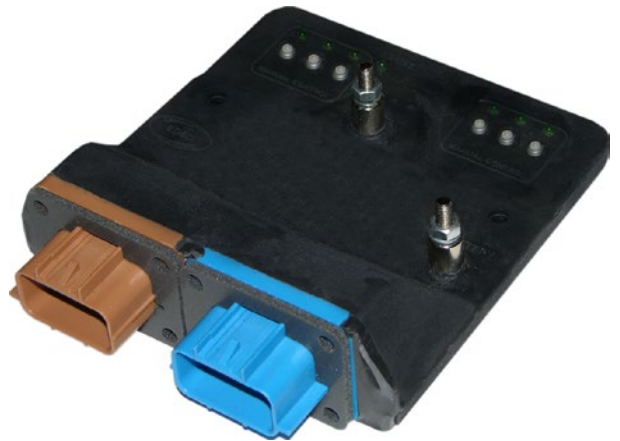


Hexa-Sinking Switch Module



Introduction

The E-Plex 426HSS series has been designed to simplify wiring in electronic systems by interfacing to devices that require a pull to ground signal. This multi-module is ideally suited to drive solenoid, motor, and lighting applications. It is intended to withstand harsh environments and utilizes sealed Delphi connectors for an IP66 rating. The module is designed to meet UL1500 standards for ignition proofing. Local electronic override capabilities allow independent operation of the device loads.

Key Features

- 30 amps total power capability.
- 6 solid-state low side outputs capable to 5 amps each.
- High side output withstands up to 20A inrush current.
- Local electronic override capabilities.
- Status LED's for each channel.
- Reverse Battery Protected.
- Short circuit detection.
- LEN value 2.

Design Specifications

- Shock: Mil Std 202 Method 213 test condition 1.
- Vibration: Tested to Lloyds Register Approval Vibration Test 2.
- Transient voltage suppression: EN6100-6-1.
- Moisture resistance: IP66.
- PCB characteristics: UL94V-0.
- Power distribution: UL 1077 compliant (except high-voltage dielectric test).
- Ignition protection: UL 1500 compliant.
- Salt spray: Tested to Lloyds Register Approval Salt Spray Test.
- Operating Temperature: -40°C to 60°C.
- Storage Temperature: -40°C to 85°C.
- Operating Humidity: 0% to 100% (condensing).
- Weight: 1.34 lb (610 grams).

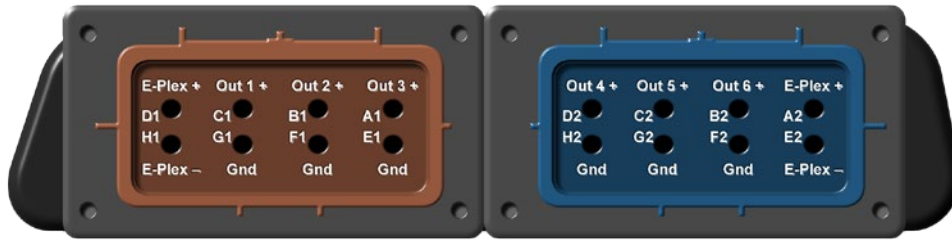
Electrical Specifications

Description	Min	Nominal	Max	Absolute Max (Surge)
Voltage	7 VDC	12 / 24 VDC	32 VDC	45 VDC ²
Current, Total	0.025 A	30 A	60 A ¹	160 A ²
Current, per channel continuous	0	5	–	30 A ⁵
Inrush capable per channel	–	–	20 A	30 A ⁵
Lead inductance	0	–	2 mH ⁶	–
Load Inductance	0	–	20 mH	–
Output Impedance ⁴	8 mΩ	10 mΩ	12 mΩ	–

NOTES:

1. De-rate max current by 0.2A per °C above ambient, 25 °C.
2. Measured at 8.3ms single half sine wave. (JEDEC Method), 10,000 pulses.
3. Duty cycle at 1 minute on time, 5 minutes off. Trip delay must be set to maximum rating.
4. Voltage method at 10A load.
5. Single pulse only.
6. Specified as 50 feet of 2 AWG (43mm²) wires with a 6" diameter spool for both power and ground.

Wiring Specifications



Pin #	Pin Description
A1	Solid State Output 3
E1	Output 3 Return
B1	Solid State Output 1
F1	Output 2 Return
C1	Solid State Output 1
G1	Output 1 Return
D1	E-Plex Data Bus +
H1	E-Plex Data Bus -
M5-T1	Battery Power

Pin #	Pin Description
A2	E-Plex Data Bus +
E2	E-Plex Data Bus -
B2	Solid State Output 6
F2	Output 6 Return
C2	Solid State Output 5
G2	Output 5 Return
D2	Solid State Output 4
H2	Output 4 Return
M5-T2	Battery Return

Outputs and Returns: Analog = 0 to 15A for 7 to 32VDC | Battery Power (+): 0.025A to 30A, 7-32VDC.

Status LEDs:

ON - Channels 1-6 indicates Load ON, E-Plex channel indicates module responding.

OFF - Channels 1-6 indicates Load OFF, E-Plex channel indicates module not responding⁹.

BLINKING - Channels 1-6 indicates Load FAULT, E-Plex channel indicates module responding.

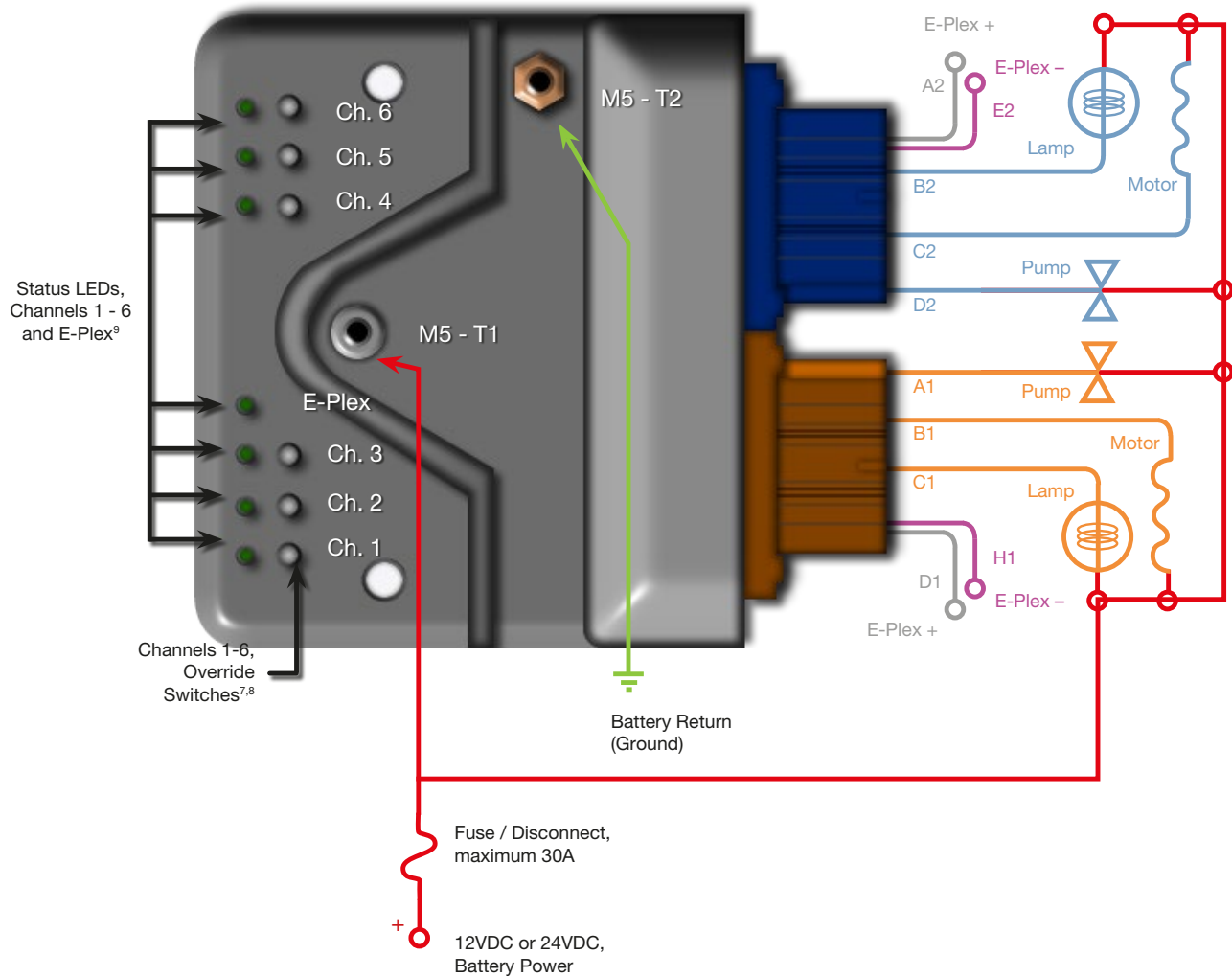
Power / Battery Connections: Must be fused to a maximum of 30A. Maximum wire size should be sized based on upstream fuse. When connecting the power source to the power studs on the module, torque the hex nuts to 18~20 in-lb (200~225 N-cm). Failure to properly torque hex nuts may result in intermittent operation due to terminals loosening over time.

Reversed Battery Conditions: The loads will turn on, but no damage will occur to the module if disconnected within 1 minute (Under nominal operating load conditions).

Pin Specifications

Cable Range AWG (mm ²)		Female Terminal	Terminal Insulation Range	Seal Insulation Range	Seal P/N
18-16	(1.0-0.75 mm ²)	15304716	1.70-2.25 mm	1.20-1.85 mm	15366063
				1.85-2.25 mm	15356064
16-12	(2.50-1.50 mm ²)	15304717	2.20-3.00 mm	2.09-2.66 mm	15366061
				2.70-3.2 mm	15336674

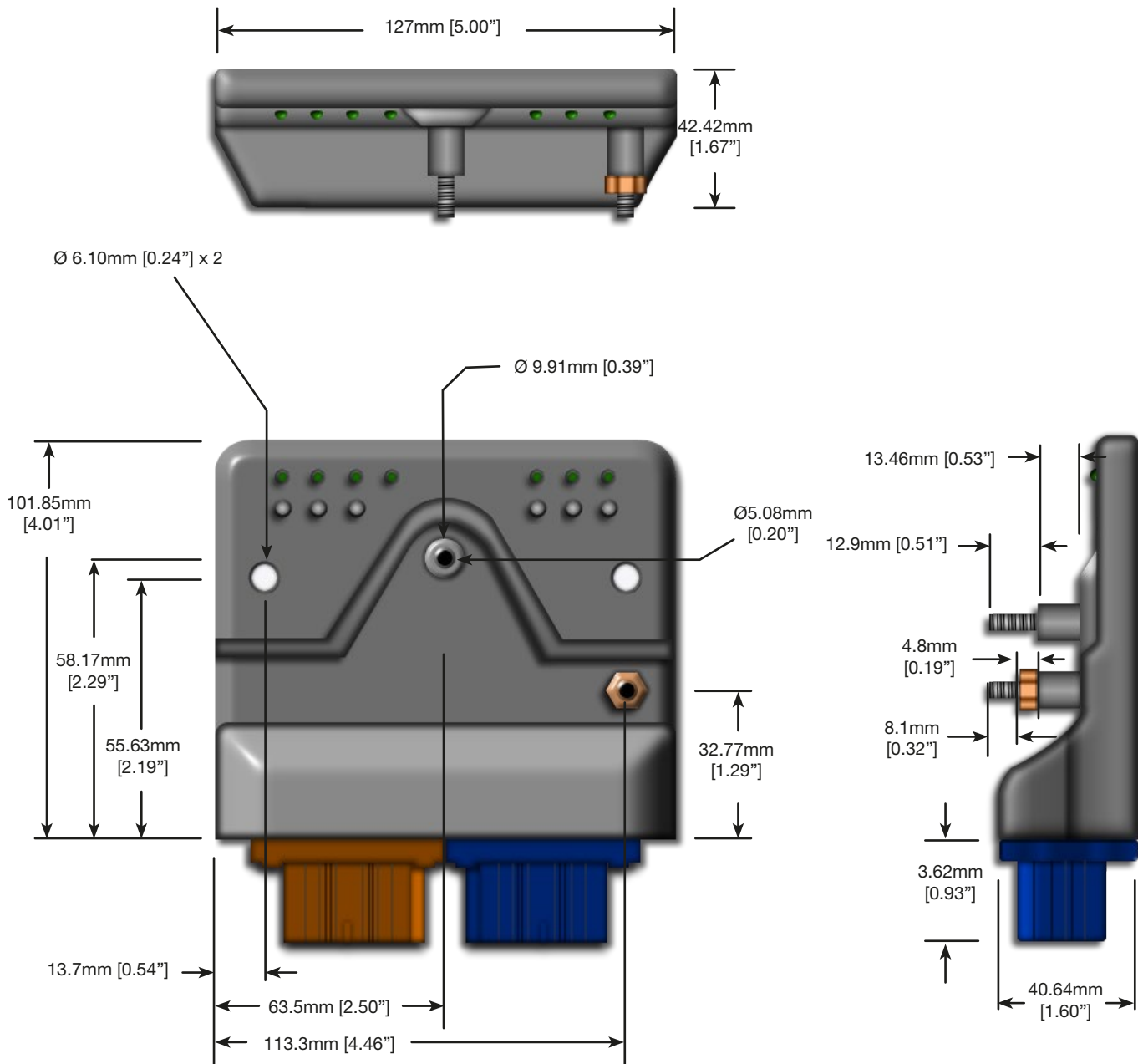
Typical Wiring Diagram



NOTES:

- Manual override switches are meant to be used as a local electronic manual override for emergency situations only.
- Load activation function for switches 1 through 6 are defined in E-Logic as either toggle or momentary operation.
- LED will be off if system is not functioning or present, however, modules in the system may still be responding.
- Inputs are active low. Pulling the input to return or battery ground will activate the LED.

Dimensional Diagram



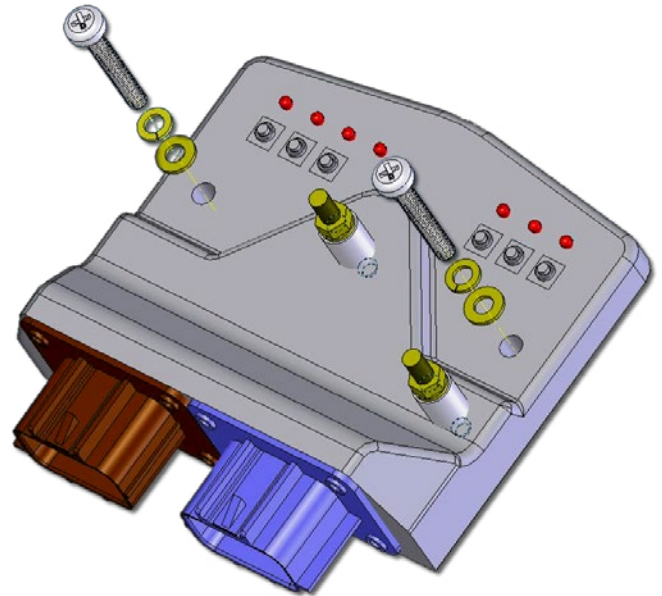
Mounting Specifications

Screw assembly to a flat mounting surface in two places, as shown in the illustration.

Mounting Instructions

Metric fasteners: Use M5 size screw, M5 split lock washer and M5 washer. Torque to 250~280 N-cm. Do not exceed this torque as it could cause damage to the electronics.

Imperial (English) fasteners: Use #10 size screw, #10 split lock washer, #10 washer. Torque to 20~22 in-lb. Do not exceed this torque as it could cause damage to the electronics.



Mechanical Specifications

Connectors:

J1 - Brown: Mates to Delphi P/N 15317308

J2 - Blue: Mates to Delphi P/N 15317304

Cavity Plug:

Delphi P/N 12059168

Power Stud Connections:

M5 nickel plated brass

Ordering Information

Description	E-Plex Part Number
426HSS Series - Hexa Sinking Switch Module	EP-SW-IO-6CH-426HSS



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