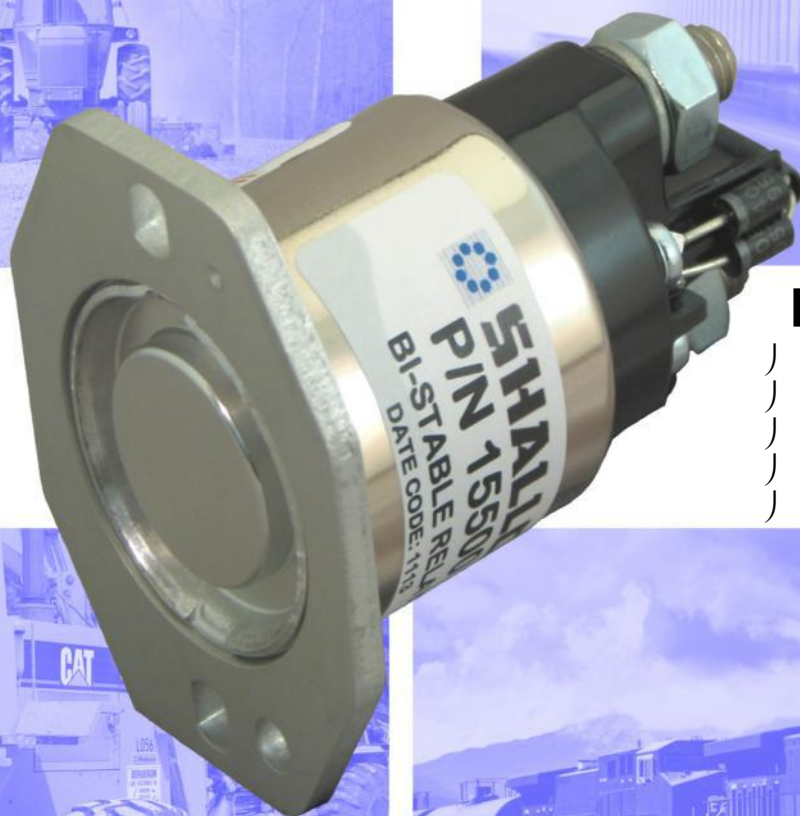


SHALLCO

DC Power Relays

“BR” Series



Bi-Stable Relay

-) 200-300 Amp
-) 12 Volt
-) 24 Volt
-) Bottom Mounted
-) Bracket Mounted



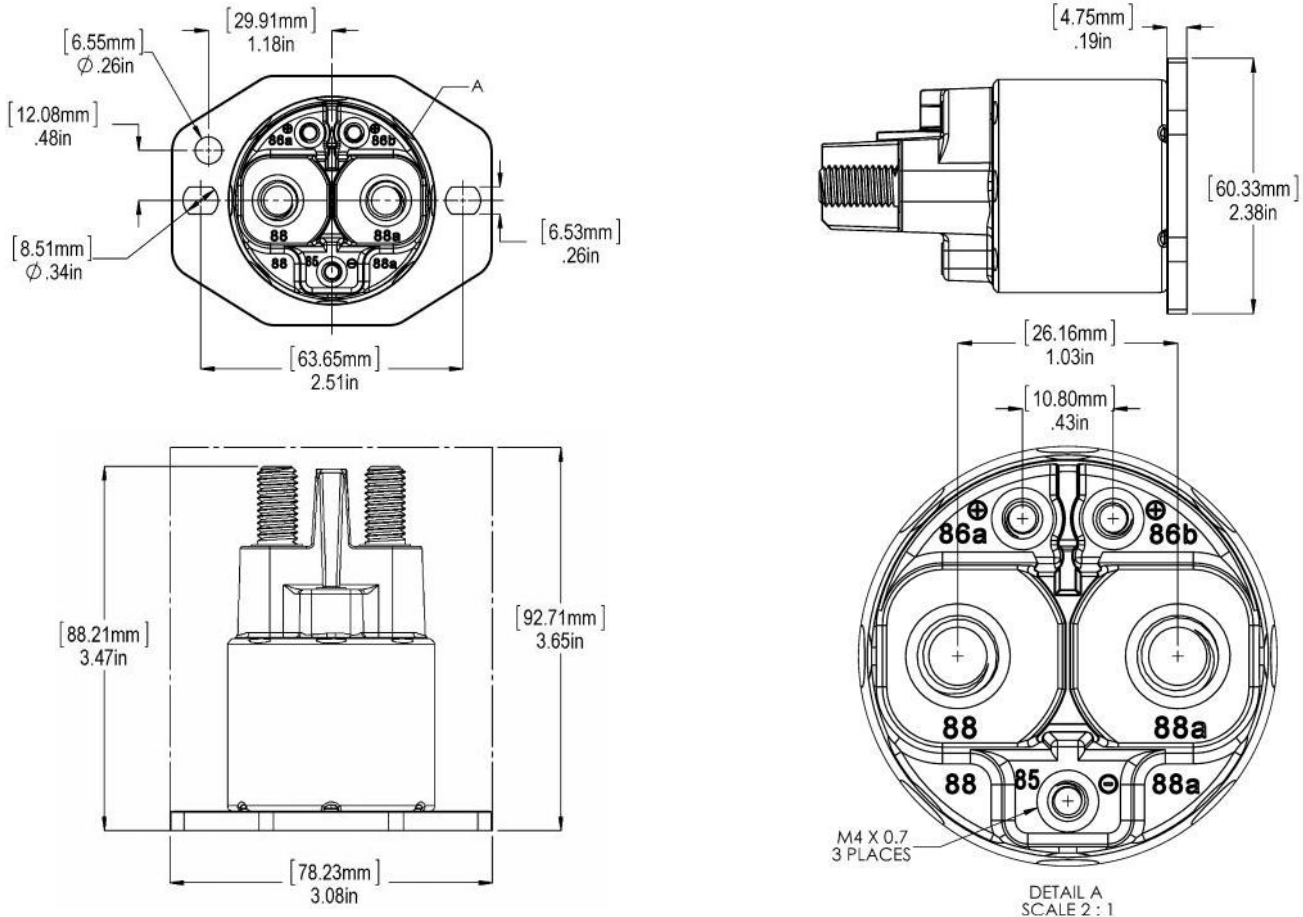
P.O. Box 1089
308 Components Drive
Smithfield, North Carolina 27577

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DC Power Relays

Introducing our NEW line of DC Power Relays. Designed and manufactured in the USA to meet the most demanding applications. We have incorporated our Sealed contact system to increase Reliability and Performance. This Robust enclosure allows various mounting methods while still retaining Shock and Vibration Resistance. The Sealed system increases resistance to most fluids and cleaning agents without influencing the Compact size and weight. The relays have been Optimized to Increase Voltage Delivery to Critical components. Our relays have been tested to meet or exceed an assortment of industry standards including Heavy Equipment and Transportation.

Physical Data - 24 VDC



Technical Data - 24 VDC

| | |
|-----------------------|--|
| Temperature Range: | -40°C to +85°C -40°F to +185°F |
| Max. Altitude Rating: | 50,000 ft. |
| Seal: | IP67: IEC 60259 |
| Shock: | 6g, 11ms, Saw Tooth |
| Vibration: | SAE J1455, Appendix A, Category 2, 4g- 10Hz-2000Hz |

Rated Contact Load 24/28 VDC

| | |
|-----------------|---------------------|
| Resistive Load: | 50,000 cycles 300 A |
| Inductive Load: | 10,000 cycles 150 A |
| Motor Load: | 50,000 cycles 300 A |
| Bounce: | ≤ 5 ms |
| Break: | ≤ 5 ms |

Electrical Characteristics

| | |
|----------------------------------|-----------------|
| Min. Insulation Resistance: | 100 M |
| Dielectric Withstanding Voltage: | 1050 V / 1 min. |
| Max. Contact Drop, Initial: | 150 mV |
| Duty Rating, Continuous: | 300 A |

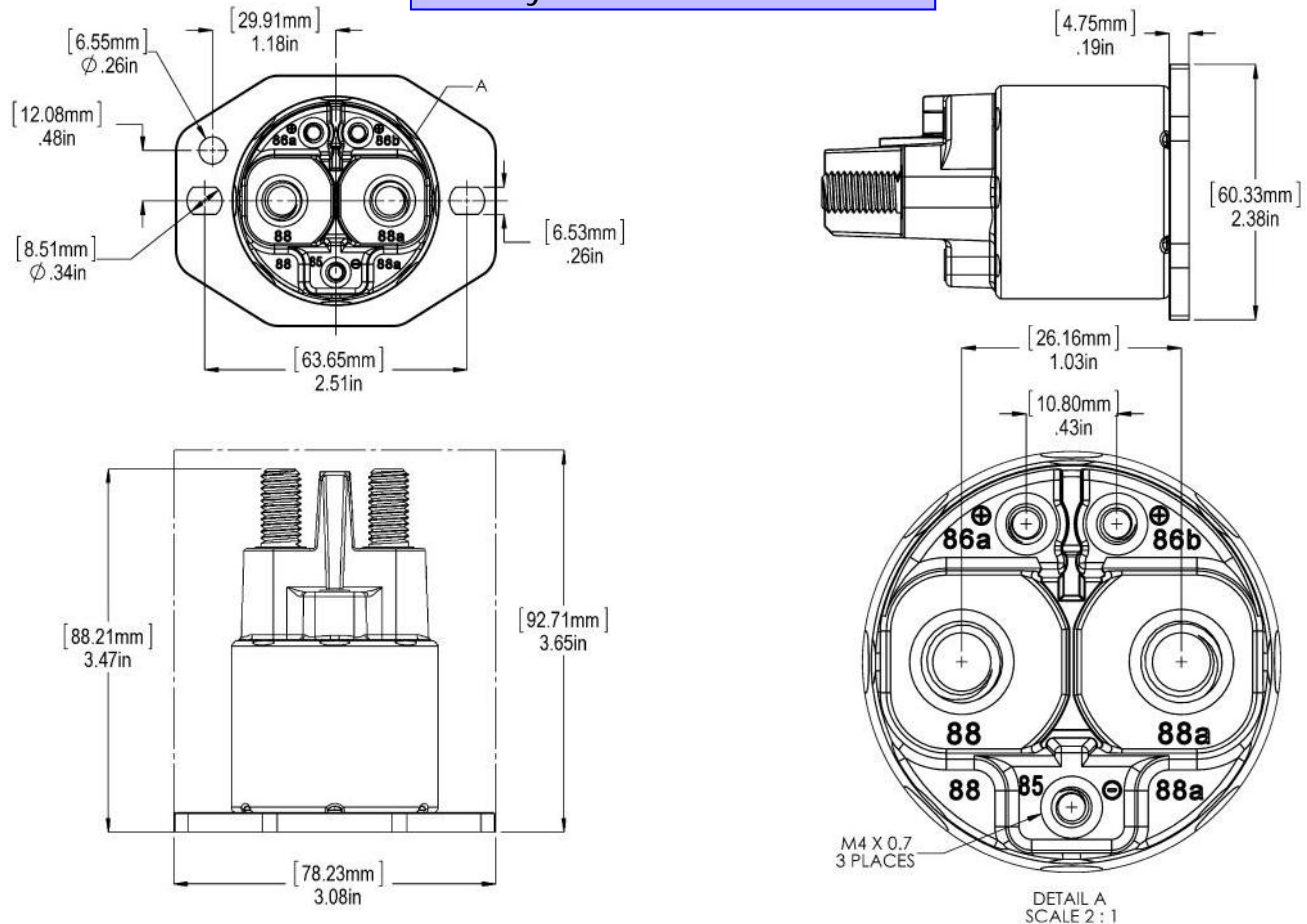
Coil Data 24/28 VDC

| | |
|------------------------------|----------------------------|
| Nominal Voltage: | 24/28 VDC |
| Voltage Range: | 18-32 VDC |
| Pull Closed Coil Resistance: | 7.3 ± 10% (From 86b to 85) |
| Pull Open Coil Resistance: | 8.4 ± 10% (From 86a to 85) |
| Max. Operating Time: | 2.5 sec |
| Max. Cycles per Minute: | 6 |

“BR” Series - Bi-Stable Relay

Our New line of "Magnetically Maintained" Bi-stable relays are Designed and Manufactured in the U.S.A. These High Quality relays have been Extensively Tested for Reliable switching in the most Demanding Agricultural, Construction, and Transportation environments. Our Compact relay features Environmentally Sealed contacts, Shock and Vibration Resistant enclosure, and are Dependable with a minimal pulse from your circuit. Shallco relays will provide more usable power to your system than the competition, Guaranteed!

Physical Data - 12 VDC



Technical Data - 12 VDC

| | |
|-----------------------|--|
| Temperature Range: | -40°C to +85°C -40°F to +185°F |
| Max. Altitude Rating: | 50,000 ft. |
| Seal: | IP67: IEC 60259 |
| Shock: | 6g, 11ms, Saw Tooth |
| Vibration: | SAE J1455, Appendix A, Category 2, 4g- 10Hz-2000Hz |

Rated Contact Load 12VDC

| | |
|-----------------|---------------------|
| Resistive Load: | 50,000 cycles 300 A |
| Inductive Load: | 10,000 cycles 150 A |
| Motor Load: | 50,000 cycles 300 A |
| Bounce: | ≤ 5 ms |
| Break: | ≤ 5 ms |

Electrical Characteristics

| | |
|----------------------------------|-----------------|
| Min. Insulation Resistance: | 100 M |
| Dielectric Withstanding Voltage: | 1025 V / 1 min. |
| Max. Contact Drop, Initial: | 150 mV |
| Duty Rating, Continuous: | 300 A |

Coil Data 12 VDC

| | |
|------------------------------|----------------------------|
| Nominal Voltage: | 12 VDC |
| Voltage Range: | 9-16 VDC |
| Pull Closed Coil Resistance: | 1.9 ± 10% (From 86b to 85) |
| Pull Open Coil Resistance: | 2.4 ± 10% (From 86a to 85) |
| Max. Operating Time: | 2.5 sec |
| Max. Cycles per Minute: | 6 |

DC POWER RELAY ORDERING INFORMATION

| Switch Series | Current Rating | | | Coil Voltage | | Mounting Method | | Special Modifier | |
|---------------|----------------|-----|-----|--------------|----|-----------------|---------|------------------|-------|
| | 100 | 200 | 300 | 12 | 24 | 1 | 2 | 3 | 4 |
| | | | | | | Bottom | Bracket | Hardware | Diode |
| BR | - † | 0 | 0 | - 0 | 0 | - 0 | † | - 0 | 0 |
| MR | - † | 0 | 0 | - 0 | 0 | - 0 | † | - 0 | 0 |
| LT | - † | 0 | 0 | - 0 | 0 | - X | 0 | - 0 | 0 |
| BD | - † | 0 | 0 | - X | X | - X | X | - 0 | X |

Ordering Example:

| | | | | | | | | | |
|----|---|-----|---|----|---|---|---|---|---|
| BR | - | 300 | - | 12 | - | 1 | - | 3 | 4 |
|----|---|-----|---|----|---|---|---|---|---|

Part Number Ordered as: **BR-300-12-1-34**

| | |
|---|------------------------------------|
| 0 | - Available option |
| † | - Contact Factory for Availability |
| X | - Unavailable Series option |

Reads as:

| | | | | | |
|-----------|----------|----------|-----------------|---------------|------------------------|
| Bi Stable | 300 Amps | 12 Volts | Bottom Mounting | With Hardware | With Diode Suppression |
|-----------|----------|----------|-----------------|---------------|------------------------|

Also Available in the DC Power Relay Line

MR Series - Mono-Stable Relay



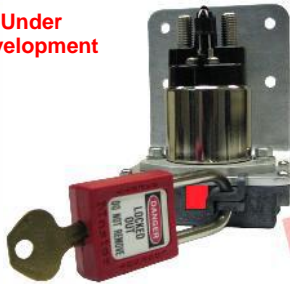
Our Mono-Stable Relays available in:

- ∩ 200-300 Amp
- ∩ 12 Volt
- ∩ 24 Volt
- ∩ Bottom Mounted
- ∩ Bracket Mounted

Our New line of "Maintained" mono stable relays are Designed and Manufactured in the U.S.A. These High Quality relays have been Extensively Tested for Reliable switching in the most Demanding Agricultural, Construction, and Transportation environments. Our Compact relay features Environmentally Sealed contacts, Shock and Vibration Resistant enclosure, and can be reliably operated with minimal power from your circuit. Shallco relays will provide more usable power to your system than the competition, Guaranteed!

LT Series - Lockout - Tag out Relay

Under Development



Lockout - Tag Out Relays available in:

- ∩ 200-300 Amp
- ∩ 12 Volt
- ∩ 24 Volt
- ∩ Bracket Mounted
- ∩ For "BR" Series only

Our NEW "Lockout Tag out" relay carries a Patent Pending and is an Industry First. It is manufactured and designed in the U.S.A. It offers the same Visible Identification of a mechanical disconnect with the Reliable benefits of remote electronic actuation. In the past to interrupt power, relays required remote location lock out and or removal of the attached cables to ensure the main power has been Disconnected. Our relays ability to Mechanically Break closed contacts and Prevent Reclosures when the lock is applied using lockout standards is the separating factor. Safety is first and foremost no matter the location.

500 Series - Battery Switches & Disconnects



Battery Switches & Disconnects available in:

- ∩ 200-300 Amp
- ∩ Up to 48 VDC
- ∩ Lockable & Keyed
- ∩ Versions available.

Shallco 500 Series Battery Switches and Disconnects are designed and manufactured in Smithfield North Carolina. Our products are designed to meet the most demanding applications in the Transportation, Marine and Heavy Equipment industries. Tested to industry standards for shock, vibration, sealing, life, voltage drop, temperature rise and resistance to fluids and cleaning agents. The 500 line of Battery Switches and Disconnects are robust in mounting and retention of battery leads under the most demanding conditions.