

500 Amp Continuous Capability / Extremely Compact Footprint

Available With or Without Intuitive Front Facing Manual Override Knob with Ability to Lock Device ON or OFF for Servicing

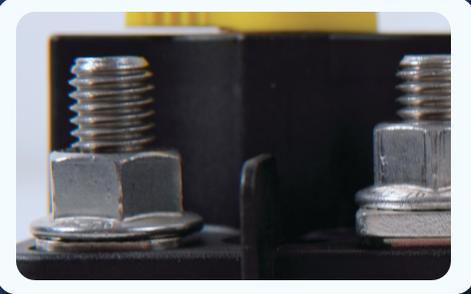
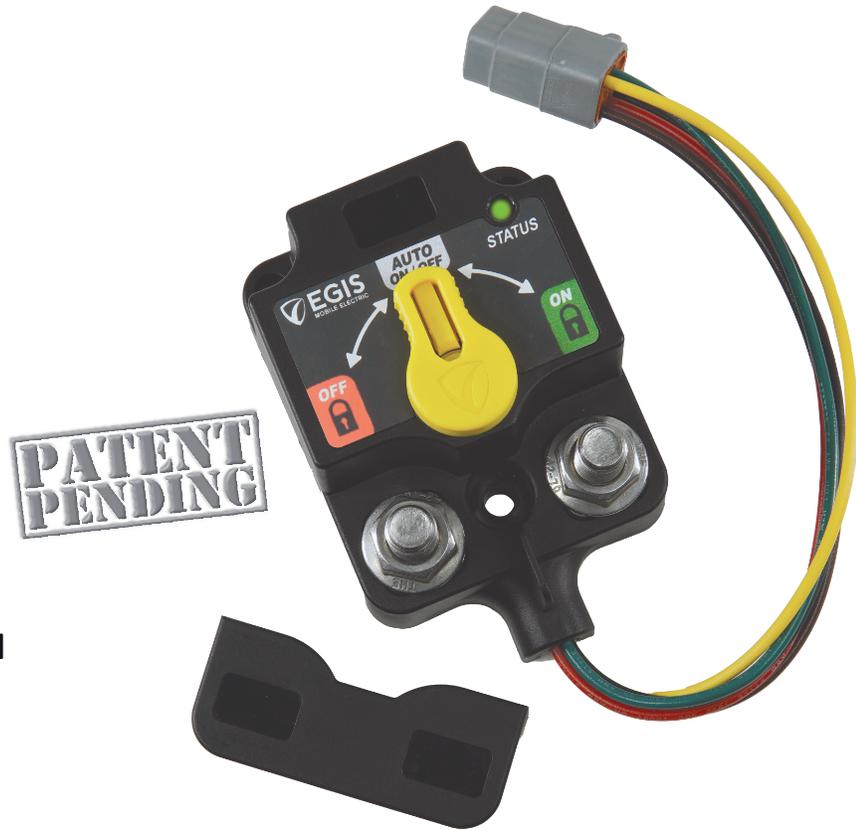
Fully Adjustable Open and Close Voltage Set Points Support All Battery Types

Supports Single/Multiple Engine Installations with Dual Start/Engine Isolation Inputs

Remote ON/OFF Input Allows Combining Batteries During Hard Start Events or Forcing Isolation of Batteries During Engine Starts.

Optional Priority Charging Delays Closure Until Charging Battery is More Charged

Optional Aux Battery Priority Shares Start Battery Energy, Maintains Starting Ability



Eliminates Dead Start Batteries by sharing charging on either of two batteries and isolating batteries when no charge sources are present.



Simple & Robust Installation: Integrated sealed plug eliminates corrosion, includes Deutsch DT/AT connector harness



Additional Low Amp Output can be used to report device status remotely or synchronize with external devices



Bullet-proof Construction: Sealed to IP67/IP6K9K, high temperature materials allow mounting anywhere.



90% Less Off-State Current: Compared to competition (13 mA) vs 8701 ACR @ 1.3 mA



Adjustable On and Off Voltage Settings allow sharing start battery energy for auxiliary battery while ensuring engine starting ability; or charging start battery before sharing with auxiliary



Dual Start/Engine Isolation input option for protecting sensitive electronics or isolating multiple charging sources to optimize overall system performance.



Start Assist input option helps ensure maximum cranking amps available.



4 Year Warranty

Dip Switch Setting Options & Features

*** DISCONNECT BATTERY FROM POWER DISTRIBUTION SYSTEM BEFORE INSTALLING PRODUCT TO PREVENT ELECTRICAL SHOCK OR PRODUCT DAMAGE**



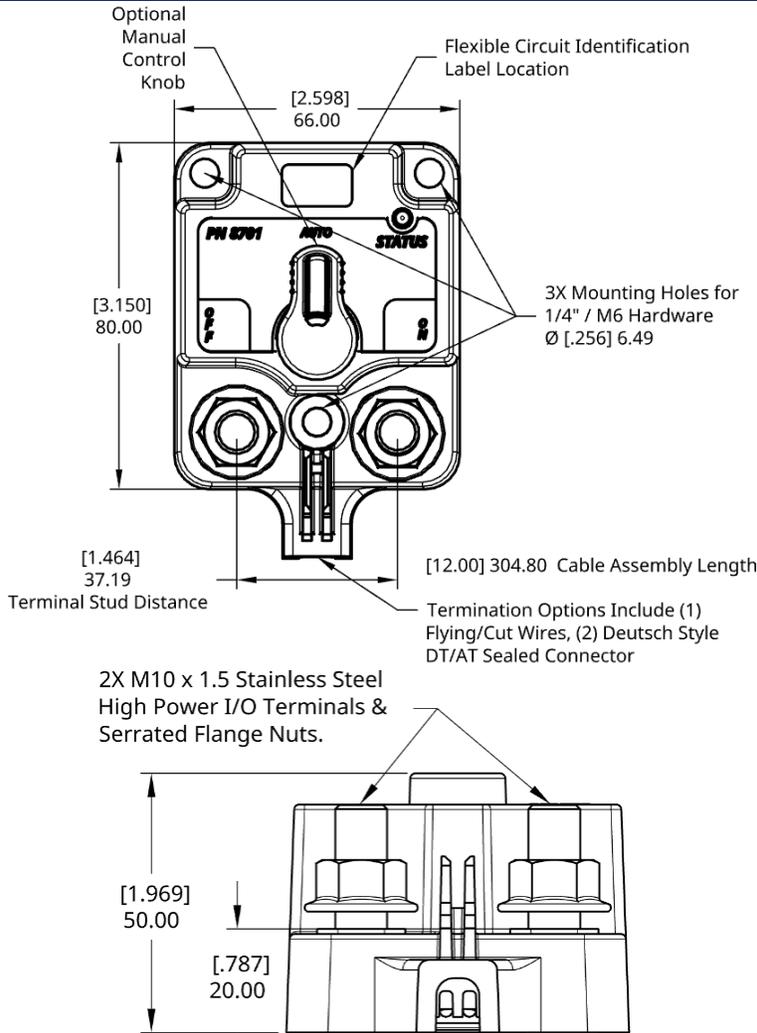
Voltage Settings				
3	2	1		
6	5	4		
ON	OFF			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.6/27.2	12.8/25.6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.5/27.0	12.7/25.4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.4/26.8	12.6/25.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.3/26/6	12.5/25.0
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.2/26.4	12.4/24.8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.1/26.2	12.3/24.6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.0/26.0	12.2/24/4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.9/25.8	12.1/24.2

= Factory Default

DS1-DS3: Determines 30 sec OFF Trigger Voltage, 10 sec OFF Trigger Voltage is 0.4 (0.8) Vdc lower. Once below this voltage, time delay to OFF is counting. If voltage is greater than this setting, time delay is re-set to 0. Setting below 12.7 (25.4) Vdc allows accy loads partial use of start battery energy, while ensuring sufficient starting ability.

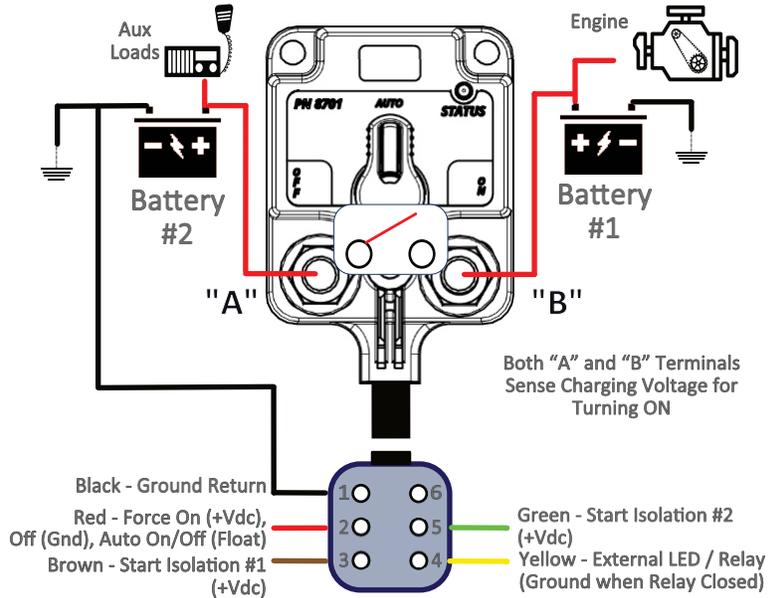
DS4-DS6: Determines 120 sec ON Trigger Voltage, 30 sec ON Voltage is 0.6 (1.2) Vdc higher. Once above this voltage, time delay to turning the relay ON is counting until ON event. If voltage is less than this setting, time delay is re-set to 0.

Dimensions



* Custom product configurations available including control harness wires, time delays, voltage settings, dip switch functionality, and control input functionality. Low minimum quantities and short lead time for samples or production. Contact support@egismobile.com

System Diagram



DTM 06-6S Connector End. Customer Supplies
DTM04-6P or Cuts & Uses Individual Wire Terminations

Specifications

Input Voltage Range (Vdc)	8.0 - 36.0 Auto-Ranging	
Nominal Voltage (Vdc)	12	24
120 sec Close Voltage Range (Vdc)	12.9-13.6	25.8-27.2
30 sec Close Voltage Range (Vdc)	13.5-14.2	27.0-28.4
30 sec Open Voltage Range (Vdc)	12.1-12.8	24.2-25.6
10 sec Open Voltage Range (Vdc)	11.7-12.4	23.4-24.8
Over Voltage Protection (Vdc) (5 sec)	17.0	34.0
State Change Current (20 msec)	5.0 A	3.0 A
Standby Current (mA)	1.3	1.3
Live Current Switching -50,000 cycles	12V/300A	24V/300A
Mechanical Switching Life	1,000,000 cycles	
2/0 AWG - 30sec/5min/Continuous	1000 / 400 / 225 Amps	
4/0 AWG - 30sec/5min/Continuous	1100 / 400 / 300 Amps	
2x 4/0 AWG - 30sec/5min/Cont.	1600 / 700 / 500 Amps	
Hardware Material	Stainless Steel Self-Locking	
Terminal Stud Torque	120 in-lbs	
LED/Aux Output Max Drive Current	400 milli-Amps	
Min Source Current for Inputs	10 micro-Amps	

Part Numbers Knob Connection Resell Pack Bulk Pack

XD Series ACR	Yes	Tinned Wire	8710-1300	8710-1300B
XD Series ACR	No	Tinned Wire	8710-1400	8710-1400B
XD Series ACR	Yes	Deutsch DTM	8810-1300	8810-1300B
XD Series ACR	No	Deutsch DTM	8810-1400	8810-1400B

Related Products Knob Term Resell Pack Bulk Pack

XD Battery Disconnect	Yes	DTM	8810-1500	8810-1500B
XD Battery Disconnect	No	DTM	8810-1600	8810-1600B
XD Flex - Relay / ACR / LVD	Yes	DTM	8810-1100	8810-1100B
XD Flex - Relay / ACR / LVD	No	DTM	8810-1200	8810-1200B



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ACR Relay Closes (Turns ON) after 120 sec if:

- 1) Voltage on Either Input to Relay > V_{on} as determined by DS4-DS6 and
- 2) Rem Ctrl (Red) wire is not connected to +Vdc or Gnd
- 3) Start Isolation Input Wires SI#1 (Brown) and SI#2 (Green) Not Connected to +Vdc

ACR Relay Closes (Turns ON) after 30 sec if:

- 1) Voltage on Either Input to Relay > V_{on} + 0.6 V (1.2V if on 24V System) as determined by DS4-DS6 and
- 2) Rem Ctrl (Red) wire is not connected to +Vdc or Gnd
- 3) Start Isolation Input Wires SI#1 (Brown) and SI#2 (Green) Not Connected to +Vdc

ACR Relay Opens (Turns OFF) after 30 sec if:

- 1) Voltage on Either Input to Relay > V_{off} as determined by DS1-DS3 and
- 2) Rem Ctrl (Red) wire is not connected to +Vdc or Gnd
- 3) Start Isolation Input Wires SI#1 (Brown) and SI#2 (Green) Not Connected to +Vdc

ACR Relay Opens (Turns OFF) after 10 sec if:

- 1) Voltage on Either Input to Relay > V_{on} - 0.4 V (0.8V if on 24V System) as determined by DS1-DS3 and
- 2) Rem Ctrl (Red) wire is not connected to +Vdc or Gnd
- 3) Start Isolation Input Wires SI#1 (Brown) and SI#2 (Green) Not Connected to +Vdc

ACR Relay Opens (Turns OFF) after 15 sec if:

- 1) Voltage on Either Input to Relay > Over-voltage set point for 15 continuous seconds and
- 2) Rem Ctrl (Red) wire is not connected to +Vdc or Gnd

ACR Relay Closes (Turns ON) Immediately if:

- 1) Voltage on Either Input to Relay > 9 Vdc (minimum operating Voltage) and
- 2) Rem Ctrl (Red) wire is connected to +Vdc

ACR Relay Opens (Turns OFF) immediately if:

- 1) Voltage on Either Input to Relay > 9 Vdc (minimum operating Voltage) and either any of the following three conditions exist:
- 2) Rem Ctrl (Red) wire is connected to Gnd
- 3) Start Isolation Input Wire SI#1 (Brown) is Connected to +Vdc
- 4) Start Isolation Input Wire SI#2 (Green) is Connected to +Vdc

ACR Start Isolation Mode Prevents Voltage Based Automatic Closing:

- 1) For as long as one or more of the two Start Isolation Lines SI#1 and/or SI#2 have +Vdc applied on the wires
- 2) For 3 minutes after +Vdc is no longer applied to both Start Isolation Lines SI#1 and/or SI#2 have +Vdc applied on the wires

Manual Override Mode Prevents Voltage Based Open or Closing:

- 1) For as long as the manual knob (if equipped) is not positioned in the "Auto/Rem" orientation

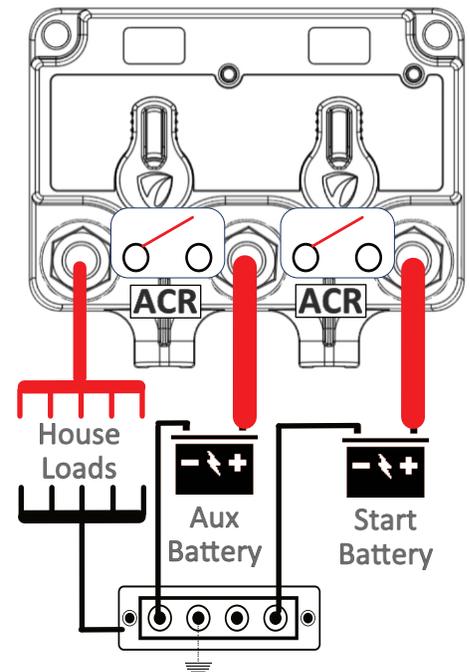
Upon Startup or Returning the ACR from Manual to Auto/Rem Mode:

- 1) The remote LED will remain OFF regardless of the physical status of the ACR until the ACR is remotely forced ON/OFF or automatically attempts to turn itself ON/OFF.
- 2) The local LED will rapid flash if the device has an input voltage that would dictate a pending ON or OFF is necessary.

ACR Status	Local LED	Rem LED
Relay OFF - Normal	Off	Off
Relay ON - Normal	On	On
Relay On - Pending Off	On w/3x Off Flashes	On
Relay Off - Pending On	Off w/3x On Flashes	Off
Relay Off - Start Isolation Mode	Off w/4x On Flashes	Off
Relay Off - Over-Voltage Mode	Off w/5x On Flashes	Off
Manual Override Engaged	Off w/2x On Flashes	Off w/2x On Flashes
Relay Off - Power Hibernation Mode	Off w/1x On Flash	Off
Power Up / Manual Mode Exited and Pending On or Off Event	Continuous Flashing	Off

Additional ACR Products

Ex: 8720-1330B



Left Relay Function	Right Relay Function	Part #
Flexible Relay/ACR/LVD	Flexible Relay/ACR/LVD	8720-1110B
Automatic Charge Relay	Battery Switch Relay	8720-1350B
Battery Switch Relay	Automatic Charge Relay	8720-1530B
Automatic Charge Relay	Automatic Charge Relay	8720-1330B



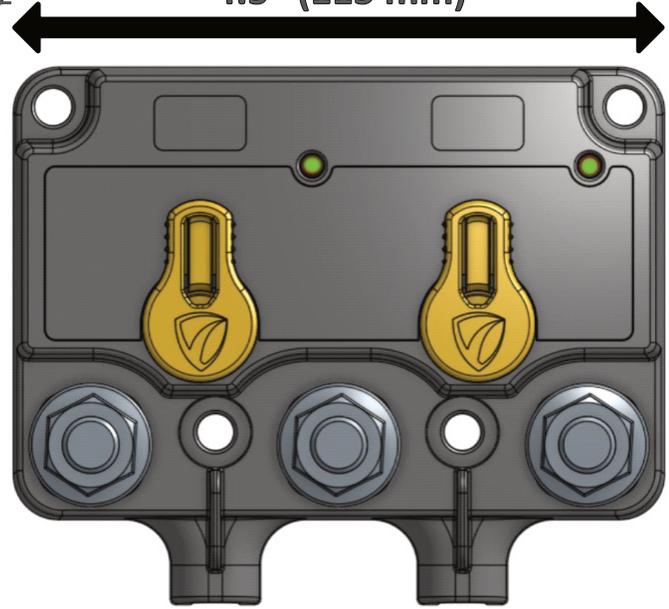
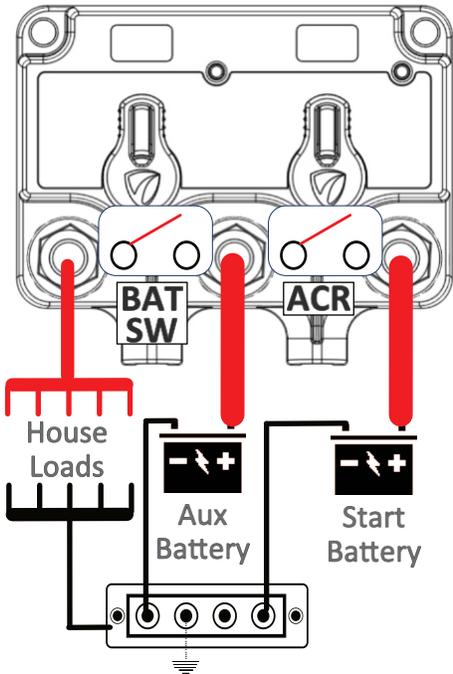
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8720 - Dual XD Relay

4.5" (115 mm)

Ex: 8720-1530

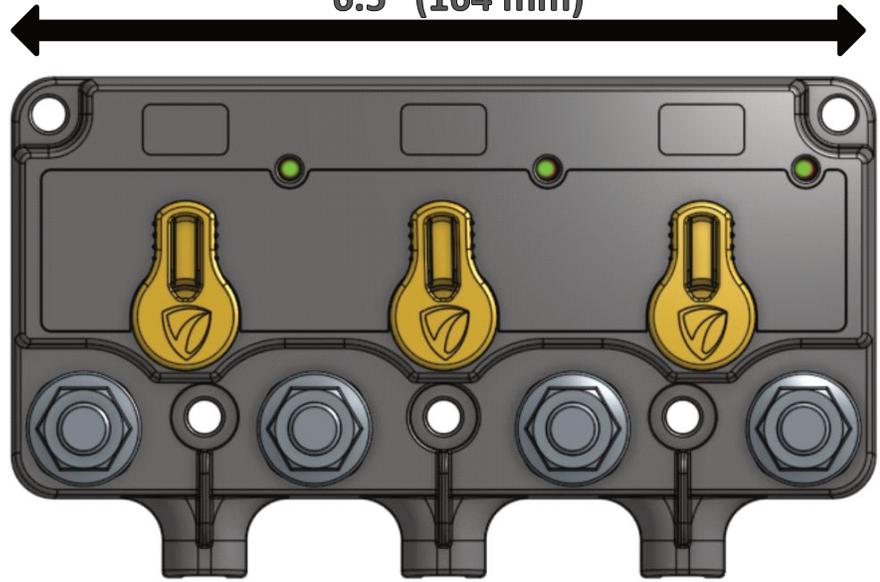
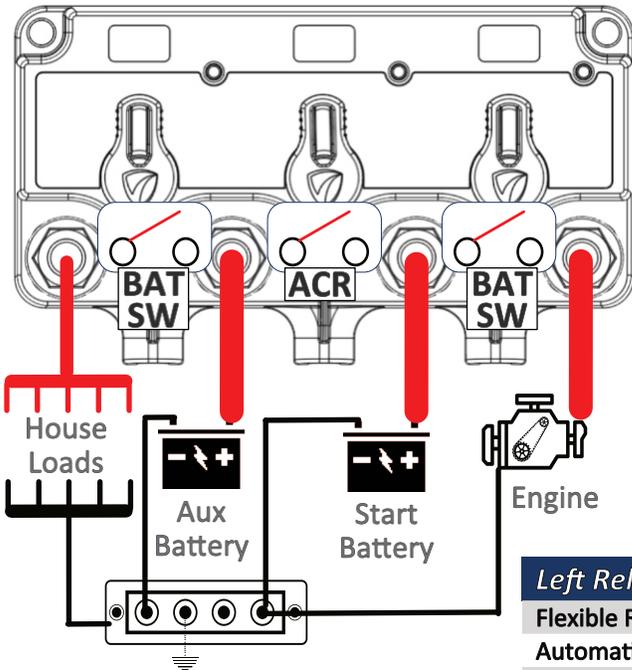


Left Relay Function	Right Relay Function	Part #
Flexible Relay/ACR/LVD	Flexible Relay/ACR/LVD	8720-1110B
Automatic Charge Relay	Battery Switch Relay	8720-1350B
Battery Switch Relay	Automatic Charge Relay	8720-1530B
Automatic Charge Relay	Automatic Charge Relay	8720-1330B

8730 - Triple XD Relay

6.5" (164 mm)

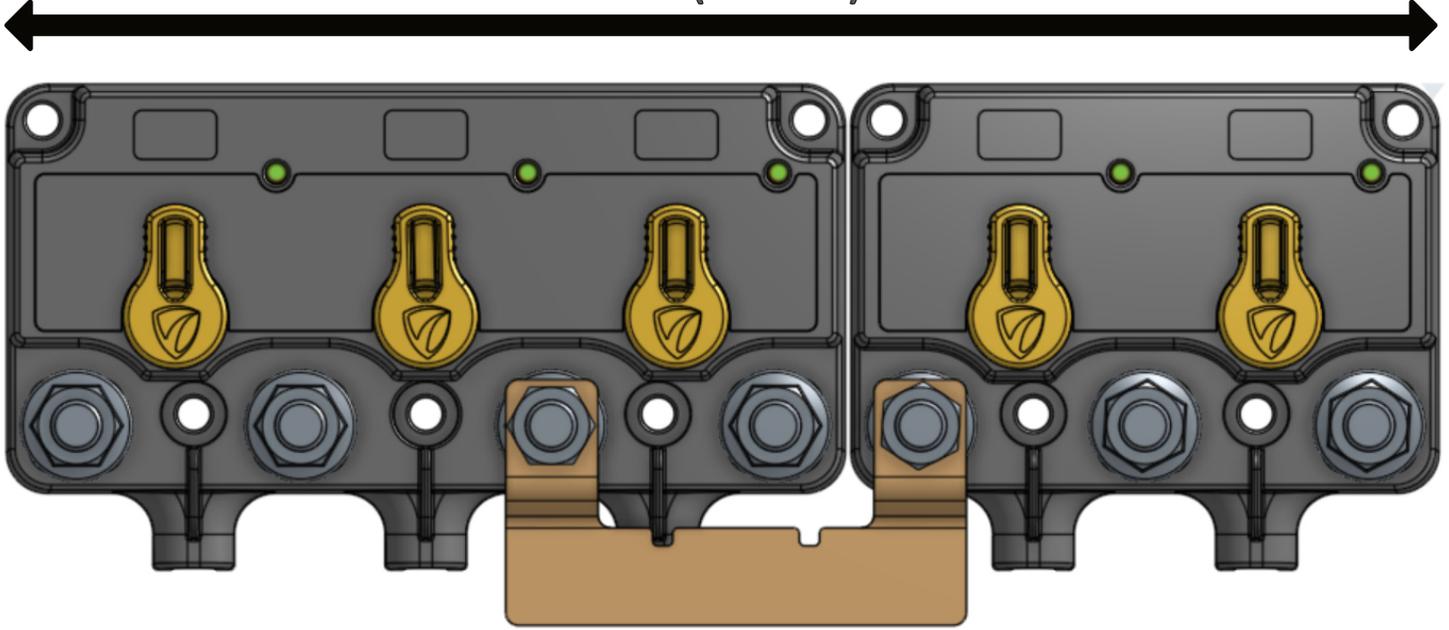
Ex: 8730-1535



Left Relay Function	Center Relay Function	Right Relay Function	Part #
Flexible Relay/ACR/LVD	Flexible Relay/ACR/LVD	Flexible Relay/ACR/LVD	8730-1111B
Automatic Charge Relay	Automatic Charge Relay	Automatic Charge Relay	8730-1333B
Battery Switch Relay	Automatic Charge Relay	Battery Switch Relay	8730-1535B

Triple Battery Relay / ACR Cluster

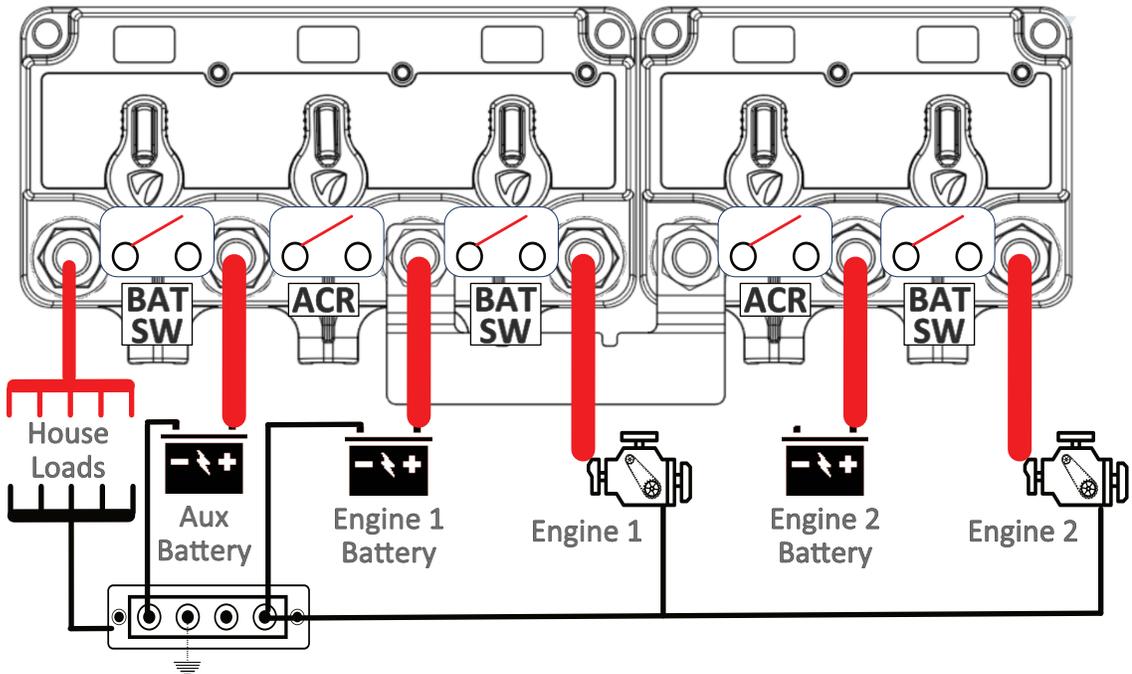
11" (280 mm)



8791 Cross-Over Busbar

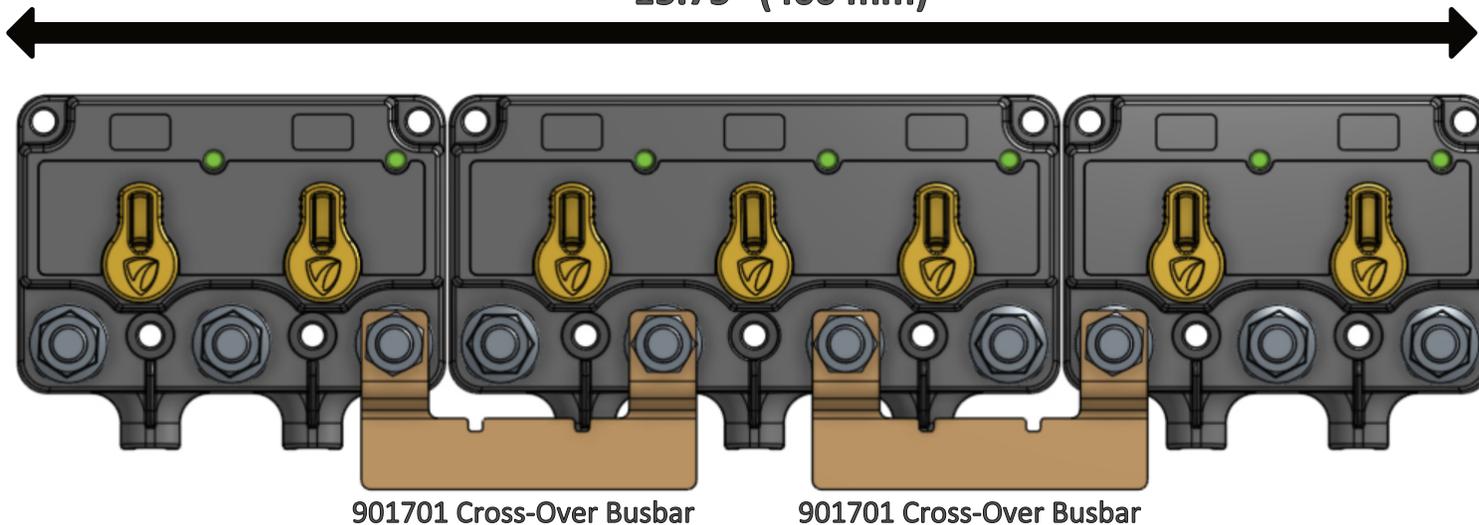
Ex: 8730-1535

Ex: 8720-1350



Quad Battery Bank Relay / ACR Cluster

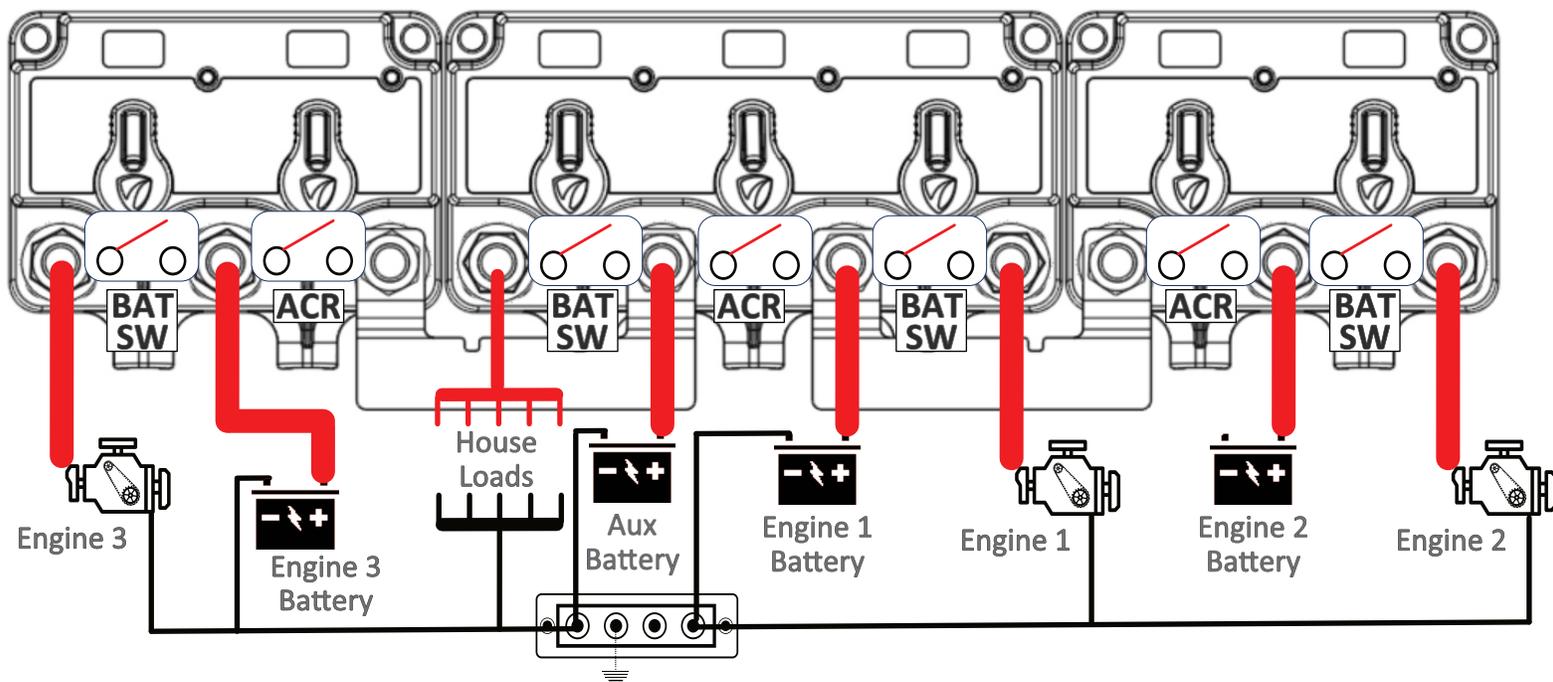
15.75" (400 mm)



Ex: 8702-1003

Ex: 8703-1003

Ex: 8702-1002



Robust Circuit Protection

Proudly Made In U.S.A.



- VS -



Product Specification		
Feature/Specification	XD Series ACR	ML-ACR
Universal 12/24 Control Voltage	✓	No: 12 or 24 Vdc
Cover for Power Terminals Included	✓	✗
Function & Cable Label Sheet Included	✓	✗
Local Status Led Indicator	✓	✗
Standby Current Draw	1.2 mA	13.0 mA ⁽¹⁾
Adjustable Turn On Voltage	✓	✗
Adjustable Turn Off Voltage	✓	✗
Ability to Manually Lock On	✓	✗
Terminal Stud Material	Stainless	Copper ⁽²⁾
Simple Bottom Cable Entry	✓	✗ ⁽³⁾
Product Assemblies for 2-7 Relays	✓ ⁽⁵⁾	✗
Dust & Water IP Rating	IP67 / IP6K9K	IP66 ⁽⁴⁾
Max Continuous Current	500 A	500 A
Power Input Stud Size	3/8" (M10)	3/8" (M10)
Mounting Footprint Width	66 ⁽⁶⁾	95
Mounting Footprint Length	80 ⁽⁶⁾	140
Mounting Depth	50	51.5

(1) XD Series ACR Standby current is 90% lower. Excessive standby current drains batteries as no charge source is present potentially permanently damaging batteries and voiding battery warranties

(2) Copper terminal studs in general are susceptible to thread damage if excessive assembly torque on the attachment nut is applied. The result is stripping of the threads and spinning of the nut; and a reduction or loss of clamping force between the cable terminal and device terminal. This can result in increased resistance and possibly overheating of the device and power cables.

(3) Studs parallel to the mounting surface require right angle cable terminal lugs to achieve bottom cable entry

(4) IP67 and IP6K9K are standard marine / harsh environment ingress performance levels to ensure effective long-term performance

(5) XD Series products are also available in single housing double and triple relay versions which provide significant cost, space, and standby current draw benefits versus existing industry options.

(6) XD Series mounting footprint is 60% smaller and much lighter, critical in today's systems with very limited space allocated for power management and where the affect of total system weight on vessel / vehicle performance has received greater attention.