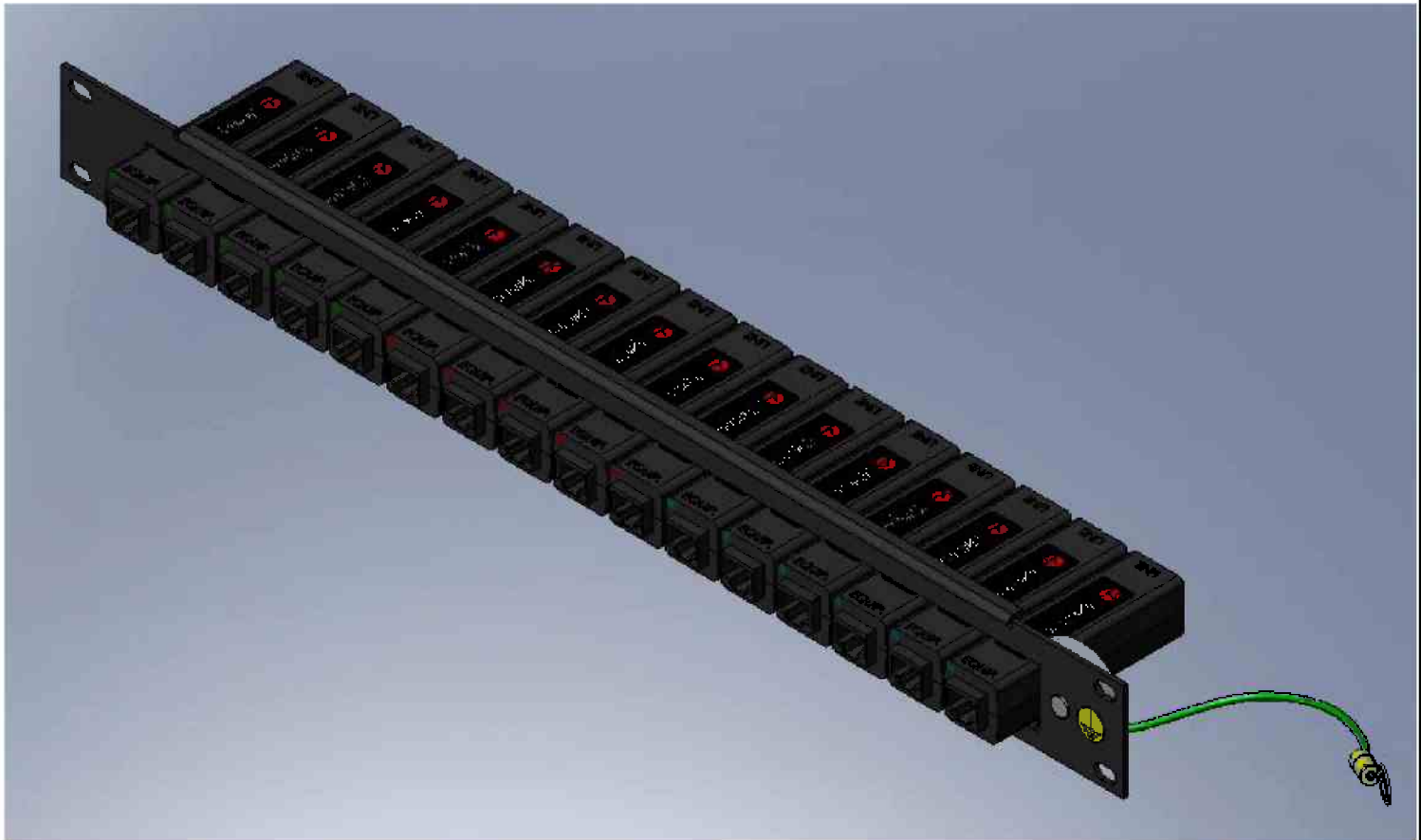



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### REVISIONS

LTR	DESCRIPTION	ECO NUM.	DATE	APPROVED
A	PRELIMINARY RELEASE	DD057	7/25/07	MLH
B	UPDATED SHT 2 PART NUMBERS	6985	9/19/07	MLH
C	ADD MODELS	DD1489	1/25/08	
D	UPDATE GDT DESC	7693	11/7/08	DWR



MATERIAL:	DRAWN: <b>MLH</b>	DATE 7/6/07	 <b>Transtector Systems, Inc.</b> 10701 Airport Road, Hayden, ID 83835 800.882.9110 208.772.8515 www.transtector.com			
	CHECKED: HS	7/25/07				
	ENGR. APPD: DWR	7/25/07	TITLE: <b>Product Specification DPR Series Data Protection Rack</b>			
	PROJ. APPD: DWR	11/4/08				
	APPROVED: LC	7/25/07				
NOTICE: THE INFORMATION AND DESIGN CONTAINED HEREIN IS THE PROPERTY OF TRANSTECTOR SYSTEMS, WHO RESERVES ALL RIGHTS THERETO			SIZE <b>A</b>	CAGE <b>30992</b>	DRAWING NUMBER <b>1400-594</b>	REV <b>D</b>
			SCALE = N/A		PAGE 1 OF 4	

**SURGE SUPPRESSOR MODELS: Data Protection Rack – DPR Series**

<b>Part Description</b>	<b>Part Number</b>
DPR Rack fully configured with six T1, five 10/100BT, five xDSL	1101-896
T1/E1 Protection Module	1101-830
xDSL Protection Module	1101-829
10/100BT Ethernet Protection Module	1101-828-1
1000BT (Gigabit) Ethernet Protection Module	1101-882
Powered Ethernet (POE) Protection Module	1101-905
Gas Discharge Tube GDT Protection Module	1101-911
DPR Rack Housing Kit (no protection included)	1000-1206

**1. GENERAL DESCRIPTION:** Transtector's DPR Series is engineered for high performance, compact versatile surge protection of GigE, 10/100BT, POE, T1/E1 and xDSL equipment used for communications circuits. The individual modules can be used as stand alone surge protection device that are an inline component and can be mounted to the wall or DIN rail (clip included and functions as ground connector). Configured in the 19" rack chassis, the array of 16 modules act also serve as a cross connect. For the ultimate in scalability and reliability, Transtector's non-degrading, high performance advanced surge protection devices are the solution. Except for the Gas Discharge Tube (GDT) Protection Module, all of the DPR Protection Podules utilize Silicon Avalanche Diode technology. The 16 module wide array unit consists of individual protection modules that mount onto the 19", 1U high rack chassis with connections from the front face (LINE) through to the back face (protected EQUIP). Each protection module type is marked from the front and back ends with a color dot to distinguish circuit types per the color legend on the front (Green = xDSL, Amber = T1/E1, Gold = 10/100BT, Purple = 1000BT). The DPR is a fully configured rack system with six each T1 protection modules, five each 10/100BT protection modules and five each xDSL protection modules as illustrated on page 1. The Rack Housing Kit can be bought separately and field equipped with any combination of Protection Modules, up to 16 modules total. The individual Protection Module is illustrated in Figure 1 and is available as a stand-alone protection product with a 35mm DIN rail grounding clip. The stand-alone DIN rail clip and/or 19" Rack Housing must be securely grounded for proper operation. All protection configurations offer straight through pin-outs from the input to output connectors. In the unlikely event of surge protection self sacrifice, the individual protection modules will reliably fail short to disrupt communication. The GDT Protection Module only will offer Primary surge protection and fail mode as per GR-1089-13.1.



**Figure 1. Individual module on din rail**

**2. ELECTRICAL:**

**2.1 xDSL DIGITAL SIGNAL SERVICE PROTECTION MODULE:**

2.1.1. Data Rate.....	6.312Mb/s
2.1.2. Nominal Operating Voltage.....	3Vpeak
2.1.3. Maximum Continuous Operating Voltage .....	5.5Vpeak
2.1.4. Protected Pins .....	(1,2) and (4,5) Straight pass through
2.1.5. Connector Style.....	RJ48 Cat5 UTP 110ohms
2.1.6. Unprotected Pins – Shorted to Ground .....	3, 6, 7, 8
2.1.7. Insertion Loss.....	< -0.5dB @ 6.312MHz
2.1.8. Surge Suppression.....	< 25Vpeak @ 100A 10/1000µs

**2.2 T1/E1 SIGNAL PROTECTION MODULE:**

2.2.1 Data Rate.....	1.544/2.048Mb/s
2.2.2 Nominal Operating Voltage.....	3Vpeak
2.2.3 Maximum Continuous Operating Voltage .....	6Vpeak
2.2.4 Connector Style.....	RJ45 Cat5 UTP 100ohms
2.2.5 Protected Pins .....	(1,2) and (4,5) Straight pass through t
2.2.6 Unprotected Pins – Shorted to Ground .....	3, 6, 7, 8
2.2.7 Insertion Loss.....	< -0.5dB @ 772kHz
2.2.8 Return Loss .....	< -26dB @ 772kHz
2.2.9 Isolation/Crosstalk .....	< -60dB @ 772kHz
2.2.10 Surge Suppression.....	< 25Vpeak @ 100A 10/1000µs

**2.3 10/100Base-T(X) ETHERNET SIGNAL PROTECTION MODULE:**

2.3.1 Data Rate .....	100Mb/s
2.3.2 Nominal Operating Voltage.....	5Vpeak
2.3.3 Maximum Continuous Operating Voltage .....	6Vpeak
2.3.4 Connector Style.....	RJ45 Cat5 unshielded 100ohm, 50ohm single ended
2.3.5 Protected Pins .....	(1,2) and (3,6) pass through
2.3.6 Unprotected Pins – Shorted to Ground .....	4, 5, 7, 8
2.3.7 Impedance .....	85 to 115ohms
2.3.8 Attenuation .....	< -1dB @ 16MHz
2.3.9 Surge Suppression.....	< 25Vpeak @ 100A 10/1000µs

**2.4 1000Base-T GIGABIT ETHERNET SIGNAL PROTECTION MODULE:**

2.4.1 Data Rate .....	1000Mb/s
2.4.2 Nominal Operating Voltage.....	3.3Vpeak
2.4.3 Maximum Continuous Operating Voltage .....	6Vpeak
2.4.4 Connector Style.....	RJ45 Cat5 unshielded 100ohm, 50ohm single ended
2.4.5 Protected Pins .....	(1,2) (3,6) (4,5) and (7,8) pass through
2.4.6 Impedance .....	85 to 115 Ohms
2.4.7 Surge Suppression .....	22Vpeak @ 100A 2/10µs

**2.5 60V POE 10/100Base-T(X) Ethernet PROTECTION MODULE:**

2.5.1 Data Rate .....	100Mb/s
2.5.2 Nominal Operating Voltage.....	48Vpeak
2.5.3 Maximum Continuous Operating Voltage .....	60Vpeak
2.5.4 Connector Style.....	RJ45 Cat5 UTP
2.5.5 Protected Pins .....	(1,2), (3,6), (4,5), and (7,8) pass through
2.5.6 Impedance .....	100 Ohms
2.5.7 Attenuation .....	< -1 dB @ 16MHz
2.5.8 Surge Suppression.....	< 75Vpeak @ 100A 10/1000µs



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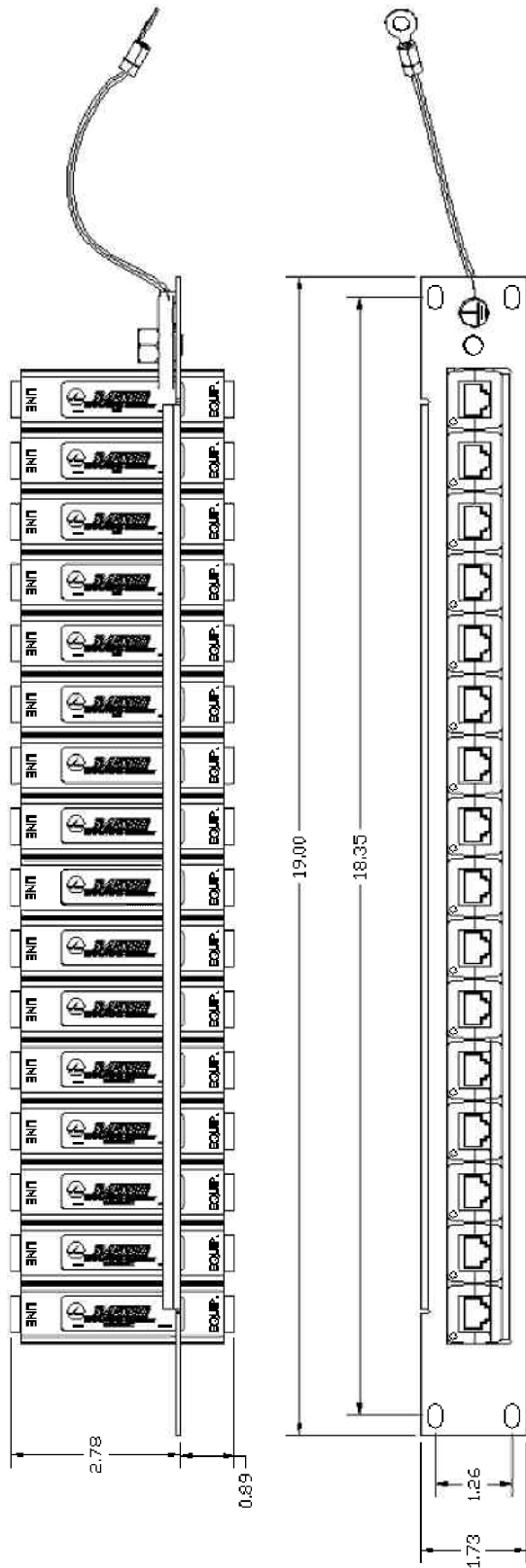
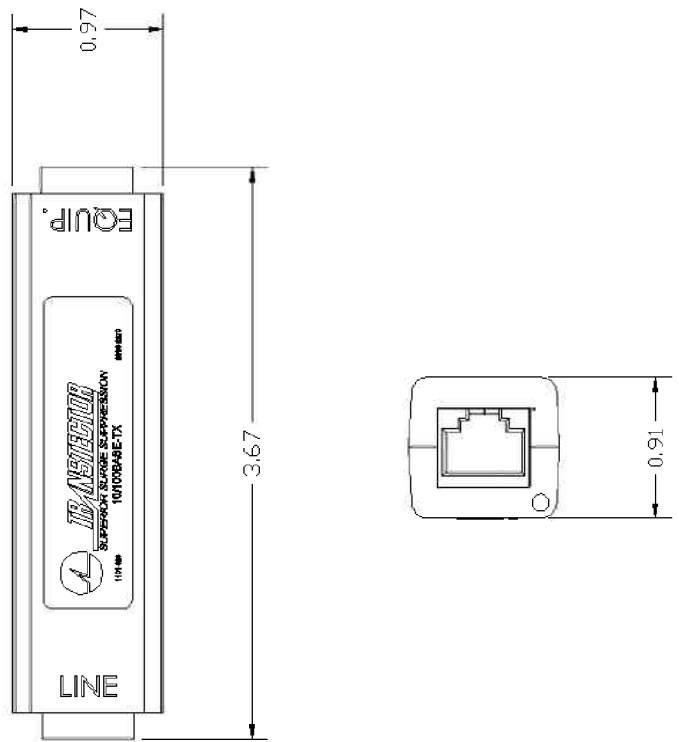


Figure 2. Mechanical outline (inches)



The DIN rail mount ground clip attaches to the bottom of the individual DPR module and offers secure ground point attachment for signal integrity and surge protection onto DIN strut. The clip may be rotated 90 degrees for panel mount, but a separate ground wire must be attached for that type of mount method.

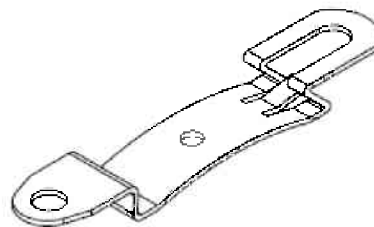


Figure 3. Module Mechanical Outline