

Solid-Sky-2Pro-DIO-RS485

Solid-Sky is a multipurpose device with great radio range. It is developed to industrial conditions and fits well to long-range applications.

Solid-Sky has durable battery package but in addition can be used with external power. It is easy to install and implement. Solid-Sky can intermittently supply power to two external two-wire 4-20 mA transmitters even when running only on battery power.

Solid-Sky uses Semtech LoRa technology which enables very long-range radio coverage in wireless battery-operated device.

Solid-Sky-2Pro-DIO-RS485 version has two mA or V inputs and three digital inputs. It has also RS485 serial connection so with Solid-Sky-2Pro-DIO-RS485 you can integrate Modbus RTU Slave devices wirelessly. For less input possibilities see Solid-Sky-2Pro.



Applications



Industry



Buildings and Environment

Product highlights and features

Power supply to external 2-wire 4-20mA transmitter

2 mA/V input channels

Long radio range

3 digital input channels

Durable primary battery, but can also be connected to an external power source

RS485 Modbus RTU Master support

Solid-Sky-2Pro-DIO-RS485



General Specifications

Enclosure	Light grey polycarbonate plastic
Environmental Protection	IP65
Weight	~850 g, including batteries
External Dimensions	130 mm x 180 mm x 75 mm (WHD), without the pole mounting kit
Rated Operating Conditions	-40...+60°C, 0...100 %RH
Allowed Storage Conditions	-40...+60°C, non-condensing
Internal Battery Type	4 x LR14 (C size 1.5 V alkaline)
Measuring Interval	Adjustable 5...7200 seconds, default setting 1800 seconds (30 minutes)
Inputs	2 process inputs (mA/V) 3 digital inputs

Radio Specifications

Modulation	LoRa
Protocol	Nokeval Sky, not LoRaWAN compatible
Antenna	Internal
Center Frequency	433.05 - 434.79 MHz, 7 predefined channels, fine tuning also possible
Bandwidth	max 300 kHz OBW
Transmission Power	max 10 mW E.R.P., software adjustable in 1 dB steps
Transmission Range	Line-of-sight range up to 10 km with maximal settings

Internal Temperature Measurement

Range	-40...+60°C
Accuracy (at 25°C)	±0.5°C typical

mA Inputs

Range	0...+21.0 mA or more
Load	50...80 Ohm
Overcurrent Protection	PTC fuse, max 30 V
Excitation	Low setting: 11.5...14 VDC, High setting: 17.5...20 VDC
Accuracy (at 25°C)	±0.008 mA
Thermal Drift	±60 ppm/°C
Sensor supply	Can intermittently supply power to 2 external two-wire 4-20 mA transmitters even when running on battery power only

Solid-Sky-2Pro-DIO-RS485



V Inputs

Range	0...11 VDC
Load	110 kOhm
Accuracy (at 25°C)	±0.005 V
Thermal Drift	±60 ppm/°C

Digital Inputs

Tolerable Input Voltage	0...30 VDC
Threshold Voltage	NPN: < 1.9 V, PNP: > 3.0 V

RS-485 Serial Connection

Modbus RTU	Master
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External Power Supply

Input Voltage	11...30 VDC
Power Consumption	~100 mA maximum, few mA typical
