SD BI-STABLE RELAY WITH AUXILIARY CONTACTS

Littelfuse

NEW
IP69K
IP66

The SD series relay provides remote power switching for applications that require high continuous current passage, large engine starting needs and high ambient temperatures. Relay switching is controlled via a plug-in connector (with small cables) to switch 1 or 2 high amp circuits. The 2 pole version suits dual battery configurations. The SD series relay helps reduce your costs and saves weight by positioning the relay close to the battery and high current loads to reduce heavy copper cable routing. Applications include; Heavy Duty Trucks and Lifting Equipment, Construction & Agricultural Equipment.



Features:

- Compact footprint saves space in your installation.
- Supports US DOT 11579 and EU ADR requirements for hazmat vehicle compliance.
- Plug-in connector controls relay switching and provides additional circuits and features.
- Dedicated 24-hour output to power your tachograph or other keep-alive functions.
- Local and remote indication of the state of the relay.
- Bi-stable internal mechanism draw no current in the on or off state saving your batteries voltage supply.

Part Number	Switch Circuit	No. Poles	Control Voltage	Contact Voltage	Continuous Rating	Inrush Current (4/0 cables)
880103	SPST	Single	9V - 16V	9V - 32V	600A	2000A x 30sec., 3000A x 1sec.
880107	DPST	Double	12V - 24V	9V - 32V	600A (2 x 300A)	1000A x 30sec., 2000A x 1sec.

Control Current: 3A
Current Rating Inrush: 125A @ 12VDC, 30 sec ON, 5 min OFF,
150A @ 12VDC, 5 sec ON, 5 min OFF
Contact Material: Silver Plated Copper
Enclosure: Engineering thermoplastic.
Input/Output Studs: 4 x M10-1.4 (nuts included)
Mounting Holes: 4 x M6 or 1/4"
Temperature: -40 to +85°C
IP Rating: IP66 / IP69K
Ignition Protection: UL94-V0
Salt Spray: 1000 hours
Vibration: 8G
Auxiliary Contacts Rating: 1A

Control Connector:
Molex MX150
Female Sealed Connector
P/N:33472-1206



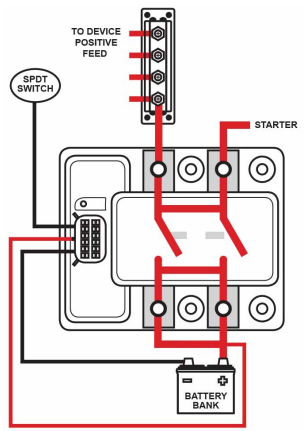
Control Connector Terminals:
Aptiv Apex 150
Female Terminals:
P/N: 54001627 (16-18AWG)
P/N: 54002002 (20-22 AWG)



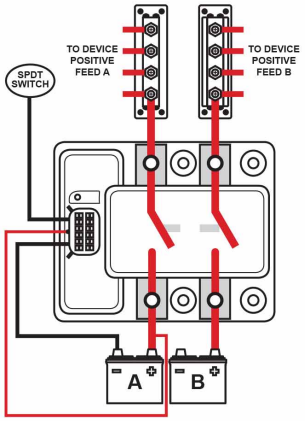
Note: Auxiliary connector and terminals not included.

Wiring Configurations

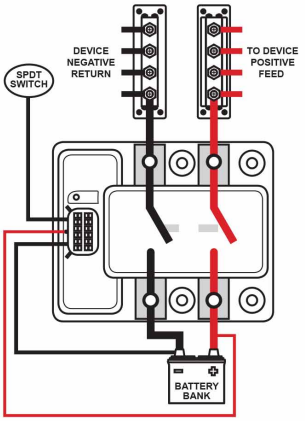
880103 (Single Pole)



880107 (Double Pole)
Positive / Positive



880107 (Double Pole)
Positive / Negative



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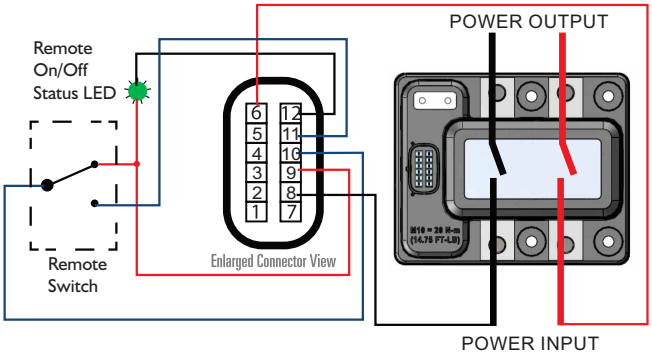
Connector Wiring Information

Connector Pin #	Reference	Description	880103	880107
1	AUX_COM	Auxiliary Relay Common Pin	O	O
2	AUX_NC	Auxiliary Relay Normally Closed Pin	O	O
3	PNB_LED	Logic input line, pulled to ground to activate	X	X
4	VSENSE3	Voltage sense #3 for battery combiner functionality	X	X
5	VDC_AUX_OUT	+Vdc fuse protected output	O	O
6	VDC_INPUT	+Vdc for device power	R	R
7	AUX_NO	Auxiliary Relay Normally Open Pin	O	O
8	GND	Ground for device power	R	R
9	SW_POWER	Power output to control switch and LED indicator	O	O
10	CNTRL_IN	Remote control input	R	R
11	SW_LO	Off Reference signal for control switch	R	R
12	LED1	External LED pull-down line (active low)	O	O

R = Required Connection
O = Optional Connection
X = No Connection

Dimensions:
140mm (L)
112mm (W)
63mm (H).







Wiring Information Notes:

- Pins 1, 2, 7 are wired to a SPDT auxiliary relay inside the unit, which can be used to power optional external circuits. This internal relay matches the on/off setting of the SD relay. Pin 1 is switched to Pin 2 when the SD relay is off, but switches to pin 7 when SD relay is on.
- Pins 3, 4 are not connected, so you do not need to connect wires.
- Pin 5 is ALWAYS ON power out to supply external circuits like clocks, alarms etc. a fuse should be fitted to this output.
- Pin 6, 8 required to power internal SD relay electronics.
- Pin 10 required to signal SD relay on/off operation from remote switch.
- Pin 11 is connected to GND (internally via pin 8).
- Pins 9, 12 allow connection of a remote LED to indicate On/Off status of SD relay, however, if they are not used, the remote switch must instead be connected to battery +ve for remote switch to work.

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