

Selection Guide for Pressure Transmitters

Series	Pressure range bar	Proof pressure bar	Output Signal	Page
PT3-07A	-0.8 ... 7	25	4 ... 20 mA	58
PT3-18A	0 ... 18	36		
PT3-30A	0 ... 30	36		
PT3-07V	-0.8 ... 7	25	0 ... 10 V	58
PT3-18V	0 ... 18	36		
PT3-30V	0 ... 30	36		
NPT 012	-0.8 ... 12	25	Neutral zone	61
NPT 030	2 ... 30	36	0 V / 24 V	

Pressure Transmitter Series PT3

PT3 Pressure Transmitters convert a pressure into a proportional electrical output signal.

Features

- ♦ Pressure sensitive piezo-based cell with strong primary output signal for precise and noise-free operation
- ♦ Pressure cell protected by oil filled pressure enclosure
- ♦ Vibration and pulsation resistant
- ♦ Protection class IP 65
- ♦ Compact dimensions
- ♦ Standard output signal 4 to 20 mA
- ♦ Gauge pressure output ranges
- ♦ Standard pressure ranges compatible with former ALCO transmitters
- ♦ Pressure connector 7/16-20 UNF w. Schrader depressor
- ♦ Variable supply voltage
- ♦ CE-mark under EC EMC-Directive

Options

- ♦ Output signal 1...6 V
- ♦ Other pressure ranges and calibrations
- ♦ Other pressure connectors
- ♦ Calibration for other supply voltages



PT3
Pressure Transmitter

NEW

Selection Chart

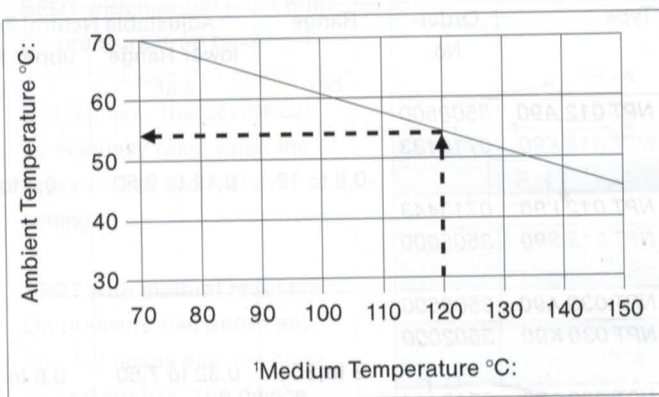
Type	Pressure Range (bar)	Output Signal	Proof Pressure	Part Code Nr. Pressure Connection		
				1/4" SAE (7/16"-20 UNF) female with schrader valve depressor S	1/4" SAE (7/16"-20 UNF) male A	80 mm solder tube ø 6 mm U
PT3-07A	-0.8 to 7	4 to 20 mA	25 bar	802 276		
PT3-18A	0 to 18		36 bar	802 277		
PT3-30A	0 to 30		36 bar	802 278		
PT3-07V	-0.8 to 7	1 to 6 V	25 bar	802 279		
PT3-18V	0 to 18		36 bar	802 280		
PT3-30V	0 to 30		36 bar	802 281		

Technical Data

Supply voltage	
Nominal	24 Vdc
Total range	8...28 Vdc
current output	
voltage output	10...28 Vdc
Operating current	
4...20 mA output	max. 20 mA
1...6 V output	max. 4 mA
Load resistance	
4 - 20 mA output	$R_L = \frac{U_B - 8.0V}{0.02A}$

Sensor lifetime	
PT3 -07 / -18 / -30 full stroke	5.000.000 cycles
Burst pressure	200 bar
Materials	
Housing cover	Stainless steel
Pressure connect. medium contact	Brass plated
Diaphragm medium contact	Nickel
Medium compatibility	HFC, HCFC, CFC
not suitable for ammonia and inflammable refrigerants!	

Electrical insulation test	500 Vdc
Protection class acc. to EN 60529	IP65
Temperatures	
Operating ambient housing	-30...70 °C
Medium ¹	-40...135 °C
Transport and storage	-40...85 °C
Vibration at 10 ... 2000 Hz	max. 4 g
Precision ²	
Offset deviation at 20 °C	* ±1.0 %
Linearity	* ±0.6 %
Hysteresis	* ±0.1 %
Typical error of measurement ³	PT3-07 PT3-18/ PT3-30
temp. range 18...22°C	* ±1.5 % * ±1.0 %
temp. range 0...50°C	* ±2.5 % * ±2.5 %
(all data according to IEC 770)	



¹) For medium temperatures above 70°C the ambient temperature must be derated as per chart above. For example, at 120 °C the ambient temperature of the housing should not exceed 55°C.

²) Percentage related to full sensor range

³) Including linearity, hysteresis, zero and range error

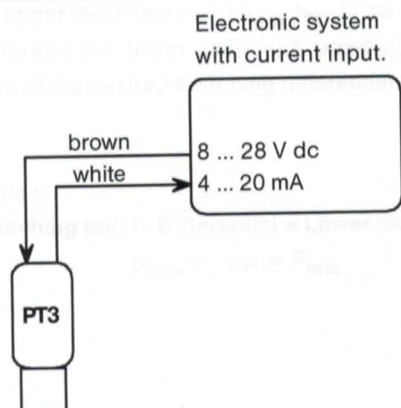
Electrical connection

- ♦ Factory wired 1.5 m cable (standard)
- ♦ 4 ... 20 mA (Two wire connection)
- ♦ 0 ... 10 V (Three wire connection)
- ♦ Protected against inverted polarity

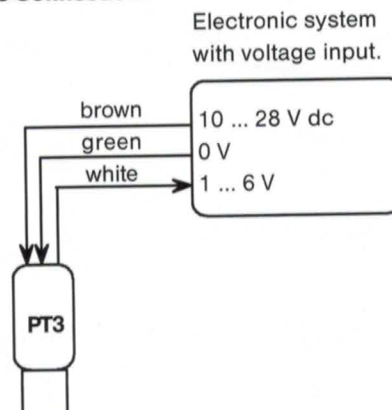
Pressure transducers with current output (two wire connection) offer the following advantages:

1. More suitable for signal transmission over long distance
2. Higher immunity to electro-magnetic interference
3. Open circuit detection enables fail-safe operation

Two Wire Connection



Three Wire Connection



Note: Changing the length of the electrical connection lead beyond 1.50 m can have a negative impact on electro-magnetic compatibility. Additional protection may be required.