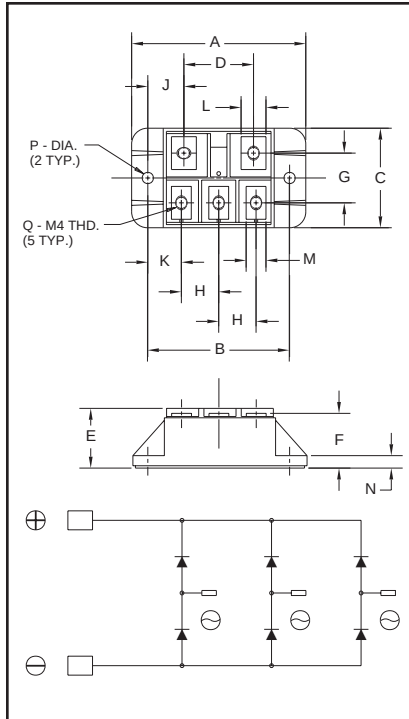


## Three-Phase Diode Bridge Modules 40 Amperes/1200-1600 Volts



**Outline Drawing**

| Dimension | Inches      | Millimeters |
|-----------|-------------|-------------|
| A         | 2.76        | 70          |
| B         | 2.244±0.010 | 57±0.25     |
| C         | 1.57        | 40          |
| D         | 1.10        | 28          |
| E         | 0.94        | 24          |
| F         | 0.87        | 22          |
| G         | 0.79        | 20          |
| H         | 0.59        | 15          |
| J         | 0.57        | 14.5        |
| K         | 0.53        | 13.5        |
| L         | 0.39        | 10          |
| M         | 0.31        | 8           |
| N         | 0.20        | 5           |
| P         | 0.18 Dia.   | Dia. 4.5    |
| Q         | Metric M4   | M4          |



**RM20TPM-24, RM20TPM-2H**  
**Three-Phase Diode Bridge Modules**  
40 Amperes/1200-1600 Volts

### 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 baseplate for easy mounting on a common heatsink with other components.

### Features:

- ☐ Isolated Mounting
- ☐ Metal Baseplate
- ☐ Low Thermal Impedance

### Applications:

- ☐ Motor Control
- ☐ Inverters
- ☐ UPS

### Ordering Information:

Select the complete eight digit module part number you desire from the table below.

Example: RM20TPM-2H is a 1600 Volt, 40 Ampere Three-Phase Diode Bridge Module.

| Type | Current Rating<br>Amperes (x2) | Voltage<br>Volts |
|------|--------------------------------|------------------|
| RM   | 20                             | 24 (1200)        |
| RM   | 20                             | 2H (1600)        |

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

**RM20TPM-24, RM20TPM-2H**  
**Three-Phase Diode Bridge Modules**  
40 Amperes/1200-1600 Volts

### Absolute Maximum Ratings

| Characteristics                                                | Symbol      | RM20TPM-24 | RM20TPM-2H | Units              |
|----------------------------------------------------------------|-------------|------------|------------|--------------------|
| Peak Reverse Blocking Voltage                                  | $V_{RRM}$   | 1200       | 1600       | Volts              |
| Peak Reverse Blocking Voltage (Non-Repetitive)                 | $V_{RSM}$   | 1350       | 1700       | Volts              |
| Recommended AC Input Voltage                                   | $E_A$       | 370        | 440        | Volts              |
| DC Output Current                                              | $I_{F(DC)}$ | 40         | 40         | Amperes            |
| Peak Half-Cycle Surge (Non-Repetitive) On-State Current (60Hz) | $I_{FSM}$   | 400        | 400        | Amperes            |
| $I^2t$ (for Fusing), 8.3 milliseconds                          | $I^2t$      | 670        | 670        | A <sup>2</sup> sec |
| Junction Temperature                                           | $T_J$       | -40 to 125 | -40 to 125 | °C                 |
| Storage Temperature                                            | $T_{STG}$   | -40 to 150 | -40 to 125 | °C                 |
| Maximum Mounting Torque M4 Mounting Screw                      | —           | 15         | 15         | kg.-cm.            |
| Maximum Mounting Torque M4 Terminal Screw                      | —           | 15         | 15         | kg.-cm.            |
| Module Weight (Typical)                                        | —           | 100        | 100        | Grams              |
| V Isolation                                                    | $V_{RMS}$   | 2500       | 2500       | Volts              |

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

| Characteristics                               | Symbol            | Test Conditions                                      | RM20TPM-24/RM20TPM-H | Units   |
|-----------------------------------------------|-------------------|------------------------------------------------------|----------------------|---------|
| <b>Blocking State Maximums</b>                |                   |                                                      |                      |         |
| Reverse Leakage Current, Peak                 | $I_{RRM}$         | $T_J = 150^\circ\text{C}$ , $V_{RRM} = \text{Rated}$ | 10                   | mA      |
| <b>Conducting State Maximums</b>              |                   |                                                      |                      |         |
| Peak On-State Voltage                         | $V_{FM}$          | $T_J = 25^\circ\text{C}$ , $I_{FM} = 40\text{A}$     | 1.3                  | Volts   |
| <b>Thermal Maximums</b>                       |                   |                                                      |                      |         |
| Thermal Resistance, Junction-to-Case          | $R_{\theta(J-C)}$ | Per Module                                           | 0.35                 | °C/Watt |
| Thermal Resistance, Case-to-Sink (Lubricated) | $R_{\theta(C-S)}$ | Per Module                                           | 0.09                 | °C/Watt |