5300 &
6300 series
Temperature transmitters

PERFORMANCE
MADE
SMARTER

HART COMMUNICATION FOUNDATION

TEMPERATURE | I.S. INTERFACES | COMMUNICATION INTERFACES | MULTIFUNCTIONAL | ISOLATION | DISPLAY

PR electronics

Freedom the rational way

A serious partner for the process industry
Since 1974 we have specialized in transmitters for temperature measurement and our focus has always been on meeting the demands of the industry. Our product range is uncompromising when it comes to reliability and quality. Due to the small number of product variants it always provides you with an optimum solution reducing inventory costs both for OEM sensor customers and end-user customers as well. You will experience both concrete and cost-saving advantages as we offer you:

- A five-year guarantee for long-term stable and reliable temperature measurement allowing you to optimize your process to the highest possible level of efficiency and productivity.
- An active partner offering day-to-day delivery as well as advice and service at a high level - always meeting your demands.

Digital output

Universal

5335/5337/6335/6337
Universal 4...20 mA transmitter
for 2-, 3- and 4-wire sensors
with HART communication

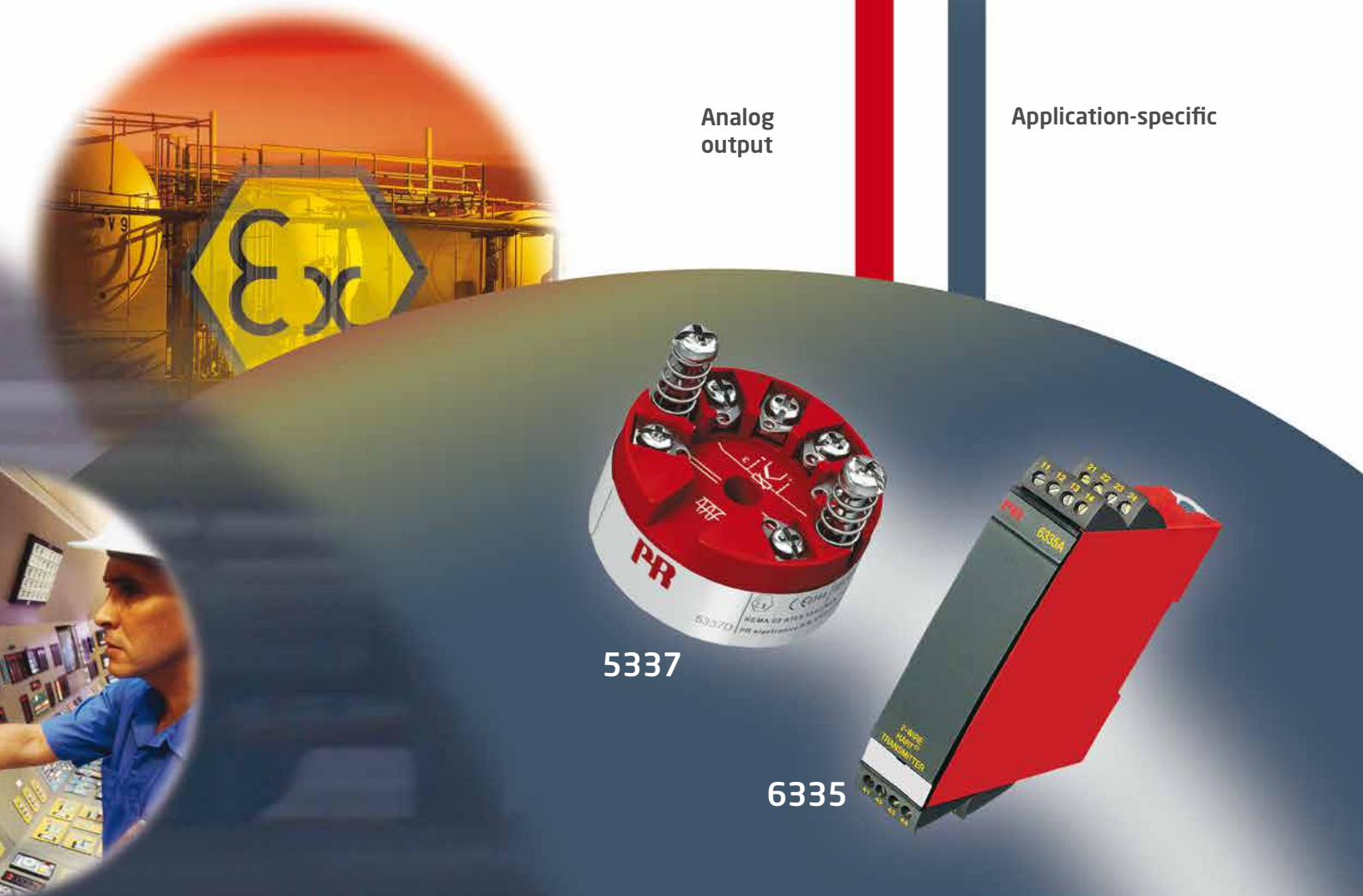
5331/6331
Universal 4...20 mA transmitter
for 2-, 3- and 4-wire sensors

5334/6334
4...20 mA transmitter for
thermocouple sensors

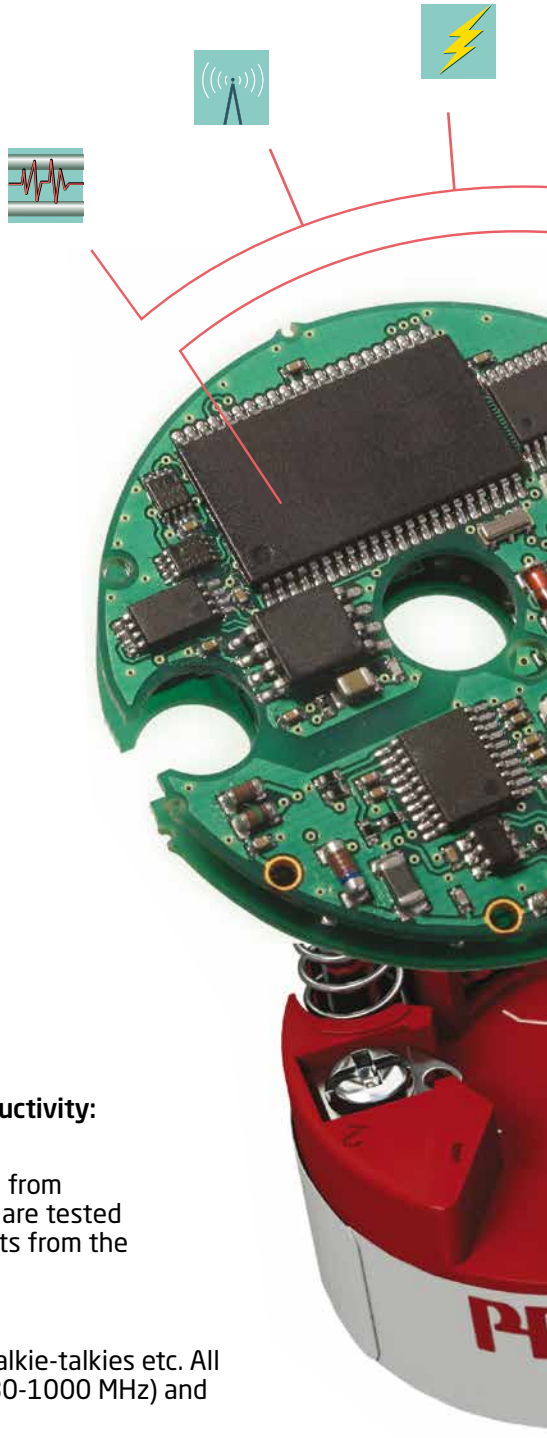
5333/6333
4...20 mA transmitter for
3-wire Pt100 and RTD sensors

Analog output

Application-specific



Number 1 in Operational Reliability



It is our objective to deliver the most reliable temperature transmitters on the market, even when it comes to hazardous locations and the most difficult applications. Why so? Because operational reliability can be directly converted into cost-savings. How much does an hour's down time in your process cost? And not least, how much annoyance does it cause?

Operational reliability is achieved by efficiently protecting the transmitter against outside disturbances. Therefore all temperature transmitters from PR electronics have been developed with a view to achieving a high basic accuracy, maximum protection against electromagnetic noise, and an extremely low temperature coefficient. This reliability is reflected in concrete product advantages satisfying our customers' demands for quality and stability and always backed up by our five-year guarantee.

Unique product features that minimizes operational stops and increases productivity:

High immunity to conducted noise: This type of disturbance may come from frequency converters or switchmode power supplies. Our transmitters are tested against 10 Vrms in the range 15 Hz-100 MHz according to requirements from the marine industry among others.

High immunity to HF noise: Airborne disturbances from cell phones, walkie-talkies etc. All our transmitters are tested at 10 V/m in the entire prescribed range (80-1000 MHz) and thus meet the NAMUR NE 21 A criterion.

High immunity to energy-loaded transients: The disturbance comes from e.g. contactors. Our transmitters are surge-tested at a test voltage of 1 kV differential mode and 2 kV common mode according to NAMUR NE 21 A criterion.

High immunity to burst noise: Efficient protection against burst noise from e.g. relays. In order to ensure a reliable operation in areas exposed to a high degree of burst noise, we test our transmitters at 2.5 kV for twelve hours. We easily meet the NAMUR NE 21 A criterion prescribing 2.0 kV for 1 minute.

Extremely low temperature coefficient: State-of-the-art when it comes to a high basic accuracy and an extremely low temperature coefficient of down to 0.002% - measured according to the European standard IEC 68-2-1 / IEC 68-2-2 / IEC 770 6.2.10.

Other factors improving reliability:

High signal / noise ratio of typically 80-100 dB corresponding to a noise attenuation factor of 10,000 – 100,000.

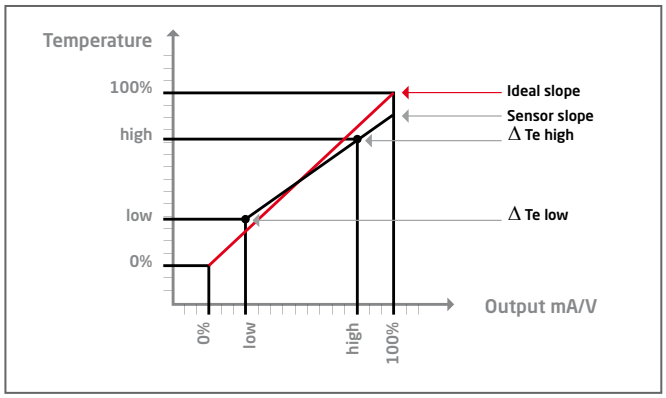
Long-term stability: Microprocessor technology ensures a maximum long-term stability of less than 0.15% / 0.20% after 5 years. Even after prolonged working periods there is no need for time-consuming recalibration.

Degree of protection NEMA 6P: Your guarantee that the transmitter is able to function in even the most humid of environments.

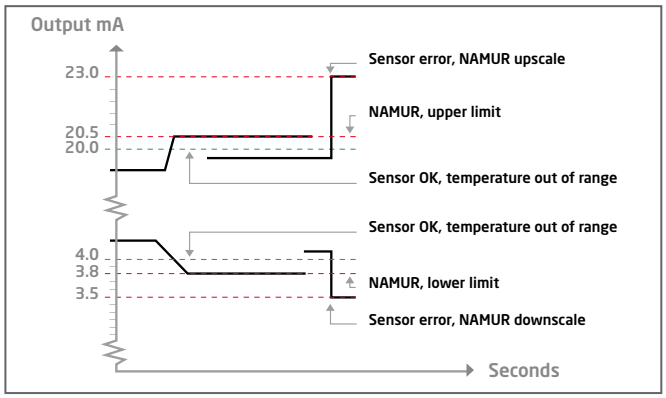
Calibration in a controlled environment: 100% control and calibration to absolute values in an environment where all ambient factors and possible disturbances are efficiently monitored and controlled.

Universal and Accessible Transmitter Set-up

Process calibration ensures extreme accuracy
In applications making heavy demands on accuracy, the combined inaccuracy of sensor and transmitter may be too great. The solution is to calibrate the transmitter to match the specific sensor. As an example the Pt100 ideal curve of the transmitter is matched to the specific sensor via a 2-point process calibration by way of the PReset software.



Set-up of sensor error detection
All our transmitters allow set-up of sensor error detection and output limitation, making it possible to distinguish between "out of range" error and sensor error.
Sensor error detection can be carried out according to NAMUR NE 43 or it can be adapted to suit a specific application.



Quick on-line configuration via PC software
Temperature transmitters from PR electronics are quickly configured to the specific application. All our analog transmitters and HART transmitters permit configuration via a standard PC and our user-friendly software, PReset. Parameters for input, output, sensor error detection and process calibration can be configured via PReset within a few minutes.

Some applications call for an occasional change in the transmitter set-up in order to configure it to the actual process. In this respect, the PRetop transmitter series is absolutely unique as these transmitters all feature on-line configuration, carried out through the transmitter's current loop.

Our bus transmitters are also universal regarding configuration as they are able to communicate with all the most recognized bus software systems on the market:

- Emerson DeltaV
- Yokogawa CS 1000 / CS 3000
- ABB Melody / Harmony
- Siemens Simatic® PDM®
- Honeywell Experion
- Metso DNA

Intelligent, digital solutions
Our transmitter solutions are suitable for systems using HART and PACTware protocols for digital communication.
The digital communication opens a wide range of possibilities, e.g.:

- Difference, average or redundancy measurements
- Diagnosing via fully-supported AMS function in HART transmitters

HART COMMUNICATION FOUNDATION

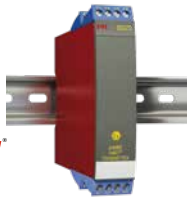
PACTware

5300 Product Range

	5331	5333	5334	5335	5337
RTD/R transmitter	✓	✓		✓	✓
TC/mV transmitter	✓		✓	✓	✓
Galvanic isolation	1500 VAC		1500 VAC	1500 VAC	1500 VAC
Channels	1	1	1	1	1
Basic accuracy Pt100	<± 0.2°C	<± 0.3°C		<± 0.1°C	<± 0.1°C
Temperature coefficient *)	<± 0.01%	<± 0.01%	<± 0.01%	<± 0.005%	<± 0.005%
NAMUR NE 21 A	✓		✓	✓	✓
DIN form B housing	✓	✓	✓	✓	✓
Analog output	✓	✓	✓	✓	✓
Digital output				HART	HART
HART protocol				5	7
PReset programming	✓	✓	✓	✓	✓

*) % of span/°C

6300 Product Range



	6331	6333	6334	6335	6337
RTD/R transmitter	✓	✓		✓	✓
TC/mV transmitter	✓		✓	✓	✓
Galvanic isolation	1500 VAC		1500 VAC	1500 VAC	1500 VAC
Channels	1&2	1&2	1&2	1&2	1&2
Basic accuracy Pt100	<± 0.2°C	<± 0.3°C		<± 0.1°C	<± 0.1°C
Temperature coefficient *)	<± 0.01%	<± 0.01%	<± 0.01%	<± 0.005%	<± 0.005%
NAMUR NE 21 A	✓		✓	✓	✓
DIN rail mounting	✓	✓	✓	✓	✓
Analog output	✓	✓	✓	✓	✓
Digital output				HART	HART
HART protocol				5	7
PReset programming	✓	✓	✓	✓	✓

*) % of span/°C

Benefit today from PERFORMANCE MADE SMARTER

PR electronics is the leading technology company that specializes in making industrial process control safer, more reliable and more efficient. Since 1974 we have been dedicated to perfecting our core competence of innovating high-precision technology with low power consumption. This dedication continues to set new standards for products that communicate, monitor and connect our customers' process measurement points to their process control systems.

Our innovative, patented technologies are derived from our extensive R&D facilities and our thorough understanding of our customers' needs and processes. We are guided by principles of simplicity, focus, courage and excellence, enabling some of the world's greatest companies to achieve PERFORMANCE MADE SMARTER.

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