



# M3534CR

## Electrolytic Capacitor Ride-Thru

### Power Protection for 3 - 15hp Drives

#### UNDERVOLTAGE SOLUTIONS FOR AC DRIVES – SHORT TERM 100% OUTAGE

Bonitron's M3534CR series of DC Bus Ride-Thru Modules provide protection from line voltage outages for 208-460 VAC Variable Speed PWM Drives that use a fixed rectifier and DC bus. Industries with continuous processes can suffer huge losses from equipment downtime, loss of production, or damaged product when Variable Speed Drives (VSD) trip on under voltage conditions. While many drives claim to have ride through capability such as auto restart or kinetic buffering, none are able to maintain complete control over the motor as called upon by the process during a complete loss of power.

While the Bonitron Model 3534RT is a small and cost effective method of protecting drives from voltage sags up to 50%, some sags are greater in depth, and some feeds with automatic re-closure systems may have up to 2 second complete outages. The Bonitron Power Source (BPS) M3534CR provides sufficient ride through capability to handle these deep sags and outages by storing energy in Electrolytic capacitor banks 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 Model 3534CR is the most cost effective product to Ride-Thru short term outages with drive systems from 3-15hp.

#### FEATURES

- Electronic voltage boost switching scheme
- Simple 5 wire hook up directly to drive
- Single Cabinet packaged system
- Parallel connection
- Electrolytic capacitor energy storage
- Very low standby power losses (less than .3% of rating)
- Built in test with optional display and activity counter

#### ADVANTAGES

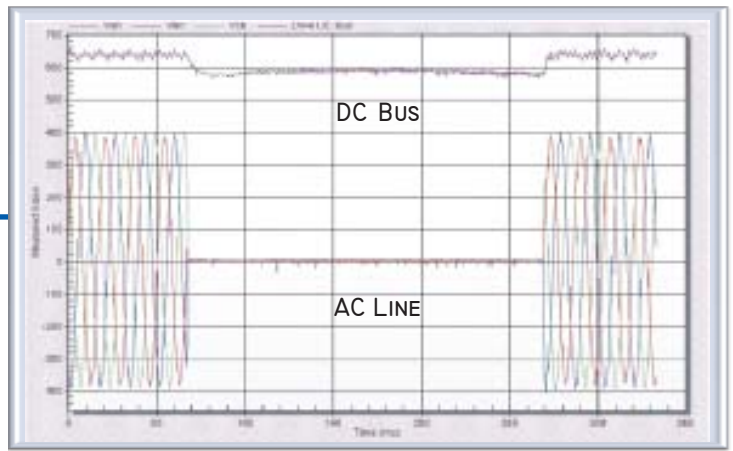
- Maximizes usage of capacitor bank - No batteries!
- Easy implementation, easy retrofit
- Minimal footprint
- Ride-Thru system failure will not affect process
- 10+ year, 500,000 cycle life expectancy
- Ability to activate and monitor system while on line
- Allows connected drive to exceed SEMI-47 spec and meet full outage specs

#### BENEFITS

- Smaller size and cost of complete ride thru system
- Low installation and operating cost
- Minimal floor space needed for installation
- Does not decrease drive system reliability
- No preventive maintenance required
- Gain confidence in systems ability to maintain control over process
- Minimizes down time – stops major production losses

## DC BUS WITH RIDE-THRU

When the AC line disappears, the drive DC bus drops. When the drive bus drops to the "threshold," the Bonitron Power Supply (BPS) becomes active and holds up the DC bus, allowing the drive to maintain control.



**Input AC Line Voltage**....3-Phase, 208 - 460VAC  
**Output DC Bus Voltage**..270 - 585 VDC  
**kW / Horsepower**.....2.2 / 3 - 12 / 16  
**Outage Duration**.....hps / motor hp = time  
 (in seconds) (See Model  
 Number Selection Table below)  
**Duty Cycle**.....1% Duty  
**Operating Temp**.....40° C  
**Sag Duration**.....2 Seconds at 100% on all phases or  
 total loss of single phase with  
 remaining 2 phases at rated voltage  
**Time**.....10 Seconds Typical  
**Panel Indicators**.....Power, Over-Temp, and RT Active

## SPECIFICATIONS

## DIMENSIONS

| Chassis | (H x W x D)   |
|---------|---------------|
| E61     | 24 x 20 x 12" |
| E63     | 30 x 24 x 12" |
| E66     | 36 x 30 x 12" |
| E69     | 42 x 36 x 12" |

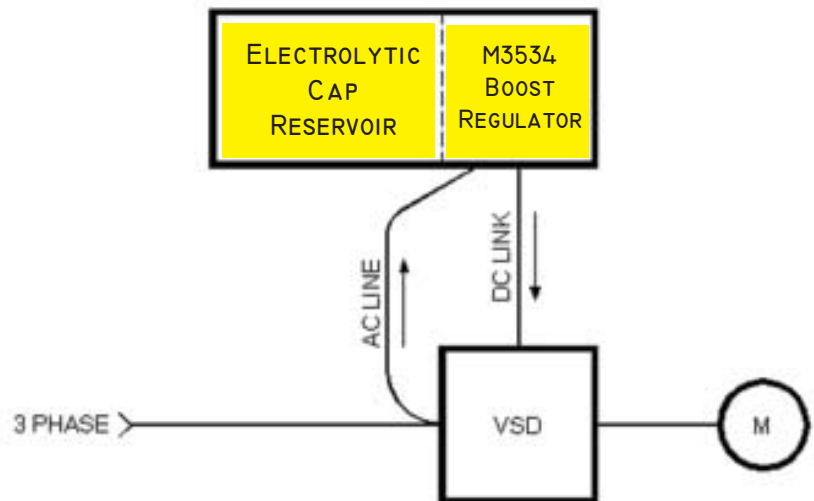
## 460V M3534CR Electrolytic Capacitor Cabinet Systems

| Model Number          | Max kW / hp | Time at MAX Power | kJ / hps   | Chassis Type | Output Voltage | Output Current |
|-----------------------|-------------|-------------------|------------|--------------|----------------|----------------|
| M3534CR-H012-02.6-E61 | 12 / 16     | 0.21              | 2.6 / 3.4  | E61          | 640 / 585      | 20A            |
| M3534CR-H012-05.1-E63 | 12 / 16     | 0.43              | 5.1 / 6.8  | E63          | 640 / 585      | 20A            |
| M3534CR-H012-07.7-E66 | 12 / 16     | 0.64              | 7.7 / 10.3 | E66          | 640 / 585      | 20A            |
| M3534CR-H012-011-E69  | 12 / 16     | 0.96              | 11 / 14.7  | E69          | 640 / 585      | 20A            |

## MODEL NUMBER SELECTION TABLE

## INDUSTRY APPLICATIONS

**Fiber Optics**.....Wind / Unwind Tension Control  
**Pharmaceutical**...Injection Pumps  
**Fibers**.....Metering Pumps, Wind / Unwind, Injection Pumps  
**Personnel Movers**...Escalators & Elevators



12KW AND BELOW 0.5 – 2 SECONDS, 100% OUTAGE PROTECTION USING DC BOOSTER WITH ELECTROLYTIC CAP RESERVOIR SINGLE CABINET POWERED FROM THE AC LINE