

NOsparc® DATA SHEET

GGXAC1F480 and 3P-GGXAC1F480

PATENTS GRANTED AND PENDING



PRODUCT OVERVIEW

The NOsparc® GGXAC1F480 AC contact arc suppressor (AC power applications) protects the contact points of relays and contactors, which extends their life and improves their overall performance along with the equipment these switches control.

The NOsparc GGXAC1F480 arc suppressor is designed to suppress contact arcing from 110Vac to 277Vac and up to 480Vac installed with and additional in-line fuse. NOsparc AC arc suppressors connect across the contact terminals on existing products and equipment using only two wires.

Connect NOsparc AC arc suppressor across contacts only! NOsparc AC arc suppressors are effective even under mixed load conditions. NOsparc AC arc suppressors will support the following AC power load categories:

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



Refrigeration
HVAC
Automation

FEATURES AND BENEFITS

EXTENDS CONTACT LIFE 10X OR MORE

- Reduced maintenance, repair and replacement costs
- Dramatic reduction in total cost of ownership

GREEN

- RoHS compliant
- Reduced carbon footprint and greenhouse gasses

ONLY 2 WIRES

- No external power required
- No special or complicated assembly requirements or associated connections to auxiliary equipment

LOW POWER

- Improves contact switching transition efficiency 20x

SMALL FOOTPRINT

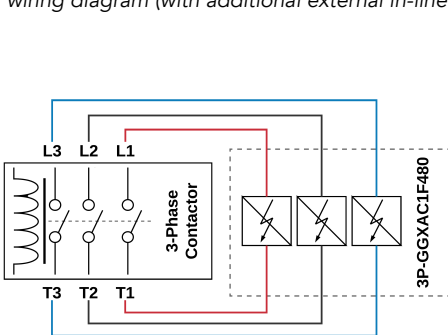
- Easily adapted to existing infrastructure
- Quick and simple panel mount retrofit process
- Minimal impact to design due to size of the hardware solution

LOWER EMI

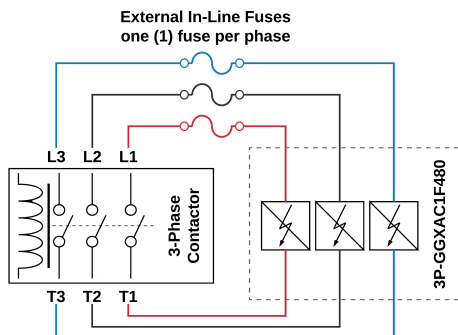
- Average 30dB reduction of EMI over 30MHz to 1GHz range

SYSTEM WIRING

One NOsparc connects in parallel across each contact; three-phase installation shown below - Left: 277Vac wiring diagram; Right: 480Vac wiring diagram (with additional external in-line fuses):



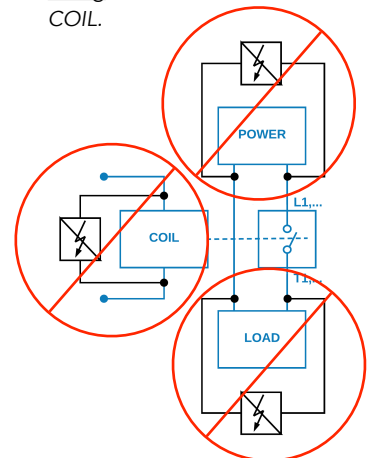
Above: three-phase wiring diagram for up to 277Vac applications.



Above: three-phase wiring diagram for more than 277Vac through 480Vac applications.

IMPORTANT NOTE

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



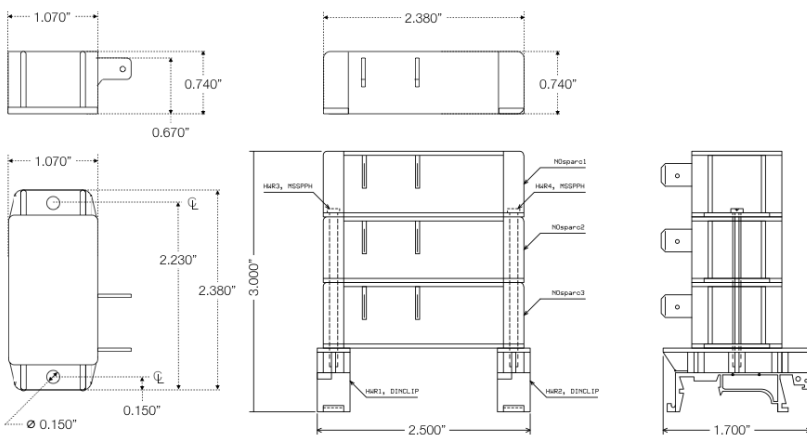
Please visit our website for additional information and a full User's Manual: www.ArcSuppressionTechnologies.com

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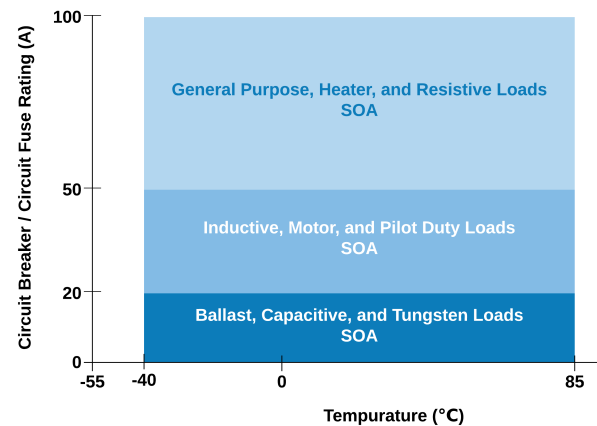
SPECIFICATIONS	GGXAC1F480	3P-GGXAC1F480
ABSOLUTE MAXIMUM CURRENT RATING	175A(rms) This absolute maximum current rating also represents the maximum allowable Locked Rotor Amperage (LRA) for motor loads and the cold filament inrush current for tungsten loads	
ARC SUPPRESSION	Duration ½ AC power cycle (maximum)	
CIRCUITS (CONTACTS)	One (1) NOsparc per contact (multiple NOsparc units required for multi-contact relays)	
CIRCUIT BREAKER / FUSE (MAXIMUM)	100A for resistive loads (see Safe Operating Area charts below for more detail)	
CLAMPING VOLTAGE	820V (typical at 1mA)	
CONTACT CYCLING	Per application's relay specifications (DO NOT EXCEED relay operating specs)	
DIMENSIONS	length: 2.380in (6.045cm) width: 1.070in (2.718cm) height: 0.740in (1.880cm)	length: 2.500in (6.350cm) width: 1.700in (4.318cm) height: 3.000in (7.620cm)
ENVIRONMENTAL	operating temperature: -40°C to 85°C (-40°F to 185°F), storage temperature: -50°C to 125°C (-58°F to 257°F), humidity: 5% to 95% (non-condensing)	
INTERFACE WIRES	across contacts: two (2) (W1 / W2 non-polarized)	
LEAKAGE CURRENT	9 mA (nominal)	
MOUNTING	orientation: any	number of holes: two (2) hole diameter: 0.150in (#6 screw) (3.81mm)
MTBF / RELIABILITY	800,000 hours (MIL-HDBK-217F)	
OPERATING VOLTAGE (NOMINAL +/-15%)	110Vac to 277Vac // up to 480Vac with in-line fuse added on Line side of contactor (see wiring diagram on front page)	
POWER FREQUENCIES	Typical operating frequencies: 50 Hz / 60 Hz	
POWER-ON	load current passthrough: ½ cycle (maximum)	
POWER TYPE	AC (sinusoidal alternating current)	
TERMINATION	0.250in quick connect male terminals (non-insulated)	
TERMINATION MATE	0.250in quick connect female terminals (fully insulated)	
WEIGHT	0.8oz (22.7g)	2.8oz (79.4g)
WIRE GAUGE	wire length between Nosparc and contact terminals: 0in to 24in: #14AWG (minimum) 24in to 36in: #12AWG (minimum) NOTE: wire lengths over 3 feet are NOT recommended	

PANEL MOUNTING AND CASE DRAWINGS



CIRCUIT BREAKER / CIRCUIT FUSE DE-RATING

The chart below depicts the circuit breaker / circuit fuse Safe Operating Areas (SOA).



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.

This product is manufactured under the following patents: US 9,087,653; US 8,619,395; US 9,423,442; US 9,508,501; US 9,847,185; and other patents pending.