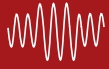


# Heavy Duty Braking Transistor

# BONITRON

M3452 Series



## Overvoltage Solutions



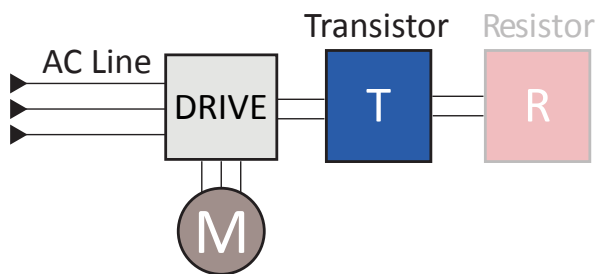
Up to 1600A  
per unit

Bonitron remains a leader in the field of high horsepower braking and proudly maintains its reputation for durability and reliability, with models rated up to 1600A.

Bonitron Braking Transistors are used with AC drives to allow full power braking and eliminate overvoltage faults. This permits controlled braking and dramatically shortens motor stopping time. The M3452 works with Variable Speed Drives (VSDs) to monitor the DC bus. If overvoltage occurs, the M3452 shunts the excess energy through a braking resistor to prevent overvoltage faults. (Standard and custom braking resistors are also available from Bonitron. For more information see the M3775R series).

Optional advanced diagnostics allow for remote monitoring, while local indicators assist in pinpointing issues. Remote configuration and networking capabilities add to the flexibility and reliability of your overall system and reduce your installation wiring.

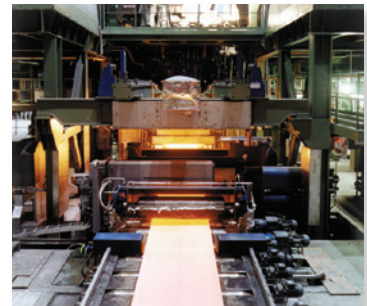
For lower duty cycle applications, or where advanced I/O isn't required, see our M3575T Standard Duty Braking Transistors.



## Product Highlights

- Local and remote status monitoring
- EtherNet/IP™ & PROFIBUS™ DP networking options
- Systems can be reconfigured on-the-fly
- Up to 1600A per unit (Parallel operation for higher ratings)
- Proven record for quality and support

## Industry Applications



Conveyors | Cranes | Drawworks | Elevators | Hoists | Pick and Place | Pump Jacks | Top Drives | & More!



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# Model Selection

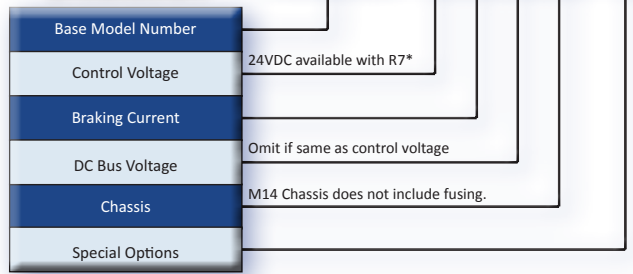
See back cover for control options



when used with  
A, R5, R7, R7E control  
options

## 230-240VAC

### Model Number Breakdown



Power (Peak)	Control Voltage	Base Model Number	Braking Current (Peak)	Braking Current (RMS)	Minimum Resistance	Dimensions (H x W x D)	UL and CUL Listing
<b>230-240 VAC Drives   375 VDC Setpoint</b>							
37.5 HP	115-120 VAC 230-240 VAC	M3452-U75LB7 M3452-L75B7	75 A	75 A	5.00 Ω	17.75" x 7.00" x 8.10"	UL and CUL
75 HP	115-120 VAC 230-240 VAC	M3452-U150LB7 M3452-L150B7	150 A	150 A	2.50 Ω	17.75" x 7.00" x 8.10"	UL and CUL
100 HP	115-120 VAC 230-240 VAC	M3452-U200LK6 M3452-L200K6	200 A	200 A	1.90 Ω	20.00" x 7.12" x 10.50"	UL and CUL
150 HP	115-120 VAC 230-240 VAC	M3452-U300LK6 M3452-L300K6	300 A	300 A	1.25 Ω	20.00" x 7.12" x 10.50"	UL and CUL
300 HP	115-120 VAC 230-240 VAC	M3452-U600LK6 M3452-L600K6	600 A	300 A	0.63 Ω	20.00" x 7.12" x 10.50"	UL and CUL
400 HP	115-120 VAC 230-240 VAC	M3452-U800LK9 M3452-L800K9	800 A	400 A	0.47 Ω	20.00" x 9.05" x 10.25"	
600 HP	115-120 VAC 230-240 VAC	M3452-U1200LK10 M3452-L1200K10	1200 A	600 A	0.32 Ω	20.00" x 10.00" x 10.50"	

For 24VDC control voltage, replace "U" with "D". Only available with R7, R7E Options. (Not UL Listed)

## 380-415VAC

Power (Peak)	Control Voltage	Base Model Number	Braking Current (Peak)	Braking Current (RMS)	Minimum Resistance	Dimensions (H x W x D)	UL and CUL Listing
<b>380 - 415 VAC Drives   620 VDC Setpoint</b>							
62.5 HP	120 VAC 380 VAC	M3452-U75EB7 M3452-E75B7	75 A	75 A	8.27 Ω	17.75" x 7.00" x 8.10"	
125 HP	120 VAC 380 VAC	M3452-U150EB7 M3452-E150B7	150 A	150 A	4.13 Ω	17.75" x 7.00" x 8.10"	
160 HP	120 VAC 380 VAC	M3452-U200EK6 M3452-E200K6	200 A	200 A	3.10 Ω	20.00" x 7.12" x 10.50"	
240 HP	120 VAC 380 VAC	M3452-U300EK6 M3452-E300K6	300 A	300 A	2.07 Ω	20.00" x 7.12" x 10.50"	
490 HP	120 VAC 380 VAC	M3452-U600EK6 M3452-E600K6	600 A	300 A	1.04 Ω	20.00" x 7.12" x 10.50"	
660 HP	120 VAC 380 VAC	M3452-U800EK9 M3452-E800K9	800 A	400 A	0.78 Ω	20.00" x 9.05" x 10.25"	
1000 HP	120 VAC 380 VAC	M3452-U1200EK10 M3452-E1200K10	1200 A	600 A	0.52 Ω	20.00" x 10.00" x 10.50"	
1330 HP	120 VAC 380 VAC	M3452-U1600EM14 M3452-E1600M14	1600 A	1200 A	0.39 Ω	28.00" x 13.90" x 14.60"	
1330 HP	120 VAC 380 VAC	M3452-U1600ET10 M3452-E1600T10	1600 A	1200 A	0.39 Ω	30.59" x 10.12" x 19.18"	



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## Line Regen

M3545 & M3645 Series

Bonitron Line Regens replace traditional braking transistor and resistor options that waste energy as heat during drive braking. Instead of dissipating braking energy as heat in a resistor, Line Regen solutions return this energy to the power grid. This reduces demand from the utility, which equates to ample energy savings. Check out our solutions at [Bonitron.com/line\\_regen.html](http://Bonitron.com/line_regen.html)



## Braking Resistors

M3775R Series

Whether you're buying a reputable Bonitron Transistor or using your drives' internal brake, there's no need to go anywhere other than Bonitron - we're your one stop shop! Our selection of resistors is rated up to the megawatts. Need a custom resistor? We do those too! [Bonitron.com/m3775r.html](http://Bonitron.com/m3775r.html)



## 460-480VAC

Power (Peak)	Control Voltage	Base Model Number	Braking Current (Peak)	Braking Current (RMS)	Minimum Resistance	Dimensions (H x W x D)	UL and CUL Listing
<b>460-480 VAC Drives   750 VDC Setpoint</b>							
75 HP	120 VAC 460 VAC	<b>M3452-U75HB7</b> <b>M3452-H75B7</b>	75 A	75 A	10.00 Ω	17.75" x 7.00" x 8.10"	UL and CUL
150 HP	120 VAC	<b>M3452-U150HB7</b>	150 A	150 A	5.00 Ω	17.75" x 7.00" x 8.10"	UL and CUL
	460 VAC	<b>M3452-H150B7</b>					
200 HP	120 VAC	<b>M3452-U200HK6</b>	200 A	200 A	3.80 Ω	20.00" x 7.12" x 10.50"	UL and CUL
	460 VAC	<b>M3452-H200K6</b>					
300 HP	120 VAC	<b>M3452-U300HK6</b>	300 A	300 A	2.50 Ω	20.00" x 7.12" x 10.50"	UL and CUL
	460 VAC	<b>M3452-H300K6</b>					
600 HP	120 VAC	<b>M3452-U600HK6</b>	600 A	300 A	1.25 Ω	20.00" x 7.12" x 10.50"	UL and CUL
	460 VAC	<b>M3452-H600K6</b>					
800 HP	120 VAC	M3452-U800HK9	800 A	400 A	0.93 Ω	20.00" x 9.05" x 10.25"	
	460 VAC	M3452-H800K9					
1200 HP	120 VAC	M3452-U1200HK10	1200 A	600 A	0.63 Ω	20.00" x 10.00" x 10.50"	
	460 VAC	M3452-H1200K10					
1600 HP	120 VAC	<b>M3452-U1600HM14</b>	1600 A	1200 A	0.47 Ω	28.00" x 13.90" x 14.60"	UL and CUL
	460 VAC	<b>M3452-H1600M14</b>					
1600 HP	120 VAC	M3452-U1600HT10	1600 A	1200 A	0.47 Ω	30.59" x 10.12" x 19.18"	
	460 VAC	M3452-H1600T10					

For 24VDC control voltage, replace "U" with "D". Only available with R7, R7E Options. (Not UL Listed)

## 575-600VAC

Power (Peak)	Control Voltage	Base Model Number	Braking Current (Peak)	Braking Current (RMS)	Minimum Resistance	Dimensions (H x W x D)	UL and CUL Listing
<b>575-600 VAC Drives   940 VDC Setpoint</b>							
95 HP	120 VAC 575 VAC	<b>M3452-U75CB7</b> <b>M3452-C75B7</b>	75 A	75 A	12.50 Ω	17.75" x 7.00" x 8.10"	UL and CUL
190 HP	120 VAC	<b>M3452-U150CB7</b>	150 A	150 A	6.30 Ω	17.75" x 7.00" x 8.10"	UL and CUL
	575 VAC	<b>M3452-C150B7</b>					
250 HP	120 VAC	<b>M3452-U200CK6</b>	200 A	200 A	4.70 Ω	20.00" x 7.12" x 10.50"	UL and CUL
	575 VAC	<b>M3452-C200K6</b>					
380 HP	120 VAC	<b>M3452-U300CK6</b>	300 A	300 A	3.20 Ω	20.00" x 7.12" x 10.50"	UL and CUL
	575 VAC	<b>M3452-C300K6</b>					
760 HP	120 VAC	<b>M3452-U600CK6</b>	600 A	300 A	1.60 Ω	20.00" x 7.12" x 10.50"	UL and CUL
	575 VAC	<b>M3452-C600K6</b>					
1000 HP	120 VAC	M3452-U800CK9	800 A	400 A	1.20 Ω	20.00" x 9.05" x 10.25"	
	575 VAC	M3452-C800K9					
1500 HP	120 VAC	M3452-U1200CK10	1200 A	600 A	0.78 Ω	20.00" x 10.00" x 10.50"	
	575 VAC	M3452-C1200K10					
2015 HP	120 VAC	<b>M3452-U1600CM14</b>	1600 A	1200 A	0.58 Ω	28.00" x 13.90" x 14.60"	UL and CUL
	575 VAC	<b>M3452-C1600M14</b>					
2015 HP	120 VAC	M3452-U1600CT10	1600 A	1200 A	0.58 Ω	30.59" x 10.12" x 19.18"	
	575 VAC	M3452-C1600T10					



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# 690VAC

Power (Peak)	Control Voltage	Base Model Number	Braking Current (Peak)	Braking Current (RMS)	Minimum Resistance	Dimensions (H x W x D)	UL and CUL Listing
<b>690 VAC Drives   1090 VDC Setpoint</b>							
110 HP	120 VAC	M3452-U75YB7	75 A	75 A	14.50 Ω	17.75" x 7.00" x 8.10"	
220 HP	120 VAC	M3452-U150YB7	150 A	150 A	7.30 Ω	17.75" x 7.00" x 8.10"	
300 HP	120 VAC	M3452-U200YK6	200 A	200 A	5.50 Ω	20.00" x 7.12" x 10.50"	
440 HP	120 VAC	M3452-U300YK6	300 A	300 A	3.60 Ω	20.00" x 7.12" x 10.50"	
875 HP	120 VAC	M3452-U600YK6	600 A	300 A	1.95 Ω	20.00" x 7.12" x 10.50"	
1170 HP	120 VAC	M3452-U800YK9	800 A	400 A	1.40 Ω	20.00" x 9.05" x 10.25"	
1750 HP	120 VAC	M3452-U1200YK10	1200 A	600 A	0.91 Ω	20.00" x 10.00" x 10.50"	
2300 HP	120 VAC	M3452-U1600YM14	1600 A	1200 A	0.68 Ω	28.00" x 13.90" x 14.60"	

## Network and Control Options

	A	R5	R7	R7E	R8EIP	R8PDP
<b>Inputs</b>						
Enable						
Master/Slave						
Bus Discharge						
Fault Reset						
Setpoint Adjust						
<b>Outputs</b>						
Module Ready						
Logic Power OK						
Not IGBT Open						
Not IGBT Shorted						
Not Overtemp						
Not Blown Fuse						
Control Ready						
Master/Slave Status						
Power Stage Ready						
Not Overcurrent						
Bus Voltage						
Active Braking						
Duty Cycle						
Temperature						
Fault History						
Blink Codes						

A, R5, R7, R7E  
Control Options are



## Specifications

**Voltages**.....230 - 690VAC  
**Current Rating**.....75 to 1600Amps  
**Connections**.....Drive DC Bus  
 Input AC Line (Control)  
 Ground  
**Max. 'On-Time'**.....Peak rating for 60 seconds  
 Continuous rating - continuous

- Discrete Hardwire Connection
- Ethernet Network Connection
- Profibus Network Connection

- 75 - 150A (B7) Options Available with "A" Only
- 200 - 600A (K6) Options A, R5, R7, R7E, R8EIP, R8PDP
- 800A (K9), 1200A (K10) and 1600A (M14 & T10) Options R7, R7E, R8EIP, R8PDP
- All units above 200A have Master/Slave capability

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