

PRESS-RELEASE



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Reference Pressure Transmitters Top-Class Pressure Transmitters

Pressure Transmitters with Mathematical Compensation

Keller AG has now redefined the state-of-the-art in high precision pressure measurement technology with its Series 33 X and 35 X pressure transmitters. A floating measurement cell, totally digital signal processing, compensation with mathematical accuracy and a highly dynamic microprocessor – these assets produce reference accuracies of up to 0,05 %FS error bandwidth.

The floating piezoresistive sensor element is free of outside influence from mechanical and thermal forces at the pressure connection. The A/D converter in the signal processor operates with a resolution of 16 bits (0,002 %FS), using the signals from the pressure sensor and the integrated temperature sensor to calculate accurate compensated measurement values in just a few milliseconds.

The transmitter's analogue output is updated at least 400 times per second, with overall accuracy of 0,05 %FS (including temperature influence in the 10 °C...40 °C range). As an option, precision of 0,01 %FS in the same temperature range is available, in relation to the reference values of primary standards (accuracy: 0,025 %).

In the typical process temperature range of -10 °C...+80 °C (an interval of 90 degrees Kelvin), our 33 X and 35 X pressure transmitters supply their digital measured values with a total error band of 0,1 %FS. The digital output permits functions such as direct display of measured pressure values on a laptop or PC, and serial networking for up to 128 transmitters.

Depending on the plug type and the number of contacts available, the transmitters provide a digital output (RS485) as well as an analogue current or voltage output, e.g. 0...10 V (3-wire); 4...20 mA (2-wire).

Measurement ranges between 0,8 bar and 1000 bar can be supplied for absolute, gauge, and differential pressures. High overpressure measurements, depending on the structural design. The pressure port can be a threaded connection 33 X, or

Series 35 X, Series 33 X



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a front-flush diaphragm 35 X. Thanks to the digital interface (RS485), the analog signal span and zero can be adjusted across the whole of basic measurement range, to suit specific applications.

Two PC programs are available free of charge for Series 30 X precision transmitters: PROG30 is used to parameterise the instruments locally and to record individual measured values, etc. READ30 allows users to assemble entire setups for recording measured values, including a graphic signal display for up to sixteen transmitters.

Series 33 X typically offers a pressure port of G1/4" male or G1/2" male thread as the process connection. Series 35 X adds a transmitter with a flush front diaphragm to the product range; 36 X W is the depth / water level transmitter version.

Users can choose from three electrical plug connectors. These are easily changed over when the instruments are used in different environments. If protection class IP68 is required (standard for the 36 X W depth sensor), a version with a cable connection is also available.

Level Gauge 36 X W

