Технические характеристики на грозорязрядники Moore Industries

По вопросам продаж и поддержки обращайтесь:

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Superior Surge Suppressor Solutions



Description

Moore Industries' family of reliable surge suppressors protects your process against failures caused by lightning, power spikes, and many other types of overvoltage damage. Overvoltage damage takes many forms, from gradually reducing measurement accuracy and product quality to destroying a unit outright and causing an unneccessary and costly shutdown.

Providing up to 3kA of surge protection per line at subnanosecond speeds, our suppressors protect your process with the most effective suppression available.

Features

• Protect from failure due to overvoltage stress. Our suppressors protect against power fluctuations such as switching inductive loads, switch contacts arcing, motors cycling, fuses clearing, circuit breakers tripping, or power outages that can gradually wear down the life of electronic circuits.

• **Hassle-Free Protection.** Easy installation combined with a safety feature that automatically resets the suppressor after each surge makes these surge suppressors hassle-free and maintenance-free.

Ordering Information

What type of line do you need to protect?	What type of unit does this line connect to?	What type of solution do you need?	What are some examples of units that this solution works with?	What is the Part Number for your solution?	Where is more information on this solution?
4.00	Field-Mount Enclosure	Field-Mount Surge Suppressor – A compact unit, this 28VDC suppressor fits into Moore Industries field-mount enclosures to protect 4-20mA line.	FDY, PSD, SDY, STZ, TDY, TDZ3	205-863-12	Page 2
4-20MA 200p	DIN-Style (Rail-mount instruments)	DIN-Plug Surge Suppressor – This plug-in terminal block surge suppressor inserts into Moore Industries DIN-style housing terminals to protect 4-20mA lines.	CPT, ECT [DIN], SIY, SPT, SST, SSX, TRY	205-863-01	Page 3
RS-422/RS-485 Communication Lines	12VDC Data Lines12VDC Rail-Mount Surge Suppressor – Enclosed in a Moore Industries DIN-style housing, this 12VDC surge suppressor protects data communication lines such as RS-422 and RS-485.		CCS, DDS, HCS, MDS, NCS	205-863-07	Page 4
4-Wire Instrument Power Lines	4-Wire Instrument Power Lines 220VAC Power Lines 220VAC Wire-In Surge Suppressor – Surface-mount surge suppressor protects the power terminals of 4-wire (line-powered) instruments.		Any unit that is powered by 220VAC	205-863-03	Page 5

Field-Mount Surge Suppressor Part Number 205-863-12



The Field-Mount Surge Suppressor

This advanced suppressor can be placed inside of a Moore Industries *BH* or *SB* enclosure. Because of its ability to allow HART signals to pass through, you can use this surge suppress or to protect both analog and HART digital/analog signal lines.

Suppress Harsh Surges. Exceeding severity level 4 of IEC 61000-4-4, this suppressor provides 3kA/line of surge protection. Lightning-fast response time stops failures due to lightning, spikes, and overvoltage surges while minimizing other electrical noise.

Perfect for Rugged Environments. This durable suppressor is encapsulated and suitable for the most harsh industrial environments.

The Field-Mount Surge Suppressor works with most Moore Industries' units, including the following:

Temperature Transmitters	STZ, THZ3, TDY, TDZ3, RIY, TIY	
Isolators, Converters, & Transmitters	FDY, PSD, SDY	

Figure 1. The compact field-mount surge suppressor fits inside a Moore Industries BH or SB housing.



Operating Voltage: 28Volts Performance Performance Performance Maximum Surge Voltage: 20kV **Response Time:** Maximum Operating (Continued) Maximum Surge Current (Continued) <1 nanosecond Voltage: 30 Volts (8x20 µsec): 2.5kA/line Current Leakage/Line at Maximum Operating **Operating & Storage** Ambient Current: 650mA Operating Voltage: 5 µA Conditions Temperature: **Clamping Action Turn-On:** Capacitance/Line at Rated -40°C to +85°C 34.2 Volts Voltage: 1nF (-40°F to +185°F) Maximum Clamping @3kA (8x20 µsec): 50 Volts

Installation

Specifications

Connection & Grounding– Establish the electrical connections before mounting the surge suppressor. Connect the wires from the field to the terminal block headers on the front of the surge suppressor. Connect the red(+) and black(–) wires from the side of the surge suppressor to the appropriate terminal of your unit. Finish the connections by connecting the green ground wire on the surge suppressor to a good earth ground, such as a ground screw attached to the base of the

enclosure. Equipment ground and suppressor ground should be common.

Mounting–Mount the surge suppressor to the bottom of your enclosure using the supplied mounting kit and instructions. Though maintenance is not required, we recommend that the instrument zero be checked after installation.

Superior Surge Suppressor Solutions

DIN-Plug Surge Suppressor

Part Number 205-863-01

Suppress Harsh Surges. Exceeding severity level 4 of IEC 61000-4-4 and 61000-4-5, this unit provides 2.5kA/ line of surge protection. Lightning-fast response time stops failures due to lightning, spikes, and overvoltage surges while minimizing other electrical noise.

Compact Power. The DIN-Plug Surge Suppressor is designed to fit onto any Moore Industries' 2-prong terminal block header. Economical, small, and powerful, this unit has the suppression technology you need for use in the field with a compact design that will fit in the most cramped of control rooms. It is available in a 28-volt model that protects most Moore Industries instruments, including the following, from overvoltage current running along 4-20mA lines:

Temperature Transmitters	CPT, RIY, SPT, TIY, THZ
Isolators, Converters, &Transmitters, and More!	CPT, ECT [DIN], SIY, SST, SSX





Specifications

Performance Operating Voltage: 28 Volts Maximum Operating Voltage: 30 Volts Maximum Operating Current: 200mA Clamping Action Turn-On: 31.4 Volts Maximum Clamping @2kA (8x20 μsec): 46 Volts

Performance Maximum Surge Voltage: (Continued) 20kV

20kV
 Maximum Surge Current
 (8x20 μsec): 2.5kA/line
 Current Leakage/Line at
 Operating Voltage: 5 μA
 Capacitance/Line at Rated
 Voltage: 500pF



The DIN-Plug Surge Suppressor is a perfect fit for any DIN unit with our 2-terminal header.

Figure 3. Dimensions of the DIN-Plug Surge Suppressor



Installation

Connecting & Grounding–For a typical installation of this product, plug the surge suppressor unit into the input or output loop terminal block of the Moore Industries' DIN unit (as shown in Figure 2). Plug the terminal block header into the back of the surge suppressor. The suppressor must be connected to a good earth ground. Equipment and suppressor ground should be common. Maintenance is not required, but we recommend that instrument zero be checked after installation.

Performance (Continued)	Response Time: <1 nanosecond
Ambient Conditions	Operating & Storage Temperature: -40°C to +85°C

(-40°F to +185°F)

Data Line Rail-Mount Surge Suppressor

Part Number 205-863-07

The Rail-Mount Surge Suppressor is designed to mount on any Top Hat or "G" type DIN-rail. This unit will protect digital signals.

Protect Communication Lines. The unit provides you with incredible protection specifically designed for communications lines. This unit will work with RS-422, and RS-485 communication lines. Put one of these units on both ends of your long runs of communications wire to ensure that your transmitter and receiver are both protected from overvoltage damage.

Tough Protection. Exceeding severity Level 4 of IEC 61000-4-4 recommendations, this unit's sub-nanosecond response time stops failures due to lightning, spikes, and overvoltage surges while minimizing other electrical noise.

Installation

Mounting-The Rail-Mount Surge Suppressor can be quickly and easily mounted on any standard DIN-rail.

Connecting–Connect each incoming power line to the appropriate plug of the FIELD terminal block. Connect wires from the protected instrument to the appropriate plug of the EQUIPMENT terminal block of the surge suppressor.

Grounding–Both the protected unit's housing and the suppressor must be connected to a common good earth ground, such as from the DIN-Rail foot to the grounded rail, the ground bolt on top of the suppressor, or hard-wired terminal blocks. Keep the ground wire (#12 AWG) short and place the suppressor as close as possible to the equipment it is protecting.

Specifications





Data Line Rail-Mount Surge Suppressor can protect communication lines.





AC Wire-In Surge Suppressor

Part Number 205-863-03

The AC Wire-In Surge Suppressor provides powerful protection for the 220VAC power lines of your process. Meeting severity level 4 of IEC 61000-4-4 and 61000-4-5, this surge suppressor's incredible protection and sub-nanosecond speed can save your process from electrical damage.

Resists Environmental Interference. This surge suppressor's durable design coupled with RFI/EMI filtering, differential and common mode suppression, and hermetically sealed components makes it ideal for use in severe environments.

Protect Almost Any Unit. The AC Wire-In Surge Suppressor works with any Moore Industries' unit that requires 220VAC power, including the SPA2, STA, SPT, ECA, PIT, PVT, PWT, PWV, PAC and PAV.

Figure 5. Dimensions of the AC Wire-In Surge Suppressor

51mm (2.0 in) (1.5 in) (2.0 in) (1.5 in) (2.0 in) 76mm (3.0 in)

Installation

Connecting–For a typical installation of this product, connect this unit to your instrument after the power switch and fuse, and as close to the electronic equipment it protects as possible. Connect the input power lines to the appropriate place on the FIELD side of the surge suppressor, as shown in Figure 6. Connect the power lines going to the protected unit to the appropriate connections on the EQUIPMENT side of the surge suppressor.

Grounding–The ground terminal must be connected to a good earth ground (AWG# 14 or larger). Protected equipment ground and suppressor ground should be common. Dress output "clean" lines away from incoming lines. This suppressor contains no internal fuse and can fail short under direct lightning exposure; therefore, proper fusing is essential. Heat sinking is not required.

Figure 6. Sample installation of the AC Wire-In Surge Suppressor



Specifications

Performance

Operating Line Voltage @ 50/60Hz: 220/240VAC Maximum Operating Line Current: 5 Amps Maximum Line Current: 6 Amps Maximum Transient Voltage: 6kV Maximum Transient Current: 4kA Clamping Action Turn-On: 390 Volts

Performance (Continued) Maximum Clamping Voltage @ I;: Line-Neutral: 410 Volts; Line-Ground: 430 Volts; Neutral-Ground: 430 Volts Suppressed Voltage Rating (V_{PM}) UL 1449 2nd Edition TVSS: Line-Neutral: 600V peak; Line-Ground: 600V peak; Neutral-Ground: 600V peak Frequency Attenuation: 100kHz -30dB; 10MHz -60dB

Performance (Continued) Maximum Leakage Current, Each Line Ground: @2201/4C

Current, Each Line to Ground: @220VAC 60Hz, 0.5mA Response Time: <1 nanosecond

Ambient Operating & Storage Temperature: -40°C to +85°C (-40°F to +185°F)

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