

Quick Guide TR800Web

updated: 120911Fz
 from Firmware: 2.0.3
 Hardware Version -HW1

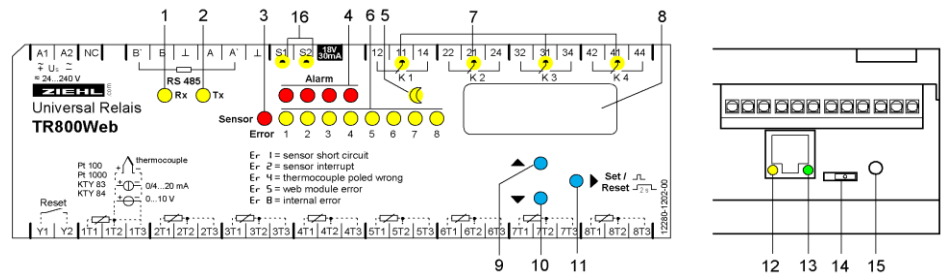
- Universal Relay



Detailed operating manual see: www.ziehl.de/ziehl/ba



1 Display and controls



1, 2 LEDs (yellow) RS485 interface

- Rx flashes briefly: Unit is receiving data via the RS485 interface
- Tx flashes briefly: Unit is transmitting data via the RS485 interface
- Rx and Tx flash/illuminate during firmware update

3 LED (red) Sensor error

- Illuminated: Fault in a sensor circuit

4 LEDs (red) alarm

- Illuminated: Alarm (1-4) has occurred
- Flashes briefly (1:4): Response delay is running
- Flashes long (4:1): Backshift delay is running
- Flashes uniformly (1:1): Ready for reset, reset with key
 Press "SET/RESET" ≥ 2s or ext. Reset Y1/Y2

5 LED (yellow) Night

- Illuminated: Limits for "Night" (can be set via browser) are active

6 LEDs (yellow) sensors

- Illuminated: Displays the sensor value belonging to the LED in the digital display
- Flashes: Sensor error in the corresponding sensor circuit

7 LEDs (yellow) relay state

- Illuminated: The relay belonging to the LED is picked up
- Off: The relay belonging to the LED is released

8 Digital display (4 digits)

- Display of sensor value, error codes
- Display of menu and configuration mode

9, 10 Up button / Down button

- Change into the menu mode (see Operating instructions Point 8.3)

11 Set/Reset button

- Press briefly: Displays the next sensor (sensor LED illuminates)
- Press for 10 s: Displays the software version (e.g. 0-00)

12 LED (yellow) Displays Ethernet transmission speed

- Off: 10 Mbps On: 100 Mbps

13 LED (green) Displays Ethernet data traffic

- Flashes during active data transmission

14 IP address slide switch

- Towards Ethernet jack: IP address 10.10.10.10
- Towards reset button: IP address User (set via web browser)

15 Webserver reset button

- Internal webserver restarts when pressed (duration ca. 1 minute)

16 LED (yellow) input state S1 and S2

- On: input Sx active

2 Installation

The unit can be installed as follows:

- Installation in switchgear cabinet on 35 mm mounting rail according to EN 60715
 - With screws M4 for installation on walls or panel. (additional latch not included in delivery)
- Connection according to connection plan or type plate.

3 Important Information's



DANGER!

Hazardous voltage!

Will cause death or serious injury. Turn off and lock out all power supplying this device before working on this device.

Observe the maximum temperature permissible when installing in switching cabinet. Make sure sufficient space to other equipment or heat sources. If the cooling becomes more difficult e.g. through close proximity of apparatus with elevated surface temperature or hindrance of the cooling air, the tolerable environmental temperature is diminishing.



A circuit-breaker or switch must be situated within easy reach of the unit and fused. Installation excess current protection should be ≤ 10 A.



Before switching on make sure that the operational voltage U_s of the type- plate and the mains voltage are the same.

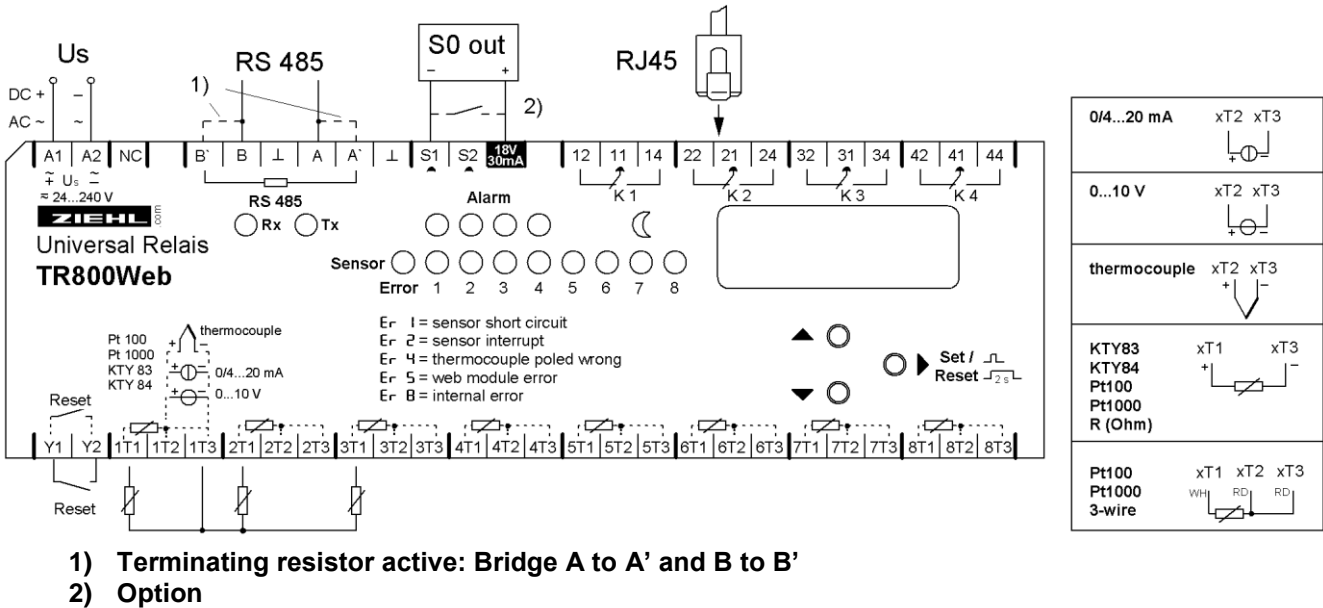


ATTENTION! When all relays are programmed in operation current mode (= pick up at alarm), a loss of the supply voltage or an instrument failure can remain unidentified.

When the relay is applied as control instrument, the operator must ensure, that this error is recognized by regular examinations.

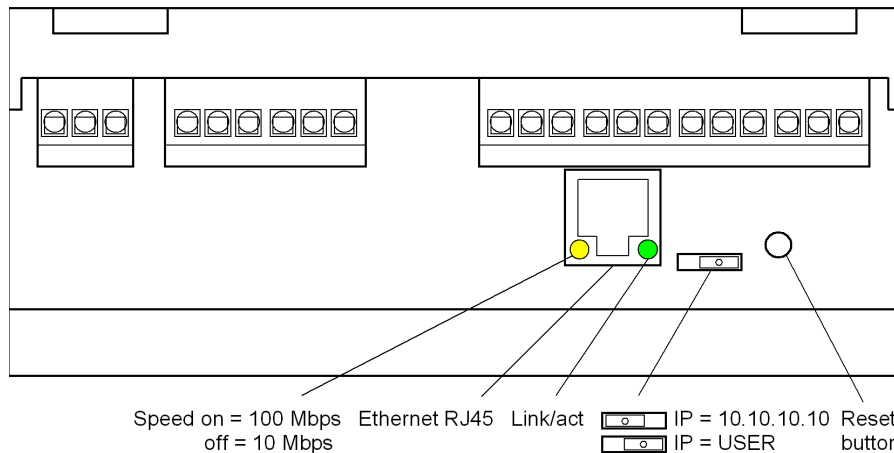
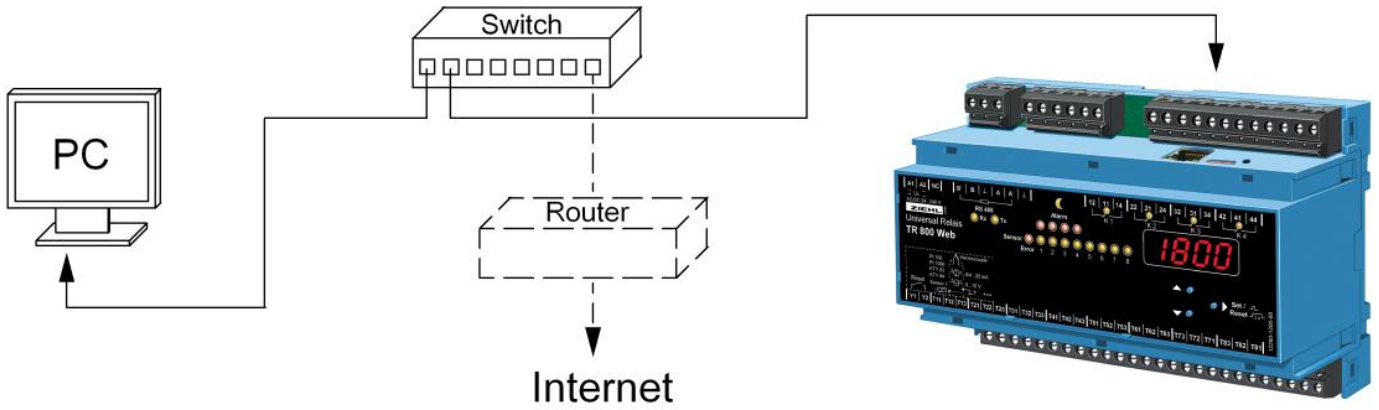
We recommend to program and accordingly evaluate at least one relay in the closed-circuit current mode

4 Connection Plan

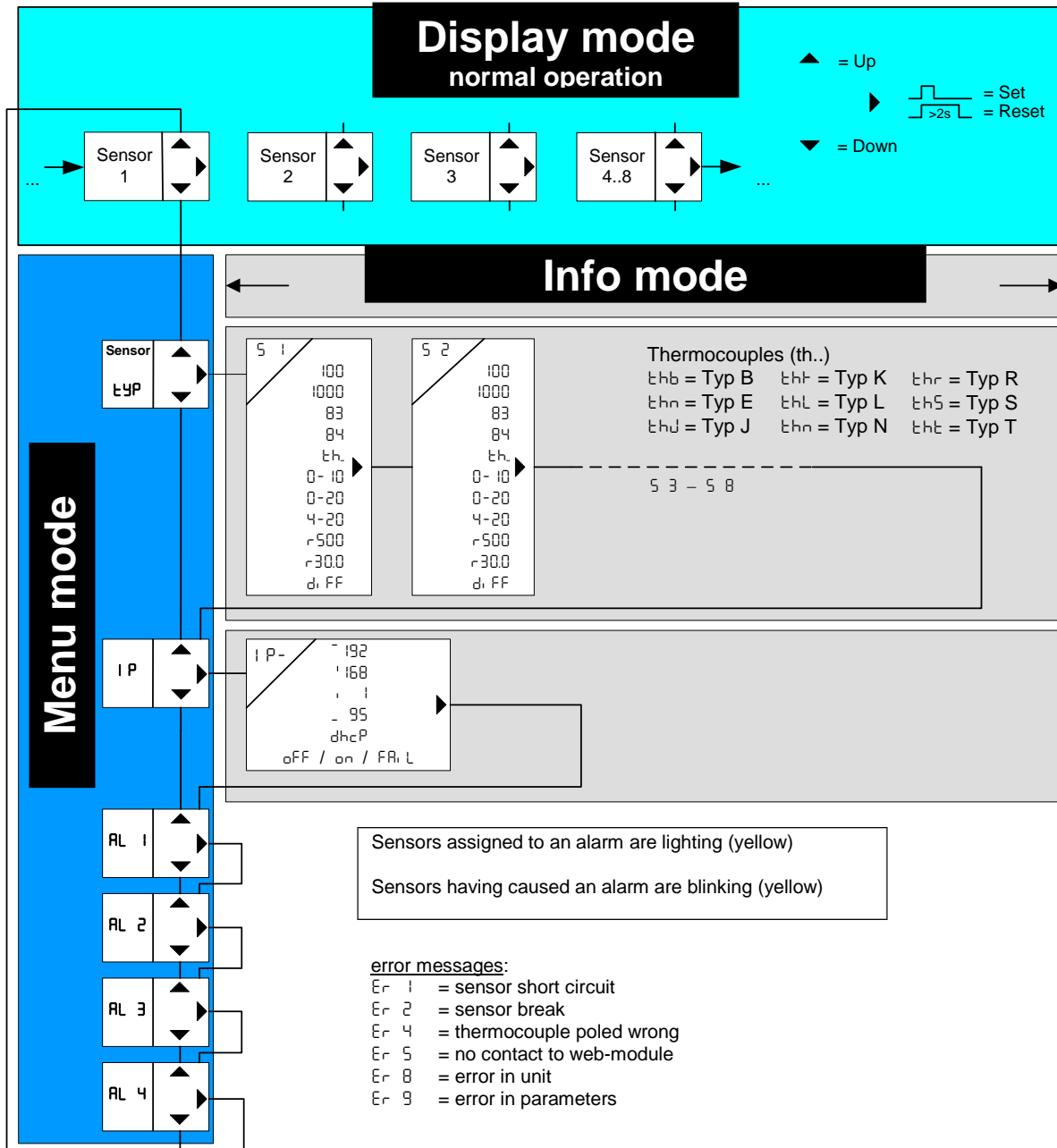


ATTENTION! Connection of sensors
 The inputs 1T1, 1T2, 1T3 to 8T3 and RESET Y1, Y2, S1, S2 are not potentially separated from output RS485. Temperature-sensors must have a sufficient insulation.
 Only signals according to SELV (Safety Extra Low Voltage) may be connected.
 The pluggable terminals of the measuring inputs have a special contact-material and may only be used for the connection of the sensors.

4.1 Connection to network and controls



5 Short operating diagram



tyP	type of sensor	d, FF	difference
S 1 ... S 8	sensors 1 to 8	IP	IP- address
nc	not connected	IP-	IP- address
100	type Pt 100	192	1 digit of IP- address
1000	type Pt 1000	'168	2 digit of IP- address
83	KTY 83	, 	3 digit of IP- address
84	KTY 84	_ 95	4 digit of IP- address
th ..	thermocouples	dhcP	DHCP
0- 10	voltage input 0-10 V	oFF	DHCP off
0-20	current input 0-20 mA	on	DHCP on
4-20	current input 4-20 mA	FRI L	DHCP missed
r500	resistance 500 Ohm	AL 1 ... AL 4	alarms 1 to 4
r300	resistance 30 K Ohm	boot	webserver starts

6 Switching on the unit

Apply supply voltage to terminals A1 and A2,

- ⇒ Ca. 2s long, all LEDs and the digital display illuminate (**88.88**)
- ⇒ The TR800Web is now ready to operate
- ⇒ In the digital display, **boot** flashes (alternating with sensor value), the integrated webserver starts (duration ca. 1-2 minutes). After **boot** extinguishes, the unit can be addressed via its interfaces.

6.1 Find the unit in the network

Prerequisite: Web browser Internet Explorer 7,8 or Firefox 3 (tested).

The TR800Web provides four facilities to find itself in the network:

6.1.1 DHCP server

In the network, there is a DHCP server; newly added units automatically are assigned an IP address

Query of the IP address in the unit

- ⇒ Press the DOWN button 2x, then the SET button
- ⇒ IP address appears in the digital display
- ⇒ Status of DHCP query is displayed (**oFF** / **oN** / **FRI L**)

Start web browser and enter the IP address in the address line [Return]

- ⇒ The TR800Web homepage opens in the web browser
- ⇒ Close the login window with the OK button (without user name and without password)

If the network logon fails via DHCP, a network configuration will be performed based on zeroconf (IP = 169.254.x.x).

6.1.2 Default IP- Address 10.10.10.10

! Use this setting for configuration only.

Push slide switch to IP 10.10.10.10 (sketch Point 8.8)

- ⇒ Requires a reboot of webserver (press RESET button), in the digital display **boot** flashes (start duration ca. 1 min)
- User management is deactivated, http-Port = 80 und https-Port = 443

Note: The following actions can only be performed with administrator rights.

Enter this command into your PC in the input prompt (command line):

```
route add 10.10.10.10 xxx.xxx.xxx.xxx (xxx.xxx.xxx.xxx= IP address of PC)
```

- ⇒ Route for the TR800Web

```
ping 10.10.10.10
```

- ⇒ Connection test
- ⇒ TR800Web replies

```
Reply from 10.10.10.10: Bytes=32 Time=3ms TTL=32
```

```
Reply from 10.10.10.10: Bytes=32 Time=1ms TTL=32
```

```
Ping statistic for 10.10.10.10:
```

```
Package: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

- ⇒ Connection okay

Start web browser and enter the IP address (10.10.10.10) in the address line [Return]
⇒ The TR800Web homepage opens in the web browser
⇒ Close the login window with the OK button (without user name and without password)
⇒ Make the basic network settings
⇒ Push the slide switch to IP USER (sketch Point 8.8)
⇒ Requires a reboot of webserver (press RESET button), in the digital display **boot** flashes (start duration ca. 1-2 minutes)

Note: The settings made in the web browser under "Network" are only effective after the slide switch is switched to IP User and the unit has been rebooted (press RESET button).

6.1.2.1 UPnP

Available for Windows starting from Win XP
Note: not available if the http port has been switched off

Start network browser (network environment),
("Symbols for show Network UPnP devices" must be active)

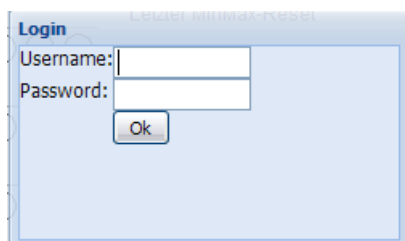
Double click on the device found
⇒ The TR800Web homepage opens in the web browser
⇒ Close the login window with the OK button (without user name and without password)

6.2 Information about the login window

Closing the login window (click on OK button) is delayed a couple of seconds as data still needs to be transmitted in the background.

If the user admin/access control is inactive (default) the login window is not visible.
The user management/access control is always deactivated if the slide switch is set to IP=10.10.10.10 (see Points 4.1 and 6.1.2).

If the user admin/access control is active (see Point 8.15), the Username and Password must be entered.
Entry is case-sensitive.
Guest access (if activated, see Point 8.15) is made by logging in without any user name and password.
Guests can only view the "Measurements" and "Sensors" web pages. It is not possible to change the parameters.



7 Troubleshooting

boot appears in the digital display	
Cause	This is <u>not</u> an error. The internal webserver is starting up.
Remedy	After switching on the network, the internal webserver needs app. 1 min. until it starts. After that, the digital display extinguishes. After performing a software update, the webserver automatically reboots.

Er 5 appears in the digital display	
Cause	The internal webserver is not working correctly
Remedy	Do a reset; press the reset button on the unit (see Point 8.8) or switch off the unit and then back on. After max. 2 min, Er 5 and boot should no longer be flashing in the display.

Er 8 appears in the digital display	
Cause	Internal device error
Remedy	Switch unit off and back on. If the error message continues to appear, the unit must be returned to the factory for repair

User name/password not known	
Remedy	See 8.9.2 Set default IP address 10.10.10.10 User management is deactivated, http-Port = 80 and https-Port = 443

Login window cannot be closed	
Remedy	Close the browser window and then reopen it

8 Technical Data

Rated supply voltage U_s	AC/DC 24 – 240 V	
Tolerance	DC 20,4 - 297 V	AC 20 - 264 V 45-62 Hz
Power consumption	< 4 W	< 13 VA
Relay output	4 x 1 changeover (CO)	
UL electrical ratings: E214025	250 V ac, 5 A, resistive 240 V ac, 1/2 hp 120 V ac, 1/4 hp B 300 – pilot duty, UL 508	
Nominal operational current I_e		
AC15	$I_e = 3 \text{ A}$ $U_e = 250 \text{ V}$	
DC13	$I_e = 2 \text{ A}$ $U_e = 24 \text{ V}$ $I_e = 0,2 \text{ A}$ $U_e = 125 \text{ V}$ $I_e = 0,1 \text{ A}$ $U_e = 250 \text{ V}$	
Recommended fuses for contact	T 3,15 A (gL)	

Inputs	
Pt 100, Pt 1000	-199...+860 °C, according EN 60751
KTY83, KTY84	-55...+175 °C, -40...+150 °C
Thermocouples	Type B, E, J, K, L, N, R, S, T EN 60 584, DIN 43 710
Voltage- / Current input	0-10 V, 0/4-20 mA
Measuring of resistance	0,0 ... 500,0 Ω , 0...30,00 kΩ
Input Y1-Y2	Reset, app. 18 VDC / 3,5 mA
Input S1 and S2	for contact or S0-interface
Network-connection	10/100 MBit <i>Auto-MDIX</i>
RS 485 interface	
Baud rate	4800, 9600, 19200 Baud
Parity	N, O, E (none, odd, even)
Wire length	1000 m at 19200 Baud
Test conditions	EN 61010-1
Rated impulse voltage	4000 V
Overvoltage category	III
Contamination level	2
Rated insulation voltage U_i	300 V
On-time	100 %
Galvanic insulation / Test-voltage	Ethernet – sensors DC 750 V
	Us – relays, sensors, Ethernet DC 3820 V
	Relays – sensors, Ethernet DC 3820 V
	Sensors – relays DC 3820 V
No galvanic insulation	RS485 – sensors – reset input Y1/Y2 – S1 – S2
Environmental conditions	
Ambient temperature range	-20 °C ... +65 °C
Storage temperature range	-20 °C ...+70 °C
Altitude	Up to 2000 m
Climatic conditions	5 – 85 % rel. humidity, no condensation
External wiring temperature range	-5 °C ...+70 °C
Housing	Design V8, switchgear mounting
Dimensions (W x H x D)	140 x 90 x 58 mm
Mounting height / width	55 mm / 8 TE
Wire connection, one wire	each 1 x 1,5 mm ²
Stranded wire with insulated ferrules	each 1 x 1,0 mm ²
Stripping length	8 mm
Torque of screw	0,5 Nm (3,6 lb.in)
Protection class housing / terminal	IP 30 / IP 20
Fitting position	any
Installation	Snap mounting on mounting rail 35 mm according to EN 60 715 or with screws M 4 (2 additional bars, not included in delivery)
Weight	app. 370 g

Subject to technical changes