압력 전송기

2-WIRE PRESSURE TRANSMITTER/BATTERY DISPLAY

APPLICATION

- General industrial application.
- Mechanical engineering.
- Process engineering.
- Rough environment.
- Oil and gas.

Battery Type
AAA Size : 2EA
About 3 Years

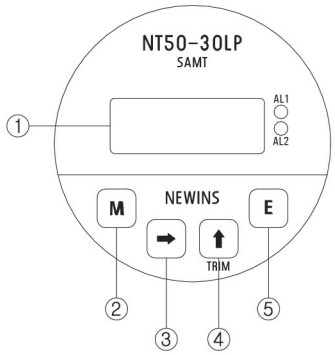
FEATURES

- Pressure range from 0.0~0.1 to 0.0~500.0bar.
- Compact size and robust construction.
- Range ability in the ratio of 5:1
- Built-in multiple function.
- Zero trim function.
- 4 Digit LCD & FND for parameter alteration and PV output on the spot.
- IP-67

SPECIFICATIONS

- **Pressure Range :**
  0.0~0.1 bar to 0~500bar
- **Overpressure :**
  300% F.S 1bar
  200% F.S 〈 250bar
  150% F.S 〉250bar
- **Accuracy :** ±0.25 FS (Typical)
- **Compensate temp :**
  -10~70℃ (Typical)
  0~60℃ (0.1bar ~0.3bar)
- **Operating condition**
  : Operating temp : -30~60℃ (sensor : -40~120℃)
  : Storage temp : -30~70℃ (sensor : -40~120℃)
- **Zero temp coefficient**
  0.02% F.S/℃ ≥0.1 bar
  0.03% F.S/℃ < 0.1 bar
- **Span temp coefficient :** /℃
  0.02% F.S/℃ ≥0.1 bar
  0.03% F.S/℃ < 0.1 bar
- **Long term stability :** ≤0.2% F.S S / year
- **Vibration :** 20g (20~5000Hz)
- **Oil filing :**
  Silicon oil (Typical)
  Olive oil available for sanitary application
- **Ring material :** NBR Viton
- **Sensor housing material :** stainless steel 316L (housing and diagram)
- **Measuring and display interval :** 500m/s
- **Moving average filter :** Selectable (none, 4, 8,16)
- **Output :**
  2-wire DC 4.00~20.00mA
  Low limit : 3.80mA
  Upper limit : 20.80mA
- **Power supply :**
  DC 9~35V
  Load limit : (Vsp-9V)/0/021R(Ω)
- **Material (body, cover) :** Aluminum (ALDC.8S)
- **Degree of protection :** IP-67
- **Electronic wire condition :** PF1/2"
- **Weight :** 290g
- **CE conformity**
  Pressure equipment directive : 2006 / 95 / EC
  EMC Directive : 2004 / 108 / EC EN61326-1
  emission (group1, classB) and immunity
  (industrial locations)

PARTS NAME



① Measured value display
② MODE : Storage the set data and change the operation menu
③ ⇨ : Enter into the data setting mode and modify the changed location
④ ⇧ : Change the data value
⑤ EXIT : Out of mode

MAJOR FUNCTIONS

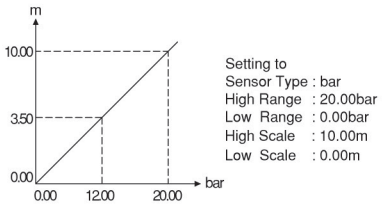
▹ Sensor zero trim

In case you need to do that are instructed the current value to zero ⇧ key current pressure is zero, by when they have tapping trim for three seconds.

▹ Display scaling function

This function changes and sets the display value according to scale and input range.

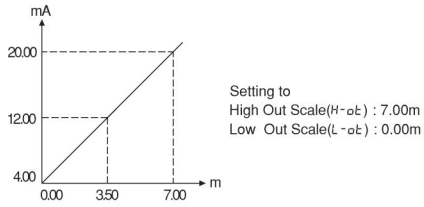
Ex) In case of input range 0.00~20.00bar and Level 0.00~10.00m



▹ Output scaling function

(Range 0.00~10.00bar, Scale 0.00~7.00m)
This function can change the 4.00~20.00mA value as the output scale.(H-OT)

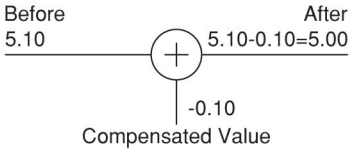
Ex) In case of display value 0.00~7.00m, Output 4.00~20.00mA



▹ Sensor compensation function

The function is useful for compensating error by long sensor line or changed zero point by aged sensor.

Ex) Before sensor adjust = 5.10bar
After sensor adjust
= measured value + compensated value
= 5.10 - 0.10
= 5.00bar



▹ Filter function

This function is moving average filter.

0001 ~ 0099

It displays in recent input No 1~99 sample average.

Setting filter function delays response.

Do not use filter when high speed response is needed.

When output and display value are changed by irregular input, it is possible to get regular input and display value by using filter function.

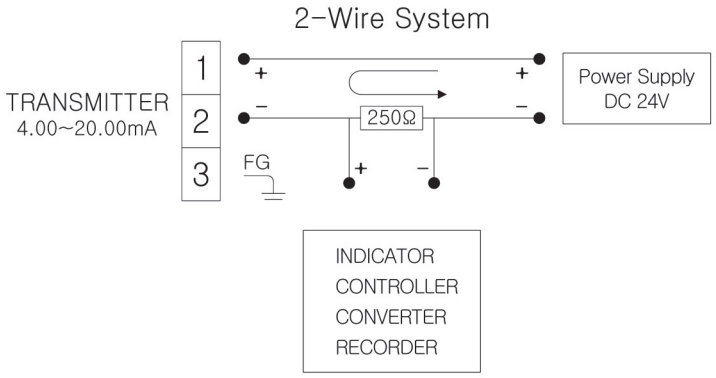
ORDERING CODE

NT34		P				Description(Basic)
Range	00					0.0~0.1bar
	01					0.0~0.2bar
	02					0.0~0.5bar
	03					0.0~1.0bar
	04					0.0~2.0bar
	05					0.0~5.0bar
	06					0.0~10.0bar
	07					0.0~20.0bar
	08					0.0~50.00bar
	09					0.0~100.0bar
	10					0.0~200.0bar
	11					0.0~300.0bar
	12					0.0~500.0bar
	13					-760 mmHg ~ 0
	14					-760 mmHg ~ 1.0bar
	15					-760 mmHg ~ 5.0bar
	16					-760 mmHg ~ 10.0bar
Protection		P				IP-67
type			G			Gauge pressure
			S			Sealed gauge pressure
			A			Absolute pressure
Process connection				0		PT1/2" (Standard)
				1		PT1/4"
				2		PF3/8"
				3		Other
Option Type					B	Battery Type
					LP	Loop Type
					S	2Alarm Contact

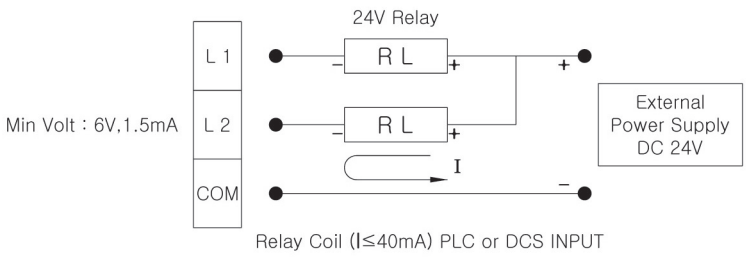
※ Note : Range ability in the ratio of 5:1

TERMINAL DIAGRAM

1. 2-Wire

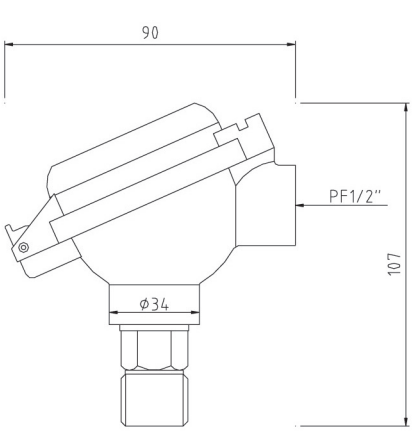


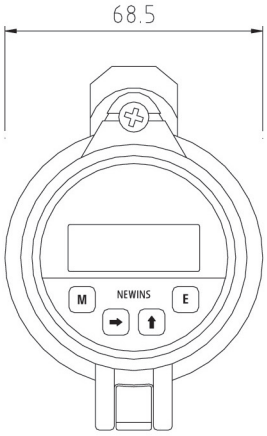
2. Loop-Powered Switch



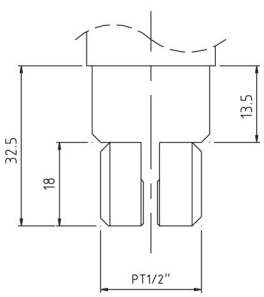
DIMENSION & PANEL CUT

※ Electric connection

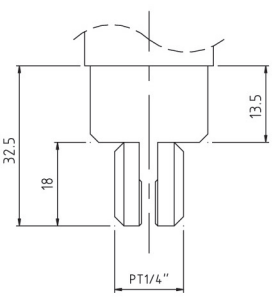




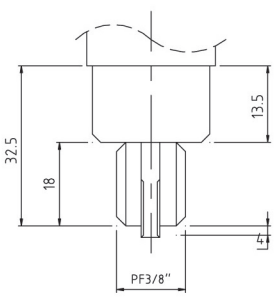
PT1/2 "



PT1/4 "



PF3/8 "



Unit:mm

전자식 압력전송기

Electric Pressure Transmitter(None Indicator)

C

The NT 3100R series of pressure transmitter, adjustable Zero and Span in the field are extremely versatile and suitable for measuring.

Moreover it uses high accuracy trusty with stainless steel diaphragm which is possible to measure 0~0.06 to 25kg/㎠ and 0~1 to 1,000kg/㎠.

FEATURES

- **Easy to adjust Zero and Span**
- **Temperature compensated**
- **Excellent corrosion and steel diaphragm**
- **High accuracy and low temperature drift**
- **Shock and vibration resistants**

SPECIFICATIONS

- **Media** : Gas, Oil, Water
- **Measuring range** : 0~0.06 to 25kg/㎠, 0~1 to 1000kg/㎠
- **Over load** : 300% of max span
- **Electric specification character**
  Power : DC 18~26V, Ripple≤500mV p- p
  Output : DC 4.00~20.00mA
  Load resistance : 500Ω at DC 24V
- **Accuracy** : ±0.2% FSO
  Linearity : 0.100% FSS
  Repeatability : 0.015% FSS
  Hysteresis : 0.010% FSS
  Thermal sensitivity shift : 0.500% FSS
  Thermal zero shift : 0.500% FSS
- **Shock resistance** : ≤20G
- **Cutoff frequency(-3dB)** : 0...>5kHz
- **Temperature compensated** : 0~82℃
- **Operating temperature range** : -40~125℃
- **Material of construction isolating**
  Diaphragm : SUS316L
  Wetted plug : SUS316
  Gasket O-ring : Viton
  Case(Head) : AL die-casting
- **Process connection** : PT3/8"(STD)
  PT1/4"
  PT1/2"
- **Weight** : About 270g

C

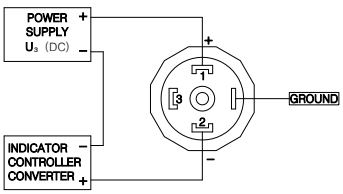
ORDERING CODE

NT 3100R					Description
Type	G				Gauge pressure
	S				Sealed gauge pressure
	A				Absolute pressure
Range		01			0~0.2kgf/㎠
		02			0~0.5kgf/㎠
		03			0~1kgf/㎠
		04			0~2kgf/㎠
		05			0~5kgf/㎠
		06			0~10kgf/㎠
		07			0~20kgf/㎠
		08			0~35kgf/㎠
		09			0~50kgf/㎠
		10			0~100kgf/㎠
		11			0~200kgf/㎠
		12			0~300kgf/㎠
		13			0~500kg/㎠
		21			-76cmHg~0kgf/㎠
		22			-76cmHg~1kgf/㎠
		23			-76cmHg~2kgf/㎠
		24			-76cmHg~5kgf/㎠
		25			-76cmHg~10kgf/㎠
		26			-76cmHg~20kgf/㎠
		ZZ			Etc
Connection			A		PT3/8"(STD)
			B		PT1/4"
			C		PT1/2"
				0	Head type
				1	Connector type
				2	Lead wire
				3	Adapter PF3/8"

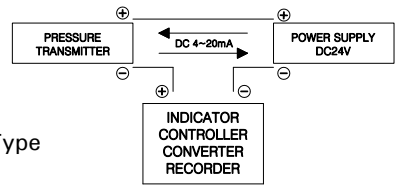
TERMINAL DIAGRAM

▷ 2Wire

* DIN.Con Type

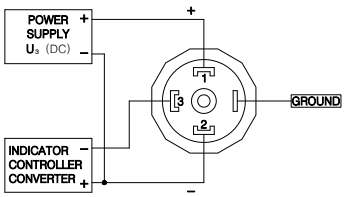


* Standard Type

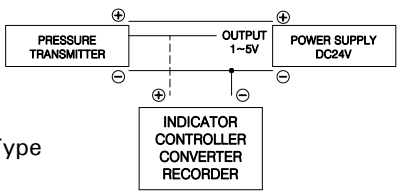


▷ 3Wire

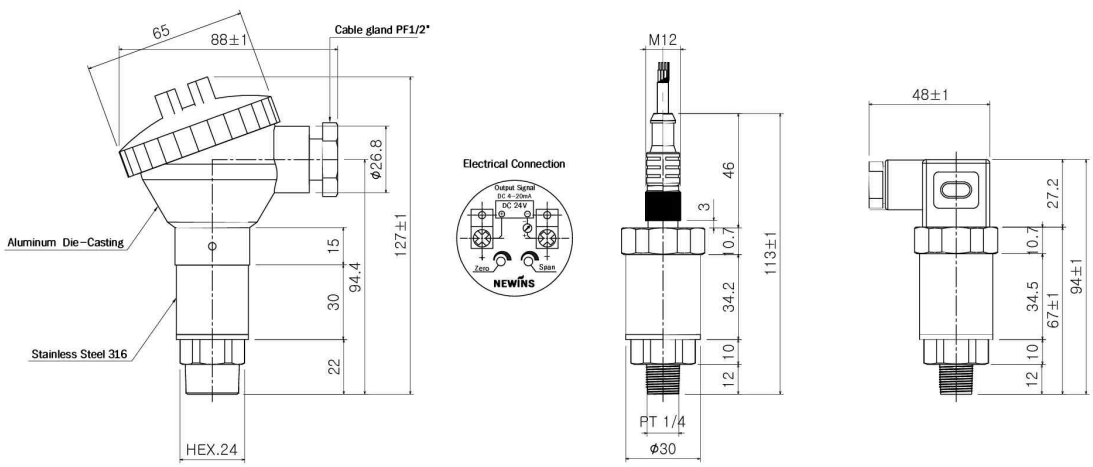
* DIN.Con Type



* Standard Type



DIMENSION & PANEL CUT



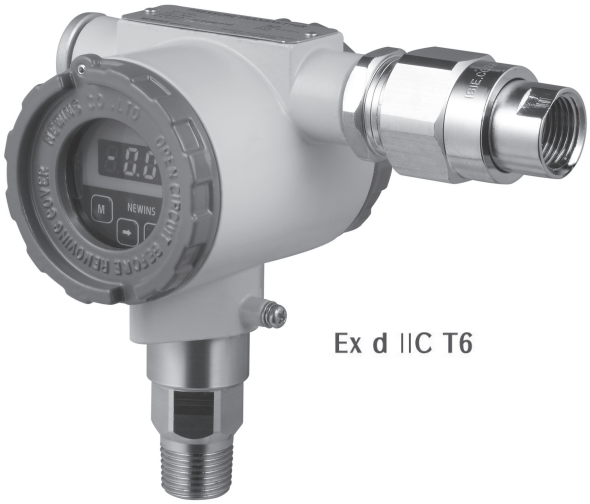
[Head Type] [Cable Type] [Connector Type]

방폭형 2선식 압력 전송기

EXPLOSION PROOF TYPE 2-WIRE PRESSURE TRANSMITTER

FEATURES

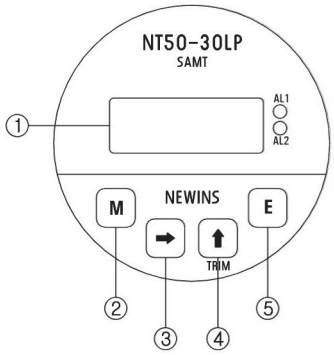
- Range ability in the ratio of 3:1
- High accuracy 16bit A/D converter
- Selectable moving average filter
- Built-in multiple function
- DC 4.00~20.00mA 2-wire loop power
- Zero trim function
- 4 Digit LCD & FND for parameter alteration and PV output on the spot



SPECIFICATIONS

- **Measuring and displaying interval** : 200ms
- **CMRR(Common Mode Rejection Ratio)** : 140dB or more
- **NMRR(Normal Mode Rejection Ratio)** : 60dB or more
- **Moving average filter** : Selectable(None 4, 8, 16)
- **Vibration(20..5000Hz)** : 20Hz
- **Diaphragm** : Stainless Steel SUS316L
- **Oil Filling** : Silicon Oil
- **Dead volume change@25℃** : <0.1mm≥/FS
- **Sensor operating temperature** : -30~100℃
- **Accuracy** : ±0.25% FS
- **Power** : DC 9~35V
- **Overpressure** : Max range 150%
- **Output** : 2-wire DC 4.00~20.00mA
  load limit(Vsp9V)/0/021=RΩ
- **Body meterial**: SUS 304 (Ex d IIC T6)
- **Degree of protection** : IP-65
- **Process connection** : PT1/2" STD
- **Operating condition**
  Operating Temp/Humidity : -20~60℃, 10~90%
  Storage Temp/Humidity : -20~70℃, 5~95%
- **Etc :** Weight : 1.7kg

PARTS NAME



① Measured value display

② MODE Key :
Storage the set data and change the operation menu

③ ⇨ Key :
Enter into the data setting mode and modify the changed location

④ ⇧ Key :
Change the data value

⑤ EXIT Key :
Out of mode

MAJOR FUNCTIONS

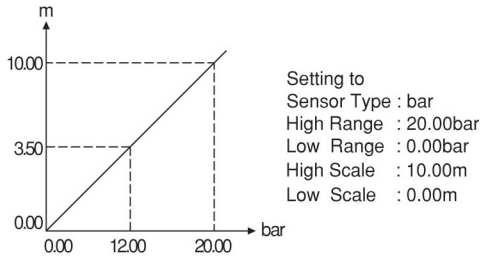
▹ Sensor zero trim

In case you need to do that are instructed the current value to zero ⇧ key current pressure is zero, by when they have tapping trim for three seconds.

▹ Display scaling function

This function changes and sets the display value according to scale and input range.

Ex) In case of input range 0.00~20.00bar and Level 0.00~10.00m

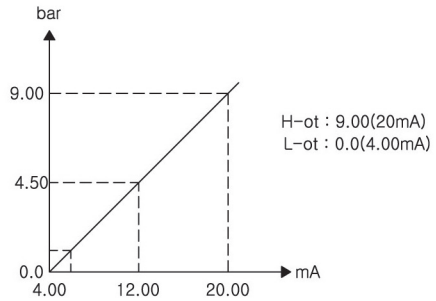


▹ Output scaling function

(Range 0.00~10.00bar, Scale 0.00~7.00m)

This function can change the 4.00~20.00mA value as the output scale.(H-ot)

Ex) In case of display value 0.00~7.00m, Output 4.00~20.00mA



▹ Sensor compensation function

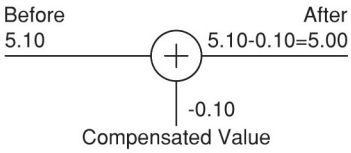
The function is useful for compensating error by long sensor line or changed zero point by aged sensor.

Ex) Before sensor adjust = 5.10bar

After sensor adjust

= measured value + compensated value

= 5.10 - 0.10 = 5.00bar



▹ Filter function

This function is moving average filter.

0001 ~ 0099

It displays in recent input No 1~99 sample average.

Setting filter function delays response.

Do not use filter when high speed response is needed.

When output and display value are changed by irregular input, it is possible to get regular input and display value by using filter function.

방폭형 2선식 압력 전송기

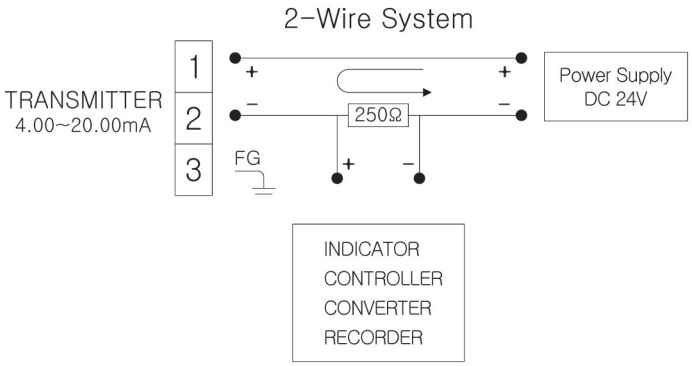
EXPLOSION PROOF TYPE 2-WIRE PRESSURE TRANSMITTER

ORDERING CODE

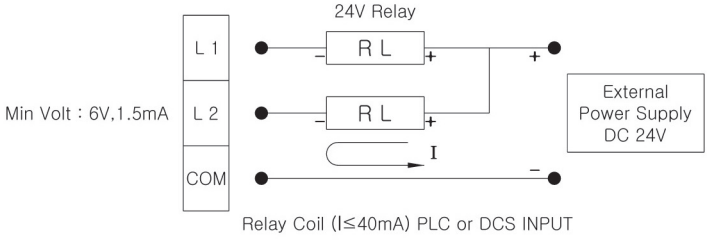
NT 33			E				Description(Basic)
INDICATOR	1 2						FND Indicator LCD Indicator
RANGE bar		0 1 2 3 4 5 6 7					0~0.5bar 0~10.0bar 0~20.0bar 0~50.0bar 0~100.0bar 0~200.0bar (-)760mmHg~5.0bar (-)760mmHg~10.0bar
Explosion proof			E				EX d II C T6
Pressure Type				G A			Gauge Pressure Absolute Pressure
Process Connection					0 1 2 3		PT(1/2") PT(1/4") PF(3/8") OTHERS
OPTION TYPE						0 1	None Loop Type

TERMINAL DIAGRAM

1. 2-Wire



2. Loop-Powered Switch



DIMENSION & PANEL CUT