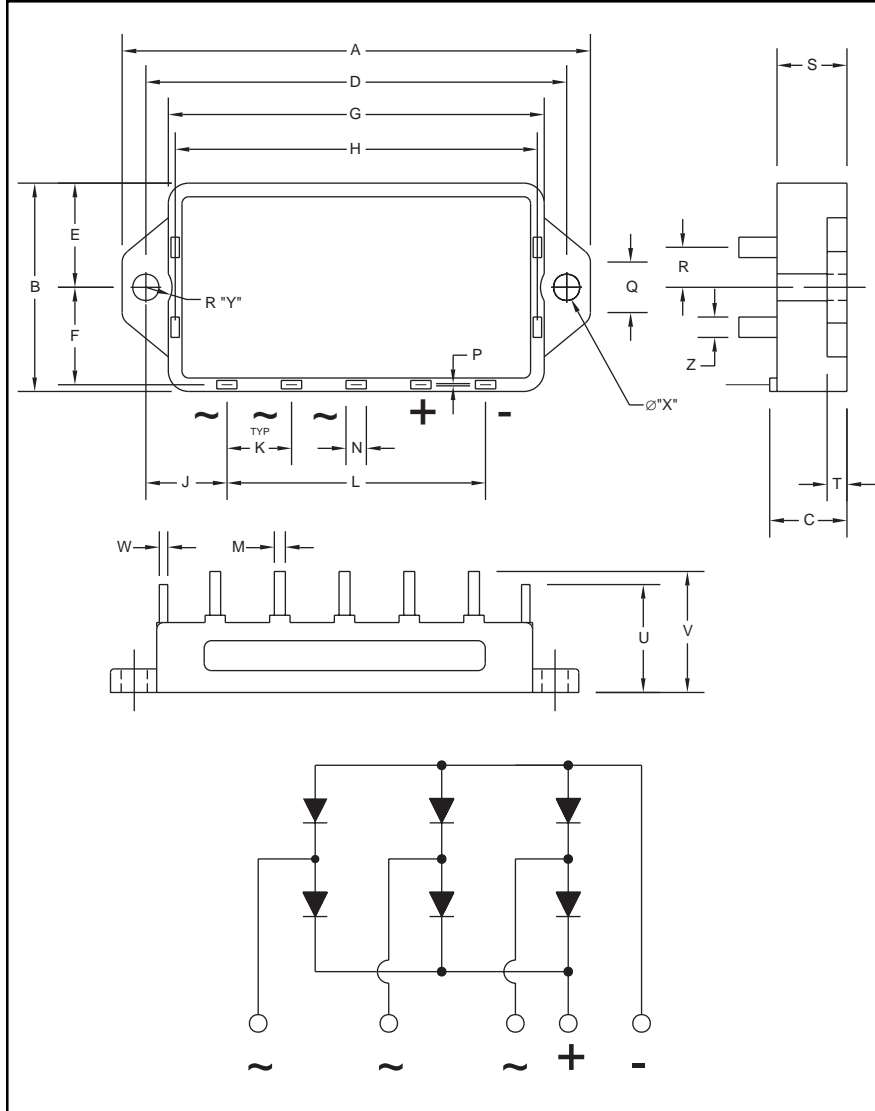


### Three-Phase Diode Bridge Module 7 Amperes/1600 Volts



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-2H

Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

**RM10TN-2H**  
**Three-Phase Diode Bridge Module**  
 7 Amperes/1600 Volts

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

Characteristics	Symbol	RM10TN-2H	Units
Repetitive Peak Reverse Voltage	$V_{RRM}$	1600	Volts
Non-Repetitive Peak Reverse Voltage	$V_{RSM}$	1700	Volts
Recommended AC Input Voltage	$E_A$	440	Volts
DC Output Current ( $T_b = 100^\circ\text{C}$ )	$I_O$	7	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	$\text{A}^2\text{sec}$
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	$V_{FM}$	$T_j = 25^\circ\text{C}$ , $I_{FM} = 10\text{A}$ , Instantaneous Measurement	-	-	1.8	Volts
Thermal Resistance	$R_{th(j-b)}$	Junction to Base Plate	-	-	3.5	$^\circ\text{C}/\text{W}$
Thermal Resistance	$R_{th(b-f)}$	Base to Fin, Thermal Grease Applied	-	-	0.3	$^\circ\text{C}/\text{W}$
Isolation Resistance		At 500V DC Between Terminal and Base Plate	10	-	-	$\text{M}\Omega$

