

The Series DTSxxAxDINS-B devices are designed to protect current loop process instrument, data transmission, control, and signal line circuits. These devices are intended for installation as close to the electrical power source of the equipment as possible so as to allow for a common point for grounding.

This device is for circuits with up to 3 pair of signal lines connected via the detachable terminal strips provided, making installation a breeze. A ground lug is provided on the side of the unit to insure a low impedance ground discharge path.

The unique design of these devices makes them among the most versatile SPD devices on the market with superior performance specs and a warranty that is second to none.

## GENERAL

<b>Description:</b>	Series wired transient voltage surge suppressor with encapsulated Optimal Response Network™ circuitry for protection of current loop and data/signal type circuits.
<b>Application:</b>	Designed for use on data, signal, current loop and control circuits to protect equipment from damaging transients generated between terminals and equipment in the data collection/transmission system.
<b>Warranty:</b>	5 Years Unlimited Free Replacement
<b>Compliance:</b>	UL497B

## MECHANICAL

<b>Enclosure:</b>	Plastic, UL 94-5VA
<b>Mounting:</b>	DIN rail mounting foot
<b>Connection Method:</b>	Wire clamping detachable box terminals located at the input and output sides of the device. Wire size: Lines # 12-22 AWG, Ground # 6-12 AWG.
<b>Shipping Weight:</b>	< 1 lbs

## CIRCUITRY

<b>Circuit Design:</b>	Series wired design incorporating discrete all mode protection and utilizing our encapsulated Optimal Response Network™ design to provide lowest possible let-through voltages.
<b>Protection Modes:</b>	Dedicated protection components and circuitry for each mode. Discrete each L-L (Normal Mode) and each L-G (Common Mode) Shield-G (Common Mode)

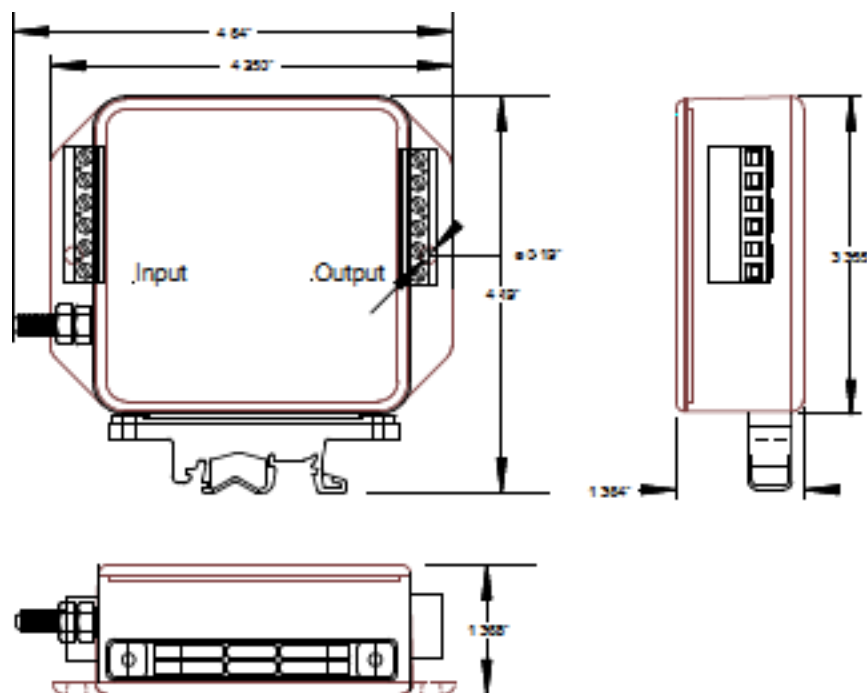
## PERFORMANCE

<b>Maximum Continuous Operating Voltage:</b>	See Table on back
<b>Maximum Continuous Operating Current:</b>	500 mA
<b>Series resistance:</b>	5 Ohms per wire (10 Ohms loop)
<b>Maximum Data Rate:</b>	Up to 2 Mbps
<b>Peak Surge Current per Pair:</b>	L-L 10 kA, L-G 10 kA



Model	Nominal System Operating Voltage (Vnom)	Test Mode	Maximum Continuous Operating Voltages	Maximum Continuous Operating Current
DTS5AxDINS-B	5 V	L-G L-L Shield-G	6 V 12 V 70 V	500 mA
DTS12AxDINS-B	12 V	L-G L-L Shield-G	25 V 50 V 70 V	500 mA
DTS24AxDINS-B	24 V	L-G L-L Shield-G	25 V 50 V 70 V	500 mA
DTS48AxDINS-B	48 V	L-G L-L Shield-G	58 V 116 V 70 V	500 mA
DTS140AxDINS-B	140 V	L-G L-L Shield-G	220 V 440 V 70 V	500 mA

Notes: x = 2, 4 or 6



Actual unit may vary from picture

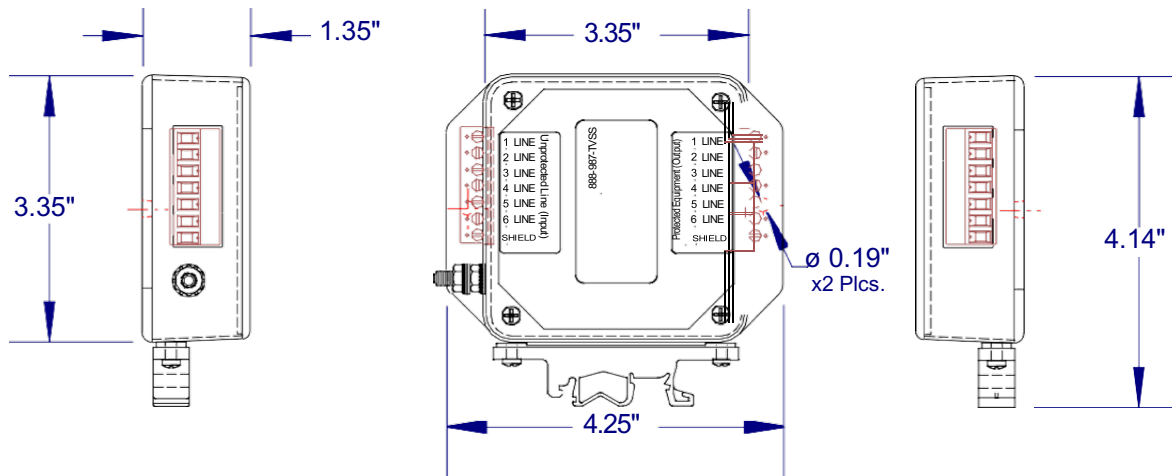


**WARNING - HAZARDOUS VOLTAGES ARE PRESENT.** Improper installation may result in serious injury to the installer and/or damage to the electrical system or connected communication equipment. Fully read and understand all instructions before beginning the installation. Safety equipment must be used as prescribed by OSHA, whenever working around hazardous voltages.

**Failure of unit and/or consequential equipment damage due to improper installation or misapplication is not covered by the product warranty.**

Voltage measurements and installation must be completed by a licensed/qualified electrician in accordance with the National and/or Canadian Electric Code, State, and Local codes. These requirements supersede this instruction.

**POWER MUST BE REMOVED FROM THE ELECTRICAL SYSTEM BEFORE INSTALLING THE DTSXXAXDINS-B SERIES DATA UNIT.**



## BEFORE INSTALLATION

Prior to installation of the DTSxxAxDINS-B series unit:

1. Test system to verify that the voltage and current do not exceed the Maximum Continuous Operating Limits listed in the table below.
2. Actual measurement with an oscilloscope, or verification through review of 'as installed' equipment specifications may be sufficient to establish compliance.
3. If the circuit exceeds Maximum Continuous Operating Limits in voltage, current and/or data rate, do not proceed with the installation!

Low speed DTSxxAxDINS-B series models are designed to protect current loop circuits, signal lines &/or slow-speed data lines feeding transducers, leak detectors, flow meters and a broad variety of similar sensory devices. Models may be optioned with 2, 4 or 6 terminal connections as shown above. \*(Refer to the notes section below the table for detail.).

There are no position-oriented components in the DTSxxAxDINS-B series unit; therefore, the device can be mounted upside down or sideways to allow for the most efficient installation.

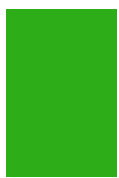


Table of Maximum Suggested Operating Limits, Data Rate & Additional Device Resistance					
Nomystem Operating Voltage (Vnom)	Operating Voltage Model Number	(MCOV)	(MCOC)	Data Rate	UL 497 Breakdown Range 100 V/s 100 V/μs
5 V	DTS5AnDINS-B	7.5 V L-G 7.5 V L-L 70 V Shield-G	500 mA	2 Mbps	5-10 < 1000
12 V	DTS12AnDINS-B	24 V L-G 24 V L-L 70 V Shield-G	500 mA	2 Mbps	17-31 < 1000
24 V	DTS24AnDINS-B	36 V L-G 36 V L-L 70 V Shield-G	500 mA	2 Mbps	25-47 < 1000
48 V	DTS48AnDINS-B	62 V L-G 62 V L-L 70 V Shield-G	500 mA	2 Mbps	43-81 < 1000
140 V	DTS140AnDINS-B	200 V L-G 200 V L-L 70 V Shield-G	500 mA	2 Mbps	140-260 < 1000

Note: n, y = number of lines (2, or 4)

## INSTALLATION STEPS

**CAUTION: Do not proceed further until power has been removed from the electrical system.**

### STEP 1: Mounting the Unit

- Y Mechanically mount the suppressor using the DIN rail mounting foot.
- Y The device should be mounted for maximum separation between protected and unprotected wiring.
- Y The device contains no direction-oriented components and can be mounted in any position.
- Y The device should be the last device placed in the circuit before the protected equipment.
- Y The device should be mounted directly to, or as close as practical to the equipment to be protected.

### STEP 2: Wiring the Unit

- Y Connect the incoming Shield line to the Shield INPUT screw terminal.
- Y Connect the outgoing Shield line to the Shield OUTPUT screw terminal.
- Y Connect a ground wire (#6-12 AWG) from ground lug to system ground using a #10 ring terminal.
- Y Connect the incoming line 1 wire to the L1 INPUT screw terminal.
- Y Connect the outgoing line 1 wire to the L1 OUTPUT screw terminal.
- Y For cable pairs, use terminals: 1 & 2 (1st pair), 3 & 4 (2nd pair), etc..., (per model terminal version).
- Y Repeat for the remaining terminals as required.

### STEP 3: Restart the system and check for proper operation

- Y The system may require recalibration due to the additional resistance of the suppressor on the line. If the system does not operate properly, remove the suppressor.



## FIVE YEAR LIMITED WARRANTY

**LP Parts, LLC** warrants for a period of **five (5) years** from date of retail purchase that if its product ceases to properly function as a direct result of any electrical anomaly, including lightning, **LP Parts, LLC** will repair or replace the product without charge, subject to the terms and conditions set forth herein. If, in the sole subjective opinion of **LP Parts, LLC** the product has been modified, altered, tampered with, misused or misapplied or repaired by any entity other than **LP Parts, LLC**, or subjected to abuse, the warranty is void. The warranty shall not apply unless the product is installed by a qualified licensed and/or bonded electrician. The warranty period for repaired or replacement products shall be only the remaining portion of the original limited warranty. Any defect appearing more than five (5) years from the date of delivery to purchaser, shall be deemed to be due to ordinary wear and tear. **LP Parts, LLC**, however, assumes no risk or liability resulting from the use of its products, including but without limiting the generality of the foregoing: (1) The use of this product in combination with any electrical or electronic components, circuits, systems, assemblies or any other materials or substances; (2) The improper application or unsuitability of this product for use in any circuit or assembly. All warranty inspections and parts must be obtained at **LP Parts, LLC**. The giving of, or failure to give, any advice or recommendations by **LP Parts, LLC** shall not constitute any warranty by or impose any liability upon **LP Parts, LLC**. THIS WARRANTY DOES NOT GUARANTEE UNINTERRUPTED ELECTRIC SERVICE. REPAIR OR REPLACEMENT OF THIS PRODUCT IS THE EXCLUSIVE REMEDY OF THE RETAIL END USER PURCHASER. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR USE OR PURPOSE; ALL OF WHICH ARE HEREBY EXCLUDED AND EXPRESSLY DISCLAIMED. **LP PARTS, LLC** SHALL IN NO EVENT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES OF ANY KIND OR CHARACTER, INCLUDING, WITHOUT LIMITATION, THE EXPENSE OF INSTALLATION OR REMOVAL OF THIS PRODUCT, LOSS OF REVENUE OR PROFITS, FAILURE TO REALIZE SAVINGS OR OTHER BENEFITS, LOSS OF COMPUTERIZED OR OTHER DATA, DAMAGE TO ANY ELECTRIC OR ELECTRICAL EQUIPMENT, INCONVENIENCE AND/OR FOR THIRD PARTY CLAIMS MADE AGAINST THE WHOLESALE OR RETAIL PURCHASER OF THIS PRODUCT, EVEN IF BEFORE OR AFTER PURCHASE **LP PARTS, LLC** HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. **LP Parts, LLC** TOTAL LIABILITY FOR ANY CLAIM MADE AGAINST IT SHALL IN NO EVENT EXCEED THE PURCHASE PRICE PAID TO **LP PARTS, LLC** FOR THE DEFECTIVE PRODUCT. As a condition precedent to **LP Parts, LLC's** performance pursuant to this Warranty, Purchaser must return this product within the Warranty period FOB **LP Parts, LLC's** place of business in Lacombe, LA. *Please call 1-985-882-2985 for warranty return procedures. Return authorization is required.*



## **Contact Us**

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