



# M3460R

## Power Dip Ride-Thru

### UNDERVOLTAGE SOLUTIONS FOR AC DRIVES

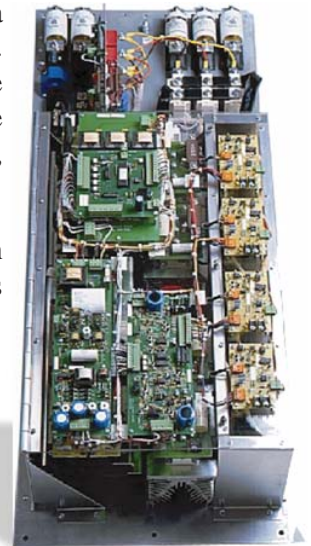
Bonitron Model M3460R series of DC Bus Ride-Thru Modules provide protection from line voltage sags for 208-600VAC Variable Speed PWM Drives that use a fixed rectifier and DC bus.

Many drives claim to have ride through capability such as auto restart or kinetic buffering, but most are not able to maintain complete control over the motor as called upon by the process during under-voltage power disturbances. Many Drives are now “SEMI-47 compliant”, but SEMI-47 specification does NOT include maintaining motor speed!

The majority of AC line voltage fluctuations that occur in three-phase distribution systems have a magnitude (decrease from nominal voltage) of less than 50% and duration of less than .5 seconds. Bonitron Power Supply 3460R models provides sufficient ride through capability to handle these types of voltage sags by temporarily storing energy in inductors and releasing it back into the drives DC bus when needed. This allows the drive to “ride through” these events while, **MAINTAINING MOTOR SPEED AND TORQUE**, without experiencing drive shutdown.

BPS M3460R Single backplate Systems are available up to 600VAC and 250kW / 335hp, and can be ordered open chassis or enclosed cabinets with disconnects. Multiple master / slave systems are available up to 1350kw / 1800hp.

Adding M3460R to any fixed bus drive allows the drive system to surpass SEMI-47 specifications.



#### FEATURES

- Electronic switching scheme- Does NOT use batteries or capacitors
- Simple 5 wire hook up directly to drive
- Parallel connection
- Multi stage design
- Very low standby power losses (less than .1% of rating)
- Built in test with optional display and activity counter
- External DC input connections

#### ADVANTAGES

- No maintenance - 50% sag 2 second spec does not decrease over time
- Easy implementation, easy retrofit
- Ride Thru system failure will not affect process
- Redundancy
- No heat losses to remove
- Ability to activate system while on line and monitor
- Ride Thru status
- Can add energy storage banks

#### BENEFITS

- Minimizes down time – stops major production losses
- Low installation cost
- Does not decrease drive system reliability
- Maximum reliability
- Low operating cost
- Gain confidence in systems ability to maintain control over process
- Ability to add outage protection later can make implementing easier on budget

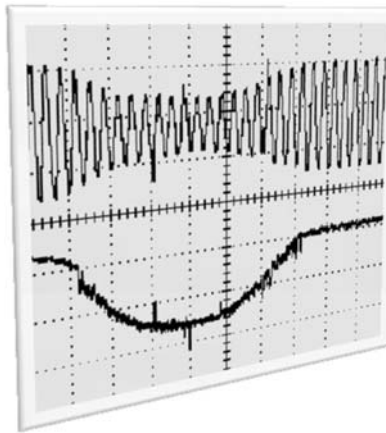
# M3460R RIDE-THRU

The Ride-Thru module is factory set to become active (begin supplying power) if the DC bus voltage drops to a preset level. Once active the Ride-Thru boosts the DC bus voltage to a nominal operating level without loss of control of motor speed.

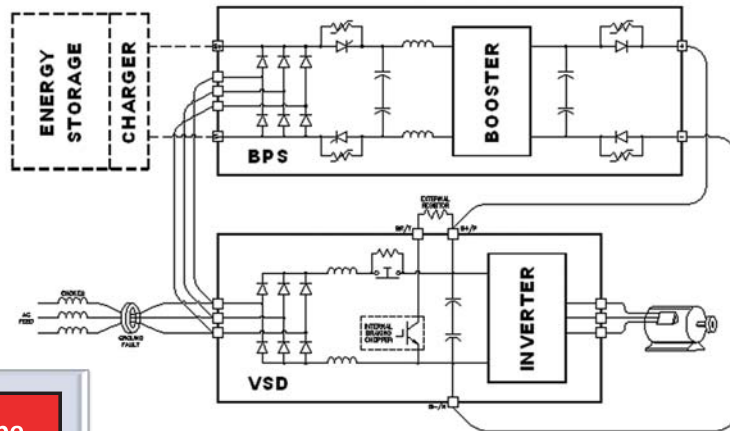
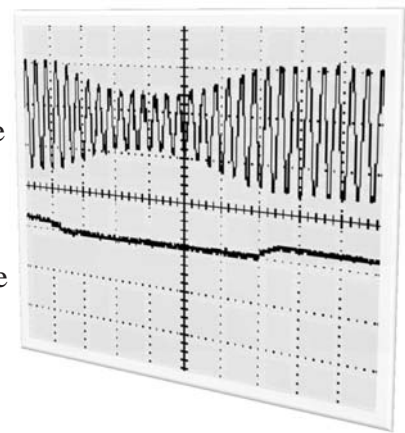
## SPECIFICATIONS

- Voltages**.....230 to 575 VAC +/- 10% @ 50-60Hz
- Power Rating**.....75 - 1800hp
- Dip Ride-Thru**.....At rated kW for up to 2 seconds with 50% incoming dip
- Optional Indicators**...Precharge Complete  
Ride-Thru Ready  
Ride-Thru Active  
Voltage Sag Sensor  
Temperature Sensor
- Operating Temp**.....40°C

## UNPROTECTED DC BUS DURING POWER SAG



## DC BUS WITH RIDE-THRU PROTECTION



## DIMENSIONS & MODEL NUMBER SELECTION TABLE

Chassis Code	(H x W x D)	Type
R9	34 x 16 x 14"	Open
R10	28 x 16 x 14"	Open
R11	44 x 16 x 14"	Open
D40	72 x 27.5 x 18"	TYPE-12
F39	72 x 24 x 18"	TYPE-3R
D31	42 x 31.4 x 16"	TYPE-12
CAB1	2000mm x 800mm x 600mm	TYPE-12

BPS Model 3460R 2 Sec @ 50% 460 Vac Power-Dip Ride Thru						
Drive kW	Drive Hp	DC Bus Amps	Open Chassis Ride Thru Model Number	Enclosed Ride Thru Model Number	Backplate Configuration	
75	100	130	M3460R-4R10-075	M3460R-4D31-075	1 x 75kw	
100	134	170	M3460R-4R9-100	M3460R-4D31-100	1 x 100kw	
150	201	255	M3460R-4R11-150	M3460R-4D40-150	1 x 150kw	
200	268	340	M3460R-4R11-200	M3460R-4D40-200	1 x 200kw	
250	335	425	M3460R-4R11-250	M3460R-4D40-250	1 x 250kw	
450	603	765	M3460R-4R11-2-450	M3460R-4CAB1-2-450	2 x 250kw	
675	905	1150	M3460R-4R11-3-675	M3460R-4CAB1-3-675	3 x 250kw	
900	1206	1530	M3460R-4R11-4-900	M3460R-4CAB1-4-900	4 x 250kw	
1125	1508	1910	M3460R-4R11-5-1125	M3460R-4CAB1-5-1125	5 x 250kw	
1350	1810	2300	M3460R-4R11-6-1350	M3460R-4CAB1-6-1350	6 x 250kw	