

The new generation of temperature sensors for the process industry

SensyTemp TSP100- and TSP300-Series



- Low investment costs due to standardized models
- Numerous possible combinations due to the building-block principle
- Simplified order process due to clear product structures
- Exchangeable measuring insets without any downtime
- Suitable for different process requirements
- Extremely short delivery times for standard models

ABB Instrumentation



Temperature sensors for light and medium duty applications

TSP111, TSP121, TSP131



The temperature sensors of the new product series TSP111, TSP121, and TSP131 cover an extensive range of variants in industrial temperature measurement technology. The modular design, which is based on standard components, enables a large variety of customized thermometers. The innovative building-block system comprises a connection head into which an exchangeable measuring inset (with visible base contact due to pressure springs) or an optional measurement transmitter can be inserted.



Protected measuring inset

The measuring inset of the **TSP121** is protected by a welded thermowell. This is why it can be used in applications with low mechanical stress and low exposure to chemicals.

The measuring inset of the **TSP131**, on the other hand, is protected by a thermowell made of solid drilled bar stock material. Suitable materials and design principles ensure that this thermowell is optimally adapted to the mechanical and measurement-related requirements. It can thus withstand high levels of stress caused by pressure, flow, vibration, and aggressive media.

The **TSP111** is basically identical with the TSP131. It comprises a connecting head with a built-in measuring inset, optionally a measurement transmitter, and an extension tube.

Unlike the TSP131, the TSP111 does not comprise a thermowell as a standard. For that reason, it is particularly suitable for installation into an existent thermowell, or a separate thermowell that can also be supplied by ABB. The thermowells can be integrated into pipelines and vessels while the plant is under construction.

A special feature of this model is the synthetic head with a hinged lid that was developed by ABB. It is made of a glass-fiber-reinforced material.

Areas of application

- Chemical & petrochemical industry
- Power and steam generation
- General process engineering
- Vessel and pipeline construction
- Machine and plant engineering
- Food and beverage industry



Temperature sensors for heavy duty applications

TSP311, TSP321, TSP331

The temperature sensors of the product series TSP311, TSP321, and TSP331 were specifically developed for particularly harsh operating and ambient conditions. The modular design, which is based on standard components – analogous to the TSP100 series – also enables a large variety of customized thermometers.



Exceptional connection head

For its **TSP300** thermometer series, ABB developed a special connection head, which is capable of withstanding the extremely harsh ambient conditions encountered in the petrochemical and offshore industries.

A special "cable guide system" positions the connecting cables automatically in the connection area during their introduction. The flat housing base ensures optimum access. A locking screw protects the screw-on cap against unintentionally coming loose.

Two different sensor head variants are available: One made of a low-copper aluminum alloy, which is combined with a high-quality epoxy coating and therefore highly corrosion-resistant even in a saline environment, and one made of 316L stainless steel for the highest requirements in the offshore industry.

As a result, the optimum connection head for any given area of application can be selected. All ABB connection heads of the AGL / AGS type have a minimum environmental protection of IP 66 / IP 67 if they are used in combination with an ABB thermo-well along with the supplied M20x1.5 cable fitting.

A second cable entry is available as an option. Both versions, the one with one cable entry and the one with two cable entries, are alternatively available with a 1/2" NPTF thread (without cable fitting).

Areas of application

- Offshore areas
- Petroleum/natural gas production and transport
- Chemical & petrochemical industry
- Power and steam generation
- Machine and plant engineering

ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 102,000 people.

www.abb.com/instrumentation

The Company's policy is one of continuous product improvement and the right is reserved to modify the information contained herein without notice.

Printed in Germany (04.2006)

© ABB 2006

3KXT161001R5001



Germany

ABB Automation
Products GmbH
Borsigstr. 2
63755 Alzenau
Tel: +49 551 905 534
Fax: +49 551 905 555

UK

ABB Limited
Oldends Lane
Stonehouse
Gloucestershire GL10 3TA
Tel: +44 1453 826 661
Fax: +44 1453 829 671

Italy

ABB Sace S.p.A.
Via Statale 113
22016 Lenno (CO)
Tel: +39 0344 58111
Fax: +39 0344 56278

USA

ABB Inc
Automation Technology
Products
125 E. County Line Rd
Warminster PA 18974-4995
Tel: +1 215 674 6000
Fax: +1 215 674 7183

China

ABB (China) Ltd.
35th floor, Raffles City
(Office Tower)
268 Xizang Zhong Lu
Shanghai, 200001
Tel: +86 (0) 21 6122 8888
Fax: +86 (0) 21 6122 8892