

Photoelectric Sensor

K series



- Ideal for the detection of Glass/PET products. (KR-Q50 / KR-Q150 / KR-Q300)
- Test input to verify operation. (KT-700 Thru-beam type)
- IP67 rating, rugged design.

Applications



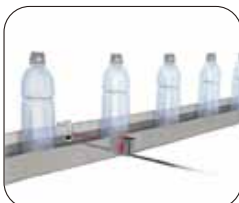
PET bottles moving on a conveyor



Pallet of PET bottles



Counting PET bottles

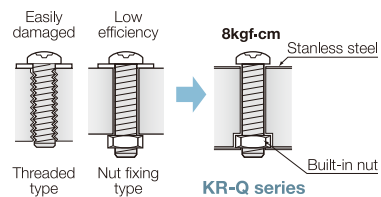
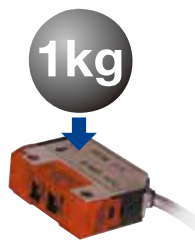


Sensing PET bottles through a narrow opening

Stainless steel housing. Built-in mounting nuts.

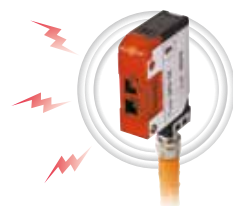
The stainless steel housing helps to protect the sensor against mechanical damage if it is struck by passing objects.

The built-in mounting nuts make installation easy and efficient, the problem of damaged threads due to over-tightening has been eliminated.

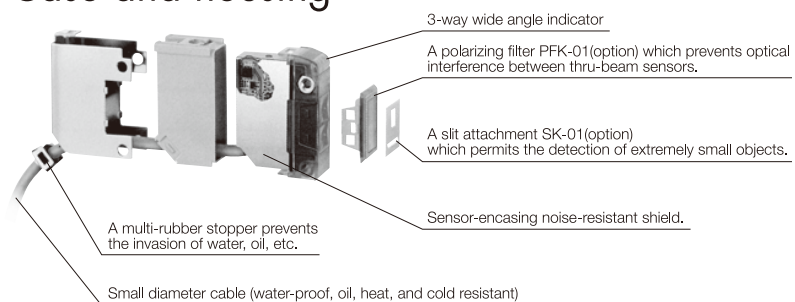


Surpasses the VDE standard for electrical noise immunity.

The noise resistant internal circuitry is designed in accordance with the strict VDE standard. Further, in-house Feilen Noise testing assures high reliability and compliance with international standards.



Case and housing



Specifications

Model		Thru-beam	Retro-reflective with polarizing Filter	Diffuse reflective	Convergent	Glass sensing			
Cable type	NPN	KT-700N	KR-250N	KD-40N	KD-L09N	KR-Q50N	KR-Q50NW	KR-Q150NW	KR-Q300NW
	PNP	KT-700P	KR-250P	KD-40P	KD-L09P	KR-Q50P	KR-Q50PW	KR-Q150PW	KR-Q300PW
Connector type	NPN	KT-700CN	KR-250CN	KD-40CN	KD-L09CN	KR-Q50CN	KR-Q50CNW	KR-Q150CNW	KR-Q300CNW
	PNP	KT-700CP	KR-250CP	KD-40CP	KD-L09CP	KR-Q50CP	KR-Q50CPW	KR-Q150CPW	KR-Q300CPW
Sensing distance		7 m	2.5 m	40 cm	1 - 9 cm	50 cm		1.5 m	2.5 m
Light source		Red							
Min detectable object		φ7 mm	φ40 mm	—	—	φ2.5 mm (Opaque object)		φ40 mm (Opaque object)	
Response time		1msec Max	0.7msec Max						
Hysteresis		NIL		20% Max	10% Max	NIL			
Sensitivity adjustment		Not equipped		Single turn potentiometer					
LED Indicator		Single Indicator							
Control output		NPN or PNP Open collector, 100mA Max / 30V DC							
Test input		Equipped	Not equipped						
Operating mode		Light ON / Dark ON selectable							
Insulation resistance		Min. 20 M Ohm / DC500V							
Supply voltage		10 to 30 V DC including 10% of ripple							
Power consumption		35mA Max	30mA Max						
Conformity		JIS, UL, CE, VDE							
Operating temp / humidity		-25 to +55°C / 35 to 85%RH							
Environmental illuminance		Sun Light:20,000 lux max. Incandescent lamp:4,000 lux max.							
Vibration resistance		10 50 55 Hz amplitude 1.5mm, X-Y-Z for 2 hours							
Protection category		IEC 144 IP67, VDE Level 3							
Material		ABS (Case), PC (Lens), SUS304 (Cover)							
Weight (Net)		25g (20g for emitter of thru-beam type)				25g			

Options

Standard reflector V-61



Small reflector V-42



Tiny reflector P45A



JCN-S : M8 Straight type

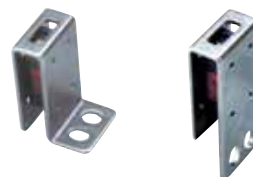


JCN-S : 2 meter
JCN-5S : 5 meter
JCN-10S : 10 meter

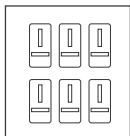
JCN-L : L-shape M8 type



JCN-L : 2 meter
JCN-5L : 5 meter
JCN-10L : 10 meter

Protective mounting brackets
LK-S01 LK-S02Sensor stand
PLN-1Fixture of Reflector
PLN-1M

SK-01 : Slit



PKF-01 : Filter

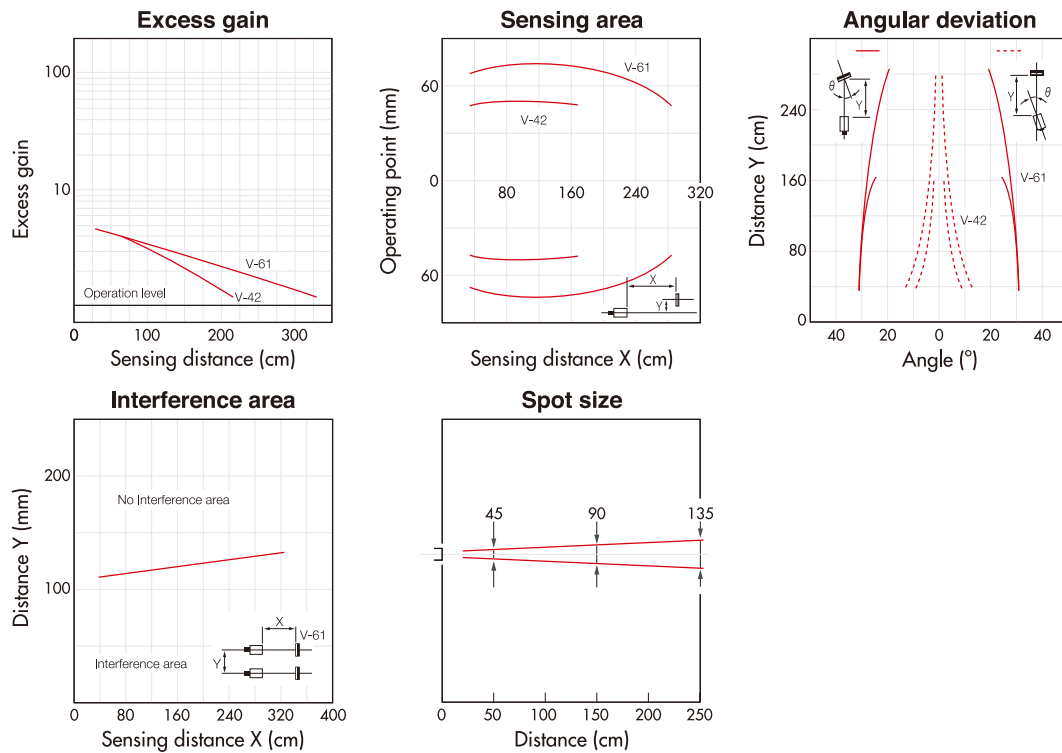


	Slit SK-01 (Emitter + receiver)	Pol.filter PFK-01	Slit + filter
Sensing distance	1000mm	1000mm	500mm
Min.dia	φ1mm	φ7mm	φ1mm

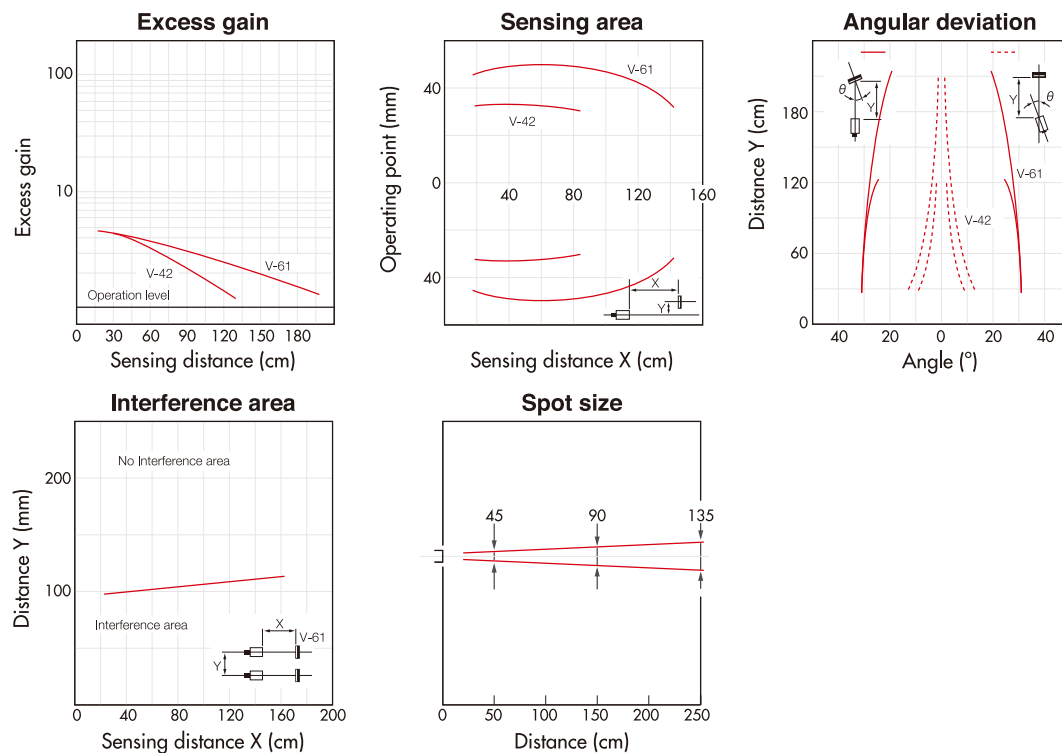
*Just peel the sticker off the backing and apply to the surface of the sensor.

Reference (typical)

KR-Q300NW



KR-Q150NW



C

C2

E

J

J2

J3

V

V2

V3
V4

SR-Q

S

Z
BGS-Z

Z2

Z3

ZM

K

BGS-2S

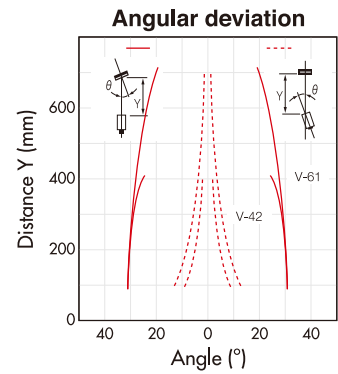
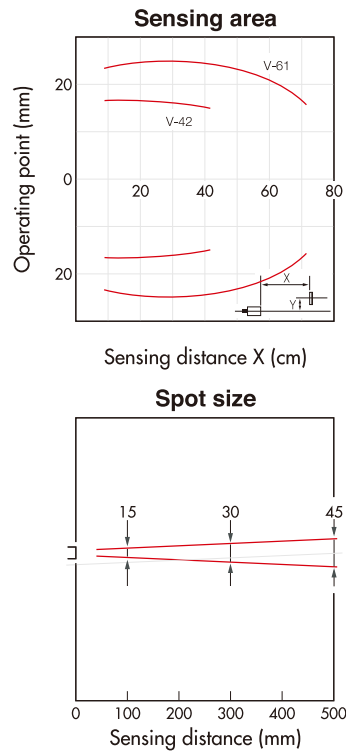
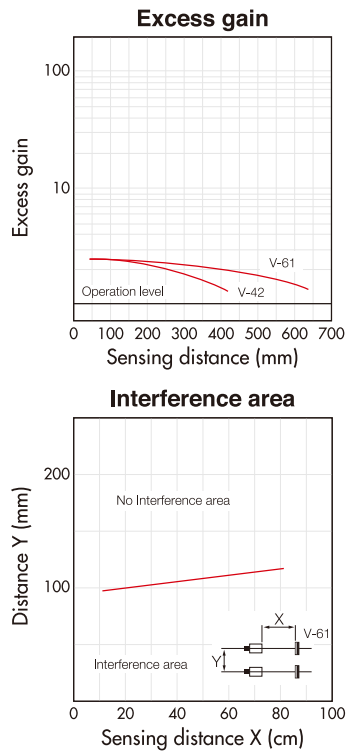
Y

DM-18T

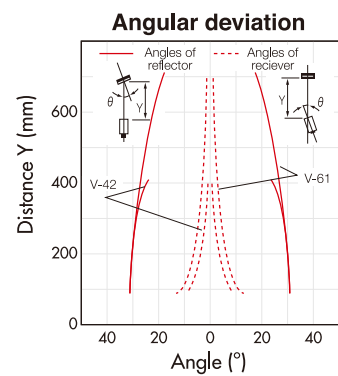
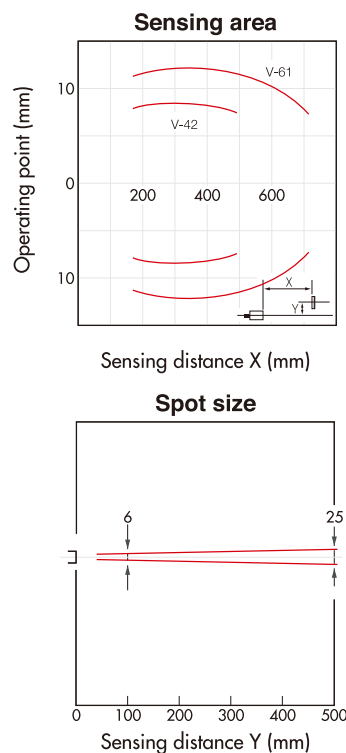
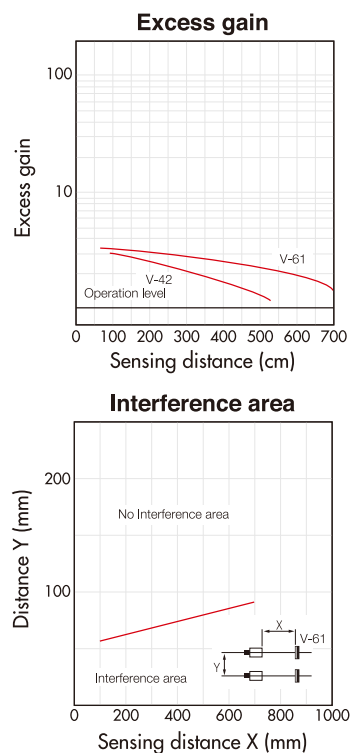
Accessory

Reference (typical)

KR-Q50NW



KR-Q50N



C

C2

E

J

J2

J3

V

V2

V3

V4

SR-Q

S

Z
BCS-Z

Z2

Z3

ZM

K

BGS-2S

Y

DM-18T

Accessory