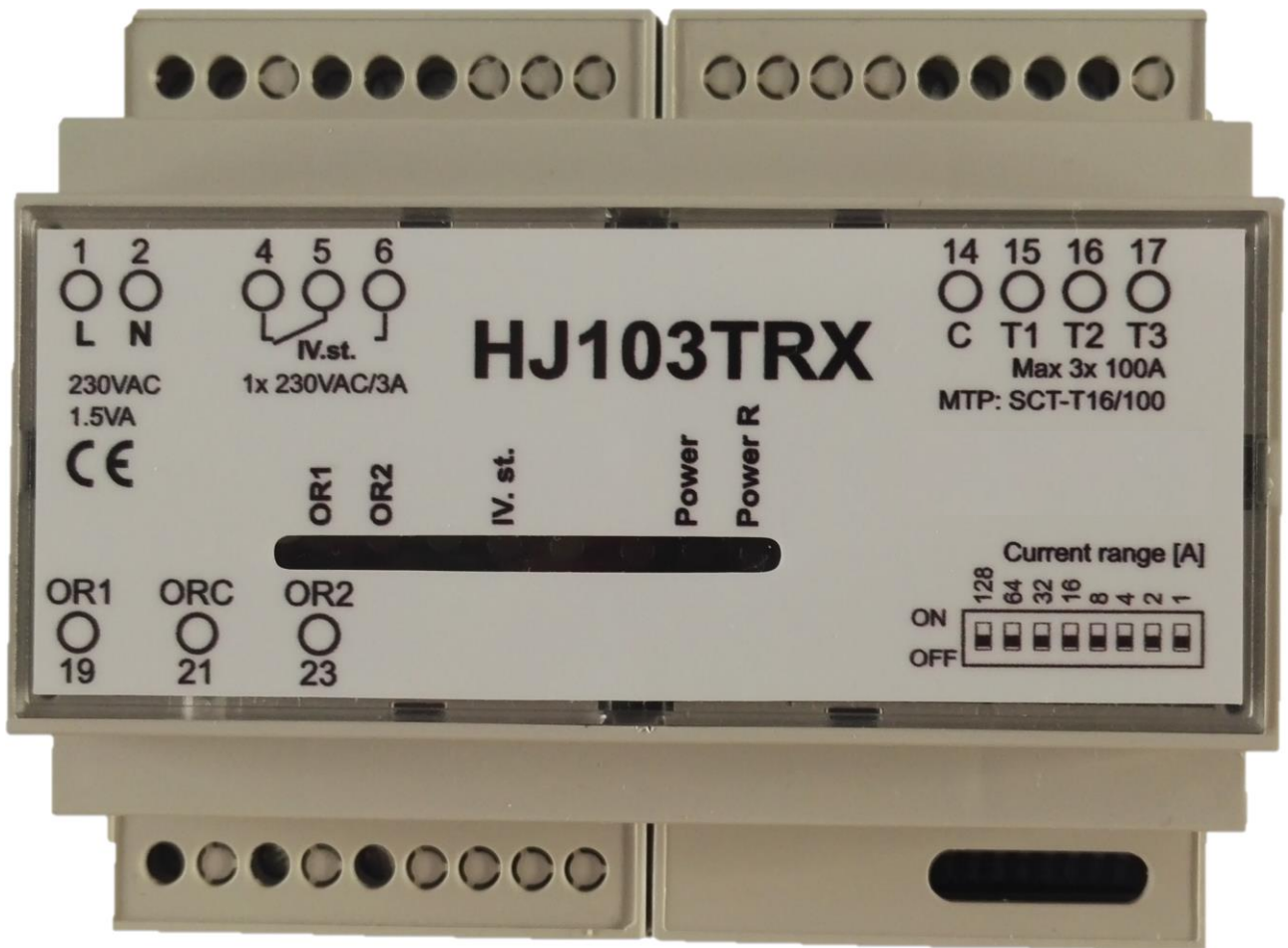


Current Maximum Monitor

HJ TRX 103



Current Maximum Monitor HJ TRX 103

1. Description

The Current Maximum Monitor, HJ103TRX, is the successor to the previous model HJ103T. The essential difference is the design itself current transformer (hereinafter MTP), which are in this model in the embodiment click-on - i.e., after the connection of conductors of MTP to designated terminals guard HJ103TRX, the MTP's are placed on the three phase conductors of the network and MTP snaps latch without disconnecting power cables and stretching holes in the box watchman. Watchman monitors the alternating current through the measurement channels and if exceeded switches or expands relay.

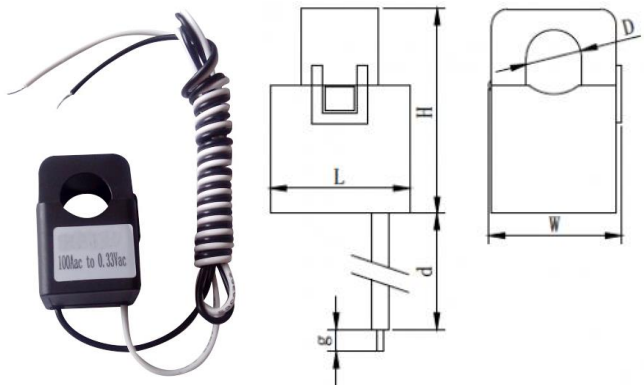


NOTICE: The Current Maximum Monitor , HJTRX103 is intended for electrical connection

2nd MTP current transformers

Measuring current transformers (MTP or MCT) with a transmission ratio of 100A / 333mV are used for direct current measurement of the HJ103TRX.

For direct current measurement with guard HJ103TRX If necessary, the measured current is higher than 100A using indirect current measurement using a current transformer with a transmission ratio $X / 5A$ and MTP gear ratio $5A / 333mV$. Both types of MTP and have the divided core are detachably - to allow simple mounting phase conductor without having to disconnect it. This type of MTP can safely remove the wires without shorting the measuring circuit before disconnection, as is required with traditional current transformer $X / 5A$.



D = 16 mm (10 mm for the indirect measurement), L = 31 mm (26 mm), W = 32 mm (25 mm), H = 46 mm (40 mm), d = 3 mm

3. Function Devices

Current of all three phases is measured and digitized measured values is by DFT (Discrete Fourier Transform) calculated effective current value. If the current value is greater than the value set via DIP switches, measurement is repeated during 2 sec., And if also this subsequent current value exceeds the set value, activates the first degree limit. When the next measurement the drop (decrease) of the current which caused the activation of limitations of the first degree, and this value is stored. If you continue to stay current measured value over the set limit (set DIP switches on HJ103TRX) is activated after 1 minute limit II. degrees and stores the value of the current drop caused by the activation

II. degree. If the measured value remains above the set current limit is activated after 1 minute restriction III. degrees and stores the value of the current drop caused by the activation of III. degree. In the event that the current value is still higher than the set value, a similar algorithm activates even restrictions IV. degree. Re-deactivation limit the degree occurs under conditions where **measured current value minus the power decrease of the degrees minus 1A is smaller than the set current maximum.**

If it was activated more degrees are deactivated in the reverse order they were activated. This procedure eliminates the Guard response to short circuits and transients that occur eg. Electricity during acceleration. The used measurement method allows very sturdy accuracy also distorted current non-sinusoidal.

4th Current Maximum Monitor HJ 103TRX

This type of guard current maximum measures current in all three phases and activate individual steps irrespective of the different currents in the individual phases. Initially activating power limitation FHEL boiler in three stages, where current limitation is not sufficient, more contact opens the fourth stage, and thus the possibility of disconnection of another appliance connected through a contactor. With regard to the control of electric boilers FHEL recommended to set the current limit value somewhat lower than the value of the main circuit breaker.

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5. Installation

Installation is very simple. Current Maximum Monitor is in DIN rail with a width of 6 circuit breakers modules.

1. Mount the HJ103TRX monitor near the main circuit breaker (in the case of the electricity meter switchboard to the non-sealing part)
2. Connect the MTP device to the terminals as indicated on the label - to C-terminal 14 connect the conductors of the same color MTP 15 to terminals T1, T2 16, T3 17-one remaining wire from each of MTP.
3. Contacts 19-OR1, 21-c, 23-OR 2 Connect terminals as indicated on the guards and electric boilers FHEL.
4. Contacts 4, 5 can connect to the contactor and its disconnection by using another appliance or group of appliances (eg. Electric. Boiler).
5. DIP switches set the monitored current according to table on guard current maximum. The resulting value is the sum of individual weights switched to the ON position. E.g. 25A corresponds to the value of the switching combination of weighing 16 + 8 + 1.
6. Connect the power supply voltage of 230V, 50Hz to terminals 1 and L-2-N.

Warning:

The device is not designed to protect electrical circuits against short circuit and it does not react! For short is considered twice exceeds the set current value - this should be considered when setting the value of the monitored current.

Contacts 19-OR1, 21-c, 23-OR 2 - connected only to terminals boiler FHEL.

6. Functions contacts watchman current maximum HJ103TRX

Table of switching contacts:

Returning steps in reverse order.

Contacts	19-21	21-23	4-5
Peaceful state	OFF	OFF	ON
I. st.	ON	OFF	ON
II. st.	OFF	ON	ON
III. st.	ON	ON	ON
IV. st.	ON	ON	OFF

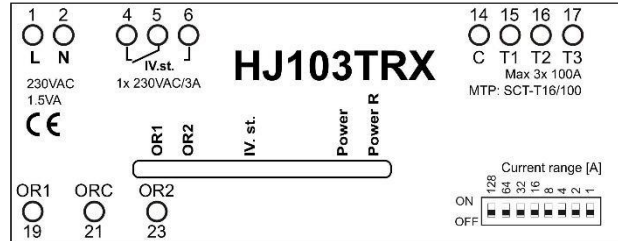
7. Technical parameters.

Supply voltage, input devices:	230 VAC, 50 / 60Hz 1.5V
Measuring range for direct measurement:	3 100A
MTP for direct measurement:	100A / 333mV, max. 16 mm diameter wires, lead length 3 m
Measuring range for indirect measurement:	3x 5A
MTP for indirect measurement:	5A / 333mV, max. 10 mm diameter wires, lead length 3 m
Current measurement accuracy:	1%
The type and contact load:	1x switching 250VAC / 3A, potential free
Cover:	IP20
Dimensions:	105 x 90 x 60 mm, 6 modules DIN IP20
Weight (including measuring transformers)	500 grams

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8. Labeling terminals.

Maximum current wires extending MTP
 SCT-T16 / 100 - 3 100A
 Contact load 4, 5 - (possibly 5, 6) max 3A.
 Power consumption devices: 1.5W



Current range - current setting

- 19 - OR 1 - OR output at terminal 1 and electric THERM
- 21 - ORC - output terminal of the OR C into electric THERM
- 23 - OR2 - Output to the terminal 2 to the OR THERM boiler
- 4-5 Wed. IV - IV break contact. degree

