

# Application Work Sheet (Pressure)

Quotation

Purchase Order

For better support to the customer, please fill this form out when you request a quotation or place an order. It will help us to provide you the correct solution and minimize a risk which is our goal for the customer.

## General Information

Client \_\_\_\_\_ Date \_\_\_\_\_  
Name \_\_\_\_\_ End-User \_\_\_\_\_  
TEL. No. \_\_\_\_\_ Project \_\_\_\_\_  
FAX. No. \_\_\_\_\_ Required delivery \_\_\_\_\_  
Model \_\_\_\_\_  
Quantity \_\_\_\_\_

## Performance Specifications

Pressure Range \_\_\_\_\_  
Operating Range \_\_\_\_\_  
Measuring Unit  MPa  bar  kPa  mmHg  mmH2O  mbar  
Pressure reference  kgf/cm2  Torr  psi  °C  °F  
Output Signal  mV/V  4 ~ 20 mA  1 ~ 5 V  0 ~ 10 V  
Power Supply  24 V DC  12 V DC

## Physical Specifications

Process Connection  PT 1/4"  PT 3/8"  PT 1/2"  G1/4"  G1/2"  
 PF 1/4"  PF 3/8"  PF 1/2"  NPT1/4"  NPT1/2"  
 Flush 1/2"  Flush 3/4"  Flush 1"  
 40A Flange  50A Flange  80A Flange  100A Flange  
 Sanitary Diaphragm \_\_\_\_\_  Other \_\_\_\_\_  
Electrical Connection  Terminal  DIN 43650  M12 Connector  Cable(1,5 m)  
Local Display Unit  None  LCD  LED

## Process Conditions

Process Media \_\_\_\_\_  
Operating Temperature \_\_\_\_\_  
Humidity \_\_\_\_\_  
Vibration \_\_\_\_\_  
Explosion Protection  Required  No required  
Weather Protection  Required  No required

# Pressure Range Code

CODE	kgf/cm <sup>2</sup>	bar	psi	MPa
0001	0~1	0~1	0~15	0~0.1
0003	0~3	0~3	0~45	0~0.3
0005	0~5	0~5	0~70	0~0.5
0006	0~6	0~6	0~90	0~0.6
0010	0~10	0~10	0~150	0~1
0015	0~15	0~15	0~200	0~1.5
0020	0~20	0~20	0~300	0~2
0025	0~25	0~25	0~350	0~2.5
0030	0~30	0~30	0~450	0~3
0035	0~35	0~35	0~500	0~3.5
0050	0~50	0~50	0~700	0~5
0070	0~70	0~70	0~1000	0~7
0100	0~100	0~100	0~1500	0~10
0200	0~200	0~200	0~3000	0~20
0250	0~250	0~250	0~3500	0~25
0300	0~300	0~300	0~4500	0~30
0350	0~350	0~350	0~5000	0~35
0500	0~500	0~500	0~7000	0~50
0700	0~700	0~700	0~10000	0~70
1000	0~1000	0~1000	0~15000	0~100
2000	0~2000	0~2000	0~28000	0~200
V0000	-76~0 cmHg	-1013~0 mbar	-30~0 inHg	-0.1~0
V0001	-76 cmHg~1	-1013 mbar~1	-30 inHg~15	-0.1~0.1
V0002	-76 cmHg~2	-1013 mbar~2	-30 inHg~30	-0.1~0.2
V0003	-76 cmHg~3	-1013 mbar~3	-30 inHg~45	-0.1~0.3
V0004	-76 cmHg~4	-1013 mbar~4	-30 inHg~60	-0.1~0.4
V0006	-76 cmHg~6	-1013 mbar~6	-30 inHg~90	-0.1~0.6
V0010	-76 cmHg~10	-1013 mbar~10	-30 inHg~150	-0.1~1
V0015	-76 cmHg~15	-1013 mbar~15	-30 inHg~200	-0.1~1.5
V0020	-76 cmHg~20	-1013 mbar~20	-30 inHg~300	-0.1~2
L0600	0~600 mmH2O	0~60 mbar	0~0.9	0~0.006
L1000	0~1000 mmH2O	0~100 mbar	0~1.5	0~0.01
L2000	0~2000 mmH2O	0~200 mbar	0~3	0~0.02
L3000	0~3000 mmH2O	0~300 mbar	0~4.5	0~0.03
L4000	0~4000 mmH2O	0~400 mbar	0~5.5	0~0.04
L5000	0~5000 mmH2O	0~500 mbar	0~7	0~0.05
00000	Other Range			

# P400 Series Explosion Proof Pressure Transmitter



## Feature

- Compact designed terminal stainless steel head
- Excellent corrosion and abrasion resistances
- From 0 ~ 0.01 to 500 MPa gauge pressure
- Advanced piezoresistive or SOS silicon sensitive sensor
- High accuracy and low temperature drift
- Shock and vibration resistance
- Explosion proof (Ex d II C T6)
- 의장등록 제0285577호

## Applications

*Wide range of applications such as process control and below.*

- Hydraulic system and pneumatic equipments
- Freon and ammonia refrigerator
- Machine tools and automatic machinery flow control
- On and off-shore industry
- Chemical and petrochemical industry
- Engine monitoring and control
- Fire fighting equipments and braking system for railway

### Input

Technology	Advanced piezoresistive or SOS silicon pressure sensor
Pressure range	0 ~ 0.01 to 500 MPa Gauge, Vacuum or Compound pressure
	0 ~ 0.1 to 3.5 MPa Absolute pressure
Pressure reference	Gauge, including vacuum and compound and absolute
Overload pressure	1.5 times of F.S. (Max. 500 MPa)

### Output

	Current output		Voltage output	
Electrical connection type	2-wire technique		3 or 4 Wire technique	
Full scale output signal	20 mA	± 0.05 %	5 V	± 0.05 %
Zero measured output	4 mA	± 0.03 %	1 V	± 0.03 %
	Other signals available on request			

### Electrical Specifications

Power supply	12 ~ 36 V DC (It is not free voltage)
Load resistance max@24 V	500 Ω at 24 V
Power ripple	≤ 500 mV P-P
Insulation resistor	≥ 20 MΩ, 25 V DC

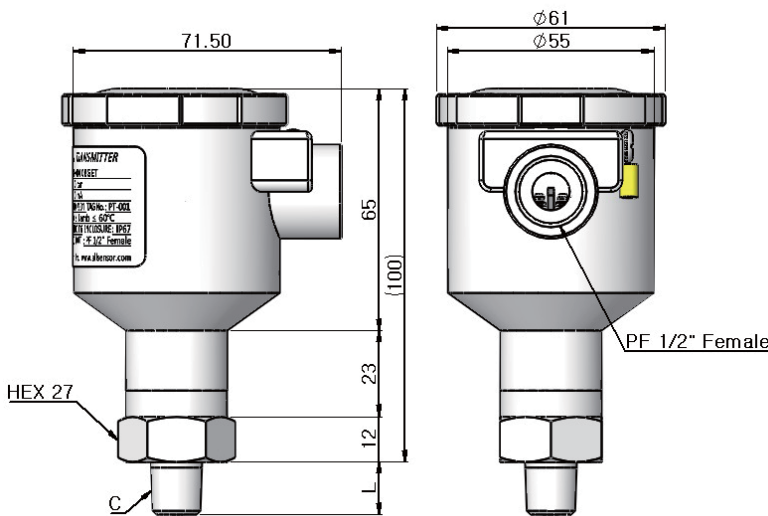
### Performance Specifications

Accuracy	≤ ± 0.25 % F.S. > 100 MPa (± 0.5 % F.S.)
Non-linearity	± 0.100 % F.S. typical
Repeatability	± 0.03 % F.S. typical
Pressure hysteresis	± 0.03 % F.S. typical
Long term stability	± 0.1 % F.S. over 1 year
Response time(10 % to 90 %)	≤ 20 ms
Reference temperature	25 °C
Working temperature range(Process)	-40 ~ 120 °C
Compensated temperature range(Process)	-10 ~ 80 °C
Ambient temperature range	-20 ~ 60 °C
Thermal sensitivity shift	≤ ± 0.1 % F.S. in reference to 35 °C typical
Thermal zero shift	≤ ± 0.1 % F.S. in reference to 35 °C typical

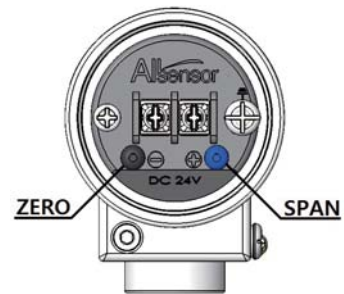
**Physical Specifications**

Process connection	Rc(PT) 3/8" (M) standard, (>)100 Mpa M20 x 1.5p) Female thread & other connections are available on request.
Electrical cable entry	G(PF) 1/2" Female
Process media (fluid)	Gases and liquids compatible with STS 316
Materials wetted by process	STS 316 Stainless steel (housing – non wetted part)
Enclosure rating	IP67
Explosion protection	Ex d II C T6 (방호장치 의무안전인증 고시 / 고용 노동부 고시 제 2016-54호)
Influence of mounting position	Not critical
Weight	Approx. 800 g
Option	Remote or Flush Diaphragm Seal

**Dimension(mm)**



**Electric Connection**



**Process Connection**

C	L
PT 1/4"	14
PT 3/8"	17
PF 1/2"	18
UNF7/16"	14

**Ordering Information**

**P 4 0 0 G H**

**Model Name**  
P400 :  
Explosion Proof  
Pressure Transmitter

**Pressure Type**  
A : Absolute  
G : Gauge

**0 0 1 0**

**Pressure Range**  
Refer to pressure range code

**Pressure Unit**  
M : MPa H : mmH2O  
B : bar G : mmHg  
P : psi T : torr  
K : kgf/cm<sup>2</sup>

**M**

**Pressure Sensor**  
P : Piezo-Resistive  
H : SOS

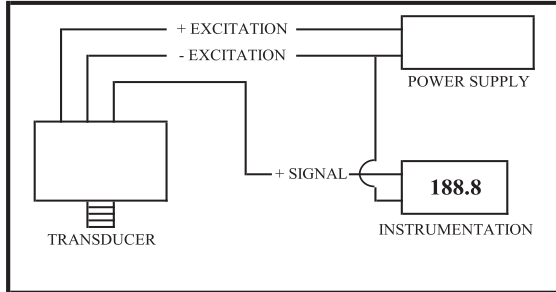
**P**

**Process Connection**  
A : PT3/8" G : M20x1.5P  
B : PF3/8" L : NPT 1/4"  
C : PT1/4" M : NPT 3/8"  
D : PF1/4" N : NPT 1/2"  
E : PT1/2" V : VCR1/4"  
F : PF1/2" W : VCR1/2"  
O : Others

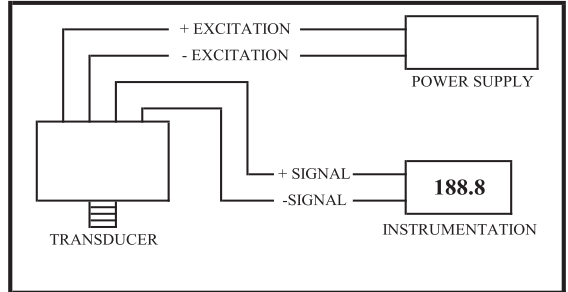
**Electrical Cable Entry**  
T : G(PF) 1/2" Female

# Pressure Transducer & Transmitter

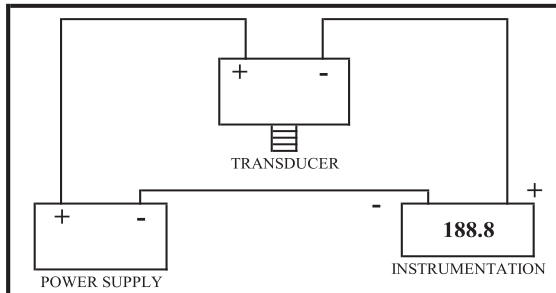
## Installation and Wiring



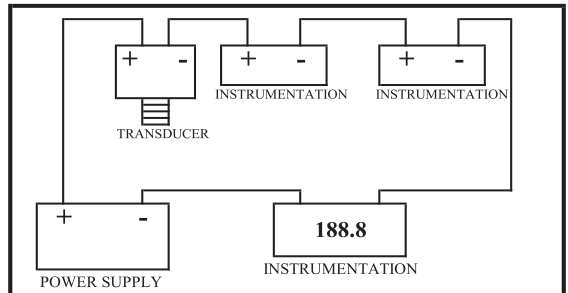
**3Wire Configuration for voltage output Transducer**  
 ("-"Excitation and "-"Signal Are Common)



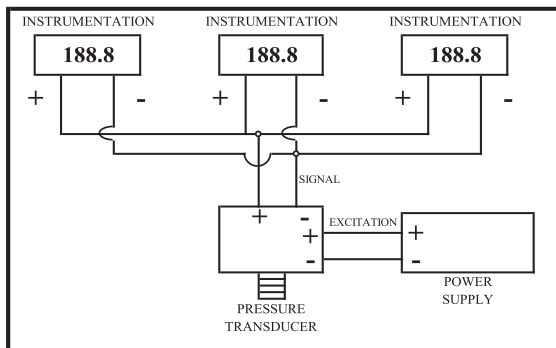
**4Wire Configuration Millivolt Output Transducer**



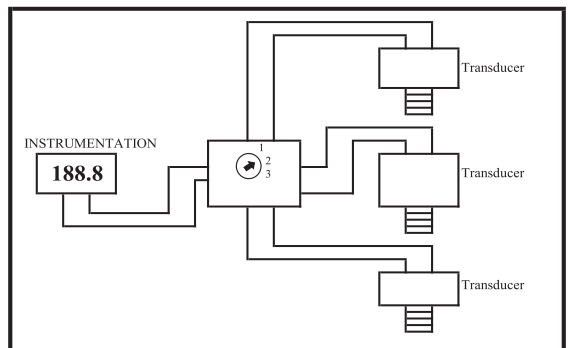
**2Wire Configuration for Current output Transducer**



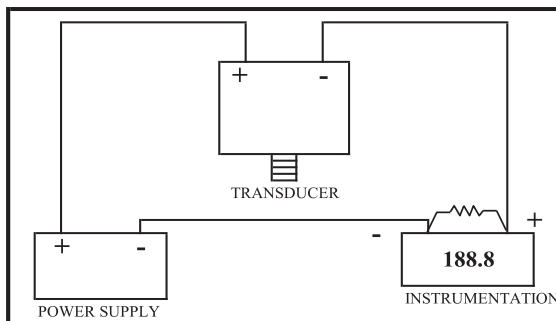
**Multi-instrument 4-20mA Current Loop**  
 (Panel Meters, Chart Recorder, Computers, etc)



**Multiple Instruments Wired In Parallel to a Voltage Output**



**Multiple Transducer Wired to One Meter and One Switch**  
 (Transducer With Built-in Zero & Span Adjustments, Same outputs & Same Pressure Range)



**Converting Current Into Voltage For Instrumentation Set Up For Voltage**