

PRODUCT PROFILE

CAPACITOR BANK CONTROLLER

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FEATURES

- Auto and/or manual step size configuration
- Discharge timer on each step
- Selectable operating modes
 - Manual operation
 - Linear, last-in, first-out
 - Balanced, distribute usage of capacitor steps
 - Best Fit, finds best match of capacitor step size to system kVAR needs
 - Special, customer-defined
 - %THD, linear mode with a voltage %THD setpoint
- Alarms
 - Bad step, indicates blown fuse, capacitor failure
 - Target power factor not achieved
 - High / Low voltage
 - %THD High
 - Current unbalance
- Powermonitor data concentrated into the MicroLogix 1500 controller and displayed with an optional HMI
- Phase current, line voltage, frequency, real and reactive power, power factor and THD



The Allen-Bradley Capacitor Bank Controller is a pre-engineered PLC-based solution designed for various capacitor bank control applications. The solution combines standard, off-the-shelf, Allen-Bradley hardware with application ladder code necessary to perform power factor correction in one single package. In addition, the Capacitor Bank Controller allows the user to add additional code and functions to address application specific needs. This makes the Allen-Bradley Controller unique in its flexibility and adaptability compared with other standard, fixed-function capacitor control products available in the market today. Start using this powerful, affordable, and easy to use solution to reduce power factor penalties, kW demand charges, and release kVA loading.

DESCRIPTION

The Capacitor Bank Control system consists of a MicroLogix 1500 controller, one or more Powermonitor 3000s, a standard Data Access Terminal (DAT) that is mounted on the MicroLogix 1500 controller, and an optional Human-Machine Interface (HMI). Pre-engineered ladder logic code in the controller gathers real and reactive power data from up to four power feeds including utility feeds and/or generators. The logic operates on the data in standard engineering units of kVAR & kW and acts to minimize imported and exported reactive power by switching up to ten individually switched capacitor groups. This strategy controls power factor within specified limits while providing the flexibility to modify the system to meet the specific requirements of the application.

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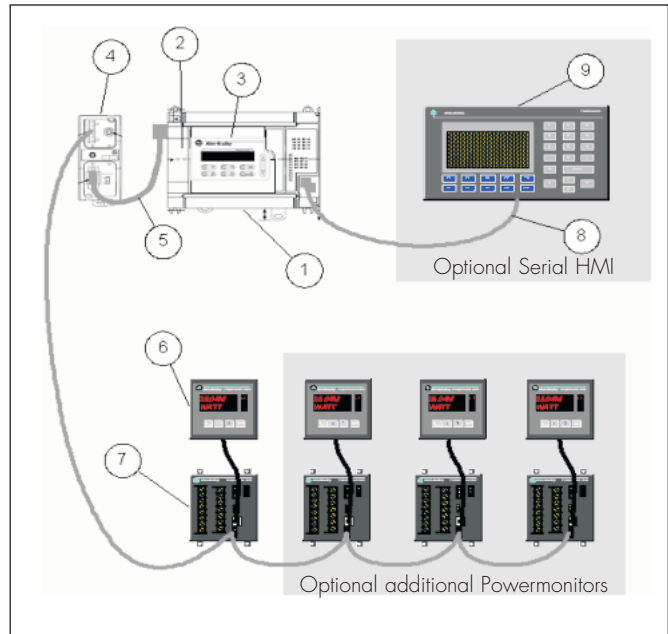
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BENEFITS

- Basic and advanced control of capacitor banks to reduce power factor penalties and kVA demand charges.
- Ability to monitor and control Vars to multiple feeders.
- Advanced Var control modes for precise power factor control.
- Simple addition of I/O for additional steps and functionality (ex: alarming).
- Can use up to (4) Current Transformer and Potential Transformer inputs per circuit for better Var control of unbalanced systems or 1 CT & 1 PT for balanced systems.
- Local and remote communications capabilities for programming, viewing, sending information and alarming for real time electrical system status.
- Easy to configure and view through an optional display module.
- Full functioning real time power & energy monitoring (Hundreds of parameters captured, logged, and available within the Powermonitor for taking action and/or passing to other systems displayed locally and/or remotely).
- Open system architectures utilizing the familiarity with PLCs and standard off the shelf hardware.
- Seamless integration into Rockwell Automation and 3rd party HMI and SCADA systems.

OPTIONS

- Up to three additional Powermonitors to aggregate up to four total feeds.
- PanelView 550 keypad HMI terminal with serial or EtherNet/IP communications.
- Ethernet power monitors to power and energy data to your local area network.



1	MicroLogix 1500 base unit with: 120/240VAC control power, (12) 24VDC inputs and (12) relay outputs
2	MicroLogix 1500 enhanced processor
3	MicroLogix 1500 Data Access Tool
4	Advanced interface converter (used for PM comms)
5	MicroLogix to AIC+ cable, 9-pin D-shell to 9-Pin D-shell, 45cm long
6	Powermonitor 3000 Display Unit w/ 3 Meter Cable
7	Powermonitor 3000 M5 with RS-485 Communications port including programmed 1764-MM1RTC (MicroLogix 1500 8K memory module with Real Time Clock) – Optional EtherNet/IP Communication is also offered
8	PanelView to MicroLogix Communication cable
9	Optional PanelView 550 operator terminal with RS-232 DF1 serial communications – EtherNet/IP Communication is also offered

Catalog Number	Powermonitor 3000	PanelView 550	MicroLogix 1500 to Powermonitor 3000 Comms	MicroLogix 1500 to PanelView 550 Comms	MicroLogix 1500 to SCADA Comms
1413-CAP-ME	EtherNet/IP	None	Serial	None	Serial
1413-CAP-ME-PE	EtherNet/IP	EtherNet/IP	Serial	EtherNet/IP	EtherNet/IP
1413-CAP-ME-PS	EtherNet/IP	Serial	Serial	Serial	None
1413-CAP-MS	Serial	None	Serial	None	Serial
1413-CAP-MS-PS	Serial	Serial	Serial	Serial	None

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