

PM30-24S DC-DC Converters

The PM30 is a DC-DC converter which provides a regulated output at power levels up to 30 watts. It accepts a wide range DC input and provides a fully isolated, regulated output. In operation, either (or neither) input pin, as well as either (or neither) output pin can be grounded. * PM30 units provide full output power for ambient temperatures up to 50°C, with linear derating from 50°C to zero power at 105°C. In forced air applications, full output power can be maintained as long as the chassis temperature, as measured in the center of the unit's label, is maintained at less than or equal to 100°C.

Note: For safety agency approval of the end use equipment to safety standards (such as UL 1950 3rd Edition, CAN/CSA C22.2 No. 950-95, DIN VDE 0805 and EN 60950), the output of the converter is ELV if the input to the converter is ELV; the output of the converter is SELV only if its input is SELV. The input and output are to be both floating or both grounded. The converter is to be protected by the specified fuse, provided in the ungrounded leg.

Specifications:

ITEMS		MODEL	PM30-24S Series			
		PM30-24S03	PM30-24S05	PM30-24S12	PM30-24S15	
Nominal Output Voltage	V	3.3	5	12	15	
Voltage Accuracy	-	± 1%				
Output Current (Power) @ 50°C	A/W	7.50 (24.80)	6.00 (30.0)	2.50 (30.0)	2.00 (30.0)	
Operating Temperature	-	-25°C to + 105°C. Derate linearly above + 50°C to 0 watts at 105°C				
Output Voltage Adjustment Range	V	3.3 – 3.6	4.5 – 5.5	10.8 – 13.2	13.5 – 16.5	
Output Ripple (20MHz BW)	mV	20mV RMS / 75 mV p-p		25mV RMS / 100 mV p-p		
Line Regulation	mV	6.6	10	24	30	
Load Regulation (10% - 100%)	mV	33	50	120	150	
Remote On /Off	-	Logic 1 or open enables unit, logic 0 or short shuts unit down. Referenced to -Vin				
Temperature Coefficient	-	± 0.01% / °C				
Overshoot	-	No overshoot at turn on, turn off, power failure or removal of a short circuit				
Input Voltage Range	-	18 – 36 Vdc				
Efficiency (Typical)	%	71	76	77		
No Load Input Power	W	0.4				
Short Circuit Protection	-	Continuous				
Overvoltage Clamp Point (fixed)	V	4.7 max.	6.5 max.	14 max.	17.5 max	
Isolation (Input to Output)	-	500Vac, 700Vdc, 1MΩ				
Regulatory Agency Compliance**	-	ETSI-300-132-2, Bellcore GR-1089, UL1950 3 rd Edition, CAN/CSA C22.2 No. 950-95, EN 60950, VDE 0805				
Mounting & Connections	-	0.040" diameter, 0.22" long solderable pins				
Cover	-	0.032" anodized aluminum				
Size (W.H.D.)	in	2.5" x 3.0" x 0.335"				
Storage Temperature	-	-40°C to + 105°C				
Cooling	-	Convection cooling allows full o/p rating. Contact factory for rating w/external forced air				
Vibration	-	2.5G RMS,10Hz – 50 Hz, random vibration, 10 minutes per axis				
Relative Humidity	-	5% - 95%, non-condensing				
Altitude	-	10,000 feet max. operating / 45,000 feet max. storage				
Fungus Proofing	-	Units are inherently fungus inert				
Thermal Cycling	-	1 hour @ -25°C ramped to 1 hour @ +25°C ramped to 1 hour @ +100°C, 10 cycles ramp = 5°C/ minute				
Warranty	-	2 year warranty includes parts and labor				

****Regulatory Agency compliance testing is in process. Check individual unit's label for appropriate agency logos.**

Note: Regulation values pertain to operation with output currents above 10% of rated load current on main output.

Total Output Power vs. Ambient Operating Temperature

