TeamWare
Wireless
Sensor
Network

Wireless device for counting pulses from electricity, gas and water fiscal meters

General features

- 6 programmable pulse counter inputs
- Compatible with ES interface for electricity fiscal meters
- Acquisition of active and reactive energy pulses (2 + 2 inputs for absorbed / generated energy)
- Tariff range acquisition (2 inputs)
- 1 SSR output AC/DC 40V 100mA
- Programmable radio transmission time
- Router function integrated
- 230 Vac mains powered
- External radio antenna

TWSN-ES is a 230 Vac powered device that acquires pulses from electricity, gas and water meters. This device can be used as a generic pulse counter (up to 6 pulse inputs). In addition, as it is powered continuously, it can work also as a repeater for peripheral TWSN sensors.

For what concerns the electricity meter application, TWSN-ES acquires active and reactive energy pulses (absorbed and generated) and tariff range.

It is possible to program the pulse counter transmission intervals.

Technical specifications

General digital inputs

- 6 digital inputs insulated by dry contact

Digital inputs connected with ES module

- VMax: m27V
- IMax: m27mA (Rseries m1 ohm)
- Ipulse: $^-$ 10mA
- Minimum pulse duration: 30 ms
- Reference standard: IEC 62053-31

User interface

- Button to associate / disassociate the node
- 7 segments led digit to view TWSN join status and radio link level with other radio sensors

Radio module specification

- Band: ISM 2.4GHz
- RF Data rate: 250 Kbps
- Reception sensitivity: -102 dBm
- Max transmission power: 10 mW (+10 dBm)
- Esternal antenna
- Indoor/Outdoor coverage: 50m/100m
- Standard: IEEE 802.15.4-2003; Stack ZigBee 2007 PRO (EMBER Znet)
- Network Security: ZigBee-2007 standard security requirements; 128 bit AES encryption algorithm

Power Supply

- Supply: 230 Vac, 50/60Hz, 20mA

Environmental and mechanical parameters

- Operative temperature: -10°C .. +60°C
- Storage temperature: -20°C .. +70°C
- Protection degree: IP50
- Size: 145x90 mm

Product standards applied

- ETSI EN 300 328: radio compatibility for digital transmissions
- ETSI EN 301 489: radio compatibility
- EN 61000-6-2/3: EMC Emissions/Immunity
- EN 60950-1: EMC electrical safety