

## Thermocouple assembly ST

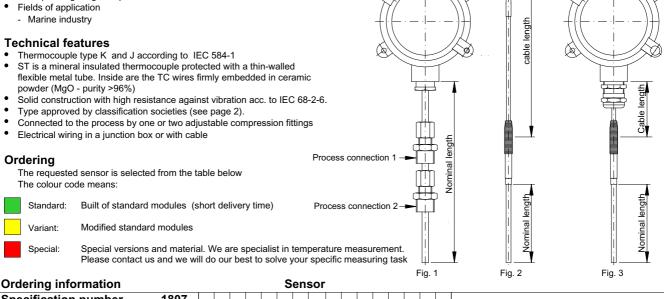
1807 stern tube

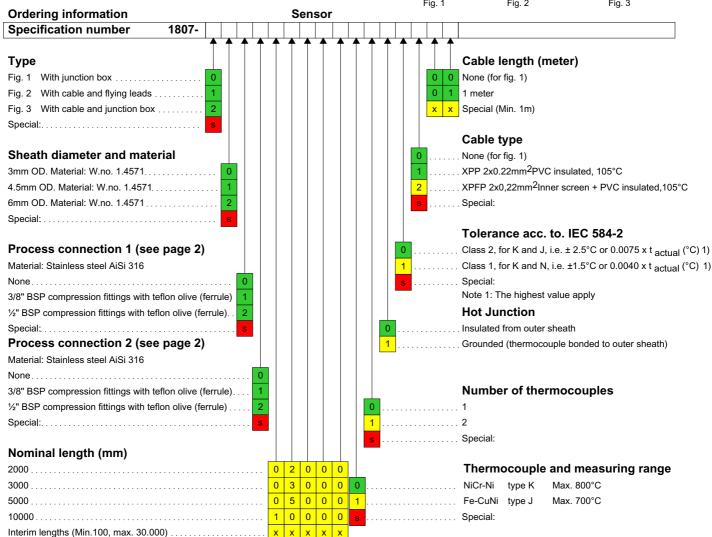
**Data sheet** 

#### FRODE PEDERSEN

### **Application** For measurement and surveillance of bearing temperature in stern tubes on ships in order to avoid damages and break down of costly equipment. The operating range is up to 800°C Fields of application

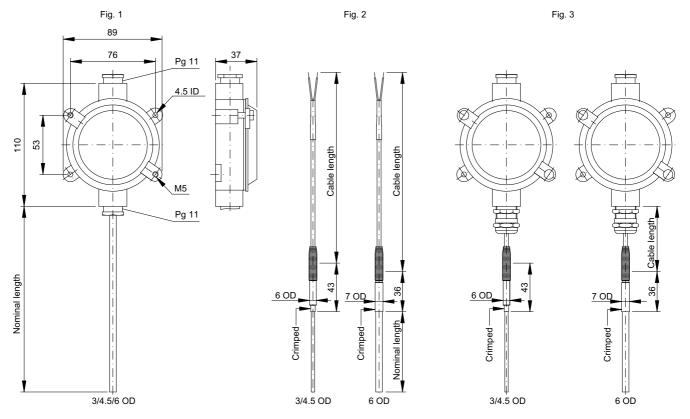
ST is a mineral insulated thermocouple protected with a thin-walled





Accesesories	Customer information
Process connection: See data sheet 9113	Name:
Compensation cable: See data sheet 9150	Tel.:

#### **Dimensions**

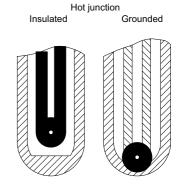


## Insulation resistance and test voltage @ 20°C

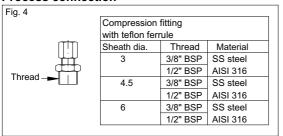
Depending of temperature and length acc. to IEC 1515

Diameter	Number of thermocouples				
	1		1 2		2
	U	Rmin	U	Rmin	
mm	Volt	M ohm x m	Volt	M ohm x m	
3 - 6	500 ±50	1000	250 ±50	1000	

Bending radius
Min. bending radius is
5 x D @ repeatable bendings
2 x D @ stationary bending



## Process connection



**Type Approvals** 

- Lloyd's Re	gister of Shipping
- Det Norsk	e Veritas

# Response time Hot junction insulated Hot junction grounded Shorth Response time is google (quideline) Response time is google (quideline)

Sheath	Response time in seconds (guidelines)			Response time in seconds (guidelines)				
diameter	In water @	0.2m/sec.	In air @	2m/sec.	In water @	0.2m/sec.	In air @	2m/sec.
	t <sub>0.5</sub>	t <sub>0.9</sub>	t <sub>0.5</sub>	t <sub>0.9</sub>	t <sub>0.5</sub>	t <sub>0.9</sub>	t <sub>0.5</sub>	t <sub>0.9</sub>
3	1,2	2,9	23	80	0,22	0,75	23	80
4.5	2,5	7,5	42	130	0,4	1,2	45	135
6	4	9,6	60	200	0,55	2,6	55	185

#### 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.

### Connection diagram

Connection diagram							
	With	Cable w/ flying leads					
	Single TC	Duplex TC	14				
	1 \$\oldsymbol{Q} 2 3 \$\oldsymbol{\psi} 4 \$\oldsymbol{Q} \oldsymbol{\psi} 4 \$\oldsymbol{\psi} \oldsymbol{\psi} 4 \$\oldsymbol	1 \$ 2 3 \$ 4 \$	Green + J Black	- White			