MIC-3890AC

3U CompactPCI® Serial AC-DC Dual output (with 5V standby) 300W Switching Power Supply

Features

- 3U x 8HP CPCI serial form factor
- Wide operating temperature -40°C to +70°C
- 1+1 redundancy, hot-swappable
- PMBus communication
- Wide input typ. 90-264V_{AC}
- Hold-up time 18mS at 115 & 230V_{AC}
- 90% efficiency

Introduction

MIC-3890AC series are 3U/8HP CompactPCI® Serial power supply units. The MIC-3890AC accepts 90–264 Vac as input voltage, with a total output of 300 W. The power supply output payload is +12 V, and the +5 Vsb voltage is used for wake-up events. The power supply supports the PMBus communication protocol, and its voltage, current, and temperature can be monitored at any time. The wide input range and wide temperature design make it suitable for harsh environments and provide an ideal solution for railway rolling stock.

Specifications

Input	Input Voltage range	Typ. 90-264V_{AC}
	Input Frequency	47-63Hz
	Input Current	3A@115V_{AC} / 1.5A@230V_{AC}
	Inrush Current	5.3Arms at 230V_{AC}
	Input Connector	FCI 51939-667LF
Output	Output Voltage	Vo1: +12V, standby Vo2: +5V
	Output Current (typ.)	Vo1: 25A, standby Vo2: 2.5A
	Output Wattage	Typ. 312.5W continuous
	Output Connector	FCI 51939-667LF
	Line Regulation	Typical 1%
	Load Regulation	Vo1 typical ±1%, Vo2 typical ±5%
	Total Tolerance	Vo1 typical ±2%, Vo2 typical ±5%
	Noise & Ripple	Typical 1% peak to peak
	Hold-up Time	18mS at 115 & 230V_{AC}
General	Efficiency	Typical 90% at 230V_{AC}
	Switching Frequency	85-100KHz
	N+1 Redundancy	Available
	Hot-swappable	Available
	DC OK	Available
	Power Fail Signal	Available
	PMBus interface	Available
Protection	Over Voltage	Available
	Over Current	Available
	Over Load	Typical 120%-130% peak current at 115V_{AC}
	Over Temperature	Available
LED	FAULT	Green: valid input voltage Red: critical fault
	Power	Green: DC OK
Environment	Operating Temperature	-40 ~ 70°C (-40 ~ 158°F) (with air flow and derating)
	Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
	Cooling	200 LFM moving air
	Operating Humidity	95% @ 40°C, non-condensing
	Non-operating Humidity	95% @ 60°C, non-condensing
	Shock	10 G, 11ms, each axis three times, operating mode
	Vibration	2Grms (5 ~ 500 Hz)

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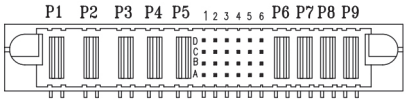
Output Voltage & Current Rating Chart

Assignment	Volt.	Typical	Min	Max
V1	12V	25A	0A	25A
V2	5V	2.5A	0A	2.5A

Pin Assignments



P1	P2	P3	P4	P5	D1	D2	D3	D4	D5	D6	P6	P7	P8	P9
					N/A	FAL	PS_P	COM	DEG	5Vsb				
					C1	C2	C3	C4	C5	C6				
					N/A	N/A	COM	A0	ALERT	5Vsb				
L	N	G	N/A	N/A	B1	B2	B3	B4	B5	B6	COM	COM	V1	V1
					N/A	12VCS	PSON	A1	SCL	COM				
					A1	A2	A3	A4	A5	A6				
					N/A	-VS	+VS	2	SDA	EN				

Ordering Information

PN	Description
MIC-3890AC-A1D1	A/D 100-240V 312.5W 12V/5V 3U 8HP CPCI-S

CPU and Peripheral I/O Board Description

Models	Description
MIC-330	3U CompactPCI® serial Intel® 9th gen. processor blade
MIC-330V2	3U CompactPCI® serial Intel® 11th gen. processor blade
MIC-332	3U CPCI-S carrier, AGX Orin
MIC-3810	3U CPCI-serial PCIe carrier board
MIC-3820	3U CPCI-serial SATA carrier board
MIC-3811	3U CPCI-serial dual Mini-PCIe carrier board
MIC-3954	3U CPCI-S Quad Mini-PCIe & M.2 carrier board
MIC-3860	3U CompactPCI® serial 4 Ports 2.5GBASE-T Ethernet board
MIC-3821	3U CompactPCI® serial M.2 PCIe/NVMe SSD carrier board
MIC-3812	3U CompactPCI® serial MXM carrier board
MIC-3861	CPCI-S 10G Ethernet board
MIC-300A1	3U CPCI-serial 1 x7&1X9 serial BP W/O RIO, fan

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