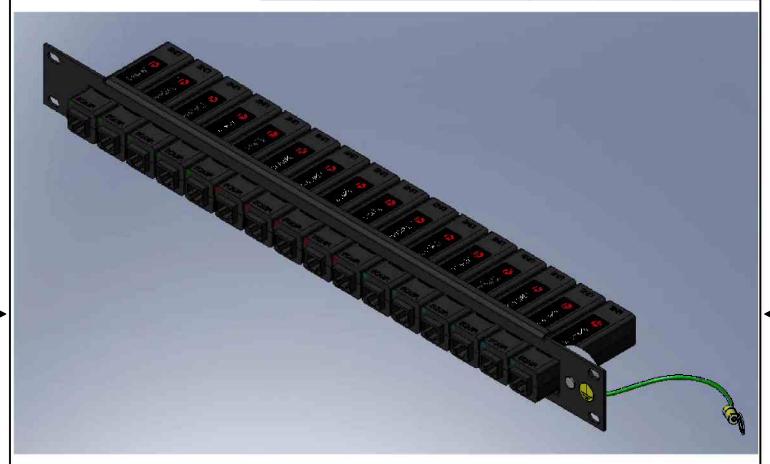
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REVISIONS					
LTR	DESCRIPTION	ECO NUM.	DATE	APPROVED	
А	PRELIMINARY RELEASE	DD057	7/25/07	MLH	
В	UPDATED SHT 2 PART NUMBERS	6985	9/19/07	MLH	
С	ADD MODELS	DD1489	1/25/08		
D	UPDATE GDT DESC	7693	11/7/08	DWR	



	DRAWN: MLH	DATE 7/6/07				<b>r Systems, Inc.</b> ort Road, Hayden,	ID 83835	
	CHECKED:	7/25/07	1		•	10 208.772.8515		or.com
	ENGR. APPD: DWR	7/25/07						
MATERIAL:	PROJ. APPD: DWR	11/4/08	TITLE:		ct Specification DPR Series			
	APPROVED:	7/25/07	Data Protection Rack					
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## SURGE SUPPRESSOR MODELS: Data Protection Rack - DPR Series

Part Description	Part Number
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

TRANSTECTOR*	
SUPERIOR SORGE SUPPRESSION	

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ELECTRIC		
	DIGITAL SIGNAL SERVICE PROTECTION MO	
2.1.1.	Data Rate	
2.1.2.	Nominal Operating Voltage	
2.1.3.	Maximum Continuous Operating Voltage	5.5Vpea
2.1.4.	Protected Pins	
2.1.5.	Connector Style	RJ48 Cat5 UTP 110ohm
2.1.6.	Unprotected Pins - Shorted to Ground	
2.1.7.	Insertion Loss	< -0.5dB @ 6.312MH
2.1.8.	Surge Suppression	< 25Vpeak @ 100A 10/1000μ
2.2 T1/E1	SIGNAL PROTECTION MODULE:	
2.2.1	Data Rate	1.544/2.048Mb/
2.2.2	Nominal Operating Voltage	3Vpea
2.2.3	Maximum Continuous Operating Voltage	6Vpea
2.2.4	Connector Style	
2.2.5	Protected Pins	
2.2.6	Unprotected Pins - Shorted to Ground	
2.2.7	Insertion Loss	
2.2.8	Return Loss	
2.2.9	Isolation/Crosstalk	
	Surge Suppression	
2 3 10/100	Base-T(X) ETHERNET SIGNAL PROTECTION	I MODIJI E:
2.3.1	Data Rate	
2.3.2	Nominal Operating Voltage	
2.3.3	Maximum Continuous Operating Voltage	
2.3.4	Connector Style RJ45 Cat	
2.3.5	Protected Pins	o unsilieded 1000iiii, oodiiii siiigle ende
2.3.6	Unprotected Pins – Shorted to Ground	
2.3.7	Impedance	
2.3.7	•	
	Attenuation	
2.3.9	Surge Suppression	< 25 V реак @ 100A 10/1000р
2.4 1000Ba	ase-T GIGABIT ETHERNET SIGNAL PROTEC	
	Data Rate	
2.4.2	Nominal Operating Voltage	
2.4.3	Maximum Continuous Operating Voltage	
2.4.4	Connector Style RJ45 Cats	
2.4.5	Protected Pins	
2.4.6	Impedance	
2.4.7	Surge Suppression	22Vpeak @ 100A 2/10μ
	DE 10/100Base-T(X) Ethernet PROTECTION N	
2.5.1	Data Rate	
2.5.2	Nominal Operating Voltage	
2.5.3	Maximum Continuous Operating Voltage	
2.5.4	Connector Style	
2.5.5	Protected Pins	
	Impedance	
2.5.6		
2.5.6 2.5.7	Attenuation	



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	2.6 10/100 2.6.1		1000Mb/s
	2.6.2	Nominal Operating Voltage	all POE circuits up to 60Vpeak
	2.6.3	Maximum Continuous Operating Voltage	60Vpeak
	2.6.4	Connector Style	RJ45 Cat5 UTP
	2.6.5	Protected Pins	(1,2), (3,6), (4,5), and (7,8) pass through
	2.6.6		115 Ohms
	2.6.7	Attenuation	< -1 dB @ 16MHz
	2.6.8		< 100Vpeak @ 100A 10/1000µs
	2.0.0		κΑ 8/20 μs all wires to ground (metallic mode)
			20 µs each wire to ground (longitudinal mode)
	2.6.9		
	2.0.0	Nominal Sas Tabe Spank Svei Voltage	
3.	ENVIRONI	MENTAL:	
٥.		ating/Storage Temperature:	-40°C to +75°C
		ive Humidity:	
	J.Z. Kelati	ve Humaity	99 // (Hori-condensing)
4.	MECHANI	CAL:	
		Chassis Material	14 gauge aluminum, black powder coat
		ht, Individual Module	
		ht, Fully Configured	
		Chassis Dimensions (see figure 2)	
	4.5 Modu	le Case Material	Rlack ARS Plastic III 94\/0 Flame Rating
	4.0. Modu	ic Gase Material	black Abo Flastic, OLOTVO Flame Nating
5.	ΔΡΡΙΙΟΔΕ	BLE INDUSTRY STANDARDS:	
٥.		ing and Grounding	NEC 800 100 and 830 100
		Suppression	
		OBT (Ethernet) Communication Protocol	
		and xDSL Communication Protocol	
	5.4. T1/E1	and ADSE Communication Protocol	110 /03

6. INSTALLATION: The DPR is intended to be installed indoors, using one rack space within a 19" RS-310-C standard rack frame. Attach the DPR into the 19" rack using the four each 10-32 screws at each corner of the rack chassis (hardware provided). A dedicated ground strap on the front of the unit must be connected to the nearest master ground bar system. All data cabling is connected through the front and rear of the DPR rack chassis. Each protection module is marked with the respective T1, 10/100BT, 1000BT, xDSL or 10/100BT 60V POE signal type. Individual protection modules can be installed or replaced by access to the screw attachment along the bottom of the rack. The module mounting screw must be securely fastened to assure proper grounding and surge protection. It is up to the user to swap between the Transmit and Receive wire pairs if required. Cable management products are available from Transtector for 19" rack applications with high cable count as like server room environments.

Each module may be installed as a stand alone protector on standard 35mm DIN rail strut. The individual protection modules are provided with a ground clip that must be securely snapped onto a well grounded DIN strut. Ensure the strut is bonded back to the best local master ground system and that paint does not obscure the fastener and bonded surfaces. Bare metal copper DIN is suggested for optimum integrity. Figure 3 portrays the ground clip and module dimensions.



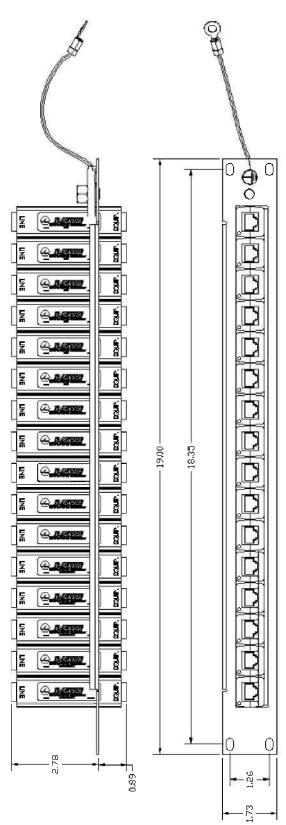
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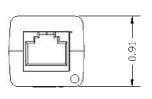
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The DIN rail mount of the individual DPF point attachment for protection onto DIN degrees for panel memust be attached for



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.

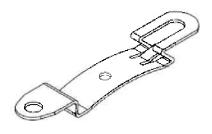


Figure 2. Mechanical outline (inches)

Figure 3. Module Mechanical Outline



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