ARG-SUPPRESSION TECHNOLOGIES

NOsparc® DATA SHEET MGXDC1F250

PATENTS GRANTED AND PENDING

PRODUCT OVERVIEW

NOsparc® DC contact arc suppressors (DC power applications) protect the contact points of relays, contactors, or micro-switches, which extends their life and improves their overall performance along with the equipment these switches control.

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

Connect NOsparc DC arc suppressor across contacts only! NOsparc DC arc suppressors are effective

even under mixed load conditions. NOsparc DC arc suppressors will support the following DC power load categories:

SYSTEM WIRING

Minus or Plus

For simplicity, only a single (one) DC contact shown

- Circuit Breaker

 Plus or Minus

 Fuse

 / Main Shut-Off Switch

 Thermal Limiter

 / Thermal Limit Shut-Off

 Process
 Control
 Input(s)

 Thermal Limit Thermocouple

 DC Power Load
- General Purpose Inductive
- Resistive
- Motor
- Capacitive
- Tungsten



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

FEATURES	BENEFITS	FEATURES	BENEFITS
Extends Contact Life 10X or More	 Reduced maintenance, repair and replacement costs Dramatic reduction in total cost of ownership 	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 	Connects with 2 Wires	No external power required No special or complicated assembly requirements or associated connections to auxiliary equipment
Green	RoHS compliantReduced carbon footprint and greenhouse gasses	Lower EMI	Average 30 dB reduction of EMI over 30MHz to 1GHz range

Automation · **Automotive** · **Transportation**

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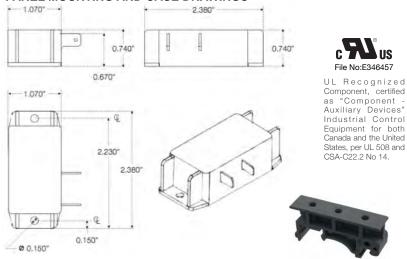


NOsparc® DATA SHEET MGXDC1F250

SPECIFICATIONS

NOsparc Model	MGXDC1F250		
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: 1 ms (typical)		
CIRCUITS (CONTACTS)	One (1) NOsparc per contact (multiple NOsparc units required for multi-contact relays)		
CIRCUIT BREAKER / FUSE (MAXIMUM)	50A for resistive loads (see Safe Operating Area charts below for more detail)		
CLAMPING VOLTAGE	330V (typical at 1 mA)		
CONTACT CYCLING	Maximum cycle time: per relay specifications (<u>DO NOT EXCEED</u> relay operating specs)		
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)		
LEAKAGE CURRENT	0.5mA (nominal)		
MOUNTING	orientation: any number of holes: two (2) hole diameter: 0.150in (#6 screw) (3.81mm)		
MTBF / RELIABILITY	2.6 million hours (MIL-HDBK-217F)		
OPERATING VOLTAGE (NOMINAL +/-15%)	12Vdc to 250Vdc		
POWER-ON	load current passthrough: 1ms		
POWER TYPE	DC (direct current)		
TERMINATION	0.250in quick connect male terminals (non-insulated)		
TERMINATION MATE	0.250in quick connect female terminals (fully insulated)		
WEIGHT	net weight: 1oz (28g)		
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		

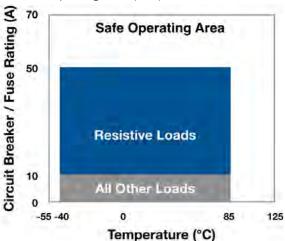
PANEL MOUNTING AND CASE DRAWINGS



NOTE: DIN rail mounting of one (1), two (2), or three (3) stacked arc suppressors can be accomplished by adding a single DIN rail mounting adaptor (NOT PROVIDED) (accepting up to a 1¾ inch #6 screw) to each side of the single arc suppressor or stacked arc suppressors. DIN Mounting Clips are available from a variety of suppliers. (One example of an appropriate plastic DIN Rail Mounting Clip is available from Digitkey with the part number: 277-2296-ND).

CIRCUIT BREAKER / CIRCUIT FUSE DE-RATING

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



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

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