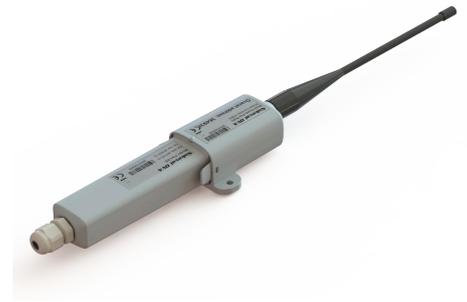# Flex-Sky-ES

Flex-Sky-ES is a wireless temperature transmitter which measures with an external Pt100 sensor connected to a spring loaded connector inside the transmitter. Sensor is not included to the device, but any 4-wire Pt100 sensor can be used.

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

Typically used with Nokeval Cell-Sky-Link-RS485-3G base station but can also be integrated to systems with RS485 Modbus RTU.

General Specifications

Storage temperature	-40...+60 °C
Operation temperature	-30...+60 °C
Operation humidity	0...100 %RH
Protection class	IP65
Enclosure material	Plastic (Measuring module: PC+ABS, Radio module: PC)
Dimensions	383 mm x 33 mm x 61 mm
Weight	Total: 151 g Measurement module: 70 g Radio module with antenna: 81 g
Internal battery type	LR6 1.5 V alkaline AA size battery, e.g. Energizer EN91.
Battery life	Typically, 2-5 years depending on the measurement interval and the radio network traffic amount.

Radio Specifications

Nokeval radio type	Sky-radio
Antenna	Dedicated ¼ wave whip with a BNC connector, Laird EXC420BNX or similar
Center requency	433.3...434.5 MHz user adjustable
Bandwidth	max 300 kHz OBW
Transmitting power	max 10 dBm E.I.R.P.
Open space range	about 10 km with maximal parameters

Sensor Specifications

Sensor type	External 4-wire Pt100 (or Ni100 or Pt1000) sensor, not supplied
Measurement range	Pt100: -200...+650 °C
Accuracy	0,05 % rdg + 0,2 °C at 25 °C + sensor accuracy
Thermal drift	0.01 °C/°C
Cable length	<30 m