Photoelectric proximity sensors VL25 series

■ Highlights

Mini-rectangular photoelectric sensors VL25 series, with high performance and 25.4mm standard mounting hole distance, are available as BGS (background suppression) mode, Diffused mode, retro-reflective mode, and through beam mode.
With optional red beam or laser beam source, they are suitable for printing and packaging, pharmaceutical, electronic, small equipment and other application fields.

- High quality sensors series
- Polarized retro-reflective function for stable and reliable object detection
  Retro-reflective model object detection
- BGS function for stable and reliable defuse model object detection
- Optional infra-red light source, red light source or laser light source configuration
- Bright sensors led indicators for easy power and detection recognition
- Water proof body design for high humidity stability IP67 degree protection
- Adjustable sensing range using potentiometer
- Mounting bracket included with 2 nuts include in package
- Output 2 LED indicators (green LED for no detection,
  red LED for object detection)
- 2m 4 wire cable including in package
- 12-24V DC power supply voltage
- 4 wire, NPN or PNP output (NO + NC)
- High switching frequency

■ Input/Output circuit

Cable

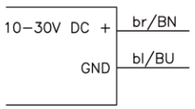


Fig.1

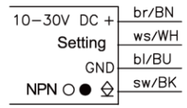


Fig.2

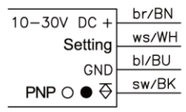


Fig.3

M8 connector

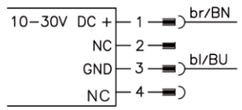


Fig.4

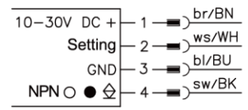


Fig.5

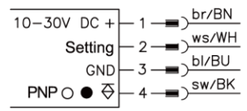
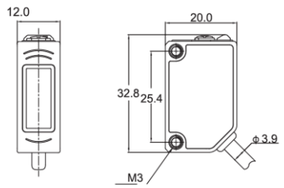


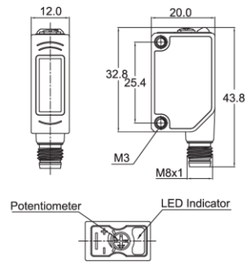
Fig.6

■ Dimension

Cable



M8 connector



■ Product parameters

Types of		Categories		Categories		Categories	
		Through-beam type		Retro-reflective		Diffuse reflection	
Connection method		Cable type	M8 Connector	Cable type	M8 Connector	Cable type	M8 Connector
Model	NPN	See Note 5	See Note 5	See Note 5	See Note 5	See Note 5	See Note 5
	PNP	See Note 5	See Note 5	See Note 5	See Note 5	See Note 5	See Note 5
		See Note 5		See Note 5		See Note 5	
Smallest detectable object		Ø18mm or more opaque object (Setting distance between emitter and receiver is 12m)		Ø54mm or more opaque, translucent or transparent object(note2,4)		Opaque, translucent or transparent body (Note 4)	
Switch mode		Light on: Setting connects U+ | Dark on: Setting connects U-					
Voltage		12 ～ 24V Dc±10%, pulsation (P-P): below 10%					
Current consumption		Transmiter: below 25mA; Receiver: 20mA or less		20mA or less		Below 25mA	
Output		<NPN output type> NPN open collector transistor Maximum sink current: 200mA Applied voltage: 24V DC or less (between output and 0V) Residual voltage: 1.5V or less		<PNP output type> PNP open collector transistor Maximum sink current: 200mA External voltage: 24V DC or less (between output and +V) Residual voltage: 1.5V or less			
Sensitivity adjustment		Single direction potentiometer					
Response time		Less than 1ms					
Operation indicator		Yellow LED indicator (lights up when the output is ON), through type on the receiver		Yellow LED indicator (lights up when the output is ON)			
Power indicator		Green LED (lights up when power is applied)					
Environmental resistance	Population degree	3 (Industrial environment)					
	Protection	IP65(IEC)					
	Temp.	-25 ～ +55℃ (Becareful not to condense or freeze), when stored: -40 ～ +70℃					
	Humidity	50%RH(70℃)					
	Light intensity	Incandescent lamp: the illuminance of the light-receiving surface is below 5000lx					
	EMC	EN 60947-5-2					
	Voltage reverse protection	500V AC for one min. between all supply terminals connected together and enclosure					
	Vibration resistance	10~55Hz frequency,0.5mm amplitude in X,Y and Z directions for 1.5 hours each					
	Shock resistance	10~55Hz frequency,0.5mm amplitude in X,Y and Z directions for 1.5 hours each					
Emitting element		Infrared LED(peak emission wavelength 850nm, modulated) / Red (625nm) / class 1 laser					
Material		Enclosure：ABS Lens:PMMA					
Cable		One 4-core (rubber cable, 2m)					
Accesories		Set of L shape mounting bracket and screws					

(note1) The default measure temperature conditions is +23 ℃, when didn't specify measure condition.
(note2) Detection range and objects of Mirror reflective type sensor apply to TD-08 reflector.
(note3) Detection range and hysteresis of diffuse reflective type sensor apply to detection objects of gloss white paper(200×200mm).
(note4) Please use actual sensor to validate testing effect, before testing transparent or translucent object.
(note5) Please use the model brochure to check the appropriate part number