



AMPHION™ Solid State Relays

DESCRIPTION

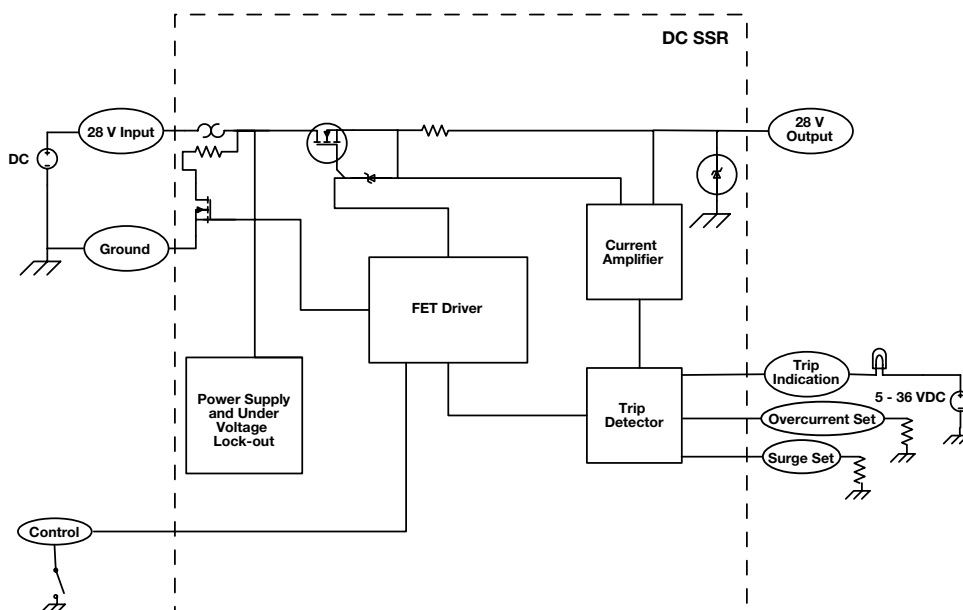
The 10747 Solid State Relay (SSR) combines the functions of a power contactor and an arc fault circuit breaker into one small and efficient module. The SSR fits in a standard M12883/48-02 socket and can switch up to 25 A at 28 VDC. This device can switch inductive or incandescent loads at the full rated current. There is also no wear out mechanism and the “on” resistance does not increase with age providing a highly reliable solid state alternative to mechanical relays.

ARC FAULT PROTECTION

The circuit breaker 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 SSR contains patented circuitry that prevents a failure in a short-circuited condition. This means that a failure will not cause a critical load to remain powered in an unprotected and uncontrolled manner.



FEATURES

- ✓ Adjustable trip curve
- ✓ No heatsink required at ambients $\leq 85^{\circ}\text{C}$
- ✓ Discrete trip status output
- ✓ Trip free reset
- ✓ No bias supply required
- ✓ No output offset
- ✓ Patented “fail-open” circuitry
- ✓ Low voltage drop
- ✓ Controlled transition time for low EMI
- ✓ Bus bar input connection and dual output pins

AMPHION™ Solid State Relays

MAXIMUM RATINGS

Operating Voltage Range (28 in. to ground): 10 – 36 VDC

Surge Voltage (28 in. to ground): 48 V for 1 sec, 80 V for 100ms

Normal Operating Temperature Range: -40° to 85°F
(-40° to 29°C) ambient

Extended Operating Temperature Range (trip accuracy reduced to ±10%): -67° to 257°F (-55° to 125°C) ambient

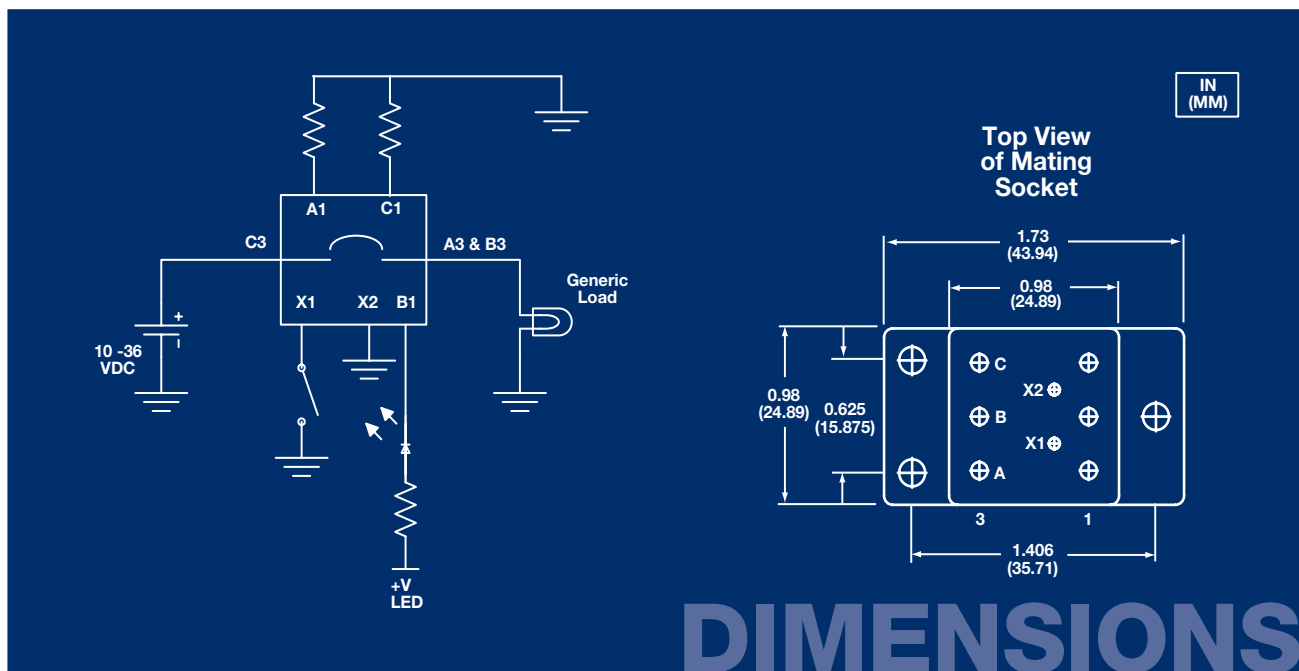
Storage Temperature: -76° to 257°F
(-60° to 125°C) ambient

Rupture Current: >600 A

Control Pin Voltage: Ground or Open

AMPHION Part Number	Current Range	Turn on/ Turn off times at full load	Maximum Off State Voltage	Total On-State Resistance	Maximum Voltage Drop at Full Current
10747B01E10	5 to 10 A	20 uS, 10%-90%	± 0.1 VDC	0.004 Ohm	0.04
10747B01E15	7.5 to 15 A	20 uS, 10%-90%	± 0.1 VDC	0.004 Ohm	0.06
10747B01E20	10 to 20 A	20 uS, 10%-90%	± 0.1 VDC	0.004 Ohm	0.08
10747B01E25	15 to 25 A	20 uS, 10%-90%	± 0.1 VDC	0.003 Ohm	0.07
10747B01E30	15 to 30 A	20 uS, 10%-90%	± 0.1 VDC	0.003 Ohm	0.09

PIN DEFINITIONS



AMETEK®

AEROSPACE & DEFENSE
POWER & DATA SYSTEMS
www.ametekpds.com

HEADQUARTERS

343 Godshall Dr . Harleysville, PA 19348 U.S.A.

E-mail: ametek-pds-sales@ametek.com

SALES:

North America

Tel: 1 319-213-6077