

SIEMENS

Ingenuity for life



Pressure Measurement

Processes require precision

Reliable, low-maintenance pressure measurement with SITRANS P320

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SITRANS P320 is the next generation state-of-the art pressure and differential transmitter family, the **successor of SITRANS P DSIII** family which has served the process industry for more than 30 years with over a million installations across the globe.

This next generation of pressure transmitter is designed according to IEC 61508 standard **for use in safety integrity level (SIL) 2/3**. This transmitter will also significantly **lower maintenance costs** as it has an increased proof test interval over other devices in the market.

The Siemens pressure transmitter SITRANS P320 is the **first pressure transmitter in the market to feature remote safety handling** reducing commissioning time in applications requiring functional safety. Via SIMATIC Process Device Manager (PDM) the SIL devices will be commissioned: rather than manually attending to each individual device across the facility, operators can commission transmitters from the control room.

SITRANS P320's user-friendly features also include a new **larger and improved display**, showing users the devices' status at a glance. Setup is convenient and quick thanks to four-button programming, NAMUR NE 107 support and a quick start wizard.

With measuring **ranges from 20 mbar to 700 bar**, depending on the device, SITRANS P320 family provides reliable results under extreme conditions. These devices are specially suited for applications where safety is critical - in industries such as chemical, oil and gas, and power generation. The SITRANS P320 can also play to its strengths across various other industries.

Benefits

- Full SIL-2/3 assessment
- Reduced commissioning time due to remote safety handling
- Suitable for harsh conditions due to robust materials
- User-friendly due to clear display and diagnostic icons acc. to NAMUR NE107
- Maintenance cost reduction due to proof test interval up to 15 years
- Fast reaction and optimized processes due to reduced response time

Comparison between SITRANS DSIII and SITRANS P320

	SITRANS P DSIII	SITRANS P320
Linear Characteristic	1:1...5:1: 0.065% TD> 5:1: (0.005 x r +0.05)%	1:1...5:1: 0.065% TD> 5:1: (0.005 x r +0.05)%
Temperature Error	(0.025 x r +0.125)% / 28K	(0.025 x r +0.125)% / 28K
Effect of static pressure error per 70 BAR	Zero Error = (0.1 x r) % Span Error = 0.14%	Zero Error = (0.1 x r) % Span Error = 0.1%
Total Performance (TD 1:1)	0.19%	0.18%
Step Response Time in milliseconds (ms.)	< 170 ms.	135 ms. for DP / 105 ms. for P
SIL (Safety Integrity Level)	SIL proven in use for SIL 2/3 applications	Designed according to IEC61508 standards for SIL2/3 applications
SFF (Safety Failure Fraction)	80%	91%
Communication	Hart 5 Protocol	Hart 7 Protocol
Tags	Y15 - Max 16 characters, Y16 - Max 27 Characters	Y15 - Max 32 characters , Y16 - Max 32 Characters
Operability via buttons	3 push buttons	Increased convenience using 4 push buttons
Long Term Stability	≤ 0.25 % / 5 years for lower & higher ranges and 0.125 % / 5 years for medium ranges	≤ 0.25 % / 5 years for lower & higher ranges and 0.125 % / 5 years for medium ranges, ≤ 0.35 % / 10 years for lower & higher ranges and 0.15 % / 10 years for medium ranges
Display	Standard Display	NAMUR NE107 device status at a glance, Improved readability
New differential pressure cell design	The 20mbar cell is designed for PN32 in the DSIII	The 20mbar cell is designed for PN160 in the DSIII
Rating Plate	Rating Plate on Left Hand side of the transmitter	Rating Plate is located on the front side of enclosure