Universal-Relay Type TR800Web
8 Inputs, Operation with Browser via TCP/IP

1

TR800Web

Web-IO Universal Relay with 8 Inputs for Temperature-Sensors and other analog Signals.

The TR800Web can be connected to the internet or an intranet and operated via TCP/IP from a normal PC with a suitable browser (tested with MS IE 7). No special software and no special instruction is necessary.

The Universal-Relay TR800Web monitors and logs signals from up to 8 inputs. Up to 8 limits (one per input) can be programmed for each of the 4 output-relays. Thus e.g. alarm 1 can be activated when the temperature at a sensor (e.g. Pt100) at input 1 exceeds

a limit or when the signal of a transmitter for pressure (e.g. 4-20 mA) at input 5 falls below a limit.
It can also send an email when a limit is exceeded and/or when the signals falls short of the limit again. A day/night switchover allows to vary limits depending on daytime.
In addition the device has an interface RS485 with the protocols Modbus and ZIEHL-standard.

Applications:
The TR800Web is used where one or more of the following features a required:
- measuring of up to 8 analog signals and transmit the data via TCP/IP
- reading of measured values and teleservice via internet/intranet
- signalling of alarms via email when limits are exceeded
- logging of measured values and remote inquiry e.g. for monitoring temperatures at engines and in plants
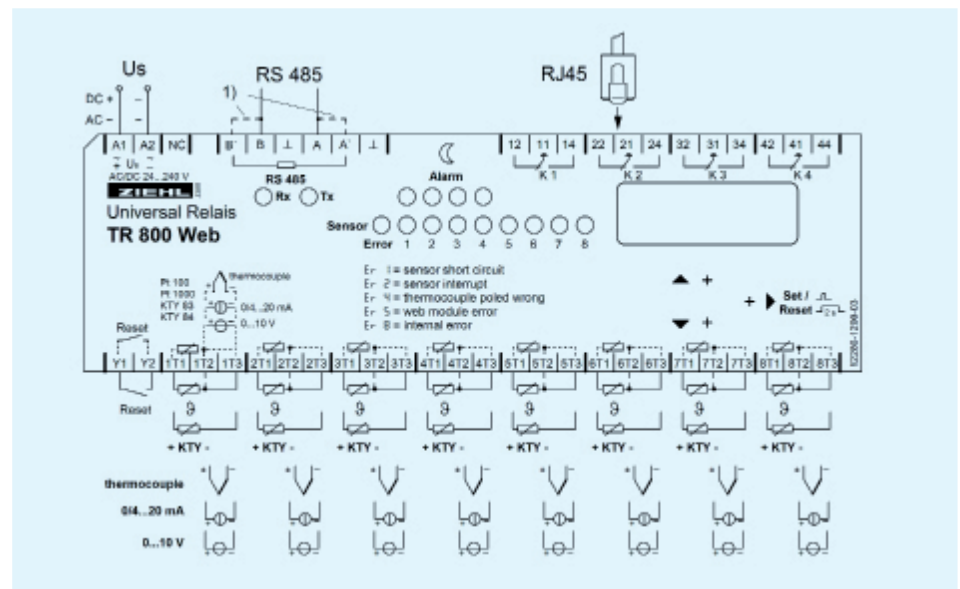
Features

8 Measuring Inputs (each programmable):
- Pt100 (RTD), Pt1000 in 2- or 3-wire
- KTY83 or KTY84
- thermocouples types B, E, J, K, L, N, R, S, T
- DC 0-10 V, DC 0/4-20 mA, display can be scaled
- resistance 0-500 Ohm, 0-30 kOhm

4 Alarms
- 4 relays, potential-free change-over contacts
- for every alarm separately programmable
  - one limit per input (limit and switching-back-value)
  - second set of values switchable day/night with week-program
  - switching-delay and switching-back delay
  - function of relay (on or off)
  - interlocked switching
  - alarm at functional error
  - email to any adresses with freely selectable subject and text

Connected via internet in web-browser

- display of measured values, min- and max-values with date/time-stamp
- simulation of measured values
- state of alarms
- configuration of inputs (name, compensation, scaling and measuring-unit)
- configuration of alarms (limits, function of relays, ...)
- time-depending day/night changing of limits
- logging of up to 150.000 values per input, alarms with date/time-stamp
- logging-interval adjustable 2 seconds to 24 hours
- configuration of network
- settings of system
- administration of users and code-protection
- real-time clock with synchronizing with time-server, reserve 7 days

Interfaces:

- Ethernet interface (http, https, UDP and Modbus)
  - http (port can be selected and switched off) and https
  - ftp-upload for automatic (interval adjustable) storage of logged data on ftp-server
  - UDP- and Modbus protocol to read data (port can be selected)
  - AJAX for data-readout in html
  - SNMP
- RS485 interface to readout data with modbus and ZIEHL-protocol

Displays and Operating Elements

- 8 LEDs for inputs
- 4 LEDs for alarms, 4 LEDs for state of relays
- 4 digit display for measuring values
- 3 buttons for reading measured values at the device and for setting of IP-adress
- switch IP 10.10.10.10 / user
- reset-button
- LEDs for activity of interfaces

Order-number: T224164

Operating and Programming with Web-Browser:

Technical Data TR800Web

Rated supply voltage Us		AC/DC 24-240 V, 0/50/60 Hz < 4 W < 13 VA
	Tolerance	DC 20,4...297 V, AC 20...264 V

Relay output		4 x 1 change-over contact (CO)Typ 2
	Type of contact	type 2 (see "general technical informations")

Testing conditions	see "general technical informations"

Network-connection	10/100 MBit Auto-MDIX

Inputs

Measuring cycle/measuring time	< 3 s

Pt100, Pt1000 according to EN 60 751

Sensor	Measuring range °C min	max	Short-circuit Ohm <	Interruption Ohm >	Resistance sensor + resistance line Ohm max
Pt100	-199	860	15	400	500
Pt1000	-199	860	150	4000	4100
KTY83	-55	175	150	4000	4100
KTY84	-40	150	150	4000	4100

Accuracy	< ± 0,5 % of measured value ± 0,5 K (KTY ±5K)
Sensor-current	≤ ± 0,6 mA
Thermal drift	< 0,04 °C/K

Thermocouples according to EN 60 584, DIN 43710

Typ	Measuring range °C Min	Max	Accuracy
B	0	1820	≤ ± 2 °C T > 300 °C
E	-270	1000	≤ ± 1 °C
J	-210	1200	≤ ± 1 °C
K	-200	1372	≤ ± 2 °C
L	-200	900	≤ ± 1 °C
N	-270	1300	≤ ± 2 °C
R	-50	1770	≤ ± 2 °C
S	-50	1770	≤ ± 2 °C
T	-270	400	≤ ± 1 °C

Thermal drift	< 0,01 % /K
Measuring-error of sensor-line	+ 0,25 µV / Ω
Accuracy of summing point	< ± 5 °C

Inputs for voltage and current

	Resistance of input	max. Inputsignal	Accuracy from Full Scale
0 - 10 V	12 k Ω	27 V	< 0,1 %
0/4...20 mA	18 Ω	100 mA	< 0,5 %

Thermal drift	< 0,02 %/ K

Measuring of resistance:

Accuracy 0,0...500,0 Ω	< 0,2 % of measured value ± 0,5 Ω
Accuracy 0...30,00 kΩ	< 0,5 % measured value ± 2 Ω
Measuring current	≤ 0,6 mA

Housing

dimensions (w x h x d)	design V8, switchgear-mount
protection housing/terminals	140 x 90 x 58 mm, mounting height 55 mm
attachment	IP 30/ IP 20
	DIN-rail 35 mm according to EN 60715 oder screws M4
weight	(with 2 extra bars)
	app. 370 g