

TEMPERIX S

Introduction

These operating instructions refer to installation, commissioning, servicing and adjustment. Statutory regulations, valid standards, additional technical details in the relevant data sheet, details of the type plate and any additional certificates are to be observed along with these operating instructions.



Safety instructions

- Installation, operation and maintenance of the instrument may be executed by authorized personnel, only, using suitable equipment.
- Warning: If the instrument is used incorrectly it is possible that serious injuries or damage can occur!
- Be sure connections to the process are sealed, tightened and secured in line with sound engineering practice.
- The standard nominal pressure rating and the permissible operating temperature of the gasket should be observed for all process connections.
- Process connections that are mechanically defective can cause injuries or give rise to process faults. Suitable precautions should be taken to avoid this.



CE marking

The CE marking on the instruments certifies compliance with valid EU directives for bringing products to market within the European Union.



Ex approval

Electrical equipment in hazardous areas should only be installed and commissioned by competent personnel. Modifications to devices and connections destroy the operating safety, the ex-proofing and the guarantee. The limit values detailed in the certificate of conformity are to be observed.

type of ex-protection

 II 2G Ex ia IIC T4/T6

Mounting and operating

- The instruments will be supplied as per specification with various connection heads and various process connections.
- Before mounting the instrument ensure that process connection, media compatibility, thermostability and meas. range are suitable for the process at hand.
- Conduct process installation before electrical installation.
- Gaskets must be chosen that are suited to the process connection and resistant to the measured medium.
- To minimize the measuring error due to heat dissipation, immerse the bulb as far as possible into the measured medium.

- Because the connecting heads are fitted with internal gaskets they are only suited for ambient temperatures to 100°C.
- When a transmitter is integrated in the connection head the allowed ambient temperature is reduced to 80°C.
- You may use standard copper wire cable to install the measuring instrument. We recommend cable cross-sectional area of 1.5 mm². The number of wires depends on the measuring resistor type and the circuit design.
- If you use 2-wire technology you should take into account the temperature influence of the supply line when you calibrate the measuring loop.
- Wire up the instrument with power switched off.
- The instrument can only be protected against electromagnetic interference (EMC) when the conditions for screening, earthing, wiring and potential isolation are met during installation.
- When the instrument is opened any contact with the electrical connections can affect the signals. This situation can be avoided by switching off the supply voltage or by disconnecting the signal circuit.
- Measuring instruments that should not have any oil or grease residues in the process connection are marked „Free of oil and grease“.
- The instrument requires no maintenance.

Calibration in the field

You can remove the measuring insert when calibrating the instrument.

Loosen the spring-loaded bolts in the connection head and remove the measuring insert from the thermowell.

Transportation and storage

Store and transport resistance thermometers under dry, clean condition and, where possible, in their original packaging. Permissible storage temperature: -40°C.....+80°. Avoid shock and vibrations.

Technical Data

Mechanical design

Measuring insert interchangeable with connection head and necktube

Connection head

- field housing, screw cap, mat. stainless steel 1.4305, IP 67
- model B, cap with 2 slotted screws, mat. aluminium, IP 54, standard
- model B, spring cover with slotted screws, mat. aluminium, IP 65 (BUZ)
- model B, spring cover with quick-release lock, mat. aluminium, IP 65 (BUS)
- model B, high spring cover with slotted screw, mat. aluminium, IP 65 (BUZH)

Technical Data

Neck-tube

stainless steel mat.no. 1.4571 or 1.4404
neck-tube 9 x 1 or 11 x 2 mm

Measuring insert

Material stainless steel, inter-changeable, DIN 43762
resistor Pt 100 according to EN 60751

Accuracy of the measuring resistor

class A according to EN 60751

Integration of transmitter

suitable Pt 100 transmitters can be integrated into the connection head.

Process connection

see page 2
material of process connection: as per specification

The gasket is in general not part of delivery!

Ex-approval

The limit values detailed in the EC-Type Examination Certificate are to be observed!

type of ex-protection:

Ⓔ II 2G Ex ia IIC T4/T6

ambient temperature	temperature class
-40...80 °C	T4
-40...60 °C	T6

Electrical data

Sum of maximum values in the intrinsically safe circuits

$U_i = 30 V$

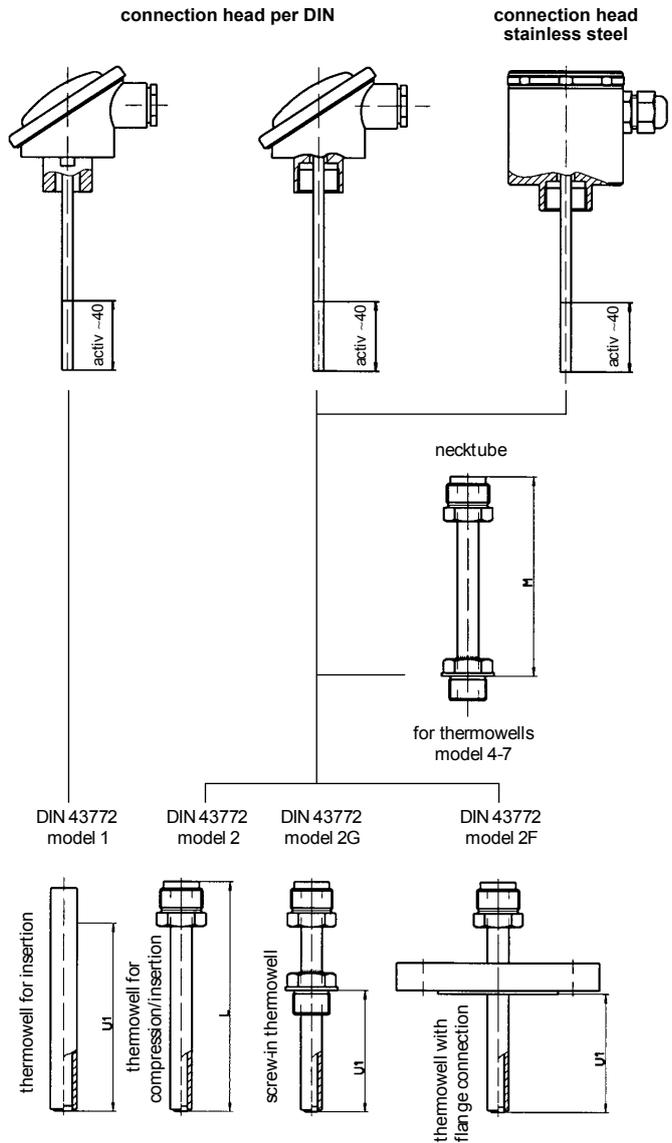
$P_i = 200 mW$

C_i and L_i negligible small

Caution

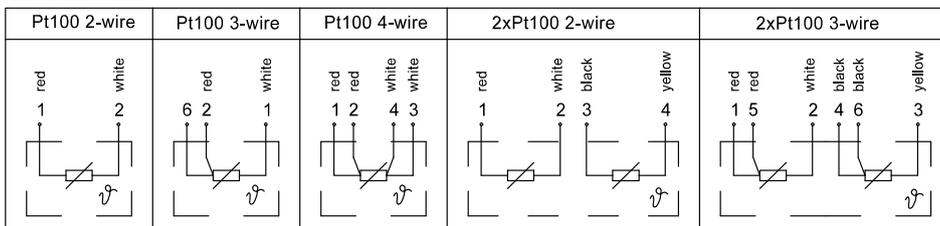
Be sure to decouple the temperature of the connection head and fittings from the process temperature (max. - 200 to 600 °C) by taking necessary measures, like choosing a suitable length of pipe.

Dimensions/case/process connection

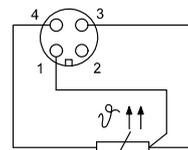


Connection diagram

connection head



circular connector M12x1





**EU-Konformitätserklärung
EU Declaration of Conformity
Déclaration UE de Conformité**

**FAFNIR GmbH
Bahrenfelder Straße 19
22765 Hamburg / Germany**

erklärt als Hersteller in alleiniger Verantwortung, dass das Produkt
declares as manufacturer under sole responsibility that the product
déclare sous sa seule responsabilité en qualité de fabricant que le produit

**Widerstandsthermometer
Resistance Thermometer
Thermomètre à résistance**

TEMPERIX ...

den Vorschriften der europäischen Richtlinien
complies with the regulations of the European directives
est conforme aux réglementations des directives européennes suivantes

2011/65/EU	Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten	RoHS
2011/65/EU	Restriction of the use of certain hazardous substances in electrical and electronic equipment	RoHS
2011/65/UE	Limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques	RoHS
2014/30/EU	Elektromagnetische Verträglichkeit	EMV
2014/30/EU	Electromagnetic compatibility	EMC
2014/30/UE	Compatibilité électromagnétique	CEM

durch die Anwendung folgender harmonisierter Normen entspricht
by applying the harmonised standards
par l'application des normes

**RoHS / RoHS / RoHS
EMV / EMC / CEM**

**EN 50581:2012
EN 61326-1:2013**

Das Produkt ist bestimmt als Elektro- und Elektronikgerät der RoHS-
The product is determined as electrical and electronic equipment of RoHS
Le produit est déterminés comme des équipements électriques et électroniques de RoHS

Kategorie / Category / Catégorie

**Überwachungs- und Kontrollinstrumenten in der Industrie /
Industrial Monitoring and Control Instruments /
Instruments de contrôle et de surveillance industriels**

Das Produkt entspricht den EMV-Anforderungen
The product complies with the EMC requirements
Le produit est conforme aux exigences CEM

**Störaussendung / Emission / Émission
Störfestigkeit / Immunity / D'immunité**

**Klasse A / Class A / Classe A
Industrielle elektromagnetische Umgebung /
Industrial electromagnetic environment /
Environnement électromagnétique industriel**

Hamburg, 20.04.2016
Ort, Datum / Place, Date / Lieu, Date



Geschäftsführer / Managing Director / Gérant: René Albrecht



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