Elio

TRANSCEIVER

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.

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.

→ Cable glands or industrial connector (32 contacts) on transceiver for easy installation.

→ Spring-type, plug-in terminal strips facilitate wiring and maintenance.

## FULLY COMPLIANT WITH EUROPEAN DIRECTIVES :

Machinery 2006/42 :
Emergency stop
→ SIL3 per EN 61508
→ Performance level PLe
   Per EN13849-1 and -2
EC type certificate issued by
TÜV NORD

TÜV NORD
TÜV NORD CERT
GmbH
Type Tested

No 44 250 11 382580 003

Radio and telecommunication terminal equipment
(low voltage, electromagnetic compatibility, radio spectrum)
R&TTE 99/5/CE
ARCEP certificate

Jay électronique
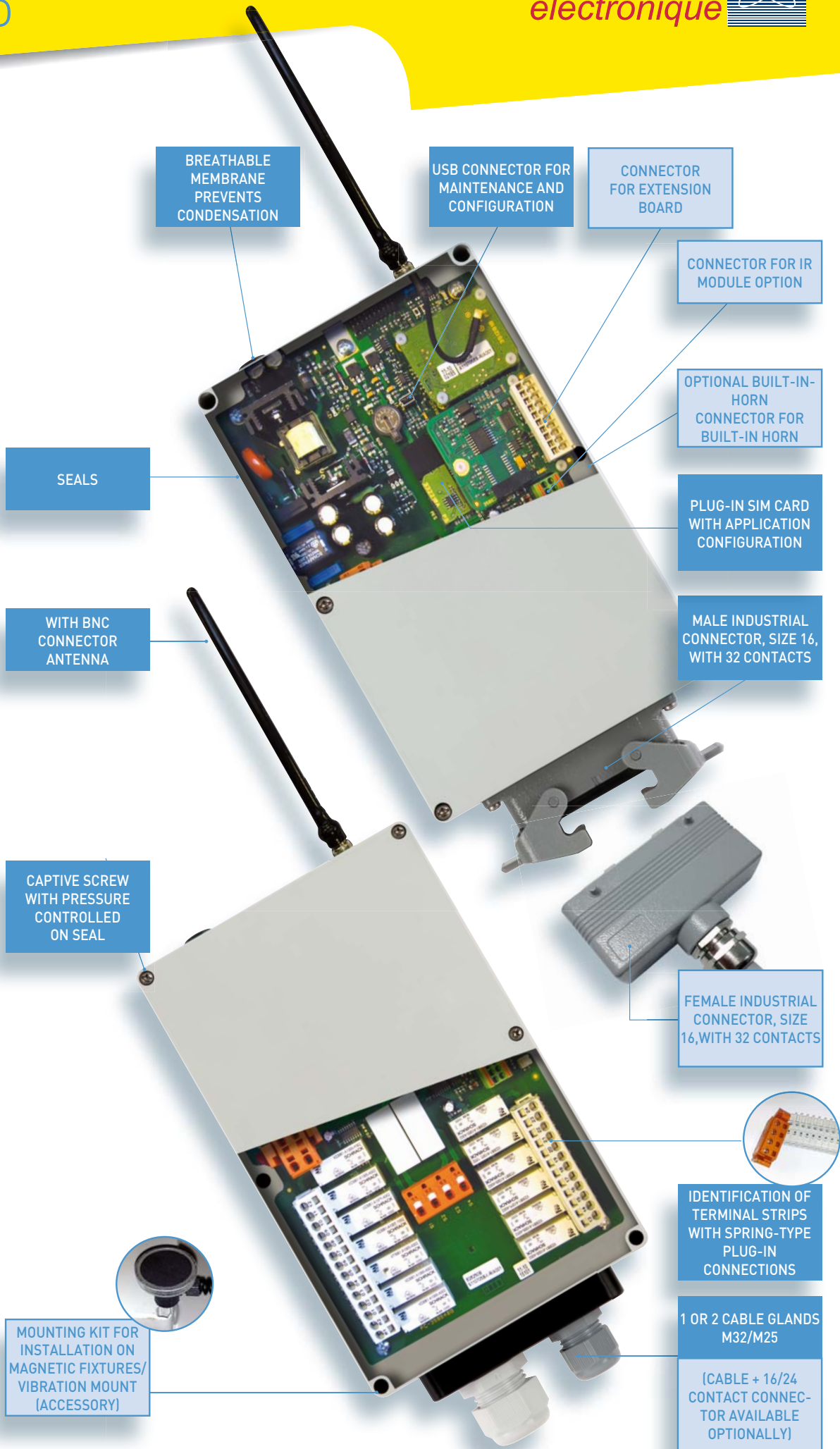
BREATHABLE MEMBRANE PREVENTS CONDENSATION

USB CONNECTOR FOR MAINTENANCE AND CONFIGURATION

CONNECTOR FOR EXTENSION BOARD

CONNECTOR FOR IR MODULE OPTION

OPTIONAL BUILT-IN-HORN CONNECTOR FOR BUILT-IN HORN

SEALS

PLUG-IN SIM CARD WITH APPLICATION CONFIGURATION

WITH BNC CONNECTOR ANTENNA

MALE INDUSTRIAL CONNECTOR, SIZE 16, WITH 32 CONTACTS

CAPTIVE SCREW WITH PRESSURE CONTROLLED ON SEAL

FEMALE INDUSTRIAL CONNECTOR, SIZE 16,WITH 32 CONTACTS

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

MOUNTING KIT FOR INSTALLATION ON MAGNETIC FIXTURES/ VIBRATION MOUNT (ACCESSORY)

1 OR 2 CABLE GLANDS M32/M25

(CABLE + 16/24 CONTACT CONNEC-TOR AVAILABLE OPTIONALLY)

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 connector for connection of 3 IR cells (optional)

→ 1 auxiliary connector for an extension board (optional)

→ 1 connector for connection of the internal horn
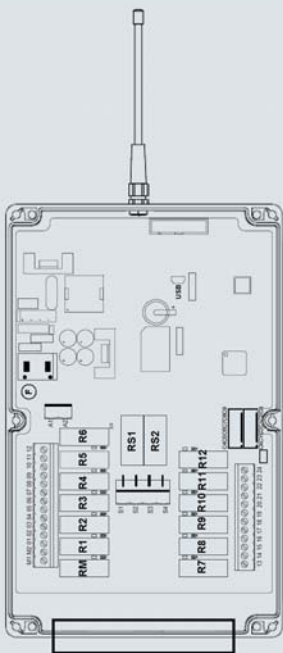
TECHNICAL CHARACTERISTICS

MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

Housing material	ABS,
Tightness	IP 65
Weight	2Kg (approx.)
Dimensions	160 x 250 x 120 mm max (not including antenna)
Operating temperature range	- 20°C to + 60°C
Storage temperature range	- 30°C to 70°C
Cable lead-out	- by 32-contact plug-in connector
	- by 2 cable gland lead-outs
Cable connections	Spring-type plug-in connectors

RADIO CHARACTERISTICS

Frequency	- 64 programmable frequencies on 433-434 MHz band
	- 12 programmable frequencies on 869 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 [1]
	300 m in open space [1]

ELECTRICAL CHARACTERISTICS

Power supply voltage	- 12 VDC - 12 % à 24 VDC +25 %
	- 12 VDC - 5 % à 24 VDC +25 % et 24/48 VAC ± 25 %
	- 115/230 VAC ± 15 %
Maximum consumption	8 W

SECURE RELAY OUTPUTS

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

SECURE RELAY OUTPUTS

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

2 logic inputs :

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

1 analogue input :

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

1 analogue output:

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

1 RS 485 serial link:

Contacts and connections	2 connection points with spring-type plug-in connectors

STARTUP BY IR VALIDATION

ACTION AREA LIMITATION

BUILT-IN HORN

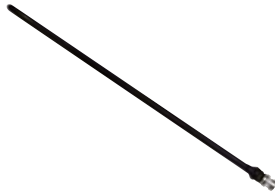|	
Power	100 dB

ACCESSORIES

Straight antenna, 1/4 wave, BNC
Reference : VUB084

Short straight antenna, 1/4 wave, BNC
Reference : VUB082

Straight antenna, 1/2 wave, BNC
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
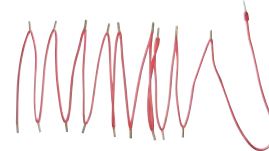Reference : VUB125

10 m extension for BNC antenna + bracket
Reference : VUB131

Transceiver mounting kit using magnetic fixtures
Reference: UDWR38

Wiring accessories for common points
Reference : PWT02

Cable gland kit PE M25 with 3 wire grommets
Reference: PWT01

2m cable + 16-pin male connector
Reference : UDWR14

2m cable + 24-pin male connector
Reference : UDWR13

Female industrial connector kit, size 16
32 contacts, reference : PWT10

1 IR module
(10m cable and plastic M16 cable gland included) for IR startup option
Reference: PWT20

10m cable extension + connector
for PWT20 IR module
Reference : UDWR10

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