



PATENT AND PATENTS PENDING

NOsparc® DATA SHEET

MHXAC1F120
MHXAC1F240
MHXAC1F480

PRODUCT NOTES

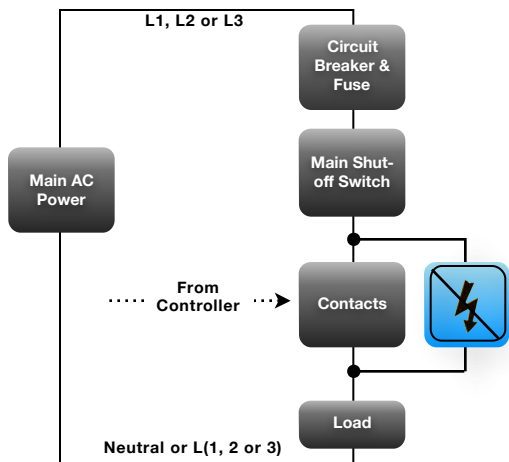
Connect NOsparc® MXHAC across relay, contactor, or snap action switch contacts only! NOsparc® MXHAC capabilities will be fully effective even under mixed load conditions. NOsparc® MXHAC has been designed to support the following AC power load categories:

Additional information and a full User's Manual for this product may be found on our website:

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

www.ArcSuppressionTechnologies.com

ABBREVIATED WIRING DIAGRAM NOsparc® ARC SUPPRESSOR

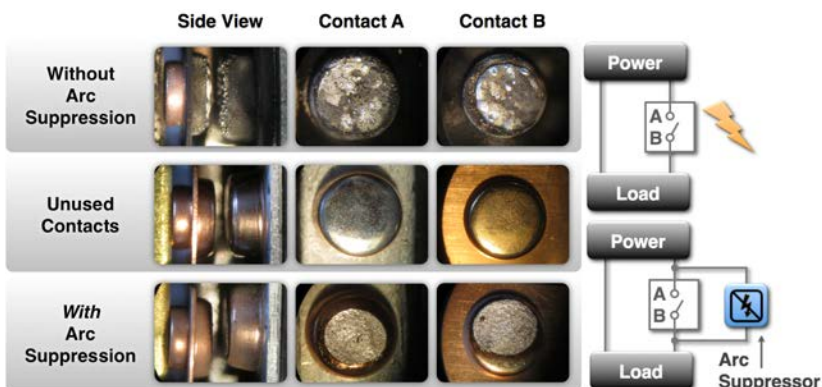


PRODUCT OVERVIEW

NOsparc® MXHAC products (AC power applications) are a family of two-terminal contact arc suppressors that attach across the contact points of a power relay, contactor or snap action switch. The products are designed to protect the contact points from premature destruction due to contact current arcing.

NOsparc® MXHAC products have a simple, elegant and straightforward design that allow them to be connected across the two contact terminals on existing products and equipment with just two wires! The products are tolerant of harsh environments.

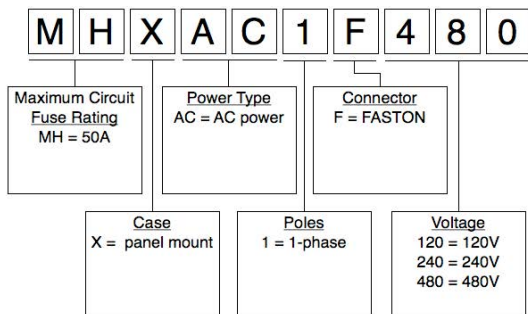
During normal operation, the NOsparc® MXHAC detects the nascent arc as it forms and suppresses its energy. The result is a low energy "arclet" with arc energy of only a few µJ as opposed to a full contact arc that is hundreds of mJ (or more).



The pictures above show how use of a NOsparc® MXHAC contact arc suppressor can keep contact points in nearly new condition. In fact, arc suppression both improves relay operation and extends the inevitable end-of-life of a standard relay, contactor or snap action switch by a factor of 100 times or more under normal, specified relay operating conditions (please refer to the relay or contactor specifications).

PART NUMBER DESCRIPTION

(Example shown: NOsparc® MXHAC1F480)



INDUSTRIES
COMMERCIAL
INDUSTRIAL
DEFENSE

FEATURES	BENEFITS
Extends Contact Life 100X or More	<ul style="list-style-type: none"> • Reduced maintenance, repair and replacement costs • Dramatic reduction in total cost of ownership
Small Footprint	<ul style="list-style-type: none"> • Easy adaptation to existing infrastructure • Quick and simple retrofitting process • Minimal impact to design due to size of the hardware solution
Only 2 Wires	<ul style="list-style-type: none"> • No neutral connection needed • No external power required • No special or complicated assembly requirements or associated connections to auxiliary equipment • Connect & Forget™ operation
Low Power	<ul style="list-style-type: none"> • Negligible impact on energy costs • Increased reliability
Green	<ul style="list-style-type: none"> • RoHS compliant • Reduced Ozone and other pollutants
Lower EMI	15dB reduction of EMI over the range of 30MHz to 1GHz

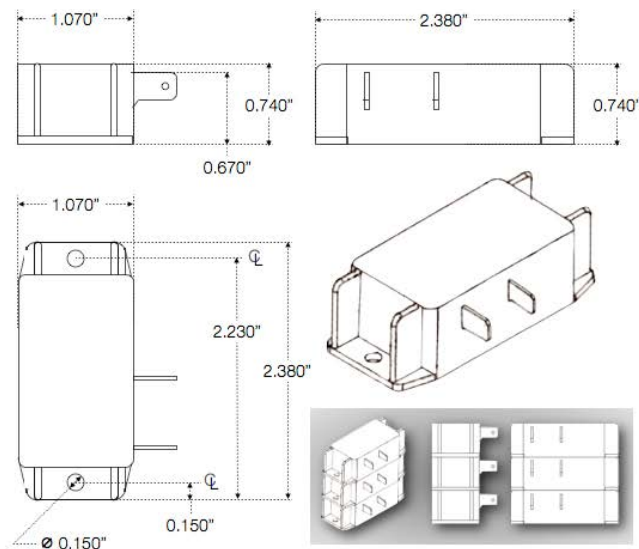
NOsparc® DATA SHEET

MHXAC1F120 • MHXAC1F240 • MHXAC1F480

SPECIFICATIONS

NOsparc® MODEL	MHXAC1F120	MHXAC1F240	MHXAC1F480
ARC SUPPRESSION	duration: ½ AC power cycle (maximum)		
CIRCUITS (POLES)	one (1) unit per pole (multiple units required for multi-pole relays)		
CIRCUIT BREAKER / FUSE RATING	50A max, up to 50°C / 35A max, 50°C to 85°C (NOTE: See de-rating chart below)		
CLAMPING VOLTAGE	510V	510V	820V
CONTACT CYCLING	maximum cycle time: per relay specifications (DO NOT EXCEED relay operating 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) (NOTE: See de-rating chart below)		
INTERFACE WIRES	across contacts: two (2) (W1/W2 non-polarized)		
LEAKAGE CURRENT	4mA (nominal)	6mA (nominal)	10mA (nominal)
MOUNTING	orientation: any number of holes: two (2) hole diameter: 0.150in (#6 screw) (3.81mm)		
OPERATING VOLTAGE	120Vac (nominal)	240Vac (nominal)	480Vac (nominal)
POWER FREQUENCIES	typical operating frequencies: 50Hz / 60Hz		
POWER-ON	load current passthrough: ½ cycle (maximum)		
POWER TYPE	AC (alternating current)		
RELIABILITY	MTBF: 438,000 hours (MIL-HDBK-217F)		
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 0in to 12in: #16AWG (wire length between Nosparc® and contact terminals) wire length 12in to 24in: #14AWG (wire length between Nosparc® and contact terminals) wire length 24in to 36in: #12AWG (wire length between Nosparc® and contact terminals) (NOTE: Wire lengths over 3 feet are NOT recommended)		

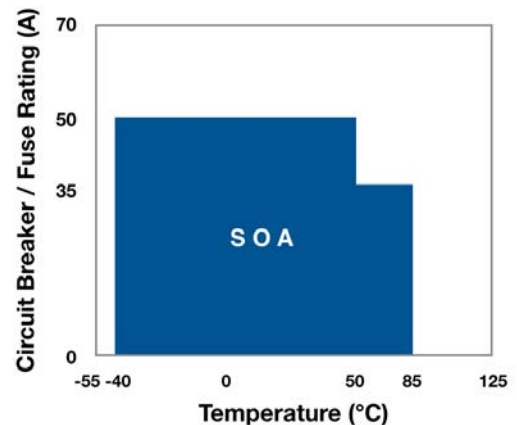
PANEL MOUNTING AND CASE DRAWINGS



NOTE: Units may be stacked up to three (3) units high by threading a #6 screw through the mounting holes in the flanges..

CIRCUIT BREAKER / CIRCUIT FUSE DE-RATING

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



File No:E346457

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.

