

MIC-3890

3U CompactPCI® Serial DC 250W Power Supply Unit



Features

- 3U x 8HP CPCI serial form factor
- M12 or WAGO DC-IN connector
- Wide operating temperature -40°C to +70 °C
- 1+1 redundancy, hot-swappable
- Reserve PMBus communication
- Wide input 66-160V_{DC}
- 80% Plus efficiency
- Meets EN50155 class S2 & C2 compliance

Introduction

MIC-3890 series are 3U/8HP CompactPCI® Serial power supply units. There are two SKUs for your application: one is a 250W with M12 connector and another is a 250W with Wago connector as input interface. Both can accept 66-160VDC as input voltage via a connector in front panel. The power supply output payload power is +12 V, the +5Vsb voltage is for wake-up events. The power supply reserve the function that supports PMBus communication protocol and the voltage, current and temperature of the power supply can be detected at any time. The wide input and wide temperature design makes it suitable for harsh environments and provides an ideal solution for railway rolling stock.

Specifications

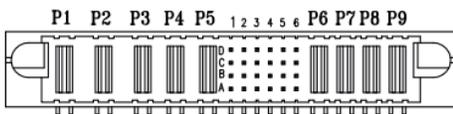
Input (DC)	input Range	66V-160V _{DC}
	Input Current	≤5A
	Inrush Current	Peak 11.4A at 160V _{DC}
	Input Connector	Wago769-663/004-000 M12 WP-04M2-93-11
Output	Output Connector	FCI 51939-667LF
	Line Regulation	±0.5%
	Load Regulation	±2%
	Total Regulation	±2%
	Noise & Ripple	5V: ≤100mV 12V: ≤120mV
	Remote Sense	Available at 12V
	Current Sharing	Available at 12V
Protection	Over Voltage	Built-in (LATCH)
	Over Current	Installed
	Over Temperature	Available
	I/P reverse voltage	Available
General	Conformal Coating	Available
	Efficiency	≥84%
	Switching Frequency	225-275KHz , Typical 250KHz
	Dielectric Withstand	I/P-O/P: 1500V _{AC} I/P-GND:1500V _{AC}
	Remote ON/OFF	Available
	Power Fail Signal	Available at [FAL#] pin
	DC OK	Available
	N+1 Redundancy	Internal OR-ing diodes
	Hot-swappable	Available

Environmental	Operating Temperature	-40 – 70 °C (with air flow and derating)
	Storage Temperature	-55°C to +85°C
	Cooling	≥150W , forced air
Safety/EMC	Emissions (conducted)	GB/T 24338.5 EN50121-4
	Safety Standard	GB/T 25119
	Shock and Vibration	GB/T 21563
	Radiated Susceptibility	GB/T 24338.4 EN50121-3-2 IEC 62236-3-2
	Surge	EN50121-3-2

Output Voltage & Current Rating Chart

Assignment	Voltages	Minimum	Maximum
V1	12V	0A	20A
V1	5Vsb	0A	2.5A

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				
N/A	-VS	+VS	A2	SDA	EN									

OUTPUTS

Assignment	DC VOLTAGE	CURRENT			PIN NBR
		min	Typ	Max	
V01	+12V	0A	20A	20A	CNT1-P8,P9
COM	Return of all output				CNT1-P6,P7,C3,B6,D4
5Vsb	+5V	0A	2.5A	2.5A	CNT1-C6,D6
-VS	The negative remote sense of V01				CNT1-A2
12VCS	The current share bus of V01				CNT1-B2
EN	Active low to enable				CNT1-A6
FAL	Active low to show power is fail				CNT1-D2
+VS	The positive remote sense of V01				CNT1-A3
PSNON	Active low to enable V01				CNT1-B3
PS_P	PS_present, pull low in the PSU				CNT1-D3
A2	I ² C address bit 2				CNT1-A4
A1	I ² C address bit 1				CNT1-B4
A0	I ² C address bit 0				CNT1-C4
SDA	Data interface respectively for I ² C logic				CNT1-A5
SCL	Clock interface respectively for I ² C logic				CNT1-B5
ALERT	Active low to alert for PUMBus				CNT1-C2
DEG	Active low to show over temperature				CNT1-D2

Ordering Information

PN	Description
MIC-3890-A1D1	3U/8HP CPCI-S 250W Wago DC-IN Power
MIC-3890-A1D2	3U/8HP CPCI-S 250W M12 DC-IN Power

Note: Matched the power cable can be selected according to customer demand
 Wago connector: 1700032645-01, A Cable 1x3P-5.0/TEMx2 OPEN 100cm ITA-CS02
 M12 connector: 1700029923-01, M cable plug-in 5P-5.0/Waterproof 4P 10cm

Product Picture



CPU and Peripheral I/O Board Description

Models	Description
MIC-330	3U CPCI-Serial main 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-300	3U CPCI-Serial 1 x7&1X9 serial BP W/O RIO, fan