

FAULT DETECTOR TS200 MT

Fault Detector with Integrated Communication System



Event detector for permanent and temporary faults, and absence of voltage and current. Includes an integrated communication module to report events in real time to the supervision and management system, allowing integration with SCADA via DNP3 and IEC104 protocols, as well as connection to other dashboards via APIs. Operates in networks up to 34.5kV.

 **TECSYS**[®]
Smart Power

DESCRIPTION

The TS200MT fault detector is a product designed to detect events in electrical distribution networks up to 34.5 kV. It monitors current and voltage cycle by cycle to indicate events of Absence and Presence of Voltage and Current, Permanent and Temporary Faults in real time at the point where it is installed.

The messages are sent via the Sigfox® network, which uses open frequency long-range radios to send the data packets. These packets are redirected to Habitat, the data aggregator software developed by Tecsys as a database and to convert the information into DNP3 protocol. The information can then be passed directly to the utility's SCADA server.

The TS200MT is simple to install and does not require any adjustments or configurations in the field. It can be installed in bare or covered cables, in conventional or compact networks.



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TECHNICAL SPECIFICATION

Fault Detector - TS200MT

FEATURES

Nominal Network Voltage: up to 34,5 kV

Frequency Grid: 50Hz / 60Hz **

Detects faults in the network when a surge in current (di/dt) is identified. To trigger activation, the current must increase by at least 10A and reach 50% of the nominal current, all within a 16ms interval**

Missing current duration for a permanent fault: 70sec**

Duration time of Current Surge: 1 to 4 grid cycles.**

Ultracap Voltage: Max 2.4Vdc / Economic level below 1.5Vdc / device shuts down at 0.7Vdc.***

Acceptable Network Cable Diameter: 10mm to 33mm

UV-resistant polycarbonate enclosure, IP66

LED visual indication Permanent Fault: flashing in a permanent fault state. 1000ms off and 100ms on

Field activation after solar exposure: Activation time varies based on weather conditions, ranging from 20 to 120 minutes

Communication with SCADA via DNP3 protocol, configurable through the Habitat platform

Limit for Absence or Presence of Voltage: Voltage above 3kV indicates presence, while voltage below 1.5kV indicates absence.**

Limit for Absence or Presence of Current: Current above 3A indicates presence, while current below 1.5A indicates absence**

Power Supply: Solar Panel

Autonomy: 40h

Sampling Interval: 32 samples per power cycle

Operating temperature: -5 a 60°C

Maintenance-free power system using a combination of ultracapacitors and solar panel

Communication via Sigfox network, with the module already integrated into the product

Open communication frequency at 902.2 MHz

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Messages sent instantly, including information about the presence of current and voltage, battery level alert, permanent and temporary faults

Faults are identified as solved when the current indication returns to the established minimum level

Transmit Power of 22.5 dBm

Independent operation: Can be installed in single-phase, two-phase, and three-phase networks

** Different values can be configured at the factory.

*** In economic mode, the device suppresses the monitoring of temporary and permanent faults.



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MONITORED EVENTS BY THE TS200MT

Fault Detector - TS200MT

The TS200MT monitors variations in the network and sends immediate messages in case of changes. Additionally, it sends two daily 'keep alive' messages to indicate normal operation and updates data, including the charge of the ultracapacitors.

UPDATED VERSIONS OF THIS MATERIAL CAN BE OBTAINED FOR DOWNLOAD ON OUR WEBSITE.