

Diode Board

Technical Information

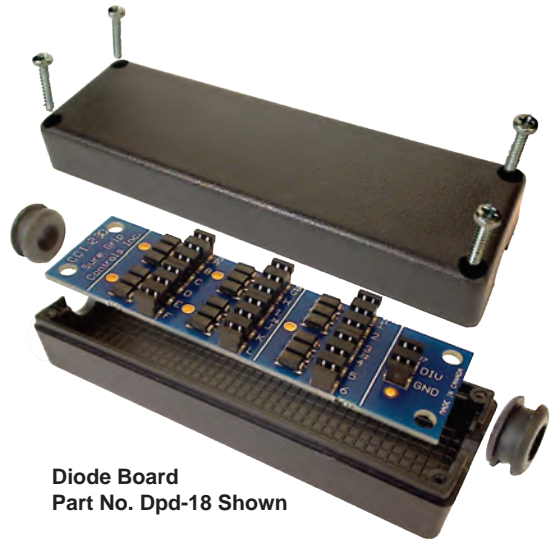
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SURE GRIP
 CONTROLS INC.

Features:

- Reliable connectors designed to withstand automotive shock/vibration levels and temperature variations.
- Can provide diode protection for up to 12 switches and diverter functionality for up to 6 outputs.
- Easy to install inline on a wiring harness using the IDC (insulation displacement) connectors.



Diode Board
 Part No. Dpd-18 Shown

Description:

The Sure Grip In-line Diode pack fits all handles or wiring harnesses to protect switches against destructive voltage surges. The In-line diode pack provides efficient surge suppression protection for your control handle to ensure maximum switch life. Simple insulation displacement wire-to-board connectors ensure reliability and allow for the diode pack to be installed anywhere on the wiring harness. A rugged two piece molded case protects the board and makes installation quick and easy. Diode packs can be configured to have up to 18 diodes total, 12 for use as switch protection and 6 for use as a diverter function. Special diode packs can be supplied that will operate a diverter valve or replace other relay logic. Consult factory for details.

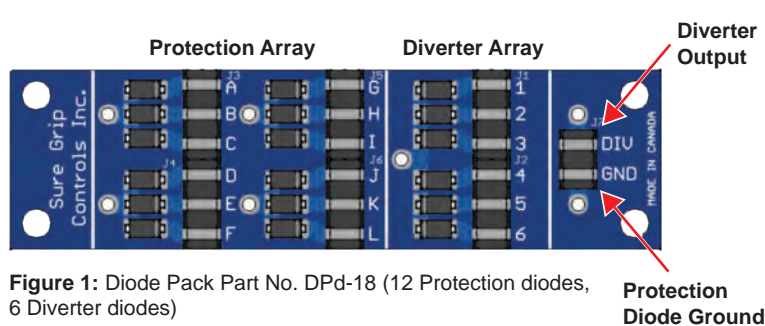


Figure 1: Diode Pack Part No. DPd-18 (12 Protection diodes, 6 Diverter diodes)

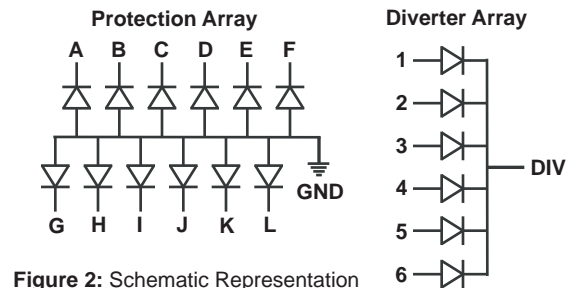


Figure 2: Schematic Representation

General Specifications

Parameter	Min	Typ	Max	Units
Diode Diverter Function				
Diode Continuous Forward Current	-	-	2.0	A
Diode Protection Function				
Reverse DC Blocking Voltage	-	-	400	V
Stranded Wire Size		20 – 22 *		AWG
Connector Current Rating		10		A
Operating Temperature Range		-40 to +70		°C

(*) Wire gauge determined by part number.

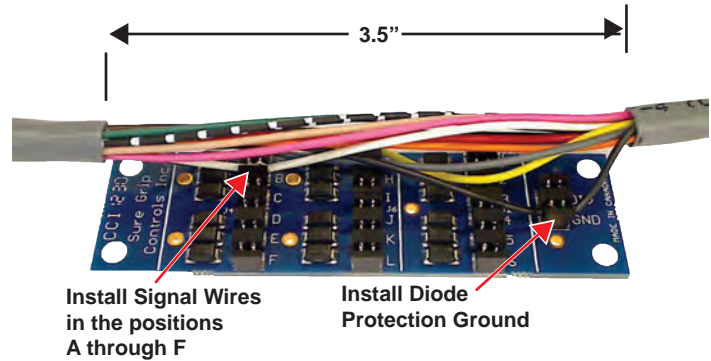
Installation Notes:

Diodes should be installed to protect switches from damaging inductive kickback that is generated by solenoid or relay coils when the switch is released (turned off).

The diode pack would typically be installed in a convenient location on the wiring harness leading from the control handle. To prepare the wiring harness, remove approximately 3 1/2" of the outer jacket from the cable with care to avoid cutting into the wires inside. Mark the wires where they will be attached to the connectors on the diode pack. Align the wires into the slots on the connectors and use the connector caps to fully install the wires into the connector.

Diode Protection Wiring:

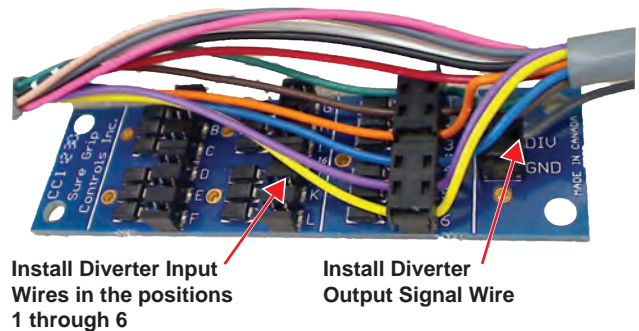
Identify all the wires that belong to the switches and use the connector caps to install the wires into the connector. Connector labels **A** through **F** are configured for diode protection. Ensure that the caps snap securely in place. Once all the switch outputs are connected, locate a ground wire in the harness if applicable or attach a separate ground wire to the 'GND' connector on the diode board. Complete the installation by installing the board in the case assembly, ensuring that no wires are pinched between the two case halves.



2 and 3 position connector caps

Diverter Valve Wiring:

Diverter inputs are wired to the connectors labeled **1** through **6** on the diode board. The diverter output connector is labeled 'DIV' and is located next to the GND connector. Install the wires from the harness using the same procedure as described above for diode protection wiring.



Ordering Information

Part Number	Wire Size	Description
DPd-18	22 AWG	Protection for up to 12 Switches. Diverter functionality for up to 6 Inputs.
DP-12	20AWG	Protection for up to 12 Switches.
DP-03	20 AWG	Protection for up to 3 Switches.