

Model M5200

Compact Size Pressure Transducer

Description

The M5200 series from SENSYS sets the price / performance standard for transducers used in demanding environments. This latest series sets a new price performance standard for demanding commercial and heavy industrial applications. This series is suitable for measurement of liquid or gas pressure, even for difficult media such as contaminated water, steam, and mildly corrosive fluids. The wetted material is made of STS630 stainless steel(17-4PH) and the transducer's durability is excellent with no o-rings, welds or organics exposed to the pressure media. The M5200 is weatherproof and exceeds the latest heavy industrial CE requirements including surge protection. The circuit is protected from reverse wiring at input and short circuit at output.

Features

- ▶ Heavy Industrial CE Approval
- ▶ 10V/m EMI Protection
- ▶ Reverse Polarity Protection
- ▶ Short Circuit Protection on Output
- ▶ 0.5%FS accuracy
- ▶ Compact Outline
- ▶ -40 to 125°C Operating Temperature
- ▶ Weatherproof

Applications

- ▶ Industrial Process Control and Monitoring
- ▶ Refrigeration Systems
- ▶ Pumps and Compressors
- ▶ Agriculture Equipment
- ▶ Advanced HVAC Controllers
- ▶ Automotive Test Stands
- ▶ Hydraulic/Pneumatic
- ▶ Energy and Water Management



Specifications

Range

7, 10, 20, 35, 70, 200, 350, 700, 1000bar (Gauge, Compound)
70, 200, 350, 700, 1000bar (Sealed)

Performance

Accuracy $\pm 0.5\%FS(RSS)$
 Thermal Effect on Zero $\pm 0.05\%FS/^{\circ}C$
 Thermal Effect on Span $\pm 0.05\%FS/^{\circ}C$
 Compensated Temperature Range $-20 \sim 85^{\circ}C$
 Operating Temperature Range $-40 \sim 125^{\circ}C$ (Cable Type : Max $105^{\circ}C$)

Electrical

Excitation	5±0.25VDC	8~30VDC	8~30VDC	15~30VDC	9~30VDC
Output	0.5~4.5VDC	0.5~4.5VDC	1~5VDC	0~5VDC	0~10VDC
	Ratiometric				4~20mA(2W)
Insulation Resistance	100MΩ @500VDC				
Electrical Connection	Cable, Packard Connector, Mini Din Connector				

Physical

Proof Pressure	X2
Burst Pressure	X5 or 1400bar, Whichever is less.
Vibration	20G at 20 to 200Hz
Shock	50G / 11ms
Media-Wetted Materials	Stainless Steel 630
Weight	Mini Din Connector type : Approx. 85g (Sensor Only)

CE compliant per the following specification

EN55022 Emission Class A & B

IEC61000-4-2 Electrostatic Discharge Immunity(8kV contact/15kV air)

IEC61000-4-3 Radiated, Radio-Frequency Electromagnetic Field Immunity (10V/m, 80M-1GHz)

IEC61000-4-4 Electrical Fast Transient Immunity (1kV)

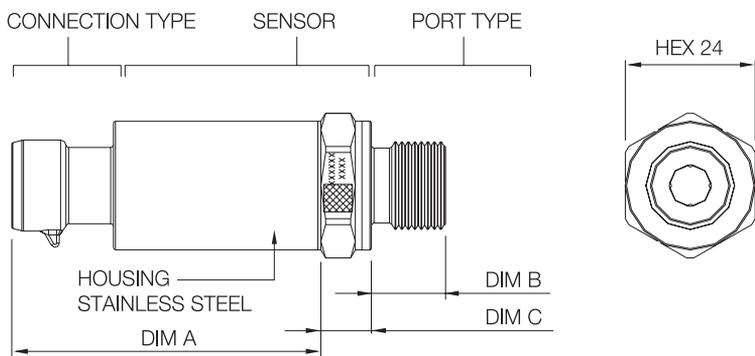
IEC61000-4-5 Surge Immunity (V+ to V-: $\pm 2\text{KV}/42\Omega$; L to Case: $\pm 1\text{KV}/12\Omega$; V- to V0: $\pm 1\text{KV}/42\Omega$)

IEC61000-4-6 Immunity to Conducted Disturbances Induced by Radio Frequency Fields

(150K~80MHz, 10V level for voltage output models, 3V level for current output model)

IEC61000-4-9 Pulse Magnetic Field Immunity (100A/m peak)

Dimension



Code	CONNECTION TYPE	DIM A
4	PACKARD CONNECTOR A	57.2
5	BAYONET CONNECTOR	53.6
6	MINI DIN CONNECTOR (FORM C)	49.5
7	DIN CONNECTOR (FORM A)	53.3
9	PACKARD CONNECTOR B	57.2
D	M12 CONNECTOR	49.5
N	CABLE 2 M	55.6
A	AMP CONNECTOR	53.3
S	SUMITOMO CONNECTOR	49.5
C	1/2" NPT CONDUIT	53.3

MINI DIN CONNECTOR (FORM C)	
INCLUDE MATING CONNECTOR AND SEAL.	MATING CONNECTOR AND SEAL.
CABLE 	DIN CONNECTOR (FORM A)
BAYONET CONNECTOR 	1/2" NPT CONDUIT
PACKARD CONNECTOR 	SUMITOMO CONNECTOR
M12 CONNECTOR 	AMP / TE CONNECTOR

PRESSURE PORT TYPE			
Code	PORT	DIM B	DIM C REF.
3	G(PF)3/8	13.72	9.3
4	UNF 7/16-20 MALE SAE J514 STRAIGHT THREAD O-RING BUNA-N 90SH-904	11.0	9.3
5	NPT1/4-18	15.24	9.3
6	NPT1/8-27	9.91	9.3
B	G(PF)1/4	11.94	9.3
E	R(PT)1/4	12.7	9.3
P	UNF 7/16-20 FEMALE SAE J514 STRAIGHT THREAD WITH INTEGRAL VALVE DEPRESSOR	10.92	11.28
U	G(PF)1/4 DIN 3852 FORM E GASKET DIN3869-14 NBR	11.94	11.3

Note: Refer to installation instructions supplied with devices for recommended torque.

Connections

► mA Output Type

CONNECTION	+SUPPLY	-SUPPLY	NC. PINS	PRESSURE REFERENCE VENT
BAYONET	A	B	C,D,E	F
PACKARD A	A	B	C	Hole Through Connector
PACKARD B	B	A	C	Hole Through Connector
CABLE	RED	BLACK		In Cable
1/2" NPT CONDUIT	RED	BLACK		In Cable
M12	1	3	2,4	Hole Through Connector
AMP/TE	1	2	3	Hole Through Connector
MINI DIN CONNECTOR (FORM C)	1	2	3,4	Threads Through Connector
DIN CONNECTOR (FORM A)	1	2	3,4	Threads Through Connector
SUMITOMO	1	2	3	Hole Through Connector

► V Output Type

CONNECTION	+SUPPLY	+OUTPUT	COMMON	NC. PINS	PRESSURE REFERENCE VENT
BAYONET	A	B	C	D,E	F
PACKARD A	A	C	B		Hole Through Connector
PACKARD B	B	C	A		Hole Through Connector
CABLE	RED	WHITE	BLACK		In Cable
1/2" NPT CONDUIT	RED	WHITE	BLACK		In Cable
M12	1	2	3	4	Hole Through Connector
AMP/TE	1	3	2		Hole Through Connector
MINI DIN CONNECTOR (FORM C)	1	2	3	4	Threads Through Connector
DIN CONNECTOR (FORM A)	1	3	2	4	Threads Through Connector
SUMITOMO	1	3	2		Hole Through Connector

Notes: 1. NC pins are reserved for factory use only. Customers should not use these connections.
2. For cable connection, the drain wire is internally terminated to pressure port.

Connection Type

CONNECTION	DESCRIPTION	MATING HOUSING P/N	MATING TERMINAL P/N	RUBBER SEAL P/N
BAYONET	BAYONET PTIH-10-6P or EQUIV	PT06A-10-6S MIL-C-26482	-	-
PACKARD	3PIN METRI-PACK 150	12078090	12103881, QTY 3	-
CABLE & 1/2" NPT CONDUIT	4WIRE, 22 AWG, SHIELDED, PVC JACKET, 105°C	-	-	-
M12	BINDER SERIES 713, 09 0439 387 04 or EQUIV	4-POS FEMALE CONNECTOR	-	-
AMP/TE	AMP / TE 3PIN ECONOSEAL J SERIES	174357-2 & 174358-7	171630-1 (AWG 20~24) 171662-1 (AWG 16~20) QTY 3	172746-1 (AWG 20~24) 172888-2 (AWG 16~20) QTY 3
MINI DIN CONNECTOR (FORM C)	INDUSTRIAL STANDARD 9.4MM FORM C	HIRSCHMANN 933 024-100, or, ATAM KD046000B7 (SEAL INCL.)	-	HIRSCHMANN 730 185-002
DIN CONNECTOR (FORM A)	DIN EN 175 301-803-A 18MM	HIRSCHMANN 931 969-100, or, ATAM KA245000B4 (SEAL INCL.)	-	HIRSCHMANN 730 801-002
SUMITOMO	SUMITOMO 3-PIN HV040	6189-6907	8100-3067 (AWG 20~22) 8100-3068 (AWG 16~18) QTY 3	7165-1075 (INS. Ø 1.1~1.6) 7176-0621 (INS. Ø 1.6~1.9) 7165-0622 (INS. Ø 1.8~2.2) QTY 3

Note: Transmitter of gage pressure type requires vent to atmosphere on the pressure reference side. This is accomplished via cable from the transmitter (the end of the cable should be terminated to clean and dry area) or through the customer mating connector/cable assembly which has internal vent path.

Weather Proof

WEATHER PROOF RATING	
CONNECTION	IP CODE
BAYONET	IP67
PACKARD	IP66
CABLE	IP67
1/2" NPT CONDUIT	IP67
M12	IP67
AMP/TE	NOT RATED
MINI DIN CONNECTOR (FORM C)	IP65
DIN CONNECTOR (FORM A)	IP65
SUMITOMO	IP67

Note: Weatherproof ratings are met when the mating connectors are installed properly and the cable termination is to dry and clean area.

Ordering Information

M52 3 1-C3079 5-010 B G

Model Name

Output

- 3 : 0.5~4.5V Ratiometric
- 4 : 1~5V
- 5 : 4~20mA
- 6 : 0~5V
- 7 : 0~10V
- 9 : 0.5~4.5V

Pressure Range

- 4 : PACKARD CONNECTOR A
- 5 : BAYONET CONNECTOR
- 6 : MINI DIN CONNECTOR (FORM C)
- 7 : DIN CONNECTOR (FORM A)
- 9 : PACKARD CONNECTOR B
- D : M12 CONNECTOR
- N : CABLE 2 M
- A : AMP CONNECTOR
- S : SUMITOMO CONNECTOR
- C : 1/2" NPT CONDUIT
- D : M12 CONNECTOR
- N : CABLE 2 M
- A : AMP CONNECTOR
- S : SUMITOMO CONNECTOR
- C : 1/2" NPT CONDUIT

Options

Type of Pressure

- G : Gauge
- S : Sealed(≥70bar)
- C : Compound

Pressure Unit

- B : bar
- P : psi

Pressure Range

- 007 : 0 ~7bar
- 010 : 0~10bar
- 020 : 0~20bar
- 035 : 0~35bar
- 070 : 0~70bar
- 200 : 0~200bar
- 350 : 0~350bar
- 700 : 0~700bar
- 01KB : 0~1,000bar

Pressure Port

- 3 : G(PF)3/8
- 4 : UNF 7/16-20 MALE
- 5 : NPT1/4-18
- 6 : NPT1/8-27
- B : G(PF)1/4
- E : R(PT)1/4
- P : UNF 7/16-20 FEMALE
- U : G(PF)1/4 DIN 3852 FORM E
GASKET DIN3869-14 NBR