

Capacitive Regen Controller



**Green
Solutions**



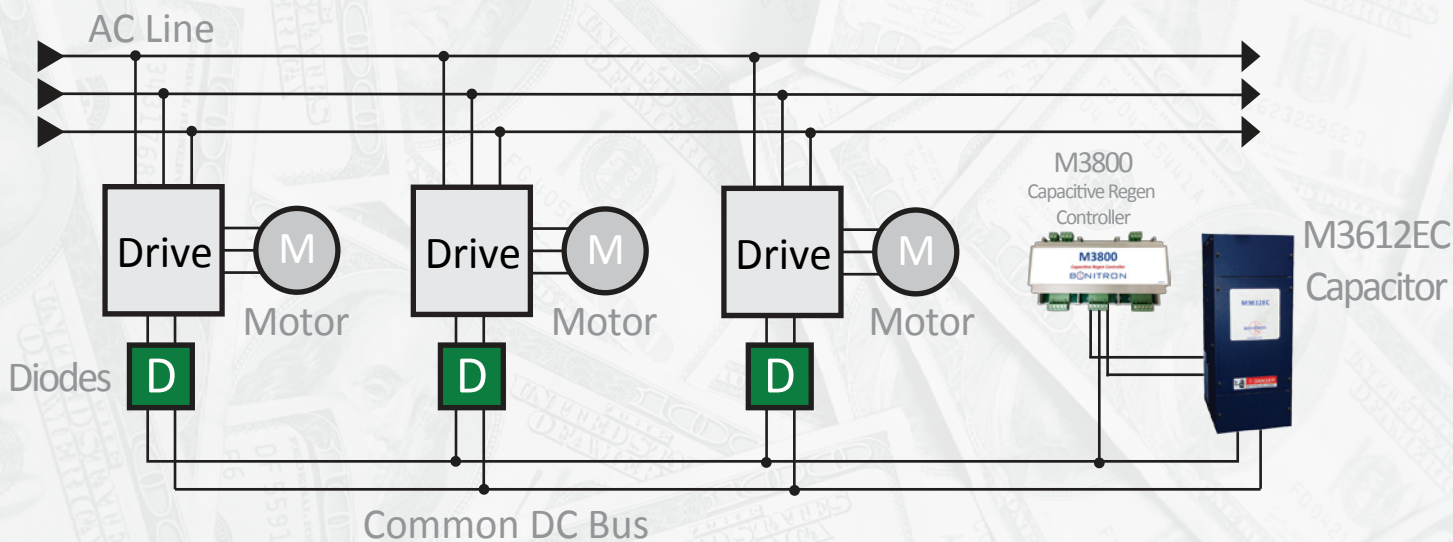
**M3800
Series**

BONITRON

M3800 Series

Bonitron's Capacitive Regen Controller is a simple, passive method for storing regenerated energy from a braking motor, well suited for cyclic applications. The M3800 Capacitive Regen Controller, used in conjunction with a capacitor bank and various external components, allows for an increase in energy storage with a smaller rise in DC bus voltage. This stored energy can then be sourced back onto the DC bus during periods of higher demand, lowering the peak power required by the drive system.

Help Fulfill Your Company's Green Initiatives!



Punch Press



For use on repetitive motion / cyclic applications such as Punch Presses, Eccentric loads and Pump Jacks.

Pump Jack



Series Ratings

**M3800
Series**

System
Voltage

230 - 480VAC
50/60Hz

Controller
Supply

24VDC
1A

Capacitive
Energy Storage

Unlimited



www.bonitron.com



615-244-2825

info@bonitron.com



System Layout

The M3800 Controller, as part of a Capacitive Regen system, requires several external components. Please see below for a diagram of the expected external system layout.

Storage

The capacitors must be sized according to the voltage and joule requirements of the application. They must be able to absorb the regenerated energy from the drive and keep the voltage below the drive's overvoltage fault level.

Precharge

The M3800 must be able to precharge the storage bank before it can connect to the drive bus; for this, it needs a rectifier and resistor, with a contactor to control them.

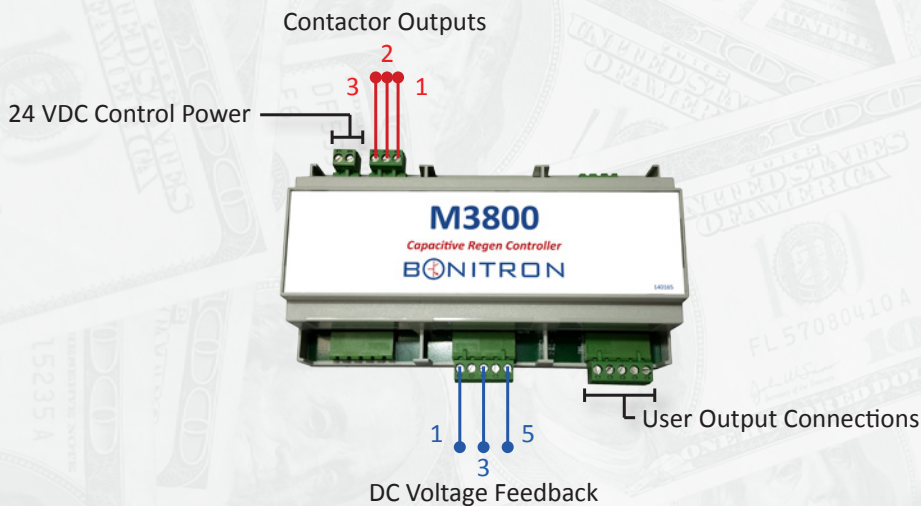
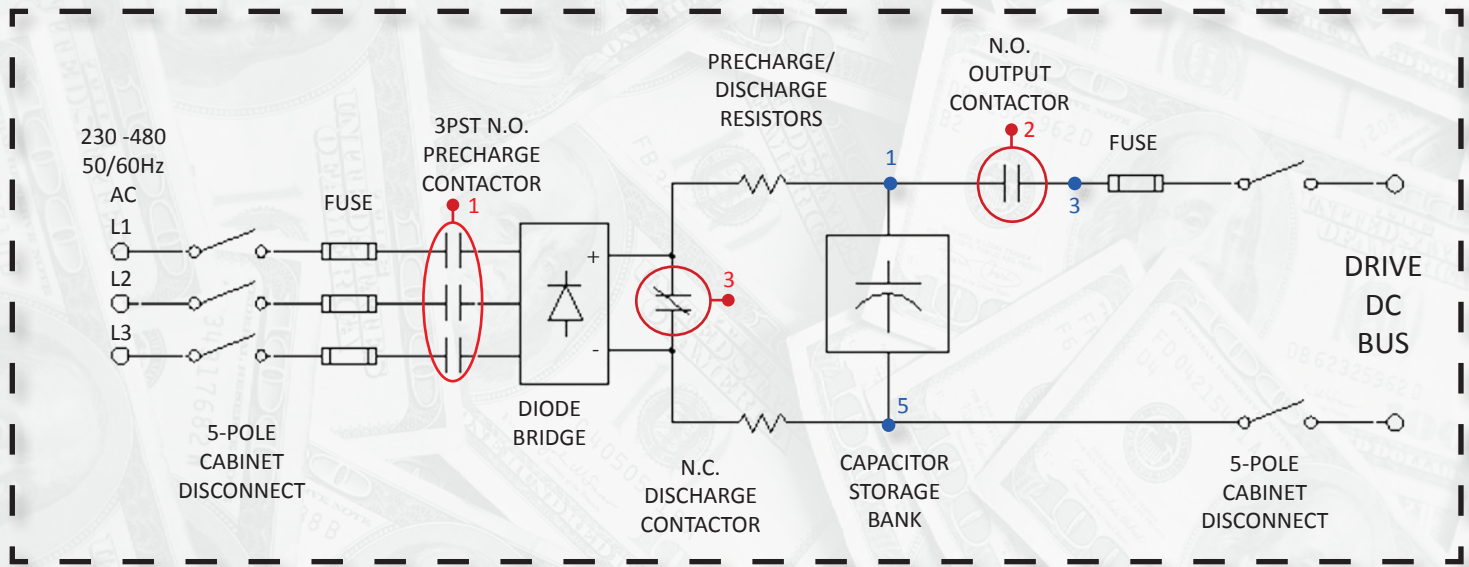
Discharge

The same resistors can be used to discharge the capacitor bank. There also needs to be a contactor in the discharge path, however this one should be a Normally Closed contactor. This way, if power is removed from the system, it automatically discharges the capacitor bank to a safe voltage.

Output to Drive

The output contactor must be rated for the max DC bus voltage as well as the max expected regen current.

External Components



M3800 Controller

To avoid the possibility that the capacitor bank could rise to a DC level that can cause an overvoltage trip on the drive, a braking chopper should be used in conjunction with the Capacitive Regen Controller.

For the M3800 User Manual visit
www.bonitron.com/m3800-manual