

A241

MEMS sensor of metal diaphragm



FEATURES

- Superior Long term Stability
- Provides a high level output
- Linear Amplified Output
- Excellent Repeatability & Hysteresis
- Temperature Compensated
- EMI/RFI Protection
- Customizable

The A241 series uses a glass-bonded stainless steel diaphragm as the sensing element, providing excellent resistance to most liquids and chemicals when mounted. Ruggedness and reliability are also enhanced by a stainless steel housing to resist corrosion pressure sealing for media compatibility is provided by selection of Non-welding Sealing type. Metal sensing element contains and integral, reliable, solid state, custom ASIC.



APPLICATIONS

- ✓ Pneumatic and Hydraulic controls
- ✓ Pump and Compressors
- ✓ Refrigeration units
- ✓ Agricultural technology
- ✓ Energy and Water Management
- ✓ Environmental control systems

PERFORMANCE SPECIFICATIONS		
PARAMETERS	Current (2-Wire)	Voltage (3-Wire)
Output	4~20mA	0~5V, 0.5~4.5V, 1~5V, 0~10V
Power Supply	5VDC, 8~30VDC	
Electric Connection	Deutsch, Packard, M12, DIN43650C, Fixed Cable, Etc. [Option]	
Pressure Range	-1~0 ~ 1000bar, Etc. [Option]	
Operating Temp. Range	-40 to 125°C	
Compensated Temp. Range	-20 to 80°C	
Accuracy	≤±0.5%F.S [Typical/25°C]	
Total Error band	≤±1.5%F.S [Typical]	
Hysteresis and repeatability	≤±0.1%F.S [Typical] / ≤±0.15%F.S [MAX]	
Pressure Port	G1/4, G1/2, R(PT)1/4, R(PT)1/2, 7/16-20UNF(Fe), Etc. [Option]	
Wetted Port material	STS630	
Body / Pressure Port material	STS316 / STS303 Electrolytic Polishing	
Electric connection material	PA66+GF30 gold plated Pin	
Enclosure	IP65(DIN43650), IP67	
Over Pressure / Burst Pressure	2xF.S. / 5xF.S.	
Response time 10~90%	≤2ms	
Withstand voltage	500V AC (1minutes between case and all terminals tied)	
Insulation resistance	Greater than 100MΩ (20V DC between case and all terminals tied)	
Mechanical life cycle	1,000,000/cycle	
Circuit protection	Reverse polarity protected. (Power supply +/-)	
Shock proof	1000m/s² (6ms or less,X,Y,Z 3times for each at constant temp.)	
Vibration proof	200m/s² (10~1000Hz, Y:4h, Z:2h at constant temp.)	
Pressure medium	Non-corrosive medium(Air, Water, Oil, Gas)	
Weight	50g (DIN43650C Connector)	

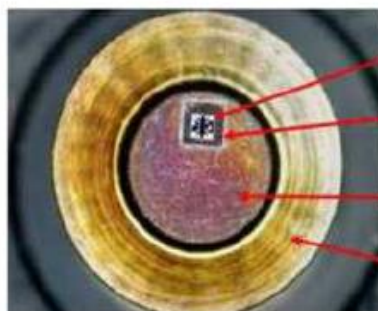
MEMS Sensor & Diaphragm

▼ Stand-alone

Diaphragm Non-weld



▼ Full Bridge



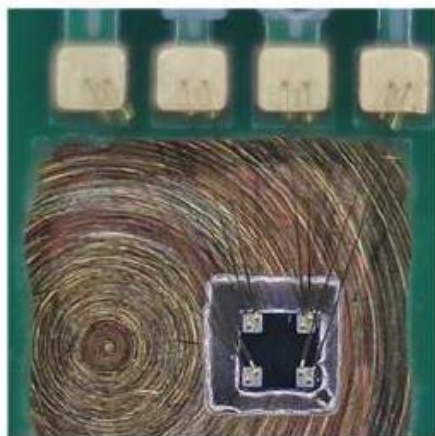
MEMS sensor

Bonding glass

Metal type
Diaphragm

Sensor body
base

▼ 2 Wire bonding



▼ Connector Insert Molding Type

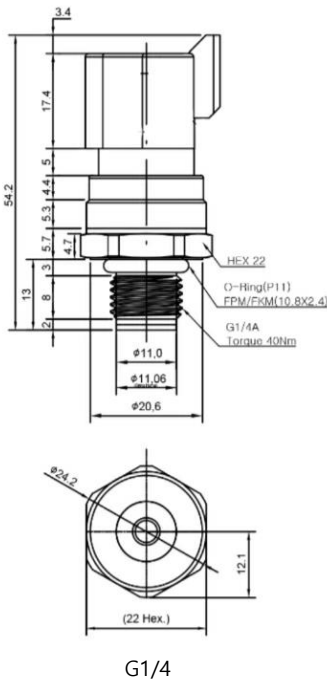


- Compact design
- Designed for use in OEM applications
- Various connector colors available
- Provides a high level output
- Long term stability
- Micro silicone metal sensor
- MEMS part "Full bridge"
- Gold cup & gold spring connection structure
- 2 Wire bonding
- EMC Safety function protection
- Reverse voltage protection circuit

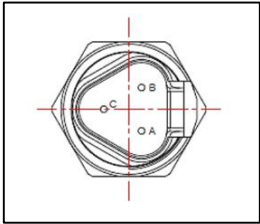
DIMENSIONS

Dimensions(mm)

Deutsch DT04-3P

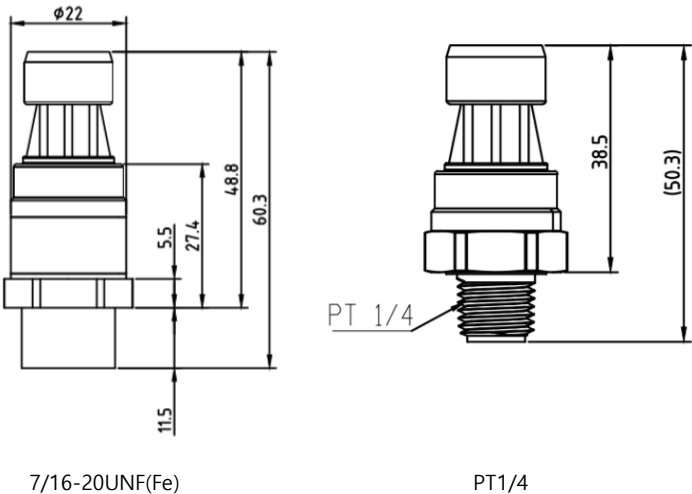


ELECTRONICAL CONNECTIONS

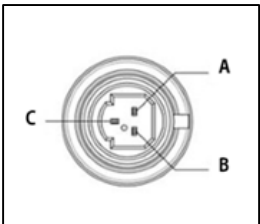


Ouput signal	Current	Voltage
A	Power(+)	Power(+)
B	NC	Output
C	Power(-)	GND

ROUND Packard Metri-Pack



ELECTRONICAL CONNECTIONS

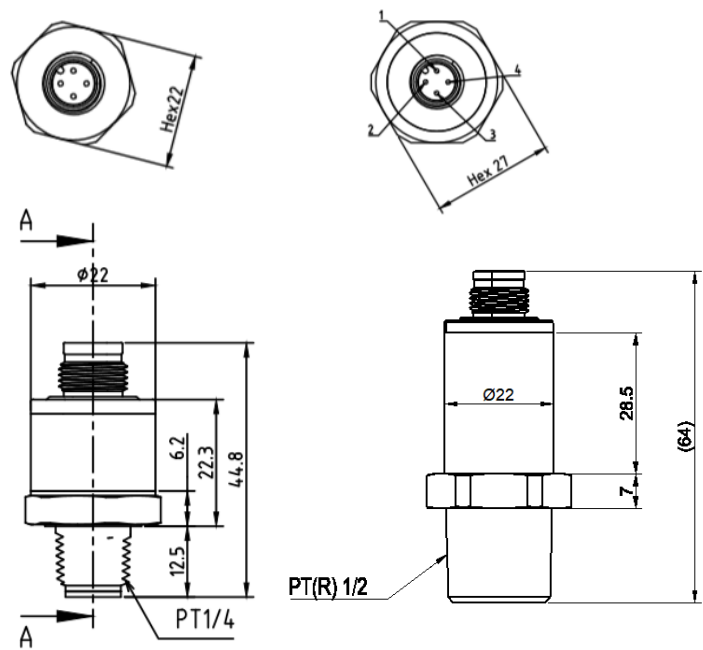


Ouput signal	Current	Voltage
A	Power(-)	GND
B	Power(+)	Power(+)
C	NC	Output

DIMENSIONS

Dimensions(mm)

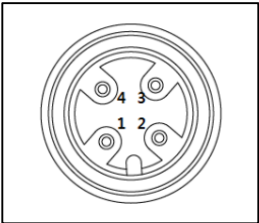
M12*1.0P (C or CM types)



C. High pressure
(-1 ~ 0, 1, 3, 10...1000bar)

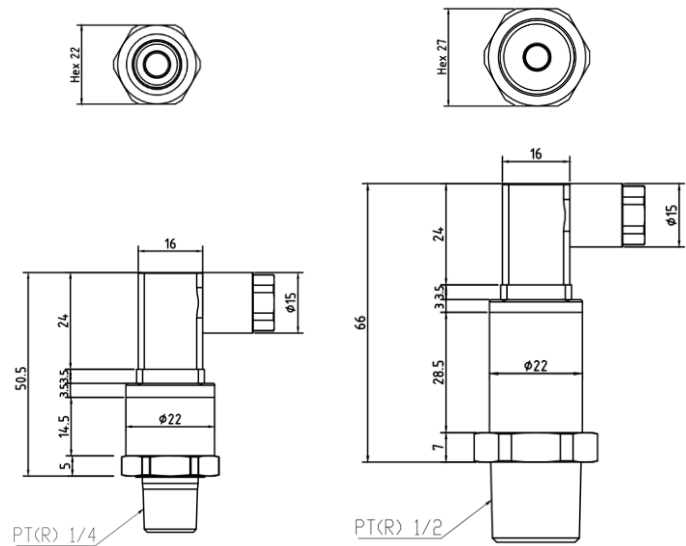
CM. Low pressure
(-1 ~ 0.1...1bar)
Oil-filled type

ELECTRONICAL CONNECTIONS



Ouput signal	Current	Voltage
1	Power(+)	Power(+)
2	NC	Output
3	Power(-)	GND
4	NC	NC

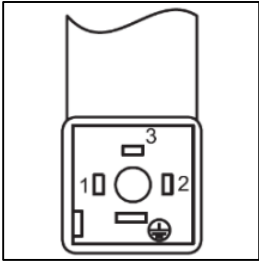
DIN43650-C (D or DM types)




D. High pressure
(-1 ~ 0, 1, 3, 10...1000bar)

DM. Low pressure
(-1 ~ 0.1...1bar)
Oil-filled type

ELECTRONICAL CONNECTIONS

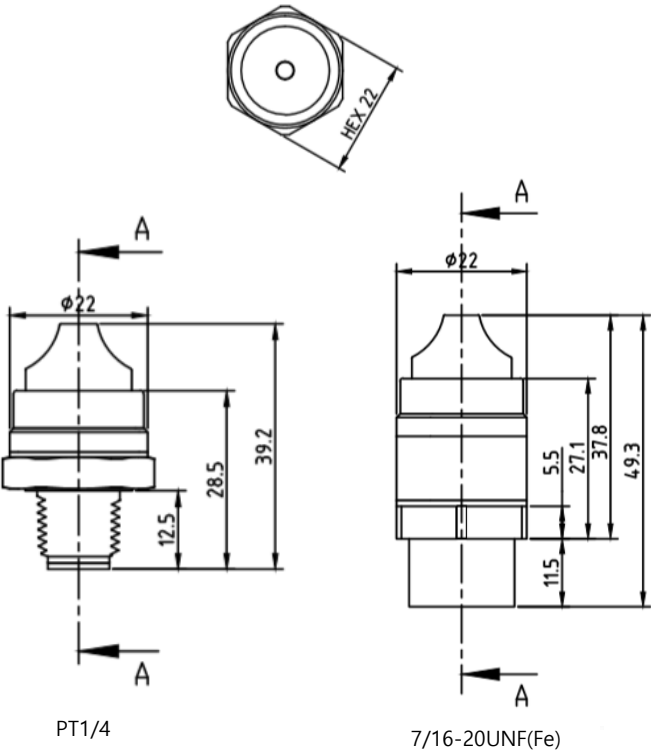


Ouput signal	Current	Voltage
1	Power(+)	Power(+)
2	Power(-)	GND
3	NC	Output
PE		

DIMENSIONS

Dimensions(mm)

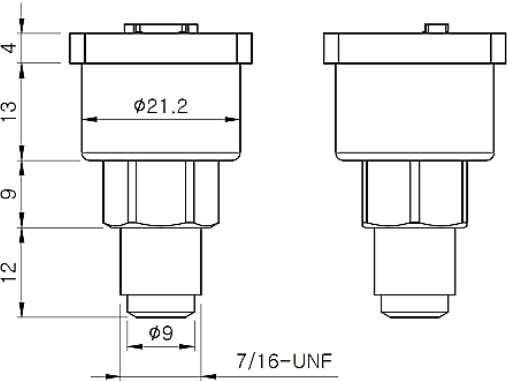
Fixed Cable



ELECTRONICAL CONNECTIONS

Ouput signal	Current	Voltage
RED	Power(+)	Power(+)
GREEN	NC	Output
BLACK	Power(-)	GND

Fixed Harness



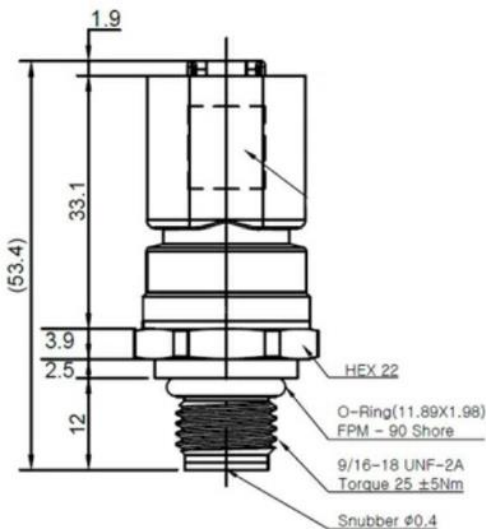
ELECTRONICAL CONNECTIONS

Ouput signal	Current	Voltage
1	Power(+)	Power(+)
2	Power(-)	Output
3	NC	GND

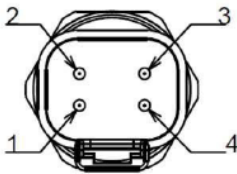
DIMENSIONS

Dimensions(mm)

Deutsch DT04-4P

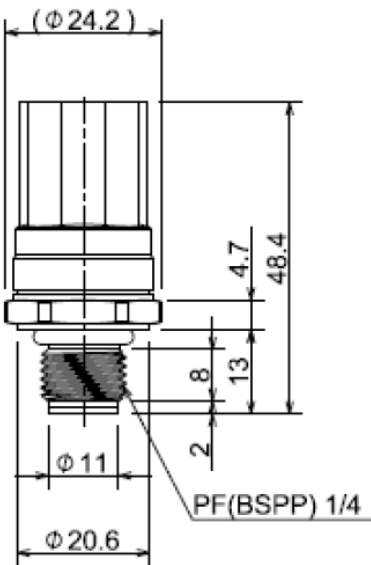


ELECTRONICAL CONNECTIONS

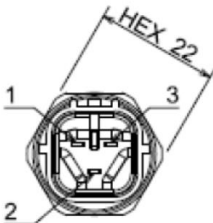


Ouput signal	Voltage
1	GND
2	Power(+)
3	NC
4	Output

HW090 6181-0072



ELECTRONICAL CONNECTIONS

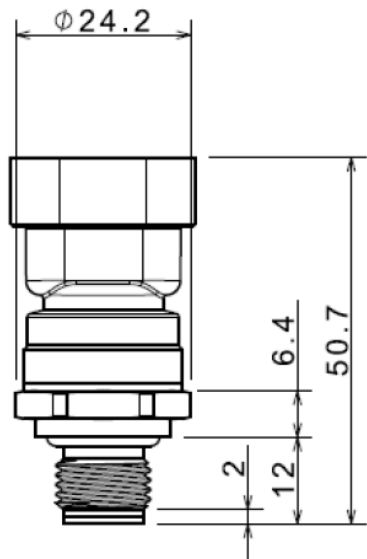


Ouput signal	Voltage
1	GND
2	Output
3	Power(+)

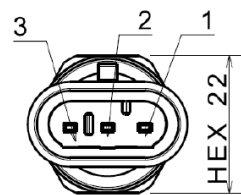
DIMENSIONS

Dimensions(mm)

Superseal series 1.5

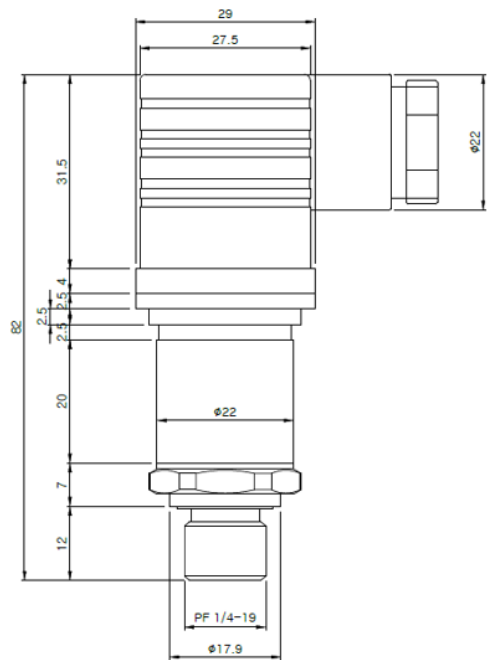


ELECTRONICAL CONNECTIONS

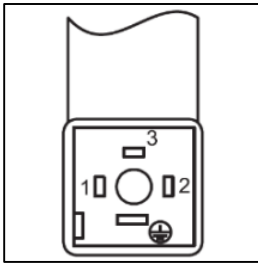


Output signal	Voltage
1	GND
2	Power(+)
3	NC
4	Output

DIN43650-A (DA types)

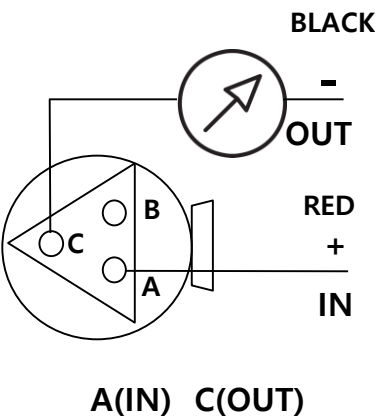


ELECTRONICAL CONNECTIONS

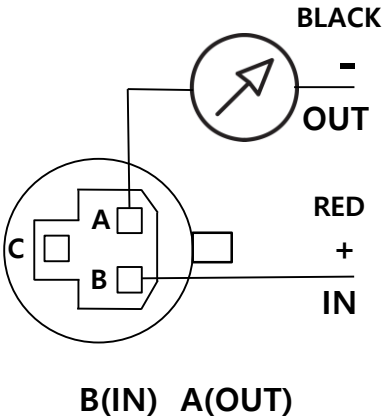


Output signal	Current	Voltage
1	Power(+)	Power(+)
2	Power(-)	GND
3	NC	Output
PE		

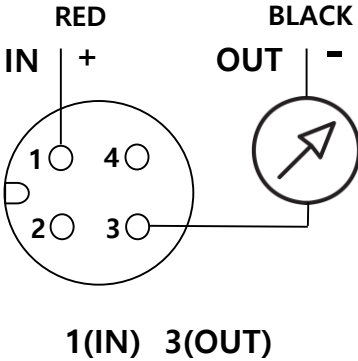
Current Output(2-Wire)



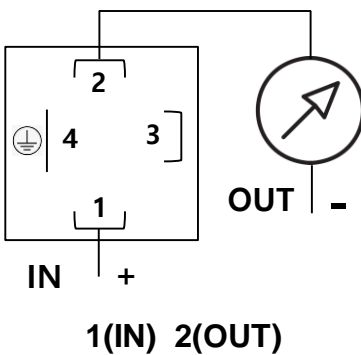
Deutsch DT04-03P



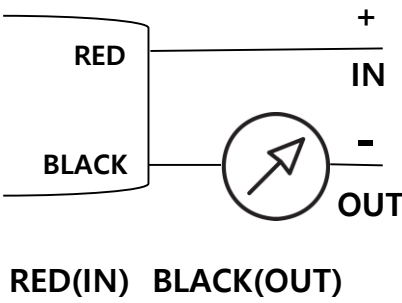
Packard



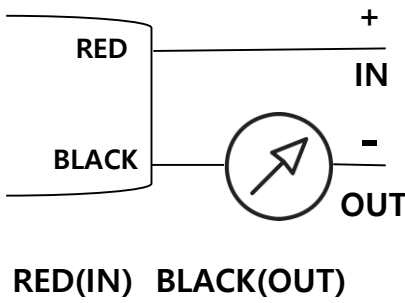
M12*1.0P



DIN43650C

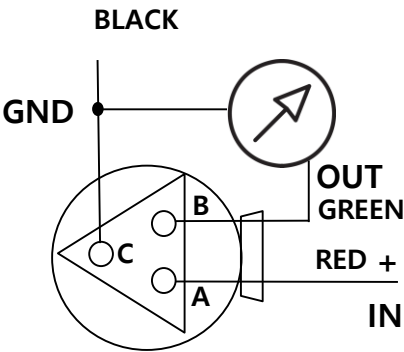


Fixed Cable



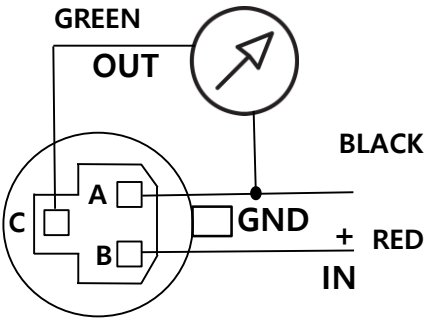
Fixed Harness

Voltage Output(3-Wire)



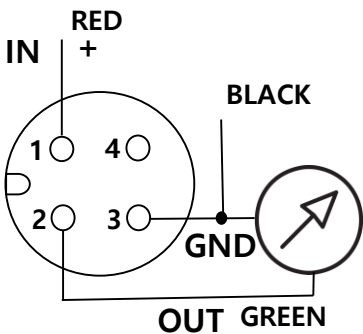
A(IN) B(OUT) C(GND)

Deutsch DT04-03P



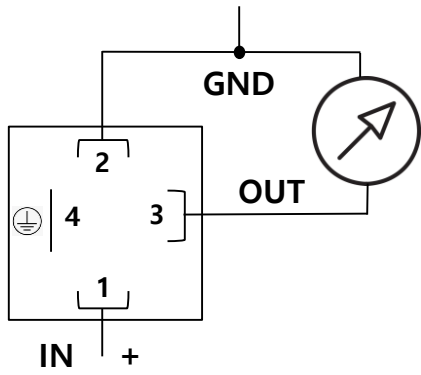
B(IN) C(OUT) A(GND)

Packard



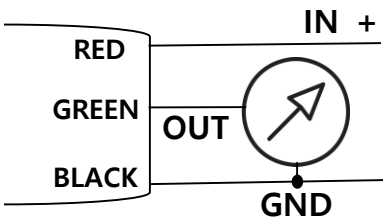
1(IN) 2(OUT) 3(GND)

M12*1.0P



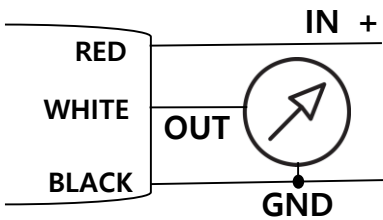
1(IN) 3(OUT) 2(GND)

DIN43650C



RED(IN) GREEN(OUT) BLACK(GND)

Fixed Cable



RED(IN) WHITE(OUT) BLACK(GND)

Fixed Harness

Ordering Information

A2410D-133G

①② ③④⑤⑥

1. Power Supply	
0	8~30VDC
1	5VDC

2. Connection	
A	Deutsch DT04-3P
B	Packard Metri-Pack
C	M12*1.0P (C, CM)
D	DIN43650C (D, DM, DA)
E	Fixed Cable
F	Deutsch DT04-4P
G	HW090 6181-0072
H	Superseal series 1.5
I	Other

3. Output	
1	4~20mA
2	0~5V
3	0.5~4.5V
4	1~5V
5	0~10V

4. Pressure Port	
1	G(PF)1/4
2	G(PF)1/2
3	R(PT)1/4
4	R(PT)1/2
5	9/16-18 UNF(M)
6	7/16-20 UNF(Fe)
7	7/16-20 UNF(M)
8	Other

5. Pressure Range	
V	± 250mb
W	± 500mb
X	± 250mmH2O
Y	± 500mmH2O
Z	0~1000mmH2O
1	-1~15bar
2	-1~35bar
3	0~10bar
4	0~16bar
5	0~20bar
6	0~25bar
7	0~30bar
8	0~35bar
9	0~50bar
A	0~100bar
B	0~200bar
C	0~250bar
D	0~500bar
E	Other

6. Pressure Type	
G	Gage
A	Absolute

Cable accessories

Type	Description
Cable with ROUND Packard Metri-Pack mating connector	1m with outer sheath
Cable with ROUND Packard Metri-Pack mating connector	2m with outer sheath
Cable with ROUND Packard Metri-Pack mating connector	3m with outer sheath
Cable with M12*1-4P mating connector	1m with outer sheath
Cable with M12*1-4P mating connector	2m with outer sheath
Cable with M12*1-4P mating connector	3m with outer sheath
Cable with Deutsch(DT04-3P) mating connector	1m
Cable with Deutsch(DT04-3P) mating connector	2m
Cable with Deutsch(DT04-3P) mating connector	3m
Fixed Cable	1m with outer sheath
Fixed Cable	2m with outer sheath
Fixed Cable	3m with outer sheath