

Data Surge Protector, Outdoor Gigabit Ethernet PoE++, SASD/GDT, Full Mode Plus S-G, FDOT APL 620-004-012, UL497B, CE



ALPU-F140

Features

- Dedicated 20kA shield-to-ground protection
- 36kA total surge handling
- Hybrid SASD + GDT protection design
- Supports Ethernet & PoE protocols up to 1G and 100W
- True isolated shield discharge path
- Outdoor-rated enclosure for pole or wall mounting
- Conformally coated PCB for corrosion resistance
- Shielded RJ-45 connectors
- Patented weatherized wiring grommet
- Integrated weep holes for moisture drainage
- Dielectric lubricant to weatherize RJ-45 connectors
- APL 620-004-012

Applications

- Outdoor IP cameras
- Pole-mounted wireless radios and access points
- Roadside LPR / ALPR camera systems
- Radar and video detection units with Ethernet output
- Outdoor PoE extenders and injectors
- Field Ethernet switches in NEMA enclosures
- Environmental sensor stations with Ethernet backhaul
- Cabinet-to-pole Ethernet uplinks

Description

The Transtector ALPU-F140 is a high-performance outdoor Gigabit Ethernet and PoE++ surge protector approved under FDOT APL 620-004-012. It is designed to protect Ethernet and PoE equipment from lightning-induced and switching-related surge events in exposed field deployments. The ALPU-F140 employs hybrid Silicon Avalanche Suppressor Diode (SASD) and Gas Discharge Tube (GDT) surge protection technology, and features an isolated shield-to-ground topology with a dedicated 20kA GDT to divert high-energy surge currents away from sensitive Ethernet electronics. The low voltage protection level performance reduces stress on connected equipment and prevents damage and premature degradation caused by surge events. Supporting all Ethernet and PoE protocols up to 1 Gbps and 100W, the ALPU-F140 maintains full data throughput and signal integrity (SI) for pole-mounted and structure-mounted outdoor applications. A conformally coated PCB and sealed outdoor enclosure provide long-term corrosion resistance in coastal, high humidity, and harsh environmental conditions.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Connectors		Shielded RJ45		
Compatible Cables		Cat5/5e UTP/STP, Cat6/6A STP		
Data Protocols		Gigabit Ethernet/PoE++		
Data Rate			1,000	Mb/s
Characteristic Impedance		100		Ohms
Power over Ethernet Protocols			PoE++	
Vdc Rating (Data)		48	60	Vdc
PoE Power			100	W
PoE Current Per Pin			1.5	A

Surge Protection Specification

Description	Minimum	Typical	Maximum	Units
Surge Protection Technology		SASD, GDT		
Protected Pins		[1,2], [3,6], [4,5], [7,8]		

Data Surge Protector, Outdoor Gigabit Ethernet
PoE++, SASD/GDT, Full Mode Plus S-G,
FDOT APL 620-004-012, UL497B, CE



ALPU-F140

Surge Protection Specification

Description	Minimum	Typical	Maximum	Units
Protection Modes		L-G, L-L, S-G		
10/000 μ s Surge Current				
L-G				
8/20 μ s Surge Current				
L-G			2	kA
L-L			0.1	kA
S-G			20	kA
Response Time			5	ns

Mechanical Specifications

Size

Length	4.5 in	[114.3 mm]
Width/Diameter	4 in	[101.6 mm]
Height	1.7 in	[43.18 mm]
Weight	0.33 lbs	[149.69 g]

Environmental Specifications

Temperature

Operating Temperature	-40 to 74 deg C
Storage Temperature	-40 to 74 deg C
Environmental Protection Rating	IP65, NEMA 3R

Installation

Mount Type	Pole/Wall
Installation Hardware	Combination Drive Screw
Grounding	#10 - #12 AWG Ring Terminal

Compliance Certifications

CE Compliant	Yes
UL Compliant	Yes
Certifications	UL 497B EN/IEC 60950-1 NOM NEMA TS2 FDOT APL 620-004-012

Data Surge Protector, Outdoor Gigabit Ethernet
PoE++, SASD/GDT, Full Mode Plus S-G,
FDOT APL 620-004-012, UL497B, CE

ALPU-F140



Transtector Systems specializes in protection of highly sensitive, low voltage equipment through its patented, non-degrading silicon diode technology and custom filters. Our power quality expertise translates into a diverse product offering including AC, DC, and signal applications as well as integrated cabinets, power distribution panels and EMP hardened devices.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Data Surge Protector, Outdoor Gigabit Ethernet PoE++, SASD/GDT, Full Mode Plus S-G, FDOT APL 620-004-012, UL497B, CE ALPU-F140](#)

URL: <https://www.transtector.com/data-surge-protector-spd-alpu-outdoor-gigabit-alpu-f140-p.aspx>

The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. Transtector reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Transtector does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Transtector does not assume liability arising out of the use of any part or document.

ALPU-F140 CAD Drawing

Data Surge Protector, Outdoor Gigabit Ethernet PoE++, SASD/GDT, Full Mode Plus S-G, FDOT APL 620-004-012, UL497B, CE

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	1/17/19	DWR

4.02 [102.2]

SLOT FOR TIE WRAP INSTALLATION

4.45 [113.0]

1.69 [43.0]

WEATHERIZED GROMMET WITH 3 POSITIONS FOR IN/OUT SERVICE WIRING AND GROUND

GROUND LUG

2X SHIELDED RJ-45 JACKS

LINE/EQUIP

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

.X±.2	[5.08]	FRACTIONS	± 1/32
.XX±.01	[.25]	ANGLES ± 1°	
.XXX±.005	[.13]	ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.	

THIRD-ANGLE PROJECTION

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

THE INFORMATION AND DIMENSIONS SHOWN ON THIS DRAWING ARE THE PROPERTY OF TRANSTECTOR CORPORATION. ALL RIGHTS RESERVED.

SHEET 1 OF 1

SCALE 1:2

TRANSTECTOR

10701 AIRPORT ROAD HAYDEN, ID 83835
 PHONE: 1.208.635.6400 | 1.800.882.9110
 FAX: 1.208.955.2041
 www.transtector.com | e-mail: sales@transtector.com

SIZE	CAGE	DRAWN BY	PART NUMBER	REV
A	30992	HMB	ALPU-F140	A