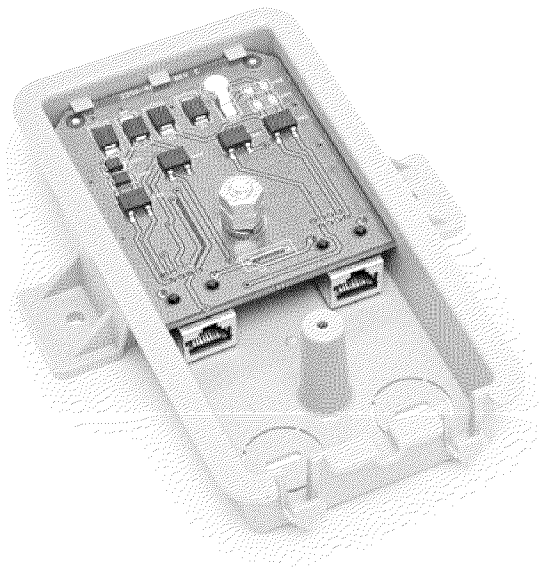


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DESIGN ACTIVITY.

REVISIONS

LTR	DESCRIPTION	ECO NUM.	DATE	APPROVED
B	CHANGE WIRE SIZE, ADD MODELS	7001	9/24/07	JDW
C	UPDATED FORMAT	DD1727	1/31/08	
D	UPDATE FOR SHIELDED RJ45 CONNECTORS	7333	8/5/08	MLH
E	UPDATE FOR CE MARK COMPLIANCE	8824	5/10/10	MTH



DRAWN:
MLH

DATE
6/27/07

CHECKED:
BP

7/3/07

ENGR. APPD:
JDW

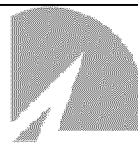
7/3/07

PROJ. APPD:
DWR

7/3/07

APPROVED:

MATERIAL:



Transtector Systems, Inc.

10701 Airport Road, Hayden, ID 83835

800.882.9110 208.772.8515 www.transtector.com

TITLE:

**Specification: ALPU POE Series
Broadband Communications Protector**

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SURGE SUPPRESSOR MODELS: ALPU POE Series Broadband Communications Protector

Model Name	Part Number
ALPU-POE-06	1101-873
ALPU-POE-06-M (Metal Case)	1101-932
ALPU-POE-60	1101-897
ALPU-POE-60-M (Metal Case)	1101-933
ALPU-POE-90	1101-898
ALPU-POE-90-M (Metal Case)	1101-934

Accessories	
Pole Mounting Kit	1000-1164

1. **GENERAL DESCRIPTION:** The Transtector ALPU POE Series Broadband Communications Protectors are designed to protect data networks with combinations of high speed data protocols. The protection circuits utilize silicon avalanche diode technology. The unit is available in a plastic enclosure or a cast aluminum enclosure. Both enclosure options are outdoor qualified NEMA 3R type enclosures with easy mounting flanges. The ALPU-POE series feature RJ-45 protection circuits for the Ethernet data pairs pins (1,2) (3,6) and DC un-polarized power pins (4,5) (7,8) for any combination of circuits up to 90VDC MCOV. The unit is intended to be wall mounted and an optional bracket is available to allow a wide range of pole mount applications. Design incorporates a dedicated ground stud that must be bonded to the nearest grounding system (or Master Ground bar) for proper surge protection function. The system wiring is installed with RJ-45 type connectors that can feed directly into the chassis without having to cut or splice or route through strain relief holes. Both enclosures include a built in cable retention feature for improved cable management. The plastic lid and base have molded fingers that grip the cables as the lid is attached. The metal enclosure has screw down clamps for maximum cable retention. In the unlikely event of surge protection self sacrifice, the individual protection cards will fail short to disrupt communication. The protection cards can be replaced for ease of service.

2. **ELECTRICAL** (performance specifications are identical for plastic and metal case versions):

2.1 ALPU-POE-06 Power Over Ethernet Protector

2.1.1 Connector Style	RJ-45 Cat5e shielded 100ohm
2.1.2 Ethernet Protected Pins	(1,2) and (3,6) pass through
2.1.2.1 Data Rate	100Mb/s
2.1.2.2 Nominal Operating Voltage	5Vpeak
2.1.2.3 Maximum Continuous Operating Voltage	6Vpeak
2.1.2.4 Impedance	85 to 115ohms
2.1.2.5 Frame Transmission	100% Transmission @ 100Mb/s
2.1.2.6 Attenuation	< -1dB @ 16MHz
2.1.2.7 Surge Suppression (per GR-1089)	<25Vpeak @ 100A 10/1000 μ s
2.1.3 DC Power Protected Pins	(4,5) and (7,8) pass through
2.1.3.1 Nominal Operating Voltage	48VDCpeak
2.1.3.2 Maximum Continuous Operating Voltage	60VDCpeak
2.1.3.3 Surge Suppression (per GR-1089)	<75Vpeak @ 100A 10/1000 μ s

2.2 ALPU-POE-60 Power Over Ethernet Protector

2.2.1 Connector Style	RJ-45 Cat5e shielded 100ohm
2.2.2 Ethernet Protected Pins	(1,2) and (3,6) pass through
2.2.2.1 Data Rate	100Mb/s
2.2.2.2 Nominal Operating Voltage	48VDCpeak
2.2.2.3 Maximum Continuous Operating Voltage	60VDCpeak
2.2.2.4 Impedance	85 to 115ohms
2.2.2.5 Frame Transmission	100% Transmission @ 100Mb/s
2.2.2.6 Attenuation	< -1dB @ 16MHz
2.2.2.7 Surge Suppression (per GR-1089)	<75Vpeak @ 100A 10/1000 μ s



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- 2.2.3 DC Power Protected Pins (4,5) and (7,8) pass through
- 2.2.3.1 Nominal Operating Voltage..... 48VDCpeak
- 2.2.3.2 Maximum Continuous Operating Voltage 60VDCpeak
- 2.2.3.3 Surge Suppression (per GR-1089) <75Vpeak @ 100A 10/1000 μ s

2.3 ALPU-POE-90 Power Over Ethernet Protector

- 2.3.1 Connector Style RJ-45 Cat5e shielded 100ohm
- 2.3.2 Ethernet Protected Pins (1,2) and (3,6) pass through
 - 2.3.2.1 Data Rate 100Mb/s
 - 2.3.2.2 Nominal Operating Voltage..... 75VDCpeak
 - 2.3.2.3 Maximum Continuous Operating Voltage 90VDCpeak
 - 2.3.2.4 Impedance 85 to 115ohms
 - 2.3.2.5 Frame Transmission 100% Transmission @ 100Mb/s
 - 2.3.2.6 Attenuation < -1dB @ 16MHz
 - 2.3.2.7 Surge Suppression (per GR-1089) <150Vpeak @ 100A 10/1000us
- 2.3.3 DC Power Protected Pins (4,5) and (7,8) pass through
 - 2.3.3.1 Nominal Operating Voltage..... 75VDCpeak
 - 2.3.3.2 Maximum Continuous Operating Voltage 90VDCpeak
 - 2.3.3.3 Surge Suppression (per GR-1089) <150Vpeak @ 100A 10/1000 μ s

3. ENVIRONMENTAL:

- 3.1. Operating/Storage Temperature..... -40°C to +80°C
- 3.2. Relative Humidity..... 99% (non-condensing)

4. MECHANICAL:

- 4.1. Plastic Enclosure
 - 4.1.1. Weight..... 0.5lbs (.23kg)
 - 4.1.2. Product Dimensions..... 6.66X1.68X3.66
 - 4.1.3. Product Material Plastic, UL94V0 Rated
- 4.2. Metal Enclosure
 - 4.2.1. Weight..... 0.8lbs (0.36kg)
 - 4.2.2. Product Dimensions..... 7.16X1.65X3.
 - 4.2.3. Product Material Die-Cast Aluminum

5. APPLICABLE INDUSTRY STANDARDS:

- 5.1. Bonding and Grounding NEC 800.100 and 830.100
- 5.2. Surge Suppression GR-1089-2006
- 5.3. Power over Ethernet Protocol IEEE 802.3af
- 5.4. CE Mark Compliant
- 5.5. ROHS Compliant

- 6. **INSTALLATION:** The ALPU POE Series Protectors are intended to be installed indoors or outdoors, on wall or pole mount applications. The unit mounts on four inch hole centers. Refer to Figure 1 and Figure 2 for mechanical requirements and connector locations. A dedicated ¼-20 ground stud with jam-nut is provided inside the plastic enclosure unit that must be bonded to the nearest grounding system. The optimum ground connection on the metal enclosure unit at the mounting flange on either side and is shown in Figure 2. Use minimum 6awg wire for ground reference attachment. Communications cables with the RJ45 connectors already installed can feed directly into the chassis. Both enclosures feature a built in cable retention feature that grips the cables as the lid is attached. A pole mount adapter kit (PN 1000-1164) is available to adapt to installations on a wide range of pole diameters.



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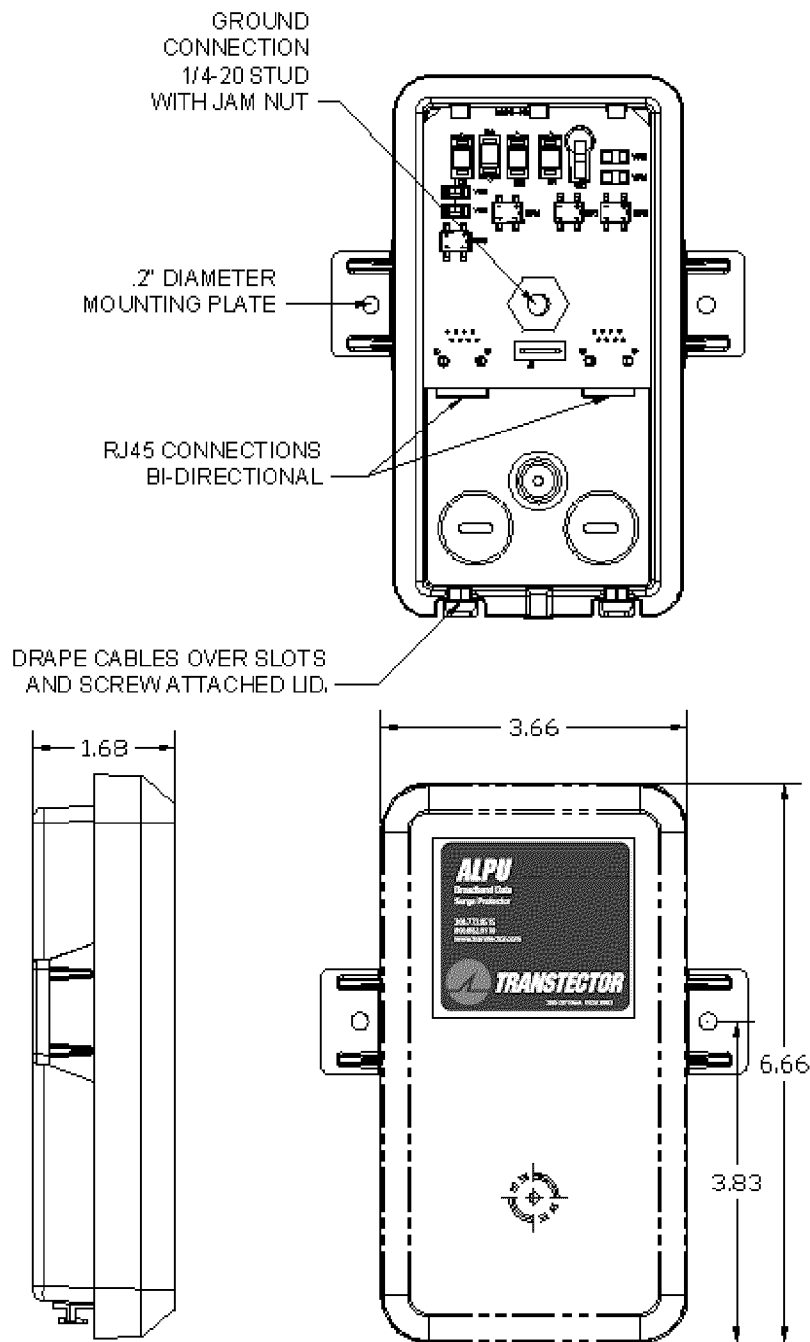


FIGURE 1. MECHANICAL OUTLINE PLASTIC ENCLOSURE DRAWING INCHES.

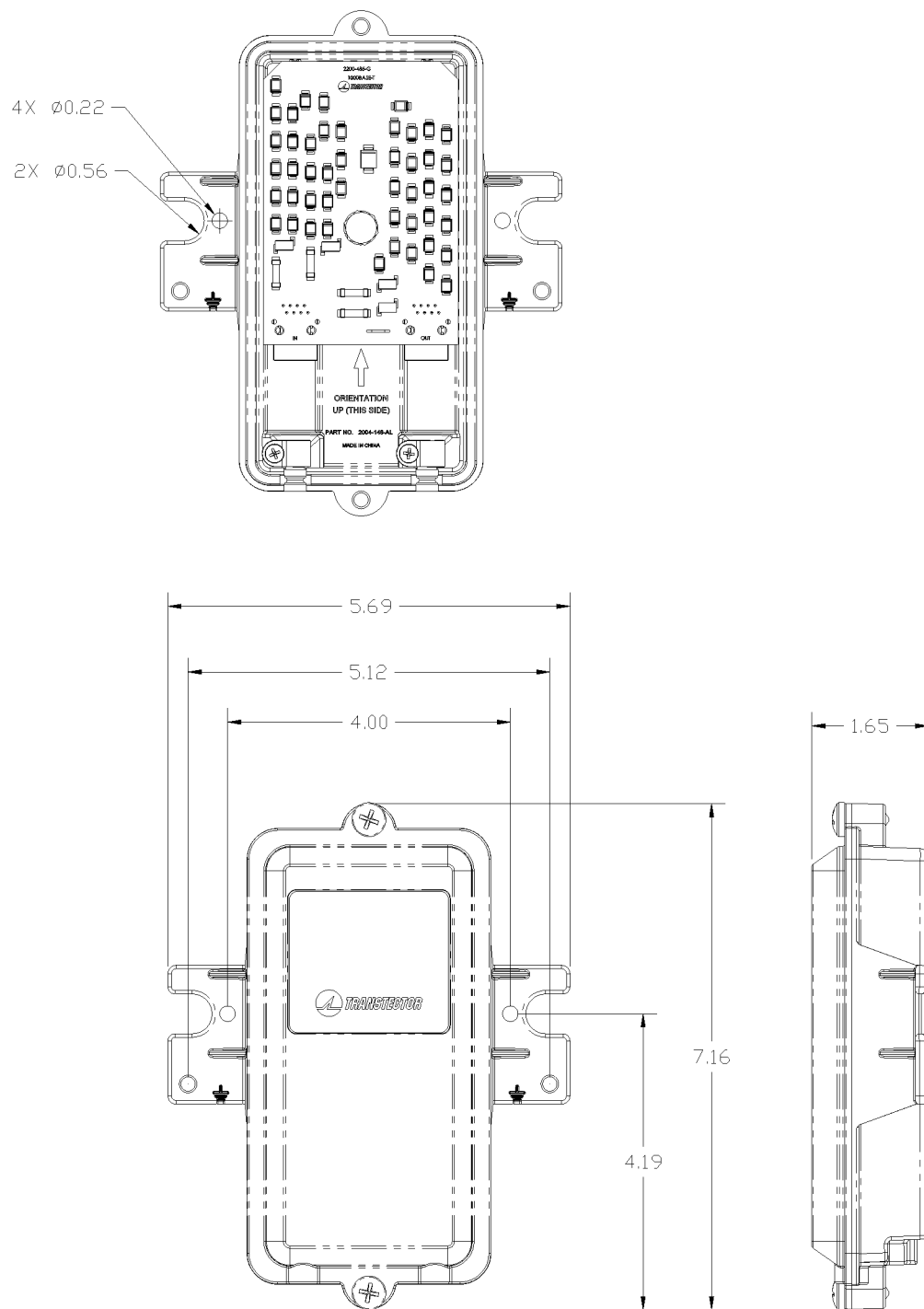


FIGURE 2. MECHANICAL OUTLINE METAL ENCLOSURE DRAWING INCHES.