



KE2 □ Pneumatic Transmitters Pressure & Differential Pressure

OUTLINE

This is a force-balanced pressure transmitter that detects pressure, liquid level, or differential pressure at the job site and converts it to a 20 to 100kPa constant air pressure signal proportional to the measured amount and transmits it from the job site to the control room receiver.

FEATURES

- Because this transmitter is a pneumatic type, it can be used in explosive and corrosive atmospheres.
- Forced-balance type allows a rigid body construction without hardly any pressure element and link mechanism changes. Therefore, vibration resistance, linearity, and hysteresis precision can be maintained for a long time.
- Since the pressure receiving element is built into the body, it is extremely compact and zero adjustment is easily performed from the outside without removing the cover and affecting the span.

SPECIFICATION 1

Application:

- KE21 Pressure, vacuum, and compound measurement
KE22 Differential pressure measurement
(standard pressure: 1MPa)

Mounting:

Panel mounting, 2B pipe installation

Process connection port:

G3/8B (PF), G1/2B (PF)

Air pressure connection port:

Rc1/4 (PT female), 6DIA., 8DIA., 10DIA.

Type:

Transmission function (standard), with pressure reducing valve, output gauge, local indicator (KE21 only)

Wetted parts materials:

Bourdon tube SUS316
Bellows SUS316L
(Depends on the pressure range.)

Pressure range:

0~0.01→0~100MPa
-0.1~0→-0.1~2MPa

Operating temperature:

-20~60°C

Accuracy:

±0.5%F.S., ±0.75%F.S., ±1.0%F.S., ±1.5%F.S.
(Depends on the pressure range.)

Supply air pressure:

140±10kPa

Output:

20~100kPa

Air consumption:

4~7L/min (normal)

Allowable overload:

150%F.S.

Span adjustment:

Internal adjustment

Zero adjustment:

External adjustment

Case material & finish:

Aluminum die casting, Gray crystal paint

Case construction:

Drip-proof type (IP23)

Pressure reducing valve specification:

Max. working pressure 0.97MPa
Puncture pressure 1.5MPa
Setting range 0.03~0.25MPa

* Up to 15 KE21 and KE22 can be used with one reducing valve.

Weight:

KE21 Approx. 5.5kg
KE22 Approx. 6kg
(Addition)
Pressure reducing valve Approx. 1.4kg
Output gauge Approx. 0.17kg
Local indicator Approx. 0.55kg

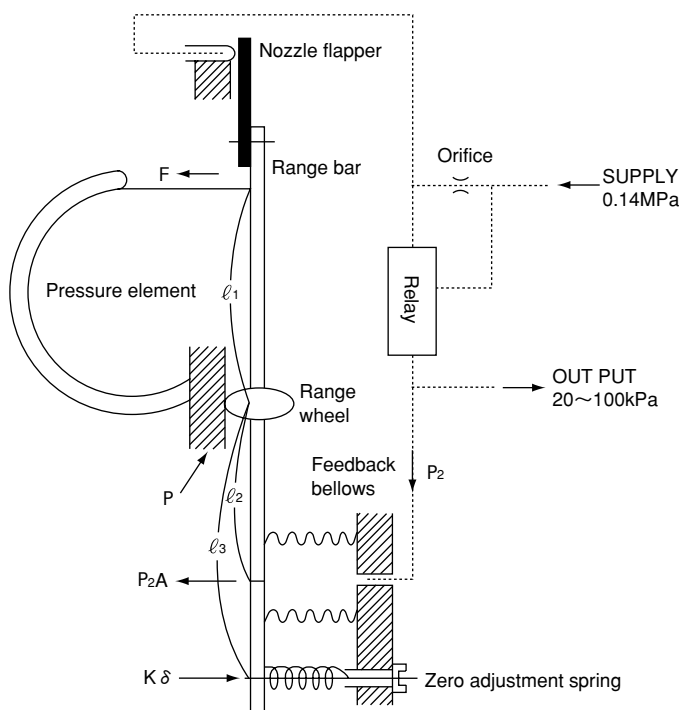
SPECIFICATION 2

Accuracy & Wetted parts materials:

Model number	Pressure range MPa	Accuracy (±%F.S.)	Wetted parts materials	Pressure range MPa	Accuracy (±%F.S.)	Wetted parts materials
KE21	0~0.01	1.0	Bellows SUS316L	0~7 ~10 ~15 ~25 ~35 ~50 ~70 ~100	0.5	Bourdon tube SUS316
	0~0.02 ~0.03 ~0.04 ~0.05 ~0.1 ~0.2 ~0.3	0.75		−0.1~0 ~0.1 ~0.2		
	0~0.4 ~0.6 ~1 ~1.5 ~2 ~2.5 ~3.5 ~5		0.5	Bourdon tube SUS316	−0.1~0.3 ~0.4 ~0.6 ~1 ~1.5 ~2	0.5
KE22	0~0.01	1.5	Bellows SUS316L (Packing: PTFE)	0~0.1 ~0.2 ~0.3 ~0.4	1.0	Bellows SUS316L (Packing: PTFE)
	0~0.02 ~0.03 ~0.04 ~0.05	1.0				

* KE22: Please specify the standard pressure.

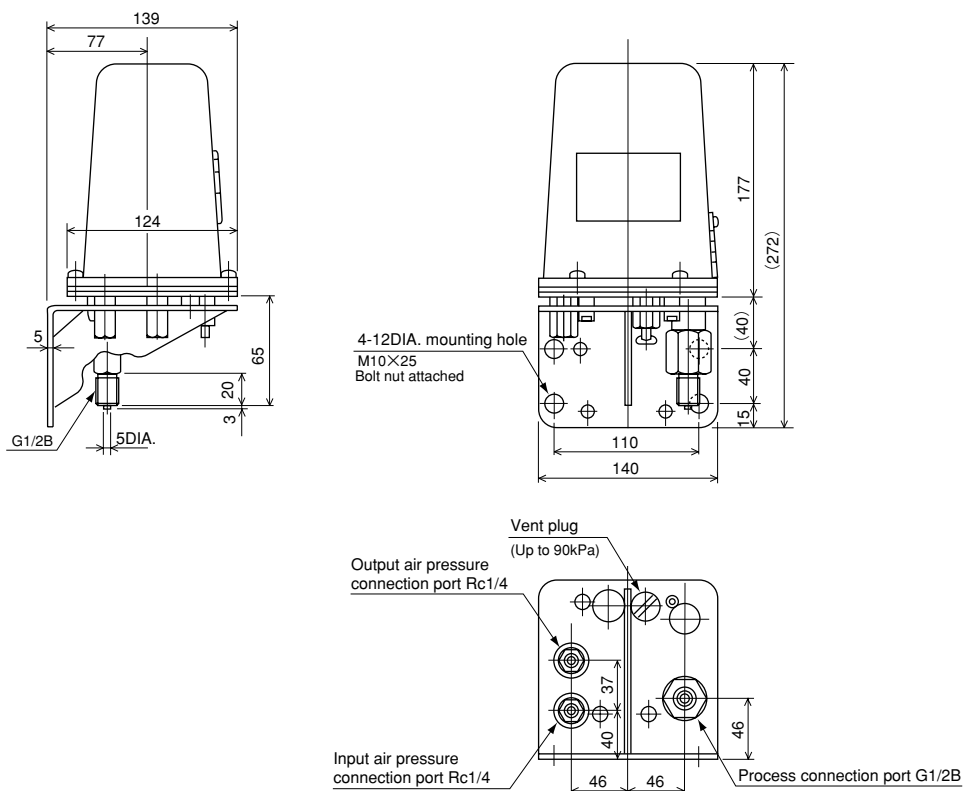
PRINCIPLE



$$F\ell_1 \cong P_2A\ell_2 - K\delta\ell_3$$

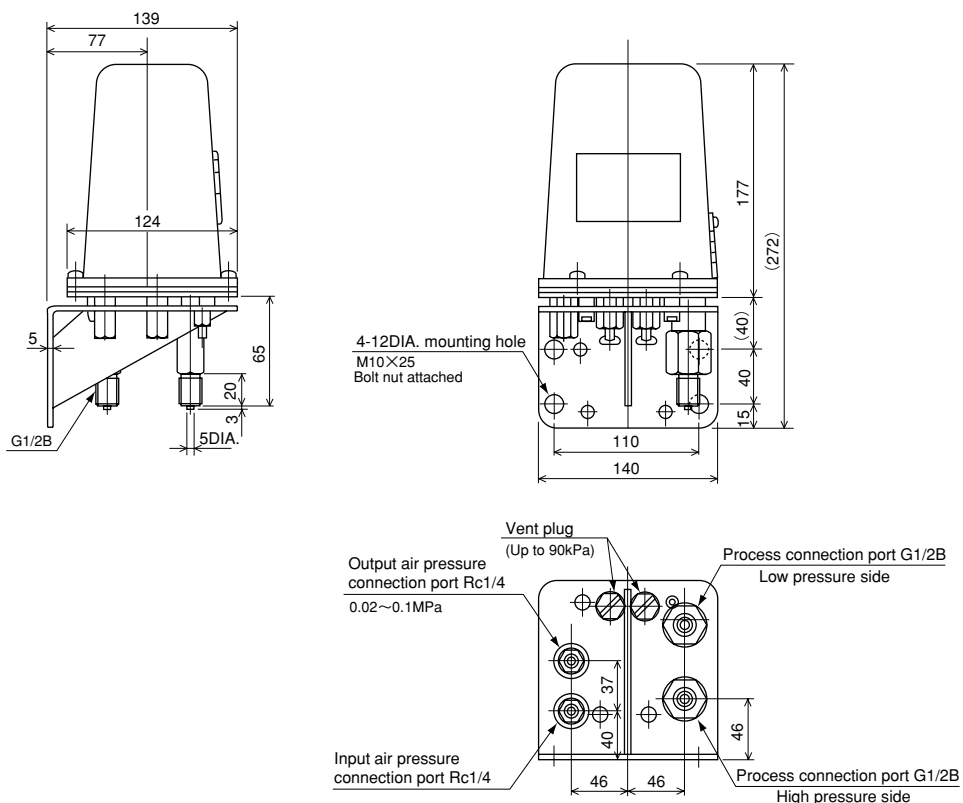
DIMENSIONS 1

Pressure transmitter



KE21-121

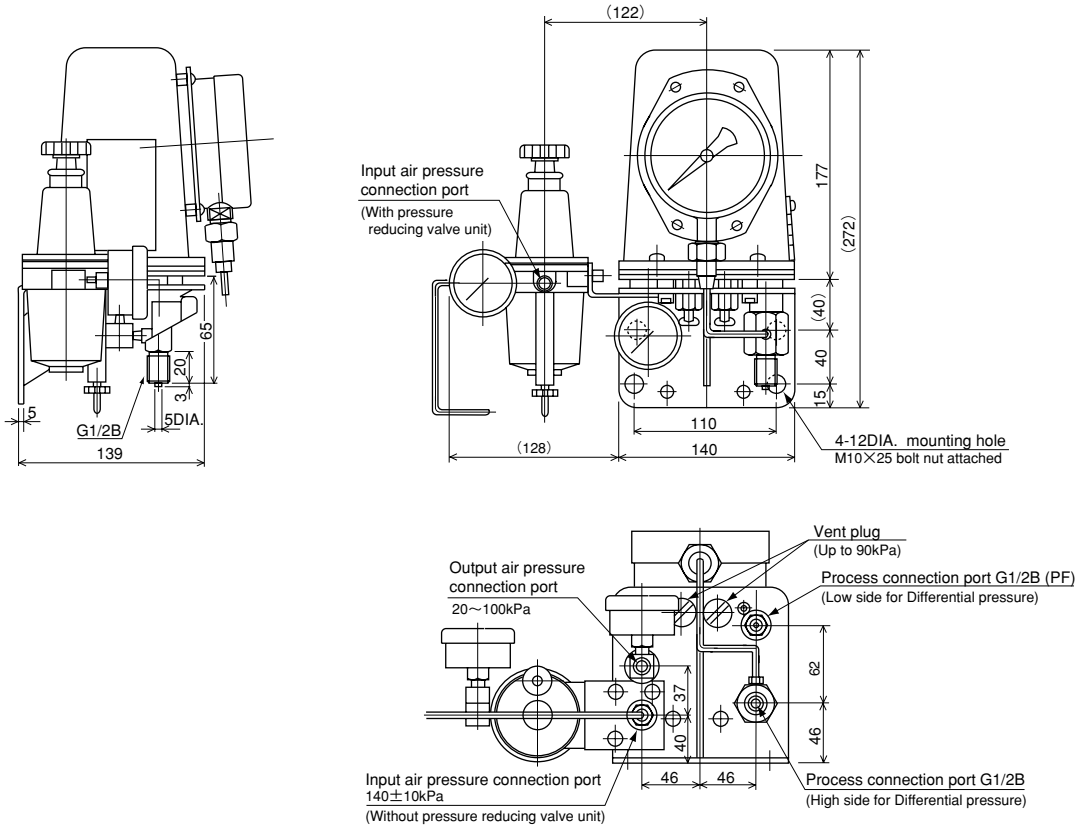
Differential pressure transmitter



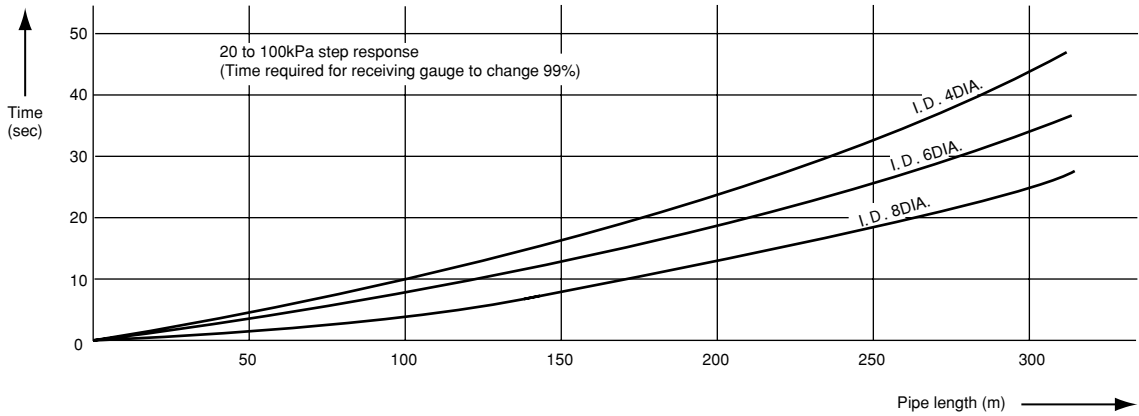
KE22-121

DIMENSIONS 2

With pressure reducing valve, output gauge, and local indicator (KE21, KE22)



RESPONSE TIME



KE2 Pneumatic Transmitters Pressure & Differential Pressure

Model number configuration 1

For ordering, please specify the model number, each specs and range.

K E 2 1					0	0	C			×	×	×	×	×	
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮

Pneumatic pressure transmitter

Model	Selective spec.	Additional spec. (Option)
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① Type	1	Panel mounting, G1/2B
	2	Panel mounting, G3/8B
	3	2B pipe installation, G1/2B
	4	2B pipe installation, G3/8B

② Connection	2	Rc 1/4
	6	6DIA.
	8	8DIA.
	0	10DIA.

③ Option	1	Standard (Transmission function)
	2	With pressure reducing valve
	3	With output gauge
	4	With local indicator (Except up to 0.03MPa range)
	5	With pressure reducing valve, output gauge
	6	With output gauge, local indicator
	7	With pressure reducing valve, local indicator
	8	With pressure reducing valve, output gauge, local indicator

④ Pressure range (MPa) <small>(When ordering, please specify the range and units separately.)</small>	1	0~0.01	Accuracy: ±1.0%F.S.
		0~0.02, 0.03, 0.04, 0.05	Accuracy: ±0.75%F.S.
	2	-0.1~0, 0.1, 0.2	Accuracy: ±0.75%F.S.
		-0.1~0.3, 0.4, 0.6, 1, 1.5, 2	Accuracy: ±0.5%F.S.
	3	0~0.1, 0.2, 0.3	Accuracy: ±0.75%F.S.
	0~0.4, 0.6, 1, 1.5, 2, 2.5, 3.5, 5, 7	Accuracy: ±0.5%F.S.	
4	0~10, 15, 25, 35, 50	Accuracy: ±0.5%F.S.	
5	0~70, 100	Accuracy: ±0.5%F.S.	

⑤ Accuracy	0	Standard ±1.0%F.S. 0~0.01MPa ±0.75%F.S. 0~0.02~0.3, -0.1~0~0.2MPa ±0.5%F.S. Except the above
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⑥ Supply pressure	0	140±10kPa
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⑦ Output	C	20~100kPa
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⑧ Treatment	0	Nil
	1	Use no oil
	2	Use no water
	3	Use no oil & water

⑨ Other additional specifications	0	Nil
	1	Mounting plate for U bolt

⑮ Documents	0	Nil
	1	Required <small>(Please specify the desired documents separately.)</small> Submission drawings, instruction manual, inspection procedure, mill sheet, test report (1 pc 1 copy), traceability certificate, attended inspection

Specify "X" if there is no specification item.

KE2 Pneumatic Transmitters Pressure & Differential Pressure

Model number configuration 2

For ordering, please specify the model number, each specs and range.

Pneumatic differential pressure transmitter

Model **KE22** — **00C** × × × × ×

Selective spec.		Additional spec. (Option)		
① Type	1	Panel mounting, G1/2B		
	2	Panel mounting, G3/8B		
	3	2B pipe installation, G1/2B		
	4	2B pipe installation, G3/8B		
② Connection	2	Rc 1/4		
	6	6DIA.		
	8	8DIA.		
	0	10DIA.		
③ Option	1	Standard (Transmission function)		
	2	With pressure reducing valve		
	3	With output gauge		
	5	With pressure reducing valve, output gauge		
(When ordering, please specify the range and units separately.)	④ Pressure range (MPa)	1	0~0.01	Accuracy: ±1.5%F.S.
			0~0.02, 0.03, 0.04, 0.05	Accuracy: ±1.0%F.S.
		2	0~0.1, 0.2, 0.3, 0.4	Accuracy: ±1.0%F.S.
⑤ Accuracy	0	Standard ±1.5%F.S. 0~0.01MPa ±1.0%F.S. 0~0.02→0.4MPa		
⑥ Supply pressure	0	140±10kPa		
⑦ Output	C	20~100kPa		
⑧ Treatment	0	Nil		
	1	Use no oil		
	2	Use no water		
	3	Use no oil & water		
⑨ Other additional specifications	0	Nil		
	1	Mounting plate for U bolt		
⑮ Documents	0	Nil		
	1	Required (Please specify the desired documents separately.) Submission drawings, instruction manual, inspection procedure, mill sheet, test report (1 pc 1 copy), traceability certificate, attended inspection		

Specify "X" if there is no specification item.

The contents in the catalogue are subject to change without notice.

NAGANO KEIKI CO., LTD.

Gets ISO 9001, ISO 14001, ISO/TS 16949 Certification

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