



INTRINSICALLY SAFE ADMIRAL LORA I/O NODE

The intrinsically safe Solexy ADMIRAL LoRaWAN® I/O node allows the monitoring and control of digital and analog input in hazardous locations.

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

The wide number of analog and digital inputs available makes the Admiral a multipurpose solution for the transmission of multiple types of information like temperature, pressure and anything that can be measured by a 4-20 mA or 0-10 V sensor, RTDs, K probe, Modbus RTU sensors and more.

The modular design is based on a motherboard, with the radio and main components; 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 ensures easy and faster installation in any application 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 EU863-870, US902-928, AP920-923 and other frequencies on request

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 EX i

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

00 None

01 Thermocouple type K

02 PT 100

03 PT 1000

04 4-20 mA receiver (ADC module 4-20mA) active

05 4-20 mA for existing loop (ADC module 4-20mA)

06 0-10 VDC (ADC module 0-10VDC)

07 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 n°3 cable entries M20x1,5

17 Aluminium n°3 cable entries 1/2" NPT

** contact us for further information

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: EN IEC 60079-0:2018, EN 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	EU863-870 US902-928 AS920-9223*
Transmit power	+14 dBm +19 dBm +19 dBm
Receiver sensitivity	-137 dBm -130 dBm -130 dBm
I/O MODULE	
Temperature	Thermocouple Type K PT100 / PT1000
Analog	4-20mA ~15 Vdc @ 40mA (Ex i) gauge voltage supply 0-10 VDC
Digital	4 digital input 1 digital output (Relay NC/NO) counting functionality on input n° 4, max frequency 2Hz
Serial	RS485 Modbus RTU Function code: FC01 (Read Coils) / FC02 (Read Discrete Inputs) / FC03 (Read Holding Registers) / FC04 (Read Input Registers) Max number of registers: 32 RS485 baud rate: from 9600 to 115200
FIRMWARE	
Protocol	LoRaWAN®, Class A
Certification	LoRaWAN® Radio module certified
Transmission cycles	Configurable from 1 s to 720 hr (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

* Actual performance speeds may be affected by a variety of attributes such as distance from gateway, data loads, packet sizes, etc
AS923 models are for use in many Asia Pacific countries. Contact SOLEXY for more information.





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