

Product Information

RM-Iso

Insulation and Loop Resistance Module with capacitance based fault location

The LANCIER Monitoring Rail-Module-Bus is a modular and robust sensor system.

Several measuring modules are mounted on a DIN rail and are directly connected to one another by means of plug-in contacts. The supply voltage, data analysis and control panel as well as their transmission to the remote measuring stations are carried out via the RM-Basic module.

The sensor RM-Iso is a measurement and monitoring device for insulation and loop resistance as well as capacitance in the LANCIER Monitoring RM bus.

A free pair in the cable that is to be monitored serves as a measuring loop, which is continuously measured by the RM-Iso module. The alarm threshold for insulation and loop resistance can be programmed with no restriction using an integrated keypad and the basic module's display. All settings are saved in an internal EEPROM memory to prevent losses.

The RM-module calculates the remaining length of the measurement loop in case of line interruption automatically if capacitance measurement is activated.

This allows for a quick cable fault

location due to construction works, cable theft or sabotage.

To troubleshoot, additional adjacent external voltages can potentially be measured and the polarity of the measurement voltage can be reversed.

For the remote alarm system the RM-Iso module possesses built-in dry output contacts. Additionally it can be connected to the LANCIER Tx-Bus, a Can-Bus or a telecontrol system via Modbus.



RM-Basic module

RM-Iso module

Technical Data

Insulation resistance

Measurement range / Resolution 0 .. 200 M Ω , fault ± 10 % of measurement, ± 0.2 M Ω / 0,1 M Ω

Loop resistance

Measurement range / Resolution 0 .. 9,99 M Ω , fault ± 3 % of measurement, ± 50 Ω / 10 Ω

Capacitance

Measurement range / Resolution 2500 nF, fault ± 3 % of measurement, ± 3 nF / 1 nF

Measuring voltage 90 V DC, switchable and disengageable

Supply voltage by RM-Basic module

Operating temperature -20 $^{\circ}$ C .. +65 $^{\circ}$ C

Admissible ambient humidity 0 .. 95 % rel. humidity, non-condensing

Display by RM-Basic module

Signal LEDs

2 x green / red: Alarm / Acknowledged alarm / Display operation insulation resp. loop

1 x blue: display operation

Signal outputs 2 dry change-over contacts for: insulation and loop resistance

Max. switchable voltage / current 100 V DC / 0.1 A DC

Dimensions RM-Iso (W x D x H) 72 x 89 x 65 mm

Ordering Data

RM-Iso

Insulation and Loop Resistance Measuring Module with control panel and signal output via dry contacts

Order-No. 074003.100

RM-Basic

Power supply, communication and display module for the RM-Bus

Order-No. 074001.100

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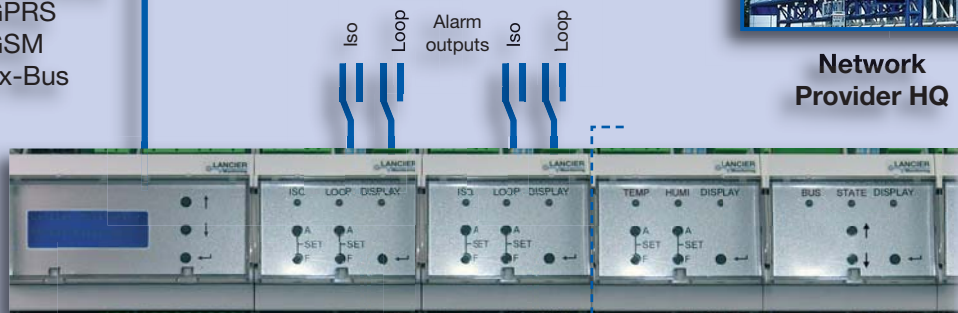
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System diagram

Communication via
Ethernet
RS485/232
GPRS
GSM
Tx-Bus



Network
Provider HQ



Each
RM-Iso-Modul
surveils 1 cable loop for
insulation and loop resistance.

Modularly expandable
to monitor further parameters ...

- e.g.
- contacts (switches, door contacts etc.)
 - temperature
 - humidity
 - pressure ...



Disconnection

e.g. because of **construction works** or **theft**.
The RM-Iso module recognizes demolition and
indicates the fault location immediately.