

# Yamatake-Honeywell

# SPECIFICATION

## Specifications

### Measuring range:

NKI 11; 0 ~ 100 to 0 ~ 700 kg/cm<sup>2</sup>  
 NKI 12; 0 ~ 25 to 0 ~ 250 kg/cm<sup>2</sup>  
 NKI 13; 0 ~ 7 to 0 ~ 70 kg/cm<sup>2</sup>  
 NKI 14; 0 ~ 3.5 to 0 ~ 35 kg/cm<sup>2</sup>

### Process connection:

PT 1/2 (ISO R7 1/2") or NPT 1/2,  
 PT 1/4 (ISO R7 1/4") or NPT 1/4 tap thread or welding nipple connection

### Electrical conduit connection:

PF 1/2 (ISO R228 1/2") female

### Power supply:

DC 21.6 ~ 44 V

### Output:

4 ~ 20 mA DC (External load; 600 ohms at 24 V, 1,400 ohms at 42 V)

### Operating pressure:

NKI 11; -1 ~ + 700 kg/cm<sup>2</sup> G

NKI 12; -1 ~ + 300 kg/cm<sup>2</sup> G

NKI 13; -1 ~ + 105 kg/cm<sup>2</sup> G

NKI 14; -1 ~ +52.5 kg/cm<sup>2</sup> G

### Temperature:

At meter body (process fluid); -40 ~ +120°C

At transmitter (ambient); -30 ~ +80°C

### Relative humidity:

10 ~ 90% RH

### Overload protection:

NKI 11; Up to 750 kg/cm<sup>2</sup> G

NKI 12; Up to 320 kg/cm<sup>2</sup> G

NKI 13; Up to 140 kg/cm<sup>2</sup> G

NKI 14; Up to 70 kg/cm<sup>2</sup> G

### Transmitter housing:

Explosion-proof type; When with an explosion-proof terminal box, Class d2G4 of JIS C0903 code approved (JIS F8001 Class 3 splash-proof included). Also suitable for the NEC Class 1, Group D, Division 1.

Weatherproof type; Equivalent to JIS F8001 Class 3 splash-proof construction.

Intrinsic safety type; Class i3nG5 of JIS C0903 code for hazardous location, including above splash-proof construction.

(Note: Intrinsic safety type ...  
 Power supply; DC23 ~ 27.5 V  
 Ambient temperature limit; -30 ~ +60°C)

### Suppression and elevation (zero spring):

Spring No. 1 (Unit: kg/cm<sup>2</sup> G)

	NKI 11	NKI 12	NKI 13	NKI 14
Suppression	Up to -1	Up to -1	Up to -1	Up to -1
Elevation	Up to 150	Up to 50	Up to 15	Up to 8
Span plus elevation	Up to 700	Up to 300	Up to 105	Up to 52.5

Note: Suppression and elevation exceeding above limit is also available as an option.

### Accuracy:

±0.5% FS

### Dead band:

Within 0.1% FS (Sensitivity is 0.5% FS)

### Materials:

Bourdon tube; SUS 316 st. st.  
 Connecting flange; SUS 316 st. st.  
 Wet-part; SUS 316 st. st.  
 Indicator window;  
 Explosion-proof type . . . . Glass  
 Weatherproof and intrinsic safety type . . . . Poly-carbonate  
 Transmitter case; Aluminum alloy shell mold.

Finish: Acryl baking finish  
 (For corrosion-resistant and silver finish, refer to the optional specification.)

Color of finish: Cover; Light beige (Munsell 4Y 7.2/1.3)  
 Case; Dark beige (Munsell 10YR 4.7/0.5)

Mounting: On vertical or horizontal 2 inch pipe.  
 Net weight: Explosion-proof type; 11.3 kg (Add 1.6 kg for explosion-proof terminal box with adapter.)  
 Weatherproof and Intrinsic safety type; 8.3 kg

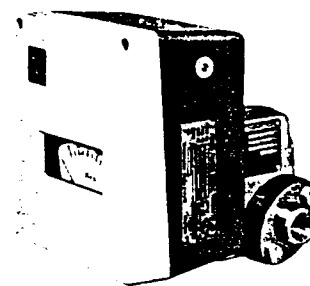
### Options (Accessories)

Following accessories are optionally available.  
 Item (1), (2) are the standard options.

## ELECTRONIC

## PROCESS PRESSURE TRANSMITTER BOURDON TUBE TYPE (HIGH & MIDDLE PRESSURE RANGE)

MODEL; NKI 11/12/13/14



Intrinsic Safety Type Case

### (1) High elevation: (Unit: kg/cm<sup>2</sup> G)

	Spring No. 2 High elevation-1	Spring No. 4 High elevation-2	Span plus elevation
NKI 11	150 ~ 600	-	Up to 700
NKI 12	50 ~ 225	225 ~ 275	Up to 300
NKI 13	15 ~ 60	60 ~ 98	Up to 105
NKI 14	8 ~ 30	30 ~ 49	Up to 52.5

(2) **Explosion-proof terminal box:** 3 way.  
 Flame-proof conduit screw-coupling type. (When flame-proof packing type is employed, the JIS explosion-proof requirements can be met by using the adapter is addition.)  
 Item (3) ~ (8) are the semi-standard options.

(3) **PTB (West Germany) approved intrinsic safety (Y59)**  
 Power supply; DC23 ~ 28 V  
 Ambient temperature limit; -30 ~ +40°C

(4) **Oil free (Y67)**  
 Degreased.

(5) **Steam jacket (Y 113)**  
 Maximum working pressure; 50 kg/cm<sup>2</sup> G  
 Maximum working temperature; 200°C  
 (Body temperature must not exceed 120°C.)  
 Connection; PT 1/4 (ISO R7 1/4") or NPT 1/4 tap thread  
 Material; Carbon steel (SF 45)

(6) **Blind type transmitter (Y 126)**

(7) **Corrosion-resistant and silver finish (Y138A ~ D)**  
 Corrosion-resistant (Acryl baking) finish (Y138A);  
 Resistance for corrosive gases.

Corrosion-proof (Epoxy baking) finish (Y138B);  
 Resistance for corrosive liquids.

Silver-normal (Acryl baking) finish (Y138C);

Protection for temperature rise of device caused by direct sun light, radiation heat, etc.

Silver-corrosion-resistant (Acryl baking) finish (Y138D)

Protection for above-mentioned temperature rise and resistance for corrosive gases.

(Note: Silver finish is not applicable for alkaline gases.)

(8) **Induction lightning arrester (Y145)**

## Yamatake-Honeywell Co. Ltd. Process Control Division

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 Tel : (03) 409-7171 Telex : J22902 Cable : YAMATAKE CO

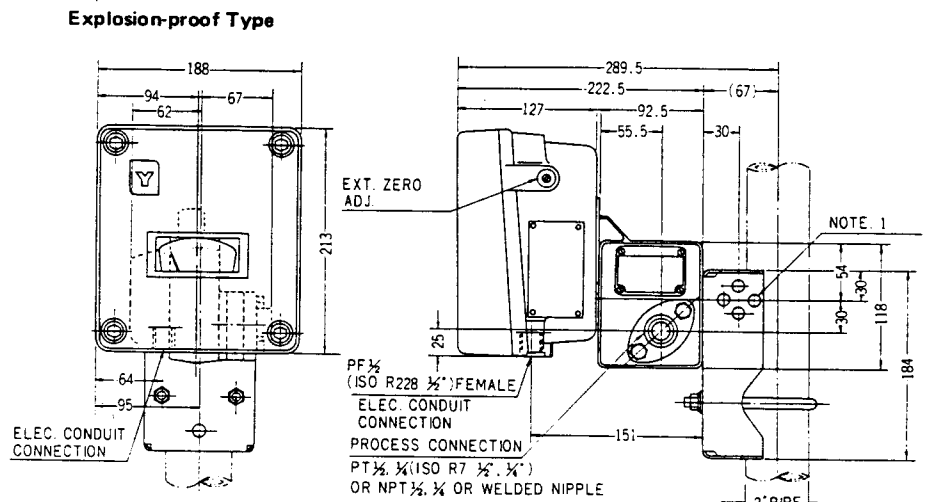
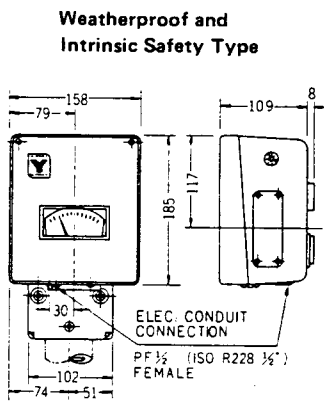
## Model Number Table

Ex.: NKI 11-22E-5, 8A

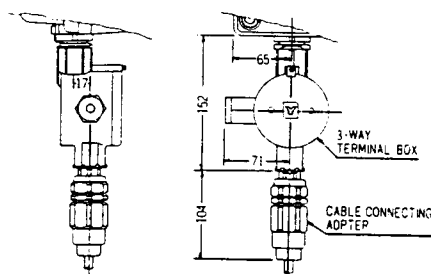
Basic Model No.		Cover Mat'l	Element Mat'l	Housing	Option	Description	
Type	Range						
NKI	1					Electronic, Process Pressure	
						Gage Pressure	
			1				0 ~ 100 to 0 ~ 700 kg/cm <sup>2</sup>
			2				0 ~ 25 to 0 ~ 250 kg/cm <sup>2</sup>
			3				0 ~ 7 to 0 ~ 70 kg/cm <sup>2</sup>
	4					0 ~ 3.5 to 0 ~ 35 kg/cm <sup>2</sup>	
		-2				SUS 316 st. st.	
			2			SUS 316 st. st.	
				W		Weatherproof Type	
				E		Explosion-proof Type	
				H		Intrinsic Safety Type	
				-5		High Elevation	
				-8		Explosion-proof Terminal Box	
				-8A		" ( With One Flame-proof Packing Type Cable Connecting Adapter )	
				-8B		" ( With Two Flame-proof Packing Type Cable Connecting Adapter )	

Note: When specifying semi-standard options (Y□), write in "Y" as follows and put an additional remarks for "Y"-numbers.  
Example: NKI 11Y-22E-5, 8A and add "Y"-number in writing.

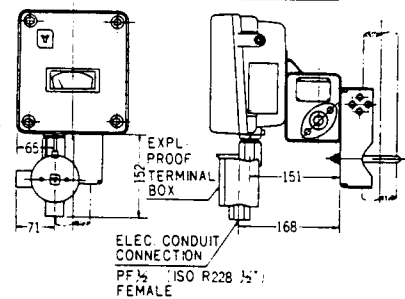
## Overall Dimensions



WITH EXPL-PROOF TERMINAL BOX AND ADAPTER



WITH EXPL-PROOF TERMINAL BOX



- Notes: 1. Universal mounting bracket enables the meter to be mounted to either vertical or horizontal 2 inch pipe.  
2. Vertically mount the transmitter. Do not exceed 5 degrees from vertical in either directions.

## Ordering Information

When ordering, please specify:

- 1) Model No.
- 2) Pressure range
- 3) Options

- \* Specifications are subject to change without notice.
- \* Reference instruction manual ··· OM2-513-110
- \* Reference specification sheet ··· SS2-519-050(Steam jacket)