HAZ LOC COMPONENTS

DATASHEET

B000029-06

ANTENNA COUPLER M SERIES

Solexy's M series is a patented multi-channel intrinsically safe barrier for RF signals. Designed for installation in the safe area (e.g. Control rooms/purged panels), allowing the installation of non-EX certified antennas in hazardous areas.

An integrated blocking circuit prevents hazardous energy from reaching the antenna if a radio, a modem or an access point failure occurs. It also allows for antenna removal in hazardous areas without turning off the device.

The coupler's compact design reduces the space required for installation and allows for connection to almost any radio system and its antennas, regardless of the radio protocol used. It is a highly flexible and cost effective solution to hazardous area radio infrastructures deployment.

Plate mounted and DIN rail available for ease of installation.

FEATURES

EXTENDED FREQUENCY RANGE

The M series covers a wide range of frequencies with only one version, starting from 300 MHz going up to 9 GHz with, minimal insertion losses across the its entire frequency range.

MULTIPLE CHANNELS, ONE DEVICE

Standard layout with 4 barriers and so for 4 different radio signals. Available with different amounts of barriers to fit the application perfectly

FLEXIBILITY

Permits a wide variety of passive antennas to be installed installed in hazardous locations, antennas may be removed and/or installed with power on.

CERTIFICATIONS

The M series is certified ATEX, IECEx, cQPS (USA & Canada), INMETRO (Brazil), JPN EX (Japan) as an apparatus, and therefore can be installed per the conditions of acceptability, without further assessment.
North America approval includes Class & Divisions and Zones.
IECEx certification is isssued from an Australian notified body, therefore making the barrier suitable for Queensland mine installations.

SHORT CIRCUIT PROTECTION

Includes integrated blocking circuitry.

Mounting

Device available with wall mount design or DIN rail for ease of installation into cabinets

APPROVALS

ATEX / IECEx CERTIFICATION

Zone 1, 2, 21 & 22
Ex I (M1) [Ex ia Ma] I
Ex II (1) G [Ex ia Ga] IIA/IIB/IIC T
Ex II (1) D [Ex ia Da] IIIC
[Ex ia Ma] I; [Ex ia Ga] IIA/IIB/IIC; [Ex ia Da] IIIC

USA & CANADA CERTIFICATION

Associated Apparatus for installation in non-hazardous locations
Class I, Zone 1, [AEx ia Ga] IIA/IIB/IIC Zone 21, [AEx ia Da] IIIC, [Ex ia Ga] IIA/IIB/IIC [Ex ia Da] IIIC
[Ex ia Ga] Cl I, Div 1, Groups ABCD

INMETRO CERTIFICATION

Zone 1, 2, 21 & 22
[Ex ia Ma] I; [Ex ia Ga] IIA/IIB/IIC; [Ex ia Da] IIIC

JPN CERTIFICATION

Zone 1, 2, 21 & 22
[Ex ia Ma] I; [Ex ia Ga] IIA/IIB/IIC; [Ex ia Da] IIIC

CONFIGURATION

M	4	F	0	P	02	00	H	XN
	a	b		c	d	e	f	g

a – Number of channels

4	4 channels
3	3 channels
2	2 channels

b – Antenna side connector

N	N Female (layout 2 only)
F	RP-SMA Female (layout 1 only)
S	SMA Female (layout 1 only)

c - Mounting design

P	Wall mounting design
V	DIN rail mounting design

d - Radio side connector

02	RP-SMA Female
04	SMA Female

e - Integrated coax lenght (radio side)

00	no cable (dual connector layout with connector on body)

f - Frequency range

H	Optimized from 300 MHz to 9 GHz

g - Certification

X0	ATEX/IECEx zone 1/21 apparatus
N0	North America class 1 & Div 1 apparatus
XN	ATEX/IECEx zone 1/21 and North America class 1 & Div 1 apparatus
B0	INMETRO zone 1/21 apparatus
XJ	Japan/ATEX/IECEx zone 1/21 apparatus

AVAILABLE ACCESSORIES

HEAVY DUTY ANTENNAS

Heavy duty antennas available in different frequencies and layout already evaluated for installation in classified area

COAX CABLE EXTENSIONS

Coax cable with custom connectors and lenght to connect barrier to radio device or to remote mounted antennas

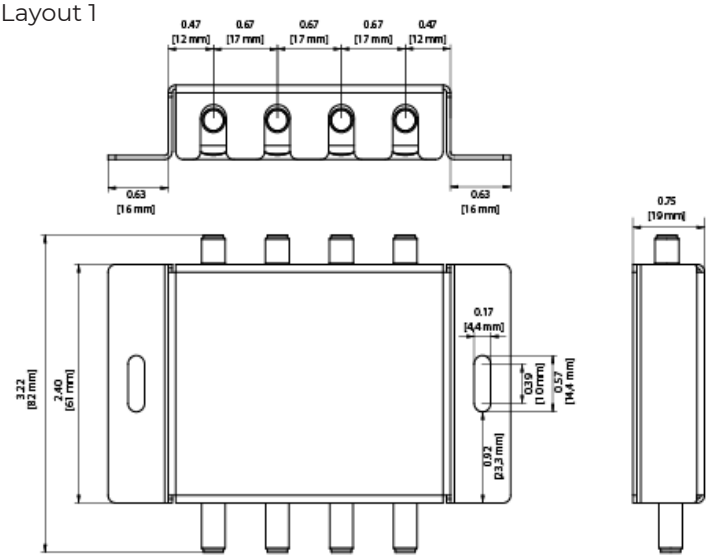
SPECIFICATIONS

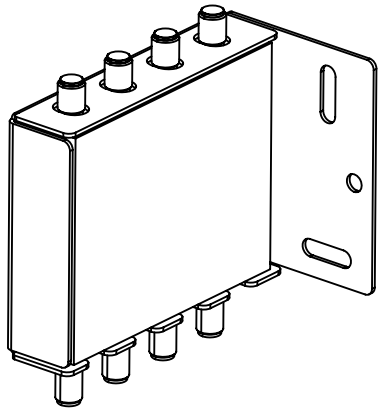
GENERAL	
ATEX certification	nr. TÜV CY 18 ATEX 0206158 X Standards: EN IEC 60079-0:2018, EN 60079-11:2012
IECEx certification	nr. IECEx MSC 19.0001X Standards: IEC 60079-0:2017, IEC 60079-11:2011 Suitable for Queensland mines
North America certification	nr. LT1504-3R2 CAN/CSA C22.2 No. 60079-0:2015 UL 60079-0, edition 6.0 CAN/CSA C22.2 No. 60079-1:2016 UL 60079-1, edition 7.0 CAN/CSA C22.2 No. 60079-11:2014 UL 60079-11, edition 6.0 UL 508, edition 17
INMETRO certification	nr. CPEx 22.0953 X Standards: IEC 60079-0:2020, IEC 60079-11:2013
Japan certification	nr. CML 23JPN1169X Standards: IEC 60079-0:2017, IEC 60079-11:2011
Maximum fault voltage	250VDC, 250VAC 50-60 Hz
Tipical insertion loss @ 20°C (dB)	<table><tr><td>Frequency</td><td>433 MHz</td><td>900 MHz</td><td>1.9 GHz</td><td>2.4 GHz</td><td>3 GHz</td><td>3.5 GHz</td><td>4.6 GHz</td><td>5.8 GHz</td><td>6 GHz</td><td>7 GHz</td><td>8 GHz</td><td>9 GHz</td></tr><tr><td>H version</td><td>-1.2</td><td>-0.9</td><td>-0.5</td><td>-0.4</td><td>-0.9</td><td>-1</td><td>-0.5</td><td>-1.1</td><td>-0.9</td><td>-1.1</td><td>-1.7</td><td>-2.8</td></tr></table>
Approximate weight	0,25 Kg (0,55lb)
Max RF input	7W (34.4 dBm)
Impedance	50 Ω
Ambient temperature range	-40°C (-40°F) to +85°C (+185°F)

DIMENTIONAL DRAWINGS

In inches

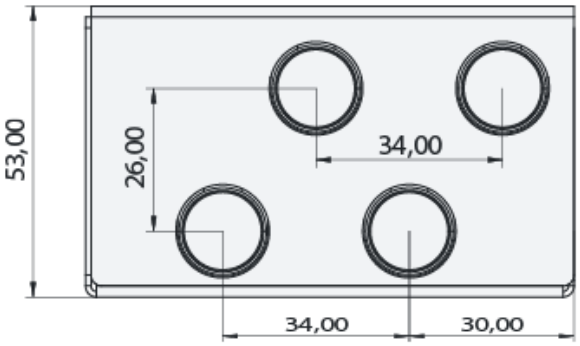
Layout 1

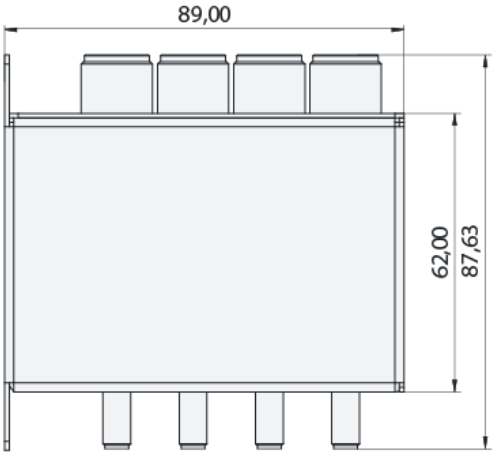




Layout 1 with DIN rail

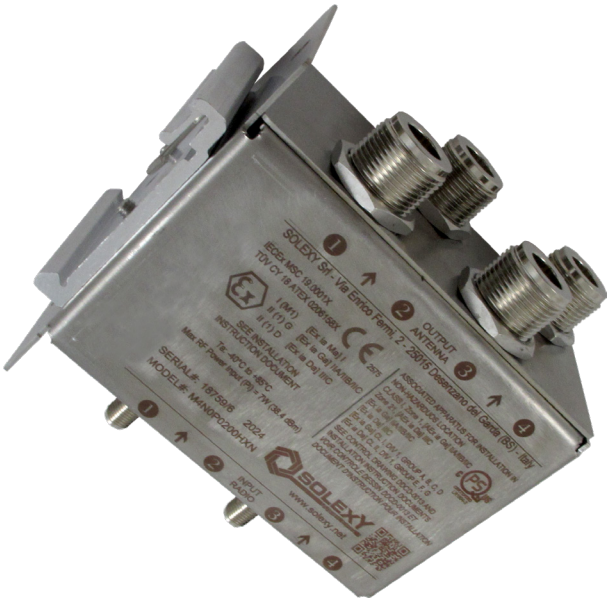
Layout 2





INSTALLATION EXAMPLE

The barrier thanks to the DIN rail mounting can be easily fitted inside an electrical cabinet, nearby the radio module



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