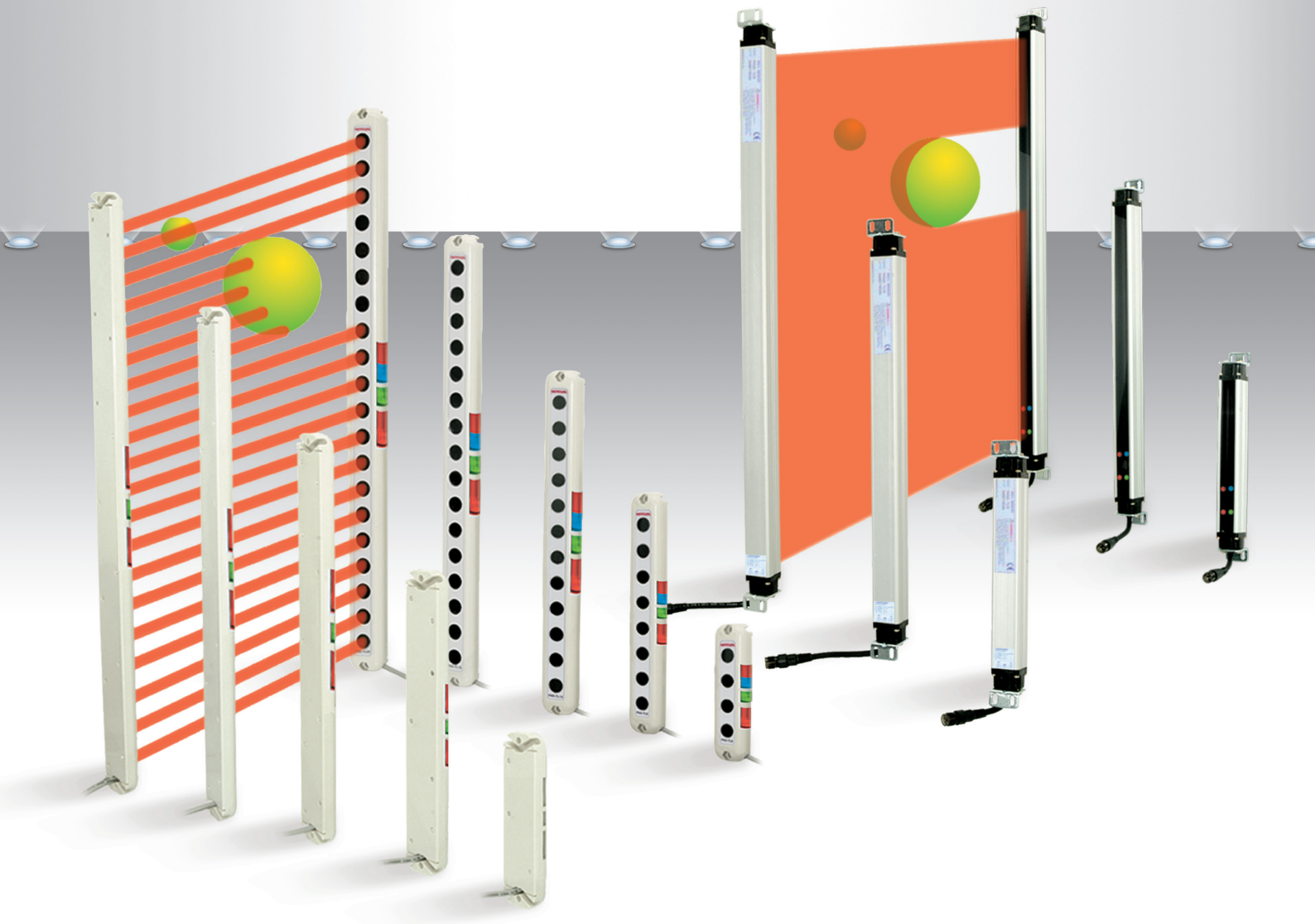
www.hynux.net

PAS series
Area sensor

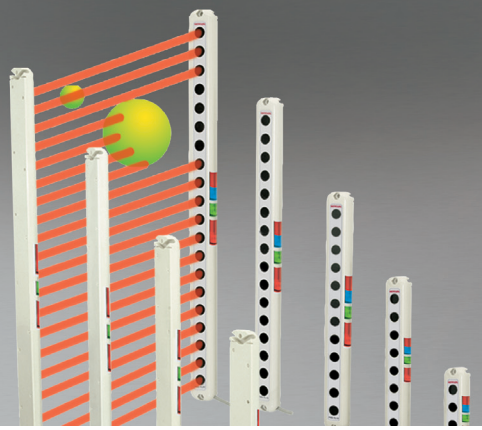
PAN series
High reliable optical area sensor with an exclusive I.C.



HANYOUNG NUX

AREA SENSOR

PAS series



Area sensor

- Simple installation, less space (Thickness: 13.5 ㎜, Width : 30 ㎜)
- Built in the auto sensitivity compensating function
- Built in the mutual interference preventing function
- Minimum sensing object (Ø 33 ㎜)

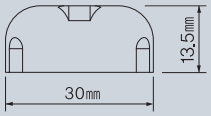
Suffix code

Model	Code		Description
PAS -	☐	☐ ☐	Area sensor
Sensing method	T		Through beam
Number of optical axis		4	4 optical axis
		8	8 optical axis
		12	12 optical axis
		16	16 optical axis
		20	20 optical axis
Control output		N	NPN open collector
		P	PNP open collector

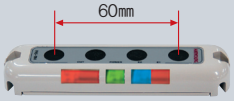
Specification

Model	NPN	PAS-T4N	PAS-T8N	PAS-T12N	PAS-T16N	PAS-T20N
	PNP	PAS-T4P	PAS-T8P	PAS-T12P	PAS-T16P	PAS-T20P
Number of optical axis		4	8	12	16	20
Sensing width		60 ㎜	140 ㎜	220 ㎜	300 ㎜	380 ㎜
Sensing method		Through beam type				
Sensing distance		5 m				
Sensing object		Opaque object above Ø30 ㎜				
Optical axis pitch		20 ㎜				
Power supply voltage		12 - 24 V d.c ±10 % (max Ripple 10%)				
Current consumption		max 80 ㎃	max 90 ㎃	max 100 ㎃	max 110 ㎃	max 120 ㎃
Output		NPN/PNP open collector output less than 100 ㎃ (30 V d.c) Induced load : 50 ㎃, Remaining voltage : max 1 V d.c				
Output mode		All optical axes L.ON, then ON operation (More than 1 optical axis D.ON then OFF operation)				
Output action		All optical axes L.ON, then ON operation (More than 1 optical axis D.ON then OFF operation)				
Weight		max 160 g	max 180 g	max 200 g	max 220 g	max 240 g
Response time		max 7 ㎳				
Pointing angle		Within ±5° (Only with distance more than sensing distance (2m)				
Light source (wave length)		Infrared LED (880 ㎚)				
LED		Trns : Power display(Green LED), M/S display(Red LED), Output Display(Red LED) Rcvr : Light on stability display(Green LED), Output Display(Red LED) E1 display(Red LED), E2 display(Blue LED)				
Ambient illumination		Sunlight : max 10,000 Lux				
Ambient temperature		-10 ~ 55 ℃ (surrounding storage temperature : -25 ~ 70 ℃)				
Ambient humidity		35 ~ 85 % R.H. (without no condensation)				
Protective structure		IP 40 (IEC)				
Insulation resistance		min 20 ㏁ (500 V d.c)				
Dielectric strength		1,000 V a.c, 50/60 ㎐ for 1 min (Between the current part and case)				
Vibration resistance		10 - 55 ㎐, double amplitude : 1.5 ㎜, for 2 hours in X, Y and Z direction				
Shock resistance		500 ㎨, 3 times each in X, Y and Z directions				
Connection method		Cable extended type, 0.2 ㎟ 5pin, Thickness : Ø4.3 ㎜, Length : 3 m				
Material		Case : ABS, Display unit : Acryl				
Protective function		Auto sensitivity compensation, mutual interference prevention in parallel installation (M/S mode) reverse polarity protection, over current protection				

■ **13.5 ㎜ Slim size**
(Simple installation at the narrow space)



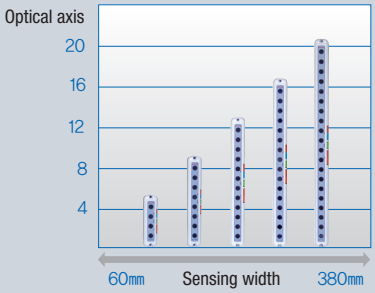
■ **Minimized 4 optical axis**
(Sensing width : 60 ㎜)



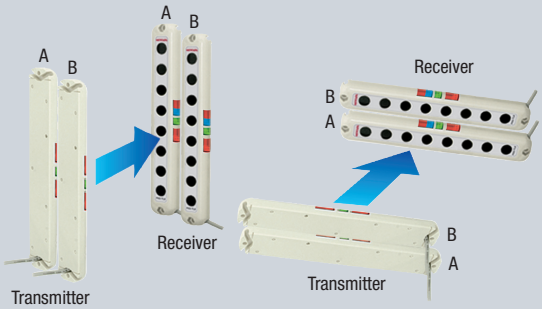
■ **Auto sensitivity compensating function**
- using exclusive ASIC IC

■ **Picking sensing function**

■ **Various sensing width 60 ㎜ - 380 ㎜**

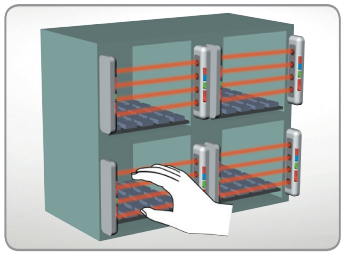


■ **In case of using mutual interference preventing fucntion**
- not effected by another near sensor

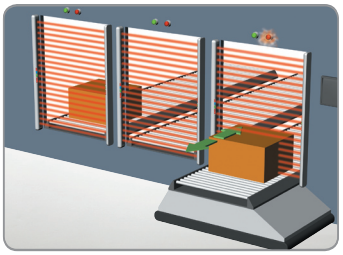


Example of using PAS series

Picking sensor application



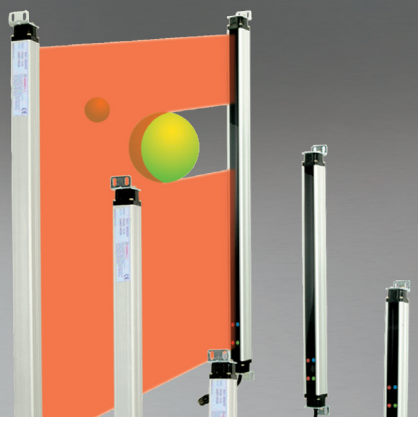
When taking an object out of box or container



When putting in and taking out an object

High reliable optical area sensor with an exclusive I.C.

PAN series



High reliable optical area sensor with an exclusive I.C.

- Various gap of optical axis
- Built in the mutual interference preventing function
- Built in the output break protecting circuit
- A, O operation mode selection
  (When all optical axes/1 optical axis light on then ON)

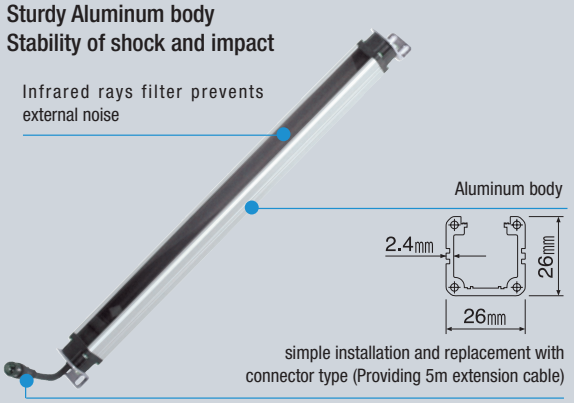
Suffix code

Model	Code						Description
PAN -	☐	☐	☐	☐			Area sensor
Optical axis pitch	10						10 ㎜ gap (coming soon)
	20						20 ㎜ gap
	40						40 ㎜ gap
Sensing method		T					Through Beam
Number of optical axis			16				Number of optical axis (please refer to the dimension)
Output					N		NPN open collector
					P		PNP open collector

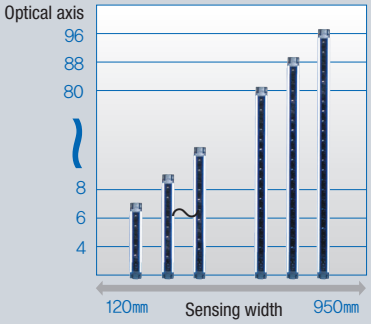
Specification

Model	NPN	PAN10-T☐N	PAN20-T☐N	PAN40-T☐N
	PNP	PAN10-T☐P	PAN20-T☐P	PAN40-T☐P
Sensing method		Through beam		
Sensing distance		2 m	7 m	
Sensing objedt		opaque object min Ø17 ㎜	opaque object min Ø32 ㎜	opaque object min Ø52 ㎜
Optical axis pitch		10 ㎜	20 ㎜	40 ㎜
Power supply voltage		12 - 24 V d.c ±10 % (Ripple less than 10 %)		
Current consumption		max 220 ㎃	max 170 ㎃	max100 ㎃
Response time		max 30 ㎳	max 15 ㎳	max 7 ㎳
Weight		Approx 1400 g (Included the weight of box)	Approx. 1400 g (Included the weight of box)	Approx. 1400 g (Included the weight of box)
Output		NPN/PNP open collector output , max 100 ㎃ (30 V d.c) Inductive load : 50 ㎃, Remaining voltage : max 0.5 V d.c		
Operation mode		Transmitter : select the master/slave operation (mutually preventing interference function) Receiver : A mode (ON when all optical axis L.ON)/O mode (select ON when 1 optical axis L.ON)		
Light source (wave length)		Infrared LED (880 ㎚)		
LED		Transmitter : Power indicator(Green LED), M/S display(Red LED) Receiver : Light on stability display(Green LED), output Display(Red LED) E1 display(Red LED), E2 display(Blue LED)		
Protective circuit		Builit in the reversed power supply connection protective circuit and output short protective circuit		
Ambient illumination		Sunlight : max 11,000 Lux, Incandescent lamp : max 3,000 Lux		
Ambient temperature		-10 ~ 55 ℃ (Surrounding storage temperature : -25 ~ 70 ℃)		
Ambient humidity		35 ~ 85 % R.H. (With no condensation)		
Protective structure		IP 65 (IEC)		
Insulation resistance		min 20 ㏁ (500 V d.c between the code and case)		
Dielectric strength		500 V a.c, 50/60 ㎐ for 1 min		
Vibration resistance		10 - 55 ㎐, double amplitude : 1.5 ㎜, for 2 hours in X, Y and Z direction		
Shock resistance		500 ㎨, 3 times each in X, Y and Z directions		
Connection methed		Connector cord extended type, cord length : 200 ㎜, Applying code : 0.5 ㎟X4, Dimension : Ø5.5 ㎜ connector		
Material		Case : aluminum, front cover and lens: acryl		

■ Sturdy Aluminum body
■ Stability of shock and impact

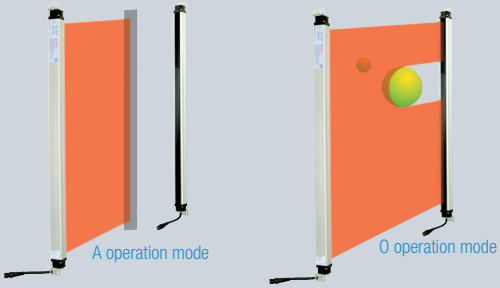


■ Various optical axis number (Maximum optical axis: 96 optical axises)
■ Various sensing width (minimum sensing width 120mm to maximum sensing width 950mm)



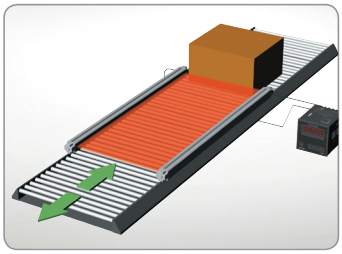
- PAN10 Series
  : 16 ~ 96 optical axis
- PAN20 Series
  : 8 ~ 48 optical axis
- PAN40 Series
  : 4 ~ 24 optical axis

■ 2 operation modes selection
- A operation mode: all optical axis sensing - output ON
- O operation mode: at least one axis sensing - output ON

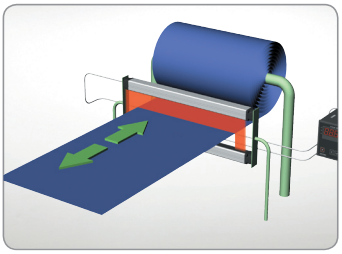


Example of using PAN series

Automation device application



moving control with conveyer



defective detection

Always with our customers

www.hynux.net

Control Switch | Control Instrument | Photo Sensor / Proximity Sensor | Thyristor Power Regulator | Sign tower / Signal light

World Leader in Control & Measurement

MAIN PRODUCTS

Temperature Controller / Recorder / Digital Counter / Timer / Analog Timer / Panelmeter / Multi Pulse Meter
Sensor / Rotary Encoder / Thyristor Power Regulator / Solid State Relay / Power Supply / Hoist switch
Foot switch / Mono lever switch / Micro switch / Power switch / Limit switch / Cam switch / Main switch
Sign tower / Signal light / Buzzer / Terminal block / Fuse holder / Control box / Cable connector

HANYOUNG nux

ADDRESS : 1381-3, Juan-Dong, Nam-Gu, Incheon, Korea
T E L : +82-32-876-4697 FAX : +82-32-876-4696
E-mail : overseas@hynux.com

CA 121005