
ACO250-360S-350	90-264	230	1.19	36	9.72	350	90
ACO250-480S-350	90-264	230	1.71	48	7.29	350	90

**Description**

**AC series - Open Frame 250 converter** is a 250W / 350W isolated, regulated ac/dc converter with active PFC in half brick package and long hold-up time setting by external capacitors. It features a high efficiency up to 91%, wide working case temperature range -40~+85°C, no minimum load required, 3kVac reinforced insulation, OVP, OCP, SCP, OTP, etc. These power modules use advanced power processing, control and packaging technologies and are suitable for many applications with harsh environments where wide temperature variation and space limitations, etc.



ACO250 Series Block Diagram

**Electrical Specifications**

(Typical @ Ta=+25°C under nominal line voltage conditions unless noted.)

**Input Specifications**

Parameter	Notes and Conditions	Min.	Typ.	Max.	Unit
Operating Input Voltage Ranges		90		264	VAC
Operating Input Frequency Ranges		47		63	Hz
Input Current	at 115VAC 100% load at 230VAC 100% load		2.4 1.2		A
Power Factor	at 115VAC 100% load at 230VAC 100% load		0.99 0.99		
Leakage Current	at 264VAC 60Hz 100% load			3.5	mA

**Output Specifications**

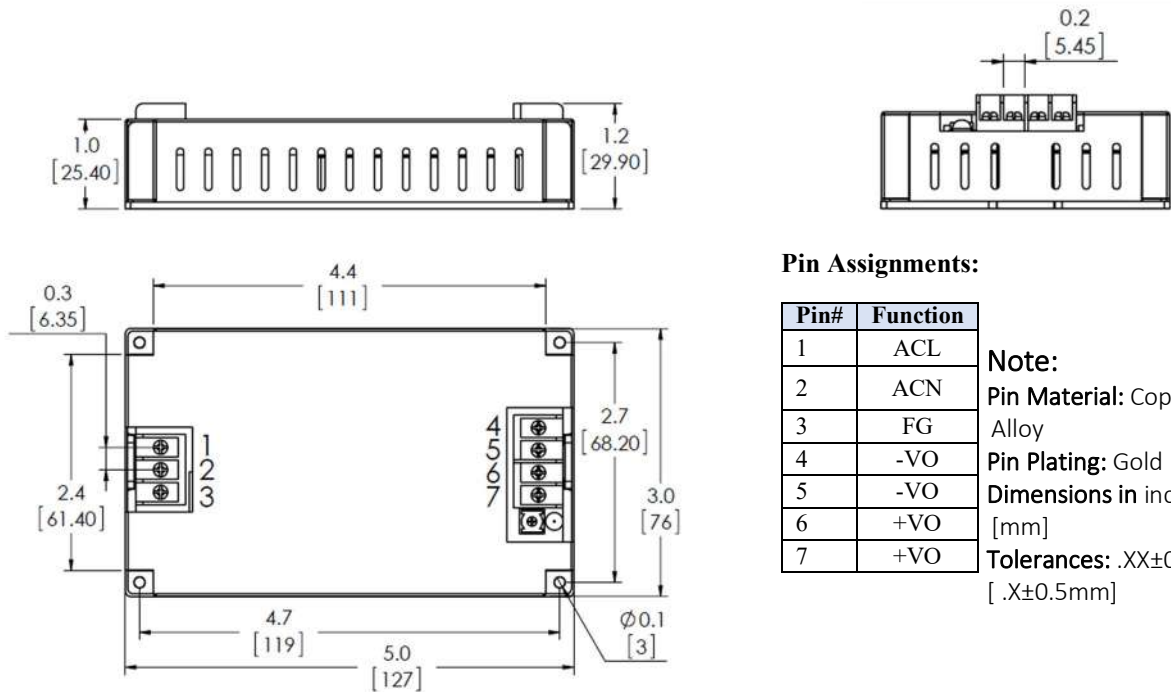
Parameter	Notes and Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy	100% Load			±1.5	%
Line Regulation	High Line to Low Line			±0.5	%
Load Regulation	0% to 100% Load			±1	%
Output Ripple & Noise Voltage	Bandwidth 20MHz and with 10uF MLCC Output Capacitor			2	%V <sub>pk-pk</sub>
Minimum Load		0			A
Hold Up Time	at full load & 115 /230VAC		12		
Over Voltage Protection		110		140	%
Short-circuit Protection	Hiccup mode	Auto-Recovery			

**General Specifications & Environmental Specifications**

Parameter	Notes and Conditions	Min.	Typ.	Max.	Unit
Switching Frequency	PFC/AC-DC		100/130		kHz
Storage Temperature Range	All models	-55		100	°C
Operating Case Temperature	on aluminum base plate	-40		85	°C
Humidity (non condensing)	All models			95	%
Isolation Voltage	Input to Output		3000		VAC
	Input to Base		1500		VAC
	Output to Base		500		VAC
Calculated MTBF	BellCore-TR-332@ 50°C G.B	TBD			M HR
Weight		380(13.4)			g (oz.)
Dimensions		5.00" x 3.00" x 1.00" (127.0 x 76.2 x 25.4 mm)			
Case Material	Metal				

**It is recommended to protect the input by fuses or other protection devices.**

The information and specifications contained in this data sheet are believed to be correct at time of publication. All specifications are subject to change without notice. No rights under any patent accompany the sale of any such products or information contained herein.

**Mechanical Dimensions & Pin Assignments**
**Shape**

**Pin Assignments:**

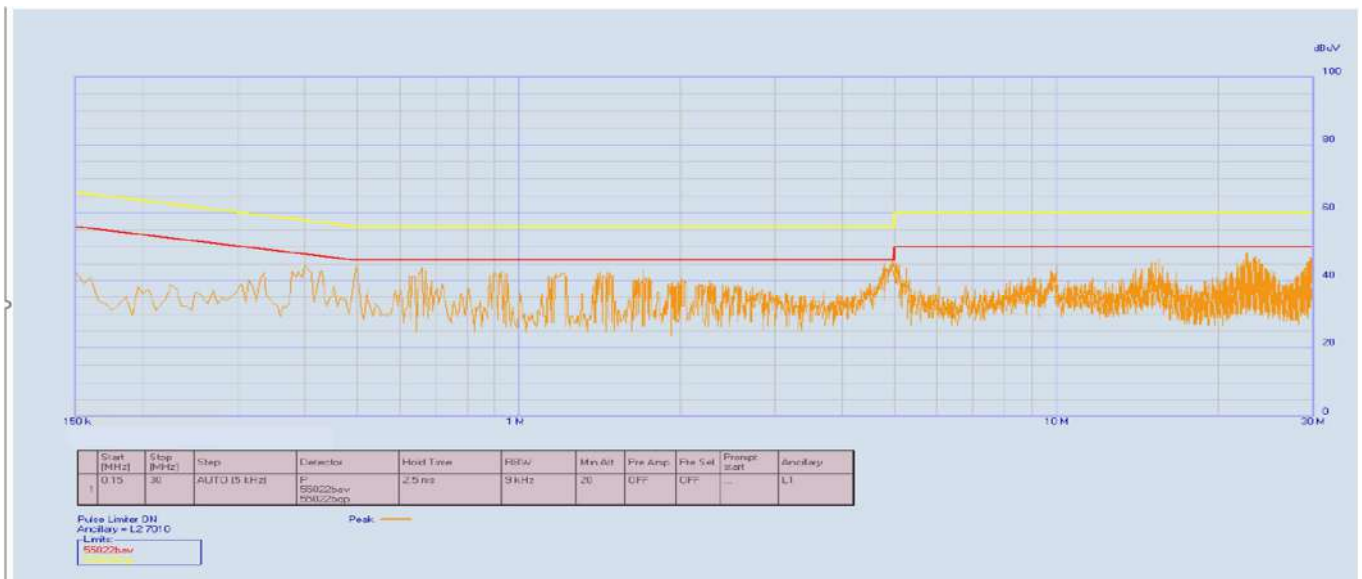
Pin#	Function
1	ACL
2	ACN
3	FG
4	-VO
5	-VO
6	+VO
7	+VO

**Note:**

Pin Material: Copper Alloy  
 Pin Plating: Gold  
 Dimensions in inches [mm]  
 Tolerances: .XX±0.25 [ .X±0.5mm]

**Conducted EMI**

Input terminal value (typ.) ACO250-120S-350 @Vin = 230VDC, Iout = 20.83A



The fundamental switching frequency of the module is 100 kHz.

