

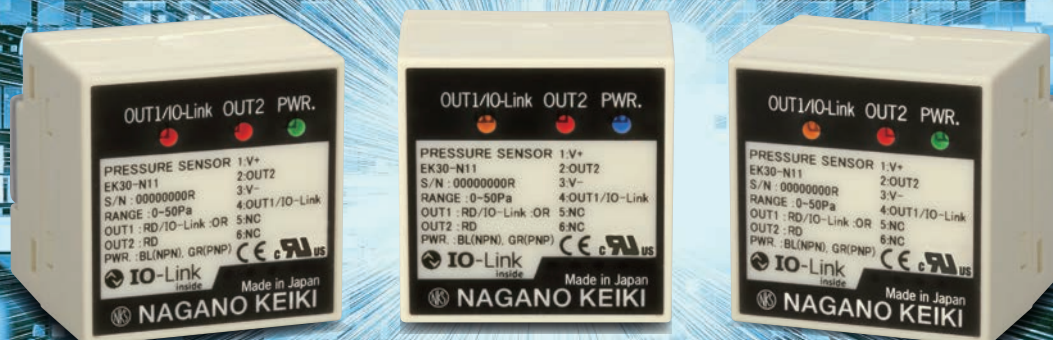
EK30 **NEW**

IO-Link compatible Digital Differential Pressure Sensor

- □30 mm compact / equipment built-in application
- Supports ultra-fine differential pressure range 10 Pa to 20 kPa range and achieves high proof pressure of 50 kPa for all pressure ranges
- Accuracy: $\pm 1.0\%$ F.S. (500 Pa or more), $\pm 1.5\%$ F.S. (200 Pa or less)

IO-Link with differential pressure measurement expands possibilities of factory equipment!

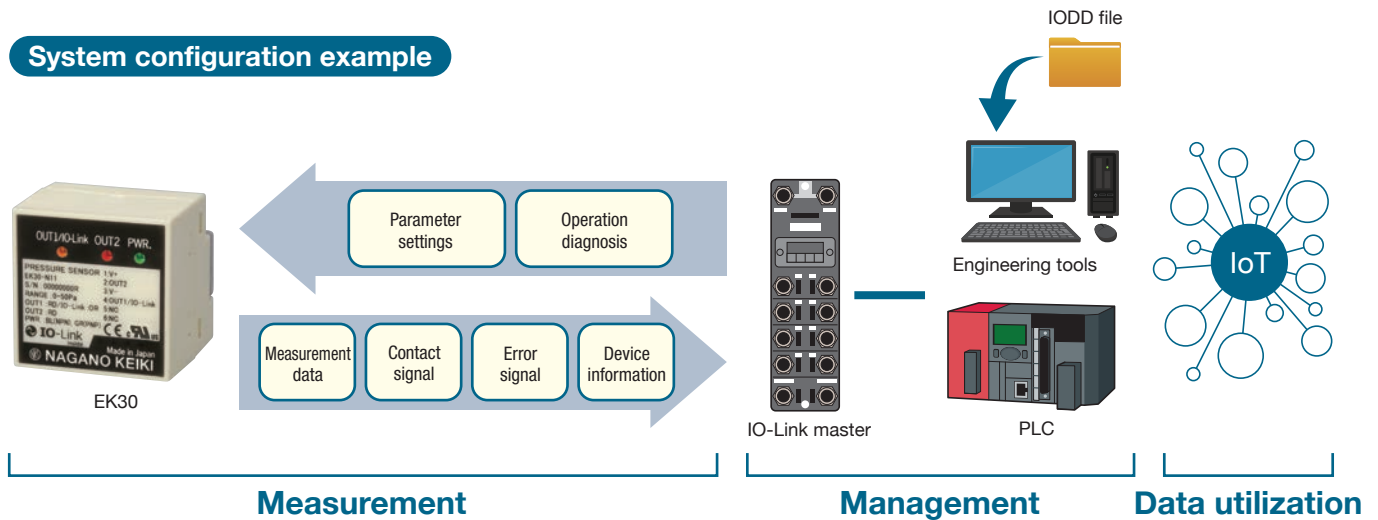
 **IO-Link**



EK30

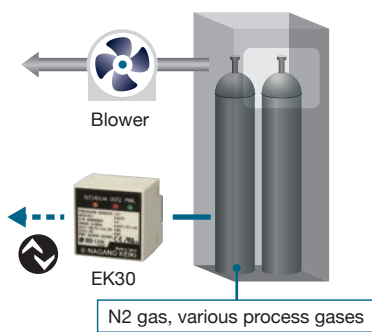
- Automated device management through mutual communication
- Reduced time to restart - easy parameter setting

System configuration example



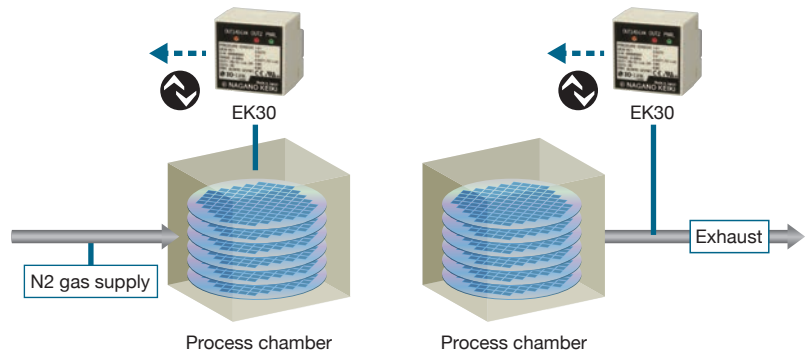
Applications

Cylinder cabinets



Internal pressure monitoring of cylinder cabinets

Various semiconductor manufacturing equipment



N2 gas purge pressure measurement

Exhaust condition monitoring

Pressure range

Differential pressure range (digital output digits)	Max. allowable pressure	Accuracy	Temperature coefficient*1	Analog output accuracy	Square root operation accuracy*2
0 to 10 Pa (10.00)	± 10 Pa (10.00)	± (1.5 % F.S.+1 digit) at 23 °C ± 2 °C	± 0.15 % F.S./°C	± 1.5 % F.S. at 23 °C ± 2 °C	± 0.5 % F.S. (Applicable for digital output value in the differential pressure range of 5 to 100 % F.S.)
0 to 25 Pa (25.00)	± 25 Pa (25.00)				
0 to 50 Pa (50.00)	± 50 Pa (50.00)				
0 to 100 Pa (100.0)	± 100 Pa (100.0)				
0 to 200 Pa (200.0)	± 200 Pa (200.0)				
0 to 500 Pa (500.0)	± 500 Pa (500)	± (1.0 % F.S.+1 digit) at 23 °C ± 2 °C	± 0.10 % F.S./°C	± 1.0 % F.S. at 23 °C ± 2 °C	
0 to 1 kPa (1.000)	± 1 kPa (1.000)				
0 to 2 kPa (2.000)	± 2 kPa (2.000)				
0 to 5 kPa (5.000)	± 5 kPa (5.00)				
0 to 10 kPa (10.00)	± 10 kPa (10.00)				
0 to 20 kPa (20.00)	—				

*1 Both zero point and span *2 Not available for compound (±) range.

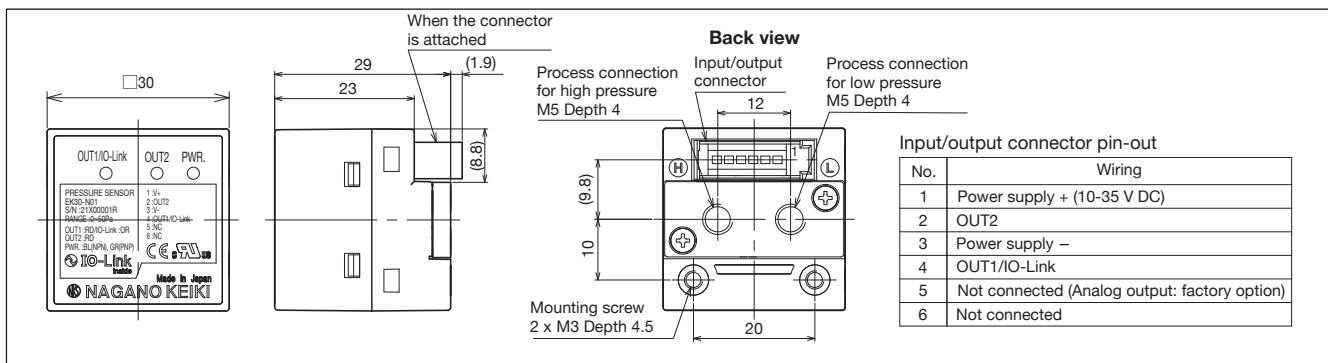
IO-Link compatible Digital Differential Pressure Sensor

Manufacturing specifications

Items	Specifications	
Media	Gases (dry air and nitrogen gas) No water or dusts should be contained	
Indication		
LED for operation	3 LEDs - OUT1: Red / IO-Link: Orange OUT2: Red PWR: Blue (NPN) / Green (PNP)	
Process connection	M5 (female screw)	
Material		
Gas contact part	Silicon, glass, PBT	
Case	PBT	
Supply voltage	24 V DC (10-35 V DC) Current consumption: Approx. 40 mA (excluding output) Use NEC (National Electrical Code) class 2 or LPS (Limited Power Source) for the power supply to be connected to the EK30.	
Output		
Communication output	IO-Link V1.1-COM2 (38.4 kbps)	
Comparator output (2 outputs)	Open collector	NPN (35 V DC, 180 mA or less), PNP (Supply voltage, 110 mA or less)
	Response speed	50 ms or less
	Operation mode	Hysteresis mode (Single, Two) Window comparator mode
Analog output (Option)	Current output	4-20 mA DC (400 Ω or less)
	Voltage output	1 to 5 V DC (10 kΩ or more)
	Response speed	50 ms or less
Input/output connector	e-CON (RITS connector 6-pin 1473562-6)	
Operating temperature	NPN, IO-Link: -10 to 60 °C, PNP: -10 to 55 °C (No condensation or freezing)	
Operating humidity	85 % RH or less (No condensation)	
Storage temperature	-20 to 70 °C (No condensation or freezing)	
Casing protection structure	IP40 (Indoor specification)	
CE marking	EMC Directive, RoHS Directive * Please use it to connect to the indoor power distribution network which is not affected by the lightning surge voltage and power supply system switching transients.	
UL standard		
Standard No.	UL61010-1	
File No.	E475503	
Degree of contamination	Standard IEC60664-1 Degree of contamination 2	
Operating altitude	Altitude 2,000 m or less	
Weight	Approx. 75 g	

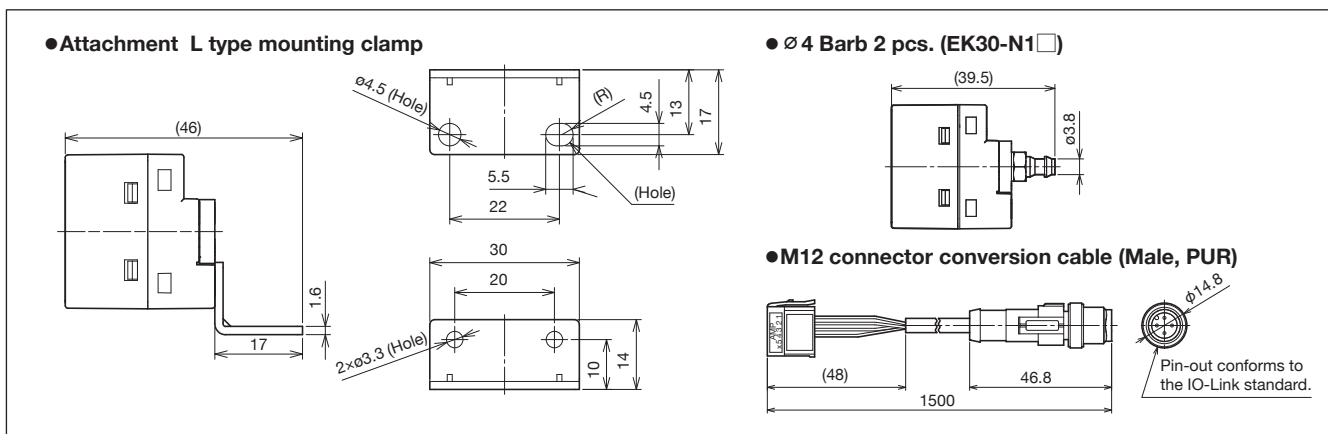
Dimensions

Unit: mm



Option

Unit: mm



Model number configuration Please specify the model number and each specs. for ordering.

Model name

E K 3 0 — **N** — **1** — **A** — × — × — ×

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮

IO-Link compatible Digital Differential Pressure Sensor

Model number Selective spec. Additional spec. (option)

① Indication	N	Nil 3 LEDs for operation
② Process connection	0	M5 female screw (Standard)
	1	Barb for inner diameter ø4 tube (Set of 2)
③ Function	1	Differential pressure
	2	Square root operation function

Please specify the differential pressure range separately for ordering.

④ Differential pressure range	⑤ Accuracy	④ Differential pressure range	⑤ Accuracy
5	8	0 to 10 Pa	± (1.5 % F.S.+1 digit) at 23 °C
6	8	0 to 25 Pa	
M	8	0 to 50 Pa	
N	8	0 to 100 Pa	
P	8	0 to 200 Pa	± (1.0 % F.S.+1 digit) at 23 °C
Q	7	0 to 500 Pa	
R	7	0 to 1 kPa	
S	7	0 to 2 Pa	
T	7	0 to 5 kPa	
U	7	0 to 10 kPa	
V	7	0 to 20 kPa	± (1.5 % F.S.+1 digit) at 23 °C
8	8	± 10 Pa	
A	8	± 25 Pa	
B	8	± 50 Pa	
C	8	± 100 Pa	
D	8	± 200 Pa	
E	7	± 500 Pa	
F	7	± 1 kPa	
G	7	± 2 kPa	
H	7	± 5 kPa	
J	7	± 10 kPa	± (1.0 % F.S.+1 digit) at 23 °C

EK30-□□2 is not available.

⑥ Power supply	1	24 V DC (10-35 V DC)
⑦ Comparator output	J	NPN open collector (35 V DC, 180 mA max.)
	K	PNP open collector (Power supply voltage, 110 mA max.)
⑧ Analog output	0	Nil
	1	4-20 mA DC
	8	1 to 5 V DC
⑨ Communication output	A	IO-Link V1.1 COM2**
⑩ Connector cable	0	Nil
	D	M12 connector conversion cable (1.5 m)**2
⑪ Accessories	0	Nil
	B	L type mounting clamp
⑫ Document	0	Nil
	1	Required (Please specify the desired documents separately.) Submission drawings, instruction manual, inspection procedure, test report (1 pc 1 copy), inspection / traceability certificate, attended inspection

*1 Please contact us for communication output IO-Link V1.1 COM3.
 *2 The M12 connector pin-out conforms to the IO-Link standard.
 Please contact us for use with analog output.
 • Specify by code "X" if there is no applicable specification.

[Caution of operation]
 Please do not use this product for measurement of corrosive gases and/or flammable gases and liquids.

The contents of the catalog are subject to change without notice.



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