

# SHALCO

## DC Power Relays "MR" Series



### Mono-Stable Relay

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



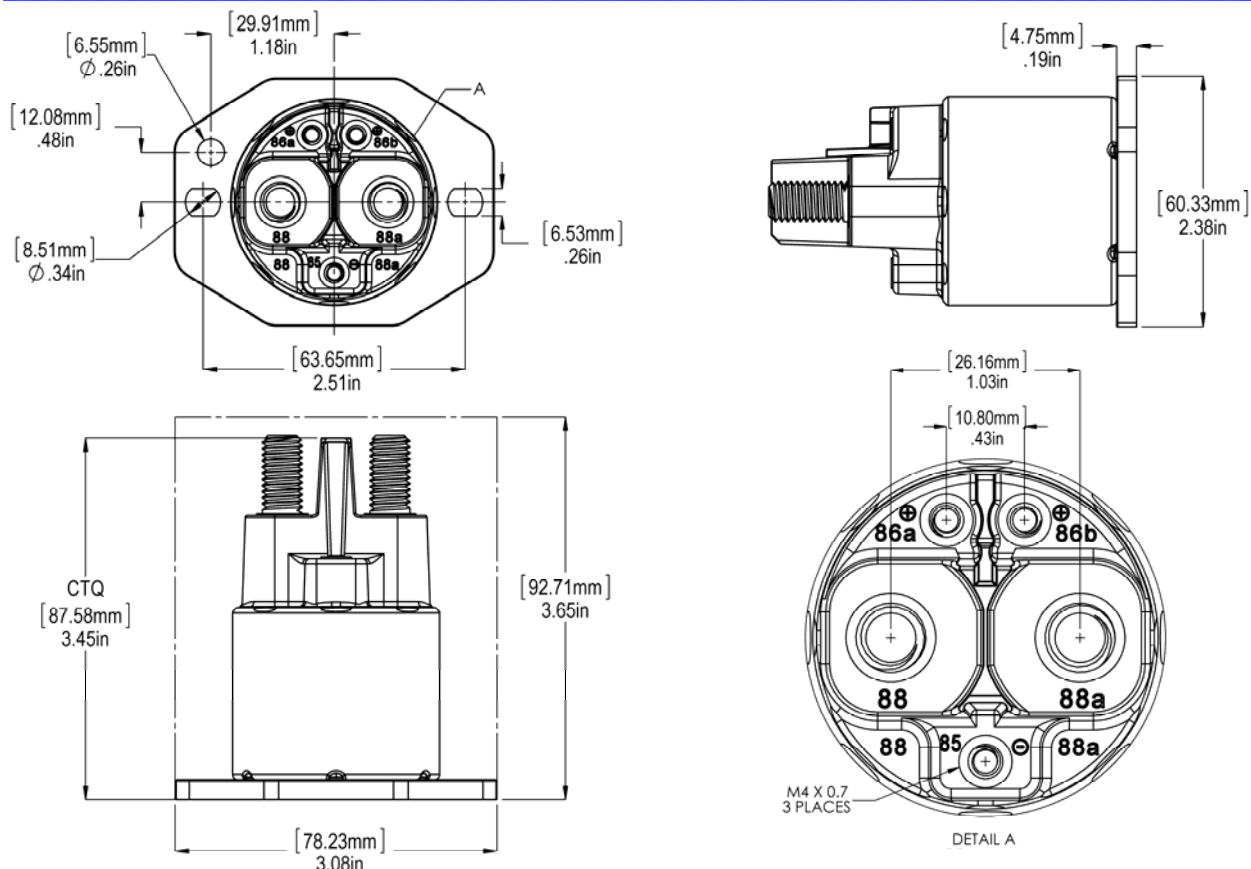
P.O. Box 1089  
308 Components Drive  
Smithfield, North Carolina 27577

Phone: 919-935-3135  
Fax: 919-934-3298  
E-mail: [Shallco@shallco.com](mailto:Shallco@shallco.com)  
Website: [www.shallco.com](http://www.shallco.com)

# 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 - 200 Amp - 12 & 24 VDC



## Technical Data

Temperature range:	-40 C to +85°C -40°F to +185°F
Max. Altitude rating:	50,000 ft.
Seal:	IP67: IEC 60529
Shock:	6g, 11ms, Saw Tooth
Vibration:	SAE J1455, Appendix A, Category 2, 4g - 10Hz-2000Hz

## Rated Contact Load

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 MΩ
Dielectric withstanding voltage:	1050 V / 1 min.
Max. Contact drop, initial:	150 mV
Duty rating, Continuous:	200 A

## Coil Data - 12 VDC Only

Nominal voltage:	12 VDC
Voltage range:	9-16 VDC
Coil resistance:	18.1 Ω, ± 10%
Wattage:	8.0

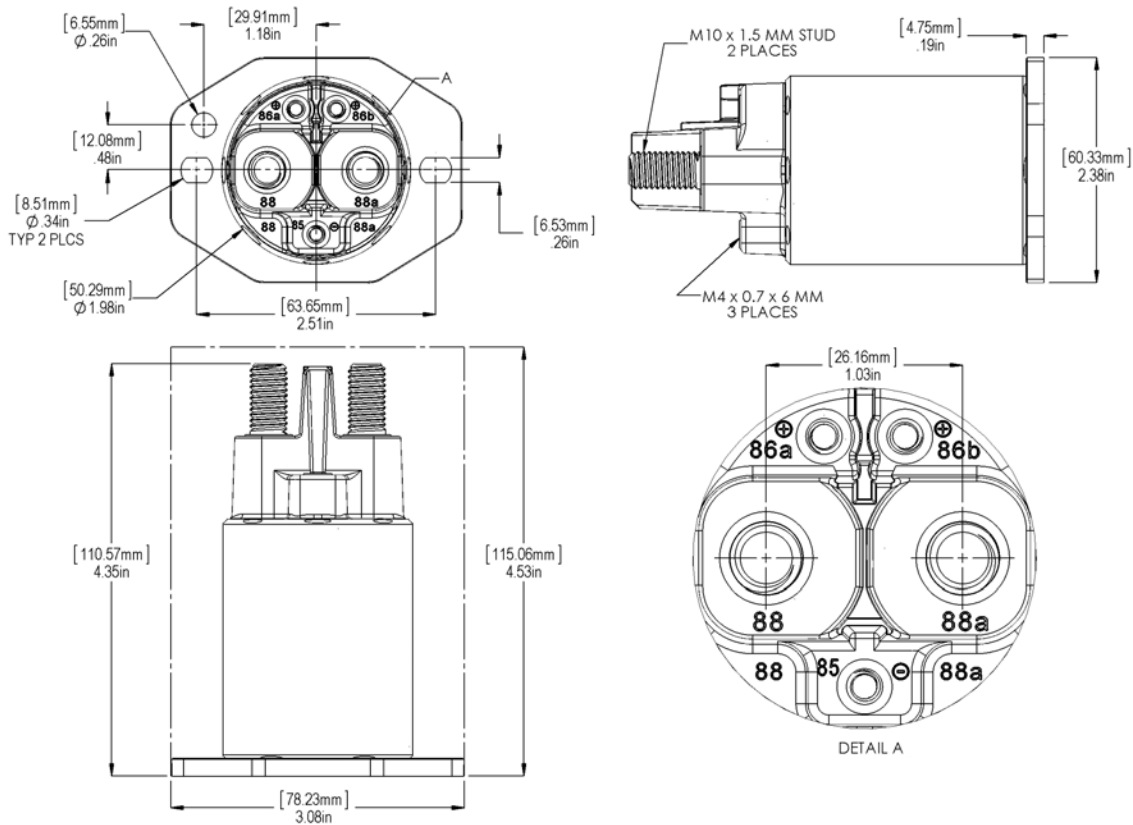
## Coil Data - 24/28 VDC Only

Nominal voltage:	24/28 VDC
Voltage range:	18-32 VDC
Pull closed coil resistance:	7.3 Ω, ± 10%
Pull open coil resistance:	8.4 Ω, ± 10%
Max. Operating time:	2.5 sec
Max. Cycles per minute	6

# “MR” Series - Mono-Stable Relay

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!

## Physical Data - 300 Amp - 24 VDC (12V Version - Under development)



### Technical Data

Temperature range: -40 C to +85°C  
 -40°F to +185°F  
 Max. Altitude rating: 50,000 ft.  
 Seal: IP67: IEC 60529  
 Shock: 6g, 11ms, Saw Tooth  
 Vibration: SAE J1455, Appendix A, Category 2, 4g - 10Hz-2000Hz

### Rated Contact Load

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 MΩ  
 Dielectric withstanding voltage: 1025 V / 1 min.  
 Max. Contact drop, initial: 150 mV  
 Duty rating, Continuous: 300 A

### Coil Data - 12 VDC Only

**UNDER DEVELOPMENT**

### Coil Data - 24/28 VDC Only

Nominal voltage: 12 VDC  
 Voltage range: 9-16 VDC (CTQ @ 7VDC)  
 Pull closed coil resistance: 1.92 Ω, ± 10%  
 Pull open coil resistance: 2.38 Ω, ± 10%  
 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
LT	- †	0	0	- 0	0	- X	X	- 0	0
BD	- †	0	0	- X	X	- X	X	- X	X

**Ordering Example:**

BR	-	300	-	12	-	1	-	3	4
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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
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## Also Available in the DC Power Relay Line

BR Series - Bi-Stable Relay	Bi-Stable Relays available in:	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!
	<ul style="list-style-type: none"> <li>200-300 Amp</li> <li>12 Volt</li> <li>24 Volt</li> <li>Bottom Mounted</li> <li>Bracket Mounted</li> </ul>	

LT Series - Lockout - Tag out Relay	Lockout - Tag Out Relays available in:	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.
<p style="color: red; font-weight: bold;">Under Development</p> 	<ul style="list-style-type: none"> <li>200-300 Amp</li> <li>12 Volt</li> <li>24 Volt</li> <li>Bracket Mounted</li> <li>For "BR" Series only</li> </ul>	

BD Series - Battery Disconnect	Battery Disconnect Switches available in:	Our NEW Battery disconnect switch offers Lockout Tag out Features along with Standard Panel mounting. It is manufactured and designed in the U.S.A. It offers a Large knob to operate with "Gloved Hands". It also has a Compact Streamlined Footprint behind the panel allowing More Room to work. It has our Sealed contact System to increase Reliability and Performance. We offer it with or without Delay on Break Main to Auxiliary contacts. Also available panel mount or Keylock for added security.
<p style="color: red; font-weight: bold;">Under Development</p> 	<ul style="list-style-type: none"> <li>200-350 Amp</li> <li>12 Volt</li> <li>24 Volt</li> <li>w/Auxiliary Contacts</li> <li>w/o Auxiliary Contacts</li> <li>Standard Panel Mount</li> </ul>	