BULLETIN 962A

FUSITE®

TECH-DATA

Glass-to-metal hermetic seals and power terminal feed-throughs

- Fusite custom glass
- Patented conductor pin features
- Heavy-duty ceramic for oversurface
- Nickel-plated steel terminal body
- Silicone rubber oversurface

Glass-to-metal hermetic seals and power terminal feed-throughs

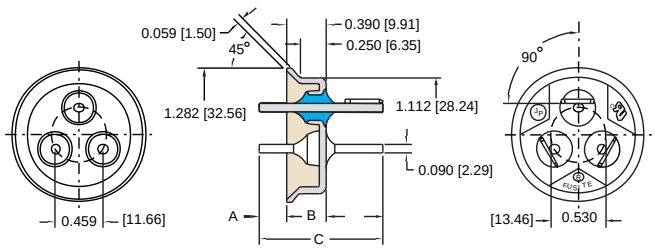
Terminal Models Fractional, 600 and 700 Series

These Fusite terminals are designed for high reliability Air Conditioning and Refrigeration Compressors. Many incorporate industry's most innovative engineering features, including:

- Patented groove is designed to open at high in-rush currents. (This design is not a substitute for compressor safety devices and circuit protection.)
- Custom-smelted Fusite proprietory glass designed for complete and reliable hermeticity.
- Heavy-duty ceramic insulator for electrical oversurface on the inside of the compressor.
- Molded silicone rubber oversurface for the outside of the compressor, bonded to the terminal.
- Solid pin and high conductivity copper core pin models available for various applications.

PART #	A	B	C
393-37	.344 [8.74]	.547 [13.89]	1.281 [32.54]
393-38	.266 [6.76]	.406 [10.31]	1.062 [26.97]
393-95	.266 [6.76]	.547 [13.89]	1.203 [30.56]

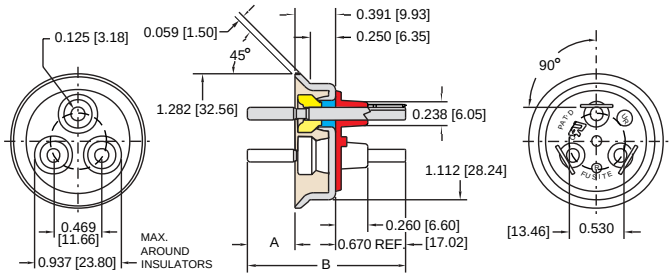
TERMINALS - 393 FRACTIONAL SERIES



PART #	A	B
393-694	.452 [11.48]	1.510 [38.36]
393-677	.530 [13.46]	1.590 [40.39]

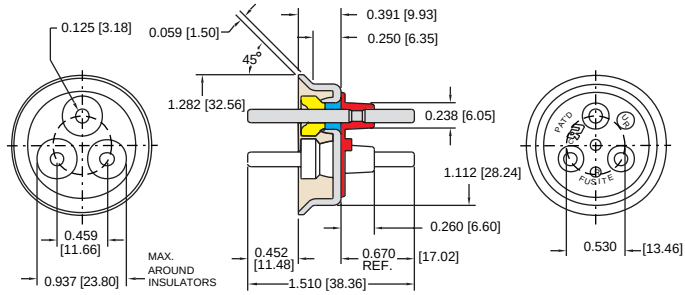
TERMINALS - 393-600 SERIES

Nonagon pad available on 393-600 and 393-700 Copper Core Models footnoted 4.



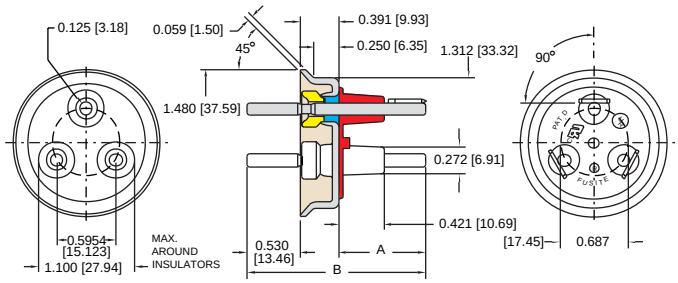
TERMINALS - 393-700 SERIES

Nonagon pad available on 393-600 and 393-700 Copper Core Models footnoted 4.

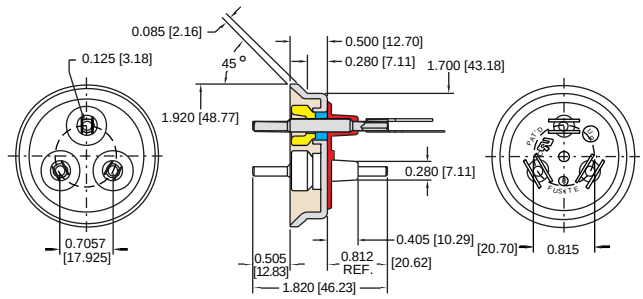


PART #	A	B
3B3-635	.765 [19.43]	1.700 [43.18]
3B3-637	.875 [22.23]	1.810 [45.97]

TERMINALS - 3B3-600 SERIES



TERMINALS - 3K3-600 SERIES



Note: Dimensions shown are in inches with millimeter dimensions in parentheses.

Minimum Ratings

Hydrostatic Pressure: ..... UL - 2250 psi

Hermeticity: ..... 1 x 10 (-7) Std. CC/Sec. of Helium

Dielectric Voltage: .....Min. 2500V with <0.5mA Leakage

Insulation Resistance: ..... >10,000 Megohms at 500VDC

Ceramic **Steel**

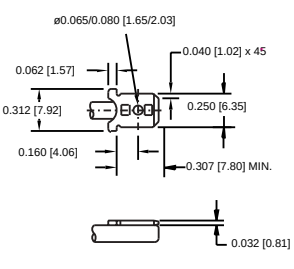
Glass **Rubber**

Drawings are representative of Fusite models. All data is subject to change. Consult latest Fusite engineering drawings for current specifications.

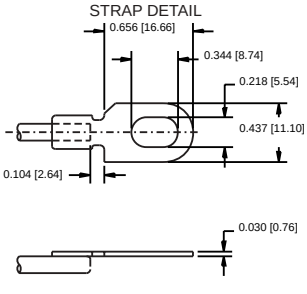
	Model ❶	Pin Material 400 Series SS	Terminations		UL Rating ❷	Maximum Operating Current Amps ❸	Minimum Spacing Inches (mm)				Pin Dia. Inches (mm)	Pin Length Inches (mm)
							Oversurface		Through Air			
			Outside	Inside			Outside	Inside	Outside	Inside		
	393-38	Solid	Pins	Pins	For up to 2000 VA & up to 300 V, and for over 2000 VA & up to 150V	20						1.062 (26.97)
	393-95	Solid	Tabs	Pins		22	1/8 (3.2)	3/32 (2.4)	1/8 (3.2)	1/16 (1.6)	.090 (2.29)	1.203 (30.56)
	393-37	Solid	Tabs	Tabs		25						1.281 (32.54)
	393-677	Cu Core ❹	Tabs	Pins	For over 2000 VA & up to 300 V	50						1.590 (40.39)
	393-694	Solid	Tabs	Pins		35						1.510 (38.36)
	393-674	Cu Core ❹	Tabs	Pins		50	3/8 (9.5)	3/16 (4.8)	1/4 (6.4)	1/8 (3.2)	.125 (3.18)	1.510 (38.36)
	393-698	Cu Core ❹	Tabs	Tabs		50						1.510 (38.36)
	393-794	Solid	Pins	Pins	For over 2000 VA & up to 300 V	35						1.510 (38.36)
	393-774	Cu Core ❹	Pins	Pins		50	3/8 (9.5)	3/16 (4.8)	1/4 (6.4)	1/8 (3.2)	.125 (3.18)	1.510 (38.36)
	393-798	Cu Core ❹	Pins	Tabs		50						1.510 (38.36)
	3B3-640	Solid	Tabs	Pins	For over 2000 VA & up to 600 V	35						1.810 (45.97)
	3B3-637	Cu Core	Tabs	Pins		55						1.810 (45.97)
	3B3-634T	Solid	Tabs	Tabs		35						1.810 (45.97)
	3B3-619	Cu Core	Tabs	Tabs		55	1/2 (12.7)	1/4 (6.4)	3/8 (9.5)	3/16 (4.8)	.125 (3.18)	1.810 (45.97)
	3B3-635	Cu Core	Straps	Pins		65						1.700 (43.18)
	3B3-620	Cu Core	Straps	Tabs		60						1.700 (43.18)
	3K3-602	Cu Core	Double Straps	Pins	For over 2000 VA & up to 600V	80					.187 (4.75)	1.820 (46.23)
	3K3-601	Cu Core	Double Straps	Double Tabs		125	1/2 (12.7)	1/4 (6.4)	3/8 (9.5)	3/16 (4.8)	.187 (4.75)	1.820 (46.23)
	3K3H-600	Cu Core	Double Straps	Double Tabs		130					.243 (6.17)	1.820 (46.23)

❶ Models listed are representative models.
❷ Terminals are recogniz ed by Underwriters Laboratories File SA3716 - Per UL Standard 984
❸ Maximum Operating Current values were established under laboratory conditions and serve as guidelines only. Individual applications must be tested to determine the effect of specific variables. Tests were conducted using standard gauge wire and high conductivity connectors, rated for their applications. It is very important to use the proper wire siz e for a given compressor operating current. Wire siz e and connector type greatly influence the pin temperature, especially in over-current conditions.
❹ These terminals are available with nonagon pads (shown at left).

TAB DETAIL



STRAP DETAIL



Hermetic Terminal Precautions

Installation, Operation and Shipping

1. Excessive shocks to the terminal must be avoided since mechanical stress can damage the glass and/or ceramic. Damage may result in hermetic failure or loss of terminal performance.

2. Precautions are required to prevent striking or bending of pins. Bent or damaged pins may result in loss of hermeticity or terminal performance.

3. Terminals must not be overheated during brazing or welding operations. The temperature of the metal adjacent to the glass must not exceed 400°F.

4. It is important to select the proper terminal for each application. Considerations include maximum operating currents, locked rotor currents, time and protection circuitry. Since customer designs vary as to terminal location, lead size, return line locations and compressor types, Fusite cannot provide specific data on every compressor configuration. The attached data tables are general guidelines only and not specific application recommendations. For assistance in terminal selection, contact Fusite Engineering.

5. Compressors and systems should be designed with appropriate electrical overload and thermal overload protection. Locked rotor currents often run 5 times as high as operating currents, and in some cases even higher. If such high currents are allowed to continue for any length of time, severe damage or personal injury may result. High currents raise the terminal pin temperatures, which may result in failure of wire insulation, breakdown of coolant-oil mixture causing possible electrical contamination, or softening of the glass seal resulting in hermetic failure.

6. Lead size and connector configuration can effect terminal operating temperature. Using larger wires increases the heat sink effect and lowers pin temperatures. Proper connector selection also reduces contact resistance and lowers pin temperatures.

General Instructions

Improper handling or servicing may cause hermetic terminal failure. The glass seal of the terminal may be damaged and allow leakage of oil and refrigerant. If electrical power is applied under these conditions, a hazardous condition can be initiated and may result in serious personal injury and/or property damage.

To protect against this potential hazard, personnel should be advised of these conditions and take the following precautions:

1. Always refer to compressor manufacturer's installation, operating and service instructions.

2. Fusite terminals are not field serviceable or repairable. Replace compressor if required.

3. Do not remove the junction box cover until electrical power to the unit has been turned off.

4. Do not start the compressor without the junction box cover properly locked in place.

To protect further against compressor failure hazards, consult factory technical manuals. In addition, consult and follow all manufacturers' warning labels mounted adjacent to the compressor junction box. Contact Fusite for other information regarding Terminal Precautions.

Where Glass Seals Metal

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