TECHNICAL DATASHEET

iSOLATE 501

Ultra-wide band RF isolator with outputs for use in hazardous areas

Protects against dangerous transients, making RF outputs safe to use simple apparatus antennas in your hazardous areas

ATEX and IECEX Zone 0, 20, 1, 21, 2, 22 and M1 mining certified outputs

US & Canada Class I, II DIvision 2; Class III, Division 1 and 2; and Class I, Zone 0 certified

Intrinsically safe

High performance with minimal losses	Ultra-wide frequency band of 150MHz to 8GHz
Fully compatible with iSOLATE-CT connector transits	Maximise wireless performance with simple apparatus antennas
Small, lightweight, and very compact	Easy to install with SMA connectors

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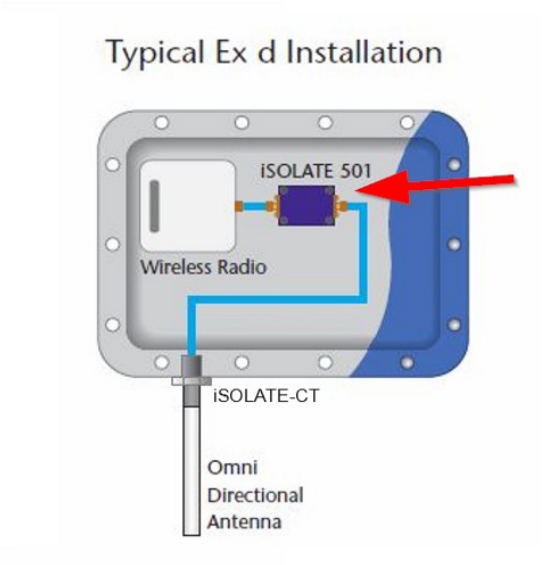
TYPICAL APPLICATIONS

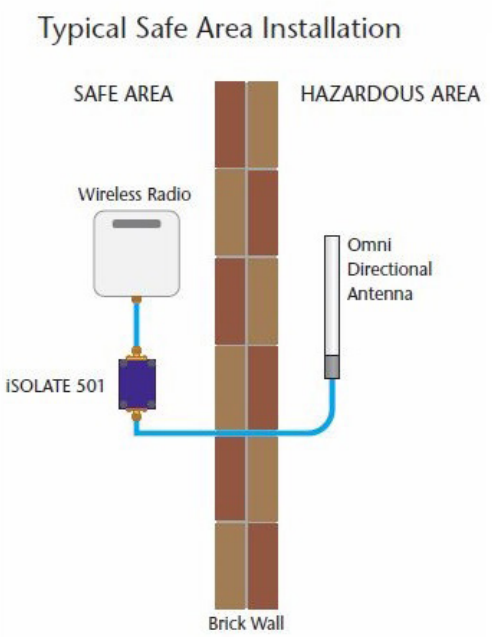
Marine VHF	156 - 163 MHz
ISM	433 MHz and 915 MHz
Tetra Mobile Stations	380 - 470 MHz
GSM	850 / 1900 MHz, 900 / 1800 MHz
UHF RFID	860 - 960 MHz
Wireless LANs	2400 / 5800 MHz
LoRa WAN	433MHz and 863-928MHz
UWB RTLS	3.5 - 6.5GHz

TYPICAL INSTALLATIONS

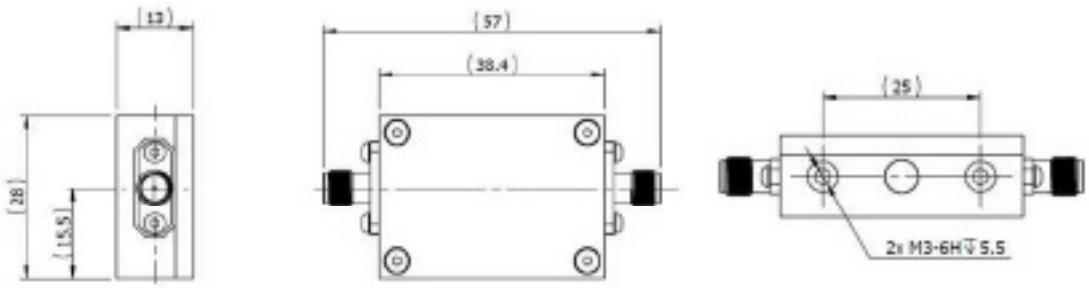
When situated in hazardous gas atmospheres, the iSOLATE501 should be mounted in an ATEX/IECEx approved Ex 'n' or Ex 'e' enclosure (or better) with minimum IP54 rating. In a hazardous dust atmosphere, an ATEX/IECEx approved Ex 'e' enclosure (or better) with minimum IP54 rating should be used.

Users should ensure that any antennas used meet the installation standard requirements – the Extronics iANT2xx range has already been assessed as suitable.





DIMENSION DRAWINGS (mm)



SPECIFICATION

Certification	II 3 (1) G D Ex nA [Ex ia Ga] IIC T6 Gc, Ex ic [Ex ia Da] IIIC T85°C Dc I (M1) [Ex ia Ma] I cMETus Class I, II Div 2, Class III Div 1 & 2 Groups A-G. Class I, Zone 0, Group IIC T4. Associated equipment Class I, II, III Div 1, Groups A-G.
Dimensions	57 x 28 x 13 mm (2.24 x 1.1 x 0.52 in)
Weight	Approximately 38g (1.34oz)
Ambient operating temperature	-60°C to +80°C (-76°F to +176°F)
Humidity	± 95 %, non condensing
Input/output connections	2 x female SMA
Enclosure material	Anodised aluminium *To maintain safe operation, the iSOLATE501 MUST be earthed to IEC60079-14 clause 16.2.3*

Maximum input power

ATEX/IECEX Equipment Group	Maximum RF Threshold Power (W)	Maximum RF Threshold Power (dBm)
Mining Group	6	37.7
Gas Group IIA	6	37.7
Gas Group IIB	3.5	35.4
Gas Group IIC	2	33.0
Dust Group III	6	37.7

It is the customer's responsibility to ensure the maximum values of RF Threshold power as per Table 4.0 of IEC 60079-0:2011 are not exceeded. The maximum RF output of the wireless transmitter and the antenna gain must be taken into account when installing equipment.

Typical performance @ 25°C

Frequency Band	Insertion Loss (dB)
150 MHz - 400MHz	1.70
400MHZ - 1GHz	0.50
1 GHz - 3.5 GHz	0.59
3.5 GHz - 6 GHz	0.99
6 GHz - 7 GHz	1.10
7GHz - 8GHz	1.60

Spot Frequency	Insertion Loss (dB)
400 MHz	0.15
900 MHz	0.16
2.45 GHz	0.48
5.5 GHz	0.99

ORDERING INFORMATION

ISOLATE501	iSOLATE501 Ultra-wide band Iintrinsically Safe RF isolator