

## FEATURES

- Control 255 PHOTON4.1's (1020 lighting points) over an RS485 network
- Supports G.E.® RR7 and RR9 latching contactor types from momentary (Version 1) or maintained (Version 2) Inputs or Schlage Electronics® or TOUCH-PLATE® 3000-PL contactor types (Version 3)
- 4 Remote Overrides and 1 remote "ALL ON" Override Inputs
- 4 On-board Override Switches
- A 12 VDC regulated power output terminal
- Status LED for each output
- Programmable timed override and flash available
- Sequences contactors to reduce inrush current



## APPLICATIONS

- Lighting circuit control
- Perimeter strip heat lockout
- Economical control of scattered electrical loads
- Replacement of existing lighting panel control package

## PRODUCT DESCRIPTION

The PHOTON4.1 interface has 4 outputs capable of controlling G.E.® RR7 or RR9 relay types (up to 10 per output) or Schlage Electronics® or TOUCH-PLATE® 3000-PL relay type lighting contactors. It provides the necessary latch and unlatch pulses required by these contactors.

Up to 255\* PHOTON4.1s can be controlled and monitored over a single twisted pair of wires from a desktop PC or a building automation system computer. This enables a system of PHOTON4.1s to control a minimum of 1020 contactors (more if multiple relays per output). Each PHOTON4.1 has an 8-position DIP switch to set its individual address. Conforms to ACT protocol.

Multiple PHOTON4.1s can be grouped in enclosures next to breaker panels, or mounted individually for remote circuit control. Optional ribbon cable(s) can be used to provide power and signal connection between PHOTON4.1s. Each PHOTON4.1 is supplied with snap track for mounting and requires 24 VAC for power.

### Local Overrides

The PHOTON4.1 has momentary local override push buttons for each of the 4 outputs. The corresponding output is toggled on or off each time the local override button is pressed.

### Remote Override (Version 1 & 2 Only)

Each PHOTON4.1 has 4 digital inputs for remote override. These require a momentary or maintained contact (specify when ordering). When an override input is made, the PHOTON4.1 will turn on the appropriate contactor, and flag the controlling CPU of the override. These digital inputs can also be used for monitoring RR9 pilot contacts or receiving a signal from digital output Current Transducers (CT's). The timed override can be set from 2 to 63 minutes. The lights will flash one minute before the override times out. Override off is not timed.

### Special Emergency "ALL ON"

The PHOTON4.1 has a terminal connection for emergency "ALL ON", and requires a momentary contact to the "REMOTE ALL ON" terminals. This feature bypasses all electronic circuits and directly connects the power transformer to the contactors. This feature is useful in emergency situations where the host computer, or other electronic devices are inoperative.

### Contactor Status Indicators

The PHOTON4.1 has an LED status indicator for each of the outputs that turns on or off with each latch or unlatch signal sent.

## ORDERING INFORMATION

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**PHOTON4.1** Version 1 \_\_\_\_\_ (for Momentary Digital Input control of G.E.<sup>®</sup> RR7 and RR9 Contactors)  
or Version 2 \_\_\_\_\_ (for Maintained Digital Input control of G.E.<sup>®</sup> RR7 and RR9 Contactors)  
or Version 3 \_\_\_\_\_ (for control of Schlage Electronics<sup>®</sup> or TOUCH-PLATE<sup>®</sup> 3000-PL Relays)

## SPECIFICATIONS

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### Electrical Requirements

#### *Power Supply*

|                |  |
|----------------|--|
| Supply Voltage | 24 VAC +/-10%  |
| Supply Current | 150 mA + specific contactor inrush during latch or unlatch pulse. G.E. <sup>®</sup> RR7 is 1/2 amp. Note: Outputs are automatically sequenced unless using "All ON" which turns all latch outputs on together. Size transformer accordingly. |

#### *Input*

|                |  |
|----------------|--|
| Input-Digital  | 5-24 VDC or VAC (Version 1 & 2 only) Version 3 - Digital inputs are used for contactor status. |
| Impedance      | 100k ohms  |
| Communications | RS485, ACT Protocol  |
| Baud Rate      | 9600 BAUD  |
| Data Bits      | 8  |
| Parity         | None   |
| Stop Bits      | 1  |

#### *Auxillary Power Supply Output*

|         |             |
|---------|-------------|
| Voltage | 12 VDC      |
| Current | 150 mA max. |

#### *Contactor Output*

|                               |  |
|-------------------------------|--|
| Voltage                       | 24 volts half wave (to contactor).   |
| Maximum contactors per output | 10 G.E. <sup>®</sup> RR7 or RR9. Other contactors may vary. (Contact factory for more than 10 G.E. <sup>®</sup> RR7 or RR9 contactors per output). |

### Mechanical Requirements

#### *Connections (Power/Signal)*

|               |                                       |
|---------------|---------------------------------------|
| Wire Size     | Up to one 14 gauge max.               |
| Terminal Type | Captive screw, plug-in, two positions |

#### *Connections (Output to Relay)*

|               |  |
|---------------|--|
| Wire Size     | Up to one 14 gauge max.                |
| Terminal Type | Captive screw, plug-in, two positions. |

#### *Connections (Ribbon Cable)*

|                  |  |
|------------------|--|
| 10 Pin Connector | 5 pin dual row header strip, 0.1" centers. |
|------------------|--|

#### *Dimensions*

4.0" L X 4.0" W X 1.375 H, 0.155" dia. holes in each corner for #6 screws.

#### *Weight*

3.3 oz.

#### *Mounting*

Snap Track (Supplied) or screws in corner holes (with standoffs).

### Environmental Requirements

|                       |                          |
|-----------------------|--------------------------|
| Operating Temperature | 32 to 120 deg. F.        |
| Operating Humidity    | 5 to 95% non-condensing. |

**Specification may change without notice to improve quality or functionality.**