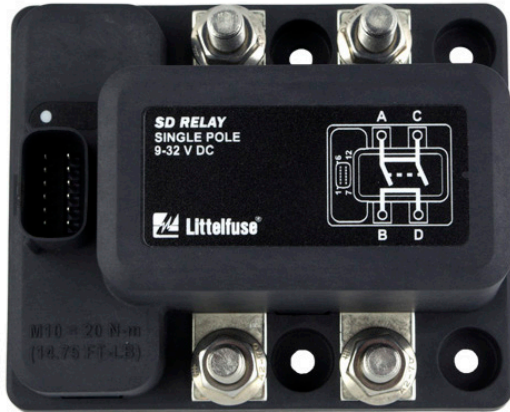


# SD SERIES HIGH-AMP RELAY

## Bi-Stable Relay with Auxiliary Contacts



### Features and Benefits

- Compact footprint saves space in your installation
- Supports US DOT 11579 and EU ADR requirements for hazmat vehicle compliance
- Bi-stable internal mechanism draw no current in the on or off state saving your batteries voltage supply
- Controlled with small wires saving weight and costs of large copper cables
- Dedicated 24-hour output to power your tachograph or other keep-alive functions
- Local and remote indication of the state of the relay

### Description

The Littelfuse SD series relay will support your remote power switching applications that require high continuous current passage, large engine starting needs and high ambient temperatures.

Additionally the SD series relay helps reduce your costs and saves weight by eliminating the need to route heavy copper cables directly to the mechanical disconnects. Cables can instead be routed directly to loads with with the SD series relay positioned close to the battery or in-line with the desired cable routing allowing you to remotely control the unit with a fine wire harness.

### Specifications Overview

|  |               |
|--|---------------|
| <b>Input Voltage:</b>                      | 9-16V DC      |
| <b>Primary Contact Voltage:</b>            | 9-32V DC      |
| <b>Max Continuous Current:</b>             | 600A          |
| <b>Max Intermittent Current (30 sec) :</b> | 1,000-2,000 A |
| <b>Max Inrush Current (1 sec):</b>         | 2,000-3,000 A |
| <b>Ingress (IP) Rating:</b>                | IP66/IP69K    |

### Web Resources

Download 2D print and technical resources at:  
[littelfuse.com/sdrelay](http://littelfuse.com/sdrelay)

### Applications

- Heavy Duty Trucks
- Construction
- Agricultural Equipment
- Heavy Duty Lifting Equipment

### Ordering Information

| PART NUMBER | DESCRIPTION   | PRIMARY CONTACT VOLTAGE | MAX CURRENT |
|-------------|---|-------------------------|-------------|
| 880103      | 12V, Single Pole, 600A Continuous, Aux NO & NC Contacts, Tachograph Output, Isolated Primary Contacts | 9-32V DC                | 600A        |
| 880107      | 12V, Double Pole, 300A Per Pole Continuous, Aux NO & NC Contacts, Tachograph Output                   | 9-32V DC                | 600A        |

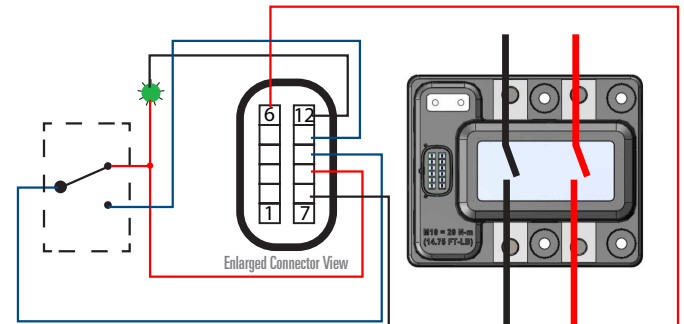
## SD SERIES RELAY

### Specifications

|   | 880103   | 880107   |
|---|--|--|
| <b>Max Continuous Current</b>   | (2x 4/0 Input and 2x 4/0 Output Cables) 600A                     | (4/0 Input / Output Cables) 600A (300A Per Pole)                 |
| <b>Max Intermittent Current, 30 Sec. Duration</b>                             | (2x 4/0 Input and 2x 4/0 Output Cables) 2,000A                   | (4/0 Input/Output Cables) 1,000A                                 |
| <b>Max Inrush Current, 1 Sec. Duration</b>                                    | (2x 4/0 Input and 2x 4/0 Output Cables) 3,000A                   | (4/0 Input/Output Cables) 2,000A                                 |
| <b>Auxiliary Contact Max Switch/Continuous Current</b>                        | 3A/3A  | 3A/3A  |
| <b>Ingress Protection Rating</b>  | IP66/IP69K   | IP66/IP69K   |
| <b>Mounting Hardware (counter-bore mounting holes)</b>                        | M6 or ¼"   | M6 or ¼"   |
| <b>Mounting Bolt Torque, Recommended/Max</b>                                  | 20 N-m/40 N-m  | 20 N-m/40 N-m  |
| <b>High-Amp Terminal Hardware</b>   | M10-1.4 Serrated Flange Nut (15 mm hex socket)                   | M10-1.4 Serrated Flange Nut (15 mm hex socket)                   |
| <b>Required Female Socket Plug Connector For Mating With Integral Housing</b> | Molex 33472-1206   | Molex 33472-1206   |
| <b>Required Female Socket Terminals</b>                                       | FCI: 54001627 (16-18 AWG wire)<br>FCI: 54002002 (20-22 AWG wire) | FCI: 54001627 (16-18 AWG wire)<br>FCI: 54002002 (20-22 AWG wire) |
| <b>Operating Temp (SAE J1455, Sec 4.1.3.1)</b>                                | -40° C to 85° C  | -40° C to 85° C  |
| <b>Salt Spray</b>   | 1,000 Hours  | 1,000 Hours  |
| <b>Humidity Cycle</b>   | 0 to 95% RH  | 0 to 95% RH  |
| <b>Operational Vibration</b>  | 8 G  | 8 G  |

| Connector Pin # | Reference   | Description   | 880103 | 880107 |
|-----------------|-------------|---|--------|--------|
| 1               | AUX_COM     | Auxiliary Relay Common Pin                          | 0      | 0      |
| 2               | AUX_NC      | Auxiliary Relay Normally Closed Pin                 | 0      | 0      |
| 3               | PNB_LED     | Logic input line, pulled to ground to activate      | X      | X      |
| 4               | VSENSE3     | Voltage sense #3 for battery combiner functionality | X      | X      |
| 5               | VDC_AUX_OUT | +Vdc fuse protected output                          | 0      | 0      |
| 6               | VDC_INPUT   | +Vdc for device power                               | R      | R      |
| 7               | AUX_NO      | Auxiliary Relay Normally Open Pin                   | 0      | 0      |
| 8               | GND         | Ground for device power                             | R      | R      |
| 9               | SW_POWER    | Power output to control switch and LED indicator    | 0      | 0      |
| 10              | CNTRL_IN    | Remote control input                                | R      | R      |
| 11              | SW_LO       | Off Reference signal for control switch             | R      | R      |
| 12              | LED1        | External LED pull-down line (active low)            | 0      | 0      |

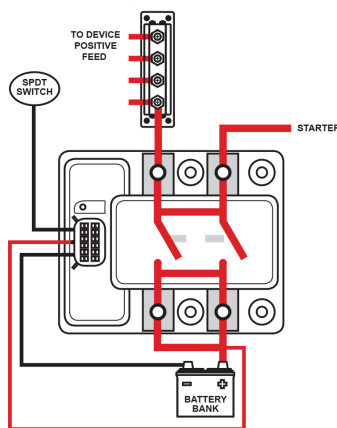
R = Required Connection  
O = Optional Connection  
X = No Connection



for Molex 33472-1206 (not included)

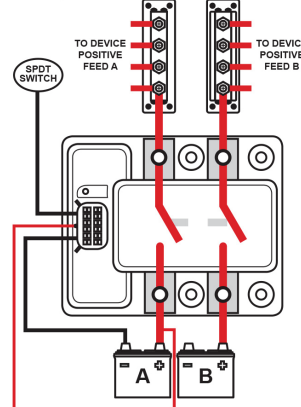
### Configurations

PN 880103 (Single Pole)

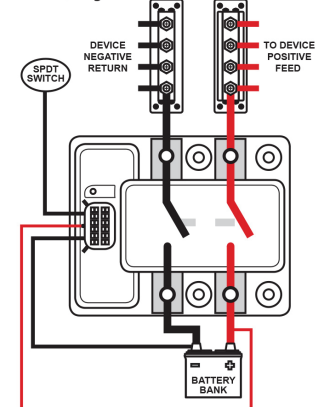


PN 880107 (Dual Pole)

Positive/Positive



Positive/Negative



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