

B00003-01c

Antenna couplers

RX SERIES



Solexy's patented (7,057,577) Explosion-Proof Antenna Coupler permits the installation of non-Ex certified antennas in hazardous areas.

This coupler is designed to be used directly with listed explosion proof housings or conduit fittings.

An integrated blocking circuit prevents hazardous energy reaching the antenna if a radio, modem or access point failure occurs. It also allows for antenna removal in hazardous areas.

The coupler's robust design allows for connection to practically any radio and antenna. It is a highly flexible and cost effective solution to hazardous area radio system deployment. The coupler can also be used as a cable bulkhead.

Fitting is approved for hazardous locations and can be installed with a simple wrench.



FEATURES

- ✔ **SHORT CIRCUIT PROTECTION**
Includes integrated blocking circuitry.
- ✔ **ENVIRONMENTAL PROTECTION**
All required circuitry is recessed into fitting and encapsulated against harsh environments.
- ✔ **CERTIFICATION**
The RX Series is certified Atex, IECEx and for USA&Canada as an apparatus, and can be installed per the conditions of acceptability, without further assessment.
North America approval (USA&Canada) includes class & divisions and zones.
IECEx certification is issued from an Australian notified body, therefore RX can be installed in Queensland mines.
- ✔ **NO SEALING FITTING REQUIRED**
Permits a wide variety of passive antennas to be installed in hazardous areas. Antennas may be removed and/or installed with power on.
Perfect for a cable bulkhead connection.
- ✔ **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 noise to interfere with RF signal (*patent pending*).


NOMENCLATURE

- a Antenna Side Connector**
 - F RP-SMA Female
 - N N Female
 - S SMA Female
 - 1 N Female (ground isolated)
- b Thread Connection**
 - 3 3/4" NPT
 - M M25x1.5
- c Housing Material**
 - S AISI 303 (standard)
 - L AISI 316L
- dd Radio Side Connector**
 - 02 RP-SMA Female (RXF and RXN only)
 - 04 SMA Female (RXS only)
- ee Coax cable length radio side (optional on request)**
 - 00 no cable (with connector on body)

| | | | | | | | |
|-----------|----------|----------|----------|-----------|-----------|----------|-----------|
| RX | N | 3 | S | 02 | 00 | J | X0 |
| | a | b | c | dd | ee | f | gg |

- f Version (frequency range)**
 - J optimized from 100 MHz to 1.4 GHz
 - R optimized from 500 MHz to 3.9 GHz and from 4.6 GHz to 6 GHz
 - L optimized from 3.9 GHz to 4.6 GHz
- gg Approval**
 - N0 USA&Canada apparatus (Class&Divisions and Zones)
 - X0 IECEx and ATEX apparatus
 - XN IECEx, ATEX, USA&Canada apparatus

SPECIFICATIONS

| ATEX certification nr. TÜV CY 18 ATEX 0206158 X |  Ex I M2 (M1) Ex db mb [ia Ma] I Mb II 2 (1) G Ex db mb [ia Ga] IIA/IIB/IIC T5...T6 Gb II 2 (1) D Ex mb tb [ia Da] IIIC T80°C...T100°C Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|-----|-----|-----|-----|-----|---|---|---|---|-----------|---|-----|-----|-----|-----|-----|-----|-----|-----|
| Standard Ref. | EN 60079-0, EN 60079-1, EN 60079-11, EN 60079-18, EN 60079-31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IECEX certification nr. IECEX MSC 19.0001X | 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 Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Standard Ref. | IEC 60079-0, IEC 60079-1, IEC 60079-11, IEC 60079-18, IEC 60079-31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| USA & Canada certification cQPSus LR-1504-3 | Class I, Division 1, GROUP ABCD; Class II, Division 1, GROUP EFG [Ex ia Ga] IIC; [Ex ia Da] IIIC Class 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Standard Ref. | CAN/CSA C22.2 No. 60079-0 UL 60079-0 CAN/CSA C22.2 No. 60079-1 UL 60079-1 CAN/CSA C22.2 No. 60079-11 UL 60079-11 CAN/CSA C22.2 No. 60079-18 UL 60079-18 CAN/CSA C22.2 No. 60079-31 UL 60079-31 CAN/CSA C22.2 No. 60950-1 UL 60950-1 CAN/CSA C22.2 No. 25-17 UL 1203 CAN/CSA C22.2 No. 30-M1986 CAN/CSA C22.2 No 157 UL 913 UL 508 CAN/CSA C22.2 No. 94.2-15 UL 50E NEMA 250-2014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum Fault Voltage | 250VDC, 250VAC 50-60Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Insertion Loss (dB) | <table border="1"> <thead> <tr> <th>Frequency</th> <th>100 MHz</th> <th>500 MHz</th> <th>1.4 GHz</th> <th>1.7 GHz</th> <th>2.5 GHz</th> <th>3.9 GHz</th> <th>4.9 GHz</th> <th>5.4 GHz</th> <th>6.0 GHz</th> </tr> </thead> <tbody> <tr> <td>J version</td> <td>1.3</td> <td>0.4</td> <td>0.4</td> <td>0.5</td> <td>0.8</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>R version</td> <td>-</td> <td>1.2</td> <td>0.6</td> <td>0.6</td> <td>0.8</td> <td>1.1</td> <td>1.8</td> <td>1.4</td> <td>2.0</td> </tr> </tbody> </table> | Frequency | 100 MHz | 500 MHz | 1.4 GHz | 1.7 GHz | 2.5 GHz | 3.9 GHz | 4.9 GHz | 5.4 GHz | 6.0 GHz | J version | 1.3 | 0.4 | 0.4 | 0.5 | 0.8 | - | - | - | - | R version | - | 1.2 | 0.6 | 0.6 | 0.8 | 1.1 | 1.8 | 1.4 | 2.0 |
| Frequency | 100 MHz | 500 MHz | 1.4 GHz | 1.7 GHz | 2.5 GHz | 3.9 GHz | 4.9 GHz | 5.4 GHz | 6.0 GHz | | | | | | | | | | | | | | | | | | | | | | |
| J version | 1.3 | 0.4 | 0.4 | 0.5 | 0.8 | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | |
| R version | - | 1.2 | 0.6 | 0.6 | 0.8 | 1.1 | 1.8 | 1.4 | 2.0 | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Weight | 0.32 kg (70.6 lb) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NEMA rating | Provides a NEMA 4X connection when connected to a NEMA 4X rated enclosure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Impedance | 50 Ω | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ambient Temperature Range | -40°C (-40°F) to +85°C (+185°F) when max RF input = 2W (T5) (standard) -40°C (-40°F) to +80°C (+176°F) when max RF input = 6W (T5) (optional, consult factory) -40°C (-40°F) to +70°C (+158°F) when max RF input = 2W (T6) (standard) -40°C (-40°F) to +65°C (+149°F) when max RF input = 6W (T6) (optional, consult factory) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Data contained in this specification are subject to change without notice

DIMENSIONAL DRAWINGS

