



The DPS##A3P-B is designed to protect highly sensitive current loop circuits, signal lines and/or low speed data lines feeding transducers, leak detectors, flow meters and a broad variety of similar sensory devices from damage due to surges.

This device is mounted using the threaded ends of the pipe housing or a capped end is optional. It is grounded through use of the green ground wire attached to the unit, as well as its housing. 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

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

MECHANICAL

Enclosure:	316 stainless steel, Capped end (C Option, R Option for 3/4" to 1/2" Reducer)
Mounting:	3/4" NPT threaded housing.
Connection Method:	18 AWG tinned copper wire
Shipping Weight:	< 2 lbs

CIRCUITRY

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

PERFORMANCE

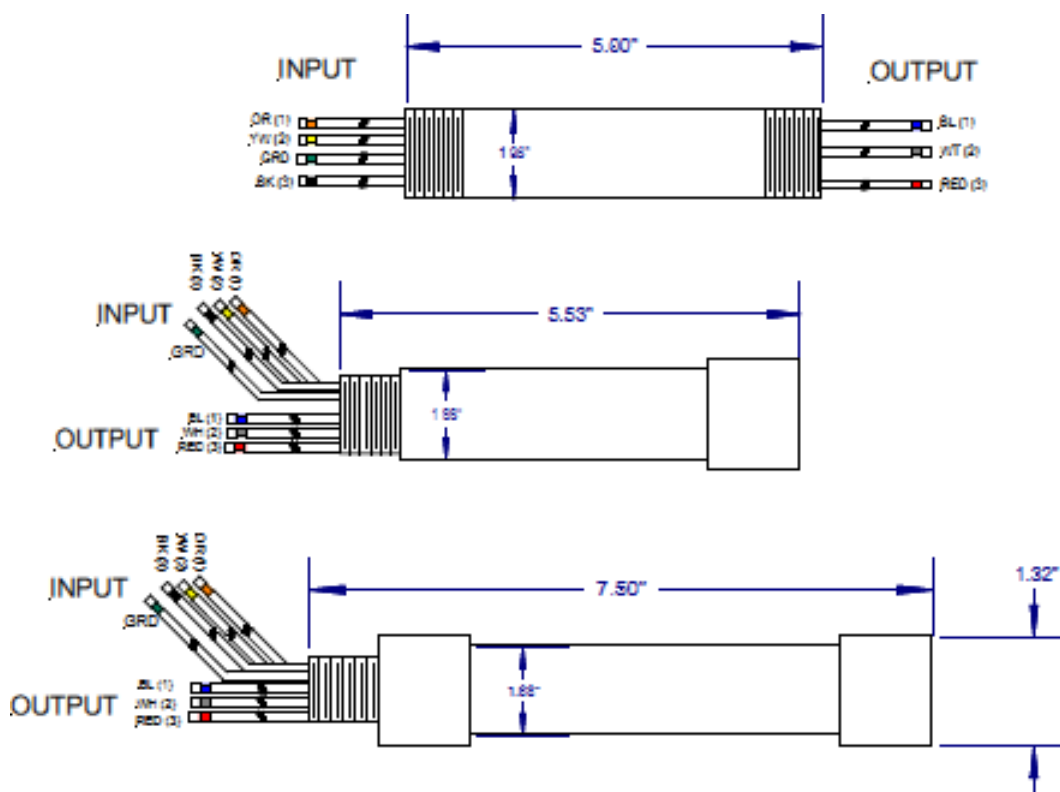
Maximum Continuous Operating Voltage:	7.5 thru 200 V (varies by model, See Table)
Maximum Continuous Operating Current:	500 mA
Frequency Range:	DC to 20 MHz
Maximum Data Rate:	Up to 2 Mbps
Series Resistance:	5 Ohms per wire (10 Ohms per loop)
Peak Surge Current per Pair:	L-L 10 kA, L-G 10 kA



Table of Maximum Suggested Operating Limits, Data Rate & Additional Device Resistance

Nominal System Operating Voltage (Vnom)	CLW##A3Pyz-B Operating Voltage Model Number	Maximum Continuous Operating Voltage (MCOV)		B3/C1 Impulse Wave 6 kV, 3 kA		Maximum Digital / Analog Data Rates Vs. Additional Series Resistance
		Voltage (L-L)	Voltage (L-G)	Voltage (L-L)	Voltage (L-G)	2 Mbps / 20 MHz
0 > Vnom ≤ 6	DPS5A3Pyz-B	± 15 Vpk	± 7.5 Vpk	< 40	< 20	5 Ohms per line (10 Ohms per pair/loop)
6 > Vnom < 15	DPS12A3Pyz-B	± 48 Vpk	± 24 Vpk	< 60	< 30	5 Ohms per line (10 Ohms per pair/loop)
15 ≤ Vnom < 36	DPS24A3Pyz-B	± 72 Vpk	± 36 Vpk	< 80	< 40	5 Ohms per line (10 Ohms per pair/loop)
36 > Vnom < 54	DPS48A3Pyz-B	± 124 Vpk	± 62 Vpk	< 160	< 80	5 Ohms per line (10 Ohms per pair/loop)
54 > Vnom ≤ 140	DPS140A3Pyz-B	± 400 Vpk	± 200 Vpk	< 400	< 200	5 Ohms per line (10 Ohms per pair/loop)

Note: y suffix = C for capped end, leave blank for no cap
z suffix = R for 3/4" to 1/2" Reducer (See bottom figure)





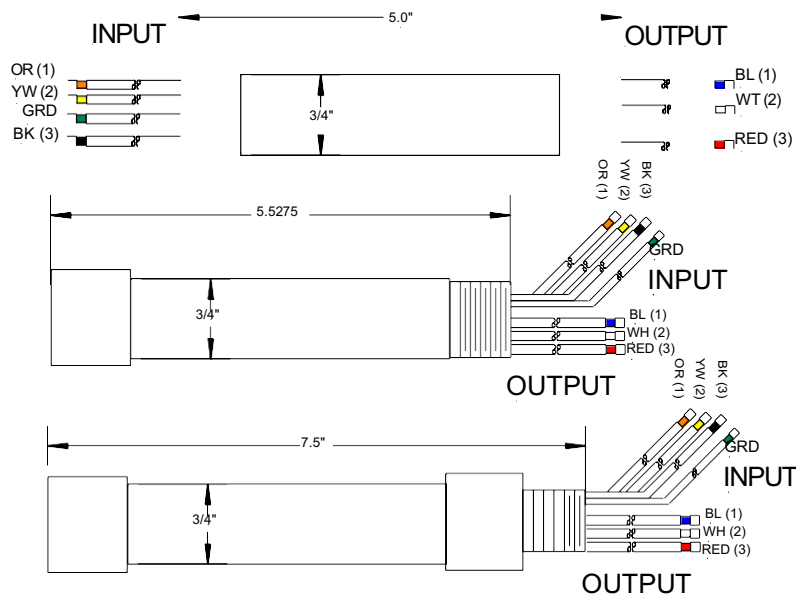
WARNING - HAZARDOUS VOLTAGES ARE PRESENT. Improper installation may result in serious injury to the installer and/or damage to the electrical system or connected communication equipment. Fully read and understand all instructions before beginning the installation. Safety equipment must be used as prescribed 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 CLWxxA3P(C)-B SERIES DATA UNIT.

WIRING DIAGRAM



BEFORE INSTALLATION

Prior to installation of the DPSxxA3P(C)-B series unit:

1. Test system to verify that the voltage and current do not exceed the Maximum Continuous Operating Levels 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 Levels in voltage and/or current, do not proceed with the installation!**

The DPSxxA3P(C)-B series devices are designed to protect current loop circuits, signal lines and/or low speed data lines feeding transducers, leak detectors, flow meters and a broad variety of similar sensory devices.

There are no position-oriented components in the DPSxxA3P(C)-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

Nominal Operating Voltage	Operating Voltage Model Number	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Data Rate	UL 497 Breakdown Range 100 V/s 100 V/μs
5VDC	DPS5A3P-B	7.5 V L-G 15 V L-L	500 mA	2 Mbps	5-10 < 1000
12VDC	DPS12A3P-B	24 V L-G 48 V L-L	500 mA	2 Mbps	17-31 < 1000
24VDC	DPS24A3P-B	36 V L-G 72 V L-L	500 mA	2 Mbps	25-47 < 1000
48VDC	DPS48A3P-B	62 V L-G 124 V L-L	500 mA	2 Mbps	43-81 < 1000
140VDC	DPS140A3P-B	200 V L-G 400 V L-L	500 mA	2 Mbps	140-260 < 1000

Note: Single-ended (end capped) models are denoted by a 'C' after the P. An R Denotes 3/4" to 1/2" Reducer

INSTALLATION STEPS

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

STEP 1: Mounting the Unit

Mechanically mount the suppressor using the threaded ends of the conduit.

- Y Suppressor should be mounted directly to, or as close as practical to the equipment to be protected.
- Y The suppressor should be the last device in line to the protected equipment.

STEP 2: Wiring the Unit

- Y Connect the GREEN ground wire from the CLWxxA3P(C)-B to the Lineground.
- Y Connect the BLUE (1) WHITE (2) and RED (3) wires on the Output side of the suppressor to the corresponding Load wires coming from the equipment to be protected, or directly to the lugs on the equipment itself.
- Y Connect the ORANGE (1) YELLOW (2) and BLACK (3) wires on the Input side of the suppressor to the corresponding Line wires.

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 and contact supplier.



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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