ML Series
AUTOMATIC CHARGING RELAYS

500 Amp magnetic latching (bi-stable) relay automatically combines batteries during charging and isolates batteries when discharging and when starting engine

- Start Isolation (SI) can be configured for temporary isolation of House loads from Engine circuit during engine cranking to protect sensitive electronics
- Engine Isolation (EI) can be configured for isolation of two engines while both are running to protect engine electronics and maximize alternator output
- Manual override knob provides an added level of safety allowing control with or without power and offering LOCKED OFF capability for servicing
- Senses charging on two battery banks
- LED output to remotely indicate switch state - requires optional LED or Remote Control Contura Switch with integrated LED (included in retail package)
- Tin-plated copper studs for maximum conductivity and corrosion resistance
- One-piece stainless flange nuts ensure safe and secure connections
- Label recesses for circuit identification

Related Products

- Paralleling Link Bus
- Related ML-Series
- Remote Battery Switches
- Remote Control Contura Switches
- Battery Management Panels
- MRBF® Terminal Fuse Blocks
- Paralleling Link Bus

Wire Harness Connections

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Circuit Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Remote</td>
</tr>
<tr>
<td>Black</td>
<td>Ground</td>
</tr>
<tr>
<td>Yellow</td>
<td>LED Output</td>
</tr>
<tr>
<td>Brown</td>
<td>SI/EI #1</td>
</tr>
<tr>
<td>Green</td>
<td>SI/EI #2</td>
</tr>
<tr>
<td>Orange</td>
<td>SI/EI #3</td>
</tr>
</tbody>
</table>

Deutsch DTM Cable End provided on bulk units. Other connector plugs are available for high volume OEM applications

9160 Paralleling Link Bus
For paralleling ML-Remote Battery Switches and Automatic Charging Relays
- Tin-plated copper for maximum conductivity and corrosion resistance
- Sold individually
Specifications

<table>
<thead>
<tr>
<th>PN</th>
<th>Cable End</th>
<th>Packaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>7620</td>
<td>Stripped Wire</td>
<td>Retail</td>
</tr>
<tr>
<td>7622</td>
<td>Stripped Wire</td>
<td>Retail</td>
</tr>
<tr>
<td>7621</td>
<td>Deutsch DTM</td>
<td>Bulk</td>
</tr>
<tr>
<td>7623</td>
<td>Deutsch DTM</td>
<td>Bulk</td>
</tr>
<tr>
<td>7620B</td>
<td>Stripped Wire</td>
<td>Retail</td>
</tr>
<tr>
<td>7622B</td>
<td>Stripped Wire</td>
<td>Retail</td>
</tr>
<tr>
<td>7621B</td>
<td>Deutsch DTM</td>
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<td>Paralleling Link Bus</td>
<td>Retail</td>
</tr>
</tbody>
</table>

Manual Control

- 7620: Yes
- 7622: Yes
- 7621: Yes
- 7623: Yes

Nominal Voltage

- 12V DC
- 24V DC

Cranking Rating (10 sec.)

- 2,500A DC
- 1,100A DC

Cranking Rating (1 min.)

- 1,100A DC
- 500A DC

Intermittent Rating (5 min.)

- 700A DC
- 500A DC

Continuous Rating

- 500A DC
- 250A DC

Amperage Operating Current - continuous @ 25°C nominal VDC

- < 13mA
- < 10mA

Amperage Operating Current - when changing state

- < 7.0A DC
- < 4.0A DC

Switching Cycles

100,000

Coil Function

Magnetic Latching, Auto-Releasing

Control Switch Included

2146 SPDT ON-OFF-ON

Control Circuit Connection

Tinned Wire

Mounting

#10 or M5

Terminal Stud Size

3/8"-16 (M10)

Terminal Stud Length

7/8" (22 mm)

Maximum Terminal Stud Torque

140 in-lb (15.8 Nm)

Cable Size to Meet Ratings

4/0 AWG (120 mm²) x 2

Terminal Ring Diameter Clearance

1.12" (28.4 mm)

* Bulk units available that incorporate Deutsch DTM Connectors. Other connector plugs are available for high volume OEM applications.

Remote Control Contura Switch (PN 2146)

Specifications

- Amperage Operating Current (LED): 18mA
- Temperature Range: -40°C to 85°C
- Pole/Throw: SPDT
- Lighting: LED rated 100,000 hours half-life
- Seals: Internal and external gasket panel seal
- Mounting Hole: 1.45" x 0.83" (36.83 mm x 21.08 mm)

Regulatory

Meets UL 1500 and ISO 8846 external ignition protection requirements

IP67—protected against immersion up to 1 meter for 30 minutes