

## HPM713 Ceramic Diaphragm Pressure Transmitter



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## Overview

HPM713 ceramic diaphragm pressure transmitter uses advanced ceramic piezoresistive core as the sensitive element, threaded installation, and flat diaphragm structure design. Ceramics have the characteristics of high elasticity, wear resistance, corrosion resistance, and fast heat dissipation, which makes the transmitter have very good thermal stability, allowing it to be used normally in the range of -40 to 120 degrees Celsius with low temperature drift.

Since the ceramic sensor does not have any filling liquid, it will not cause process pollution, and its dry ceramic diaphragm is not affected by the installation direction. The diaphragm on the end face of this product is exposed to directly feel the pressure, which can eliminate problems such as scaling, unsanitary and viscous pressure blockage. It is widely used in measurement media containing particle impurities, as well as pressure measurement in situations where blockage or scaling may occur. It is also It can be used in hygienic industries such as food, medicine, and wine making.

## Application

Measurement of gauge and absolute pressure of gases or liquids in the field of industrial process control.

Water treatment industry.

Environmental protection industry.

Food industry; Pharmaceutical industry.

## Features

- All stainless steel shell
- Anti-corrosion ceramic (96% Al<sub>2</sub>O<sub>3</sub>) sensor
- Threaded flat membrane pressure interface, easy to clean, prevent clogging and scaling
- Anti-corrosion, wear-resistant, negative pressure resistant
- Applicable medium temperature range is wide, -40°C ~ 120°C, low temperature drift
- Support negative pressure, absolute pressure or composite pressure measurement
- Supports multiple output signals and multiple electrical interfaces
- Special waterproof and breathable design

## Technical Parameters

Pressure Range	
Rated Pressure	-1...0~0.2...400bar
Minimum Pressure	0 ~ 0.2...400bar
Overload	1.5x of full scale
Measuring Medium	
Type	Various liquids and gases compatible with contact materials
Output/Power Supply	
Standard	Two wire: 4-20mA / Vs=10-30V
Standard	Three wire: 0-5V / Vs=8.5-30V
Standard	Three wire: 0 ~ 10V / Vs=12-30V
Standard	Four wire: Modbus-RTU/RS485 / Vs =3 ~ 8 VDC or 10 ~ 30 VDC

Performance	
Accuracy*	±0.5%FS
Long term stability	±0.3%FS/year
(includes linearity, hysteresis, and repeatability)*	
Temperature Drift Characteristics	
Zero temperature drift	≤±0.4%FS/10°C (25 ~ 85°C, reference 25°C)
Fullness temperature drift	≤±0.15%FS/10°C (-10 ~ 85°C, reference 25°C)

Environmental Conditions	
Temperature Range	Medium range: -40 ~ 120°C Ambient temp.: -40 ~ 85°C Storage temp.: -40 ~ 85°C
Protection Grade	IP65

Electrical Protection	
Short circuit protection	Permanent
Reverse polarity protection	No damage, circuit inoperative
Electromagnetic compatibility	Conforms to EN 61326

Insulation	
Insulation resistance	>200MΩ @500VDC
Dielectric strength	<2mA @ 500VAC 1min

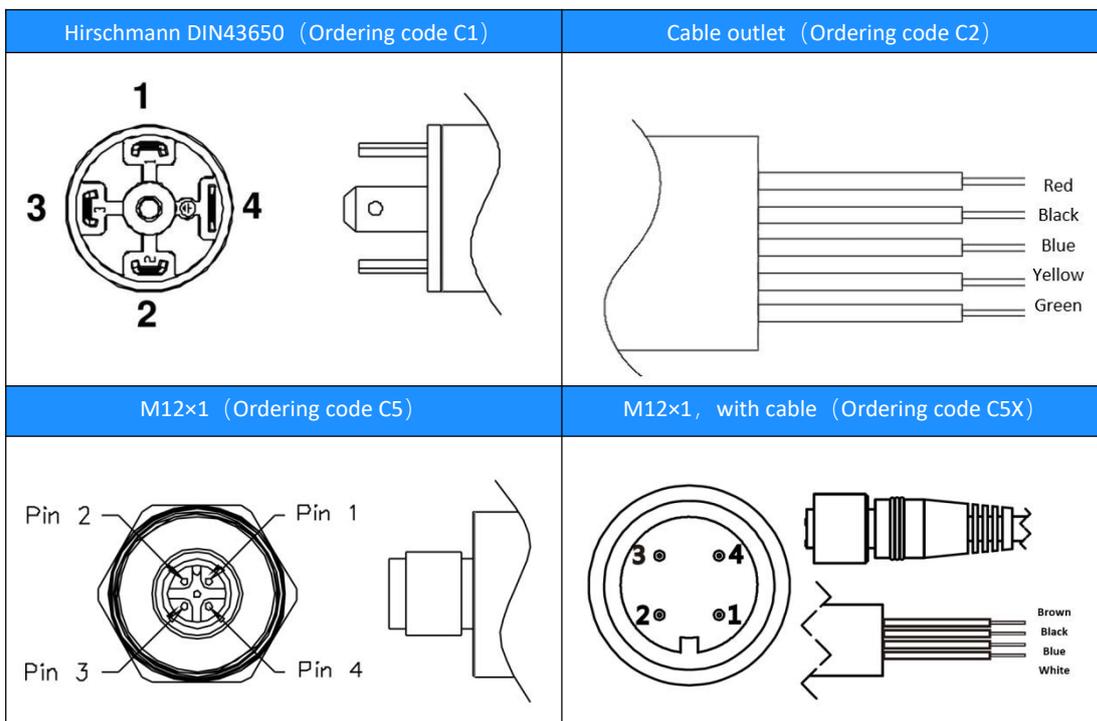
### Structural Material

Ordering Code	Part	Material
S4	Housing	304
S6		316L
S4	Process Connection Interface	304
S6		316L
HC		HastelloyC276
FE		PTFE (max.measuring range 10bar)
DF		PVDF (max.measuring range20bar)
M6	Sensor	Ceramic Al <sub>2</sub> O <sub>3</sub> 96%
FK	Sensor seal ring	Fluorocarbon rubber FKM
FF		Perfluoroelastomer FFKM
ED		EPDM
SI		Silicone Rubber

### Structural Drawing(unit:mm)

M12×1 electrical connection , G3/4 thread	Installation Diagram
<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. The dimensions listed in the picture may change as the technology is updated.</li> <li>2. For other specifications, please consult us.</li> </ol>	

### Electrical Connection



Two wire 4 ~ 20mA current output		
Signal Definition	Power supply+(+V)	Power supply-(0V/+OUT)
M12x1	1	2
M12x1 with cable	brown	black
Hirschmann DIN43650	1	2
Cable Outlet	red	black

Three wire 0~5V/10V voltage output			
Signal Definition	Power supply+(+V)	Power supply-(GND)	Signal+(+OUT)
M12x1	1	2	3
M12x1 with cable	brown	black	blue
Hirschmann DIN43650	1	2	3
Cable Outlet	red	black	blue

Four wire Modbus-RTU/RS485				
Signal Definition	Power supply+(+V)	Power supply-(-v)	RS485A	RS485B
M12x1	1	2	3	4
M12x1 with cable	brown	black	blue	white
Hirschmann DIN43650	1	2	3	4
Cable Outlet	red	black	yellow	green

## Ordering Guide

Model Type	HPM713 Ceramic Diaphragm Pressure Transmitter
Measuring Range	(X1~X2)bar
<b>Code</b>	<b>Output Signal</b>
B1	(4~20)mA
B3	(0~10)V
B4	(0~5)V
B5	(1~5)V
B7	RS485
<b>Code</b>	<b>Process Connection</b>
KG34	G3/4" Flat diaphragm
KG1	G1" Flat diaphragm
KM27	M27x2 " Flat diaphragm
<b>Code</b>	<b>Electrical Connection</b>
C1	Hirschmann
C2	Cable Outlet
C5	M12x1 4P
C5X	M12x1,with cable
<b>Code</b>	<b>Housing Material</b>
S4	304
S6	316L
<b>Code</b>	<b>Process Connection Interface</b>
S4	304
S6	316L
FE	PTFE
DF	PVDF
HC	Hastelloy C
<b>Code</b>	<b>Additional Functions</b>
G	Gauge Pressure
A	Absolute Pressure
FK	Fluorine rubber FKM sealing ring
FF	Perfluoroelastomer FFKM sealing ring
ED	EPDM sealing ring
SI	Silicone rubber seal
FK	Fluorine rubber FKM sealing ring
FF	Perfluoroelastomer FFKM sealing ring
ED	EPDM sealing ring
SI	Silicone rubber seal
E.G.:HPM713 (0~10)bar-B1-KG34-C5-S4-S6-G FK	