

EGIS MOBILE ELECTRIC XD Series Single Flex 2 Relay-ACR Bi-Stable Relays



EGIS MOBILE ELECTRIC XD Series Single Flex 2 Relay-ACR Bi-Stable Relays Instruction Manual

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EGIS MOBILE ELECTRIC XD Series Single Flex 2 Relay-ACR Bi-Stable Relays



Product Information

Specifications:

- Input Voltage Range (Vdc): 8.0 – 36.0 Auto-Ranging
- Nominal Voltage (Vdc): 12, 24
- 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
- Mechanical Switching Life: 1,000,000 cycles
- Operational Temperature Range: -40 to 105°C
- Ignition Protection: SAE J1171 / ISO 8846

Product Usage Instructions

Install Guidelines & Dip Switch Settings:

1. DISCONNECT BATTERY FROM POWER DISTRIBUTION SYSTEM BEFORE INSTALLING PRODUCT TO PREVENT ELECTRICAL SHOCK OR PRODUCT DAMAGE
2. INSTALL A 7.5 – 10.0 A FUSE ON THE BLACK GROUND RETURN WIRE
3. DIP SWITCHES ARE SET FOR INDIVIDUAL RELAYS WITHIN DS1 determines the function of the device.
 - If DS1 = OFF, relay will act as a simple Battery Disconnect Switch Remote Relay.
 - If DS1 = ON, relay will operate as a Voltage Sensing Relay(VSR) and will utilize DS2-DS6 to determine VSR response per individual application requirements.
 - DS2-DS3: Determines ON Trigger Voltage and delay settings.
 - DS4-DS6: Determines OFF Trigger Voltage and device response to voltages below the setting.

General Specifications (Each Relay):

- Live Current Switching -50,000 cycles: 12V/300A, 24V/300A
- Hardware Material: Stainless Steel Self-Locking
- Terminal Stud Torque: 120 in-lbs
- LED/Aux Output Max Drive Current: 400 milli-Amps
- Typical Source Current for All Control Lines: 10 micro-Amps

FAQ:

Q: What is the warranty period for the XD Series Flex 2 Single/Double/Triple Bi-Stable Relays & VSR/ACRs?

A: The product comes with a 4 Year Industry Leading Warranty.

500 Amp Continuous Capability Per Relay /Extremely Compact Footprint

Available With or Without Intuitive Front

Facing Manual Override Knobs with Ability to

Lock Relays ON or OFF for Servicing

Sensing Relay, or Low Voltage Disconnect

Replaces Wiring with Remote to Legacy

Remote ON/OFF/Auto Inputs Allows Forced

Close or Open or Allowing Automatic
Operation Based on Voltage Sensing
Local and Remote LED Indicators Per Relay Mechanical Only Contactor Options



Ultra-Low Power Draw: Lowest off-state current draw in industry (1.3 mA) combined.



Simple & Robust Installation: Sealed plugs/harnesses included.



Flexible Application Options: Install as a Remote Battery Disconnect Switch, Voltage Sensing Relay, or Low Voltage Disconnect. On/Off trigger via external signal and/or alternator voltage sense.



Diagnostic Feedback via optional external LEDs control lines and on-board LEDs for each relay



Bullet-proof Construction: Sealed unit, high temperature materials allow mounting anywhere on vehicle. Integrated thermal overload protection



Optional Kill Switch eliminates need for using thermal circuit breakers as service maintenance switches, reducing voltage drop to electrical loads.



Meets Stringent OEM Standards for electrical transient self-protection



4 Year Industry Leading Warranty

Install Guidelines & Dip Switch Settings

1. DISCONNECT BATTERY FROM POWER DISTRIBUTION SYSTEM BEFORE INSTALLING PRODUCT TO PREVENT ELECTRICAL SHOCK OR PRODUCT DAMAGE
2. INSTALL A 7.5 – 10.0 A FUSE ON THE BLACK GROUND RETURN WIRE
3. DIP SWITCHES ARE SET FOR INDIVIDUAL RELAYS WITHIN AN XD RELAY WITH TWO OR MORE RELAY POSITIONS

<div> <div>ON</div> <div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div> <div>1 OFF 6</div> </div>					
VSR "ON"			VSR "OFF"		
2	3	Voltage	4	5	6
<div></div>	<div></div>	12.5 / 25.0	<div></div>	<div></div>	11.4/22.8
<div></div>	<div></div>	12.9 / 25.8	<div></div>	<div></div>	11.7/23.4
<div></div>	<div></div>	13.1 / 26.2	<div></div>	<div></div>	12.0/24.0
<div></div>	<div></div>	13.5 / 27.0	<div></div>	<div></div>	12.3/24.6
VSR or Relay			<div></div>	<div></div>	12.4/24.8
1			<div></div>	<div></div>	12.5/25.0
		VSR	<div></div>	<div></div>	12.6/25.2
		Relay	<div></div>	<div></div>	12.7/25.4
			= Default		

DS1 determines the function of the device.

If DS1 = OFF, relay will act as a simple Battery Disconnect SwitCh Remote Relay.

If DS1 = ON, relay will operate as a Voltage Sensing Relay (VSR) and will utilize DS2-DS6 to determine VSR response per individual application requirements

DS2-DS3: 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.

DS4-DS6: Determines OFF Trigger Voltage.

See methods of operation for device response to voltages below this setting.

Setting below 12.7 (25.4) Vdc allows accessory loads partial use of start battery energy, while ensuring sufficient starting ability.

General Specifications (Each Relay)

Input Voltage Range (Vdc)	8.0 - 36.0 Auto-Ranging	
Nominal Voltage (Vdc)	12	24
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	
Typ Source Current for All Ctrl Lines	10 micro-Amps	
Operating Temperature Range	-40 to 105 C	
Ignition Protection	SAE J1171 / ISO 8846	

<i>LED Indicators</i>	<i>Local LED</i>	<i>Rem LED</i>
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

Detailed Operational Modes & Responses

Relay Mode – Relay Closes (Turns ON) Immediately if:

1. Voltage on Either Input to Relay > 9 Vdc (minimum operating Voltage) and either any of the following two conditions exist:
2. Rem On/Off Ctrl (Red) wire is connected to +Vdc (maintain if desire is for device to stay Closed) or
3. Momentary ON Signal Wire (Brown) is Connected to +Vdc Until Device Closes, Up to 3 seconds. (+Vdc may then remain or be removed while device remains Closed either way)
4. D51 = Off, Setting Device as an Simple Relay

Relay Mode – Relay Open (Turns OFF) Immediately it:

1. Voltage on Either Input to Relay > 9 Vdc (minimum operating Voltage) and either any of the following three conditions exist:
2. Rem On/Off Ctrl (Red) wire changes from +Vdc to Floating or
3. Rem On/Off Ctrl (Red) wire is connected to Ground (may be momentarily or permanently connected for device to stay Closed) or

4. Momentary OFF Signal Wire (Green) is Connected to +Vdc Until Device Opens, Up to 1 Second (+Vdc may then remain or be removed while device will remain Open either way)
5. Rem Ctrl (Red) wire and Momentary ON Signal Wire (Brown) must not have +Vdc applied, they will override Off Signal from Green Wire
6. DS1 = Off, Setting Device as an Simple Relay

VSR Mode – Relay Closes (Turns ON) after 120 sec if:

1. Voltage on Either Input > V_On as determined by DS2-DS3 and
2. Rem Ctrl (Red) wire is not connected to +Vdc or Gnd and
3. Start Isolation Input Wires SI#1 (Brown) and SI#2 (Green) Not Connected to +Vdc
4. DS1 = On, Setting Device as an Voltage Sensing Relay (VSR)

VSR Mode – Relay Closes (Turns ON) after 30 sec if:

1. System as determined by to -DS and on + 0.6 V (2.2v it on 24v
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
4. DS1 = On, Setting Device as an Voltage Sensing Relay (VSR)

VSR Mode – Relay Automatically Opens (Turns OFF) if:

1. Voltage on Either Input < _Off as determined by DS4-DS6 and
2. Rem Ctrl (Red) wire is not connected to +Vdc or Gnd and
3. Start Isolation Input Wires SI#1 (Brown) and SI#2 (Green) are Not Connected to +Vdc and
4. DS1 = On, Setting Device as an Voltage Sensing Relay and
5. At least 120 sec has passed since the device was either forced Closed by the Red input wire or the device automatically Closed and
6. The advanced charge management algorithm has determined that any electrical charging, if operating, is not equal to or great than the electrical loads discharging the connected batteries.

VSR Mode – 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

VSR Mode – Relay Immediately Closes (Turns ON) Immediately if:

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

VSR Mode – Relay Immediately 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 +Vac
4. Start Isolation Input Wire SI#2 (Green) is Connected to +Vdc

VSR Mode – Start Isolation 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 Prevents Remote or Voltage Based Open or Closing:

1. For as long as the manual knob (if equipped) is not positioned in the “Auto/Rem” orientation

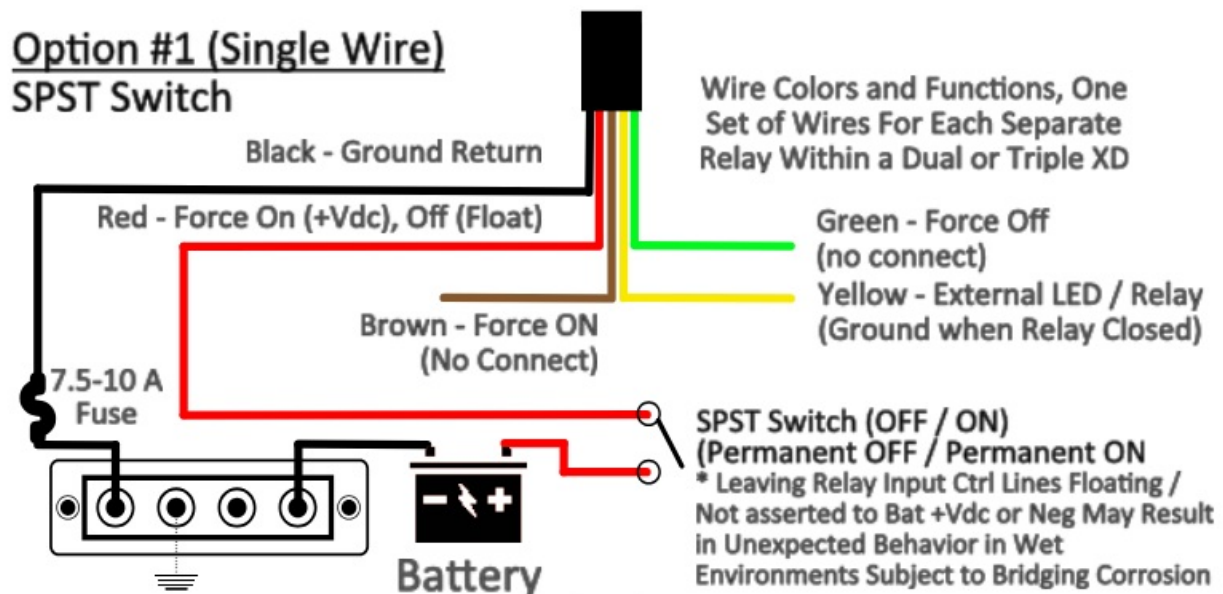
Upon Startup or Returning Device from Manual to Auto/Rem Mode:

1. The remote LED will remain OFF regardless of the physical status of the VSR until the VSR 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.

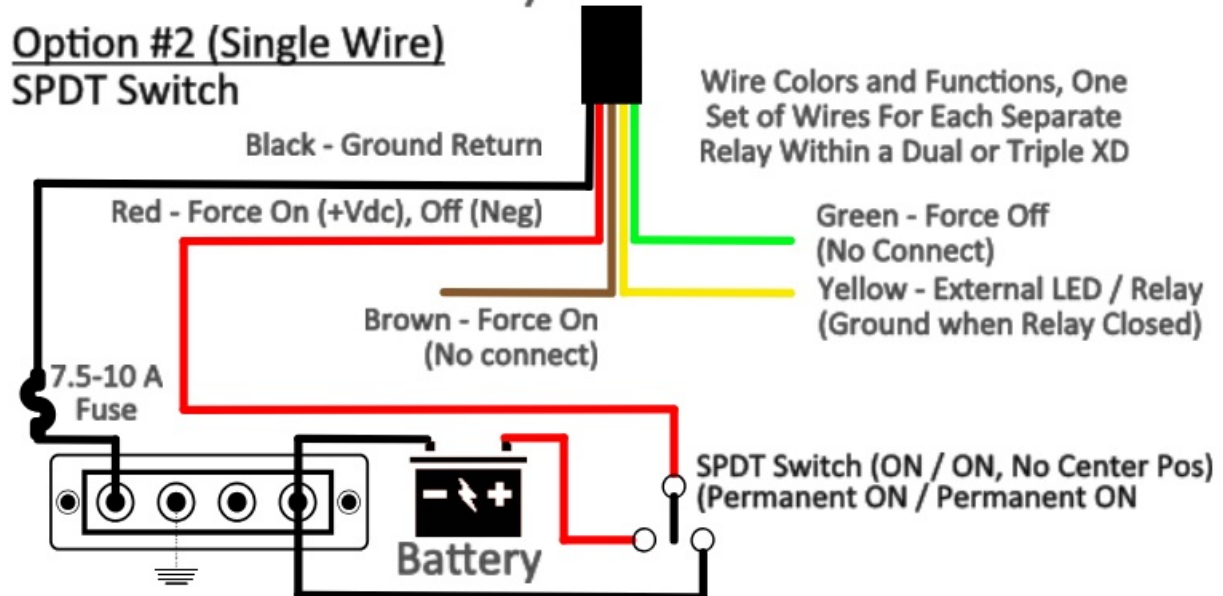
INSTRUCTION

Fig 1 – Relay Mode – Control Wiring Options

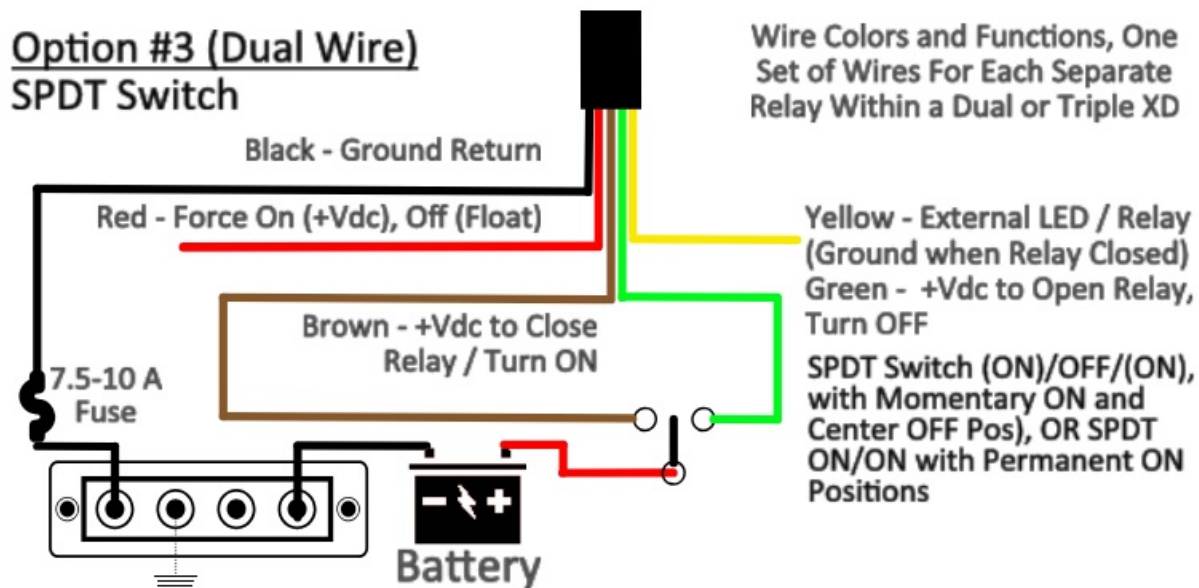
Option #1 (Single Wire) SPST Switch



Option #2 (Single Wire) SPDT Switch



Option #3 (Dual Wire) SPDT Switch



Leaving Relay Input Ctrl Lines Floating / Not asserted to Bat +Vdc or Neg May Result in Unexpected Behavior in Wet Environments Subject to Bridging Corrosion

Fig 2 – Mechanical Only Contactor Option

XD Series Single, Dual, and Triple XD Relays are available with one or more positions constructed as a mechanical-only battery switch / mechanical contactor. This offers the option for certain application a more cost-effective solution to variations with all relay positions that are remote relays. See examples below

Example:
8730-1939B

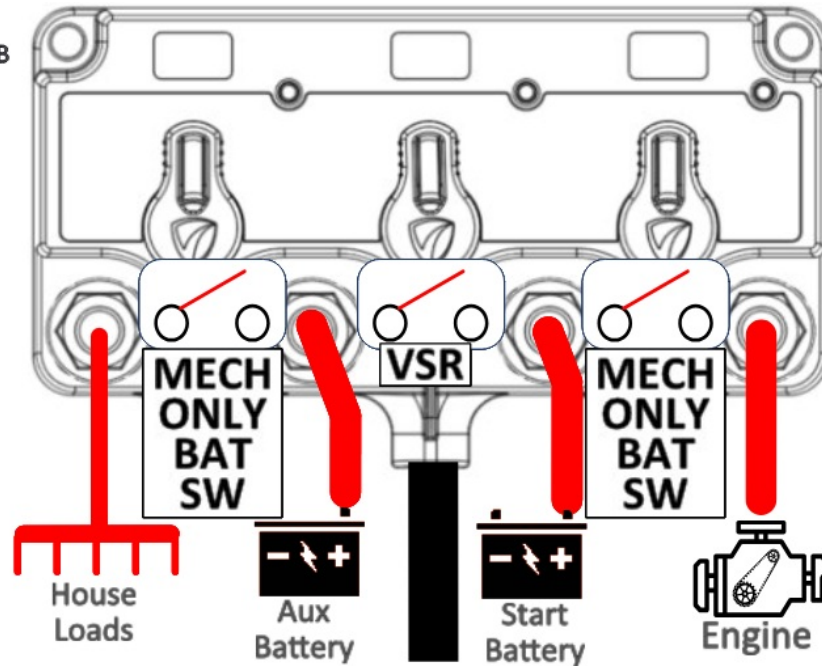
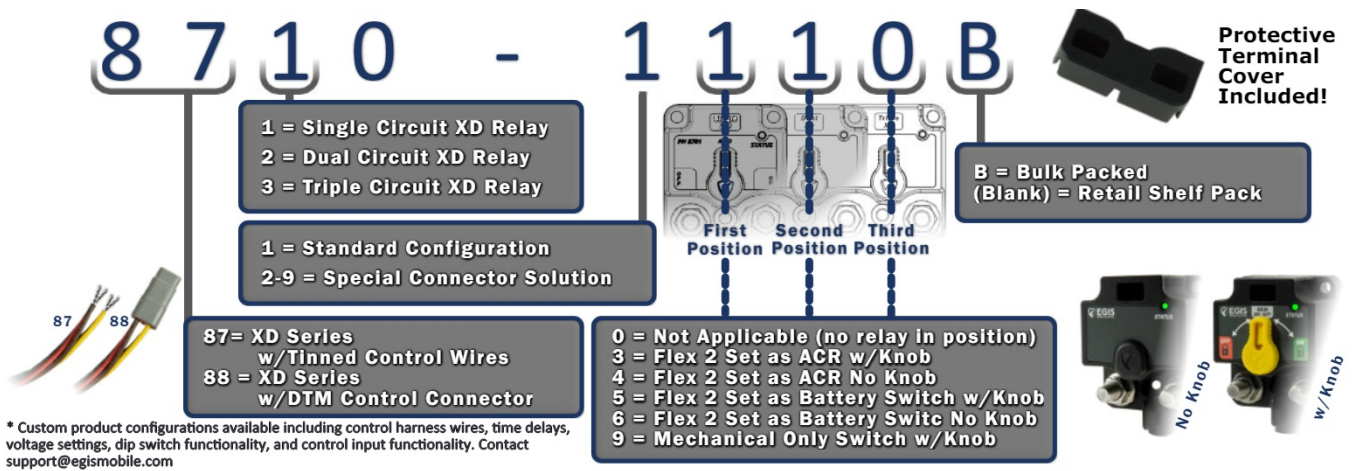


Fig 3 – XD Series Part Number Guide



Custom product configurations available including control harness wires, time delays, voltage settings, dip switch functionality, and control input functionality. Contact support@egismobile.com

Fig 4 – Triple XD Series – Dimensions

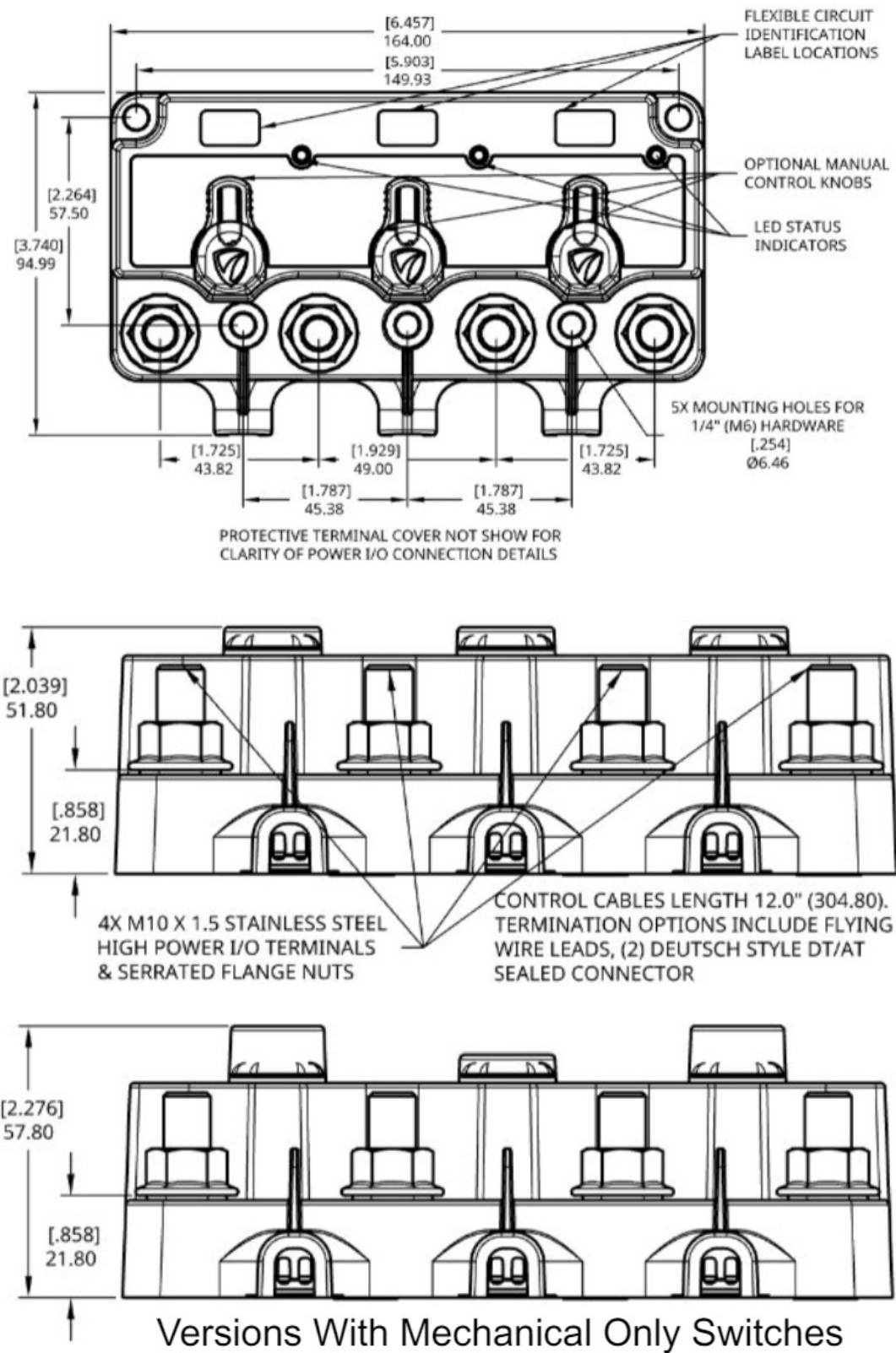


Fig 5 – Dual XD Series – Dimensions

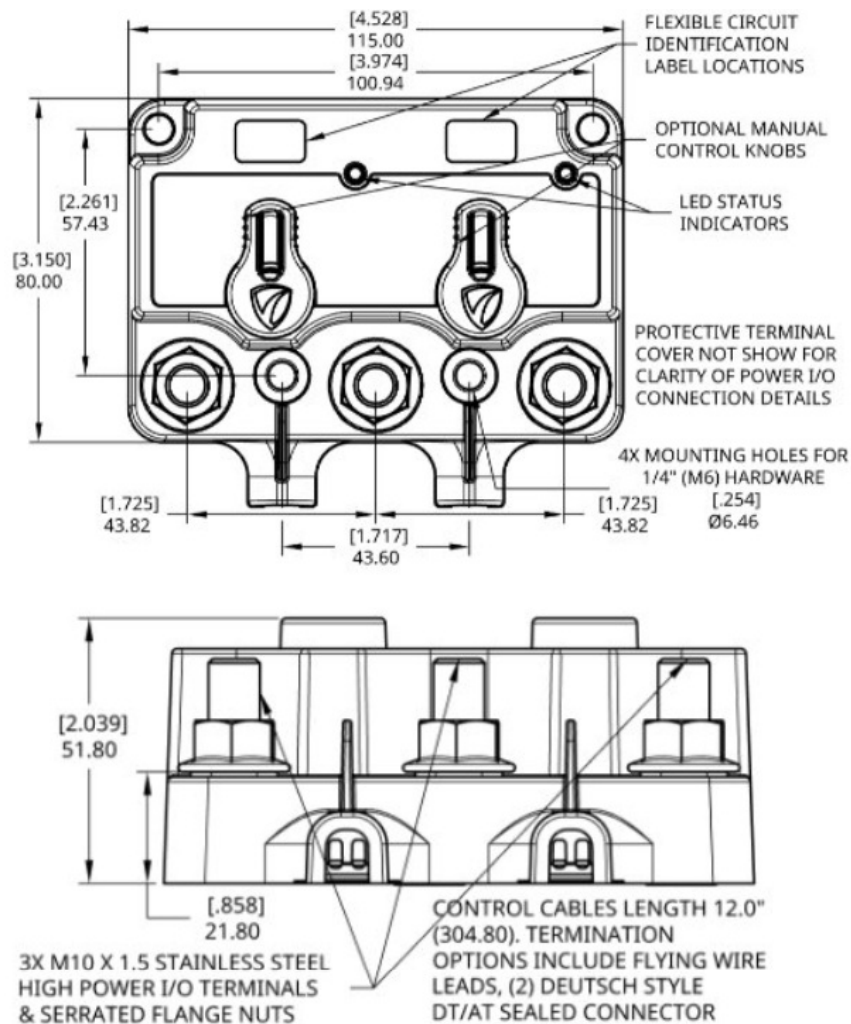


Fig 6 – Single XD Series – Dimensions

2X M10 x 1.5 Stainless Steel High Power I/O Terminals & Serrated Flange Nuts.

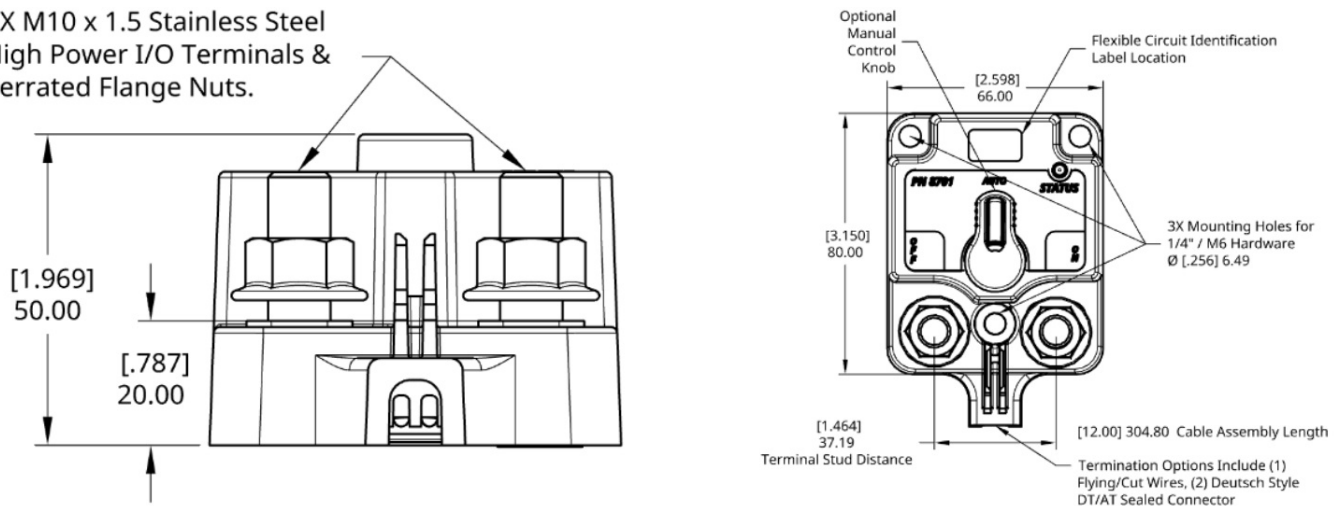


Fig 7 – Triple XD – 88 Series (DTM Connectors) Diagram (Matches Legacy Remote Relay Solutions)

ALL relay positions capable of configuration as either Voltage Sensitive Relay (VSR) or Simple Remote Battery Disconnect via Dip Switches. Factory Dip Switch Settings are Per Part Number Per Table Referencing this Figure. For all relay positions set as VSRs, both input terminals adjacent to the relay position are used for sensing voltage and making automatic open/close decisions (VSR Mode Only)

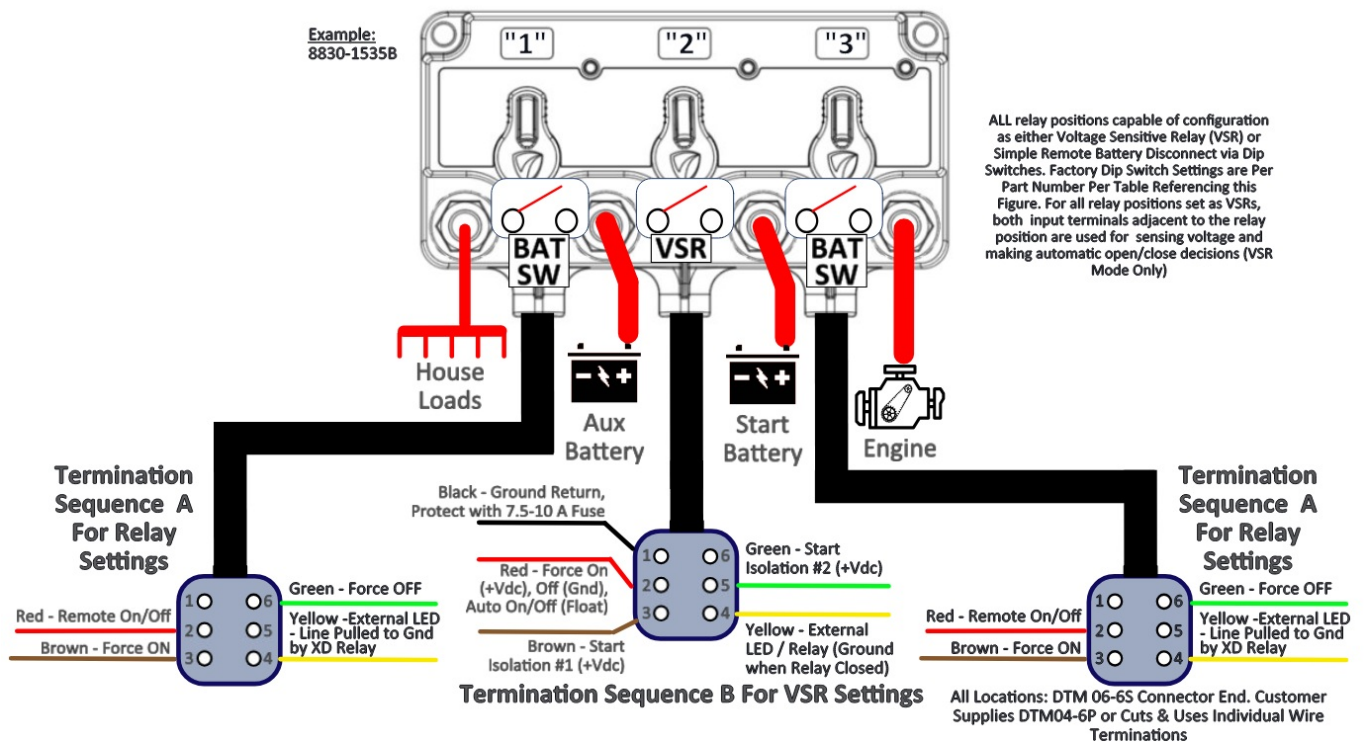
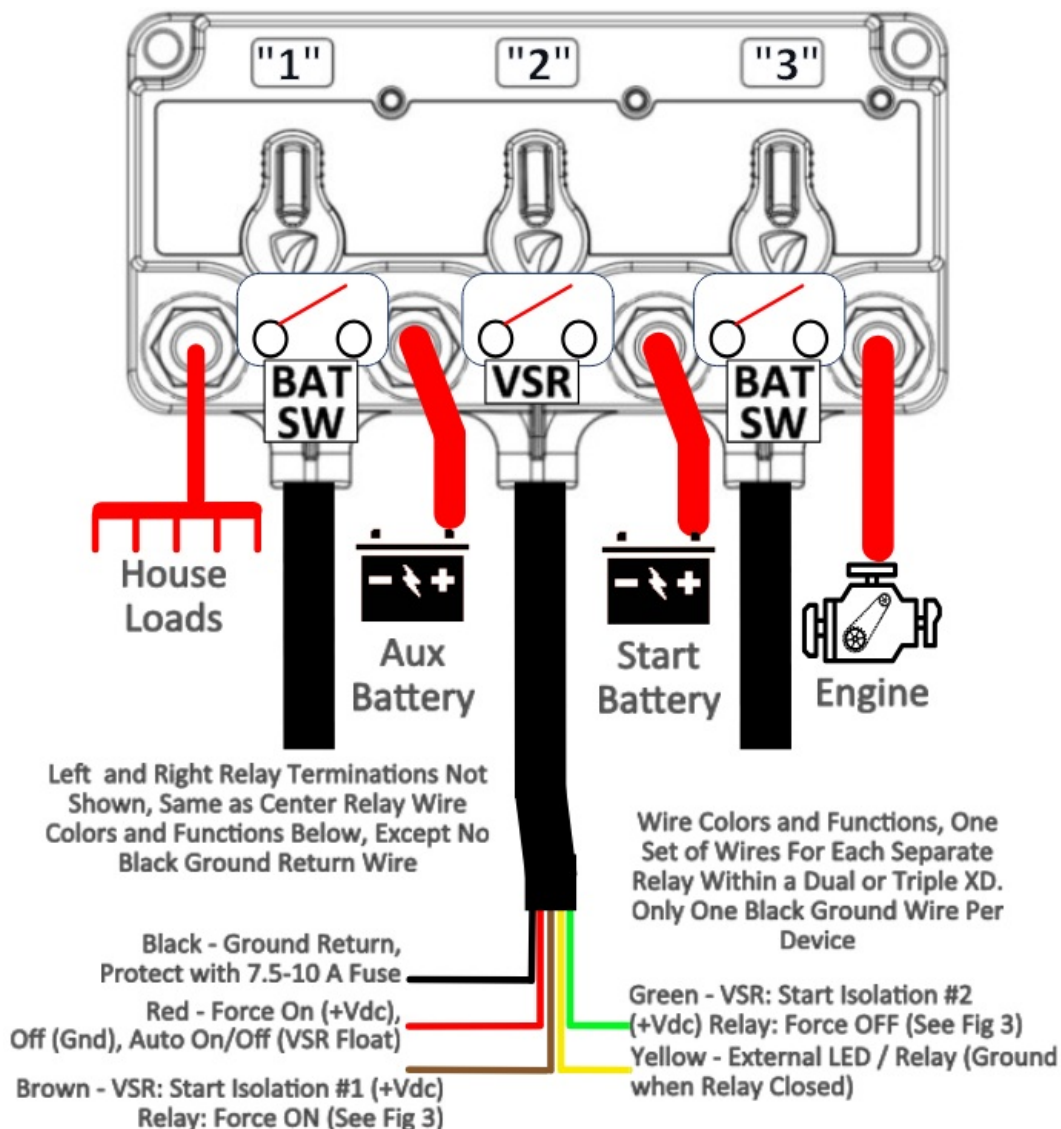


Fig 8 – Triple XD – 87 Series (Connection Diagram)



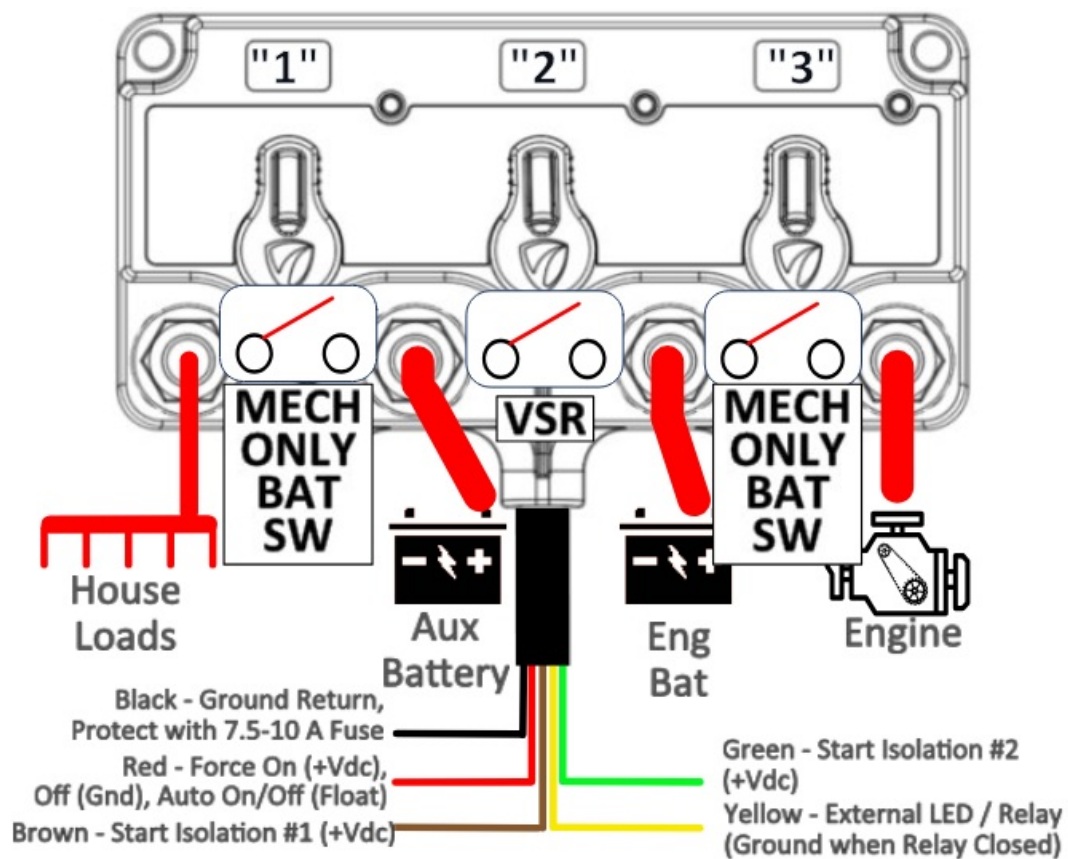
Triple XD Relay Part Numbers and Dip Switch Settings (Fig 7)

<u>Left Relay</u>		<u>Center Relay</u>		<u>Right Relay</u>		<i>Bulk PNs</i>
<i>Knob</i>	<i>Setting</i>	<i>Knob</i>	<i>Setting</i>	<i>Knob</i>	<i>Setting</i>	
Yes	VSR	Yes	VSR	Yes	VSR	8830-1333B
No	VSR	No	VSR	No	VSR	8830-1444B
Yes	Relay	Yes	VSR	Yes	Relay	8830-1535B
Yes	Relay	No	VSR	Yes	Relay	8830-1545B
Yes	Relay	Yes	Relay	Yes	Relay	8830-1555B
No	Relay	Yes	VSR	No	Relay	8830-1636B
No	Relay	No	VSR	No	Relay	8830-1646B
No	Relay	No	Relay	No	Relay	8830-1666B

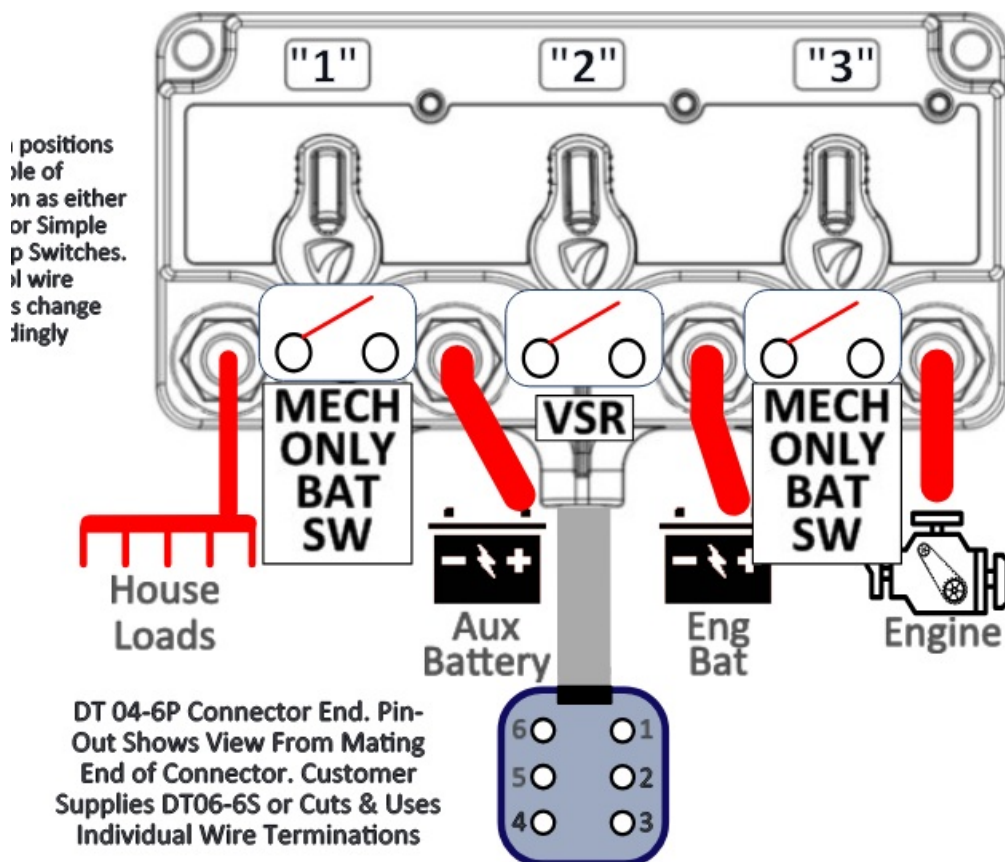
Triple XD Relay Part Numbers and Dip Switch Settings (Fig 8)

<u>Left Relay</u>		<u>Center Relay</u>		<u>Right Relay</u>		<i>Bulk PNs</i>
<i>Knob</i>	<i>Setting</i>	<i>Knob</i>	<i>Setting</i>	<i>Knob</i>	<i>Setting</i>	
Yes	VSR	Yes	VSR	Yes	VSR	8730-1333B
No	VSR	No	VSR	No	VSR	8730-1444B
Yes	Relay	Yes	VSR	Yes	Relay	8730-1535B
Yes	Relay	No	VSR	Yes	Relay	8730-1545B
Yes	Relay	Yes	Relay	Yes	Relay	8730-1555B
No	Relay	Yes	VSR	No	Relay	8730-1636B
No	Relay	No	VSR	No	Relay	8730-1646B
No	Relay	No	Relay	No	Relay	8730-1666B

Fig 9 – Triple XD – 87 Series (Mech Only Bat Sw)



ALL switch positions capable of configuration as either VSR/ACR or Simple Relay via Dip Switches. Control wire responses change accordingly



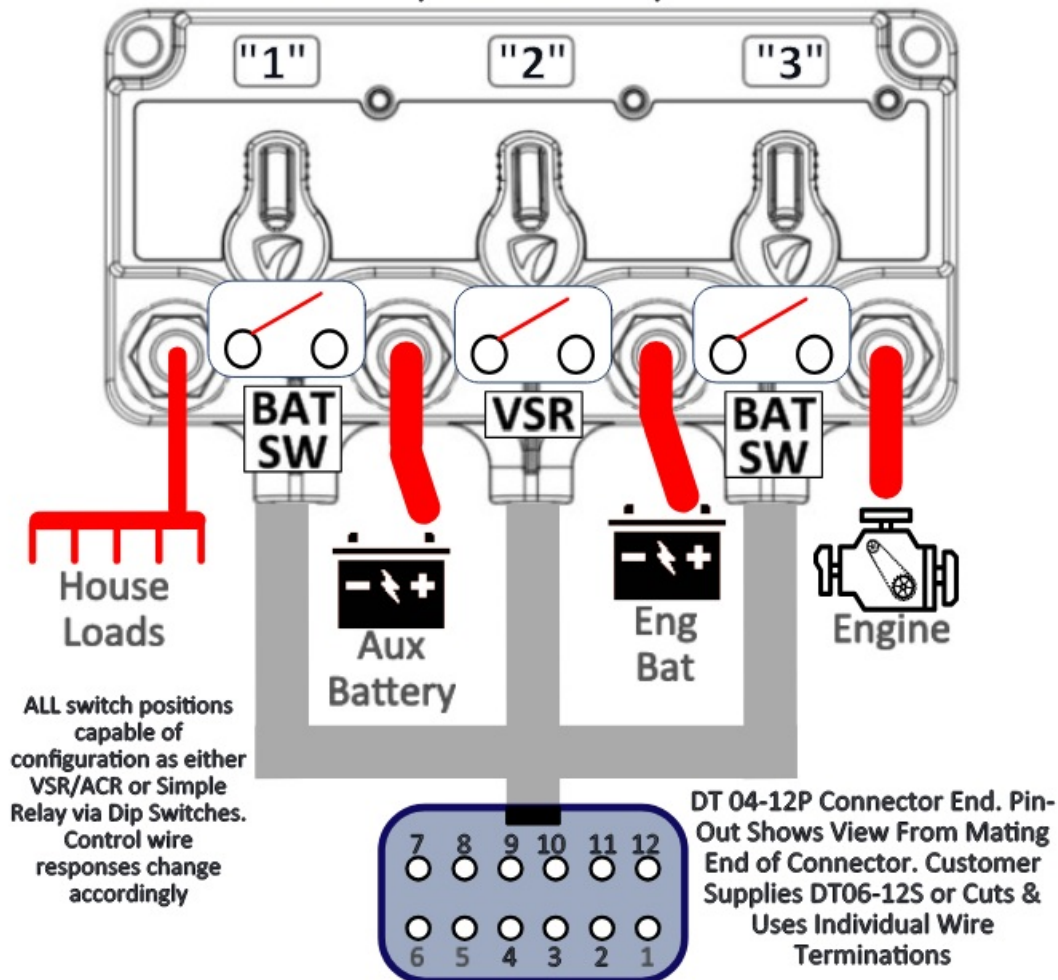
<i>6 Pin DT Connector Functions (Fig 10)</i>	<i>Pin #</i>	<i>Wire Color</i>
Ground (Required), Protect w/ 7.5 - 10.0 A Fuse	1	Black
Relay 2 Rem Ctrl Signal (Optional / Recommended)	2	Red
Relay 2 Start Isolation #1 / Relay Mode OFF (+Vdc)	3	Brown
Relay 2 Rem Indicator (Active Low), (Optional)	4	Yellow
Relay 2 Start Isolation #2 / Relay Mode ON (+Vdc)	5	Green

<i><u>Triple XD Relay Part Numbers and Dip Switch Settings (Fig 9 & 10)</u></i>						
<i><u>Left Relay</u></i>		<i><u>Center Relay</u></i>		<i><u>Right Relay</u></i>		<i>Bulk PNs</i>
<i>Knob</i>	<i>Setting</i>	<i>Knob</i>	<i>Setting</i>	<i>Knob</i>	<i>Setting</i>	
Yes	None (1)	Yes	VSR	Yes	None (1)	8730-1939B
Yes	None (1)	No	VSR	Yes	None (1)	8730-1949B
Yes	None (1)	Yes	VSR	Yes	None (1)	8830-1939B
Yes	None (1)	No	VSR	Yes	None (1)	8830-1949B

<i><u>Triple XD Relay Part Numbers and Dip Switch Settings (Fig 10)</u></i>						
<i><u>Left Relay</u></i>		<i><u>Center Relay</u></i>		<i><u>Right Relay</u></i>		<i>Bulk PNs</i>
<i>Knob</i>	<i>Setting</i>	<i>Knob</i>	<i>Setting</i>	<i>Knob</i>	<i>Setting</i>	
Yes	Relay	Yes	VSR	Yes	Relay	8830-2535B
Yes	Relay	No	VSR	Yes	Relay	8830-2545B
Yes	Relay	Yes	Relay	Yes	Relay	8830-2555B
No	Relay	Yes	VSR	No	Relay	8830-2636B
No	Relay	No	VSR	No	Relay	8830-2646B
No	Relay	No	Relay	No	Relay	8830-2666B

Fig 11 – Triple XD – 88 Series (Single DT Conn)

Ex: 8830-2535B, 8830-2545B, 8830-2636B

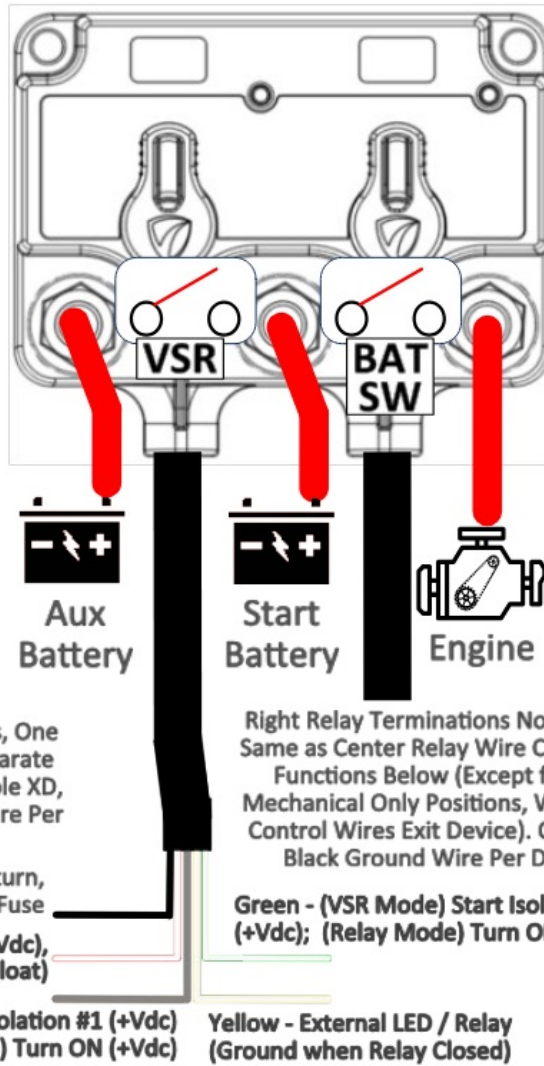


12 Pin Connector Functions (Fig 11)		Pin #	Wire Color
Ground (Required), Protect w/ 7.5 - 10.0 A Fuse		1	Black
Relay 1 Rem Ctrl Signal (Optional / Recommended)		2	Red
Relay 1 Rem Indicator (Active Low), (Optional)		3	Yellow
Relay 2 Rem Ctrl Signal (+Vdc/Float/Gnd)		4	Red
Relay 2 Rem Indicator (Optional / Recommended)		5	Yellow
Relay 2 Start Isolation #1 Input (Optional)		6	Brown
Relay 2 Start Isolation #2 Input (Optional)		7	Green
Relay 3 Rem Ctrl Signal (Optional / Recommended)		8	Red
Relay 3 Rem Indicator (Active Low), (Optional)		9	Yellow

Fig 12 – Dual XD – 87 Series (Flying Wires)

Example:
8720-1530B

ALL switch positions
capable of
configuration as either
VSR/ACR or Simple
Relay via Dip Switches.
Control wire
responses change
accordingly

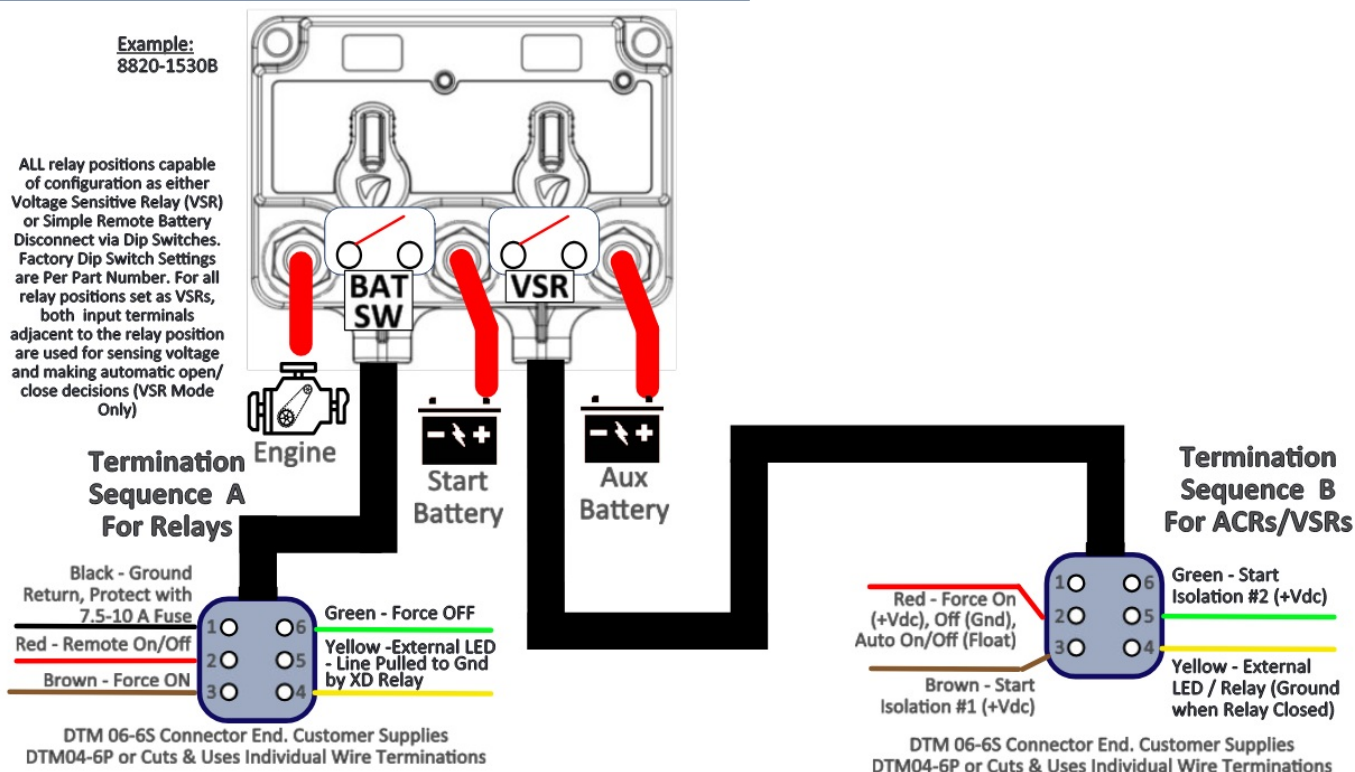


Dual XD Relay Part Numbers and Dip Switch Settings (Fig 12)

<u>Left Relay</u>		<u>Right Relay</u>		<u>Bulk PNs</u>
<u>Knob</u>	<u>Setting</u>	<u>Knob</u>	<u>Setting</u>	
Yes	VSR	Yes	VSR	8720-1330B
No	VSR	No	VSR	8720-1440B
Yes	VSR	No	Relay	8720-1350B
Yes	Relay	Yes	VSR	8720-1530B
No	VSR	Yes	Relay	8720-1450B
Yes	Relay	No	VSR	8720-1540B
Yes	Relay	Yes	Relay	8720-1550B
No	Relay	No	Relay	8720-1660B
Yes	VSR	Yes	Mech Only	8720-1390B
No	VSR	Yes	Mech Only	8720-1490B
Yes	Relay	Yes	Mech Only	8720-1590B

Mechanical Only (Mech Only) locations do not have an active remotely controllable relay or an automatic operation relay but instead offer only an "on-device" mechanical disconnect for that specific location

**Fig 13 - Dual XD - 88 Series (DTM Connectors)
(Matches Legacy Remote Relay Solutions)**



Dual XD Relay Part Numbers and Dip Switch Settings (Fig 13)						
<u>Left Relay</u>			<u>Right Relay</u>			Bulk PNs
<i>Knob</i>	<i>Setting</i>	<i>Term Seq</i>	<i>Knob</i>	<i>Setting</i>	<i>Term Seq</i>	
Yes	VSR	B	Yes	VSR	B	8820-1330B
No	VSR	B	No	VSR	B	8820-1440B
Yes	VSR	B	No	Relay	A	8820-1350B
Yes	Relay	A	Yes	VSR	B	8820-1530B
No	VSR	B	Yes	Relay	A	8820-1450B
Yes	Relay	A	No	VSR	B	8820-1540B
Yes	Relay	A	Yes	Relay	A	8820-1550B
No	Relay	A	No	Relay	A	8820-1660B
Yes	VSR	B	Yes	Mech Only	-	8820-1390B
No	VSR	B	No	Mech Only	-	8820-1490B
Yes	Relay	B	Yes	Mech Only	-	8820-1590B

Fig 14 – Dual XD – 88 Series (Mounts Left of Triple)

Fig 14 - Dual XD - 88 Series (Mounts Left of Triple)

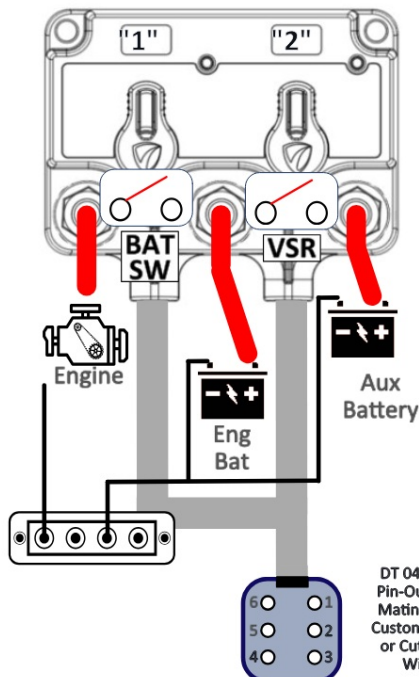
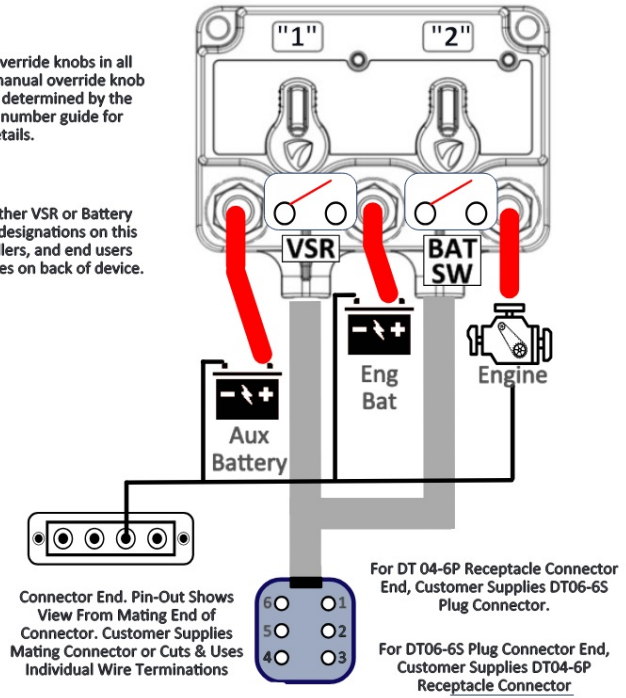


Fig 15 - Dual XD - 88 Series (Mounts Right of Triple)



6 Pin Connector Functions (Fig 14)

	Pin #	Wire Color
Ground (Required), Protect w/ 7.5 - 10.0 A Fuse	1	Black
Relay 1 Rem Ctrl Signal (Optional / Recommended)	2	Red
Relay 1 Rem Indicator (Active Low), (Optional)	3	Yellow
Relay 2 Rem Ctrl Signal (+Vdc/Float/Gnd)	4	Red
Relay 2 Rem Indicator (Optional / Recommended)	5	Yellow
Relay 2 Start Isolation #1 Input (Optional)	6	Brown

Dual XD Part Numbers Dip Switch Settings (Fig 14)

Left Relay		Right Relay		Bulk PNs
Knob	Setting	Knob	Setting	
Yes	Relay	Yes	VSR	8820-6530B
Yes	Relay	No	VSR	8820-6540B
No	Relay	Yes	VSR	8820-6630B
No	Relay	No	VSR	8820-6640B
Yes	Relay	Yes	Relay	8820-6550B

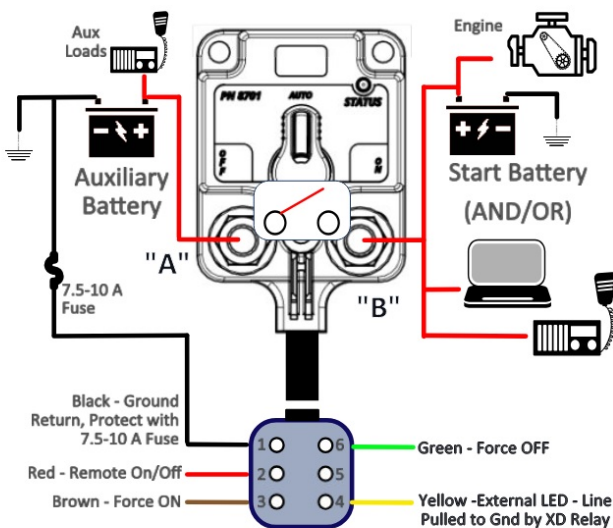
6 Pin Connector Functions (Fig 15)

	Pin #	Wire Color
Ground (Required), Protect w/ 7.5 - 10.0 A Fuse	1	Black
Relay 1 Rem Ctrl Signal (Optional / Recommended)	2	Red
Relay 1 Rem Indicator (Active Low), (Optional)	3	Yellow
Relay 2 Rem Ctrl Signal (+Vdc/Float/Gnd)	4	Red
Relay 2 Rem Indicator (Optional / Recommended)	5	Yellow
Relay 1 Start Isolation #1 Input (Optional)	6	Brown

Dual XD Part Numbers Dip Switch Settings (Fig 15)

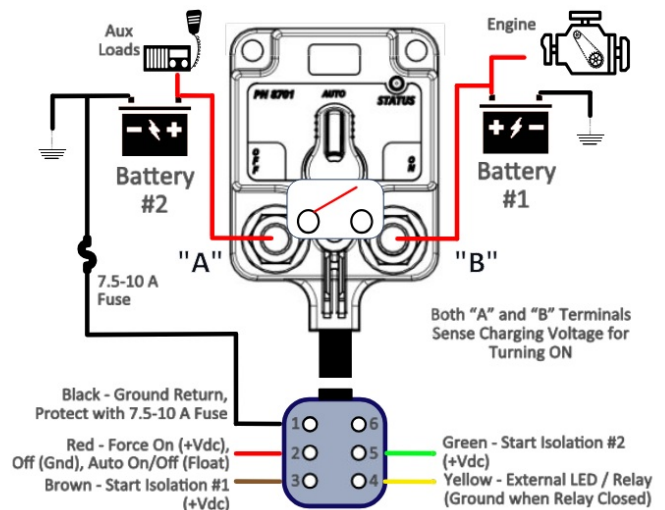
Left Relay		Right Relay		Housing Connector	
Knob	Setting	Knob	Setting	Bulk PNs	Color Gender
Yes	VSR	Yes	Relay	8820-6350B	Gray Receptacle
No	VSR	Yes	Relay	8820-6450B	Gray Receptacle
Yes	VSR	No	Relay	8820-6360B	Gray Receptacle
No	VSR	No	Relay	8820-6460B	Gray Receptacle
Yes	VSR	Yes	Relay	8825-6350B	Black Plug

Fig 16 - Single XD - 87/88 Remote Relay/Battery Switch (Connector Matches Legacy Blue Sea Systems Relays)



- A) 88xx-xxxx Part Numbers Use a DTM 06-6S Connector End. Customer Supplies DTM04-6P or Cuts & Uses Individual Wire Terminations.
- B) 87xx-xxxx Part Numbers Provide Flying Wires With Colors Matching the Same Functions Outlined on the Connector End Diagram, But Without the Connector.

Fig 17 - Single XD - 87/88 Voltage Sensitive Relay (VSR/ACR) (Connector Matches Legacy Blue Sea System ACRs)



- A) 88xx-xxxx Part Numbers Use a DTM 06-6S Connector End. Customer Supplies DTM04-6P or Cuts & Uses Individual Wire Terminations.
- B) 87xx-xxxx Part Numbers Provide Flying Wires With Colors Matching the Same Functions Outlined on the Connector End Diagram, But Without the Connector.

6 Pin DTM Connector Functions	Pin #	Wire Color
Ground Reference (Required)	1	Black
Single Wire Close/Open (See Pg 3, Relay Mode)	2	Red
Relay Close (See Pg 3 it Relay Mode, If Changed to VSR then Start Isolation #1 Function)	3	Brown
Remote Indicator	4	Yellow
Relay Open (See Pg 3 it Relay Mode, If Changed to VSR then Start Isolation #2 Function)	6	Green

Single XD Part Numbers Dip Switch Settings For Above			
Knob	Default Setting	Termination	Bulk PNs
Yes	Relay	Flying Wires	8710-1500B
Yes	Relay	DTM Connector	8810-1500B
No	Relay	Flying Wires	8710-1600B
No	Relay	DTM Connector	8810-1600B
Yes	Mechanical Only	None	8710-1900B

6 Pin DTM Connector Functions	Pin #	Wire Color
Ground Reference (Required)	1	Black
VSR ON/Auto/Off (If Changed to Relay Mode then Single Wire Close/Open (See Pg 3)	2	Red
Start Isolation #1 Function (If Changed to Relay then Relay Close (See Pg 3)	3	Brown
Remote Indicator	4	Yellow
Start Isolation #2 Function (If Changed to Relay then Relay Open (See Pg 3)	5	Green

Single XD Part Numbers Dip Switch Settings For Above			
Knob	Default Setting	Termination	Bulk PNs
Yes	VSR	Flying Wires	8710-1300B
Yes	VSR	DTM Connector	8810-1300B
No	VSR	Flying Wires	8710-1400B
No	VSR	DTM Connector	8810-1400B

Mechanical Only (Mech Only) locations do not have an active remotely controllable relay or an automatic operation relay but instead offer only an “on-device”mechanical disconnect for that specific location. No control wire terminations are present

XD Battery Disconnet – Competitor Compariosn / Cross Reference



<i>Product Comparison Summary</i>		
Feature/Specification	XD Series ACR	ML-ACR
Universal 12/24 Control Voltage	Yes	No, 12 or 24 Vdc
Cover for Power Terminals	Included	No
Function & Cable Label Sheet	Included	Not Included
Local Status Led Indicator	Yes	No
Ability to Manually Lock On	Yes	No
Intuitive Manual Override	Yes	No
Terminal Stud Material	Stainless	Copper ⁽²⁾
Simple Bottom Cable Entry	Yes	No ⁽³⁾
Product Assemblies for 2-7 Relays	Yes ⁽⁵⁾	No
Dust & Water IP Rating	IP67 / IP6K9K	IP66 ⁽⁴⁾
Pressure Regulated Enclosure	Yes	No
Marine Grade Control Wiring	Yes	No
Mounting Footprint Width	66 ⁽⁶⁾	95
Mounting Footprint Length	80 ⁽⁶⁾	140
Mounting Depth	50	51.5
Standby Current Draw	1.2 mA	0 - 8 mA ⁽¹⁾
Max Continuous Current	500 A	500 A
Power Input Stud Size	M10 (3/8")	3/8" (M10)

1. Excessive standby current drains batteries as no charge source is present potentially permanently damaging batteries and voiding battery warranties. The XD Series Standby current is 70% lower than the competitor's auto-release version, and so low (1.2 mA) that on its own would take 9 years to drain a Group 31 battery.
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. Customers are encouraged to independently evaluate legacy product to water entry susceptibility.
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.

High Ampere Remote Battery Switches

Blue Sea Sys P/N	Vdc		Egis Mobile Electric P/N	Vdc	Manual Control	Control Leads	Control Method ⁽¹⁾
7700	12		8710-1500B	12/24	Yes	Wires	Bi-Stable
7700100	12		8810-1500B	12/24	Yes	DTM	Bi-Stable
7702	24		8710-1500B	12/24	Yes	Wires	Bi-Stable
7702100	24		8810-1500B	12/24	Yes	DTM	Bi-Stable
7713	12		8710-1500B	12/24	Yes	Wires	Auto-Release
7713100	12		8810-1500B	12/24	Yes	DTM	Auto-Release
7717	24		8710-1500B	12/24	Yes	Wires	Auto-Release
7717100	24		8810-1500B	12/24	Yes	DTM	Auto-Release

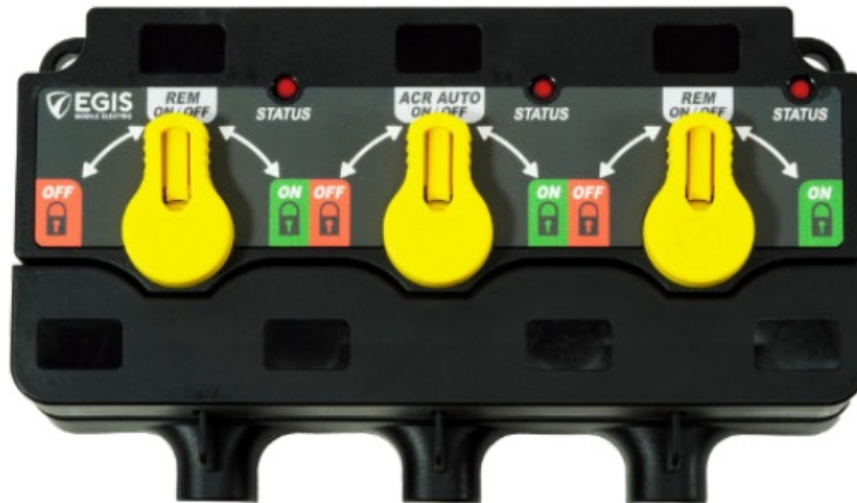
(1) Control Method Determined by Dip Switch Selection on Device

High Ampere Solenoids

Blue Sea Sys P/N	Vdc		Egis Mobile Electric P/N	Vdc	Manual Control	Control Leads	Control Method ⁽²⁾
7701	12		8710-1600B	12/24	No	Wires	Bi-Stable
7701100	12		8810-1600B	12/24	No	DTM	Bi-Stable
7703	24		8710-1600B	12/24	No	Wires	Bi-Stable
7703100	24		8810-1600B	12/24	No	DTM	Bi-Stable
7718	12		8710-1600B	12/24	No	Wires	Auto-Release
7718100	12		8810-1600B	12/24	No	DTM	Auto-Release
7719	24		8710-1600B	12/24	No	Wires	Auto-Release
7719100	24		8810-1600B	12/24	No	DTM	Auto-Release

(2) Control Method Determined by Dip Switch Selection on Device

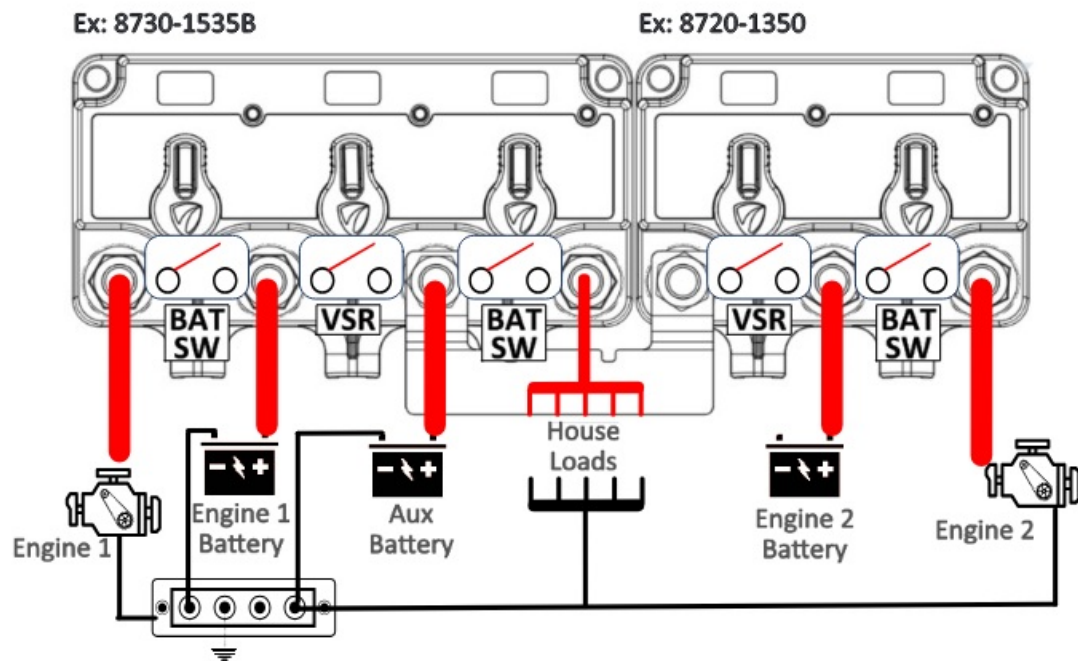
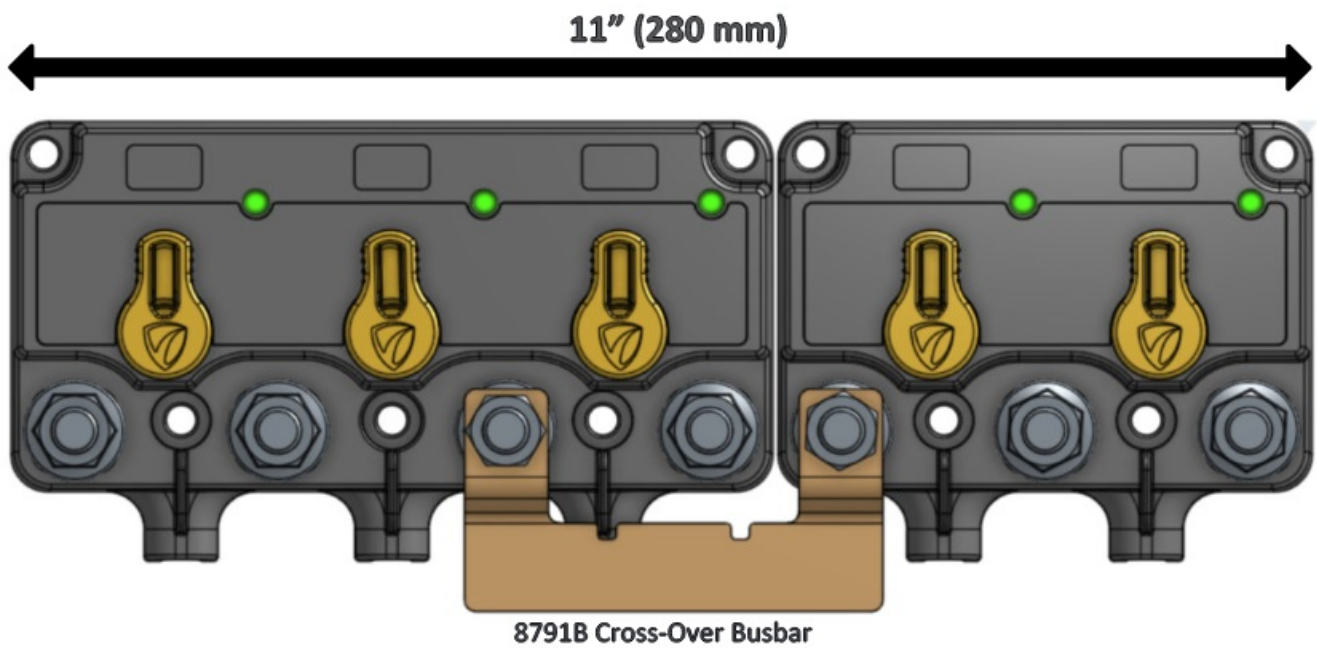
High Amp Automatic Charging Relays (ACRs)						
Blue Sea Sys P/N	Vdc		Egis Mobile Electric P/N	Vdc		Manual Control Control Leads
7620	12		8710-1400B	12/24		No Wires
7620100	12		8810-1400B	12/24		No DTM
7621	24		8710-1400B	12/24		No Wires
7621100	24		8810-1400B	12/24		No DTM
7622	12		8710-1300B	12/24		Yes Wires
7622100	12		8810-1300B	12/24		Yes DTM
7623	24		8710-1300B	12/24		Yes Wires
7623100	24		8810-1300B	12/24		Yes DTM



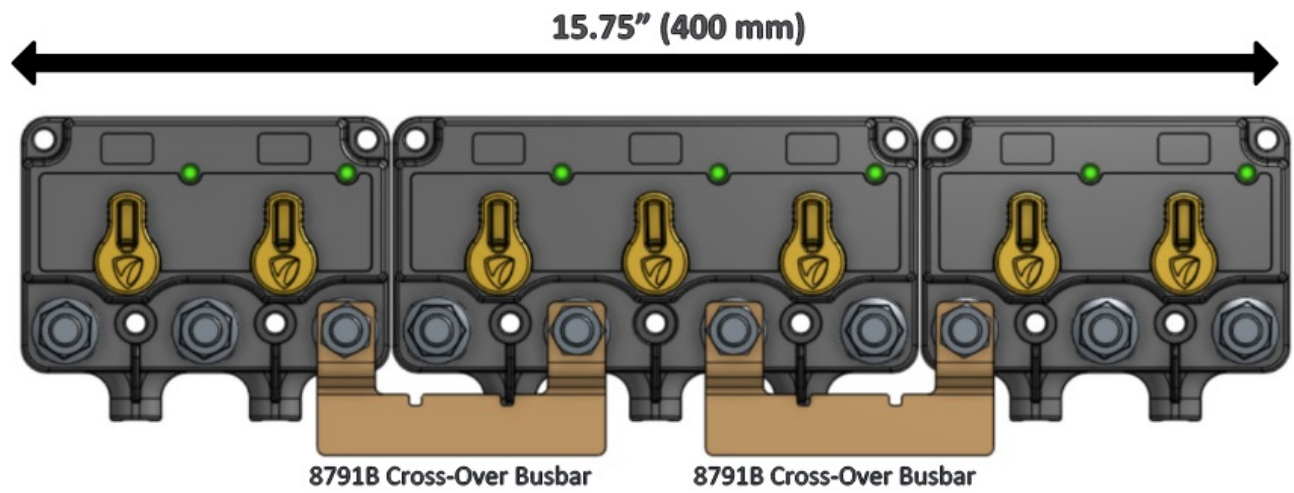
XD Series Dual and Triple Relays can be configured to have each individual internal relay replicate legacy competitor product functionality and connect with external controls with the same DTM connector and pin-out locations, simplifying product transition.

XD Relay Family Cluster Examples

Triple Battery Relay / VSR Cluster



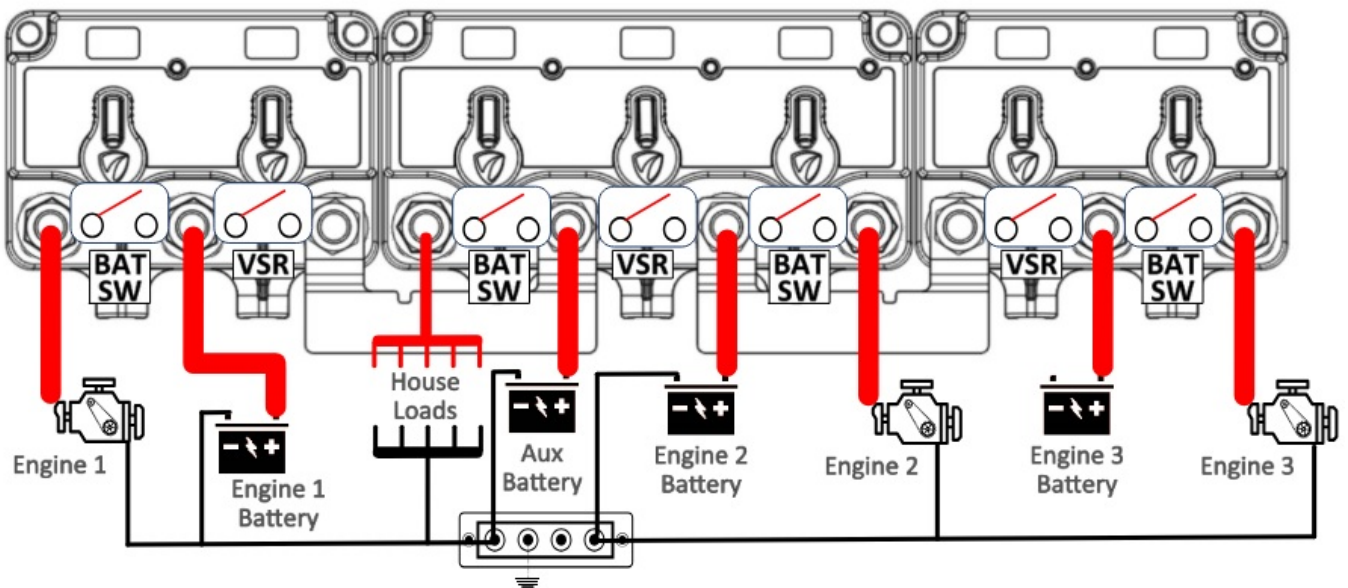
Quad Battery Bank Relay / VSR Cluster



Ex: 8720-1530

Ex: 8730-1535

Ex: 8720-1350



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Documents / Resources



[EGIS MOBILE ELECTRIC XD Series Single Flex 2 Relay-ACR Bi-Stable Relays](#) [pdf] Instruction Manual

XD Series, XD Series Single Flex 2 Relay-ACR Bi-Stable Relays, Single Flex 2 Relay-ACR Bi-Stable Relays, 2 Relay-ACR Bi-Stable Relays, Bi-Stable Relays, Relays

References

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- [User Manual](#)

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