Nokeval

Flex2-CS LWEU/LWNA

Transmitter

The Flex2 series is a multipurpose weatherproof LoRaWAN transmitter series with several input options for various needs of industrial measurement and monitoring. The LoRaWAN radio offers a long range, especially outdoors, and connectivity to all standard LoRaWAN systems.

Flex2-CS LWEU/LWNA measures temperature with an external sensor connected via an M12 connector (supplied). The sensor is not supplied, but a thermocouple or a RTD sensor can be used.

Applications

Industry

Product highlights and features

High measurement accuracy and reliability

Weatherproof

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Environment

Operating temperature	-30...+60 °C
Operating humidity	0-100 %RH
Protection class	IP65
Enclosure material	Plastic (PC+ABS)

Measurements

Dimensions	Width 60 mm, depth 32.5 mm, height: height: 204.7 mm
Weight	Radio modules: 35g Measurement modules: 70g (slight variation between Flex2 models)
Cable gland	M12x1.5

Measuring and data transmission

Measure interval	Configurable: 0...14400s
Radio	LoRa radio technology with Murata ABZ-093 LoRaWAN modem
Antenna	Internal
Frequency band	EU868: 863-870 MHz / US915: 902-928 MHz
Transmission power	Max +14 dBm E.R.P.
Range, line-of-sight	Depends on installation location and environment, in good conditions 10 km

Power supply

Batteries	3.6V Lithium Thionyl battery pack
Typical battery life	With a good radio link and 5 min measurement interval, typically 5 years With an average radio link and 30 min measurement interval, typically 5 years With a bad radio link and 30 min measurement interval, typically 3 years

CS module

Sensor type	RTD
Cable length	< 30 m
Measurement range	-200...+650°C
Accuracy	Accuracy 0.05% rdg + 0.2 °C at 25 °C ambient
Thermal drift	0.01 °C/°C
Sensor type	Thermocouple
Cable length	< 30 m
Measurement range	mV: -30...2000mV
Linearity error	TcB: 400...1700 °C (0.3 °C), TcC: 0...2300 °C (0.5 °C) TcD: 0...2300 °C (1 °C), TcE: -100...900 °C (0.2 °C) TcG: 1000...2300 °C (2 °C), TcJ: -160...950 °C (1 °C) TcK: -150...1370 °C (0.5 °C), TcL: -150...900 °C (0.5 °C) TcN: 0...1300 °C (0.1 °C), TcR: 0...1700 °C (0.5 °C) TcS: 0...1700 °C (0.5 °C), TcT: -200...400 °C (1 °C)
Accuracy	Typically ±1.0°C over +0...+100 °C