

# NOsparc® DATA SHEET

## GGXAC1F277 and 3P-GGXAC1F277

PATENTS GRANTED AND PENDING



### PRODUCT OVERVIEW

The NOsparc® GGXAC1F277 AC contact arc suppressor (AC power applications) protects the contact points of relays, contactors, or snap action switches, which extends their life and improves their overall performance along with the equipment these switches control.

The NOsparc GGXAC1F277 arc suppressor is designed to suppress contact arcing from 110Vac to 277Vac. 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

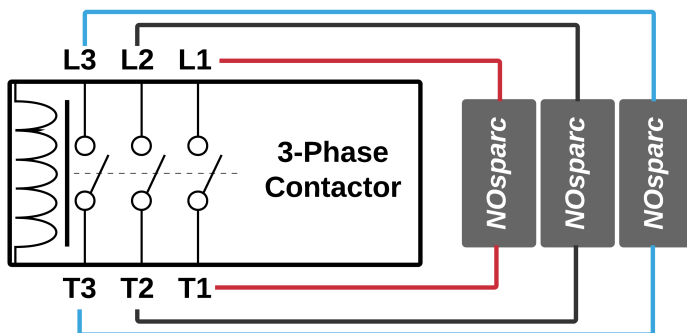
- Easily adapted to existing infrastructure
- Quick and simple panel mount retrofit process
- Minimal impact to design due to size of the hardware solution

#### LOWER EMI

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

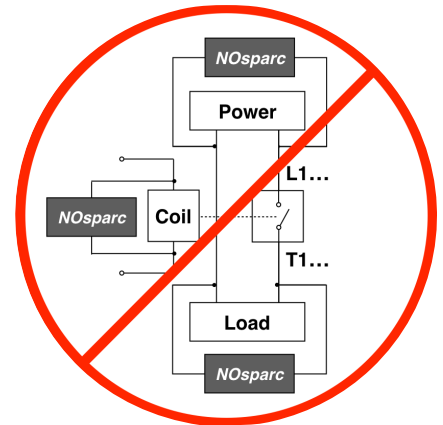
### SYSTEM WIRING

One NOsparc connects in parallel across each contact (pole) shown below (3P-GGXAC1F277 product connected to three-phase contactor pictured):



### IMPORTANT NOTE

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

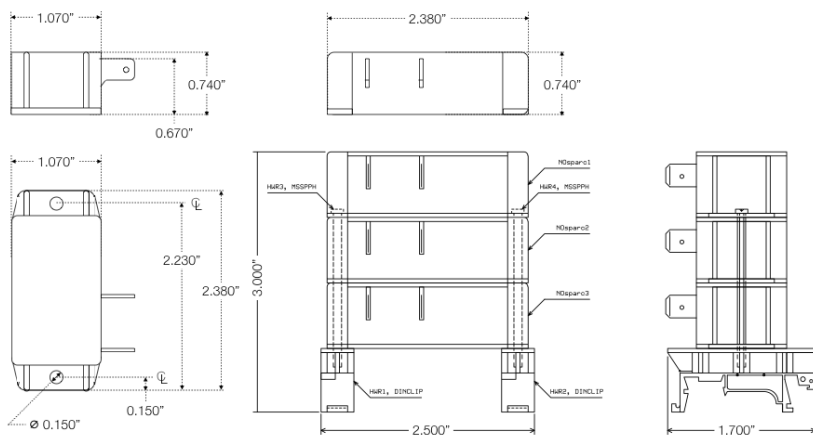


Please visit our website for additional information and a full User's Manual:  
[www.ArcSuppressionTechnologies.com](http://www.ArcSuppressionTechnologies.com)

**SPECIFICATIONS**

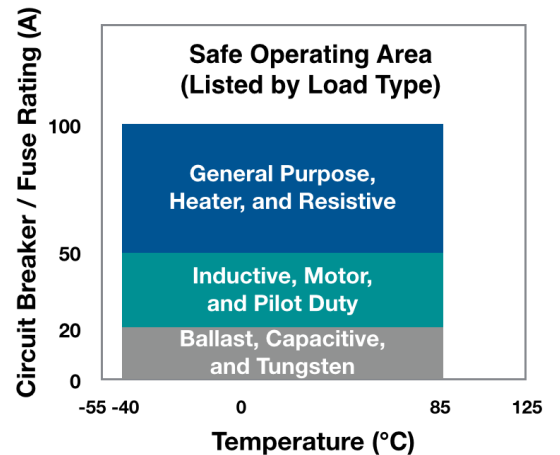
NOsparc Model:	GGXAC1F277 and 3P-GGXAC1F277
<b>ABSOLUTE MAXIMUM CURRENT RATING</b>	175A(rms) This absolute maximum current rating also represents the maximum allowable Locked Rotor Amperage (LRA) for motor loads and the cold filament inrush current for tungsten loads
<b>ARC SUPPRESSION</b>	Duration ½ AC power cycle (maximum)
<b>CIRCUITS (CONTACTS)</b>	One (1) NOsparc per contact (multiple NOsparc units required for multi-contact relays)
<b>CIRCUIT BREAKER / FUSE (MAXIMUM)</b>	100A for resistive loads (see Safe Operating Area charts below for more detail)
<b>CLAMPING VOLTAGE</b>	510V (typical at 1mA)
<b>CONTACT CYCLING</b>	Maximum cycle time: per relay specifications (DO NOT EXCEED relay operating specs)
<b>DIMENSIONS</b>	SINGLE UNIT: length: 2.380in (6.045cm) width: 1.070in (2.718cm) height: 0.740in (1.880cm) 3-PHASE UNIT: length: 2.500in (6.350cm) width: 1.700in (4.318cm) height: 3.000in (7.620cm)
<b>ENVIRONMENTAL</b>	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)
<b>INTERFACE WIRES</b>	across contacts: two (2) (W1 / W2 non-polarized)
<b>LEAKAGE CURRENT</b>	7 mA (nominal)
<b>MOUNTING</b>	orientation: any number of holes: two (2) hole diameter: 0.150in (#6 screw) (3.81mm)
<b>MTBF / RELIABILITY</b>	2.6 million hours (MIL-HDBK-217F)
<b>OPERATING VOLTAGE (NOMINAL +/-15%)</b>	110Vac to 277Vac
<b>POWER FREQUENCIES</b>	Typical operating frequencies: 50 Hz / 60 Hz
<b>POWER-ON</b>	load current passthrough: ½ cycle (maximum)
<b>POWER TYPE</b>	AC (sinusoidal alternating current)
<b>TERMINATION</b>	0.250in quick connect male terminals (non-insulated)
<b>TERMINATION MATE</b>	0.250in quick connect female terminals (fully insulated)
<b>WEIGHT</b>	single-phase net weight: 0.8oz (22.7g) three-phase net weight: 2.8oz (79.4g)
<b>WIRE GAUGE</b>	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.  
 File No:E346457

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