



## Critical Asset Protection Bulkhead CAPB - Central

### Active Irrigation Central Station Protection

The CAPB - Central provides automated, active lightning protection by the electrical isolation of irrigation control systems and central-stations. The combination of best-engineering-practice passive lightning protection with fully automatic active lightning protection includes:

- selective isolation - automatically disconnects selected conductors from the irrigation control system
- selective grounding – automatically grounds disconnected conductors
- selective shut-down disconnects communication and signal conductors via three independent circuits with programmable delays to provide the ultimate defense against over-voltages, electrical over-stress and lightning surge currents in a lightning environment



The CAPB - Central is intended for use as the indoor or secondary lightning protection bulkhead installed at the irrigation control computer and must be used in conjunction with proper external or outdoor (primary) lightning protection. The CAPB - Central integrates the Strike Guard Lightning Warning System and WAVE Sequencer with the user's critical irrigation control system.

During the automatic, controlled-transition to the alarm condition, the relay bank manages unprotected conductors and automatically disconnects and selectively shunts communication and signal conductors to ground for the duration of the thunderstorm threat. The lightning all-clear signal initiates an automatic, orderly re-connect and re-start sequence.

The factory-assembled CAPB - Central comes completely pre-mounted, pre-cabled and interfaced to a pre-wired multiple relay bank, main DC power supply, AC power circuit breaker, and an AC power secondary surge arrester. All protective shielding and wire dressing are implemented at the factory to deliver a properly-engineered, fully-assembled and pre-tested CAPB to the irrigation control central-station site.

The CAPB - Central significantly reduces installation time and standardizes the combination of passive and active lightning protection. The fiberglass enclosure of the CAPB - Central is designed to be mounted in an office environment in close proximity to the irrigation central-station. The CAPB - Central is modular and may be adapted to a wide variety of central-station types. The standard CAPB - Central is supplied with six, two-pole relays to handle a total of 12 conductors. Additional relays may be added as required.

## CAPB - CENTRAL SPECIFICATIONS:

**INSTALLATION:** Wall-mountable, 36 inches tall x 32 inches wide x 7.5 inches deep finished panel

**ENCLOSURE:** WAVE Sequencer NEMA 4X molded fiberglass. AC wiring and all switch gear in steel enclosures

**WAVE SEQUENCER BATTERIES:** 6 v, 3.5 Ahr, sealed gel cell; lead-acid

**COMMUNICATION & CONTROL INPUT:** Strike Guard Lightning Data Receiver direct connect or WAVE Transmitter RF signal, 10 W, 27.255 MHz, -115 dBm sensitivity (or better)

**OUTPUT CONTROL:** Sequence delays between outputs via DIP switch programming

**STATUS INDICATION:** Power on/off, failure, control output, sequence on/off

**RF PROTECTION:** PolyPhaser® rated up to 2 kW protection between 1.5 to 50 MHz

**SURGE PROTECTION:** Sycom Clamping level 150/300 V for 120/240 VAC, <5 nanosecond response time

**SEQUENCER RELAYS:** Omron MY2IN 12 VDC coil voltage, 10 Amp at 250 VAC contact rating

**INPUT POWER:** 240 VAC, split phase

**OUTPUT POWER:** 120 or 240 VAC, 3 protected field wire paths

**AC/DC POWER SUPPLY:** In-line switching power supply, 100-240 VAC input, 50/60 Hz, UL, VDE, FCC, CSA, CE.

**WAVE TRANSMITTER RANGE:** 2 mile radius with standard antenna

**ANTENNA:** Standard 3 ft monopole antenna, 25 ft coaxial cable

**APPLICATION:** Lightning protection of AC power sources and satellites in large irrigation systems



WAVE Sequencer

## CAPB - CENTRAL DELIVERS:

- All Wxline and active/passive lightning protection components fully assembled, tested and ready for customer input and output AC power connections
- Best-engineering-practice conventional passive lightning surge protection methods with active protection by isolation
- Advanced and comprehensive active lightning protection including automatic disconnection (isolation), automatic grounding of field conductors, automatic AC power shut-down, selective isolation, selective grounding, and selective shut-down
- Properly engineered (NEC compliant) panel for greatly simplified installation
- Optional high-intensity strobe indicates sequence on/off condition
- Shielding, cable-routing, cable dressing and metal-enclosed switch-gear to minimize flashover risk and for arc-flash protection
- Attractive enclosure with large-area viewing window
- Rugged professional grade, complete assembly



The CAPB - Central interfaces with the Strike Guard Lightning Warning System for automation of active lightning protection functions

WXLINE

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Specifications are subject to change.

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