

# GL SERIES MINIATURE SLOT SENSOR

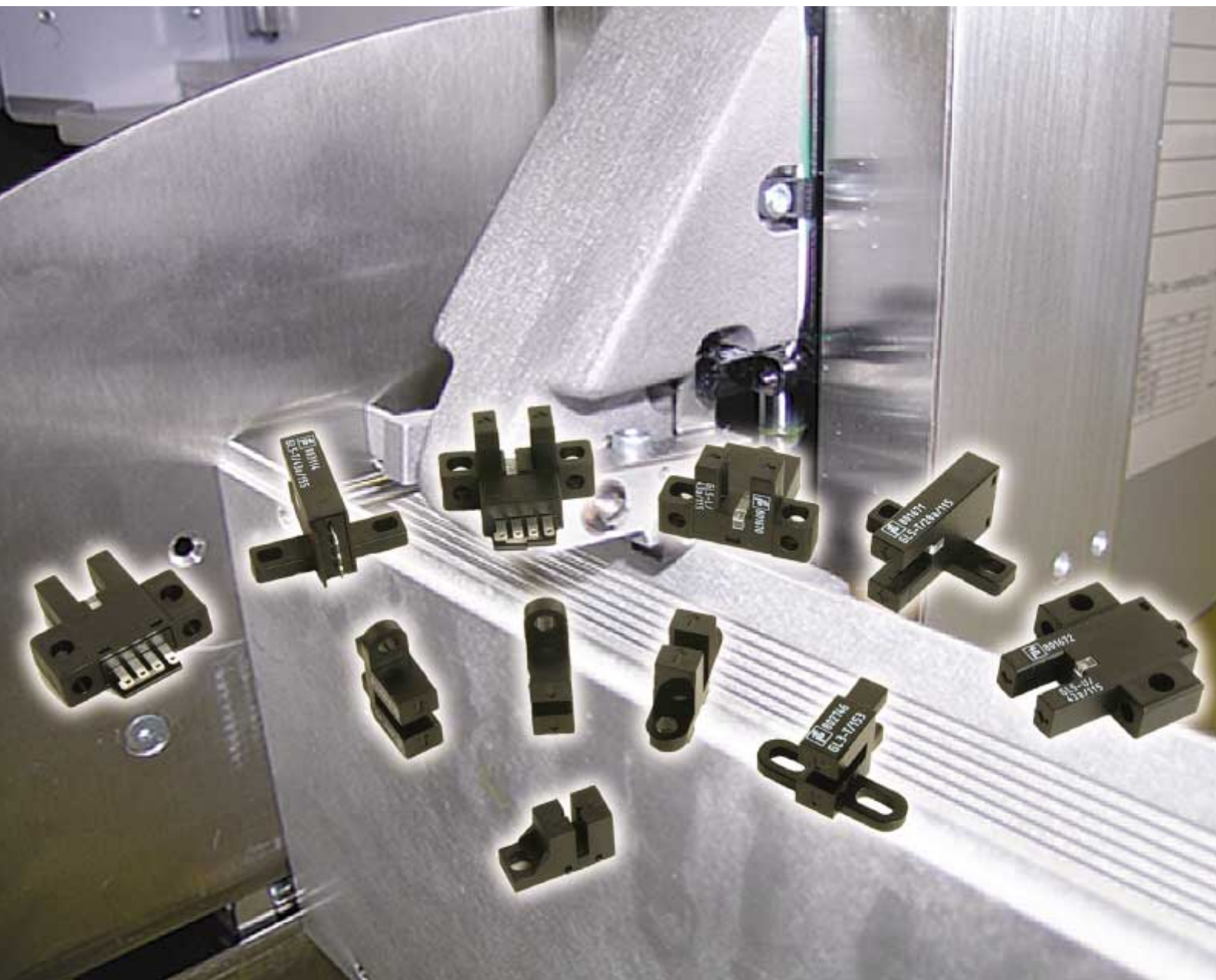


## GL Series offers:

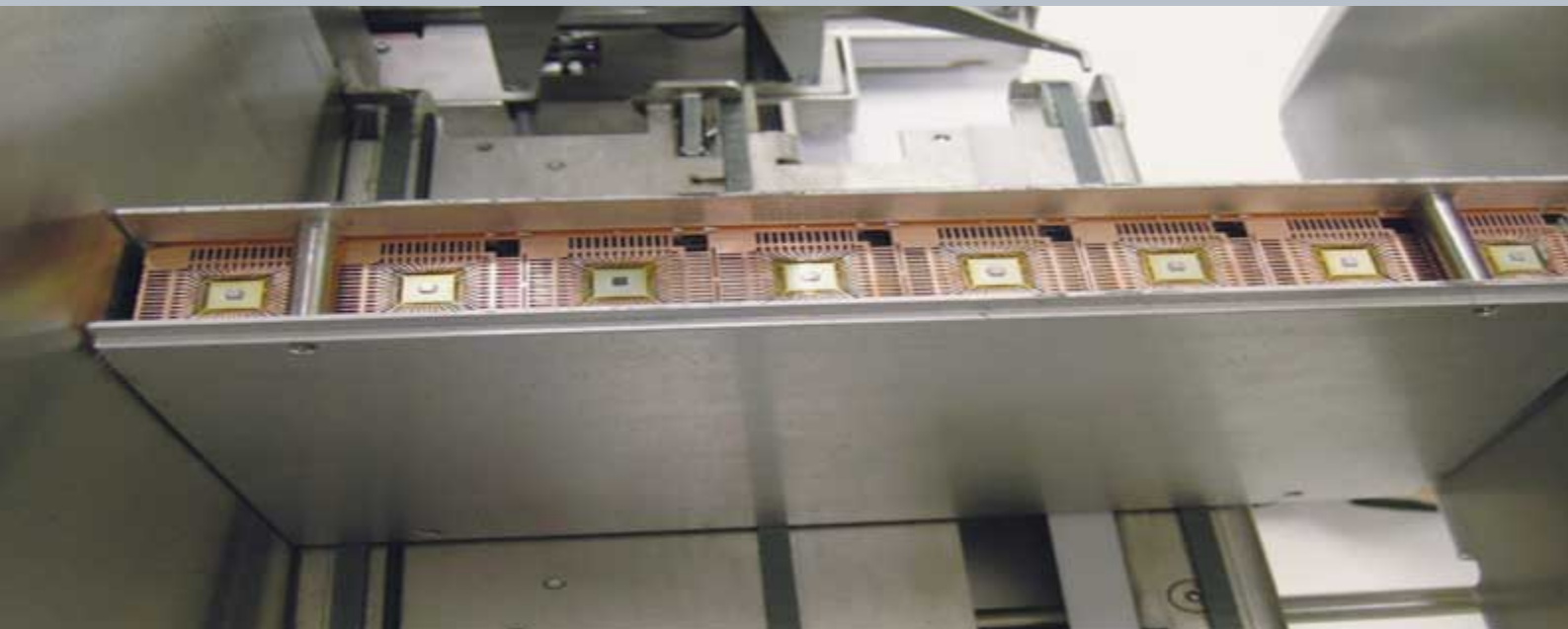
- Reliability
- Variety
- Economy

## Fulfilling your needs for sensors for a host of assembly solutions

Sensors of the GL Series guarantee precise and error free detection over and over again. Available in slot widths of 2 mm, 3 mm and 5 mm, the GL Series provides you with multiple mounting configurations so varied that you will surely find a direct fit to meet your individual needs.







### GL2 – “MINI GENIUS”

Need to detect small targets in deep confined spaces? Take a look at GL2. With its 1.8 mm slot size, this mini genius is a great performer. Reliable detection of small and tiny targets is possible with its small aperture slits. Its “Flat” mounting and wires that exit from the side of the housing enables it an unmatched performance. For a power packed performance in a small housing, GL2 is a natural choice.



### GL3 – ULTIMATE FLEXIBILITY AND ECONOMY

Need flexibility in mounting or housing configurations for similar targets? With its 3.15 mm slot size, the GL3 series offers high flexibility in its four housing configurations. Its unique optical design ensures a high immunity to interference from the ambient light. An extra smooth exterior optical surface does not permit easy collection of dust. Each housing type is available with an in-built resistor that saves you from the need of extra wiring and external components.



### GL5 – ULTIMATE FEATURE PACKED PERFORMANCE

Need high end features that pack performance in a small sensor? With its 5 mm slot width, the GL5 series offers ultimate performance in a miniature housing. A self-contained sensor series that has the highest switching frequency in its class, it readily meets your demanding applications. Its unique LED indicator design allows the switching of this sensor to be viewed from virtually all angles and from phenomenal distances. It also provides you easy visual diagnostics in deep/dark and confined spaces. Flexibility of use and mounting is further enhanced with availability of both – its 2 m cabled and connector versions.



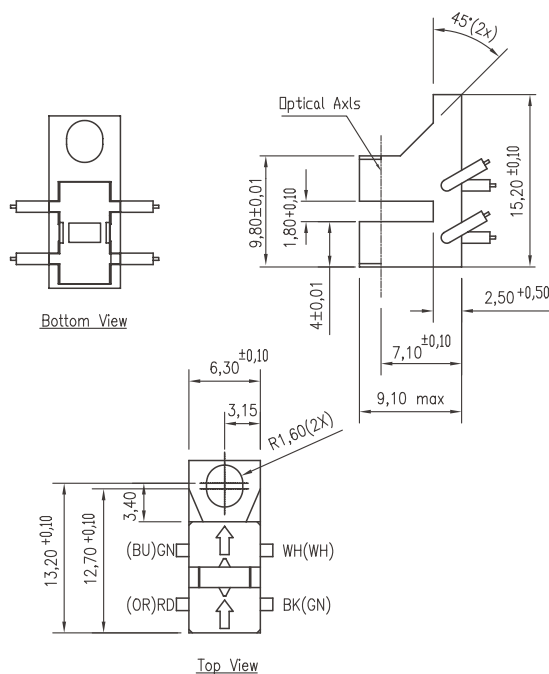
# GL2 AND GL3 – ULTIMATE FLEXIBILITY AND ECONOMY



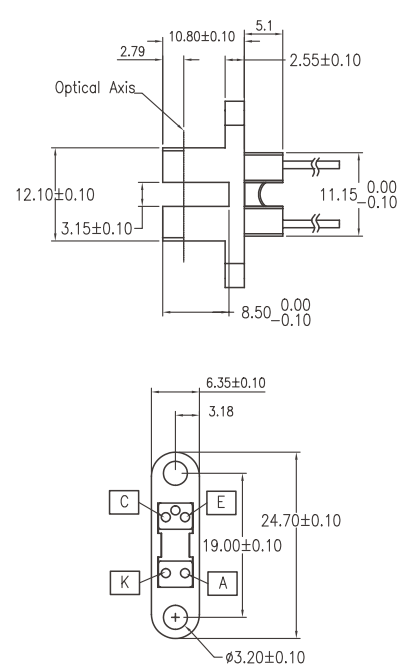
	GL2 P-Type	GL3 U-Type		GL3 T-Type
Version	P-Type	4-wire version	3-wire version	4-wire version
Models	GL2-P/153	GL3-U/153	GL3-U/153-Y803733	GL3-T/153
Slot width	1.8 mm	3.15 mm	3.15 mm	3.15 mm
Supply Voltage	5 ... 30 V DC	5 ... 30 V DC	24 V DC	5 ... 30 V DC
Housing Material	PC, infrared transparent black	PC, infrared transparent black	PC, infrared transparent black	PC, infrared transparent black
Response Time $T_{on}$ , $T_{off}$	18 $\mu$ s (typ.), 25 $\mu$ s (max.)	18 $\mu$ s (typ.), 25 $\mu$ s (max.); $V_{cc}=5$ V, $I_C=1$ mA, $R_L=1$ K	18 $\mu$ s (typ.), 25 $\mu$ s (max.); $V_{cc}=5$ V, $I_C=1$ mA, $R_L=1$ K	18 $\mu$ s (typ.), 25 $\mu$ s (max.); $V_{cc}=5$ V, $I_C=1$ mA, $R_L=1$ K
Ambient Illuminator	Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)
Built-in Resistor	Available in 4-wire version and 3 wire version: 2K, 1% Tc50, 0.4 W	Available in 4-wire version and 3 wire version: 2K, 1% Tc50, 0.4 W	Available in 4-wire version and 3 wire version: 2K, 1% Tc50, 0.4 W	Available in 4-wire version and 3 wire version: 2K, 1% Tc50, 0.4 W

## Technical Dimensions

GL2-P/153



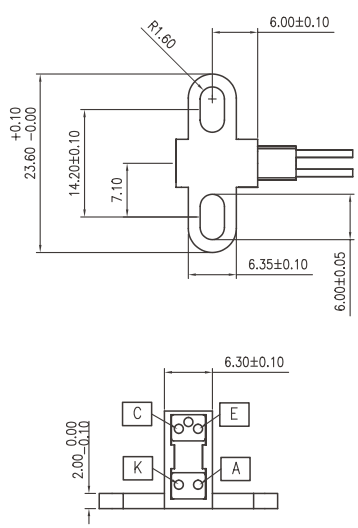
GL3-U/153



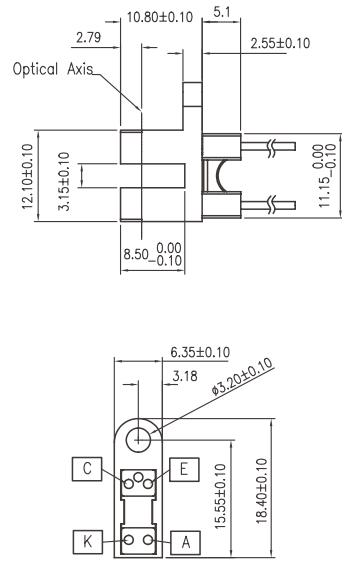


-Type	GL3 L-Type		GL3 P-Type	
	4-wire version	3-wire version	4-wire version	3-wire version
3-wire version	4-wire version	3-wire version	4-wire version	3-wire version
GL3-T/153-Y803732	GL3-L/153	GL3-L/153-Y803730	GL3-P/153	GL3-P/153-Y803731
3.15 mm	3.15 mm	3.15 mm	3.15 mm	3.15 mm
24 V DC	5 ... 30 V DC	24 V DC	5 ... 30 V DC	24 V DC
PC, infrared transparent black	PC, infrared transparent black	PC, infrared transparent black	PC, infrared transparent black	PC, infrared transparent black
18 µs (typ.), 25 µs (max.); Vcc=5 V, IC=1 mA, RL=1 K	18 µs (typ.), 25 µs (max.); Vcc=5 V, IC=1 mA, RL=1 K	18 µs (typ.), 25 µs (max.); Vcc=5 V, IC=1 mA, RL=1 K	18 µs (typ.), 25 µs (max.); Vcc=5 V, IC=1 mA, RL=1 K	18 µs (typ.), 25 µs (max.); Vcc=5 V, IC=1 mA, RL=1 K
Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)
Available in 4-wire version and 3 wire version: 2K, 1% Tc50, 0.4 W	Available in 4-wire version and 3 wire version: 2K, 1% Tc50, 0.4 W	Available in 4-wire version and 3 wire version: 2K, 1% Tc50, 0.4 W	Available in 4-wire version and 3 wire version: 2K, 1% Tc50, 0.4 W	Available in 4-wire version and 3 wire version: 2K, 1% Tc50, 0.4 W

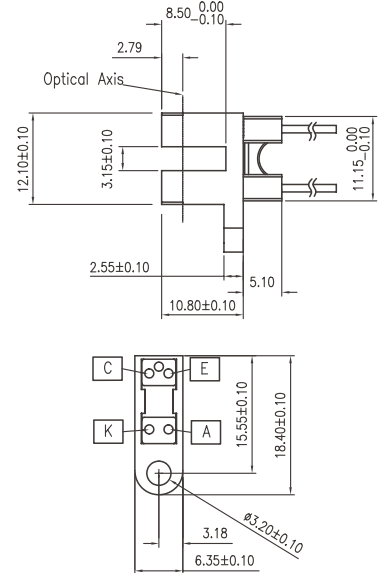
GL3-T/153



GL3-L/153



GL3-P/153



# GL 5 – ULTIMATE PERFORMANCE AND FEATURE



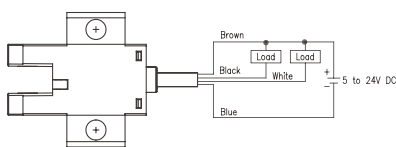
	GL5 U-Type Cable		GL5 U-Type Connector	GL5 T-Type Cable
Models	NPN	GL5-U/28a/115	GL5-U/28a/155	GL5-T/28a/115
	PNP	GL5-U/43a/115	GL5-U/43a/155	GL5-T/43a/115
Slot width	5 mm		5 mm	5 mm
Supply voltage	Operating range: 5 V ... 24 V DC absolute max: 4.75 ... 27 V DC		Operating range: 5 V ... 24 V DC absolute max: 4.75 ... 27 V DC	Operating range: 5 V ... 24 V DC absolute max: 4.75 ... 27 V DC
Output Selection	Two outputs: Light-ON and Dark-ON		Two outputs: Light-ON and Dark-ON	Two outputs: Light-ON and Dark-ON
Ambient Illuminator	Halogen lamp: 1000 Lux (max.)		Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)
Housing Material	PBT		PBT	PBT

\*Minimum detectable object: 0.8 mm x 1.8 mm; Power ON and Power OFF delay: M 2 ms; Repeatability: M 0.03 mm; Switching frequency: 5 KHz (max.); Operating indicator

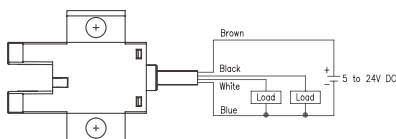
## Technical Dimensions

### Wiring diagram

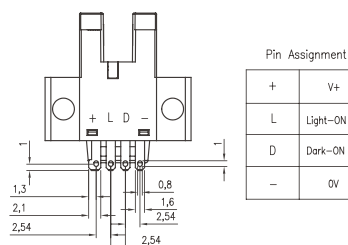
#### NPN Output



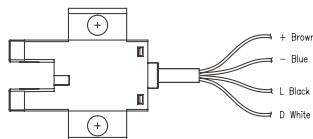
#### PNP Output



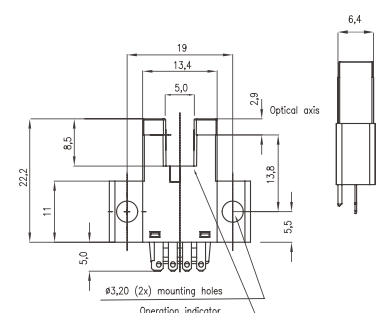
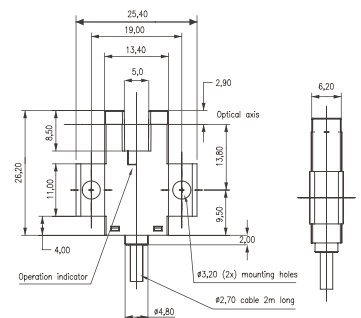
### Pin Assignment



### Connection Diagram



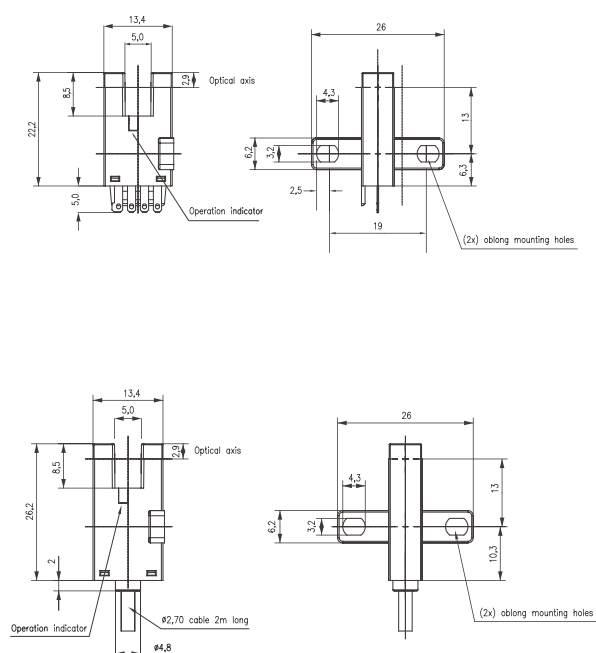
### GL5-U



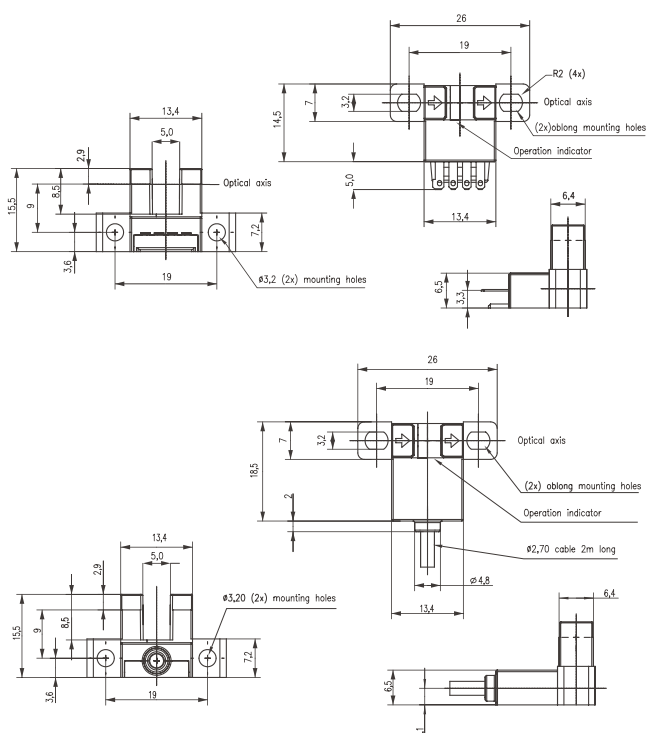


GL5 T-Type Connector	GL5 L-Type Cable	GL5 L-Type Connector
GL5-T/28a/155	GL5-L/28a/115	GL5-L/28a/155
GL5-T/43a/155	GL5-L/43a/115	GL5-L/43a/155
5 mm	5 mm	5 mm
Operating range: 5 V ... 24 V DC absolute max: 4.75 ... 27 V DC	Operating range: 5 V ... 24 V DC absolute max: 4.75 ... 27 V DC	Operating range: 5 V ... 24 V DC absolute max: 4.75 ... 27 V DC
Two outputs: Light-ON and Dark-ON	Two outputs: Light-ON and Dark-ON	Two outputs: Light-ON and Dark-ON
Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)	Halogen lamp: 1000 Lux (max.)
PBT	PBT	PBT

## GL5-T



## GL5-L





# FACTORY AUTOMATION – SENSING YOUR NEEDS



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