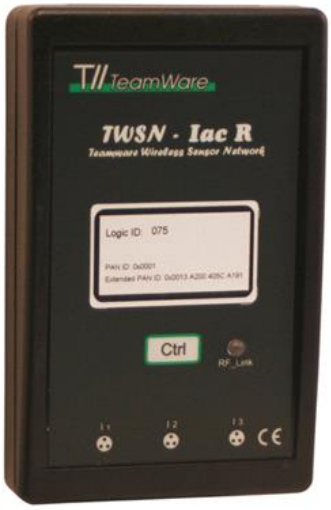
TWSN-IacR

Wireless AC current sensor



TeamWare
Wireless
Sensor
Network

Wireless sensor for measuring AC currents with Rogowski coils

General Features

- Sensor for measuring 3 AC currents with Rogowski coils
- Measure range from 10 to 1000 A
- Programmable alarm thresholds
- Programmable transmission time
- Fast and easy installation without any interruption of electrical service
- Battery powered
- Internal radio antenna

TWSN-IacR is a radio device, battery powered, that performs the measure of 3 different AC currents with Rogowski coils. A significant feature is the high resistance to mechanical shocks.

TWSN-IacR transmits measurements at regular intervals to a TWSN family gateway. It is possible for the operator to program the alarm threshold in order to manage any possible overcoming of minimum or maximum levels of measured currents.

Technical specifications

Measures

- Method: True RMS
- Measure accuracy: 1% reading + 0.1% full scale
- Range: 10 ÷ 1000 A
- Channels number: 3

User Interface

- Button to associate / disassociate to node
- Status led

Rogowski sensors interface

- Output: 46uV/A @ 50Hz
- Lcoil/Rcoil: 190uH/unnecesary
- Diameter: from 125 mm

Radio module specifications

- Band: ISM 2.4GHz
- RF Data rate: 250 Kbps
- Reception sensitivity: -95 dBm
- Max transmission power: 2 mW (+3 dBm)
- Internal antenna
- Indoor/Outdoor coverage: 30m/60m
- 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: n.1 battery AA da 3,6V 2,6Ah
- Supply (option): external 9 to 40Vcc
- Battery life: > 2 years with data sent every 5 min

Environmental and mechanical parameters

- Operative temperature: -10°C .. +60°C
- Storage temperature: -20°C .. +70°C
- Protection degree: IP50
- Size: 150x90 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

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