



M3575R

Standard Duty

UL Braking Resistor Modules

OVERVOLTAGE SOLUTIONS FOR AC DRIVES

Bonitron's **M3575R** Resistive Braking Modules provide drive protection from overvoltage faults, due to regenerated voltage, by dissipating the excess energy as heat. M3575R Resistive Braking Modules are typically used in applications where infrequent, low duty cycle, or low horsepower regeneration occurs. The standard duty cycle for the Dynamic Braking Modules is 20% or less.

The **M3575R** Modules are easily applied as resistive loads for use with a drive's internal or external braking transistor. Sizes up to 33 horsepower in a single unit are available and may be paralleled for higher requirements. Units have been designed and tested to ensure that cabinet temperatures are less than 85° C. Over-temperature contacts are standard on all Bonitron resistors.



FEATURES

- UL & CUL Certified models
- 6 - 20% Braking Duty: 1-33 hp: 230, 480-575 AC line voltages available
- Standard terminal access covers
- Fan cooled, low temperature cases are wall or cabinet mountable
- Compatible with any variable speed drive braking system

ADVANTAGES

- Quick cool down - lower temperatures address OSHA concerns
- Covered electrical terminals help protect personnel from shock hazard
- Can be installed as retrofit or to an existing cabinet or drive location
- Fits any VFD DC bus electrical configuration
- UL Certification denotes a higher level of quality

BENEFITS

- Rapid Installation saves application down time
- Model Number Selection Table makes selecting a model number simple
- Stock to 2 weeks available
- Covered electrical terminals reduce electrical shock hazard
- No added hardware cost

MODEL NUMBER SELECTION TABLES

230VAC (320VDC Bus) AT 6% DUTY – NO FAN

| Model Number | Peak hp | Braking Amps (RMS) | Braking Amps (Peak) | Braking Watts (Peak) | Braking Watts (cont.) | Load Ohms | Chassis |
|--------------|---------|--------------------|---------------------|----------------------|-----------------------|-----------|---------|
| M3575R-L1M0 | 1hp | 0.28A | 2A | 746 | 22 | 190 | M4 |
| M3575R-L2M0 | 2hp | 0.57A | 4A | 1492 | 45 | 95 | M4 |
| M3575R-L3M0 | 3hp | 0.85A | 6A | 2238 | 67 | 63 | M4 |
| M3575R-L4M0 | 4hp | 1.13A | 8A | 2984 | 90 | 48 | M7 |
| M3575R-L5B0 | 5hp | 1.41A | 10A | 3730 | 112 | 38 | B4 |
| M3575R-L6M0 | 6hp | 1.70A | 12A | 4476 | 134 | 32 | M7 |
| M3575R-L8B0 | 8hp | 2.12A | 15A | 5968 | 179 | 25 | B4 |
| M3575R-L9M0 | 9hp | 2.55A | 18A | 6714 | 201 | 21 | M10 |
| M3575R-L11B0 | 11hp | 2.83A | 20A | 8206 | 246 | 19 | B7 |
| M3575R-L16B0 | 16hp | 4.38A | 31A | 11936 | 358 | 13 | B7 |
| M3575R-L24B0 | 24hp | 6.65A | 47A | 17904 | 537 | 8 | B10 |

230VAC (320VDC Bus) AT 20% DUTY – WITH FAN

| Model Number | Peak hp | Braking Amps (RMS) | Braking Amps (Peak) | Braking Watts (Peak) | Braking Watts (cont.) | Load Ohms | Chassis |
|--------------|---------|--------------------|---------------------|----------------------|-----------------------|-----------|---------|
| M3575R-L1MF | 1hp | 0.52A | 2A | 746 | 75 | 190 | M4 |
| M3575R-L2MF | 2hp | 1.03A | 4A | 1492 | 150 | 95 | M4 |
| M3575R-L3MF | 3hp | 1.55A | 6A | 2238 | 224 | 63 | M4 |
| M3575R-L4MF | 4hp | 2.07A | 8A | 2984 | 298 | 48 | M7 |
| M3575R-L5BF | 5hp | 2.58A | 10A | 3730 | 373 | 38 | B4 |
| M3575R-L6MF | 6hp | 3.10A | 12A | 4476 | 448 | 32 | M7 |
| M3575R-L8BF | 8hp | 3.87A | 15A | 5968 | 597 | 25 | B4 |
| M3575R-L9MF | 9hp | 4.65A | 18A | 6714 | 671 | 21 | M10 |
| M3575R-L11BF | 11hp | 5.16A | 20A | 8206 | 821 | 19 | B7 |
| M3575R-L16BF | 16hp | 8.00A | 31A | 11936 | 1194 | 13 | B7 |
| M3575R-L24BF | 24hp | 12.14A | 47A | 17904 | 1790 | 8 | B10 |

460VAC (640VDC Bus) AT 6% DUTY – NO FAN

| Model Number | Peak hp | Braking Amps (RMS) | Braking Amps (Peak) | Braking Watts (Peak) | Braking Watts (cont.) | Load Ohms | Chassis |
|--------------|---------|--------------------|---------------------|----------------------|-----------------------|-----------|---------|
| M3575R-H1M0 | 1hp | 0.14A | 1A | 746 | 22 | 780 | M4 |
| M3575R-H2M0 | 2hp | 0.28A | 2A | 1492 | 45 | 390 | M4 |
| M3575R-H3M0 | 3hp | 0.42A | 3A | 2238 | 67 | 260 | M4 |
| M3575R-H4M0 | 4hp | 0.57A | 4A | 2984 | 90 | 195 | M7 |
| M3575R-H5B0 | 5hp | 0.71A | 5A | 3730 | 112 | 150 | B4 |
| M3575R-H6M0 | 6hp | 0.85A | 6A | 4476 | 134 | 130 | M7 |
| M3575R-H8B0 | 8hp | 1.13A | 8A | 5968 | 179 | 90 | B4 |
| M3575R-H9M0 | 9hp | 1.27A | 9A | 6714 | 201 | 87 | M10 |
| M3575R-H11B0 | 11hp | 1.84A | 13A | 8206 | 246 | 60 | B7 |
| M3575R-H16B0 | 16hp | 2.40A | 17A | 11936 | 358 | 45 | B7 |
| M3575R-H24B0 | 24hp | 3.54A | 25A | 17904 | 537 | 30 | B10 |
| M3575R-H27B0 | 28hp | 3.82A | 27A | 20888 | 627 | 28.2 | B10 |
| M3575R-H33B0 | 33hp | 4.53A | 32A | 24618 | 739 | 22.5 | B10D |

460VAC (640VDC Bus) AT 20% DUTY – WITH FAN

| Model Number | Peak hp | Braking Amps (RMS) | Braking Amps (Peak) | Braking Watts (Peak) | Braking Watts (cont.) | Load Ohms | Chassis |
|----------------|---------|--------------------|---------------------|----------------------|-----------------------|-----------|---------|
| M3575R-H1MF | 1hp | 0.26A | 1A | 746 | 75 | 780 | M4 |
| M3575R-H2MF | 2hp | 0.52A | 2A | 1492 | 150 | 390 | M4 |
| M3575R-H3MF | 3hp | 0.77A | 3A | 2238 | 224 | 260 | M4 |
| M3575R-H4MF | 4hp | 1.03A | 4A | 2984 | 298 | 195 | M7 |
| M3575R-H5BF | 5hp | 1.29A | 5A | 3730 | 373 | 150 | B4 |
| M3575R-H6MF | 6hp | 1.55A | 6A | 4476 | 448 | 130 | M7 |
| M3575R-H8BF | 8hp | 2.07A | 8A | 5968 | 597 | 90 | B4 |
| M3575R-H9MF | 9hp | 2.32A | 9A | 6714 | 671 | 87 | M10 |
| M3575R-H11BF | 11hp | 3.36A | 13A | 8206 | 821 | 60 | B7 |
| M3575R-H16BF | 16hp | 4.39A | 17A | 11936 | 1194 | 45 | B7 |
| M3575R-H24BF | 24hp | 6.54A | 25A | 17904 | 1790 | 30 | B10 |
| M3575R-H27BF | 28hp | 6.97A | 27A | 20888 | 2089 | 28.2 | B10 |
| M3575R-H33BF | 33hp | 8.26A | 32A | 24618 | 2462 | 22.5 | B10D |
| M3575R-H50G1F | 50hp | 13.68A | 53A | 40000 | 8000 | 14 | G1 |
| M3575R-H100G2F | 100hp | 27.37A | 106A | 80000 | 16000 | 7 | G2 |
| M3575R-H150G3F | 150hp | 41.05A | 159A | 120000 | 24000 | 5 | G3 |

INDUSTRY APPLICATIONS

Automotive.....Pick and Place
 Paint Booths
 Assembly Lines
 Glass Handling
 Downhill Conveyers

Elevators.....Industrial Elevators

Cranes.....Shipyards Cranes
 Industrial Hoists

Food Processing...Food Byproduct Separating

Pharmaceutical...Centrifuges

Railroad.....Rail Dumping Cars

Testing.....Dynamometers

Fibers.....Web Presses

Printing.....Paper Roller
 Tension Controllers

SPECIFICATIONS

Voltages..... 230, 460 VAC

Connections..... Braking Transistor
 Fault Contact
 Optional Fan 115, 230

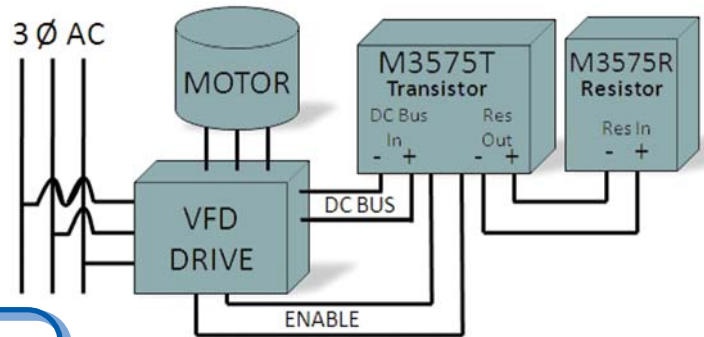
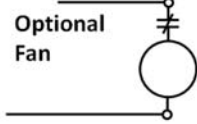
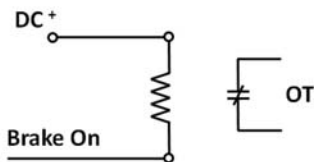
Input Package..... VAC & 24 VDC

Duty Cycle..... TYPE-1
 20% Max with Fan
 6% Max without Fan

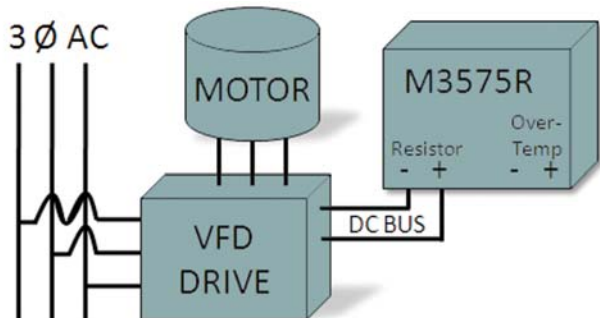
Maximum 'On-Time'..... 60 Seconds

Faults Output..... N.C. Over-Temp
 Contact (71°C)
 1 A, 24 VDC, 0.5 A,
 125 VAC

M3575R SCHEMATIC & DIMENSIONS



VFD WITH EXTERNAL BRAKING TRANSISTOR



VFD WITH INTERNAL BRAKING TRANSISTOR

| Chassis | Description | Dimensions (H x W x D) |
|---------|---------------------------------|------------------------|
| B4 | TYPE - 1 | 17.75 x 4 x 8" |
| B7 | TYPE - 1 | 17.75 x 7 x 8" |
| B10 | TYPE - 1 | 17.75 x 10 x 8" |
| B10D | TYPE - 1 | 17.75 x 10 x 11.70" |
| G1 | Grid Resistors (50hp or higher) | 38 x 25 x 22" |
| G2 | Grid Resistors (50hp or higher) | 47 x 25 x 22" |
| G3 | Grid Resistors (50hp or higher) | 56 x 25 x 22" |
| M4 | Mini | 12.75 x 4 x 8.70" |
| M7 | Mini | 12.75 x 7 x 8.70" |
| M10 | Mini | 12.75 x 10 x 8.70" |