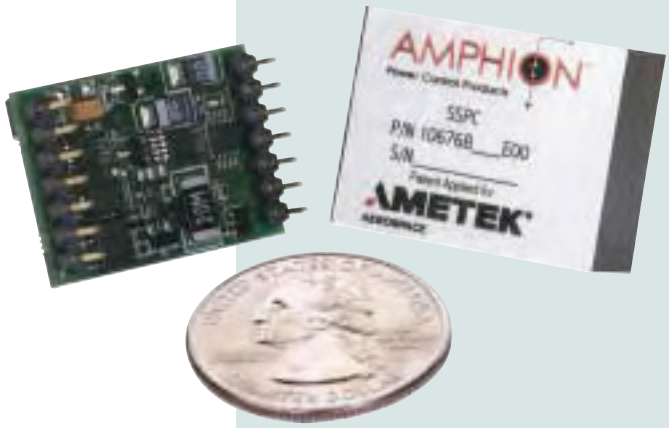
AMPHION™ Solid State Power Controllers



DESCRIPTION

AMETEK's AMPHION Solid State Power Controller (SSPC) combines circuit breaker, load monitoring and relay functions in a small, cost-effective, plug-in package. The SSPC can be used directly in an application circuit or combined with other AMPHION SSPC components into a power distribution system.

PROGRAMMABLE OVER-CURRENT TRIP CAPABILITY

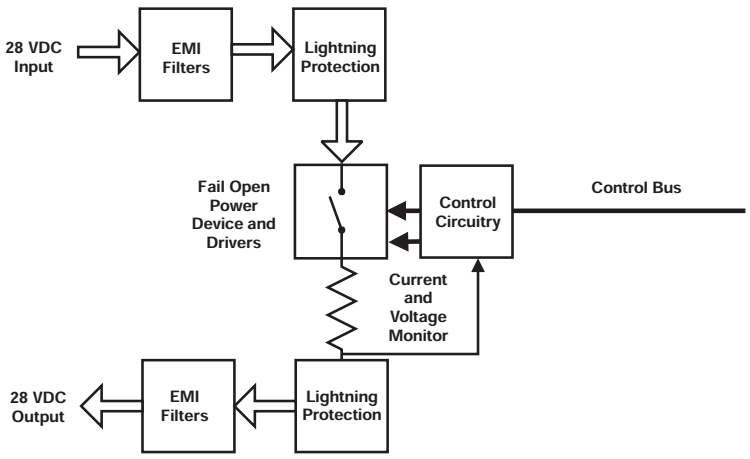
The SSPC features an adjustable time versus current trip characteristic and has the ability to detect and trip on intermittent arc faults produced by wire insulation failure.

UNIQUE FAILSAFE DESIGN

Unlike other solid-state products, the SSPC contains patented circuitry that prevents a failure in a short-circuited condition. This means that a SSPC failure will not cause a critical load to remain powered in an unprotected and uncontrolled manner.

APPLICATIONS

Digital control of 28 VDC loads, such as pumps, valves, lights, actuators, fans, etc. Protect wiring harnesses and loads from fire due to wire shorts or insulation failures. Monitors load operation and health.



FEATURES

- ✓ *Programmable circuit breaker trip characteristics*
- ✓ *Input voltage range of 10 to 36 VDC*
- ✓ *Fail open design (patented)*
- ✓ *Programmable power-on defaults*
- ✓ *Voltage and current monitoring via an integral serial data port*
- ✓ *Multiple current ranges available*
- ✓ *DO-160D testing*

AMETEK®
AEROSPACE

AMPHION™ Solid State Power Controllers

SPECIFICATIONS

ELECTRICAL CHARACTERISTICS

Voltage Range: 10 V to 36 VDC

Current Range: Programmable within ranges

Turn On Time: 100 uS maximum after reset event

Turn Off Time: 100 uS maximum after trip event

Trip Curve: Programmable within current ranges

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature Range:
-67° to 257°F (-55° to 125°C)

Storage Temperature Range:
-76° to 302°F (-60° to +150°C)

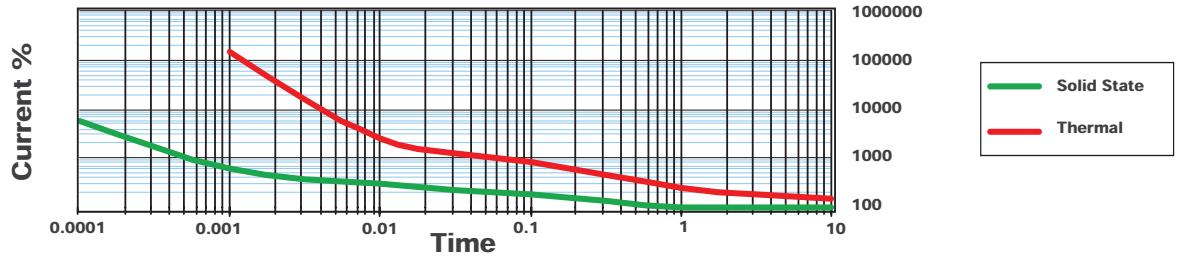
Maximum Transient Voltage: 1500 V for 100 uS

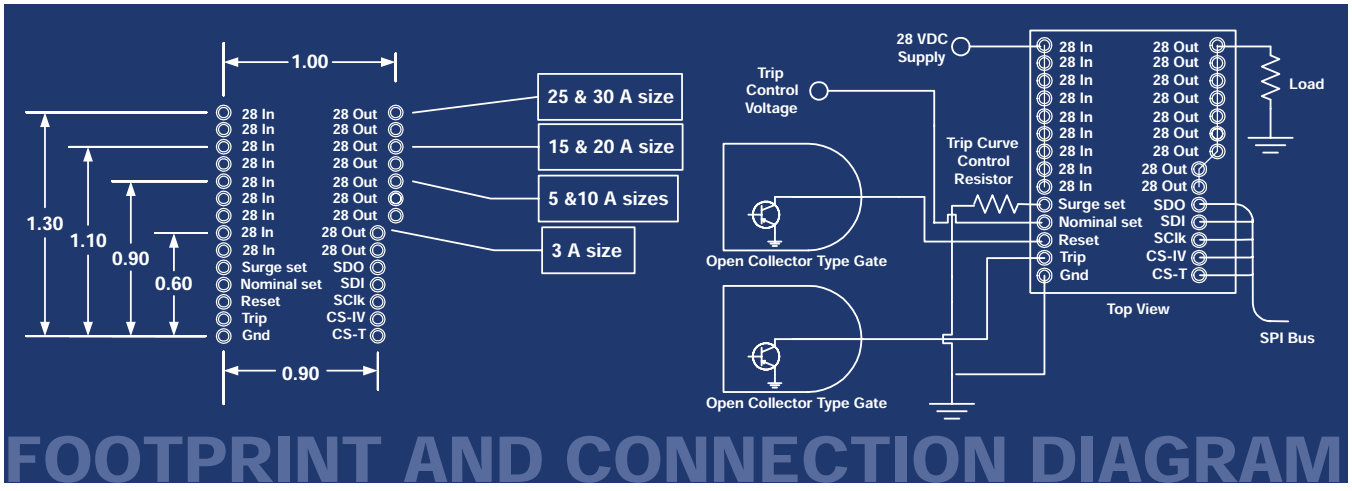
Maximum Surge Voltage: 50 VDC for 50 ms

Maximum Sinusoidal Vibration: 20 Gs

AMPHION Part Number	Current Range	On State Resistance	Size	Repetitive Interrupt Rating	Weight
10676B01E01	0.1 to 1 A	0.030 Ohm	1.125" W x 0.875" T x 0.44" H	50 A peak	0.6 oz.
10676B01E03	1 to 3 A	0.025 Ohm	1.125" W x 0.875" T x 0.44" H	100 A peak	0.6 oz.
10676B01E05	1 to 5 A	0.025 Ohm	1.125" W x 0.875" T x 0.44" H	500 A peak	0.6 oz.
10676B01E10	5 to 10 A	0.015 Ohm	1.375" W x 1.00" T x 0.50" H	500 A peak	1.0 oz.
10676B01E15	10 to 15 A	0.010 Ohm	1.35" W x 1.35" T x 0.45" H	500 A peak	1.0 oz.
10676B01E20	15 to 20 A	0.010 Ohm	1.35" W x 1.35" T x 0.45" H	500 A peak	1.0 oz.
10676B01E25	20 to 25 A	0.006 Ohm	1.5" W x 2.25" T x 0.45" H	1000 A peak	2.0 oz.
10676B01E30	25 to 30 A	0.006 Ohm	1.5" W x 2.25" T x 0.45" H	1000 A peak	2.0 oz.

TRIP CHARACTERISTIC COMPARISON WITH A THERMAL CIRCUIT BREAKER





FOOTPRINT AND CONNECTION DIAGRAM

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