

MIC-3890WDC

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



Features

- 3U x 8HP CPCl serial form factor.
- Wide operating temperature -40°C to +85°C.
- 1+1 redundancy, hot-swappable & active current sharing
- PMBus communication.
- Wide input typ. 16.6-160VDC.
- EN50155 Class S2 & C2 compliance

Introduction

MIC-3890WDC series are 3U/8HP CompactPCI® Serial power supply units. The MIC-3890WDC accepts 16.6-160VDC as input voltage, with a Max output of 312W. 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.

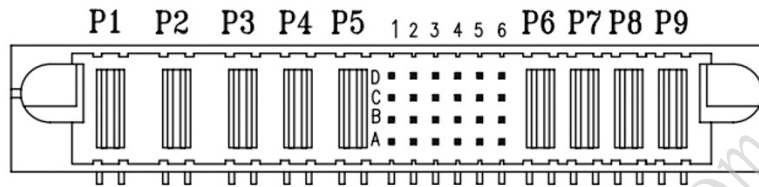
Specifications

Input	Input Voltage range	16.6-160VDC, nominal 110VDC
	Input Current	Typical 3.1A at 110VDC
	Inrush Current	Peak 27A at nominal 110VDC
	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 Regulation	Vo1 typical ±2%, Vo2 typical ±6%
	Noise & Ripple	Typical 1% peak to peak, or 120mV
General	Efficiency	Min. 89% at 110VDC(312.5W)
	Switching Frequency	100, 65, 80, 400KHz, 100KHz at nominal I/P 110VDC
	N+1 Redundancy	Available
	Hot-swappable	Available
	DC OK	Available
	Power Fail Signal	Available
	PMBus interface	Available
	Dielectric Withstand	I/P-O/P: 3000VAC, I/P-GND:1500VAC, O/P-GND:1000VAC
	Over Voltage	Available
Protection	Over Current	Available
	Over Load	Typical 160% max. load fully protected against output overload or short circuit
	Over Temperature	Available
LED	FAULT	Green: valid input voltage Red: critical fault
	Power	Green: DC OK
Environment	Operating Temperature	-40 °C to +85 °C w (with air flow and derating)
	Storage Temperature	- 45 °C ~ 90 °C
	Cooling	150-312.5W: 200-600LFM Fan
	Operating Humidity	90% @ 40°C, non-condensing
	Non-operating Humidity	95% @ 60°C, non-condensing
	Shock	10 G, 11ms, each axis three times, operating mode
	Vibration	10Grms ((10Hz-2000Hz)

Output Voltage & Current Rating Chart

Assignment	Volt.	Typical	Min	Max	Peak
V1	12V	25A	0A	25A	28A
V2	5V	2.5A	0A	2.5A	3A

Pin Assignments



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	5Vsb	COM	COM	V1	V1
					C1	C2	C3	C4	C5	C6				
					N/A	N/A	COM	A0	ALERT	5Vsb				
					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				

Ordering Information

PN	Description
MIC-3890DC-A1D1	D/D 16.6-160V 312.5W 12V/5V CPCI

Product Pictures



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-S serial PCIe carrier board
MIC-3820	3U CPCI-S serial SATA carrier board
MIC-3811	3U CPCI-S 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-3850	CPCI-S LAN Switch board
MIC-300B	3U CPCI-S 84HP Chassis 8slot BP Fanless
MIC-300A1	3U CPCI-S 84HP Chassis with 8-slot B Fan