

MCM Series



- Compact Size - High Power Density
- Rugged Construction
- Universal Input
- Wide Operating Temperature
- EMI Performance to MIL-STD-461E
- Convection-cooled
- Manufactured in the USA

Specification

Input

Input Voltage	• 90-264 VAC (120-370 VDC)
Input Frequency	• 47-63 Hz
Inrush Current	• 40 A max at 230 VAC, cold start 25 °C
Input Protection	• Internally fused

Output

(Specification rated at Ta = 25 °C & 100 % load unless specified otherwise)

Output Voltage	• 12 to 28 VDC (for other output voltages 3.3 V to 48 V - please consult technical sales)
Initial Set Accuracy	• ±1.0%
Minimum Load	• No minimum load required
Start Up Delay	• 2 s max
Start Up Rise Time	• 50 ms
Hold Up Time	• 16/75 ms minimum at 115/230 VAC
Line Regulation	• ±0.5%
Load Regulation	• ±1%
Over/Undershoot	• None at turn on/off
Transient Response	• 4% max. deviation, recovery to within 1% in 500 µs for a 25% load change
Ripple & Noise	• 1% pk-pk, 20MHz BW with 1 µF capacitor connected across measurement points
Overvoltage Protection	• 115-135% Vnom, recycle input to reset
Overload Protection	• 110-150%, on primary power limit, auto recovery
Short Circuit Protection	• Trip and restart (Hiccup mode)
Temperature Coefficient	• 0.05% /°C

Mechanical

AC Input Connector	• AC mains lead, for UK or European mains lead contact technical sales.
DC Output Connector	• D-Sub Type. For customer specific options please contact sales.

General

Efficiency	• 80-85%
Isolation	• 4000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• 70 kHz typical
MTBF	• 250 kHrs per MIL-HDBK-217F

Environmental

Operating Temperature	• -40 °C to +70 °C, derate linearly from 100% load at +50 °C to 50% load at +70 °C. Start up at -30 °C.
Cooling	• Convection-cooled
Operating Humidity	• 95% RH, non-condensing
Storage Temperature	• -40 °C to + 85 °C
Shock	• 30 g pk, half sine, 6 axes
Vibration	• 2 g rms, 5 Hz to 500 kHz, 3 axis

EMC & Safety

Emissions	• MIL-STD-461E, CE102, RE102
EMI Immunity	• MIL-STD 461E, CS101, 114, 115, 116 & RS103
Safety Approvals	• Designed to meet EN60950, UL60950

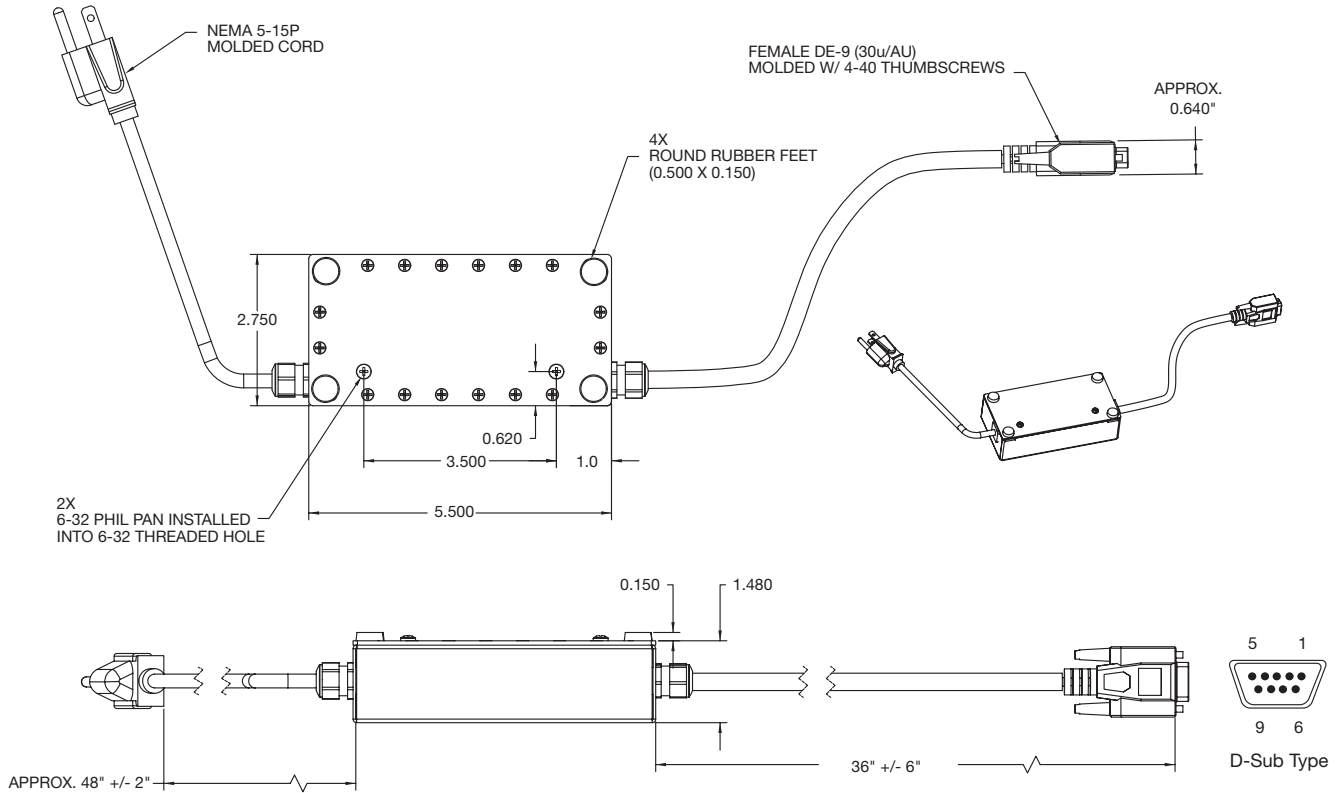
Models and Ratings

Input Voltage	Output Voltage	Output Current	Efficiency (typ)	Model Number
90-264 V	12 VDC	5.0 A	80%	MCM60US12-D9
	15 VDC	4.0 A	80%	MCM60US15-D9
	18 VDC	3.3 A	81%	MCM60US18-D9
	24 VDC	2.5 A	83%	MCM60US24-D9
	28 VDC	2.1 A	83%	MCM60US28-D9

Notes

1. For extended burn-in, please contact sales.

Mechanical Details



Notes

1. All dimensions are in inches
2. Weight: < 2.5 lbs
3. Finishing: Black epoxy paint
4. Mechanical drawing shows the '-D9' 9 Pin Output D-Sub connector. For other connectors, please contact sales.
5. For no connectors, add suffix '-NI' the part number e.g. MCM60US28-NI.

Output Pin Connections	
Pin	D-Sub Type
1	N/C
2	N/C
3	N/C
4	+Output
5	+Output
6	N/C
7	N/C
8	Return
9	Return

Derating Curve

