

Achema Hall 11, Booth C3

Transmitter offers high reliability in temperature measurement

- **Dual sensor operation with 4 wire sensor connection**
- **Automatic redundancy switching for lossless recordings**
- **Wide range of hazardous approvals**
- **Versatile use in chemical, oil and gas, marine and power generation applications**

With Sitrans TH320/420 and TR320/420, Siemens introduces a new generation of reliable HART (Highway Addressable Remote Transducer Protocol) temperature transmitters for a wide range of sensor types suitable for mounting in sensor head and rail mounting. They feature high availability of the measurement signal and ease of use. Due to the safety integrity level (SIL) 2/3 certification according to IEC 61508 the temperature transmitters are particularly suited for safety-critical applications. The devices also have a large number of country specific explosion protection certificates for all zones. They provide reliable results even under extreme conditions up to -50°C. Main application areas include industries such as chemical, oil and gas, marine and power generation.

With fast and accurate sensor and transmitter tuning, the use of the Callendar-van Dusen method or 60-point-curve ensures highest measuring accuracy. Deviations can be detected and monitored through the drift detection with dual-channel transmitters, e. g. for preventive maintenance. Electronic device descriptions (EDD, DTM and FDI) allow the new transmitters to be used in all current distributed control systems. A quick start wizard is just one example of their user-friendly features. Measurement values, device functions and visual alarm signals can be displayed

and operation planning and implementation is very convenient using special visualization components for Simatic PCS 7 (Sitrans Library).

When a sensor fails in operation, for example due to disconnection or short circuit, measurement failures may result in loss of control or production stops. To avoid this and ensure high measurement availability through reliability and long term stability, maintenance planning is essential. The Sitrans TH420 and TR420 sensor backup function, drift detection and alarming make this possible. Using the 4 wire connection for both sensors increases data accuracy and reliability as it allows a seamless transition to the second sensor in case the first sensor fails. The continuous balancing of the two independent sensors measuring in parallel, while detecting and monitoring measuring value deviations, allows the scope of maintenance to be planned as required, following the description above, and production stops to be avoided. Balancing the sensors using the Callendar-van Dusen method also meets the challenge of sensor inaccuracy caused by individual deviation from standardized Pt100 curves or by aging. Outstanding transmitter accuracy and sensor balancing enable simpler calibration of the sensors directly in the transmitter and provide for highly precise individual values.



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This press information document and a press photo can be downloaded from <http://www.siemens.com/press/PR2018050158PDEN>

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