





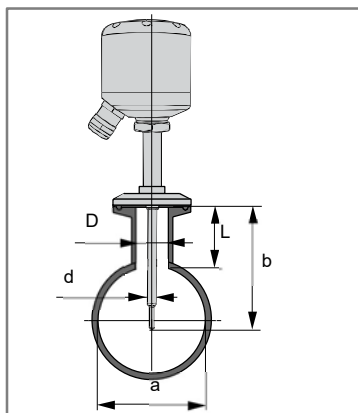
OPTITEMP TRA-H6x /-C6x

Temperature sensors for hygienic applications

-  Installation, assembly, start-up and maintenance may only be performed by appropriately trained personnel. Check the nameplate for correct operating conditions.
-  This instrument complies with requirements of Low Voltage Directive. Instruments must not be connected to power supply before reading instructions described in the manual.
-  The responsibility as to the suitability, intended use and corrosion resistance of the used materials against the measured fluid of this device rests solely with the operator.
-  For complete documentation (manuals, supplementary manuals, data sheets and certificates) please refer to www.krohne.com/Downloads.

1 Installation

Installation into pipelines and tanks



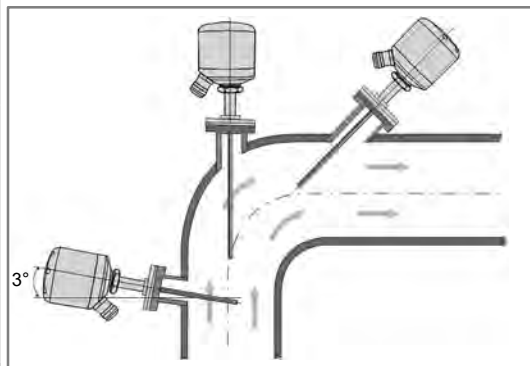
- L: length of the stand-off
- b: insertion length into the pipe
- D: inner diameter of the stand-off
- a: inner diameter of the pipe
- d: outer diameter of sensor rod/thermowell

The insertion length (b) of the thermowell or measuring insert refers to the distance from the seal of the process connection or the bottom of the flange to the tip of the thermowell or sensor rod. This length determines how far the sensor projects into the measured medium.

To avoid measurement errors and fulfil hygienic requirements as well, ensure that the insertion length (b) meets the following requirements:

- Insertion length in pipelines: $b \geq L + 22 \text{ mm} / 0.87''$
- Pipes with (a) < $\text{Ø}200 \text{ mm} / 7.87''$: sensor/thermowell's tip should project past the middle of the pipe if possible
- The relation $L \leq (D - d)$ must be maintained for cleanability reasons

Installation into pipelines

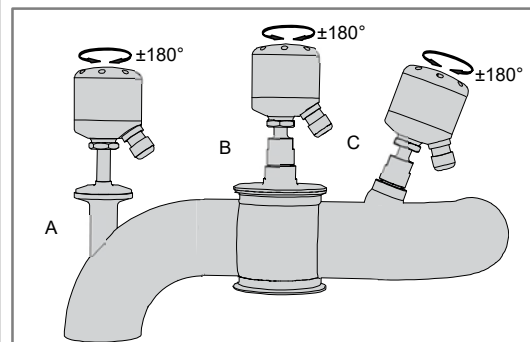


Requirements:

- Ensure drainability by inclined or vertical installation.
- Ensure inspectability.
- Make sure using the included PEEK gasket if EHEDG requirements must be fulfilled.

Installation procedure

- Unpack device, check for damage and completeness.
- Install TRA-H/C61 into existing thread or into hygienic adapter (B, C).
- Use PEEK gasket for EHEDG compliance and consider its limits, e.g. torques.
- Install TRA-H/C65 into existing clamp stand-off (A) using a suitable gasket.
- Adjust head with gland into required direction, consider limits of $\pm 180^\circ$.
- Take care of proper electrical connections.
- If using a transmitter, be sure sensor type, wire connection and range is set accordingly, refer always to the corresponding transmitter manual.
- Check and maintain temperature sensors in appropriate intervals.



- A: With clamp process connection
- B: G1/2 thread with VARIVENT N (full welded or adapter)
- C: G1/2 thread with weld-in sphere



Caution:

Adjusting cable gland direction:

- Sensors without replaceable inserts, tip size $\text{Ø}6 \text{ mm} / \text{Ø}0.24''$ reduced to $3 \text{ mm} / 0.12''$:
-> open nut until head gets loose, turn head $\pm 180^\circ$ max.
- Sensors with replaceable insert, tip size $\text{Ø}6 \text{ mm} / \text{Ø}0.24''$ reduced to $4 \text{ mm} / 0.16''$:
-> open nut until head gets loose, turn head as required.

Permissible ambient temperature

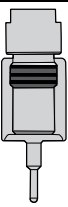
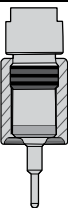
Sensor	Design	T _{min.}		T _{max.}		Remarks
		[°C]	[°F]	[°C]	[°F]	
TRA-H61, TRA-H65	Standard with cable gland	-40	-40	+100	+212	Without transmitter
	Standard with M12 connector	-30	-22	+100	+212	
TRA-H61, TRA-H65	Standard with cable gland	-40	-40	+80	+176	With transmitter
	Standard with M12 connector	-30	-22	+80	+176	
TRA-C61, TRA-C65	Compact	-30	-22	+100	+212	Without transmitter
TRA-C61, TRA-C65	Compact	-30	-22	+80	+176	With transmitter

Permissible process temperature

Sensor	Design	T _{min.}		T _{max.}		Remarks
		[°C]	[°F]	[°C]	[°F]	
TRA-H61, TRA-H65	Fast responding	-50	-58	+200	+392	With or without transmitter
TRA-H61, TRA-H65	With replaceable insert	-50	-58	+300	+572	
TRA-C61, TRA-C65	Compact	-50	-58	+200	+392	Without transmitter
TRA-C61, TRA-C65	Compact	-50	-58	+150	+302	With transmitter

When using sensors with EHEDG approved hygienic adapters maximum temperature is limited to +140°C / +284°F with respect to the mandatory PEEK gasket.

Limits using gaskets and hygienic adapters

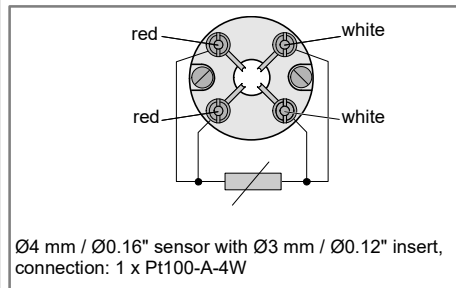
	Type of connection	Limits		Required torque
		metric	imperial	
	Steel to steel	40 bar at 200°C	580 psi at 392°F	10 Nm
	Steel to PEEK	10 bar at 140°C	145 psi at 284°F	20 Nm

2 Electrical connection

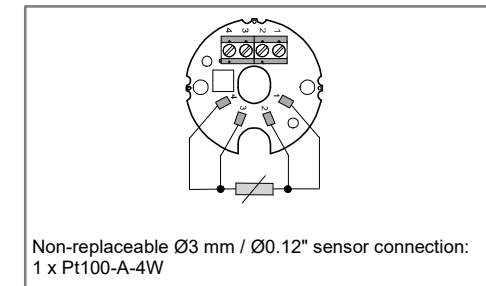


Danger:
All work on the electrical connections may only be carried out with the power disconnected.
Take note of the voltage data on the nameplate.
Observe the national regulations for electrical installations.

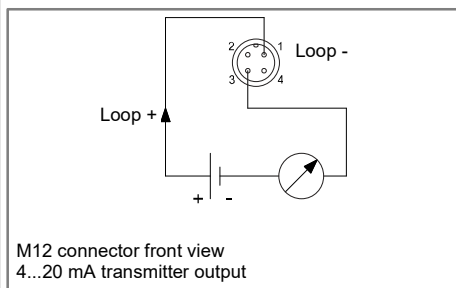
Measuring insert socket



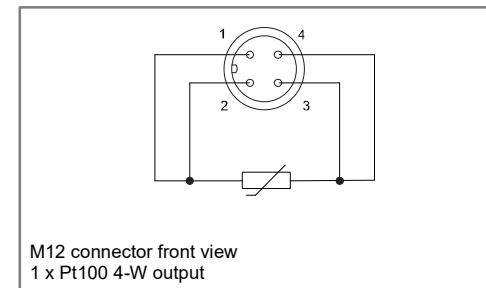
Printed board connector



Integrated transmitter output



Pt100 output



Contact

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