

# PRESSURE TRANSDUCER

[Analog output Type]

## 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



### APPLICATIONS

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

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 an integral, reliable, solid state, custom ASIC.

PERFORMANCE SPECIFICATIONS		
PARAMETERS	Current (2-Wire)	Voltage (3-Wire)
Output	4~20mA	0.5~4.5V, 1~5V, 0~10V
Power Supply	5VDC, 8~30VDC	
Electric Connection	Deutsch, Packard, M12, DIN43650C, Stationary Cable [Option]	
Pressure Range	-1 ~ 1000bar [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/25°C]	
Hysteresis and repeatability	≤±0.1%F.S [Typical/25°C] / ≤±0.15%F.S [Typical/25°C]	
Pressure Port	G1/4, G1/2, R(PT)1/4, R(PT)1/2, 7/16-20UNF(Fe) [Option]	
Wetted Port material	STS630	
Body / Pressure Port material	STS316 / STS303 Electrolytic Polishing	
Electric connection material	PA66+GF30 gold plated Pin	
Enclosure	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	5,000,000/cycle	
Circuit protection	Reverse polarity protected. (Power supply +/-)	
Shock proof	1000m/s <sup>2</sup> (6ms or less, X, Y, Z 3times for each at constant temp.)	
Vibration proof	200m/s <sup>2</sup> (10~1000Hz, Y:4h, Z:2h at constant temp.)	
Pressure medium	Non-corrosive medium(Air, Water, Oil, Gas)	
Sensor element	Full Bridge MEMS of metal diaphragm	
Weight	0.05kg (DIN43650C-type)	

## MEMS Sensor & Diaphragm



- ▮ 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

# PRESSURE TRANSDUCER

[Analog output Type]

## Pressure Sensor



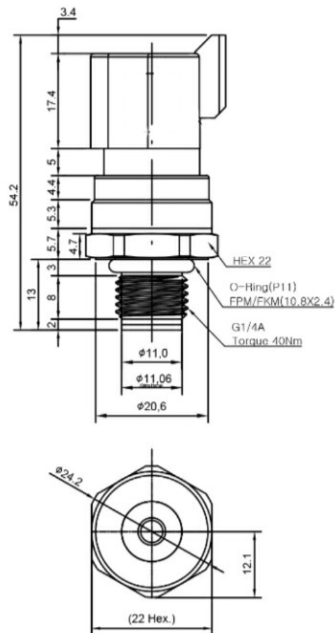
## Port Connections

Pressure Connections	G1/4A	G1/4A	M14X1.5	9/16-18 UNF(M)
	ISO 1179/DIN3852-E Oring ( P11)	ISO 1179-2 ED seal(DIN3869)	ISO 9974-2 ED Seal(DIN3869)	ISO11926-2/3 Oring(3-906)
	Torque 40 Nm	Torque 40 Nm	Torque 35Nm	Torque 30 Nm
Pressure Connections	G3/8A	R(PT)1/8	R(PT)1/4	7/16-20 UNF(Fe)
	ISO 1179/DIN3852-E Oring ( P14)	DIN 2999-Rc(Japan: PT)	DIN 2999-Rc(Japan: PT)	ISO11926-2/3
	Torque 70 Nm	2-3 Turns	2-3 Turns	Torque 18 Nm

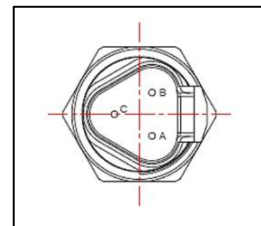
## DIMENSIONS

Dimensions (mm)

### Deutsch DT04-3P



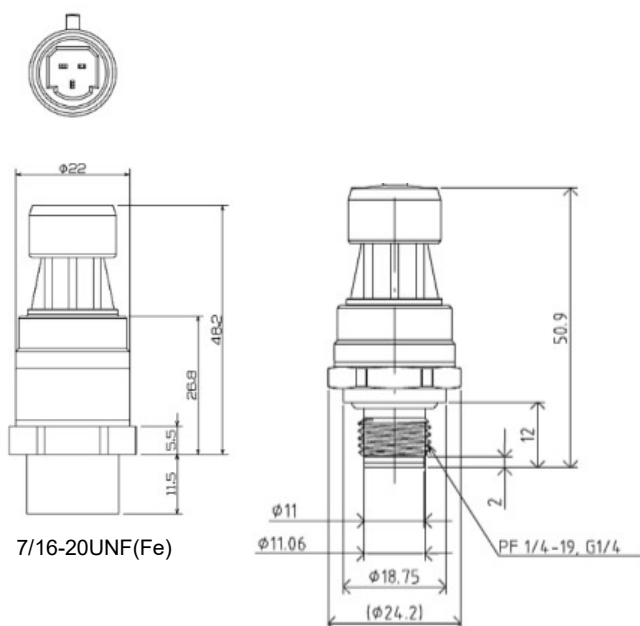
### ELECTRONICAL CONNECTIONS



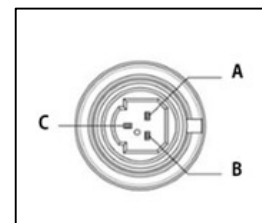
Output signal	Current	Voltage
A	Power(+)	Power(+)
B	NC	Output
C	Power(-)	GND

Dimensions (mm)

### ROUND Packard Metri-Pack



### ELECTRONICAL CONNECTIONS



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

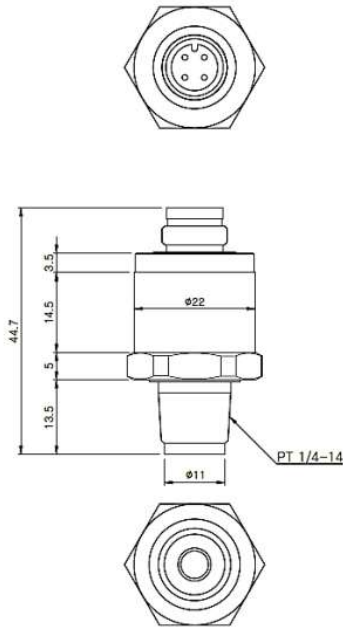
# PRESSURE TRANSDUCER

[Analog output Type]

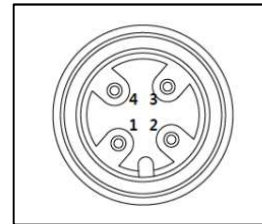
## DIMENSIONS

Dimensions (mm)

M12\*1.0P



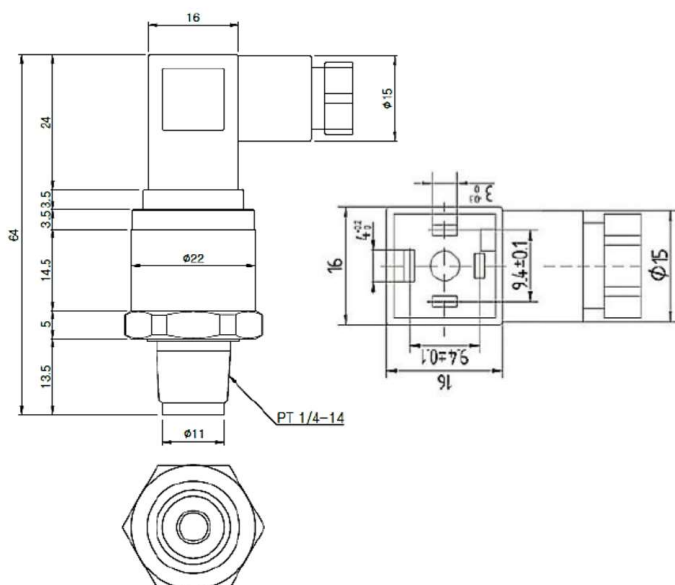
ELECTRONICAL CONNECTIONS



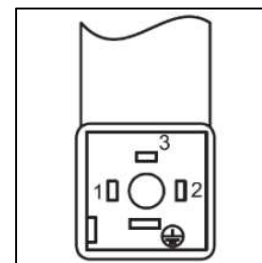
Ouput signal	Current	Voltage
1	Power(+)	Power(+)
2	NC	Output
3	Power(-)	GND
4	NC	NC

Dimensions (mm)

DIN43650-C



ELECTRONICAL CONNECTIONS

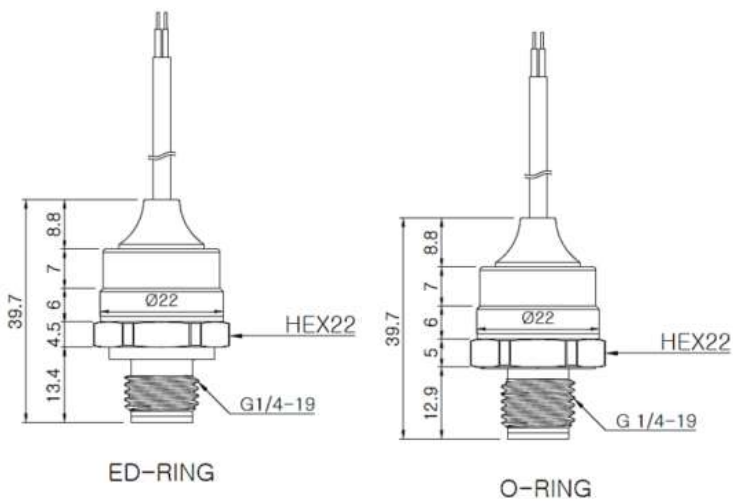


Ouput signal	Current	Voltage
1	Power(+)	Power(+)
2	Power(-)	GND
3	NC	Output
PE		

## DIMENSIONS

Dimensions (mm)

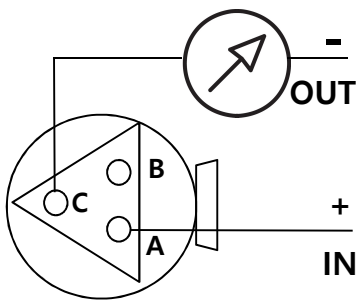
### Stationary Cable



### ELECTRONICAL CONNECTIONS

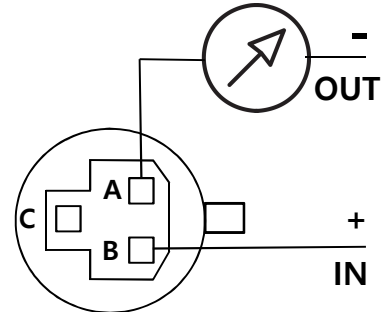
Ouput signal	Current	Voltage
RED	Power(+)	Power(+)
GREEN	NC	Output
BLACK	Power(-)	GND

## Current Output(2-Wire)



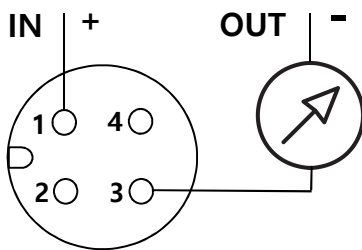
A(IN) C(OUT)

Deutsch DT04-03P



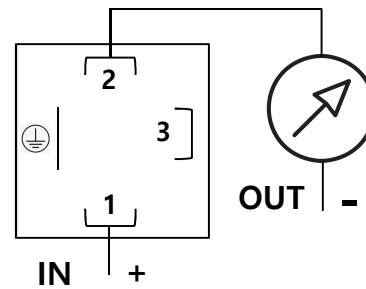
B(IN) A(OUT)

Packard



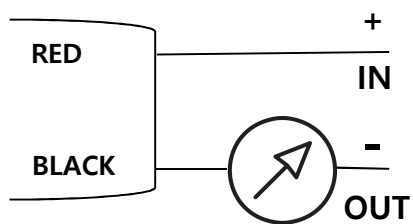
1(IN) 3(OUT)

M12\*1.0P



1(IN) 2(OUT)

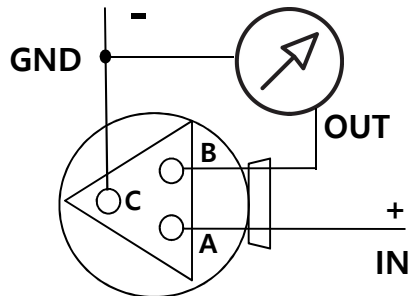
DIN43650C



RD(IN) BK(OUT)

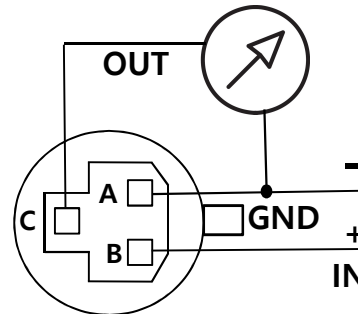
Stationary Cable

## Voltage Output(3-Wire)



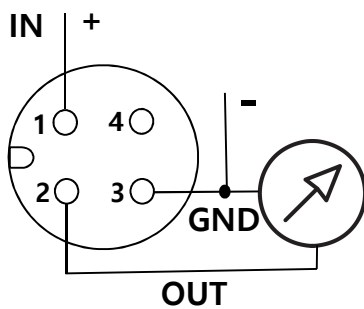
A(IN) B(OUT) C(GND)

Deutsch DT04-03P



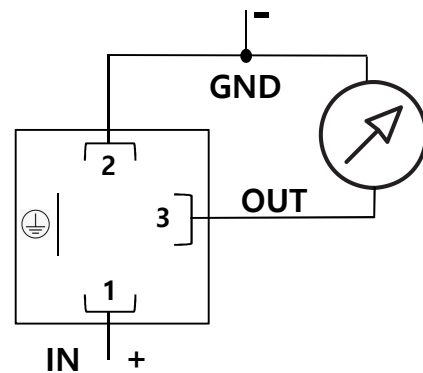
B(IN) C(OUT) A(GND)

Packard



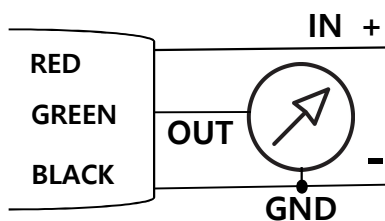
1(IN) 2(OUT) 3(GND)

M12\*1.0P



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

DIN43650C



RD(IN) GN(OUT) BK(GND)

Stationary Cable



## ORDERING INFORMATION

### A2410D-531G

①② ③④⑤⑥

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

2. Connection	
A	Deutsch DT04-3P
B	Packard Metri-Pack
C	M12*1.0P
D	DIN43650C
E	Stationary Cable
F	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	Other

5. Pressure Range	
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



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