

Temperature probes Pt 100 (Standard on stock) TS Series



TS 111

TS 111: Stainless steel probe, BSP 1/2"

Measuring range / Material	-50 ... +250 °C / AISI 316 L
Fitting	BSP-M 1/2"
Head housing	BAMO case, painted aluminum alloy
Stem	Ø 6 mm
Sensor	Pt 100 Ω at 0 ° C; 3-wire
Accuracy	Class B
Connections	On ceramic terminal block

Code	Stem length [mm]
610 113	50
610 114	100
610 115	150



TS 110

TS 110: Stainless steel probe, without fitting

Measuring range / Material	-50 ... +250 °C / AISI 316 L
Fitting	None
Head housing	BAMO case, painted aluminum alloy
Stem	Ø 6 mm
Sensor	Pt 100 Ω at 0 ° C; 3-wire
Accuracy	Class B
Connections	On ceramic terminal block

Code	Stem length [mm]
610 050	150
610 100	300
610 150	500

Options:

Compression fitting: AISI 316 L; BSP-M 1/2"; Code: 692 362
 Compression fitting: AISI 316 L; BSP-M 1/4"; Code: 692 364



TS 131

TS131: Plastic probe, BSP 1/2"

Measuring range / Material	-10 ... +105 °C / Stem in PPH -20 ... +140 °C / Stem in PVDF
Fitting	BSP-M 1/2"
Head housing	PP
Stem	Ø 12 mm; Length 500 mm
Sensor	Pt 100 Ω at 0 ° C; 3-wire
Accuracy	Class B
Connections	On ceramic terminal block

Code	Material
610 304	PPH
610 404	PVDF

Options for all 3 types: Integrated 4-20 mA transmitter

Code	Fixed measuring range
601 157	0...+50 °C
601 158	0...+100 °C
601 159	0...+200 °C

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Temperature probes Pt 100
(Standard on stock)
TS Series

15-10-2020

D-610.02-EN-AB

TE

610-02/1

Temperature probe with Pt 100 Ω sensor TS 11



- Sensor Pt 100 Ω at 0 °C
- Range from -50 to +250 °C
- Stem and fitting in AISI 316 L
- Head in aluminum alloy or in plastic

REFERENCE TABLE

Model

Fitting

- 0 None
- 1 BSP 1/2"
- 2 NPT 1/2"

Stem material

- I AISI 316 L

Stem length

xxx 50 ... 999 mm

Stem O.D.

- 06 6 mm (length max. 500 mm)
- 08 8 mm (length max. 800 mm)
- 10 10 mm (length max. 999 mm)

Sensor

- 3 Simplex 3 wires
- 4 Simplex 4 wires
- 6 Duplex 2 x 3 wires

Accuracy

- A Class A
- B Class B

Connection

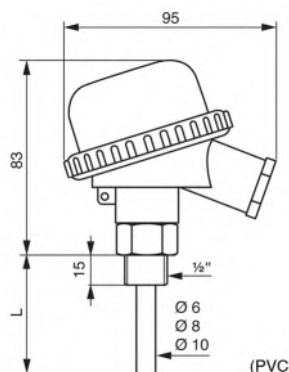
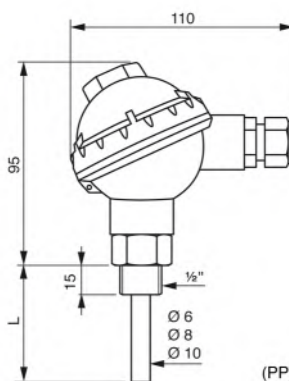
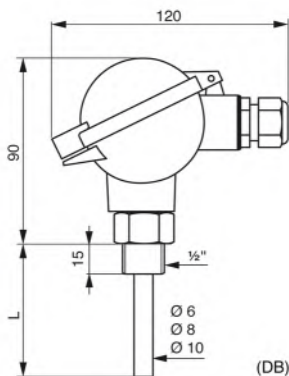
- C Ceramic terminal box
- T 4-20 mA Transmitter

Head

- DB In aluminum alloy
- PVC In PVC
- PP In PP

TS 11 1 I 250 08 4 A T DB

(Example)



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Temperature probe with Pt
100 Ω sensor
TS 11

22-06-2018

D-611.01-EN-AB

TE

611-01 /1

Plastic temperature probe, Pt 100 Ω TS 13



- Plastic probe
- Materials: PVC, PP, PVDF
- Sensor: Pt 100 Ω at 0 °C
- Range: from -20 °C up to 140 °C

APPLICATIONS

Temperature measurements in aggressive fluids.
Example: chemical industry, surface treatments, sewage / wasted water etc.

DESCRIPTION

The TS13 probe is entirely designed with plastic materials.

Made to your application for aggressive environments, the TS13 probe reduces maintenance costs while maintaining the measurement quality of traditional metal probes.

CODE NUMBERS AND REFERENCES

Code 613 000
Reference See below to design your probe

Model

Fitting

- 00** None
- 1** BSP 1/2"

Probe material (Stem & fitting)

- P** PVC (limits: -10 ... +60 °C)
- H** PPH (limits: -10 ... +105 °C)
- V** PVDF (limits: -20 ... +140 °C)

Stem length

xxx 50...999 mm

Stem O.D. in mm

12 12 mm

Sensor

- 3** Simplex 3-wire
- 4** Simplex 4-wire
- 6** Duplex: Two 3-wire

Accuracy

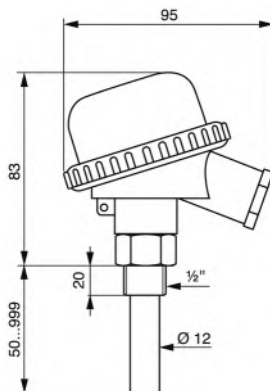
- A** Class A
- B** Class B

Connections

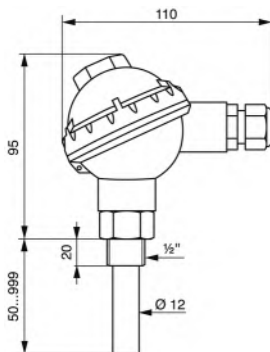
- C** Ceramic terminal
- T** 4-20 mA transmitter

Head housing

- PVC** PVC Head
- PP** PP Head
- PVDF** PVDF head (on request)



Example: Probe with PVC head housing



Example: Probe with PP head housing

TS 13 1 H 200 12 4 B T PP

(Example)

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Plastic temperature probe,
Pt 100 Ω
TS 13

22-06-2018

D-613.01-EN-AD

TE

613-01 /1

Ambient temperature probe TS 18



- **Sensor:** Pt 100 Ω at 0 °C
- **Range:** From -40 °C up to +75 °C
- **Wall mount ABS housing**
- **Output signal:** Or resistor or 4-20 mA

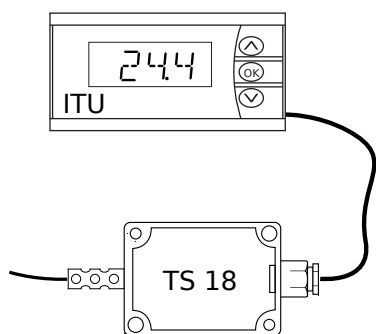
APPLICATIONS

These probes are suitable for indoor, or for outdoor measurements of ambient temperature.

DESCRIPTION

The sensor Pt 100 Ω at 0 °C is fixed inside a perforated housing in ABS for ambient temperature measurements. Connections on screw terminals 2, 3, 4-wire for resistor signal or 2-wire for 4-20 mA version.

To display the temperature we recommend our ITU units (data-sheet 222-03).



Display with ITU device (Option)

Model

Measurement mode

- 0** Indoor
- 1** Outdoor

Accuracy

- A** Class A
- B** Class B

Connections

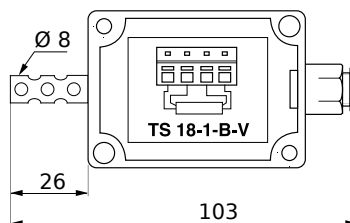
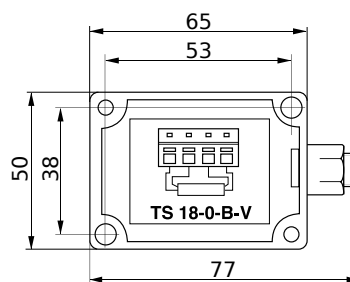
- V** Screw terminals
- T** Transmitter: 4-20 mA, 2-wire
(Measuring range to confirm on P.O.)

TS 18 1 A V

DIMENSIONS



ITU display unit (Option)



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Ambient temperature probe
TS 18

04-10-2019

D-618.01-EN-AB

TE

618-01 /1

Thermowells, welded body TWS

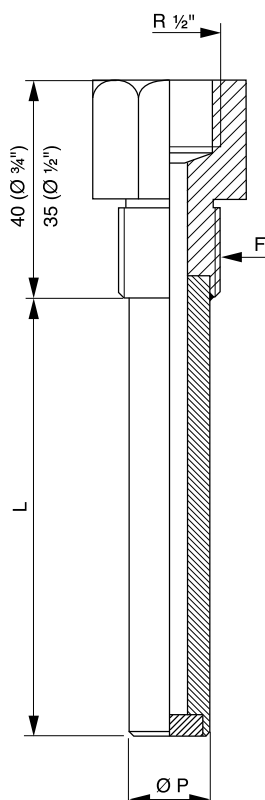


- Body: welded tube
- AISI 316 L, PVC, PPH, PVDF
- Fittings:
Threads: BSP or NPT 1/2" ; NPT 3/4"
Flanges: DN 32, 40 or 50

APPLICATIONS

A thermowell is a tubular thermal conductor designed to isolate the temperature sensor from the liquid in process. Its use is recommended for the protection of a sensor against corrosive effects. It also, allows the replacement or maintenance/ calibration of an instrument without interrupting the process.

TECHNICAL FEATURES - CODIFICATION



Model

Fitting (F)

- | | |
|-----------|---------------------------------|
| 1 | Thread BSP 1/2" (27 mm wrench) |
| 2 | Thread NPT 1/2" ((27 mm wrench) |
| 3 | Thread 3/4" (30 mm wrench) |
| 31 | Flange DN 32 - PN 10/16 |
| 41 | Flange DN 40 - PN 10/16 |
| 51 | Flange DN 50 - PN 10/16 |
| 32 | Flange 1 1/4" ANSI 150 Lbs |
| 42 | Flange 1 1/2" ANSI 150 Lbs |
| 52 | Flange 2" ANSI 150 Lbs |
| x | (Others on request) |

Materials

- | | |
|----------|------------|
| I | AISI 316 L |
| P | PVC |
| H | PPH |
| V | PVDF |

Stem length in mm (L)

xxx From 50 up to 500 mm

O.D. AISI stem (Ø P)

- | | |
|-----------|-----------------|
| 10 | 10 x 1 mm |
| 12 | 12 x 1 mm |
| 13 | 13,71 x 2,24 mm |
| 14 | 14 x 1 mm |
| 21 | 21,3 x 2,8 mm |

O.D. plastic stem (Ø P)

- | | |
|-----------|-------------|
| 12 | 12 x 1,8 mm |
| 16 | 16 x 2 mm |

TWS 1 I xxx 10 12

EC Conformity The instrument meets the legal requirements of the current European Directives

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Thermowells, welded body
TWS

TE

635-01 /1

15-11-2019

D-635.01-EN-AA

Relative Humidity and Temperature HygroWiz



- Local or remote display
- Analogue output(s) 4-20 mA
- Relay output(s)
- Interface RS485 with MODBUS RTU

APPLICATIONS

- For automation of HVAC network
- Storage areas, cool stores, greenhouses, animal husbandry
- Museums, Data centers, weather stations

DESCRIPTION

Hygrowiz measures the temperature and relative humidity of the air. The temperature and humidity probe is integrated or cable connected to the housing. Standard version: the probe has a PTFE tap filter to limit the impact of water splashes (non-absorbent and anti-corrosion surface).

Choose the right version for your application, with remote signals, relay outputs, 4-20 mA signals, interface RS485 MODBUS protocole. Please, request more information when necessary.

HygroWiz is available as a blind version, without display. For an easy start-up, HydroWiz is set up by ourselves before shipment, according to your needs (to list them on P.O.).



Front view

Front view	
1	1 or 2 outputs
2	Interface RS485 / MODBUS
3	Visual alarm indicator + acoustic alarm
4	Customizable graphic displays
5	To save settings or access to software
6	AISI 316 L probe (according model)
7	Temperature & humidity sensors; Max. 120 °C & 100 % RH
8	Not used
9	Not used
10	Housing, IP 65
11	Not used
12	LCD; 2.9" display
13	2 LED for status of outputs



QM 612

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Relative Humidity and
Temperature
HygroWiz

29-06-2020

D-671.01-EN-AB

TE

671-01 /1

TECHNICAL FEATURES

Power supply	24 V DC (11 ... 36 V DC) – Consumption maxi 2.5 W
Display	Backlit, graphic LCD – 128 x 64 pixels
Ambient temperature	-20 ... +70 °C (Version without display: -30 ... +80 °C)
Protection	IP 65 (Version without display: IP 67)
Housing	Wall mounting Dimensions: 120 x 90 x 50 mm Materials: ASA (Luran®) and polycarbonate

Probe for QM-212 model:

Type	Integrated to the display unit
Dimensions	Height: 90 mm; O.D.: 18 mm
Materials:	AISI 316 L; PTFE tap filter
Temperature	-30 ... +105 °C ($\pm 0,2$ °C from 10 to 60 °C) $\pm 0,4$ °C at 30 °C ; $\pm 0,7$ °C at 105 °C
Humidity	0to 100 % RH ($\pm 1,8$ % RH from 20 to 80 % RH at 25 °C)

Probes for QM-612 model:

Type	Output cable, to connect to the housing
Dimensions	Length: 90 mm; O.D. 18 mm
Materials	AISI 316 L; PTFE tap filter Cable with PUR coating: Max. 80 °C; Or TPE: Max. 120 °C
Temperature	-40 ... +120 °C ($\pm 0,2$ °C from 10 to 60 °C) ($\pm 0,4$ °C at -30 °C ; $\pm 0,7$ °C at 120 °C)
Humidity	0... 100 % RH ($\pm 1,8$ % RH from 20 to 80 % RH at 25 °C)
Connections	Cable gland or connector type M12 - 4 pins

Outputs (options):

Relay outputs	0, 1 or 2 relay outputs, N.O. Rated: 24 V AC / 35 V DC, 200 mA
Analogue outputs	0, 1 or 2 outputs: 0/4-20 mA (0/24 mA max.) Active signal, no galvanic insulation
Interface	RS485; 8N1 & 8N2; 1,200 ... 115,200 bit/s; MODBUS RTU; no galvanic insulation

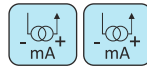
EC Conformity: The instrument meets the legal requirements of the current European Directives.

Examples of complete systems:

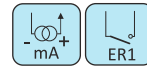
2 x Relays
1 x RS485



2 x 0/4-20 mA
1 x RS485



1 x 0/4-20 mA
1 x Relay
1 x RS485



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Relative Humidity and
Temperature
HygroWiz

29-06-2020

D-671.01-EN-AB

TE

671-01 /2

TABLE TO BUILT A TRANSMITTER

Series

QM QM Series

Model

212 Transmitter with integrated probe O.D. 18 mm, 90 mm high

612 Transmitter with cable output probe or with a M12 connector

Cable length for 612 model

- 00** Without cable
- 05** Cable length 0.5 m
- 10** Cable length 1 m
- 15** Cable length 1.5 m
- 20** Cable length 2 m
- 25** Cable length 2.5 m
- 30** Cable length 3 m

Connections and cable types for 612 model

- 0** None – Only for integrated probe (QM-212-00-0)
- 1** Cable gland with PUR coating; -30 ... +80 °C
- 2** M12 connector, with PUR coating for probe O.D. 18 mm; -30 ... +80 °C
- 3** Cable gland with TPE coating; -30 ... +120 °C
- 4** M12 connector with TPE coating for probe O.D. 18 mm; -30 ... +120 °C

Input channel 1

- 3** Probe with temperature and humidity sensors

Input channel 2

- 0** None

Outputs

- 00** None
- 11** 2 Relays
- 21** 1 Relay + 1 Analogue output 0/4-20 mA, active, no galvanic insulation;
- 22** 2 Analogue outputs 0/4-20 mA, active signal, no galvanic insulation

Display

- None**, blind version
- 1** LCD, resolution 128 x 64 pixels

Cable glands, quantity

- 3** 3 pieces

QM 212 00 0 3 0 00 1 10 3 3

671

671



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**Relative Humidity and
Temperature
HygroWiz**

29-06-2020 D-671.01-EN-AB

TE

671-01 /3

SPARE PARTS

Output cable probe

Connector type

2 Connector for operating temperature -30 ... +80 °C

Measurement types

3 Temperature and humidity

PPQ-612-00 2 3

Probe without cable

Cable length

05 0.5 m

10 1 m

15 1.5 m

20 2 m

25 2.5 m

30 3 m

Cable glands

1 Cable gland with PUR coating (-30 ... +80 °C)

3 Cable gland with TPE coating (-30 ... +120 °C)

Measurement types

3 Temperature and humidity

PPQ-612 XX X 3



PPQ-622-XX-X-X

Cable output probe, O.D. 12 mm; Length: 300 mm; AISI 316 L; Filter 25 µm, in stainless steel

PPQ-612-XX-X-X

Cable output probe, O.D. 18 mm; Length: 900 mm; AISI 316 L; Filter: FPQ-P350

PPQ-612-00-X-X

Probe without cable, O.D. 18 mm; Length 90 mm; AISI 316 L; Filter FPQ-P350



FPQ-P350

PTFE filter (limits the impact of water splashes), non-absorbent surface, anti-corrosion, -30 ... 120 °C



MOUNTING ACCESSORIES – CONNECTORS

HPQ-FS12

Flat round flange AISI 316L, for probes O.D. 12 mm



HPQ-TS12

Adjustable fitting M20 x 1.5 AISI 316 L, for probes O.D. 12 mm



HPQ-W1218

Wall mount bracket AISI 316L, for probes O.D. 12 & 18 mm



HPQ-CGS18

Adjustable fitting M25x1.5, for probes O.D. 18 mm



CPQ-00

Connector M12 - 4 pins, for probes PPQ-612, -30 ... +80 °C



CPX-30

Cable 3 m long with connector M12 - 4 pins, for probes PPQ-612



CPQ-30 : Cable: PUR coating, -30 ... +80 °C

CPT-30 : Cable: TPE coating, -30 ... +120 °C

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Relative Humidity and
Temperature
HygroWiz

29-06-2020

D-671.01-EN-AB

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671-01 /4