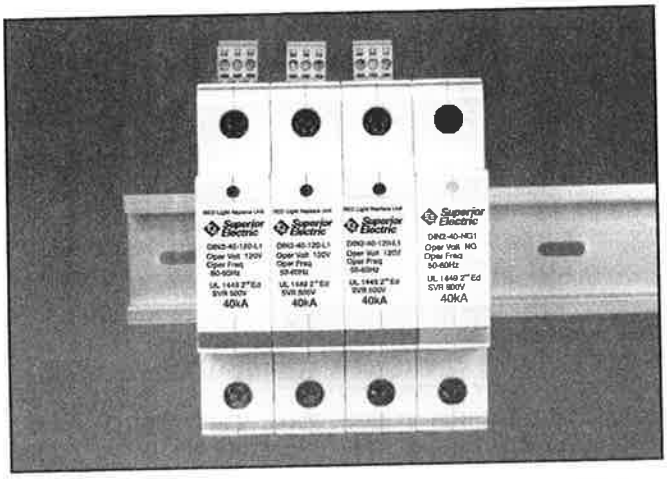
STABILINE® Transient Voltage Surge Suppressors
DIN2-40 Series - OWNERS MANUAL

Congratulations

Thank you for purchasing the DIN2-40 Series STABILINE Transient Voltage Surge Suppressor ... another Superior product!!

Expect exceptional performance. The unit is built to the highest standards for your complete satisfaction.

To assure many years of uninterrupted service, please read this Owners Manual to familiarize yourself with the operation and proper installation of the DIN2-40 Series unit.



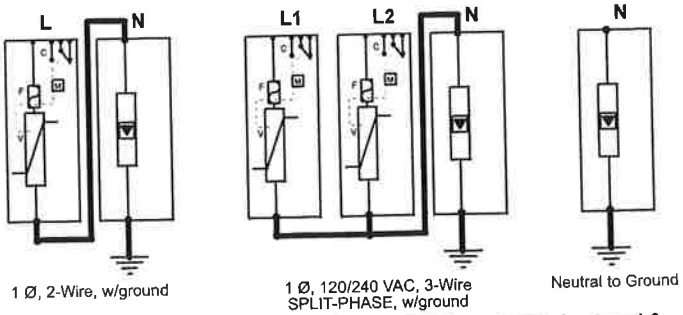
DIN2-40 Series STABILINE® Transient Voltage Surge Suppressors are single pole, parallel-connected, MOV technology Class II, Category B Surge Protective Devices suitable for use in AC electrical power systems for protection against surge and transient activity. DIN2-40 Series protectors provide 40 kA Surge Amp Capacity protection in a maintenance free, low profile, DIN Rail mountable module.

MODEL NUMBER & Typical System Voltage / Service Configurations

STABILINE Model	Typical System Voltage / Service Configuration	Protection Mode	Protector Quantity		Surge Performance Specifications				
			Line Voltage	N-G	MCOV	Max Surge Current Rating	❶ Nominal Surge Current Rating	❷ UL 1449 SVR Rating	❸ C3 Comb Wave
DIN2-40-120-L1	1 Ø, 120 VAC, 2-Wire, w/ground 1 Ø, 120/240 VAC, 3-Wire SPLIT-PHASE, w/ground 3 Ø, 208Y/120 VAC, 4-Wire WYE, w/ground	L-N, N-G L-N / L-N, N-G L-N / L-N / L-N, N-G	1 2 3	1 1 1	150 VAC	40 kA	20 kA	500 VAC	500 VAC
DIN2-40-220-L1	1 Ø, 220 VAC, 2-Wire, w/ground 3 Ø, 380Y/220 VAC, 4-Wire WYE, w/ground 3 Ø, 220 VAC, 3-Wire DELTA	L-N, N-G L-N / L-N / L-N, N-G L-L / L-L / L-L	1 3 3	1 1 N/A	255 VAC	40 kA	20 kA	700 VAC	900 VAC
DIN2-40-277-L1	1 Ø, 277 VAC, 2-Wire, w/ground 3 Ø, 480Y/277 VAC, 4-Wire WYE, w/ground	L-N, N-G L-N / L-N / L-N, N-G	1 3	1 1	320 VAC	40 kA	20 kA	800 VAC	1000 VAC
DIN2-40-480-L1	1 Ø, 480 VAC, 2-Wire, w/grounded neutral 3 Ø, 380 or 480 VAC, 3-Wire DELTA	L-L, N-G L-L / L-L / L-L	1 3	1 N/A	550 VAC	40 kA	20 kA	1800 VAC	2100 VAC
DIN2-40-NG1	120, 120/240, 220, 277, 380, 480 VAC Neutral to Ground	N-G	N/A	1	600 VAC	40 kA	20 kA	800 VAC	500 VAC

❶ For a minimum of (20) 8 x 20usec surges
❷ UL 1449 2nd Edition, (6kV, 500A 8 x 20usec) Surge Voltage Rating
❸ C3 Combination Wave, 20kV, 8 x 20usec, 10 kA

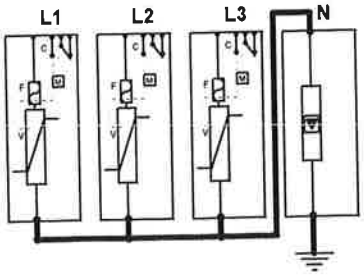
TYPICAL SERVICE CONFIGURATIONS Contact Factory for addititional configurations



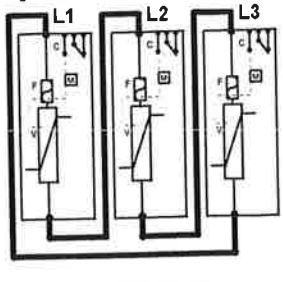
1 Ø, 2-Wire, w/ground

1 Ø, 120/240 VAC, 3-Wire SPLIT-PHASE, w/ground

Neutral to Ground



3 Ø, 4-Wire WYE, w/ground



3 Ø, 3-Wire DELTA

SPECIFICATIONS

Electrical Specifications
Modes of Protection: L-N; L-G; L-L protectors use MOV technology and N-G protector use Gas Tube.
Input Power Frequency: 47-64 Hz
Associated Fusing: DIN2-40 protectors incorporate an internal thermal disconnect system with time-delayed Class J,30A-125A over current fuses.

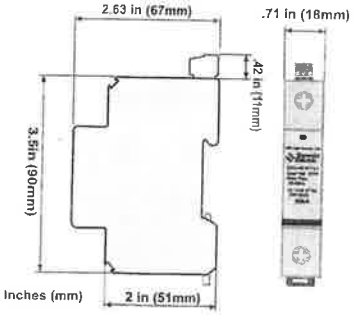
Environmental Specifications
Operating Temperature: -40° C to 85° C (-40° F to 185° F)
Relative Humidity: 5% to 95% non-condensing
Max. Operating Altitude: 4,000 meters (13,000 feet)

Mechanical Specifications
Enclosure: IP20 enclosures (UL94V0 thermoplastic housing material).
Mounting: Din Rail 35mm symmetrical
Connection Method: Screw terminal # 4 - 10 AWG
Size (H x W x D): 3.5 x .71 x 2.63 inches (90.0 x 18.0 x 67 mm)
Weight (Shipping): 0.25 lbs (0.11 kg)

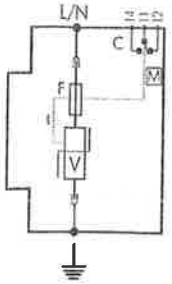
General Specifications
Standards Compliance and Safety Approvals: Meet UL 1449, 2nd Edition, EN61643-11 (Europe), ANSI/IEEE C62.41-2002, NF EN 61643-11 (France), VDE0675-6, CSA-22.2 and CE marked.
Warranty: Ten Years

SAVE THESE INSTRUCTIONS!!

Dimensions



Internal Protector Schematics



V : Heavy Duty Varistor

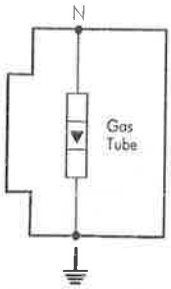
F : Thermal Fuse

C : Remote and Signal Contact

I : Thermal Disconnect

M: Monitor (Window)

Line Voltage Protector



Neutral to Ground Protector

The Importance of Correct Installation

THE FOLLOWING IS INTENDED FOR QUALIFIED ELECTRICAL PERSONNEL ONLY. COMPLETELY READ THESE INSTRUCTIONS BEFORE INSTALLATION. IT IS THE FINAL RESPONSIBILITY OF THE INSTALLING ELECTRICIAN TO ENSURE THAT ALL LOCAL CODES AND OTHER APPLICABLE SAFETY/ENVIRONMENTAL CONDITIONS ARE MET AND THE UNIT IS CORRECTLY INSTALLED.

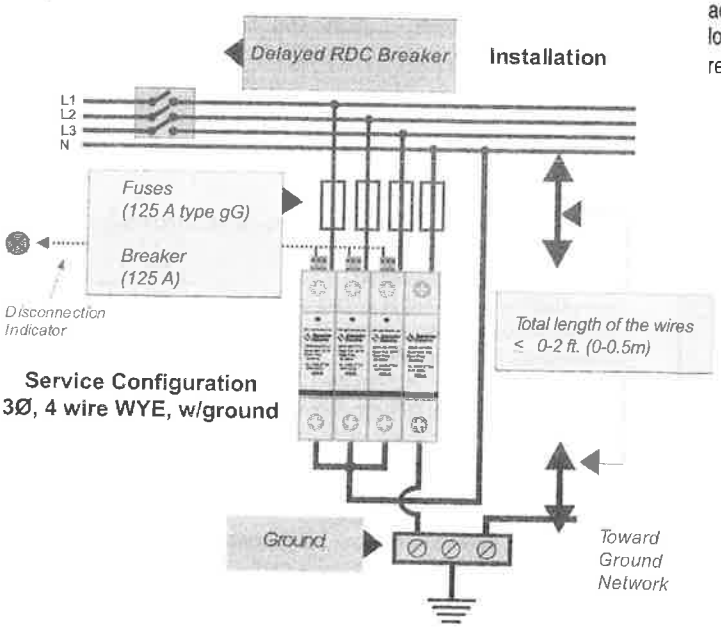
This manual provides guidelines for the proper installation of DIN2-40 Series units. Proper product selection and compliance with these guidelines will help your new suppression system provide years of reliable service. If installer's are unsure about the facility's electrical configuration or have other installation-related questions, we recommend they consult with a master electrician or other qualified electrical professional.

Installation

REMOVE POWER FROM ELECTRICAL SYSTEM PRIOR TO INSTALLATION.

The DIN2-40 protectors are installed/connected in Parallel with the line and the equipment to be protected.

The DIN2-40 Series unit should be installed down stream of a 125 A maximum fuse or breaker (see diagram). If pre-existing fuses or breakers are present, then the fusing or breaker used for the DIN2-40 protector should have a lower rating in order to be properly coordinated, as per applicable electrical regulatory standards. The Short Circuit current rating for these DIN2-40 protectors are 25,000 Amps using a 50A Class J time delayed fuse.



Service Configuration
3Ø, 4 wire WYE, w/ground

DO NOT INSTALL THE DIN PROTECTOR IF MEASURED VOLTAGE EXCEEDS UNIT RATINGS.

The DIN2-40 protector MUST BE mounted in an enclosure to assure personnel safety from exposed terminals. Mechanically mount the DIN2-40 protector utilizing customer supplied Din-Rail.

Wiring connection between the DIN2-40 protector and protected equipment should be kept as short as possible. Superior Electric recommends that wire lengths be less than 20 inches (0.5m). Wire should be straight and should not contain 90 degree bends. If bends are required, they should be sweeping bends.

Unprotected cables should not be installed in parallel with the protected cables. This will minimize coupling of inductively induced surges onto unprotected cables.

Remote Signal

DIN2-40 protectors (except N-G protector) come standard with one remote monitoring relay with "dry Form C contacts" per module. The contact can be used to drive several different types of indicators such as a remote light indicator or an audible alarm. The signal strength is (Vmax:250V rms, Imax: 2A). The connection to the remote signal is through the screw terminals.

Maintenance

The DIN2-40 protector is a maintenance free device. If the unit is subjected to a prolonged over-voltage condition, an internal thermal element will activate, disconnecting the DIN2-40 from the line. When the unit is no longer providing protection the window on the front of the DIN2-40 becomes red and a replacement unit will be required.

WARNING! The DIN2-40 Series Warranty is voided if the unit is damaged as a result of improper installation or the installer's failure to verify the voltage and power configuration of the DIN2-40 unit with the installation voltage and service configuration at the site. Improper installation or misapplication of these devices may result in serious injury to the installer and/or damage to electrical system(s) or related equipment. Protective eyewear should be worn during the installation process.

*** These INSTRUCTIONS are subject to change without notice.**

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