VIVACE™
Process Instruments
Exceeding Automation Limits

VPT11-P

PROFIBUS PA PRESSURE TRANSMITTER

DIRECT MOUNTING

PROFIBUS®

- ✓ Two Wire Loop Powered Transmitter with Profibus PA Communication
- ✓ 5-digit, rotative, multi-function LCD including bargraph
- ✓ 6 Pressure Ranges:
  6 kPa to 40 MPa
- ✓ 2 Accuracy Classes:
  Standard Model: ± 0.075%
  High Performance Model: ± 0.05%
- ✓ Measuremente Response Time: 50 ms
- ✓ Built-in Transiente Suppressor
- ✓ No Polarity 9 to 32 Vdc Power Supply
- ✓ Advanced Diagnosis
- ✓ Operating Temperature -40 to 100 °C
- ✓ Local Adjustment via Magnetic Tool
- ✓ Configuration, Calibration, Monitoring and Diagnostics via HART or Android Configurator and Supported by EDDL and FDT/DTM Tools

DESCRIPTION

VPT11-P is a piezoresistive Silicon Pressure Transmitter of high performance, completely digital, designed for gauge and absolute pressure measurements, in addition to having models for flanged, remote seal and sanitary applications.

The transmitter is powered by a 9 to 32 Vdc voltage, uses the Profibus PA communication protocol, according to IEC61158-2, for configuration, calibration, monitoring and diagnostics. The VPT11-P works with the concept of functional blocks as Analog Input. Profibus PA configurator, Android platform or tools based on EDDL or FDT/DTM can easily configure the transmitter. In addition, it is possible to configure it via local adjustment using a magnetic key.

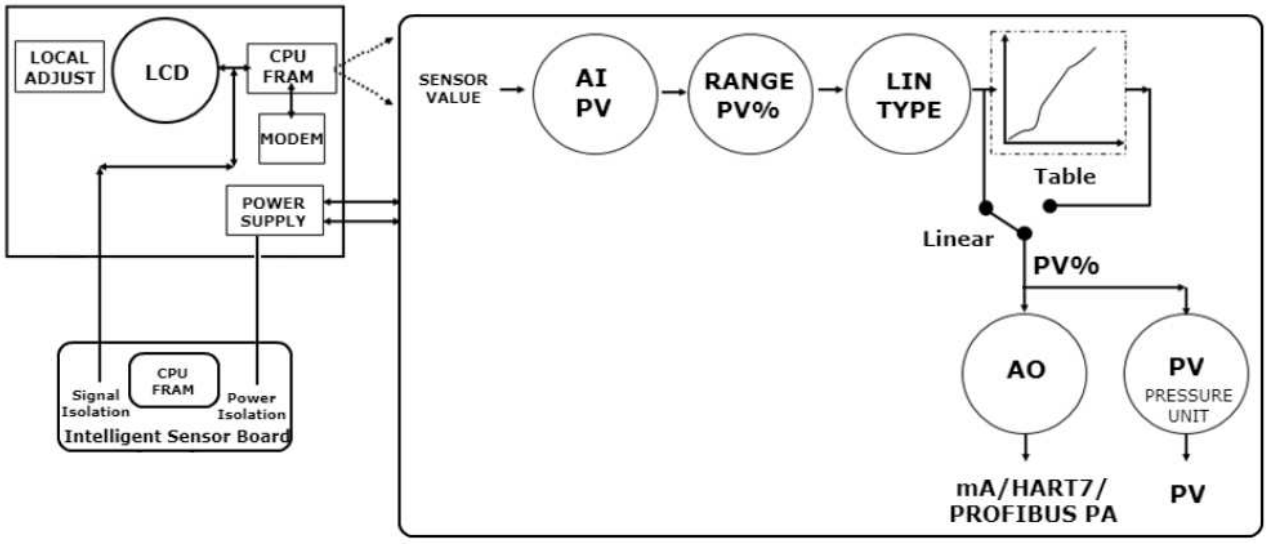
Prioritizing its high performance and robustness, it was designed with the latest technologies of electronic components and materials, ensuring long-term reliability for systems of any scale.

BENEFITS OF PIEZORESISTIVE SENSOR

The advantages of pressure transducer using semiconductor technology compared to other pressure resistance measurements are:

- higher sensitivity;
- higher linearity;
- low hysteresis on pressure and temperature;
- higher reliability in the passivation of silicon nitride;
- faster response;
- high stability in the load cycle as a result of the non-occurrence of fatigue, monocrystalline silicone diaphragm;
- compact;
- lower cost.

BLOCK DIAGRAM



TECHNICAL AND PHYSICAL SPECIFICATIONS

Accuracy	Standard Model: ± 0.075% High Performance Model: ± 0.05%
Communication Protocol	Profibus PA, according to IEC 61158-2 (H1), voltage mode 31.25kbits/s bus powered
Sensor Type	Microprocessed piezoresistive silicon sensor, digital Reading with pressure and temperature compensation algorithm.
Models / Measurement Ranges	G1 / -6 to 6 kPa (-611.8 to 611.8 mmH_2O) G2 / -40 to 40 kPa (-4078.9 to 4078.9 mmH_2O) G3 / -100 to 250 kPa (-1 to 2.5 kgf/cm^2) G4 / -0.1 to 3 MPa (-1 to 30.6 kgf/cm^2) G5 / -0.1 to 10 MPa (-1 to 102 kgf/cm^2) G6 / -0.1 to 40 MPa (-1 to 407.9 kgf/cm^2) A2 / 0 to 40 kPa (0 to 4078.9 mmH_2O) A3 / 0 to 250 kPa (0 to 2.5 kgf/cm^2) A4 / 0 to 3 MPa (0 to 30.6 kgf/cm^2)
Stability(1)	Standard Model: ±0.2%*URL (5 years) High Performance Model: ±0.2%*URL (15 years)
Rangeability	10:1 (G1) or 100:1 (others)
Response Time	50 ms
Function Blocks	1 Analog Input (AI)
Output Type	Linear and User Table
Power Supply / Current	9 to 32 Vdc, no polarity / 12 mA
Temperature Limits	Ambient: -40 to 85°C Process: -40 to 100°C Storage: -40 to 100°C
Humidity Limits	0 to 100% RH (relative humidity)
Configuration	Remote: EDDL, FDT/DTM, Android Tools. Local: using magnetic screwdriver.
Write Protection	Hardware and software with indication icon on LCD
Protection Degree	IP67
Mounting	Field, direct on process pipe or using Ø 2” tube bracket
Housing Material	Aluminum
Approximated Weight with Bracket	2.5 Kg
Hazardous Area Classification	Explosion Proof and Intrinsically Safe (pending)

(1) For temperature changes of ± 20 °C, relative humidity 0-100%, line pressure of up to 7 MPa (70 bar), installation in accordance with good practice and appropriate assembly for processes where hydrogen atoms can be generated (hydrogen migration).

ORDERING CODE

VPT11 *Pressure Transmitter – Direct Mounting*

Communication Protocol	H	HART
	P	PROFIBUS
Accuracy Class	S	STANDARD
	H	HIGH PERFORMANCE (SEE NOTE 1)
Sensor Type	A	ABSOLUTE
	G	GAGE
Sensor Range	1	-6 to 6 kPa (-611.8 to 611.8 mmH_2O)
	2	-40 to 40 kPa (-4078.9 to 4078.9 mmH_2O)
	3	-100 to 250 kPa (-1 to 2.5 kgf/cm^2)
	4	-0.1 to 3 MPa (-1 to 30.6 kgf/cm^2)
	5	-0.1 to 10 MPa (-1 to 102 kgf/cm^2)
	6	-0.1 to 40 MPa (-1 to 407.9 kgf/cm^2)
Diaphragm Material	I	SS 316L
	H	HASTELLOY C276
Fill Fluid	S	SILICONE
	N	NEOBEE M20
Process Connection	0	½ - 14NPT FEMALE
	1	½ - 14NPT MALE
	2	M20 x 1,5 SEALED MALE
	3	G ½ MALE
	4	SANITARY DN25 DIN32676
	5	SANITARY DN40 DIN32676
	6	INTEGRAL FLANGE 2" x 150#
	7	INTEGRAL FLANGE 3" x 150#
	8	FLANGED REMOTE SEAL 2" x 150#
Certification Type	0	NO CERTIFICATION
	1	INTRINSICALLY SAFE
	2	EXPLOSION PROOF
Certification Body	0	NO CERTIFICATION
	1	INMETRO
Housing Material	A	ALUMINUM
Electrical Connection	1	½ – 14 NPT
Painting	1	BLUE – RAL 5005
Mounting Bracket	0	NO BRACKET
	1	SS 304 BRACKET

Ordering Code Example:

VPT11-	P	S	-	G	1	-	I	S	0	-	0	0	-	A	1	1	0

NOTE 1: Only available for Gage models.

contato@vivaceinstruments.com.br
www.vivaceinstruments.com.br
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