

NOsparc® GCLAC3F480 DATA SHEET



PRODUCT OVERVIEW

The NOsparc® GCLAC3F480 contact arc suppressor (AC power applications) protects, cleans, and restores the contact points of 3-phase relays and contactors. This improves their overall performance and extends contact life to the mechanical life of the relay or contactor.

The NOsparc GCLAC3F480 arc suppressor is designed to suppress contact arcing from 110Vac to 480Vac. NOsparc AC arc suppressors connect across the contact terminals on existing products and equipment using two wires per contact, plus a connection to the contactor's coil.

NOsparc AC power arc suppressors support the following AC power loads:

- General Purpose
- Capacitive
- Resistive
- Tungsten
- Ballast
- Pilot Duty
- Inductive
- Heater
- Motor

NOsparc is effective even under mixed load conditions.

HVACR & Automation

Additional information and a full User Manual are available on our website: www.ArcSuppressionTechnologies.com

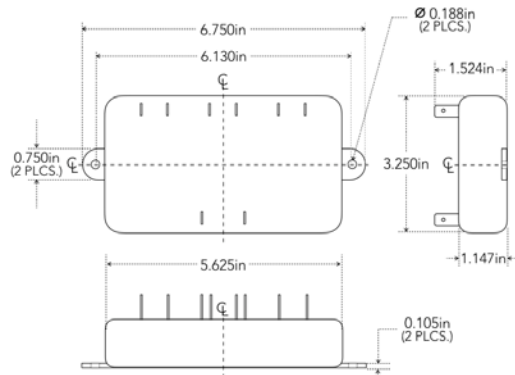
FEATURES AND BENEFITS

- **EXTENDS CONTACT LIFE**
 - CONTACTS LAST TO MECHANICAL LIFE OF RELAY OR CONTACTOR
- **REDUCES MAINTENANCE, REPAIR, AND REPLACEMENT COSTS**
- **ROHS COMPLIANT**
- **REDUCES CARBON FOOTPRINT**
- **REDUCES GREENHOUSE GASSES**
- **EASY INSTALLATION**
 - ARC SUPPRESSION CONNECTED IN PARALLEL ACROSS EACH CONTACT
 - COIL POWER CONNECTION DRAWS APPROX. 10mA FROM CONTROLLER
- **SMALL FOOTPRINT**
 - EASILY ADAPTED TO EXISTING INFRASTRUCTURE
 - QUICK AND SIMPLE PANEL MOUNT RETROFIT PROCESS
- **LOWER EMI**
 - AVERAGE 30dB REDUCTION OF EMI OVER 30MHz TO 1GHz RANGE

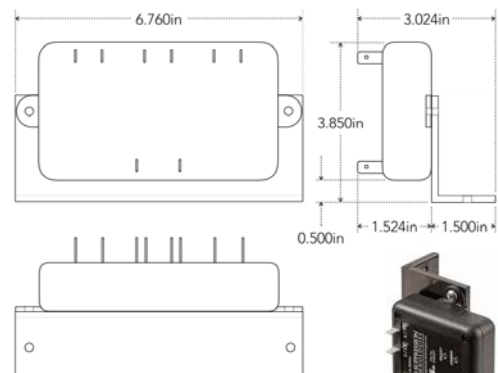
DIMENSIONS AND DRAWINGS

Note that the GCLAC3F480 comes with an "L"-shaped mounting bracket that may be used as needed for installation.

Product dimensions without optional mounting bracket:



Product dimensions with optional mounting bracket:



LED INDICATOR LIGHTS

READY Lights:

3 **green** LEDs will light when arc suppressor installed in a powered circuit and contacts are open.



ARMED Lights:

3 **red** LEDs will light when the contactor's coil is on and arc suppressor is ready for operation.



Light patterns other than those shown above indicate either improper installation or product malfunction.

This product is manufactured under the following patents: US 8,619,395; US 9,087,653; US 9,423,442; US 9,508,501; US 9,847,185; US 10,134,536; US 10,566,150; US 10,727,005; and US 10,727,010. Other patents pending.

7900 INTERNATIONAL DRIVE, SUITE 300, BLOOMINGTON, MN 55425 // 612-928-5546 // www.ArcSuppressionTechnologies.com

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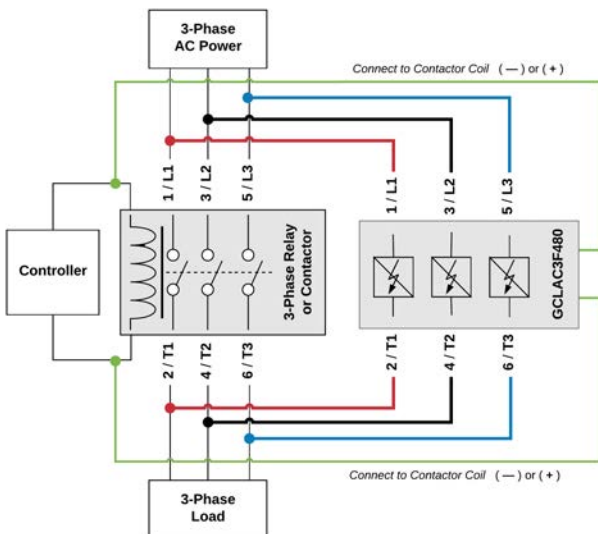
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SPECIFICATIONS

CONTACT Specifications	
ABSOLUTE MAXIMUM CURRENT RATING	235A _{rms} at 60Hz / 195A _{rms} at 50Hz — this absolute maximum current rating also represents the maximum allowable Locked Rotor Amperage (LRA) for motor loads and the cold filament inrush current for tungsten loads
ARC SUPPRESSION	duration: ½ AC power cycle (maximum)
CIRCUIT BREAKER / FUSE (MAXIMUM)	100A for general purpose, heater, and resistive loads, 50A for inductive, motor, and pilot duty loads 20A for ballast, capacitive, and Tungsten loads
CLAMPING VOLTAGE	820V (typical at 1mA)
CYCLING	maximum cycle time: per relay specifications (DO NOT EXCEED relay or contactor operating specs)
LEAKAGE CURRENT	2.5mA @ 110 Vac to 10mA @ 480Vac
OPERATING VOLTAGE	110Vac to 480Vac (nominal +/-10%)
PHASE TO PHASE TERMINAL DIELECTRIC ISOLATION VOLTAGE	4000Vac
TERMINATION	across contacts: two (2) 0.250" insulated quick connect terminals per contact/phase, six (6) total
COIL Specifications	
CIRCUITS	one (1) coil connection; either AC or DC (non-polarized)
CLAMPING VOLTAGE	470V (typical at 1mA)
OPERATING CURRENT	10mA (+/- 10%)
OPERATING VOLTAGE	24Vac to 240Vac (nominal +/-10%); 24Vdc to 250Vdc (nominal +/-10%)
COIL TO PHASE TERMINAL DIELECTRIC ISOLATION VOLTAGE	4000Vac
TERMINATION	across coil: two (2) 0.250" insulated quick connect terminals for the coil connection
GENERAL Specifications	
DIMENSIONS (WITHOUT BRACKET)	length: 6.750in (17.145cm) width: 3.250in (8.255cm) height: 1.524in (3.871cm)
DIMENSIONS (WITH BRACKET)	length: 6.760in (17.170cm) width: 3.850in (9.779cm) height: 3.024in (7.681cm)
ENVIRONMENTAL	operating temperature: -40°C to 75°C (-40°F to 167°F), storage temperature: -50°C to 125°C (-58°F to 257°F), humidity: 5% to 95% (non-condensing)
MOUNTING	orientation: any number of holes: two (2) hole diameter: 0.188in (#10 screw) (4.775mm)
MTBF / RELIABILITY	800,000 hours (MIL-HDBK-217F)
POWER FREQUENCIES	typical operating frequencies: 50Hz / 60Hz
POWER TYPE	AC (sinusoidal alternating current)
WEIGHT	7.875oz (223g)
WIRE GAUGE	wire length between Nosparc and contact terminals: up to 24in: #14AWG (minimum); 24in to 36in: #12AWG (minimum). NOTE: DO NOT use wire lengths over 3 feet

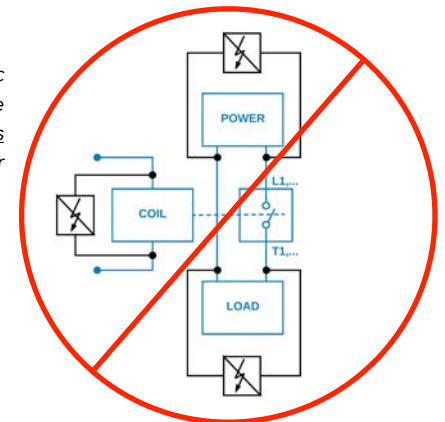
SYSTEM WIRING

Arc suppressor connects in parallel across each respective contact (phase) as shown, with a separate connection to the contactor coil. Make sure installation uses accepted proper crimping standards and is compliant with all safety regulations.



IMPORTANT NOTE
NOsparc will be damaged if arc suppressor connected across the following locations where there is NO arcing: LOAD, POWER, and/or COIL.

left: GCLAC3F480 connected to three-phase contactor



UL Recognized Component, certified as "Component - Auxiliary Devices" Industrial Control Equipment for both Canada and the United States, per UL 508 and CSA-C22.2 No 14.