

MAXIMUM CHARACTERISTICS

Application:  
12/24/48 Volt DC Protection. The DC Defender provides robust 5kA lightning current withstand for sensitive 48VDC powered equipment. The unit features silicon avalanche diode technology to provide the optimum low voltage protection for DC power plant, tower top radios, low noise amplifiers (LNA) and tower mounted amplifiers (TMA) applications. The unit is encased in a rugged metal enclosure for outdoor cabinet and pole mounting installations.

Electrical Performance:  
Protection Modes: DC + to DC -, DC + to Ground, DC - to Ground  
Nominal Operating Voltage  $U_n$ : Up to 48 Vdc  
Maximum Continuous Operating Voltage  $U_c$ : 60 Vdc  
Maximum Line Current: 15 Amps  
Nominal Discharge Surge Current (8/20)  $I_n$ : 5 kA (8/20  $\mu$ s) per protection mode  
Protection Level @ 500 A, 8/20  $\mu$ s: 97 V<sub>pk</sub>  
Protection Level  $U_p$  @  $I_n$ : 250 V<sub>pk</sub>  
Response Time: <5 nano-seconds  
Leakage Current at  $U_n$ : <30  $\mu$ A  
Failure Mode: Power disconnect from radio if suppression fails

Approvals:  
RoHS compliant, CE compliant, UL 497b Listed.  
IEC/ANSI/UL/CSA 60950 Compliant  
Hazardous Location Certifications: ETL Class I Div 2, Class I Zone 2, ATEX, IECEx (See Figure 1)

Mechanical:  
DC Power Input/Output Connections: Compression Lugs  
Wire Range: #14 to #10 AWG (Sum diameter of dual conductors not to exceed Ø0.300")  
Enclosure Rating: NEMA 3R  
Dimensions: 7.15" [181mm] x 5.69" [145mm] x 1.65" [42mm]  
Weight: <5 lbs [2.27 kg]

Environmental:  
Operating Temperature: -40°C to +85°C  
Relative Humidity: <95% (non-condensing)

Mounting: Surface/wall or on a pole with kit  
Pole Mount Kit: 1000-1164 (not included)

ALPU DC Defender

1101-1110

Ratings: 60 Vdc, 15 A, IP54

Class I Division 2 Groups A,B,C,D T4

Class I Zone 2 AEx nA IIC T4 Gc

Class I Zone 2 Ex nA IIC T4 Gc

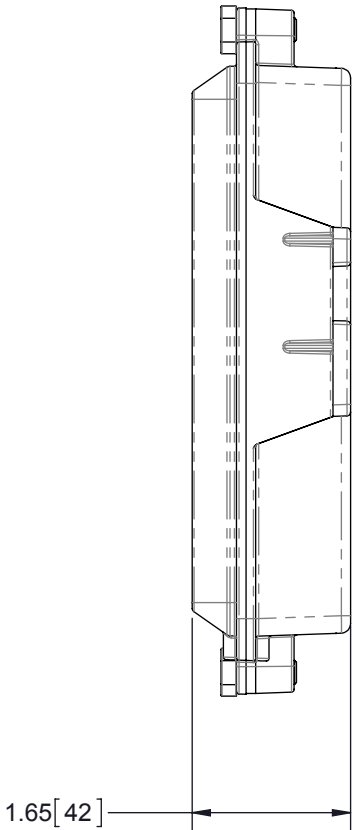
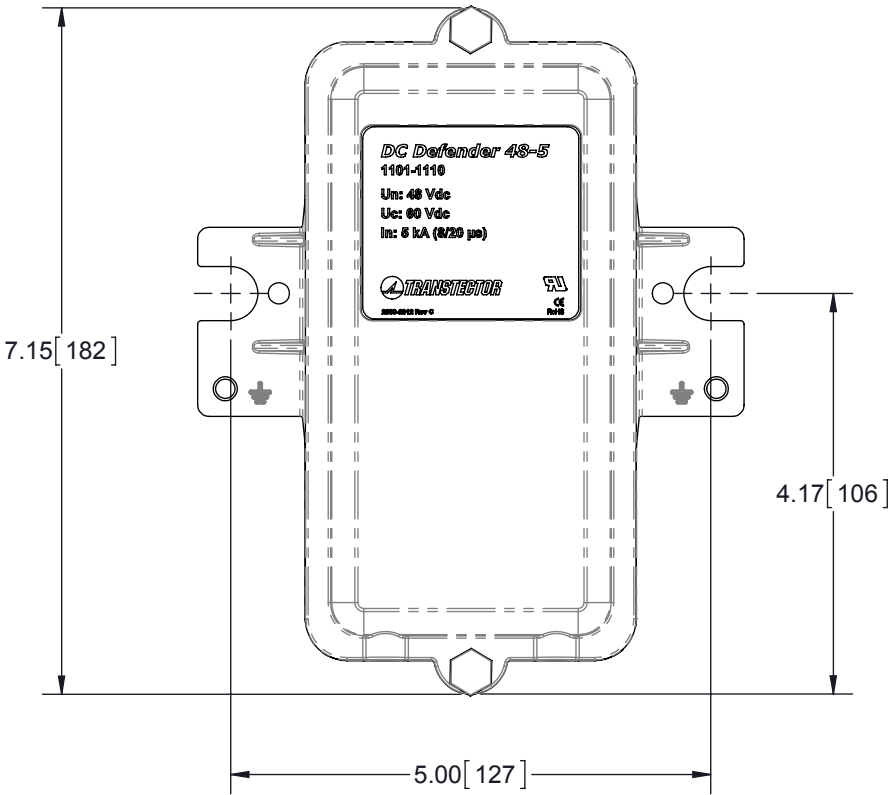
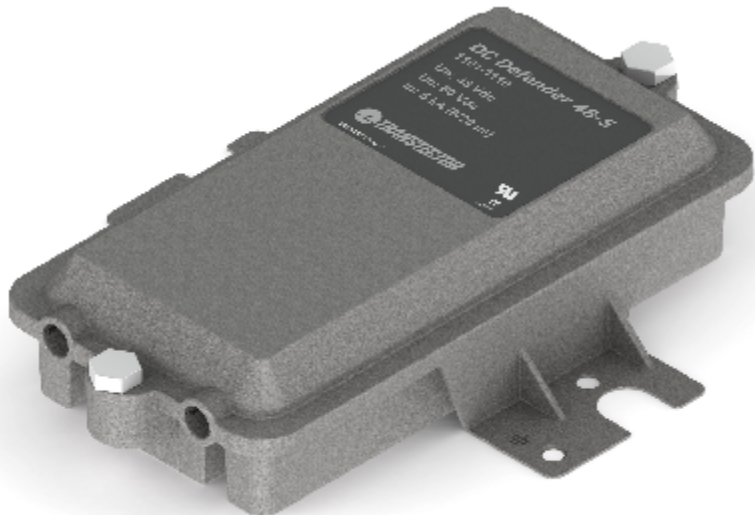
CE II 3 G Ex nA IIC T4

-40°C ≤ Tamb ≤ +85°C

ITS15ATEX46178X

IECEX ETL 15.0002X

Figure 1: Hazardous Locations



ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS		DRAWN TOT	DATE 5/18/12	<div></div> <div>DC DEFENDER 48-5</div> <div>CUSTOMER SPECIFICATION</div>		
TOLERANCES: FRACTIONS=± 1/32 .XX=± .01 ANGLES=± 1 ° .XXX=± .005		ENG APPD KAD	05/21/12			
MATERIAL .		PRODUCT MGR MLH	6/20/12			
THIRD-ANGLE PROJECTION 		MARKETING APPD LJ	6/20/12			
		PROJECT NO. DD89447		SIZE B	CAGE 30992	PART NUMBER 1101-1110
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