

Frese Temperature Sensor

Marine & Industry-series

Application temperature sensor

Frese temperature sensors for Marine and Industrial applications. Can be used in any process applications measuring both liquids and air.

Available as stand alone PT100 sensor or with a build-in programable transmitter providing a 4-20 mA feedback signal for industrial and marine applications.

Screw sensor pockets for easy replacement, are available as accessory.

Application areas:

- Fresh Water cooling systems
- Sea water cooling systems
- Lube oil systems
- Ventilation and air cooling systems.
- Any process application



Benefits

- Quick response times – a reduced probe tip allows response times of $t_{0.9} = 14$ s to be reached in water
- Increased safety – thanks to successful testing by Bureau Veritas
- Flexible and time-saving startup – due to availability of different standardized process connections
- Programable transmitter for user defined scaling of output.

Features

- The connection head is suitable for ambient temperatures up to 100 °C.
- Normally fitted with a Pt100 temperature sensor according to DIN EN 60751, Class B in 4-wire circuit connections.
- The intelligent design of the RTD temperature probe with a fixed measuring insert allows temperatures to be measured under standard conditions.
- Versions of class A or AA are also possible.
- Versions with a reduced probe tip are available for quicker response times.
- A transmitter can be integrated into the terminal head as an option.
- The RTD temperature probes are certified according to Bureau Veritas.

Frese Temperature Sensor

Marine & Industry-series

Technical data · RTD temperature sensor

Terminal head	Form B DIN EN 50446, die-cast aluminum, M20 × 1.5
Seal	IP65
Cable gland:	M20x1.5
Protection class:	IP69 (Cable diameter 8 - 15 mm)
Measuring insert	Pt100 temperature sensor DIN EN 60751, cl. B, 4-wire circuit, permanently installed
Response times	t0.5 = 5 s, t0.9 = 14 s in water 0.4 m/s; ø6 mm
Transmitter Accessories	Programmable transmitter, output 4 to 20 mA or 20 to 4 mA Default scaling: 0-100 deg C: 4-20 mA
Operating temperature	-50°C to +400°C
Measuring insert	Protection pocket,
Tolerance class	Class B (Standard) Class A & AA (Optional)
Protection tube	Stainless steel 1.4571 (316Ti) in ø6 mm
Process connection	Screw connection G 1/2 B
Environmental influences	Admissible temperature at connection head -40°C to +100°C -40°C to +85°C (with transmitter)
Permissible torque moment:	130 Nm
Permissible flow velocities:	Air: 25 m/s Hot steam: 25 m/s Water: 3 m/s
Reaction times at liquid velocity = 0.4 m/sec:	t 1/2: 5 s t 9/10: 14 s (t = total temperature step)
Max. pressure:	165 bar
Max. temperature:	400 °C
Weight:	280 g



Accessories

Product	Dimension	Suitable cable type diameter [mm]	Type	Item number
Cable gland	M20 x 1,5	8 - 15	With lock nut, IP 69	07-21381

Approvals/approval marks

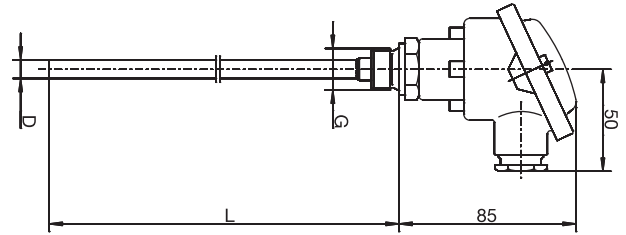
Approval mark	Testing agency	Certificate/certification number	Inspection basis	Valid for
BUREAU VERITAS	BUREAU VERITAS	47622/A0 BV	Rules for the Classification of Steel Ships Environmental Category, EC Code: 41	Basic type

Frese Temperature Sensor

Marine & Industry-series

Dimensions

Fitting length L: See table below
Diameter probe D: ø6 mm
Connection thread G: G 1/2 B



Please note:



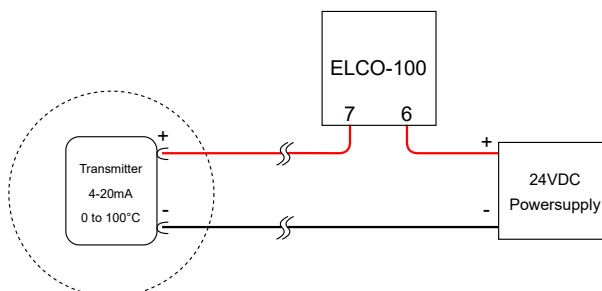
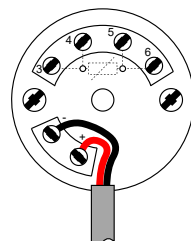
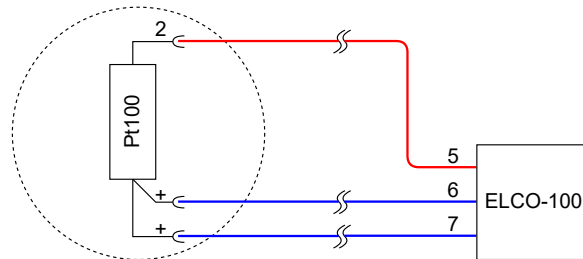
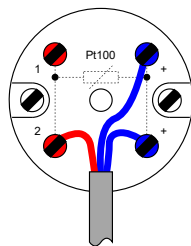
When mounting, only the hexagonal surface must be used for screwing the temperature sensor in.



Sensor Types & Operation Data

Type	Output type	Sensor length L [mm]
58-8961	PT100	50
58-8962		100
58-8963		150
58-8964		200
58-8965	4-20 mA	50
58-8966		100
58-8967		150
58-8968		200

Electric wiring

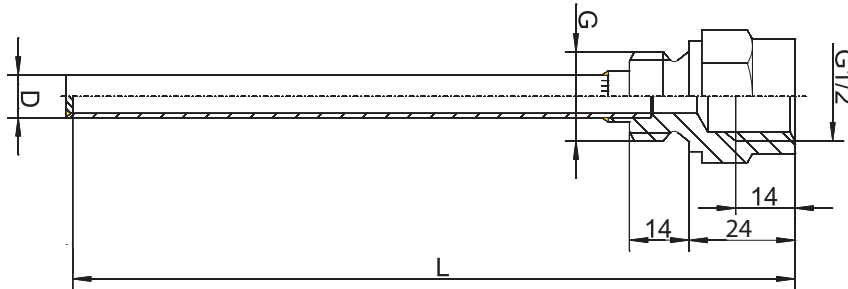


Frese Temperature Sensor

Marine & Industry-series

Sensor pockets

Material: Stainless steel
Pocket length L: See table below



Sensor Pockets Types

Type	L [mm]	D [mm]	G ["]
78-2-JU-00489138	50	8	1/2
78-2-JU-00489140	100	8	1/2
78-2-JU-00489141	150	8	1/2
78-2-JU-00489142	200	8	1/2

Frese A/S assumes no responsibility for errors, if any, in catalogues, brochures, and other printed matter. Frese A/S reserves the right to modify its products without prior notice, including already ordered products, if this does not alter existing specifications. All registered trademarks in this material are the property of Frese A/S. All rights reserved.

Frese A/S
 Tel: +45 58 56 00 00
 info@frese.dk