Challenge and Innovation

High precision transmitter with high reliability and stability

DOTECH
SENSING & CONTROL

Integral & flush type differential pressure, temperature, humidity and dew point temperature transmitter

HPX1000

· Integral & flush type transmitter
· Application of high resolution graphic LCD
· Capacitive touch button
· Displays four measured values
(Diff. press, temp. humidity and dew point temp.) at once
· Display function of trend data graph
· 2 digital alarm outputs
· 3 analog (4~20m A) outputs
· RS485 Modbus RTU communication
· Front cover made of stainless steel

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Flush Multifunction Transmitter **HPX1000**

Differential pressure

Pressure range	±25Pa, ±125Pa, ±500Pa
Accuracy	±3% of reading
Zero span	±0.1Pa(±25Pa, ±125Pa) / ±0.2Pa(±500Pa)
Repeatability	0.5% of reading
Reliability	< 0.1Pa/year
Type of fluid	Air, N_2, O_2
Display unit of pressure	Pa, mmHg, InH_2O, mmAq(mmH_2O), hPa, kPa, mbar

Humidity

Measurement range	0 ~ 100%RH
Accuracy *	±1.8%RH (0 ~ 80%RH)
Repeatability	±0.2%RH
Hysterisis	< ±1%RH
Response time	< 4sec
Long term drift	< 0.5%RH /Year

Temperature

Measurement range	-10 ~ 60°C
Accuracy	±0.2°C (0 ~ 60°C)
Repeatability	±0.1°C
Response time	< 5sec
Long term drift	< 0.05°C/year

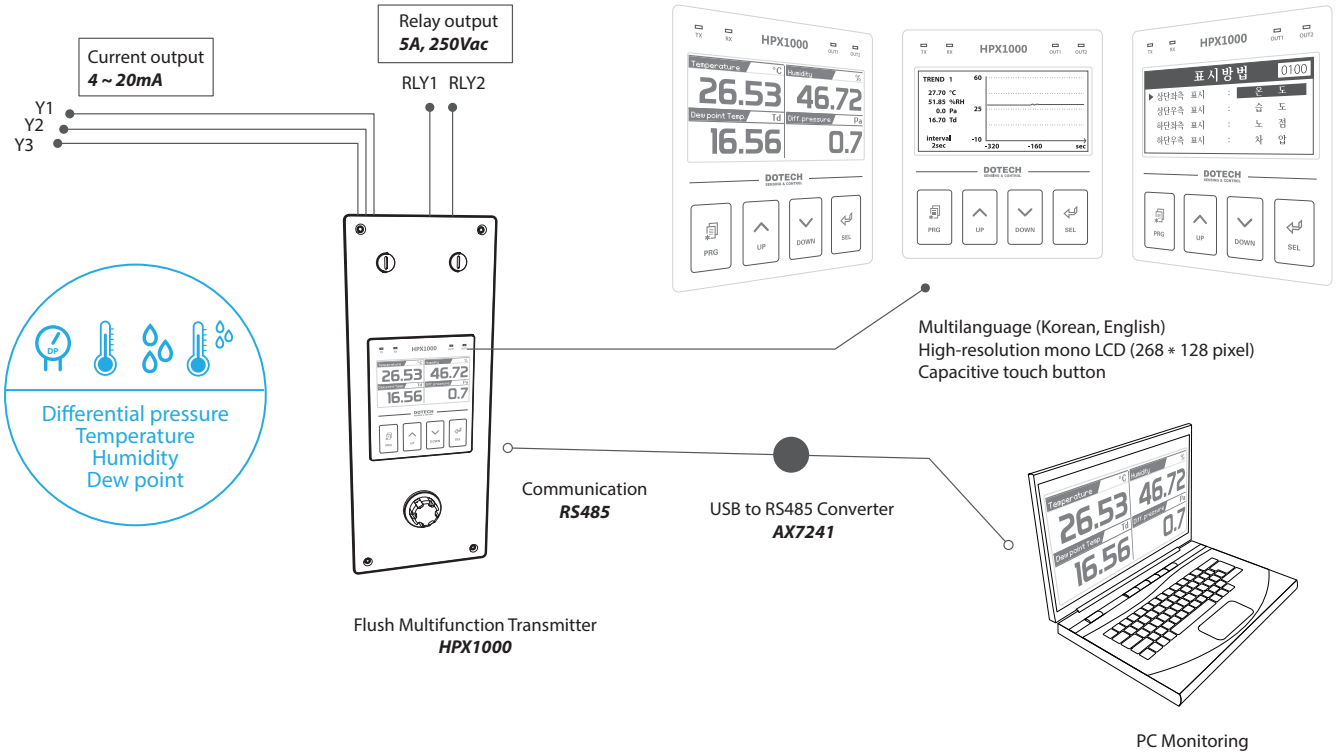
Dew point

Measurement range	-40 ~ 60°C
Accuracy **	±4°C (-10 ~ 20°C)
Repeatability	±0.1°C

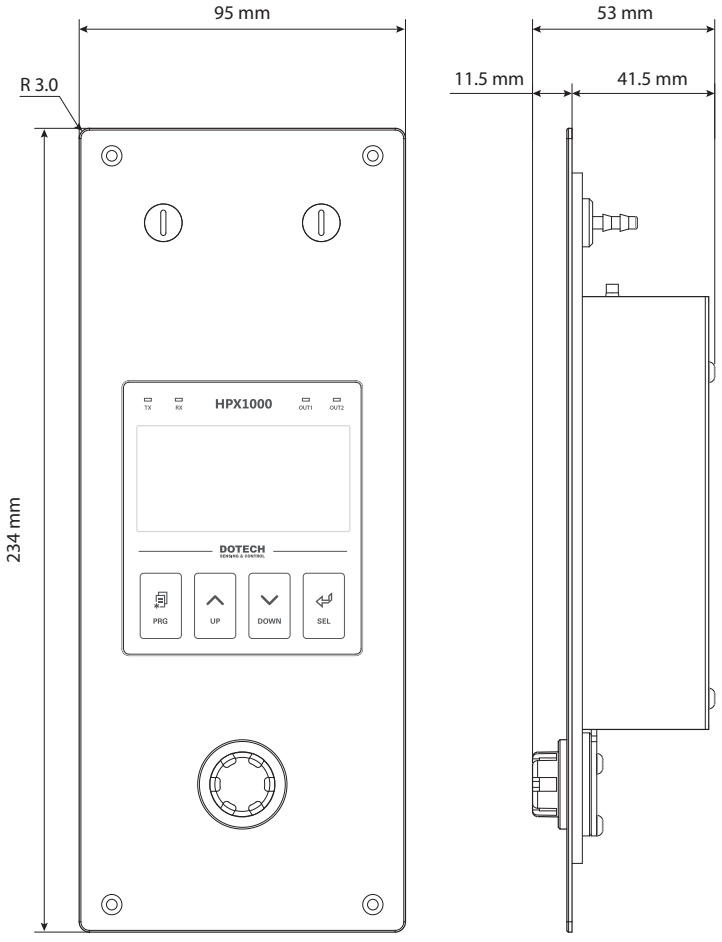
* Accuracy at 23 degrees Celsius
** Accuracy at 25 degrees Celsius of dry-bulb temperature

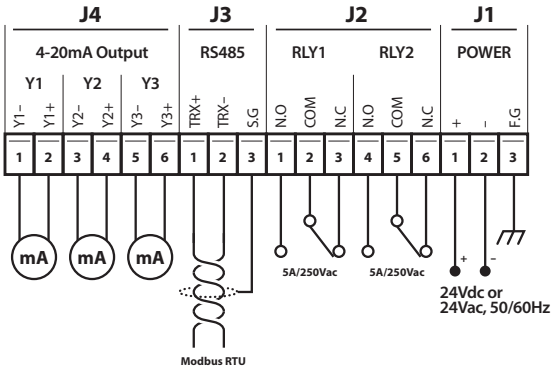
Common Specifications

Power supply	24Vdc ±10%, 24Vac ±10%, 50/60Hz
Current consumption	max. 120mA @24Vdc
Relay output	2-CH, 5A, 250Vac
Current output	3-CH, Opto-isolation
Digital output	RS485, Galvanic-isolation (Modbus RTU protocol)
Material	SUS304 Hairline
Display	High resolution MONO LCD (268 x 128 Pixel) / Capacitive touch button
Operating temperature	Temperature: -10 ~ 60°C, (Non condensation)
Storage temperature	Temperature: -20 ~ 70°C, Humidity: Below 95%RH
Dimensions	95(W)mm X 234(H)mm X 42(D)mm
IP rating	IP65 (Front panel)
Weight	600g



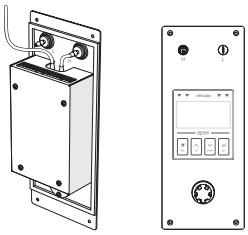
Dimensions & Wiring



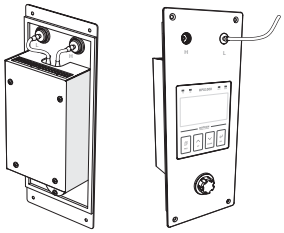


PIN		Definition	Description
J1	1	Power supply	+24Vdc / 24Vac (L)
	2		GND / 24Vac (N)
	3		F.G
J2	1	Relay output 1 (RLY 1)	NO(Normal Open) Contact
	2		Common
	3		NC(Normal Close) Contact
	4	Relay output 2 (RLY 2)	NO(Normal Open) Contact
	5		Common
	6		NC(Normal Close) Contact
J3	1	RS485 communication	TRX +
	2		TRX -
	3		S.G
J4	1	4~20mA output 1 (Y1)	-
	2		+
	3	4~20mA output 2 (Y2)	-
	4		+
	5	4~20mA output 3 (Y3)	-
	6		+

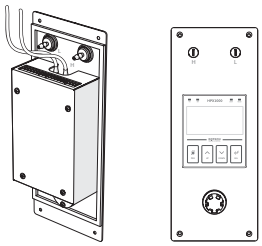
Connections in accordance with measurement method of diff. pressure



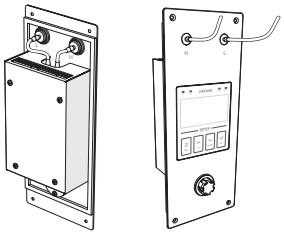
Installation method 1



Installation method 2



Installation method 3



Installation method 4

Range by unit of pressure

Unit	Minimum	Maximum
Pa	-500.0	500.0
kPa	-0.50	0.50
hPa	-5.00	5.00
mmAq	-50.98	50.98
mbar	-5.00	5.00
inchH_2O	-2.00	2.00
mmHg	-3.75	3.75

※ There may be a difference in measurement range in accordance with order specifications.
Parameter value related to pressure will be initialized when changing unit of pressure.

Range by unit of temperature

Unit	Minimum	Maximum
℃	-10.00	60.00
℉	14.00	140.0

Ordering guide

HPX1000 -	①	②	Description
① Measureable parameters	A		Differential pressure, temperature, humidity and dew point temperature
	D		Differential pressure
	H		Temperature, humidity and dew point temperature
② Differential pressure range		0	Temperature, humidity and dew point temperature
		1	-25 ~ 25 Pa
		2	-125 ~ 125 Pa
		3	-500 ~ 500 Pa

※ Silicon Tube Φ6.0 * 3.0 2M Exclusive tube (Standard scope of supply)

Specifications by Model Order

HPX1000 - A1 : Differential pressure, temperature, humidity and dew point temperature model / Differential pressure range : -25 ~ 25 Pa
HPX1000 - A2 : Differential pressure, temperature, humidity and dew point temperature model / Differential pressure range : -125 ~ 125 Pa
HPX1000 - A3 : Differential pressure, temperature, humidity and dew point temperature model / Differential pressure range : -500 ~ 500 Pa
HPX1000 - D1 : Pressure differential model / Differential pressure range : -25 ~ 25 Pa
HPX1000 - D2 : Pressure differential model / Differential pressure range : -125 ~ 125 Pa
HPX1000 - D3 : Pressure differential model / Differential pressure range : -500 ~ 500 Pa
HPX1000 - H0 : Temperature, humidity model

Accessory (Options)

Model	Description
AX7241	RS485 communication converter (RS485 to USB converter)
Extension nipple	When silicon tubes connection is required to measure diffential pressure on its front side

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R20171221