



PHOTO SENSORS

KPS-Z SERIES



PHOTO SENSOR

CLASSIFICATION

KPS - Z
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MODEL	Type	Sensing Distance	Protection
DNS	Diffuse-Reflective	0.5m	-
2DN		1m	IP65
RNS	Retro-Reflective	3m	-
RN			IP65
TS	Through-Beam	15m	-
TNS			Emitter
T			Receiver
TN			Emitter
			Receiver

I/O Circuit Diagram

Model	Operation mode	Timing chart	Operation selector	Output Circuit
KPS-ZDNS	LIGHT NO		LIGHT NO	
KPS-Z2DN				
KPS-ZRNS				
KPS-ZRN	DARK NO		DARK NO	
KPS-ZTS				
KPS-ZTNS				
KPS-ZT	Through-beam emitter			
KPZ-ZRN				



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Specification

Type	Diffuse Reflective		Retro-reflective		Through-beam	
Model	KPS-ZDNS	KPS-Z2DN	KPS-ZRNS	KPS-ZRN	KPS-ZTS KPS-ZTNS	KPS-ZT KPS-ZTN
Detecting Distance	0.5m	1m	3m		15m	
Standard detecting object	20(cm)X20(cm) white paper		OPAQUE OBJECT, MINIMUM ϕ 75 DIAMETER		OPAQUE OBJECT, MINIMUM ϕ 12 DIAMETER	
Hysteresis	20% of detecting distance		-		-	
Light Source	IR LED(850nm)		IR LED(660nm)		IR LED(850nm)	
Voltage	12~24VDC \pm 10%					
Power consumption	25mA				Emitter: 20mA receiver: 17mA	
Output	NPN open collector					
Operation Mode	Light ON/Dark ON switching					
Response time	1ms					
External light interference	incandescent light 2,000 lx					
Ambient temperature	-20~+60°C					
Ambient humidity	35~85% RH					
Insulation resistance	min. 20M Ω (DC500V)					
Dielectric strength	50/60Hz 500VAC for 1 minute					
Vibration resistance	10~55Hz at double amplitude: 1.5mm(X,Y,Z directions) for 1 hour					
Shock resistance	50G					
Protection	None	IP65	None	IP65	None	IP65
Indicator	Receiver: Operation (Red), Safe (Green) Transmitter: Power (Green)					
Weight	50g					
Material	Case: PBT, Lens: PC					

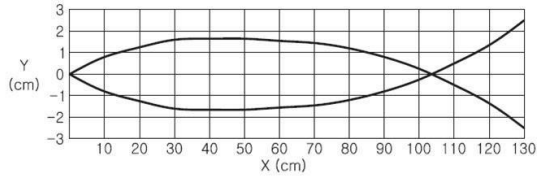
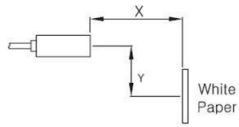


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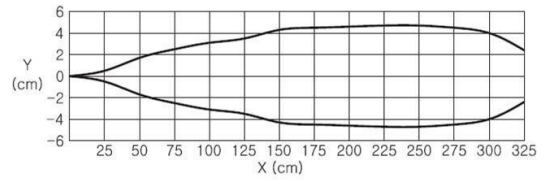
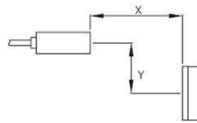
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Parallel Operating Range

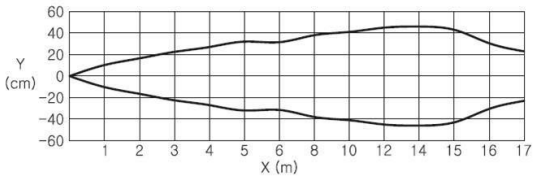
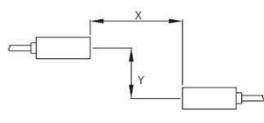
KPS-Z2DN



KPS-ZRN

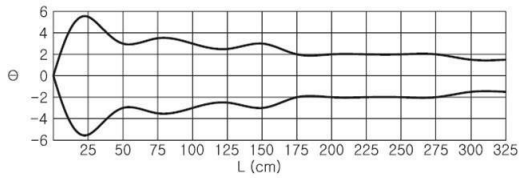
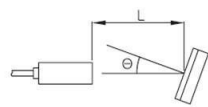


KPS-ZT/ZTN



Parallel Operating Range

KPS-ZRN



KPS-ZT/ZTN

