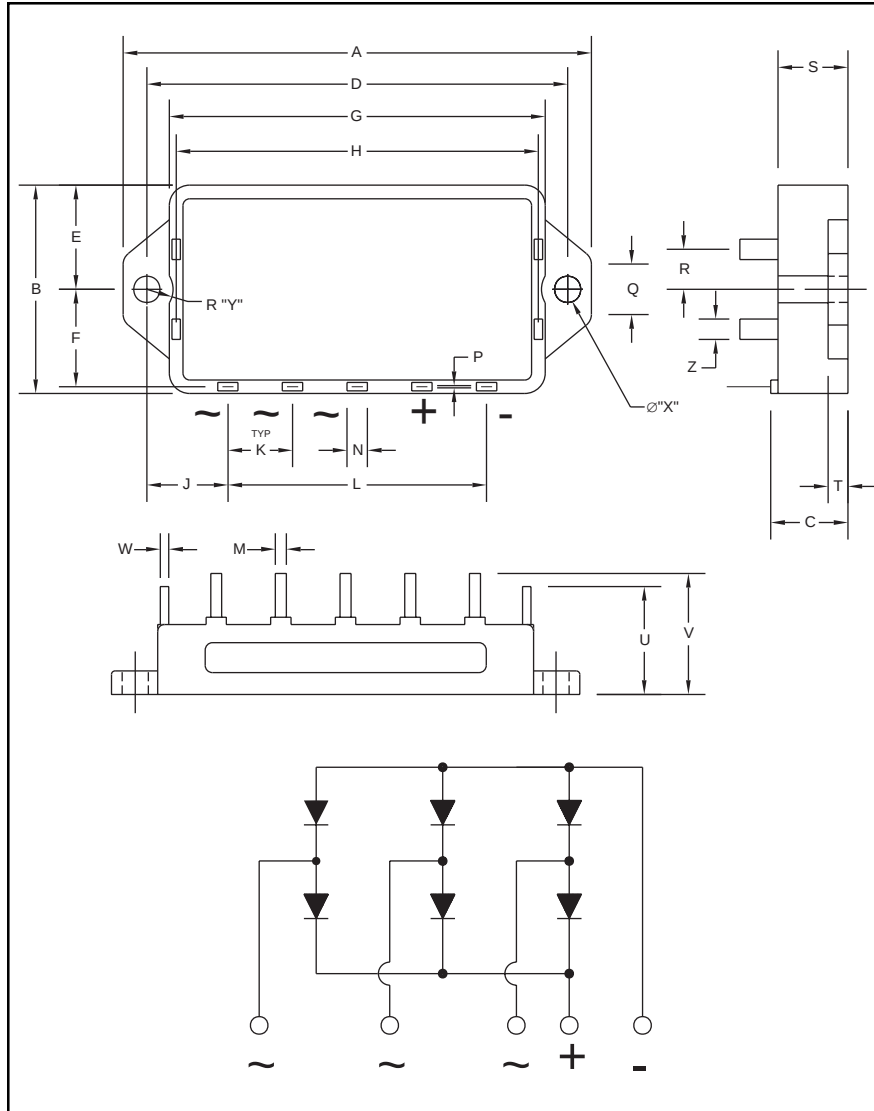


Three-Phase Diode Bridge Module 12 Amperes/800 Volts



Outline Drawing and Circuit Diagram

Dimensions	Inches	Millimeters
A	2.83	71.8
B	1.18	30.0
C	0.35	9.0
D	2.55	64.8
E	0.59	15.0
F	0.54	13.7
G	2.32	58.8
H	2.21	56.2
J	0.48	12.08
K	0.40	10.16
L	1.60	40.64
M	0.05	1.20

Dimensions	Inches	Millimeters
N	0.16	4.0
P	0.02	0.6
Q	0.55	14.0
R	0.20	5.0
S	0.35	9.0
T	0.14	3.5
U	0.45	11.5
V	0.71	18.0
W	0.06	1.5
X	0.16	4.0
Y	0.16	4.0
Z	0.08	2.0



Description:

Powerex Three-Phase Diode Bridge Modules are designed for use in applications requiring rectification of three-phase AC lines into DC voltage. Each module consists of six diodes and the interconnect required to form a complete three-phase bridge circuit. Each diode is electrically insulated from the mounting base plate for easy mounting on a common heatsink with other components.

Features:

- ☐ Isolated Mounting
- ☐ Metal Base Plate
- ☐ Low Thermal Impedance

Applications:

- ☐ Motor Control
- ☐ Inverters
- ☐ UPS

Ordering Information:

RM10TN-H

RM10TN-H

Three-Phase Diode Bridge Module

12 Amperes/800 Volts

Absolute Maximum Ratings, $T_j = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	RM10TN-H	Units
Repetitive Peak Reverse Voltage	V_{RRM}	800	Volts
Non-Repetitive Peak Reverse Voltage	V_{RSM}	900	Volts
Recommended AC Input Voltage	E_A	220	Volts
DC Output Current ($T_b = 100^\circ\text{C}$)	I_O	12	Amperes
Surge (Non-Repetitive) Forward Current (One Half Cycle at 60Hz, Peak Value)	I_{FSM}	200	Amperes
I^2t for Fusing (Value for One Cycle of Surge Current)	I^2t	166	A^2sec
Junction Temperature	T_j	-40 ~ +125	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ +125	$^\circ\text{C}$
Operating Frequency	f	1000	Hz
Maximum Mounting Torque M3.5 Mounting Screw	—	11	in-lb
Maximum Mounting Torque M3.5 Terminal Screw	—	11	in-lb
Dielectric Strength (AC 60Hz, 1 minute between terminal and base plate)	V_{iso}	2500	Volts

Electrical and Thermal Characteristics, $T_j = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Repetitive Reverse Current	I_{RRM}	$T_j = 125^\circ\text{C}$, $V_{RRM} = \text{Rated}$	—	—	8.0	mA
Forward Voltage Drop	V_{FM}	$T_j = 25^\circ\text{C}$, $I_{FM} = 20\text{A}$, Instantaneous Measurement	—	—	1.3	Volts
Thermal Resistance	$R_{th(j-b)}$	Junction to Base Plate	—	—	2.5	$^\circ\text{C/W}$
Thermal Resistance	$R_{th(b-f)}$	Base to Fin, Thermal Grease Applied	—	—	0.3	$^\circ\text{C/W}$
Isolation Resistance		At 500V DC Between Terminal and Base Plate	10	—	—	M Ω

