▶ # Get full control of your process

KROHNE

▶ measure the facts

OPTITEMP TT 53 –
Universal HART® 7 temperature transmitter

OPTITEMP TT 53 is a modern HART® temperature transmitter developed to meet the highest standards of accuracy and reliability. A universal transmitter compatible with RTD, thermocouples, voltage and potentiometer, offering high flexibility and reducing the number of installed product variants.

It is fully compatible with HART® 7 and offers extended diagnostic information (for example, device error, sensor and wiring conditions) making it reliable and highly precise.
OPTITEMP TT 53 supports communication via NFC® (Near Field Communication) and Bluetooth® which makes it possible to configure and monitor the transmitter remotely.

N® NFC   **HART▲▲ COMMUNICATION PROTOCOL**   **IEC. IECEx**   **Ex**

OPTITEMP TT 53 C   OPTITEMP TT 53 R

Configure OPTITEMP TT 53 wirelessly

Configure your OPTITEMP TT 53 wirelessly via NFC® by using the new app OPTITEMP Connect. The intuitive and easy-to-use interface in the app makes your job easier.

Complement with our new TT-CON BT and you can configure and monitor your OPTITEMP TT 53 also via Bluetooth®. Thanks to the extended range that Bluetooth® offers, you can connect to the transmitter without removing it from the process.

High reliability

The robust design of the TT 53 makes it highly reliable even under the most demanding conditions. External influences such as ambient temperature, vibrations up to 10 g, moisture and EMC interference have minimal influence on the measuring result.

Full control of your process via HART® 7

OPTITEMP TT 53 helps you to get full control of the process. In addition to enhanced diagnostics via HART® 7, the transmitter can also measure the ambient temperature and supply voltage it has been exposed to. This allows you to detect peaks that could damage the process control.

Technical specifications

Input	Universal for RTD, TC, mV and ohm
Output	4...20 mA, HART® protocol
Sensor error	NAMUR NE43
Adjustments – Zero point	Any value within range limits
Adjustments – Min. span	10°C / 18°F or according to the sensor
Error compensation	Sensor and system error correction
Ambient temperature	–40...+85°C / –40...+185°F
Humidity	0...98% RH (non-condensing)
Vibration	IEC 60068-2-6, 10 g
EMC	EN 61326-1 and EN 61326-2-3
Typical accuracy	Max. ±0.08K or ±0.08% of span
Adjustable filtering level	0.17 to 90 s (default 1.4 s) (3-wire RTD)
Galvanic isolation	1500 VAC
HART® compliance	Fully compliant with the HART® 7 protocol as well as the previous HART® 6 and 5.
Ex-classifications	ATEX: II 1G Ex ia IIC T6...T4 Ga IECEx: Ex ia IIC T6...T4 Ga
Power supply	Standard version: 8.5 ...36 VDC Ex-version: 8.5 ...30 VDC
Configuration	ConSoft, OPTITEMP Connect or EDD, DTM/FDT enabled systems
Runtime counter	Hour counter for elapsed operational time
Simulated output	Fixed current ouput during a maximum time of 15 min
Wireless connectivity	NFC® and Bluetooth®*

Bluetooth® communication is only supported together with TT-CON BT

Contact

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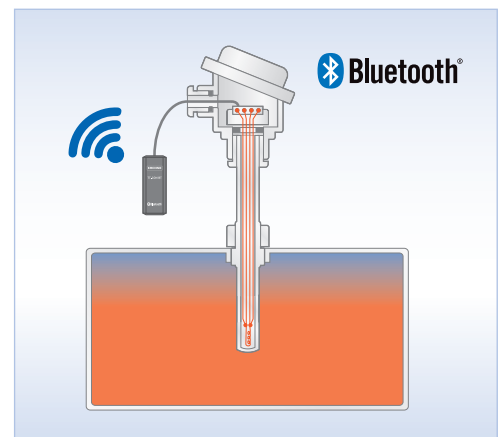temperature@krohne.com

Quick configuration via NFC

Quick configuration of the transmitter without power supply and wiring.

Bluetooth® communication via TT-CON BT

Monitor and configure your transmitter even in the tightest mounting locations.

Enhanced diagnostics

See what ambient temperature and supply voltage the TT 53 has been exposed to.

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