

MIC-3890DC

3U CompactPCI® Serial DC 300W Power Supply Unit



MIC-3890V2-B1D1

Features

- 3U x 8HP CPCI serial form factor.
- Front panel has a 1x 110V input via an M12 male connector, 1 x 12V output to the backplane
- Wide operating temperature -40°C to +70 °C.
- N+1 redundancy, hot-swappable.
- PMBus communication.
- Wide input 66-160V_{DC}.
- 85% Plus efficiency.
- Meets EN50155 class S2 & C2 compliance.

Introduction

The MIC-3890V2 series are 3U/8HP CompactPCI® Serial power supply units designed for use in demanding environments such as railway rolling stock. These units accept a wide input voltage range of 66-160V_{DC} via a front-panel M12 connector, total power output 300W, delivering 12V to the backplane for system power. The power supply supports PMBus communication, allowing real-time monitoring of voltage, current, and temperature. Its wide input range and temperature tolerance make it ideal for harsh environments.

Specifications

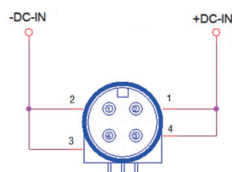
Input	input Voltage range	66V-160V _{DC} , nominal 110V
	Input Current	Typical 3.5 A at 110VDC
	Inrush Current	Peak 4.5A at nominal 110VDC
	MAX Current	7A
	Input Connector	Harting M12 Male connector 21033213401
Output	Output Voltage	Vo: +12V
	Output Current (Max.)	Vo: 25A
	Output Wattage	300W
	Output Connector	12V: FCI 51939-667LF
	Line Regulation	Typical 2%
	Load Regulation	Typical 2%
	Voltage Regulation	Typical 1%
	Noise & Ripple	12V: max 120mV PP
General	Efficiency	Typical 85% at 110V _{DC}
	Dielectric Withstand	I/P-O/P: 1500V _{AC} I/P-GND: 1500V _{AC} O/P-GND: 500V _{AC}
	N+1 Redundancy	Available
	Hot-swappable	Available
	DC OK	Available
	Power Fail Signal	Available
Protection	Over Voltage	Available
	Over Current	Available
	Over Load	Available
	Over Temperature	Available (110°C)
LED	Input OK	Input LED: Green / faulty LED: off
	Input Faulty	Input LED: off / faulty LED: red
	12V Output OK	12V output LED: green / faulty LED: off
	12V Output Faulty	12V output LED: off / faulty LED: red
Environment	Operating Temperature	-40 ~ 70°C (-40 ~ 158°F) (with air flow and derating)
	Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
	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)

Output Voltage & Current Rating Chart

Assignment	Voltages	Minimum	Maximum
V1	12V	0A	25A

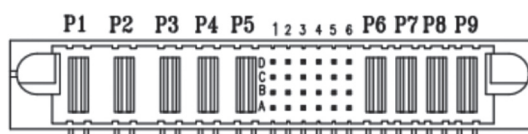
Pin Assignments

1. 110V Input M12 Connector



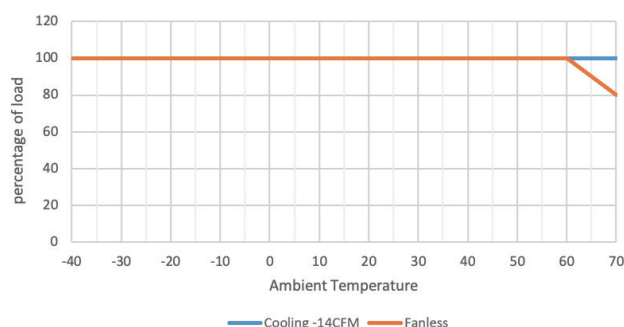
Pin	Name	Remark
1,4	+110V	Input anode
2,3	-110V	Input cathode

2. Backplane Connector: FCI 51939-667LF



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

Derating Curve



CPU and Peripheral I/O Board Description

Models	Description
MIC-330	3U CPCI-Serial main board.
MIC-330V2	3U CPCI-Serial main board
MIC-332	3U CPCI-Serial AI board
MIC-300A	3U CPCI-Serial chassis
MIC-3861	3U CPCI-Serial 10G LAN board
MIC-3860	3U CPCI-Serial 2.5G LAN board
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-3812	3U CPCI-Serial MXM GPU carrier board

Ordering Information

PN	Description
MIC-3890V2-B1D1	3U CPCI-S 300W DC power single 12V output



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