

FRODE PEDERSEN

Application

- Measurement of exhaust temperature in ships- and stationary diesel engines
- The operating range is up to 800°C in gaseous media with high flow velocity
- Fields of application
 - Big ship engines
 - Generators

Technical features

- Thermocouple type K acc. to IEC 584-1
- Solid construction with high resistance against vibration acc. to IEC 68-2-6
- Measuring insert is a mineral insulated type, and can be changed during operation
- Thermowell drilled from bar stock for optimum strength
- Type approved by classification societies (see page 2)
- Connected to the process with a screwed attachment on the thermowell

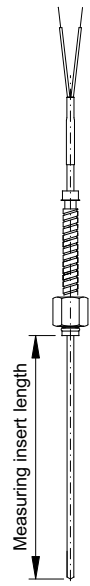
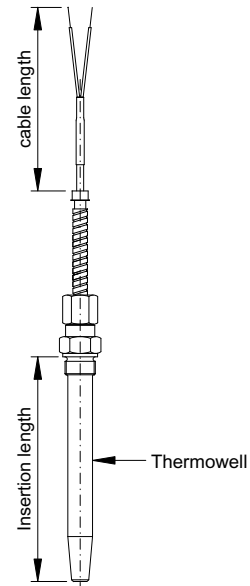
Ordering

Please select the requested sensor from the table below
The colour code means:

- Standard:** Built of standard modules (short delivery time)
- Variant:** Modified standard modules
- Special:** Special versions and material. We are specialists in temperature measurement. Please contact us and we shall do our utmost to solve your specific measuring tasks

Assembly UST 2

Measuring insert



Ordering information

Sensor

Specification number	1802-								
----------------------	-------	--	--	--	--	--	--	--	--

Thermowell (drilled, bar stock)

Stainless, acidproof steel, 800°C
W.no. 1.4571 (AISI 316Ti)

Fig. 1 Complete assembly	 0	
Fig. 2 Measuring insert	 1	
Special:.....	 s	

Cable length (meter)

 0	 2		2
 0	 4		4
 0	 6		6
 x	 x.x		Special (Min. 0.1m)

Insertion length (mm)

125	 1	 2	 5
200	 2	 0	 0
250	 2	 5	 0
300	 3	 0	 0
Special (Min. 100, max. 300mm)	 x	 x	 x

Cable type

 0	XSGLO 2x1.5mm ² with silicone and steel braid insulation, 200°C
 s	Special:

Measuring insert length (mm)

140	 1	 4	 0
215	 2	 1	 5
265	 2	 6	 5
315	 3	 1	 5
Special (Min. 115, max. 315mm)	 x	 x	 x

Tolerance acc to IEC 584-2

 0	Class 2, for type K, i.e. ±2.5°C or 0.0075 x t _{actual} (°C) 3)
 1	Class 1, for type K, i.e. ±1.5°C or 0.0040 x t _{actual} (°C) 3)
	Note 3: The highest value applies

Note 1: Measuring insert length=insertion length
for thermowell + 15mm
Used when fig. 2 is selected

Number of thermocouples

 0	1
 s	Special:

Process connection (see page 2)

None (when fig. 2 is selected)	 0	
3/4" BSP	 1	
M27x2	 2	
Special:.....	 s	
	 0	
	 s	

Measuring insert

Termocouple Type	Diam./type	Max. temperature
NiCr-Ni	K 6 MI ²⁾	Continuously
Special:		800°C

Max. temperature

Continuously
800°C

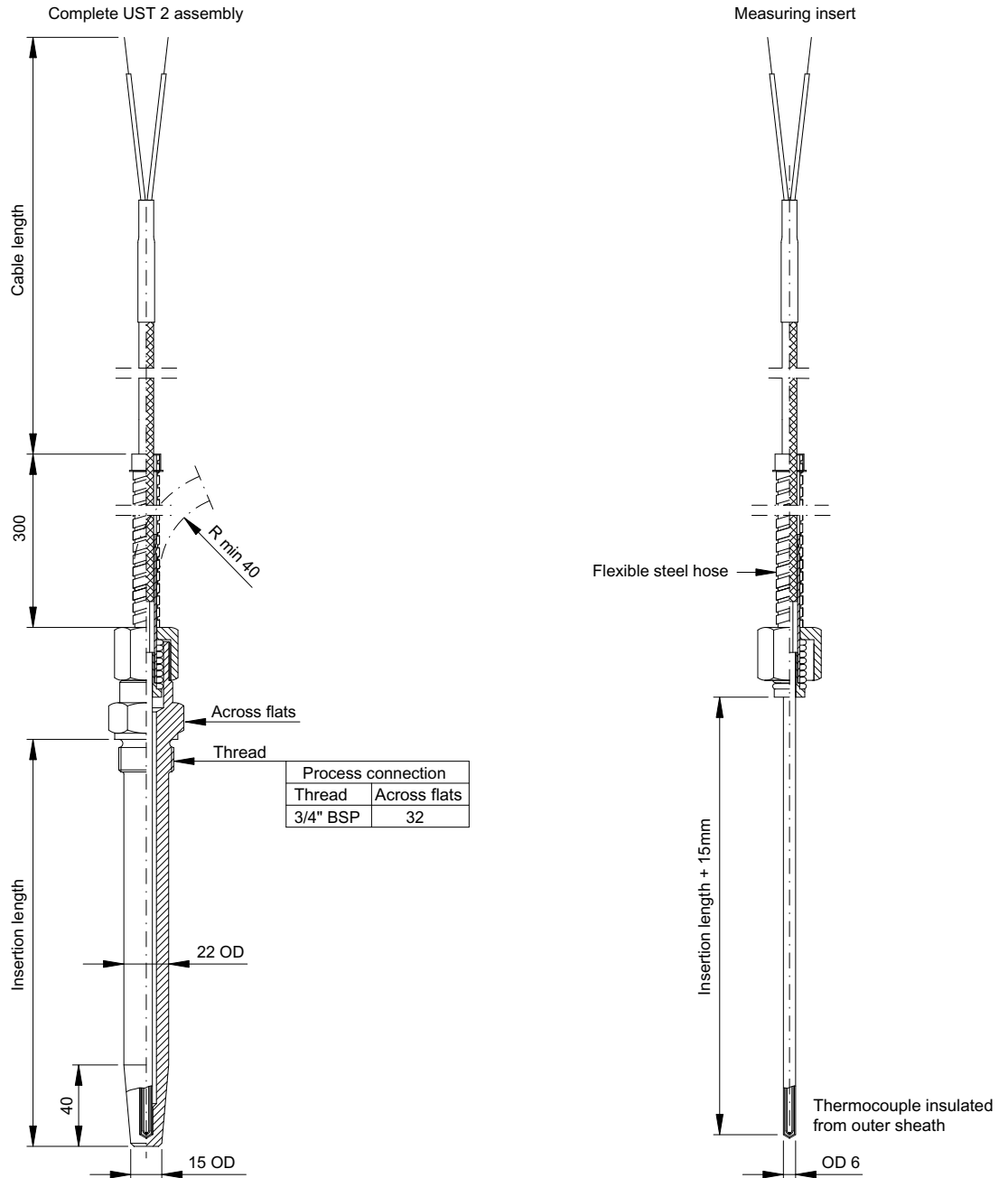
Note 2: MI= Mineral insulated.

Accessories

Customer information

Name:
Tel.:

Dimensions



Compensating cable

XSGLO 2x1.5mm² with silicone and steel braid insulation, 200°C

Insulation resistance

Versus temperature

Test temperature °C	U Volt	Rmin M ohm
20±15	500	1000
500±15	500	5

Response time

Thermowell Diameter	Response time acc. to representative measurement Temp. changed from 800°C to 20°C (immersed in water)	
	t _{0.5}	t _{0.9}
22 → 15	40	120

Note:

The 0.5/0.9 time is the time that it takes the sensor to reach 50%/90% of the final value of a temperature change of a medium. If media and velocity are different from the ones stated, the time can change significantly.

Type Approvals

- Lloyd's Register of Shipping
- Det Norske Veritas

Connection diagram

