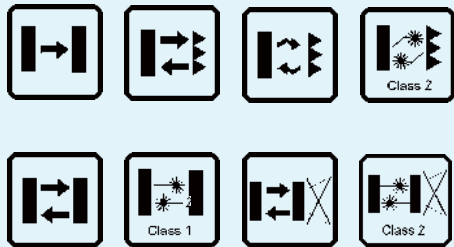


GHK50T...

- High-resolution sensors, powerful background suppression ,may provide an LED or laser transmitter models.
- Compact rectangular case ,the height of installation flexibility.
- Including laser transmitter adjustable-field polarzation and diffuse reflective type product.
- Provides Vac/dc powered models sensor.
- Has a sensitivity/detection distance trimmer potentiometer
- Connected via cable or M12 connector can be rotated.
- Complementary PNP、 NPN output ,PNP/NPN bipolar output selectable light or dark ,SPDTrelay output.
- Detection diagrams : page 047-048
- Technical data : page 048-049
- Connections : page 049-050
- Dimensions : page 050
- Connector : page 114
- Reflector : page 117
- Mounting brackets : page 126



BGQ-Light series , K50 Compact photoelectric sensor , supply voltage-dependent on the model : 10-30 Vdc ; 24...240 Vac or 24...60 Vdc (SPDT relay output)

Type ⁽¹⁾	Sensing mode	Range ⁽²⁾	Light emission	Output type	Connection ⁽⁴⁾	Excess gain Light chart	ID NO.
GHK50T-E25M-NA6/2M-R	Emitter	25 m	RED 640 nm	————	2m cable	———— / LP049	A163J000
GHK50T-E25M-NA6-R				————	4 pins M12 connector	———— / LP049	A163J100
GHK50T-E25M-NA32/2M-R				————	2m cable	———— / LP049	A163J001
GHK50T-R25M-E6PN6/2M-FR	Receiver	25 m	————	NPN/PNP LO or DO	2m cable	————	A1646000
GHK50T-R25M-E6PN6-FR				NPN/PNP LO or DO	4 pins M12 connector	————	A1646100
GHK50T-R25M-E2P6/2M-FR				PNP NO and NC	2m cable	————	A1642000
GHK50T-R25M-E2P6-FR				PNP NO and NC	4 pins M12 connector	————	A1642100
GHK50T-R25M-E2N6/2M-FR				NPN NO and NC	2m cable	————	A1645000
GHK50T-R25M-E2N6-FR				NPN NO and NC	4 pins M12 connector	————	A1645100
GHK50T-R25M-E2R32/2M				SPDT Relay	2m cable	————	A1647000
GHK50T-BP20M-E2P6-FR _{J2}				Laser polarized retroreflex	0.3 ... 20 m Based on : GHZ63-RT	class 2 laser 	PNP NO and NC
GHK50T-BP20M-E2N6-FR _{J2}	NPN NO and NC	4 pins M12 connector	———— / LP050				A16D5100
GHK50T-BP10M-E6PN6/2M-FRR	polarized retroreflex	0 ... 10 m , Based on : GHZD83-RT	RED 640 nm	NPN/PNP LO or DO	2m cable	———— / LP051	A1626000
GHK50T-BP10M-E6PN6-FRR				NPN/PNP LO or DO	4 pins M12 connector	———— / LP051	A1626100
GHK50T-BP10M-E2P6/2M-FRR				PNP NO and NC	2m cable	———— / LP051	A1622000
GHK50T-BP10M-E2P6-FRR				PNP NO and NC	4 pins M12 connector	———— / LP051	A1622100
GHK50T-BP10M-E2N6-FRR				NPN NO and NC	4 pins M12 connector	———— / LP051	A1625100
GHK50T-BP10M-E2R32/2M-FRR				SPDT Relay	2m cable	———— / LP051	A1627000



(1) Other detection mode, Please contact the product manager

(2) Retro-reflective sensing distance depends on the selected model reflecting plate.

(3)

(4) The model with other connections, Please contact the product manager

BGQ-Light series , K50 Compact photoelectric sensor , supply voltage-depending on the model : 10-30 Vdc ; 24...240 Vac or 24...60 Vdc (SPDT relay output)

Type ⁽¹⁾	Sensing mode	Range ⁽²⁾	Light emission	Output type	Connection ⁽⁴⁾	Excess gain Light chart	ID NO.	
GHK50T-D900-E2P6/2M-FRJ2	Laser diffuse	0 ... 900 mm	class 2 laser 	PNP NO and NC	2m cable	— / LP052	A16B2000	
GHK50T-D900-E2P6-FRJ2				PNP NO and NC	4 pins M12 connector	— / LP052	A16B2100	
GHK50T-D900-E2N6/2M-FRJ2				NPN NO and NC	2m cable	— / LP052	A16B5000	
GHK50T-D900-E2N6-FRJ2				NPN NO and NC	4 pins M12 connector	— / LP052	A16B5100	
GHK50T-DL2M-E6PN6/2M-FRR	Long range Diffuse	0 ... 2 m	RED 640 nm	NPN/PNP LO or DO	2m cable	— / LP053	A1606000	
GHK50T-DL2M-E6PN6-FRR				NPN/PNP LO or DO	4 pins M12 connector	— / LP053	A1606100	
GHK50T-DL2M-E2P6/2M-FRR				PNP NO and NC	2m cable	— / LP053	A1602000	
GHK50T-DL2M-E2P6-FRR				PNP NO and NC	4 pins M12 connector	— / LP053	A1602100	
GHK50T-DL2M-E2N6/2M-FRR				NPN NO and NC	2m cable	— / LP053	A1605000	
GHK50T-DL2M-E2N6-FRR				NPN NO and NC	4 pins M12 connector	— / LP053	A1605100	
GHK50T-DL2M-E2R32/2M-FRR				SPDT Relay	2m cable	— / LP053	A1607000	
GHK50T-BY150-E2P6-FRJ2				Laser background suppression	Range : 30 ... 150 mm	class 2 laser 	PNP NO and NC	4 pins M12 connector
GHK50T-BY150-E2N6-FRJ2	Range : 50 ... 350 mm	PNP NO and NC	4 pins M12 connector		— / LP054		A16F5100	
GHK50T-BY350-E2P6-FRJ2		NPN NO and NC	4 pins M12 connector		— / LP055		A16F2101	
GHK50T-BY350-E2N6-FRJ2	NPN NO and NC	4 pins M12 connector	— / LP055		A16F5101			
GHK50T-BY300-E6PN6/2M-FRR	background suppression	Range : 30 ... 300 mm	RED 660 nm	NPN/PNP LO or DO	2m cable	— / LP056	A1666000	
GHK50T-BY300-E6PN6-FRR				NPN/PNP LO or DO	4 pins M12 connector	— / LP056	A1666100	
GHK50T-BY300-E2P6/2M-FRR				PNP NO and NC	2m cable	— / LP056	A1662000	
GHK50T-BY300-E2P6-FRR				PNP NO and NC	4 pins M12 connector	— / LP056	A1662100	
GHK50T-BY300-E2N6-FRR		NPN NO and NC		4 pins M12 connector	— / LP056	A1665100		
GHK50T-BY600-E2P6/2M-FRR		Range : 60 ... 600 mm		PNP NO and NC	2m cable	— / LP057	A1662001	
GHK50T-BY600-E2P6-FRR					PNP NO and NC	4 pins M12 connector	— / LP057	A1662101
GHK50T-BY600-E2N6-FRR					NPN NO and NC	4 pins M12 connector	— / LP057	A1665101
GHK50T-BY1200-E2P6/2M-FRR					Range : 60 ... 1200 mm	PNP NO and NC	2m cable	— / LP058
GHK50T-BY1200-E2P6-FRR		PNP NO and NC		4 pins M12 connector			— / LP058	A1662102
GHK50T-BY1200-E2N6-FRR		NPN NO and NC		4 pins M12 connector			— / LP058	A1665102
GHK50T-BY2000-E2P6/2M-FRR		Range : 200 ... 2000 mm		PNP NO and NC			2m cable	— / LP059
GHK50T-BY2000-E2P6-FRR	PNP NO and NC		4 pins M12 connector		— / LP059	A1662103		
GHK50T-BY2000-E2N6-FRR	NPN NO and NC		4 pins M12 connector		— / LP059	A1665103		
GHK50T-BY2000-E2N6-FRR	NPN NO and NC		4 pins M12 connector		— / LP059	A1665103		

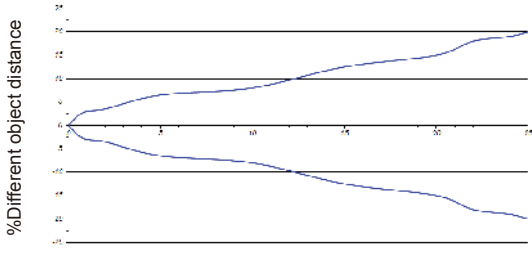
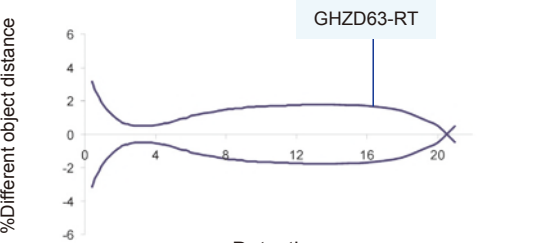
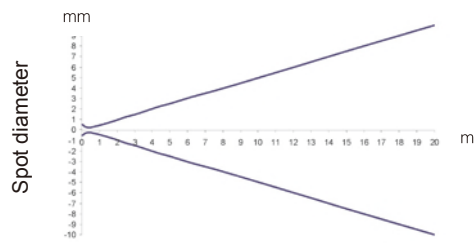
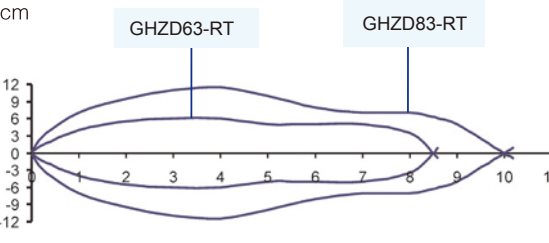
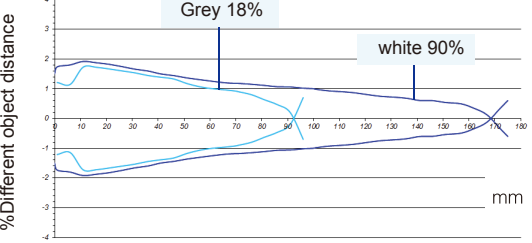
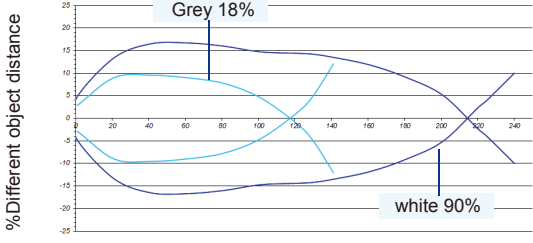
(1)Other detection mode,Please contact the product manager

(2)Retro-reflective sensing distance depends on the selected model reflecting plate.

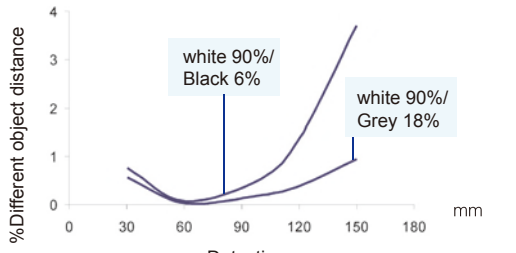
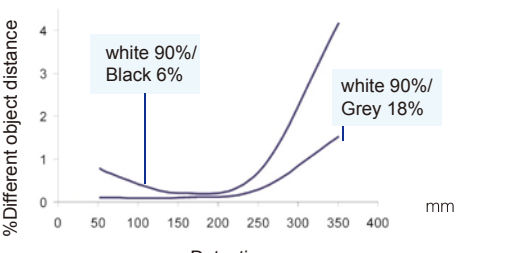
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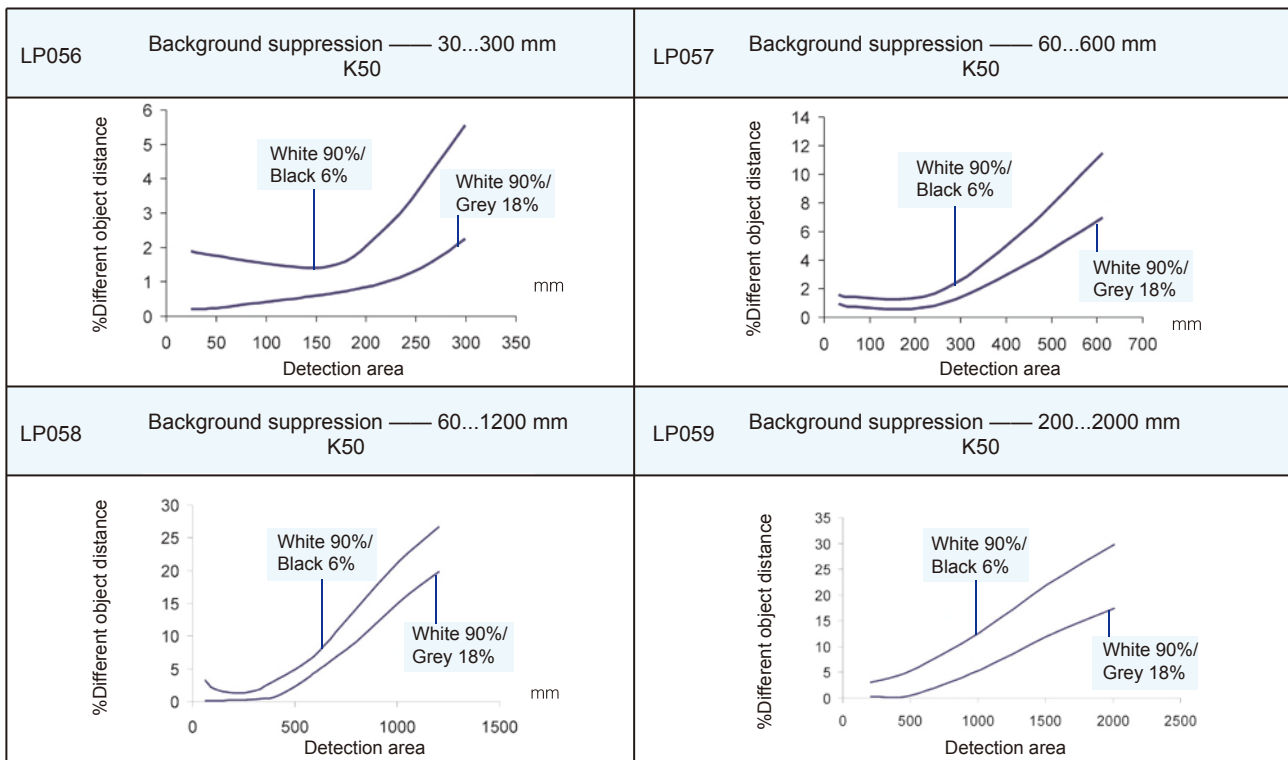
(4)The model with other connections,Please contact the product manager

Detection diagrams

<p>LP049 Through-beam K50</p>	<p>LP050 Laser polarized retroreflex K50</p>
 <p>%Different object distance</p> <p>Detection area</p>	 <p>%Different object distance</p> <p>Detection area</p>
<p>Laser polarized retroreflex — Spot diameter K50</p>	<p>LP051 Polarized retroreflex K50</p>
 <p>Spot diameter</p> <p>Detection distance</p>	 <p>%Different object distance</p> <p>Detection area</p>
<p>LP052 Laser diffuse K50</p>	<p>LP053 Long range Diffuse K50</p>
 <p>%Different object distance</p> <p>Detection area</p>	 <p>%Different object distance</p> <p>Detection area</p>

Background suppression sensor breakpoint deviation


<p>LP054 Laser background suppression — 30...150 mm K50</p>	<p>LP055 Laser background suppression — 50...350 mm K50</p>
 <p>%Different object distance</p> <p>Detection area</p>	 <p>%Different object distance</p> <p>Detection area</p>



Detection diagrams

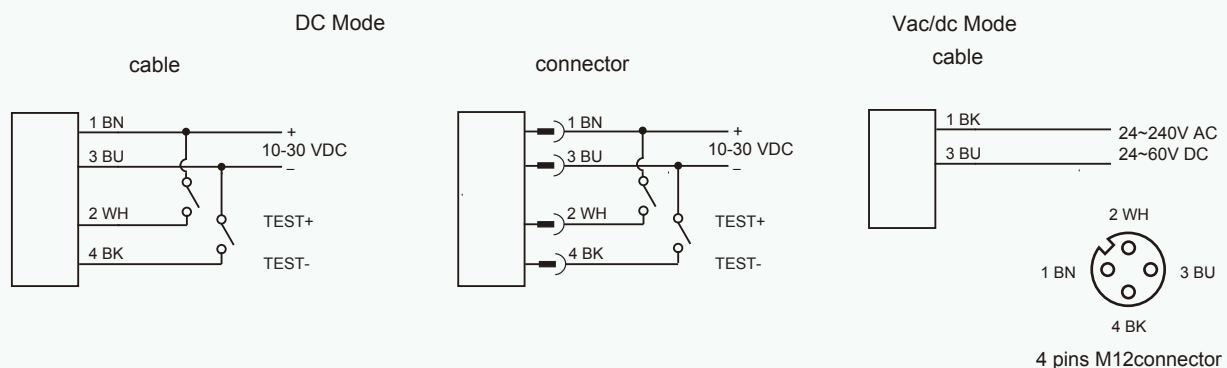
BGQ-Light series , K50 Compact photoelectric sensor , supply voltage-depending on the model : 10-30 Vdc ; 24...240 Vac or 24...60 Vdc (SPDT relay output)

<p>Supply voltage</p>	<p>SPDT Relay Output: 24...240 Vac/ 24...60 Vdc , ripple : ≤10% , Power Consumption < 3 VA ; PNP、 NPN Output : 10...30 Vdc , ripple :≤2 Vpp , Power Consumption < 30mA ;</p>
<p>Laser properties</p>	<p>EN 60825-1 Standard ,class 2;CDRH21 CFR 1040.10 Standard ,class 2;Wavelength: Class 2: 645...665 nm , T_A=25°C average life is 100000 hour,Visible red Pulsed light : Laser Power ≤5mW ; Pulse duration =5 μs ; Highest frequency =32 KHz .</p>
<p>Power supply protection</p>	<p>Reverse polarity protection,receiver/sensor output of overload and short circuit protection .</p>
<p>Auxiliary function</p>	<p>Emitter:White (TEST+) connected to +Vdc ,while the black (TEST-) connected to 0V: Emitter is turned off.;</p>
<p>Resolution</p>	<p>Laser background suppression: 30...150 mm : 0.2mm@60 mm ; 50..350 mm : 0.4mm@150 mm ; Laser diffuse , Laser polarized retroreflex : 0.5mm@0.5m (Base on : GHZD63-RT) ;</p>
<p>Spot size</p>	<p>Polarized retroreflex: 80mm@3m (Base on : GHZD83-RT) ; Background suppression: 30...300 mm : 6 x 6 mm@200 mm ; 60...600/1200 mm : 15 x 15 mm@400 mm ; 200...2000 mm : 200 x 200 mm@2m ;</p>
<p>Setting</p>	<p>Laser polarized retroreflex , Laser diffuse , Through-beam , Polarized retroreflex , Diffuse : 270° sensitivity trimmer ; Laser background suppression : 30...150 mm : 4 turns sensitivity trimmer ; 50..350 mm : 6 turns sensitivity trimmer ;</p>
<p>Indicator</p>	<p>Emitter: Green LED Power indicator; Receiver, Others: Yellow LED Output state indicator, Green LED signal stability indicator;</p>
<p>Output</p>	<p>Laser polarized retroreflex , Laser diffuse , Laser background suppression : PNP(NO and NC) , or NPN(NO +NC) ; Through-beam , Polarized retroreflex , Diffuse : PNP、 NPN(NO and NC) , PNP/NPN bipolar(LO or DO) , SPDT Relay output ; Background suppression : PNP、 NPN(NO and NC) , PNP/NPN bipolar(LO or DO) ;</p>

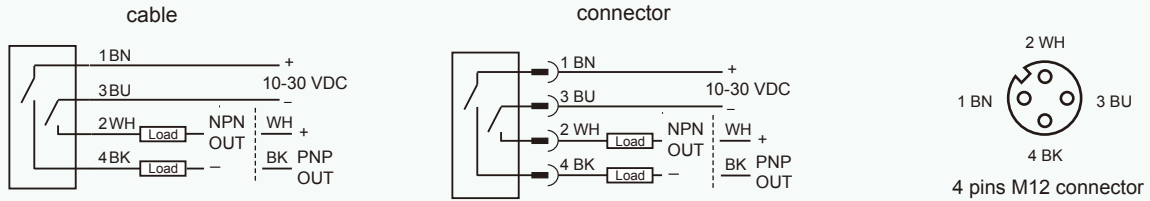
BGQ-Light series , K50 Compact photoelectric sensor , supply voltage-depending on the model : 10-30 Vdc ; 24...240 Vac or 24...60 Vdc (SPDT relay output)	
Output current /Contact capacity(SPDT)	Receiver , Others (10-30 Vdc power supply) : ≤100 mA Receiver , polarized retroreflex , Diffuse (24...240 Vac 或 24...60 Vdc power supply) : max 2A
Output voltage drop	Receiver , Others (10-30 Vdc power supply) : ≤2 V
Insulation resistance	Under 500Vdc voltage ,resistance between electronics and housing : > 20 MΩ;
Response time	Laser polarized retroreflex , Laser Diffuse : 200 μs ; Polarized retroreflex , Diffuse : 500 μs ; Through-beam: 1 ms ; Laser background suppression: 30...150 mm : 140 μs ; 50...350 mm : 200 μs ; Background suppression: 30...300 mm/60...600 mm : 500 μs ; 60...1200 mm : 1 ms ; 200...2000 mm : 1.5 ms ;
switching frequency	Laser polarized retroreflex , Laser Diffuse : 2.5 kHz ; Polarized retroreflex , Diffuse : 1 kHz ; Through-beam: 500 Hz ; Laser background suppression: 30...150 mm : 3.5 kHz ; 50...350 mm : 2.5 kHz ; Background suppression: 30...300 mm/60...600 mm : 1 kHz ; 60...1200 mm : 500 Hz ; 200...2000 mm : 330 Hz ;
Run mode	SPDT Relay Output , PNP/NPN bipolar(LO or DO): 1 turns sensitivity trimmer Receiver , Laser polarized retroreflex , Polarized retroreflex : NO DO/NC LO ; Laser Diffuse , Diffuse , Background suppression : NO LO/NC DO ;
Connections	DC Mode : 2m Ø 4 mm cable , PVC , 4X0.14 mm ² ; Vac/dc Mode : 2m Ø 5 mm cable , PVC ; or 4 pins M12X1 connector.
Timing function	Background suppression product with timing function (Model Suffix "T") , Timing range :0 ... 1 s
Mechanical protection	IP67
Housing material	ABS
Lens material	PMMA
operating temperature	-10 ... +55°C ;
storage temperature	-20 ... +70°C ;
Reference standard	EN 60947-5-2
Vibration	Amplitude on each axis (X , Y , Z) direction is 0.5mm , frequency 10...55Hz (EN 60068-2-6 compliant)
Shock resistance	Each axis (X , Y , Z) can be tolerated 6 (30G) impact direction , Duration 11ms (EN 60068-2-27 compliant)
Certification	

Connections

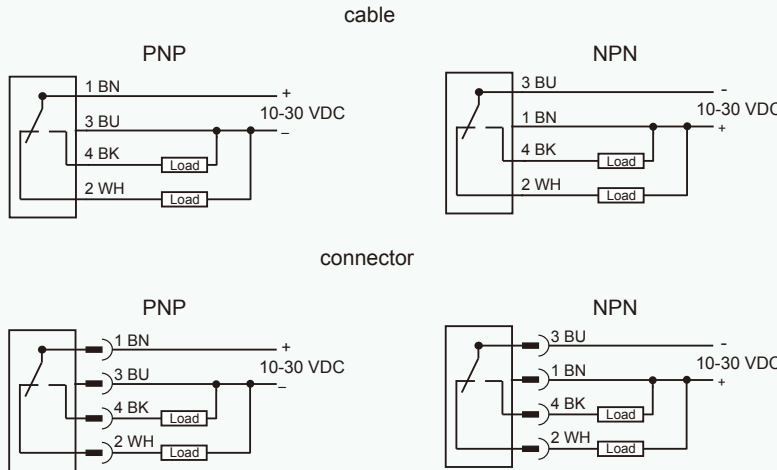
1. K50 Through-beam (DC , Vac/dc) Emitter ;



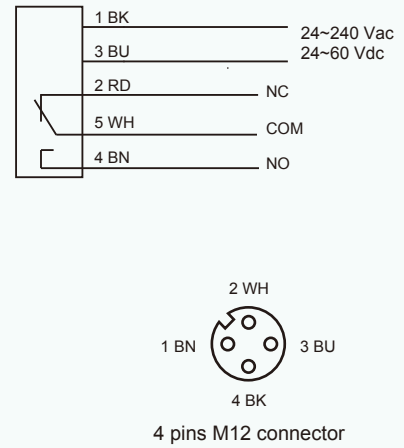
2. K50 NPN/PNP bipolar(LO or DO):



3. K50 NPN or PNP(NO and NC)



4. K50 SPDT Relay Output cable



Dimensions

