

SOLEXY WIRELESS

HAZ LOC COMPONENTS

DATASHEET

B00003-05

ANTENNA COUPLER RX SERIES



THE IDEAL BARRIER FOR LOW FREQUENCIES AND FOR ISOLATED GROUND LAYOUT

Solexy's Patented (7,057,577) explosion-proof antenna coupler allows the installation of non-EX certified antennas in hazardous areas.
The RX coupler is designed to be used directly with listed explosion-proof housings or conduit fittings.

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 smart design 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 deployment.
The couplers act as a cable bulkhead as well, not taking any space inside the enclosure.

Fitting is approved for hazardous location and can be installed with a simple wrench avoiding any kind of sealing fittings.

FEATURES

ISOLATED ANTENNA GROUND

Optional antenna ground isolation (RX1) from housing ground, combined with a capacitive circuit, solves ground loop issues in case of remote mounted antennas and prevents potential ground noises to interfere with the RF signal

FLEXIBILITY AND NO SEALING FITTING REQUIRED

Permits a wide variety of passive antennas to be installed installed in hazardous locations, Antenna may be removed and/or installed with power on.
Can be screwed directly in the enclosure and works perfectly as a cable bulkhead connection.

CERTIFICATIONS

The RX 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 mines installations.

SHORT CIRCUIT PROTECTION

Includes integrated blocking circuitry.

ENVIRONMENTAL PROTECTION

All required circuitry is recessed into the fitting and encapsulated against harsh environments.

APPROVALS

ATEX / IECEx CERTIFICATION

Zone 1, 2, 21 & 22
Ex I M2 (M1) Ex db mb [ia Ma] I Mb; Ex II 2 (1) G Ex db mb [ia Ga] IIA/IIB/IIC T5...T6 Gb; Ex II 2 (1) D Ex mb tb [ia Da] IIIC T80°C...T100°C Db
Ex db mb [ia Ma] I Mb; Ex db mb [ia Ga] IIA/IIB/IIC T5....T6 Gb; Ex mb tb [ia Da] IIIC T80°....T100°C

USA & CANADA CERTIFICATION

Class I, Div 1, GROUP ABCD; Cl II, Div 1, GROUP EFG; [Ex ia Ga] IIC; [Ex ia Da] IIIC; Cl I, Zone 1, AEx db mb [ia Ga] IIA/IIB/IIC T6...T5 Gb; Zone 21, AEx mb tb [ia Da] IIIC T80°C...100°C Db; Ex db mb [ia Ga] IIA/IIB/IIC T6...T5 Gb; Ex mb tb [ia Da] IIIC T80°C...T100°C Db

INMETRO CERTIFICATION

Zone 1, 2, 21 & 22
Ex db mb [ia Ma] I Mb; Ex db mb [ia Ga] IIA/IIB/IIC T6....T5 Gb; Ex mb tb [ia Da] IIIC T80°....T100°C Db

JPN CERTIFICATION

Zone 1, 2, 21 & 22
Ex db mb [ia Ma] I Mb; Ex db mb [ia Ga] IIA/IIB/IIC T6....T5 Gb; Ex mb tb [ia Da] IIIC T80°....T100°C Db

CONFIGURATION

RX	N	3	S	02	00	J	XN	
	a	b	c	d	e	f	g	h

a – Antenna side connector

N	N Female
1	N Female (isolated ground)

b – Thread

3	3/4” NPT
M	M25x1.5

c - Material

S	Stainless steel AISI 303
L	Stainless steel AISI 316L

d - Radio side connector

02	RP-SMA Female

e - Integrated coax lenght (radio side)

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

f - Frequency range

J	Optimized from 100 MHz to 3 GHz
R	Optimized from 1 GHz to 3.9 GHz and from 4.6 GHz to 6 GHz

g - Certification

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

h - Extensions

-13	Max input 6W (standard max RF input 2W, see * in ambient temperature range section)

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, EN 60079-31:2014, EN 60079-1:2014, EN 60079-18:2015/A1:2017
IECEx certification	nr. IECEx MSC 19.0001X Standards: IEC 60079-0:2017, IEC 60079-11:2011, IEC 60079-31:2022-01, IEC 60079-1:2014-06, IEC 60079-18:2017 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 CAN/CSA C22.2 No. 60079-18:2016 UL 60079-18, edition 4.0 CAN/CSA C22.2 No. 60079-31:2015 UL 60079-31, edition 2.0 CAN/CSA C22.2 No. 60950-1:2007 UL 60950-1, edition 2.0 CAN/CSA C22.2 No. 25-17 UL 1203, edition 5.0 CAN/CSA C22.2 No. 30-M1986 UL 913, edition 8.0 CAN/CSA C22.2 No. 157-92 UL 508, edition 17
INMETRO certification	nr. CPEx 22.0953 X Standards: IEC 60079-0:2020, IEC 60079-11:2013, IEC 60079-31:2022, IEC 60079-1:2016, IEC 60079-18:2020
Japan certification	nr. CML 23JPN1169X Standards: IEC 60079-0:2017, IEC 60079-11:2011, IEC 60079-31:2022-01, IEC 60079-1:2014-06, IEC 60079-18:2017
Maximum fault voltage	250VDC, 250VAC 50-60 Hz
Typical insertion loss @ 20°C (dB)	

Frequency	100 MHz	169 MHz	433 MHz	500 MHz	900 MHz	1.9 GHz	2.4 GHz	3 GHz	3.5 GHz	4.6 GHz	5.8 GHz	6 GHz
J version	-1.1	-0.6	-0.5	-0.6	-0.6	-0.7	-0.8	-1	-	-	-	-
R version	-	-	-	-1.5	-1.2	-0.5	-0.7	-0.7	-1.6	-1.2	-2.4	-2.1

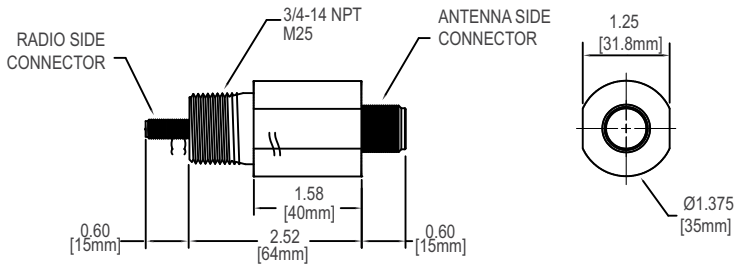
Approximate weight	0,32 Kg (0,70lb)
NEMA rating	Provides a NEMA 4X when connected to a NEMA 4X rated enclosure
Impedance	50 Ω
Ambient temperature range	-40°C (-40°F) to +85°C (+185°F) if max RF input = 2W (T5) -40°C (-40°F) to +80°C (+176°F) if max RF input = 6W (T5) * -40°C (-40°F) to +70°C (+158°F) if max RF input = 2W (T6) -40°C (-40°F) to +65C (+149°F) if max RF input = 6W (T6) *

Data contained in this specification are subject to change without notice

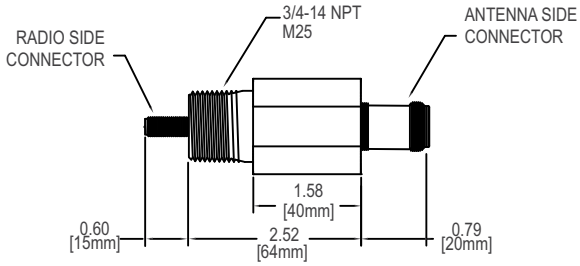
DIMENSIONAL DRAWINGS

In inches

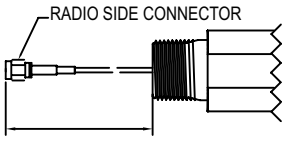
RXN



RX1



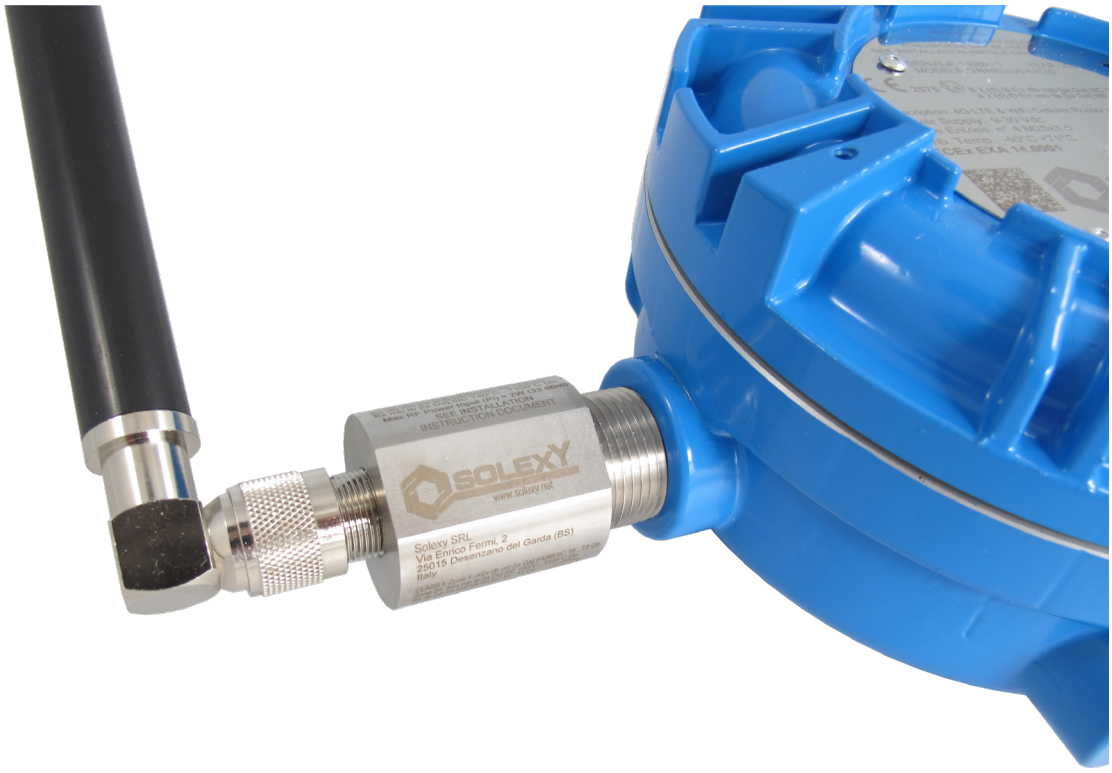
RX Series with
coax cable embedded
(optional execution on request)



COAX LENGTH UP TO 30"
ACCORDING TO CUSTOMER NEEDS

INSTALLATION EXAMPLE

The barrier stays outside the enclosure not taking any space inside of it and generating a little offset of the antenna from the housing to provide better radio performances



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