





Size: 4in x 2.25in x 0.75in (101.6mm x 57.2mm x 0.75mm)

OPTIONS

- Single or Dual Output
- Positive or Negative Logic
- Assembly Option
 - -Enclosed
 - -Din Rail
 - -Enclosed & Din Rail

APPLICATIONS

- Wireless Network
- Telecom/Datacom
- Industry Control System
- Measurement Equipment
- Semiconductor Equipment

FEATURES

- 4:1 Ultra Wide Input Range
- No Minimum Load Required
- 1600VDC Input to Output Isolation
- Screw Terminals for Input and Output Connections
- Internal Input Fuse Protection
- Internal Output LED Indicator

- RoHS II and REACH Compliant
- Over Voltage, Over Load and Short Circuit Protection
- Remote Control
- CE Marked
- Meets EN55022 Class B
- Safety Meets UL60950-1, EN60950-1, and IEC60905-1

DESCRIPTION

The DCMD20W series of DC/DC converters offers up to 20 watts of output power in a 4in x 2.25in x 0.75in chassis mount, enclosed, din rail or enclosed din rail package. This series consists of single and dual output models with 4:1 ultra-wide input range. Each model has an internal output LED indicator, internal input fuse protection, screw terminals for input and output connectors, as well as remote control. This series also has over voltage, over load, and short circuit protection, RoHS II and REACH compliance, and UL60950-1, EN60950-1, and IEC60950-1 safety approvals. Please call factory for order details.

MODEL SELECTION TABLE								
Single Output Models								
Model Number ⁽¹⁾	Input Voltage	Output	Output Current	Ripple & Noise	No Load Input		Efficiency	Output Power
	Range	Voltage			Current	Capacitive Load ⁽²⁾		
DCMD20W-24S33X		3.3VDC	5500mA	60mVp-p	51mA	18000µF	84%	
DCMD20W-24S05X	24VDC	5VDC	4000mA	75mVp-p	66mA	9600µF	87%	
DCMD20W-24S12X	(9.5~36VDC)	12VDC	1670mA	75mVp-p	25mA	1650µF	85%	
DCMD20W-24S15X		15VDC	1330mA	75mVp-p	26mA	1050µF	85%	Up to 20W
DCMD20W-48S33X		3.3VDC	5500mA	60mVp-p	36mA	18000µF	84%	Op 10 2000
DCMD20W-48S05X	48VDC	5VDC	4000mA	75mVp-p	36mA	9600µF	87%	
DCMD20W-48S12X	(18~75VDC)	12VDC	1670mA	75mVp-p	17mA	1650µF	86%	
DCMD20W-48S15X		15VDC	1330mA	75mVp-p	17mA	1050µF	86%	

MODEL SELECTION TABLE								
Dual Output Models								
Model Number ⁽¹⁾	Input Voltage Range	Output Voltage	Output Current	Ripple & Noise	No Load Input Current	Maximum Capacitive Load ⁽²⁾	Efficiency	Output Power
DCMD20W-24D05X	24VDC (9.5~36VDC)	±5VDC	±2000mA	100mVp-p	58mA	±4800µF	87%	
DCMD20W-24D12X		±12VDC	±833mA	100mVp-p	33mA	±825µF	86%	
DCMD20W-24D15X	(9.5~30VDC)	±15VDC	±667mA	100mVp-p	34mA	±525µF	86%	Up to 20W
DCMD20W-48D05X	48VDC	±5VDC	±2000mA	100mVp-p	25mA	±4800µF	88%	Op 10 2011
DCMD20W-48D12X	(18~75VDC)	±12VDC	±833mA	100mVp-p	19mA	±825µF	87%	
DCMD20W-48D15X	(10~737DC)	±15VDC	±667mA	100mVp-p	19mA	±525µF	87%	

Wall Industries, Inc. • 37 Industrial Drive, Exeter, NH 03833 • Tel: 603-778-2300 • Toll Free: 888-597-9255 • Fax 603-778-9797



SPECIFICATIONS All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances SPECIFICATION TEST CONDITIONS Min Max Unit Typ INPUT SPECIFICATIONS 24Vin (Nominal) 9.5 24 36 Input Voltage Range VDC 48Vin (Nominal) 18 48 75 24Vin (Nominal) 9.5 Start-Up Voltage VDC 48Vin (Nominal) 18 24Vin (Nominal) 7.5 VDC Shutdown Voltage 48Vin (Nominal) 15 24Vin (Nominal) 50 VDC Input Surge Voltage (100ms, max.) 48Vin (Nominal) 100 24Vin (Nominal) 6 Input Fuse (Slow Blow) Α 48Vin (Nominal) 4 15 Α Inrush Current Input Reflected Ripple Current Nominal Input and Full Load 10 mAp-p **OUTPUT SPECIFICATIONS** Output Voltage See Table 3.3Vout -1.5 +1.5 Voltage Accuracy % Others -1 0 +10 Single -0.2 +0.2 Line Regulation Low Line to High Line @Full Load % Dual -0.5 +0.5 3.3Vout -1.5 +1.5 Load Regulation No Load to Full Load % Others -1.0 +1.0 Voltage Adjustability Single Output -10 +10 % Cross Regulation Asymmetrical Load 25%/100% Full Load, Dual Outputs -5.0 +5.0 % Output Power See Table Output Current See Table Maximum Capacitive Load See Table 3.3Vout 60 Single mVp-p Ripple & Noise (20MHz bandwidth) Measured by 20MHz Bandwidth 5, 12, 15Vout 75 Dual 100 Transient Response Recovery Time 25% Load Step Change μS 250 Power Up 100 Start-Up Time Constant Resistive Load ms Remote ON/OFF 20 Temperature Coefficient -0.02 +0.02 %/°C Output Indicator Green LED REMOTE ON/OFF CONTROL(3) DC-DC ON Open or 3~12VDC Positive Logic (Standard) DC-DC OFF Short of 0~1.2VDC DC-DC ON Short or 0~1.2VDC Negative Logic (Option) DC-DC OFF Open or 3~12VDC Input Current of CTRL Pin -0.5 mΑ Remote OFF Input Current 2.5 mΑ **PROTECTION** Short Circuit Protection Continuous, Automatic Recovery Over Load Protection % of lout Rated 150 % 3.3Vout 3.9 5Vout 6.2 Over Voltage Protection Zener Diode Clamp **VDC** 12Vout 15 15Vout 18 **ENVIRONMENTAL SPECIFICATIONS** Without Derating -40 +75 ٥С Operating Temperature With Derating +75 +91 οС Storage Temperature -40 +105 Thermal Shock MIL-STD-810F Relative Humidity 5 95 %RH Chassis Mount Models MIL-STD-810F Enclosed Models MIL-STD-810F Vibration **DIN Rail Models** IEC60068-2-6 Enclosed & DIN Rail IEC60068-2-6 Hours **MTBF** MIL-HDBK-217F, Full Load 1,966,000



SPECIFICATIONS All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances **SPECIFICATION TEST CONDITIONS** Unit Min Max Тур **GENERAL SPECIFICATIONS** Efficiency See Table Switching Frequency 360 400 440 kHz Input to Output 1600 Isolation Voltage 1 Minute **VDC** Input (Output) to Chassis 1600 Isolation Resistance 500VDC GΩ **Isolation Capacitance** 400 pF PHYSICAL SPECIFICATIONS Weight 3.13oz (89g) 4in x 2.25in x 0.75in Chassis Mount (101.6mm x 57.2mm x 19.1mm) 4in x 2.25in x 0.79in Dimensions (L x W x H) **Enclosed Mount** (101.6mm x 57.2mm x 20.1mm) 4in x 2.25in x 1.09in **DIN Rail Mount** (101.6mm x 57.2mm x 27.8mm) Chassis Material Aluminum SAFETY CHARACTERISTICS UL60950-1 Safety Approvals EN60950-1 IEC60950-1 EMI EN55022 Class B Perf. Criteria A EN61000-4-2 Air ±8kV and Contact ±6kV **FSD** Radiated Immunity EN61000-4-3 10V/m Perf. Criteria A Fast Transient EN61000-4-4 ±2kV Perf. Criteria A EN61000-4-5 ±0.5kV Perf. Criteria A Surge Conducted Immunity EN61000-4-6 10Vr.m.s Perf. Criteria A

NOTES

100A/m continuous; 1000A/m 1 Second

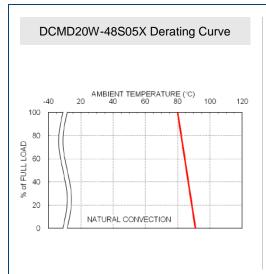
- 1. "X" in product name indicates assembly option types. "X" will be "U" for Chassis Mount, "C" for Enclosed Mount, "D" for DIN Rail Mount, or "ED" for Enclosed & DIN Rail Mount.
- 2. Test by minimum input and constant resistive load.
- 3. Referred to –Vin pin.

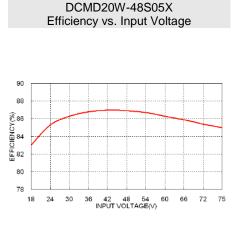
Power Frequency Magnetic Field

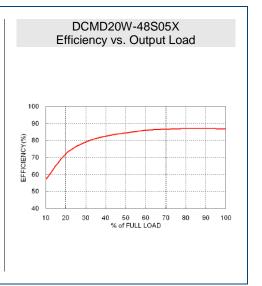
*Due to advances in technology, specifications subject to change without notice.

EN61000-4-6

CHARACTERISTIC CURVES



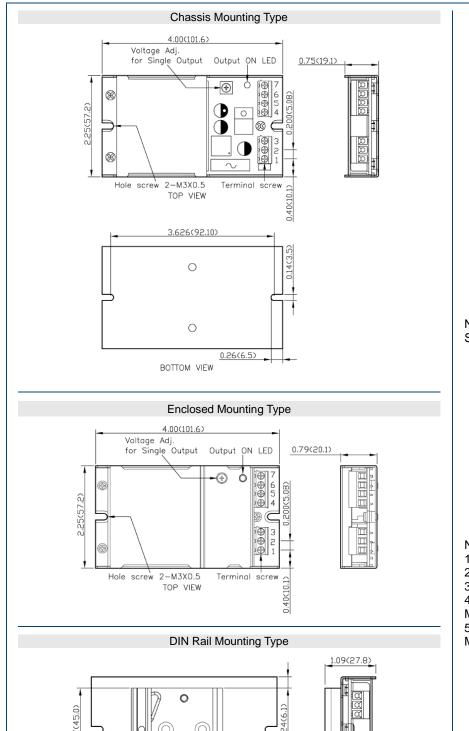




Perf. Criteria A



MECHANICAL DRAWINGS



1.17(29.8)

1.97(50.0) BOTTOM VIEW

Pin Connection

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
3	Ctrl	Ctrl
4	NC	NC
5	-Vout	-Vout
6	+Vout	Common
7	NC	+Vout

NC: No Connection

Screw Terminals- wire range from 14 to 18 AWG

NOTES:

- 1. All dimensions in Inch (mm)
- 2. Tolerance: X.XX±0.02 (X.X±0.5)
- 3. Tolerance: X.XXX±0.01 (X.XX±0.25)
- 4. Hole Screw Locked Torque:
- MAX 5.0kgf-cm (0.49N-m)
- 5. Terminal Screw Locked Torque:
- MAX 2.5kgf-cm (0.25N-m)



MODEL NUMBER SETUP -

DCMD	20	W	-	48	S	05	U	N
Series Name	Output Power	Input Range		Input Voltage	Output Quantity	Ouptut Voltage	Assembly Option	Remote Control Option
	20 : 20 Watts	4:1		24: 9.5~36VDC	S: Single	33: 3.3VDC	U: U-Chassis	None: Positive Logic
				48: 18~75VDC		05 : 5VDC	C: Enclosed	N: Negative Logic
						12 : 12VDC	D: DIN Rail	
						15 : 15VDC	ED: Enclosed & DIN Rail	
					D : Dual	05 : ±5VDC		
						12 : ±12VDC		
						15 : ±15VDC		

COMPANY INFORMATION -

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001-2008 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact Wall Industries for further information:

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