

## *418 Series - 75 Amp "Hybrid" Power Relay*

**Makes Your Traffic Cabinet Mercury Free!**

The 418 Series Relay is designed as a direct "drop-in" replacement for existing mercury displacement relays. The 418 Series is a single pole hybrid relay which features an LED indicator to verify circuit power which simplifies trouble-shooting by field maintenance personnel.



*Mercury Displacement  
Relay*



*Hybrid Relay Replacement  
418 Series*

- Hybrid Technology – Electromechanical and Solid-State relays in parallel
  - Solid-State relay alone - would require large heatsink
  - Electromechanical relay alone - large contacts to switch 75 Amps
- 120VAC 75 Amp switching (at 74° C)
- Drop-in replacement for MDR – no rewire or drilling
- LED indication – shows power applied to input
- Less weight than MDR, or SSR with large heatsink
- Not position sensitive - flexible placement in panel

## **Struthers-Dunn**

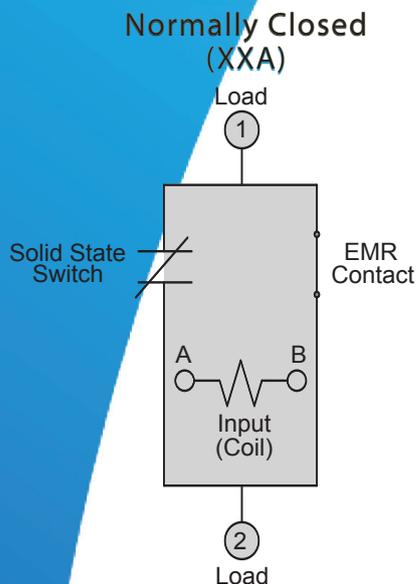
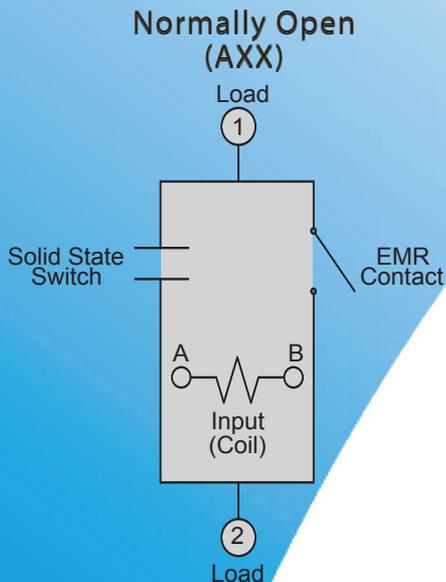
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# General Specifications

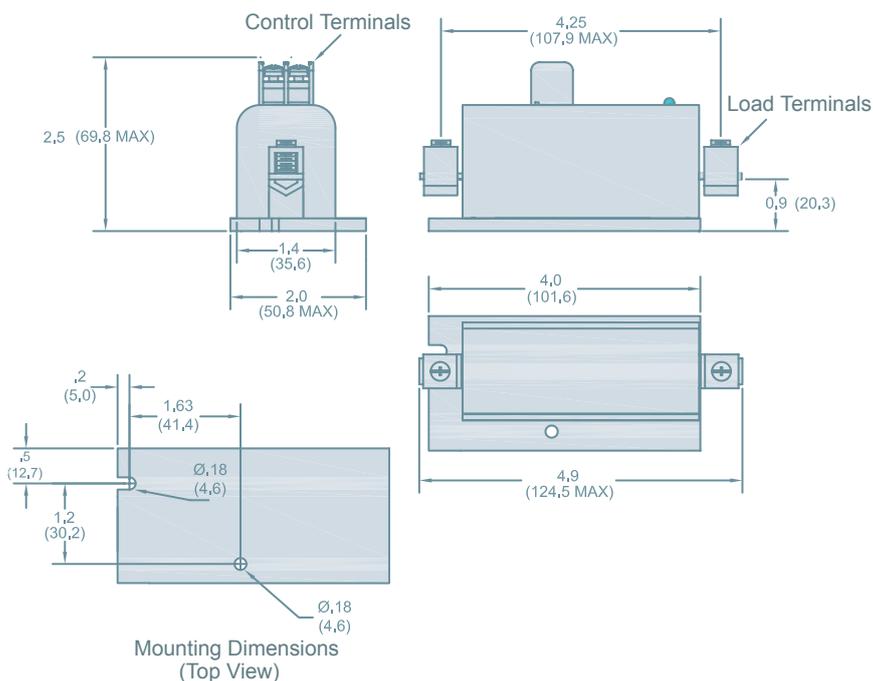
## Wire Diagram



| Contacts                                     | 418AXXL-120VAC                 | 418XXAL-120VAC |
|--|--------------------------------|----------------|
| Contact Configuration                        | SPST - NO                      | SPST - NC      |
| Component Type                               | Hybrid Relay                   |                |
| Mounting Type                                | Panel Mount                    |                |
| Input Voltage                                | 120VAC                         |                |
| Output Voltage Range                         | 24 to 240VAC                   |                |
| <b>Output Characteristics</b>                |                                |                |
| Switching Device                             | Triac + EMR                    | SCR + EMR      |
| Current Rating                               | 75 A @ 120VAC<br>60 A @ 240VAC |                |
| Max. Off State Leakage Current [rms]         | 10mA                           |                |
| <b>Input Characteristics</b>                 |                                |                |
| Voltage Range                                | 89 to 135VAC 50/60 Hz          |                |
| Must Release Voltage                         | 12VAC                          |                |
| <b>Performance Characteristics</b>           |                                |                |
| Electrical Life, Operations at Rated Current | 4,000,000                      |                |
| Operate Time (Response Time) - On            | .010 s                         |                |
| Release Time (Response Time) - Off           | .100 s                         |                |
| <b>Environment</b>                           |                                |                |
| Ambient Temperature - Storage                | -40 to +100 °C                 |                |
| Ambient Temperature - Operation              | -40 to +75 °C                  |                |
| <b>Miscellaneous Characteristics</b>         |                                |                |
| Input Indicator                              | Green LED                      |                |
| Input Terminal Wire Size                     | 14 AWG Max                     |                |
| Output Terminal Wire Size                    | 4-12 AWG                       |                |
| Weight                                       | 284g (10 oz)                   | 312g (11 oz)   |

## Outline Dimensions

Dimensions shown in inches & (millimeters)



## Ordering Code

|                     |     |                         |                         |         |
|---------------------|-----|-------------------------|-------------------------|---------|
| Ordering Code       | 418 | AXX                     | L                       | -120VAC |
| Series              | 418 |                         |                         |         |
| Contact Arrangement |     | AXX (Single Pole, N.O.) | XXA (Single Pole, N.C.) |         |
| LED                 |     |                         |                         |         |
| Input Voltage       |     |                         |                         |         |