

OPTIMISED

OPEN-ENDED



## TRANSCIVER

# Elio

## For Ex-hazardous areas

The Elio radio transceiver by JAY Electronique provides solutions to the wide range of functional needs involved in secure industrial applications. This highly flexible product integrates today's cutting edge technology for optimum performance.

**This Transceiver is designed for use in zone 1, 2, 21 and 22 explosible atmospheres.**

### MAIN FEATURES

- > Configurable, intelligent bi-directional radio link exchanges information while adapting to the radio environment.
- > Internal, unique SIM card contains all the transceiver and operator module parameters linked to the application, and :
  - allows an operator module to associate to a transceiver by recovering the application configuration,
  - allows you to quickly replace a transceiver if necessary.
- > Quick and easy product configuration by mini-B USB connector and thanks **iDialog** software (labels, feedback information, alarms, mapping for control devices and outputs, interlockings, network functions, access PINs codes).
- > Cable glands on transceiver for easy installation.
- > Spring-type, plug-in terminal strips facilitate wiring and maintenance.

### FULLY COMPLIANT WITH EUROPEAN DIRECTIVES :

ATEX manufacturer  
2014/34/EU

EC type  
certificate  
issued by  
LCIE



Machinery directive 2006/42/EC:

Emergency stop  
> SIL 3 per EN 61508-1-7  
> Performance level PL e per  
EN ISO 13849-1 and -2  
EC type certificate issued by  
TUV NORD



No 44 250 11 382580 003

Radio and telecommunication  
terminal equipment  
(low voltage, electromagnetic  
compatibility, radio spectrum)  
RED 2014/53/EU



## DEFINITION OF A POTENTIALLY EXPLOSIVE ATMOSPHERE

### How an explosion happens

An explosion is formed by an association of the following 3 elements :

■ **An oxidant :**

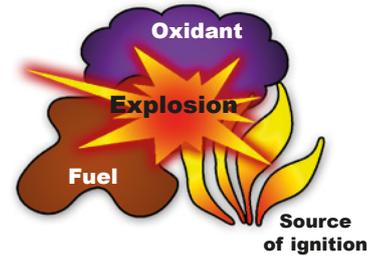
in our case, the oxygen in the air.

■ **A fuel :**

- ◆ A gas (methane, acetylene, ...)
- ◆ A fume (gasoline, solvent, ...)
- ◆ A dust (wood, sugar, grain, ...).

■ **A source of ignition :**

- ◆ An electric arc
- ◆ A mechanical spark
- ◆ A high temperature



### Consequences of an explosion

Explosions are responsible every year for around 6 deaths and 387 persons with permanent disability (IP) out of 379 accidents. These can produce major catastrophes, such as the explosion at the «AZF» plant at Toulouse (France) in 2001 or the «Blaye silo» near Bordeaux (France) in 1997, resulting in a large number of deaths and injuries, and destruction of the sites.

### Protection against explosions

It is necessary to evaluate the specific hazards created by explosible atmospheres, keeping in mind :

- ◆ the probability that **explosible atmospheres** will occur and persist,
- ◆ the probability that **sources of ignition**, including **electrostatic discharges**, are present and will become active and effective,
- ◆ the **installations, substances and methods** used, and their possible **interactions**,
- ◆ the extent of the **foreseeable consequences**.

The explosion hazards must be evaluated globally.

### In practice, this requires :

- Identification of zones representing a hazard and substances which could create explosible atmospheres.
- Classification of the explosive atmospheres in zones where there is an explosion hazard, assisted if necessary, by an outside organization.
- Definition of the equipment required to carry out the project.

With reference to user ATEX directive 99/92/CE.

The zones are standardised in accordance with their degree of dangerousness.

■ **Definition of explosion hazard zones linked to :**

**GASES, FUMES AND FOG**

**ZONE 0 :** location where an explosive atmosphere, consisting of a mixture with the air of combustible material in the form of gases, fumes or fog, is present continuously or over extended periods of time, or frequently.

**ZONE 1 :** location where an explosive atmosphere, consisting of a mixture with the air of combustible materials in the form of gases, fumes or fog, is likely to form occasionally under normal operation.

**ZONE 2 :** location where an explosive atmosphere, consisting of a mixture with the air of combustible materials in the form of gases, fumes or fog, is not likely to form during normal operation, or should such a formation occur, is nonetheless only of short duration.

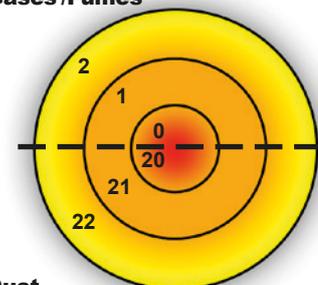
**DUST**

**ZONE 20 :** Location where an explosive atmosphere in the form of a cloud of combustible dust is present in the air continuously, or over extended periods of time, or frequently.

**ZONE 21 :** Location where an explosive atmosphere in the form of a cloud of combustible dust may occasionally form in the air during operation.

**ZONE 22 :** Location where an explosive atmosphere in the form of a cloud of combustible dust is not likely to form in the air during normal operation, or should such a formation occur, is nonetheless only of short duration.

**Gases /Fumes**



**Dust**

- Continuous hazard
- Hazard present during normal operating conditions
- Limited hazard in the event of failure of a system (limited in time)

DEFINITION OF MARKINGS  
ON ATEX - IECEx PRODUCTS

Since April 20, 2016, all Ex products must satisfy the requirements of the directive ATEX 2014/34/UE, the evolution of the standard 60079-0 leads to a new product marking presented in the following tables :

| Transceiver <b>Elio ATEX</b>   | Connection interface unit <b>PYR ATEX</b>  | <b>Kit PYA</b> Output BNC antenna kit with intrinsic safety barrier  |
|--|--|--|
|  <p>                     1 2 3<br/> <b>C</b> <b>€0081</b> <b>II</b> <b>2</b> <b>GD</b><br/>                     4 5 6 7<br/> <b>Ex d IIB T6 Gb</b><br/>                     8 9 10 7<br/> <b>Ex tb IIIC T85°C Db</b><br/><br/> <b>LCIE 15 ATEX 3023 X</b> 11<br/> <b>IECEX LCIE 15.0025 X</b> 12                 </p> |  <p>                     1 2 3<br/> <b>C</b> <b>€0081</b> <b>II</b> <b>2</b> <b>GD</b><br/>                     4 5 6 7<br/> <b>Ex e IIC T6 Gb</b><br/>                     8 9 10 7<br/> <b>Ex tb IIIC T85°C Db</b><br/><br/> <b>LCIE 14 ATEX 3011 X</b> 11<br/> <b>IECEX LCIE 14.0013 X</b> 12                 </p> |  <p>                     1 2 3<br/> <b>C</b> <b>€0081</b> <b>II</b> <b>1</b> <b>GD</b><br/>                     4 5 7<br/> <b>Ex ia IIC Ga</b><br/>                     8 9 7<br/> <b>Ex ia IIIC Da</b><br/> <b>I M1</b><br/> <b>Ex ia I Ma</b><br/> <b>LCIE 14 ATEX 3004 U</b> 11<br/> <b>IECEX LCIE 14.0006 U</b> 12                 </p> |

Below are the tables to understand the **ATEX** marquing :

**1 Device group**

| Device group | Application   |
|--------------|---|
| Group I      | Electrical devices intended for use in firedamp mines. (underground work in the mines and parts of ground installations) => Protection against firedamp |
| Group II     | Electrical devices intended for all other explosible atmospheres than firedamp mines (ground industries) => Protection against explosions               |

**2 3 ATEX classification**

| Category of equipment | Flammable substances | Degree of protection | Description   |
|-----------------------|----------------------|----------------------|---|
| 1                     | G Gas<br>D Dust      | Very high level      | Devices capable of operating in the atmospheres where the risk of explosion is permanent or almost permanent (zones 0, 1, 2 and 20, 21, 22) |
| 2                     | G Gas<br>D Dust      | High level           | Devices capable of operating in the atmospheres where the risk of explosion is frequent (zones 1, 2 and 21, 22)                             |
| 3                     | G Gas<br>D Dust      | Normal               | Devices capable of operating in the atmospheres where the risk of explosion is occasional (zones 2 and 22)                                  |

(.) : The information in brackets indicates that it is possible to connect the cable link option to an operator module which is certified in category 1.

#### 4 Protection modes for electrical equipment in gaseous atmospheres

| Protection mode |                           | Standard        | Basic principle  | Application in ZONE  |   |   |   |
|-----------------|---------------------------|-----------------|--|--|---|---|---|
|                 |                           |                 |  | 0  | 1 | 2 |   |
| d               | Explosion proof enclosure | EN/IEC 60079-1  | The extremely heavy duty enclosure contains the explosion inside the device. The explosion proof seals of the device prevent any propagation of the flame outside the enclosure. The seals are regularly serviced. |  | ● | ● |   |
| e               | Enhanced safety           | EN/IEC 60079-7  | The components inside the enclosure must not produce arcs, sparks or dangerous temperatures under normal utilization conditions. The enclosure must be tight to IP 54 and withstand impacts.                       |  | ● | ● |   |
| i               | Intrinsic safety          | ia              | EN/IEC 60079-11  | The actual design of the circuit, where the energy is limited at the entry by a Zener barrier or a galvanic insulator makes it impossible for arcs or electrical sparks to form, subdivided into "ia" resists 2 defects: suitable for zone 0, and "ib" resists 1 defect: suitable for zones 1 and 2. | ● | ● | ● |
|                 |                           | ib              | EN/IEC 60079-11  | The actual design of the circuit, where the energy is limited at the entry by a Zener barrier or a galvanic insulator makes it impossible for arcs or electrical sparks to form, subdivided into "ia" resists 2 defects: suitable for zone 0, and "ib" resists 1 defect: suitable for zones 1 and 2. |   | ● | ● |
| m               | Encapsulation             | EN/IEC 60079-18 | For this protection mode, all the electronics is encapsulated in an insulating material to prevent electrical arcs or electrical sparks.   |  | ● | ● |   |
| n               | Zone 2                    | EN/IEC 60079-15 | This protection mode is only suitable for devices intended for zone 2 where the risk of explosion is low. It combines the enhanced safety mode "e" with lower protection requirements.                             |  |   | ● |   |
| o               | Immersion in oil          | EN/IEC 60079-6  | The material or the electrical circuit is immersed in oil. The explosive mixture is located above the liquid and cannot be ignited by the electrical circuit.  |  | ● | ● |   |
| p               | Internal overpressure     | EN/IEC 60079-2  | A pressurized gas is introduced in the enclosure to prevent the possibly-explosive surrounding atmosphere from entering the enclosure.   |  | ● | ● |   |
| q               | Powdery filler            | EN/IEC 60079-5  | For this protection mode, all the electronics is encapsulated in an inert powdery material to prevent electrical arcs or electrical sparks.  |  | ● | ● |   |

[ ] : The information in brackets indicates the type of protection and the level of protection for the cable link option.

#### 5 Classification of gases and fumes by explosion groups (non-exhaustive list)

| Group IIA |                | Group IIB       |                       | Group IIC        |
|-----------|----------------|-----------------|-----------------------|------------------|
| Propane   | Acetone        | Ethylene        | Ethyl oxide           | Acetylene        |
| Ethane    | Hexane         | Diethylene      | Sulphuretted hydrogen | Hydrogen         |
| Butane    | Methanol       | Ethyl ether     | Ethanol               | Carbon disulfide |
| Benzene   | Paint thinners | Cycloprodene    |                       |                  |
| Pentane   | Natural gas    | Butadiene 1-3   |                       |                  |
| Heptane   |                | Propylene oxide |                       |                  |

#### 6 Gas temperature classes

The safe use of equipment in dangerous areas requires knowledge of the gas group and compare the temperature auto-ignition of gaseous mixtures treated to the temperature of equipment marking.

**The maximum surface temperature of the material must always be less than the autoignition temperature of the gas present in the dangerous area.**

| Temperature class | MAXIMUM surface temperature of electrical equipment | Ignition temperatures of FLAMMABLE materials |
|-------------------|---|--|
| T1                | 450°C   | > 450°C                                      |
| T2                | 300°C   | > 300°C                                      |
| T3                | 200°C   | > 200°C                                      |
| T4                | 135°C   | > 135°C                                      |
| T5                | 100°C   | > 100°C                                      |
| T6                | 85°C  | > 85°C                                       |

### 7 Equipment protection level (EPL)

Traditional relationship between level of protection and areas / categories (without additional risk assessment).

| Equipment protection level (EPL) | Normal range of application | Category (2014/34/UE) |
|----------------------------------|-----------------------------|-----------------------|
| Ga                               | 0 (and 1 and 2)             | 1G                    |
| Gb                               | 1 (and 2)                   | 2G                    |
| Gc                               | 2                           | 3G                    |
| Da                               | 20 (and 21 and 22)          | 1D                    |
| Db                               | 21 (and 22)                 | 2D                    |
| Dc                               | 22                          | 3D                    |
| Ma / Mb                          | mines                       | M1 / M2               |

### 8 Protection modes for electrical equipment in dusty atmospheres

| Protection mode |                           |                 | Standard  | Basic principle  | Application in ZONE |    |    |
|-----------------|---------------------------|-----------------|---|--|---------------------|----|----|
|                 |                           |                 |   |  | 20                  | 21 | 22 |
| i               | Intrinsic safety          | ia              | EN/IEC 60079-11   | The actual design of the circuit, where the energy is limited at the entry by a Zener barrier or a galvanic insulator makes it impossible for arcs or electrical sparks to form, subdivided into "ia" resists 2 defects: suitable for zone 0, and "ib" resists 1 defect: suitable for zones 1 and 2. | ●                   | ●  | ●  |
|                 |                           | ib              | EN/IEC 60079-11   | The actual design of the circuit, where the energy is limited at the entry by a Zener barrier or a galvanic insulator makes it impossible for arcs or electrical sparks to form, subdivided into "ia" resists 2 defects: suitable for zone 0, and "ib" resists 1 defect: suitable for zones 1 and 2. | ●                   | ●  | ●  |
| m               | Encapsulation             | EN/IEC 60079-18 | For this protection mode, all the electronics is encapsulated in an insulating material to prevent electrical arcs or electrical sparks.  | ●  | ●                   | ●  |    |
| p               | Internal overpressure     | EN/IEC 60079-2  | A pressurized gas is introduced in the enclosure to prevent the possibly-explosive surrounding atmosphere from entering the enclosure.  | ●  | ●                   | ●  |    |
| t               | Explosion proof enclosure | EN/IEC 60079-31 | The extremely heavy duty envelope contains the explosion inside the device. The explosion proof seals of the device prevent any propagation of the flame outside the enclosure. The seals are regularly serviced. | ●  | ●                   | ●  |    |

### 9 Classification of dust by explosion groups

| Explosion groups | Type of dust                   | Fundamental principle  |
|------------------|--------------------------------|--|
| Group IIIA       | Combustible dust in suspension | Very fine solid particles of nominal size of about 500 microns or less, can be suspended in the air, which can be deposited because of their own weight and that can burn or be consumed in the air and are susceptible to form explosive mixtures with air under conditions of atmospheric pressure and normal temperature. |
| Group IIIB       | Non-conductive dust            | Combustible dust electrical resistivity greater than 103 Ω.m. Size < 500 μm  |
| Group IIIC       | Conductive dust                | Combustible dust electrical resistivity at or below 103 Ω.m. Size < 500 μm   |

### 10 Maximum surface temperature for dusty atmospheres

### 11 LCIE : certificate of EC type examination number

### 12 LCIE : IECEx certificate number



1/2 WAVE ANTENNA  
ON BNC CONNECTOR  
+ 3M EXTENSION  
CABLE

USB CONNECTOR FOR  
MAINTENANCE AND  
CONFIGURATION

INTEGRATED  
INTRINSIC SAFETY  
BARRIER FOR  
ANTENNA OUTPUT

PLUG-IN SIM CARD  
WITH APPLICATION  
CONFIGURATION

CONNECTOR  
FOR EXTENSION  
BOARD (OPTION)

IDENTIFICATION OF  
TERMINAL STRIPS  
WITH SPRING-TYPE  
PLUG-IN  
CONNECTIONS



1 CABLE GLAND PG  
1/2" NPT SIZE 20  
(OPTION)

BIDIRECTIONAL  
RADIO LINK

EXPLOSION PROOF  
HOUSING

EXPLOSION PROOF  
SEAL PLANE

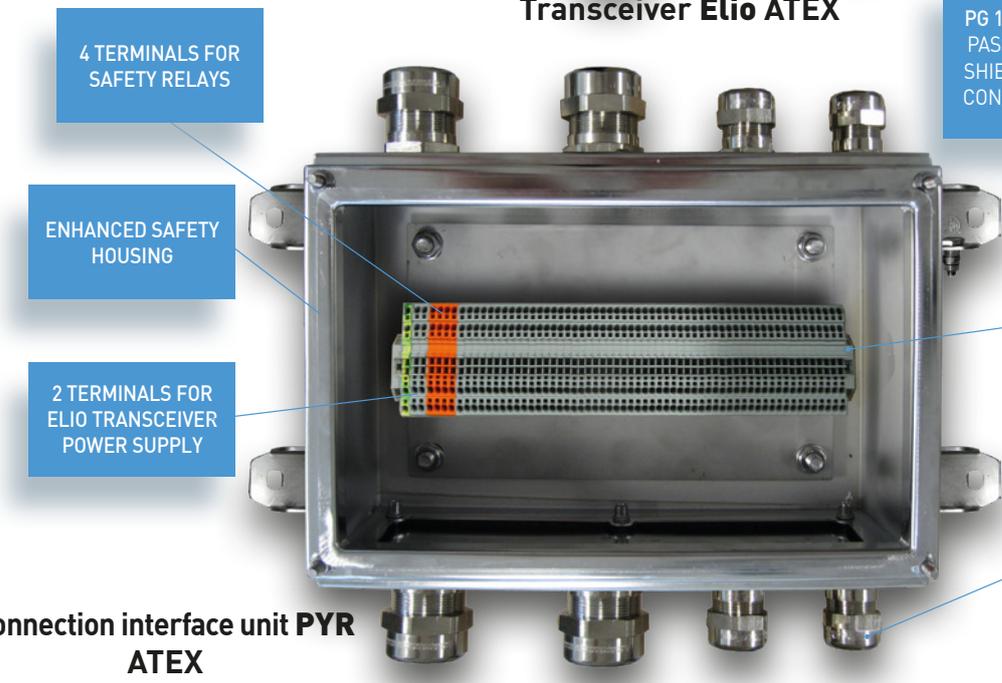
18 HOUSING CLOSURE  
STAINLESS STEEL  
SCREWS

CAPTIVE SCREWS  
WITH MASTERY OF  
THE PRESSURE ON  
THE SEAL

**Transceiver Elio ATEX**

1 CABLE GLAND  
PG 1" NPT SIZE 32  
PASSAGEWAY FOR  
SHIELDED CABLES  
CONTROL / POWER  
SUPPLY

1 CABLE GLAND  
PG 1" NPT SIZE 32  
(OPTION)  
PASSAGEWAY FOR  
SHIELDED CABLES  
CONTROL / POWER  
SUPPLY



4 TERMINALS FOR  
SAFETY RELAYS

ENHANCED SAFETY  
HOUSING

2 TERMINALS FOR  
ELIO TRANSCIVER  
POWER SUPPLY

55 TERMINALS FOR  
INPUTS / OUTPUTS

HOUSING DELIVERED  
WITH CABLE GLANDS  
FOR SHIELDED CABLES  
OR CAPS TO BE  
MOUNTED :  
4 CABLE GLANDS M20  
4 CABLE GLANDS M32  
4 PLUGS M20  
2 PLUGS M32

**Connection interface unit PYR  
ATEX**

## DESCRIPTION

The Elio transceiver is formed by a motherboard comprising :

- > 1 «On» relay (RM) (active when the «On/Validation» button on the operator module is pressed; not self-holding)
- > 2 safety relays (RS1& RS2) (active when the «On/Validation» button on the operator module is pressed; self-holding up to shutdown).
- > 12 function relays (R1 to R12)
- > 1 auxiliary connector for an extension board (optional)

### Wireless HMI Control (WHC)

Text messages or graphic images can be send from Modbus Network and write on module operator display screen

### Compatibility:

These transceivers operate with **Beta, Gama, Pika, Moka** operators modules, to be defined according the application.

## TECHNICAL CHARACTERISTICS

### MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

|                             |  |
|-----------------------------|--|
| Housing material            | Aluminium alloy marine grade   |
| Tightness                   | IP 66  |
| Weight                      | 26Kg (approx.)   |
| Dimensions                  | 340 x 415 x 258,3 mm max (without antenna)   |
| Operating temperature range | - 20°C to + 55°C   |
| Storage temperature range   | - 30°C to + 70°C   |
| Cable lead-out              | - 1 cable gland PG 1 " NPT Size 32 passageway for shielded control cables / power supply<br>- 1 cable gland PG 1 " NPT Size 32 passageway for shielded control cables / power supply (in OPTION)<br>- 1 cable gland PG 1/2 " NPT Size 20 for auxiliary control (in OPTION) |
| Cable gland material        | Brass with nickel plating  |
| Wiring connection           | Spring-type plug-in connectors   |

### RADIO CHARACTERISTICS

|                   |   |
|-------------------|---|
| Frequency choice  | - 64 programmable frequencies on 433-434 MHz band<br>- 12 programmable frequencies on 869 MHz band<br>- 64 programmable frequencies on 911-918 MHz band |
| Transmit power    | < 10 mW (license free)  |
| Modulation        | FM  |
| Antenna           | plug-in antenna on BNC connector  |
| Average range (1) | 100 m in industrial environment<br>300 m in open space  |

### ELECTRICAL CHARACTERISTICS

|                      |  |
|----------------------|--|
| Power supply voltage | - 12 VDC - 12 % to 24 VDC +25 %<br>- 12 VDC - 5 % to 24 VDC +25 % and 24/48 VAC ± 25 %<br>- 115/230 VAC ± 15 % |
| Maximum consumption  | 8 W  |
| USB Interface        | mini-B 5-contact USB connector   |
| Indication           | - yellow indicator lights : power on   |

### SECURE RELAY OUTPUTS

|                             |   |
|-----------------------------|---|
| Type of contacts            | 2 relays with linked contacts   |
| Contacts and connections    | 2 connection points, potential free, by contact<br>Spring-type plug-in connectors |
| Characteristics of contacts | Max. current 6A   |

### SECURE RELAY OUTPUTS

|                          |   |
|--------------------------|---|
| Contacts and connections | 2 connection points, potential free, by contact<br>Spring-type plug-in connectors   |
| Command                  | 1 «On» relay + 12 function relays   |
| Outputs                  | Independent NO relays<br>- Category DC13 0,5A / 24VDC , AC15 2A / 230VAC<br>- Interrupting capacity 2000VA max.<br>- Max. current 8A<br>- Min. current 10 mA (12 Vmin.)<br>- Max. voltage. 250VAC |
| Response time            | - On startup : 0,5s max<br>- On command : 300ms max   |
| Active-stop time         | 100 ms  |
| Passive stop time        | adjustable between 0.5 and 2s   |
| Indication               | - 1 green indicator light : Radio status and quality<br>- 1 yellow indicator light : Power on<br>- 1 red indicator light : fault and diagnostic   |
| Power supply protection  | - Against polarity inversions<br>- Against overcurrents by fuse   |

(1) Range varies according to environment conditions around operator module and reception antenna (steel works, metal walls ...).

## ADDITIONAL OPTIONS

### EXTENSION BOARD TO COMMUNICATE WITH EQUIPMENT USING OTHER COMPLEMENTARY ELECTRICAL SIGNALS

|                                  |   |
|----------------------------------|---|
| Galvanic insulation              | > 2,5kV   |
| <b>2 logic inputs :</b>          |   |
| Contacts and connections         | 4 connection points with spring-type plug-in connectors             |
| Active input consumption         | < 20mA  |
| High level on input              | > 3Vdc  |
| Low level on input               | < 2Vdc  |
| Voltage                          | 0-30Vdc Max   |
| <b>1 analogue input :</b>        |   |
| Contacts and connections         | 2 connection points with spring-type plug-in connectors             |
| Type of signal                   | 0-10V or 4-20mA   |
| Active voltage input consumption | < 10mA  |
| <b>1 analogue output:</b>        |   |
| Contacts and connections         | 2 connection points with spring-type plug-in connectors             |
| Type of signal                   | 0-10V or 4-20mA   |
| Voltage output max. current      | < 10mA  |
| <b>1 RS 485 serial link:</b>     |   |
| Contacts and connections         | 2 connection points with spring-type plug-in connectors             |
| Protocol                         | Modbus RTU slave  |
| Data rate                        | 1200, 2400, 4800, 9600, 19200 (default), 38400, 57600, 115200 bit/s |
| Parity                           | none / even (default) / odd   |
| Slave addressing                 | 1 to 247  |

### SYNCHRONIZATION OF EQUIPMENT

- Master / Master
- Tandem
- Pitch and Catch

## CONNECTION INTERFACE UNIT ATEX



Reference : **PYR000**

### MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

|  |  |
|--|--|
| Housing material   | Inox   |
| Tightness  | IP 66  |
| Weight   | 8,5Kg [approx.]  |
| Dimensions   | 230 x 330 x 148 mm   |
| Operating temperature range  | - 20°C to + 60°C   |
| Storage temperature range  | - 30°C to + 70°C   |
| Cable lead-out by cable glands to be mounted depending on the application [material : Brass with nickel plating] : |  |
|  | - 2 cable glands M32 passageway for shielded cables to Elio ATEX transceiver housing |
|  | - 2 cable glands M32 passageway for shielded cables power supply / control           |
|  | - 4 cable glands M20 passageway for cables sensors data / control                    |
| Wiring connection  | 62 terminals   |
| Accessories  | 4 caps M20<br>2 caps M32   |

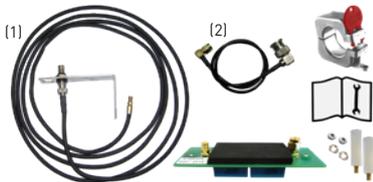
### ELECTRICAL CHARACTERISTICS

Maximum allowable current on the terminals :  
2 possible cases :

**1)** at least 12 terminals crossed by a 4A current working simultaneously (for example, for the ATEX Elio Transceiver unit: 2 active safety relays + 4 function relays simultaneously; for the connection interface unit: 12 terminals may be loaded simultaneously).

**2)** A maximum current of 1A without limitation of terminals connected and loaded.

## ANTENNA WITH INTRINSIC SAFETY BARRIER ATEX



Reference : **PYA**

THIS KIT ALLOWS YOU TO INTEGRATE A STANDARD JAY ELECTRONIQUE TRANSCIVER IN A CUSTOMER ATEX / IECEx HOUSING.

**OPERATING TEMPERATURE RANGE :**  
-30°C ≤ TAMB ≤ +85°C

(1) = 3M EXTERNAL ANTENNA CABLE  
(2) = 40CM INTERNAL ANTENNA CABLE

## ACCESSORIES

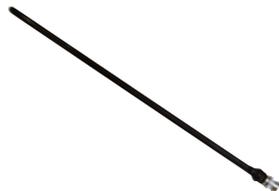


**Straight antenna, 1/4 wave, BNC, on 433 MHz**

Reference : VUB084

**Short straight antenna, 1/4 wave, BNC, on 433 MHz**

Reference : VUB082



**Straight antenna, 1/2 wave, BNC, on 433 MHz**

Reference : VUB086



**0.5 m extension for BNC antenna**

Reference : VUB170



**2 m extension for BNC antenna + bracket**

Reference : VUB105



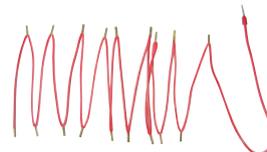
**5 m extension for BNC antenna + bracket**

Reference : VUB125



**10 m extension for BNC antenna + bracket**

Reference : VUB131



**Wiring accessories for common points**

Reference : PWT03



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