

## Absolute Pressure Field-Mounted Transmitter PEK401HF With HART Protocol



### Application Area

Field mounted Absolute and Gauge pressure transmitter PEK401HF with HART- protocol for converting pressure into a scalable 4 to 20 mA analogue output signal. Typical area use of this transmitter is Process Control, absolute pressure for deriving flow rated (volumetric or mass flow), level, mass or volume

### Input Types

This Transmitter uses Absolute and Gauge pressure sensor as input analogue signal.

High Performance and Accuracy in total ambient pressure and Temperature range

- Digital Communication and Universal configuration with HART protocol communicator or PC-based configuration
- Self-diagnostics function ensures long-term performance and lower cost of ownership
- High Resolution LCD display and a bar-graph with an indicator for alarms
- 2-wire technology, Loop-powered 4-20mA Pressure Transmitter analogue output with HART protocol
- Wide voltage supply range from 10V DC without load up to 15V DC with 250  $\Omega$  load
- Extremely high overload limit and High Pressure and long term stability
- No hysteresis and Corrosion-resistant

## Technical Data

Power Supply			
Supply Voltage	Minimum	10V DC without load 15V DC with 250Ω load	
	Maximum	32V DC	
Output			
Output Signal	4 to 20 mA with HART Protocol 7.0		
Signal on Alarm	Under Range 3.9 mA Over Range 21 mA as NAMUR STD		
Load	Max. 23mA		
Transmission Behavior	Loop Current Linear in Input Range		
Input Types and Ranges			
Gauge Sensor	Minimum Pressure	Maximum Pressure	Max. Permissible Overload
		40 KPa - 10 MPa	20 MPa
Absolute Sensor		40 KPa - 60 MPaA	80 MPa
Performance Characteristic			
Accuracy	0.1 % Full Scale		
Pressure Hysteresis	<= +/- 0.5 % Full Scale		
Long Term Drift	<= +/- 0.5 % Full Scale/Year		
Noise suppression for noise frequency	50/60 Hz		
Update time	< 0.5 sec		
Response Time	650 ms		
Switch on Delay	750 ms		
Influence of Ambient	Negligible		
Load Influence	Negligible		
Power Supply Influence	Negligible		
Resolution	1μA		
Insulation resistance	>250MΩ		
Intrinsic safety	Eex ia IIC T4		
Short-Circuit protection	Permanent		
Electromagnetic Compatibility (EMC) standards			
Electromagnetic Compatibility (EMC) standards	IEC/EN 61326-1: 2006 IEC/EN 61326-2-3: 2006		
EMC	ESD	4KV Contact 8KV Air	
	Radiated	80-1000 MHz @ 10V/m AM	
	Burst	1KV	
	Surge	0.5 KV Line-Line 1KV Line-Earth	
	Conducted	150KHz to 80MHz @ 10V	

EMC	Magnetic	50Hz @ 30A/m
	Emission	30-230MHz, 30dB (uV/m) @ 10m 230-1000MHz, 37dB (uV/m) @ 10m
Explosion Proof		EXia/Eexd IIC T6
Vibration Effect		10 to 60 Hz : 0.21 mm peak Displacement 60 to 500 Hz : 3g
Operating Temperature		Without LCD: -40°C to +85°C With LCD: -20°C to 70°C
Relative humidity		0% to 95%
Protection rating (Enclosure)		IP65 (IP66 ,IP67 Optional)
<b>Others</b>		
Display Type		Graphical Display, 8×17 Characters, 102x64 Pixels, FSTN Pos. Transflective
Weight		Approx. 1,800 g
Display Range		Pressure: -9999.9 Current: 99.999
Materials		Aluminum die cast (SS 316 Optional)

### Electrical Connection

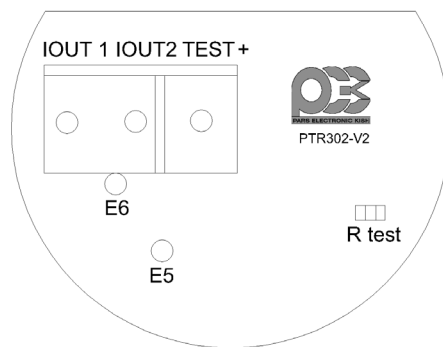
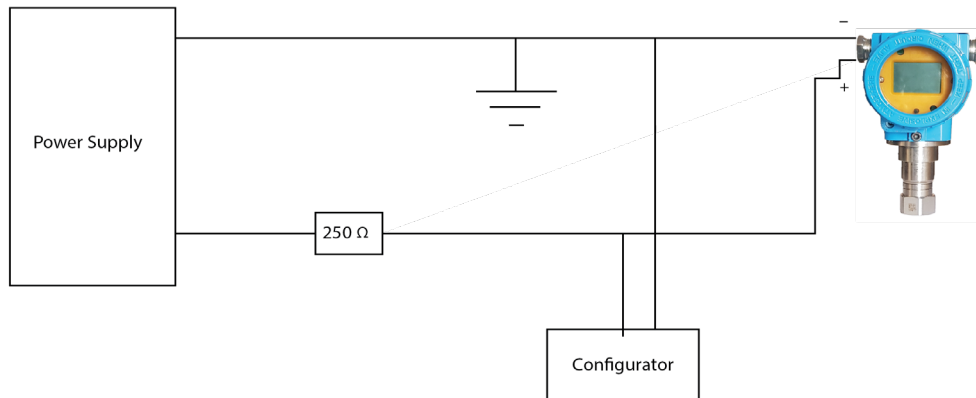


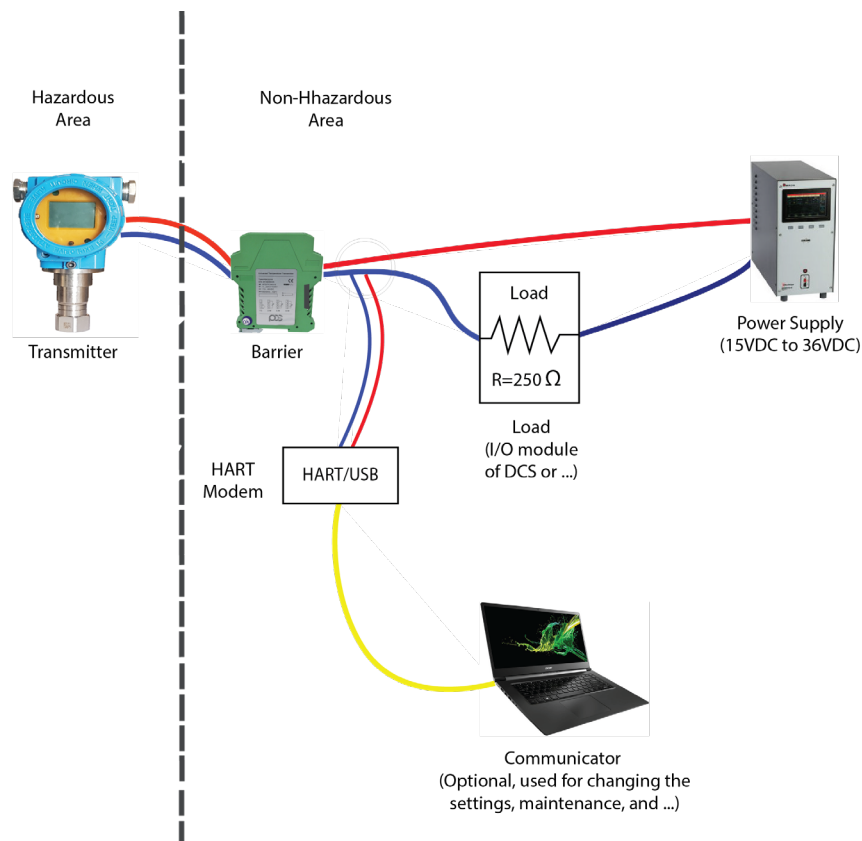
Diagram of connectors PEK401HF

Connection	Description
IOUT1	HART Supply Connector (without polarization)
IOUT2	HART Supply Connector (without polarization)
	Communicator Connector (without polarization)
Test+	Communicator Connector (without polarization)
IN+	Sensor Connection
IN-	Sensor Connection
FB+	Sensor Connection
FB-	Sensor Connection



Wiring Diagram for the PEK401H Working as a Transmitter

### Electrical Field Connection Diagram



Electrical Field Connection Diagram PEK401HF