



# M3460

## APPLICATION NOTES

# THE NEED FOR RIDE-THRU PROTECTION

Bonitron's M3460 Ride-Thru provides protection from AC line voltage sags for AC drive systems that use a fixed DC bus, such as AC PWM adjustable speed drives (ASD). Unfortunately, ASDs are quite susceptible to problems when fluctuations in incoming power occur. Bonitron's Ride-Thru provides protection from line voltage sags or the momentary loss of one phase. This provides the security of "riding through" these events without motor speed control loss, drive shutdown, or the problems associated with other power supply backup methods.

The Bonitron M3460 Ride-Thru is an AC drive option that increases the drive's ability to maintain normal operation during these voltage sags. There are many reasons why the M3460 is the best choice for Ride-Thru applications, some of them are:



1. Easy retrofit installation
  - use existing wiring
  - use existing feed breakers
  - only 5 connections:
    - 3 to Ac line and 2 to drive DC bus
2. Inexpensive
  - \$100 to \$200 per Kw
  - Less expensive than other options
    - Traditional UPS
    - Flywheel technology
    - Capacitive energy storage
3. Easy testing
  - Can test system "on line"
  - Can take off line for repair or testing without disrupting the process
4. No maintenance
  - Ride Thru time not based on traditional energy storage
  - Does not degrade after time
  - Uses less than 100 watts when inactive
  - No fans or filters for cabinet
5. Ability to add Outage backup
  - Energy storage can be added later
6. Instant response
  - No "switchover time"
  - Maintain control of motor speed and torque
7. Easy commissioning
  - No programming
  - Can power up/down with system "on line"
  - Single fine tune level adjustment
8. No RF interference
  - Slow switching speeds internally filtered
  - Feeds DC to inverter bus
9. DCS communications
  - single fault contact or complex I/O signals
10. System monitoring
  - LEDs
  - Voltage and current monitoring
  - Activity counter
11. Over 10 years of on site experience
  - Over 1,000 Ride Thru units installed
  - Over 10,000 Drives connected
  - Over 30 companies
  - Over 10 countries
12. Redundancy
  - Models use multiple stages
  - Single stage failure only means reduced capability
13. Custom options available
  - Ability to adapt for custom configurations

For application specific information please call a member of our engineering team. (615) 244-2825