Janitza®

Operation manual for Janitza® RogoTrans measurement transducer

(for connection to the Janitza® Rogowski current transformer)
Operation manual for item no. 15.03.613



Before installing the product, please read this operation manual through carefully!

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The "operation manual" is not a complete directory of all safety measures required to operate the device.
Special operating conditions may require further measures. The "operation manual" contains instructions that must be observed to ensure your personal safety and to prevent damage to property.

Symbols used:

	This symbol is an addition to the safety instructions and indicates an electrical hazard.
	This symbol is an addition to the safety instructions and indicates a potential hazard.
	This symbol with the word **NOTE!** describes: • Procedures that do not pose any risks of injures. • Important information, procedures or handling steps.

Safety information

- Only qualified electrical specialists are permitted to install, put into operation, maintain and operate the device.
- During all work on the device comply with the national health, safety and accident prevention regulations.
- If you do not observe the safety regulations, this can result in death, serious physical injuries or extensive property damage.
- During set-up and operation, observe the applicable provisions and safety regulations (also national safety regulations), as well as standard engineering practice.
- Observe the installation instructions provided!
- De-energise the system before starting the work. Check that it is de-energised!
- De-energise the device before starting the work. Check that it is de-energised!
- The safety-related data can be found in this document and the certificates (EC type approval certificate, if applicable any further approvals).
- Do not exceed the threshold values specified in the operation manual and on the rating plate.
- Never operate equipment and current transformer circuits whilst open.
- It is prohibited to open or modify the device. Do not repair the device yourself, but rather replace it with an equivalent device.
- Repairs must be carried out by the manufacturer only. The manufacturer shall not be liable for damage due to violations.
- Install the device in an appropriate enclosure with suitable protection type in accordance with IEC 60529 to protect against mechanical or electrical damage.
- The prerequisites for faultless, safe operation of the device are proper transport and proper storage, set-up and installation, as well as operation and maintenance.
- Only use accessories that comply with the specifications of the device manufacturer (e.g. combination of Janitza® RogoTrans measurement transducer and Janitza® current transformer).
- Store the product documentation.

Operating and safety information

- Connect the harmonised Janitza® Rogowski current transformer at the input of the Janitza® measurement transducer!
- The Janitza® Rogowski current transformer and its cables must not exhibit any insulation damage.
- The output signal (1 A) must be connected exclusively with potential-separated 1 A current transformer inputs.
- It is prohibited to connect the input or output signal with external voltage. This can lead to the destruction of the Janitza® measurement transducer.
- Ensure adequate dimensioning of the power supply unit (24 V / 1 A)!
- It is necessary to connect the earth of the supply voltage (- 24 V) to ground (GND)
- Do not use the device in close proximity to strong, high frequency fields (distortion of the measured value)
- If multiple devices are used next to each other then a minimum distance of approx. 5 mm must be maintained between the devices (heat development)

Brief description

- The Janitza® RogoTrans measurement transducer is supplied with the output signal of a Janitza® Rogowski current transformer.
- The Janitza® RogoTrans measurement transducer outputs a maximum AC current of 1 A at the output.
- With the Janitza® RogoTrans measurement transducer, you can select between five current measurement ranges from 250 A AC to 4,000 A AC.

For further information on the Janitza® Rogowski current transformer please refer to the separate operation manual for the current transformer.

Properties

- Janitza® RogoTrans measurement transducer for Janitza® Rogowski current transformer
- Standardised output signal 0 to 1 A
- Universal applications for measuring alternating currents
- Metering ranges 250 to 4000 A
- Power supply: 24 V DC
- Compact construction in a plastic housing
- Assembly on DIN rail possible

Commissioning

After the power is switched on, all LEDs briefly light up in turn (from top to bottom). The device subsequently performs initialisation. During this time (approx. 15 s), the red "ERROR" LED lights up permanently and the output is inactive.
Once the red LED has gone out, the device is ready for operation.

Programming the metering range

Press and hold down the "Prog" button (approx. 3 s) to enter programming mode.
The yellow "Prog" LED illuminates.
It is now possible to select the desired current metering range by repeatedly pressing the "Prog" button. The active range is indicated by the corresponding green LED.
Around 5 s after being pressed for the last time, the yellow LED goes out and the metering range is stored permanently.
Metering range factory setting: 4000A

Fault indications

With a pending error, the red ERROR LED flashes in alternation with one of the green LEDs, which in this case indicates the fault:
OVERLOAD: Incorrect selection of current range (over-current > 110% of the range)
LOAD?: Burden is too great or the output current circuit is interrupted or not connected
ERROR 1: Internal error (+/- 5V)
ERROR 2: Internal error (+/- 8V)
ERROR 3: Internal error (offset ADC)

Symbols on the device

Warning!
Read the operation manual through carefully!

CE conformity, this product satisfies the provisions of the low voltage directive 2014/35/EU

Technical data

Item number	15.03.613
Dimensions	22.5 x 100 x 110 mm (W x H x D)
Weight	approx. 0.2 kg
Power supply	24 V DC (18 to 36 V) / 1 A
Current draw	< 300 mA (with 1 A output current) < 80 mA (without output current)
Input	Janitza® Rogowski current transformer max. 90mV (4000 A range)
Current metering ranges	1 to 4000 A 1 to 2000 A 1 to 1000 A 1 to 500 A 1 to 250 A
Metering range setting (button) LED (yellow)	Wear-free metering range selection via micro-controller and PGA
Operating and metering range display	via 6 LED (green)
Phase angle	< 1°
Linearity error at 50 Hz Measuring error at 50 Hz	< 0.2 % in all metering ranges < 0.2 % in all metering ranges
Input impedance	10 kΩ in all metering ranges
Signal output	0 to 1A
Measurement range exceeding	110%
Burden	0 to 1.5 Ω
Linearity error burden 0 to 1.5Ohm	< 0.02 %
Alarm output	24 V DC / 200 mA (floating potential optical output, open with fault)
Alarm messages (via red LED)	Overload (range exceeding) Burden too great (output circuit) Undervoltage (24 V)
Alarm delay	60 seconds
Protection type	IP30
Ambient temperature	- 20 °C to 70 °C
Installation position	Vertical; if multiple devices are used next to each other then a minimum distance of 5 mm must be maintained between the devices (heat development)
Storage temperature	- 25 °C to 85 °C

Example connections to a UMG 512-PRO



