The TRW1-Series (T) is designed to measure temperature in rooms or areas

In accordance with RESET® and WELL Building Standard™

The sensor operates with low voltage power supply

Reading/Parameter settings via NFC technology

The temperature sensor output is active

Use

Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System

Used in all common HVAC applications

Used in Commercial and Industrial Buildings

Features

Sensor with active output

Sensor output 0–10 V or 4–20 mA

With Operation LED, optional with ePaper display available

Reading/Parameter settings via NFC technology

Modern and practical product design

Firmware updates via external USB-C

Easy to use, install and maintain

Product Range

Order Codes	Display	Active Output	Power Supply	Measuring Ranges	Accuracy	IP Rating	Product Dimensions
TRW1G.FA	N/A	0–10 V	AC/DC 24 V (±10 %)	0 °C to +50 °C (default) –40 °C to +135 °C via NFC adjustable	±0.2 °C between 0 °C to +50 °C	IP20	86 mm × 86 mm × 25 mm
TRW1G.GA	ePaper display 31×60 mm	0–10 V	AC/DC 24 V (±10 %)	0 °C to +50 °C (default) –40 °C to +135 °C via NFC adjustable	±0.2 °C between 0 °C to +50 °C	IP20	86 mm × 86 mm × 25 mm
TRW1G.FD	N/A	4–20 mA	AC/DC 24 V (±10 %)	0 °C to +50 °C (default) –40 °C to +135 °C via NFC adjustable	±0.2 °C between 0 °C to +50 °C	IP20	86 mm × 86 mm × 25 mm
TRW1G.GD	ePaper display 31×60 mm	4–20 mA	AC/DC 24 V (±10 %)	0 °C to +50 °C (default) –40 °C to +135 °C via NFC adjustable	±0.2 °C between 0 °C to +50 °C	IP20	86 mm × 86 mm × 25 mm

Sensor Specification	**Sensor Specification**	Measured	Temperature
		Sensor Characteristics	Active
		Sensor Output (s)	0–10 V or 4–20 mA
		Output Load	
		0–10 V output	Min. load 5 kΩ @ AC/DC 24 V
		4–20 mA output	Max. load 700 Ω @ DC 24 V
		Accuracy	±0.2 °C between 0 °C to +50 °C
		Response time	t_{63} = 2 s
		Long Term Drift	<0.03 °C per year
		Default Measuring Range	0 °C to +50 °C
		Optional Measuring Range	free selectable via NFC −40 °C to +135 °C
Technical Information	**Electrical Information**	Power Supply	AC/DC 24 V (±10 %)
		Frequency	50/60 Hz at AC 24 V
		Terminal Clamp	Screw terminal, max. 1.5 mm²
		Power Consumption	
		0–10 V output	≤1 W
		4–20 mA output	≤1 W
	Mechanical Information	Cable Entry	~50 mm × 10 mm on the backside
		USB Type-C	Software updates via bootloader
		Display	ePaper 31 mm × 60 mm
	Materials and Colours	Housing Cover	ABS, white
		Housing Bottom	ABS, white
		Flammability Standard	UL 94 class HB; IEC 60707; ISO 9770
	Environmental Conditions	Operation Temperature	0 °C to +50 °C
		Operation Humidity	<85 % RH, no condensation
		Transport Temperature	−35 °C to +70 °C
		Transport Humidity	<90 % RH
		Storage Humidity	<85 % RH, no condensation
	Norms and Directives	IP-Rating	IP20 in accordance with IEC60529
		REACH Regulation	Regulation (EC) No. 1907/2006
		Product Safety	Safety class III, in accord. with EN IEC 60730-1
		Product Standard	Automatic electrical controls for household and similar use in accordance with EN IEC 60730-1:2022
		CE marking in accordance with Directive	2014/30/EU Electromagnetic Compatibility (EMC)
		EMC Emissions, in accordance with	EN IEC 60730-1:2022
		EMC Immunity, in accordance with	EN IEC 60730-1:2022
		RoHS Compliance, in accordance with	Directive 2011/65/EU, as amended by (EU) 2015/863
		Operation Climatic Conditions	IEC 60 721-3-3
		Operation Mechanical Conditions	IEC 60 721-3-2 to class2M2
		Transport to Climatic Conditions	IEC 60 721-3-2
		Transport Mechanical Conditions	IEC 60 721-3-2 to class2M2
		Storage Climatic Conditions	IEC 60 721-3-1
		Storage Mechanical Conditions	IEC 60 721-3-1 to class2M2
Miscellaneous	**Accessories**	N/A	
	Shipping & Handling	Minimum Order	1 box with 1 piece
		Packaging	Rigid cardboard packaging
	Order Notes	Order Code	See product range, page 1, e.g. TRW1G.FA

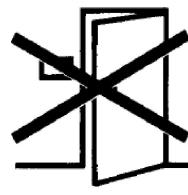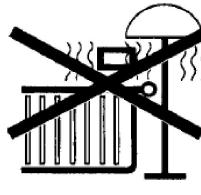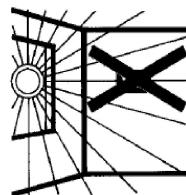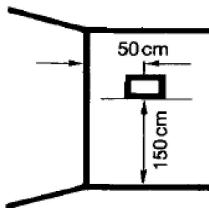| Advices	**Installation Notes**
	Observe the following general regulation for engineering and installation:
	All relevant national and local electrical installation codes
	Other country-specific regulations
	Comply with all local safety regulations, schematics, cable listings, dispositions, specifications, and arrangements from the engineering office in charge
	Third-party specifications, e.g., general contractors' or constructors' notes

Mounting Advices

Disposal Notes

The device is considered an electronic device for disposal in terms of the European Directive 2012/19/EU

The device may not be disposed as domestic garbage

The device must be disposed through channels provided for this purpose

It is mandatory to comply with local currently applying laws and regulations
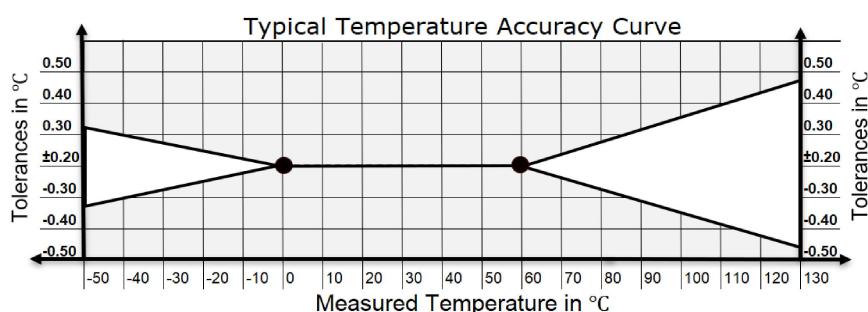
NFC Setting

All devices marked with the NFC Logo can be parameterized via the Gruner AP NFC APP

The NFC APP is available on the Gruner AP Website, https://www.grunerasiapacific.com/
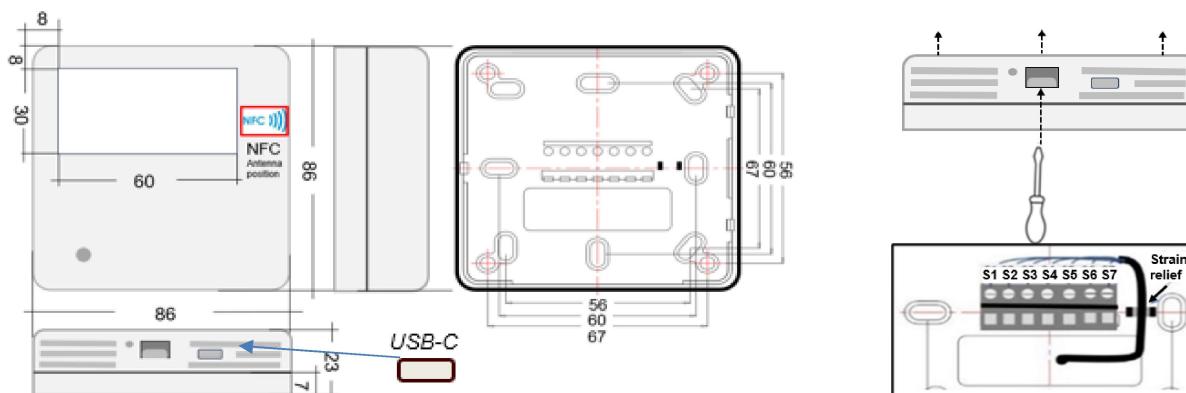
Hold your NFC-capable Android phone to the NFC Logo, the installed APP will start automatically

Commisioning Note: The sensor will reach its specified accurracy after 1 hour of being powered up

Accuracy Curves

Typical Temperature Accuracy Curve

Dimensional Drawing / Mounting

all dimension in "mm" and in round terms

Connections / Settings

Terminal Connections						
S1	S2	S3	S4	S5	S6	S7
UB+ 24V AC/DC	GND	N/A	N/A	Temperature	N/A	N/A