



INTRINSICALLY SAFE LORA I/O MODULE

The intrinsically safe Solexy LoRaWAN® I/O module allows the monitoring and control digitals and analog input as well as digital output in hazardous locations.

The LoRa® protocol allows for a long range, up to 10 km, with a low power consumption, leading to the possibility to have battery operated devices.

The wide number of analog and digital inputs available makes the LWI LoRa module a multipurpose solution for the transmission of multiple kind of information like temperature, pressure and anything that can be measured by a 4-20 mA or 0-10 V sensor, RTDs, K probe, through RS485 serial port and more.

The modular design based on a motherboard, with the radio and main components, and interchangeable slaves boards, with different kinds of input, gives to the customer the possibility to have a cost-effective solution, selecting the appropriate input number and type according to the application.

The battery-operated layout ensure an easy and faster installation in any installation where monitoring is required, including temporary installation.

FEATURES

BATTERY OPERATED

Up to 5 years battery life, intrinsically safe battery with power input, can be replaced in the field (classified area)

LORA PROTOCOL

Long range with low power consumption
Available in the 868 MHz and 915 MHz frequencies
long range

WEATHER PROOF

IP 65/67

FLEXIBILITY

Input and output selected based on the requirements

HEAVY DUTY CONSTRUCTION

Rugged aluminium enclosure suitable for outdoor application

INTRINSICALLY SAFE

Device completely EXi

APPROVALS



ATEX / IECEx CERTIFICATION



Zone 0, 1, 2, 20, 21 & 22

II 1G Ex ia IIC T4 Ga

II 1D Ex ia IIIC T135°C Da

Ex ia IIC T4 Ga

Ex ia IIIC T135°C Da

NOMENCLATURE



LWI M 0 04 EU X0 - 05 1
a b c d e f g

a - Housing

- M Metal housing
- P Plastic housing

b - Digital input/output

- 0 RS485
- 1 RS485, 4 digital inputs, 1 digital output

c - Analog input/output

- 0 None
- 1 Thermocouple type K
- 2 PT 100
- 3 PT 1000
- 4 4-20 mA receiver (ADC module 4-20mA) active
- 5 4-20 mA for existing loop (ADC module 4-20mA)
- 6 0-10 VDC (ADC module 0-10VDC)
- 7 6 PT100/1000, 1 4-20 mA

d - Operating frequencies

- EU 863-870 MHz (Europe)
- US 902-928 MHz (North America)
- AP 920-923 MHz (Asia-Pacific)
- ** Contact Solexy team for specific regions

e - Certification

- X0 ATEX/IECEx zone 0/20
- 00 Weatherproof

f - extention (enclosure)

- 05 Aluminium 1
- 06 Plastic 1

f - extention (battery)

- 0 Qty 1 BL-02
- 1 Qty 2 BL-02

Data contained



SPECIFICATIONS

GENERAL	
ATEX certification	nr° FIDI 25 ATEX 0024X Standards: IEC 60079-0:2018, IEC 60079-11:2012
IECEX certification	nr° IECEX FIDI 25.0011X Standards: IEC 60079-0:2017, IEC 60079-11:2011
Power supply	3.6V / 7200mAh - replaceable lithium battery 9-36V / 500mW - external EX i power supply
Battery packs	BL-02: 3.6V/7200mAh BL-01: 3.6/5200mAh (on request)
Battery life	Up to 5 years
Ambient temp. range	-40°C (-40°F) +60°C (+140°F) with BL-02 (Battery pack 2) -40°C (-40°F) +80°C (+176°F) with BL-01 (Battery pack 1) (on request)
IP Rating	IP65/67
RF TRANSCEIVER	
Frequency of operation	EU: 863-870 MHz US: 902-928 MHz
Transmit power	+14 dBm +19dBm
Receiver sensitivity	-137 dBm -130 dBm
I/O MODULE	
Temperature	Thermocouple Type K PT100 / PT1000
Analog	4-20mA ~15 Vdc @ 40mA (Ex i) gauge voltage supply 0-10V
Digital	4 digital input 1 digital output (Relay NC/NO) counting functionality on input n° 4, max frequency 2Hz
Serial	RS485 (for configuration and communication non bi-directional)
FIRMWARE	
Protocol	LoRaWAN®, Class A
Transmission cycles	Configurable from 1 to 2592000sec. (ideal once every hour for better autonomy)
Data compression	Yes (differential coding)
Activation method	Activation by Personalization (ABP) or Over-The-Air Activation (OTAA)
Data encryption	AE128

Data contained in this specification are subject to change without notice





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