

# NOsparc® MGXDC1F250 DATA SHEET



## PRODUCT OVERVIEW

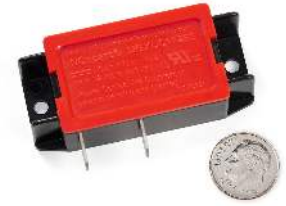
The NOsparc® MGXDC1F250 contact arc suppressor (DC power applications) protects, cleans, and restores the contact points of relays and contactors. This improves their overall performance and extends contact life to the mechanical life of the relay or contactor.

The NOsparc MGXDC1F250 arc suppressor is designed to suppress contact arcing from 12Vdc to 250Vdc. This NOsparc DC arc suppressor connects across the contact terminals on existing products and equipment using only two wires.

Connect MGXDC1F250 across contacts only! NOsparc DC arc suppressors will support the following DC power load categories:

- General Purpose
- Resistive
- Capacitive
- Inductive
- Motor
- Tungsten

NOsparc is effective even under mixed load conditions.



## Transportation & Automation

Additional information and a full User Manual are available on our website: [www.ArcSuppressionTechnologies.com](http://www.ArcSuppressionTechnologies.com)

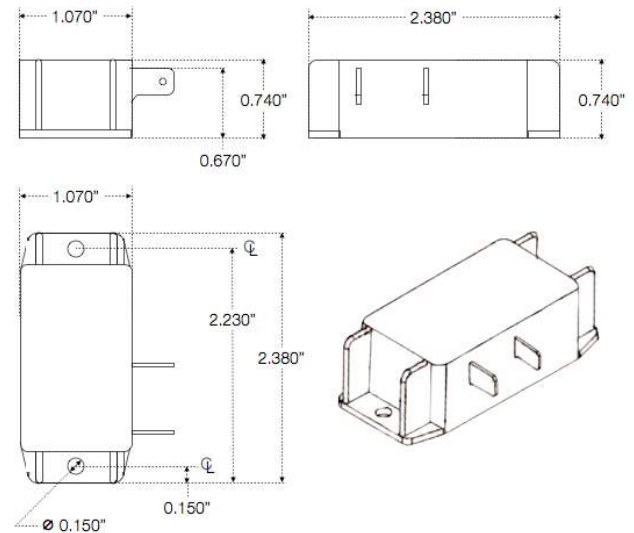
## FEATURES AND BENEFITS

- **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**
  - ONLY 2 WIRES
  - NO EXTERNAL POWER REQUIRED
- **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

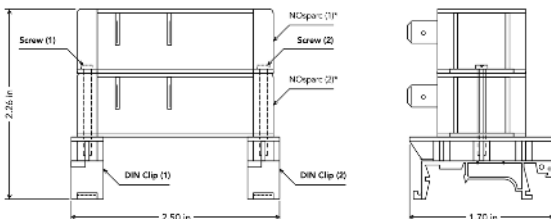
## DIMENSIONS AND MOUNTING

Panel mounting of an arc suppressor can be accomplished using a #6 screw through the two mounting holes.

Product dimensions:



Example of two (2) MGXDC1F250 products on DIN rail clips:



Optional DIN rail mounting (shown left) of up to three (3) stacked MGXDC1F250 products can be accomplished by adding a single DIN rail mounting adaptor (NOT PROVIDED), with a #6 screw to each side of the single arc suppressor or stacked arc suppressors. Accepts a 1in #6 screw for two (2) stacked NOsparc units or a 1½in #6 screw for three (3) stacked NOsparc units.

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](http://www.ArcSuppressionTechnologies.com)

© 2020. Information contained in this document is subject to change without notice.  
"NOsparc" is a registered trademark of Arc Suppression Technologies, LLC. All rights reserved.

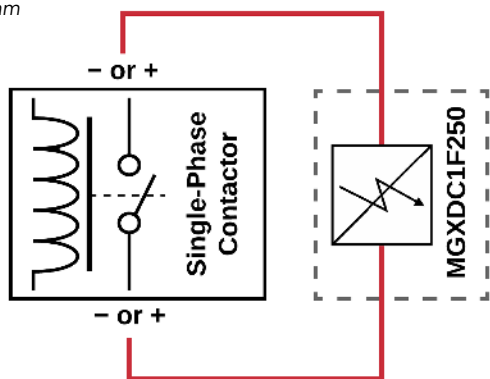
CONTACT Specifications	
ABSOLUTE MAXIMUM CURRENT RATING	75A — this absolute maximum current rating also represents the maximum allowable Locked Rotor Amperage (LRA) for motor loads and the cold filament inrush current for tungsten loads
ARC SUPPRESSION	duration: 1ms (typical)
CIRCUITS (CONTACTS)	one (1) NOsparc per contact (multiple NOsparc units required for multi-contact relays)
CIRCUIT BREAKER / FUSE (MAXIMUM)	50A for resistive loads 10A for all other loads
CLAMPING VOLTAGE	330V (typical at 1mA)
CYCLING	maximum cycle time: per relay specifications ( <b>DO NOT EXCEED</b> relay operating specs)
LEAKAGE CURRENT	0.5mA (nominal)
OPERATING VOLTAGE	12Vdc to 250Vdc (nominal +/-10%)
TERMINATION	across contacts: two (2) 0.250" insulated quick connect terminals
GENERAL Specifications	
DIMENSIONS	length: 2.380in (6.045cm)    width: 1.070in (2.718cm)    height: 0.740in (1.880cm)
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)
MOUNTING	orientation: any    number of holes: two (2)    hole diameter: 0.150in (#6 screw) (3.81mm)
MTBF / RELIABILITY	800,000 hours (MIL-HDBK-217F)
POWER-ON	load current passthrough: 1ms
POWER TYPE	DC (direct current)
WEIGHT	1oz (28g)
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**

One NOsparc connects in parallel across each contact shown. Make sure installation uses accepted proper crimping standards and is compliant with all safety regulations.

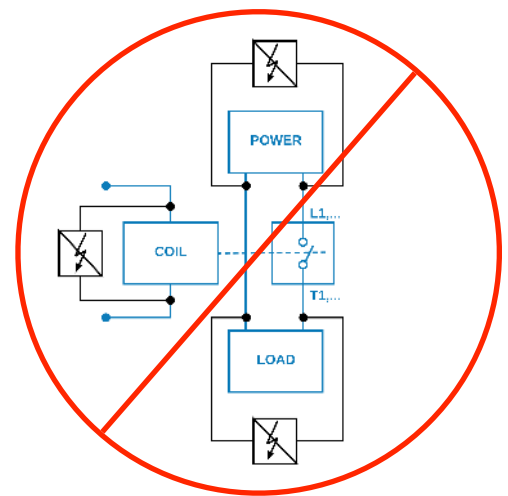
The MGXDC1F250 is non-polarized.

Right: wiring diagram



**IMPORTANT NOTE**

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



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.