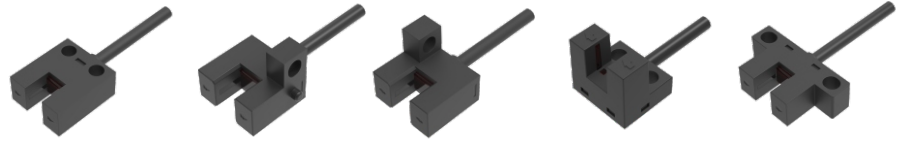


Micro groove type

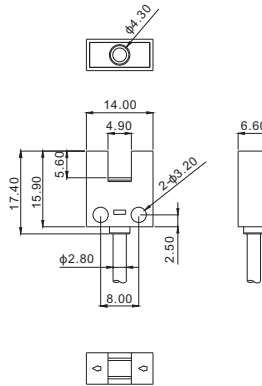


Model					
NPN	DSU-201NA-E	DSF-202NA-E	DSR-204NA-E	DSL-205NA-E	DSK-206NA-E
PNP	DSU-201PA-E	DSF-202PA-E	DSR-204PA-E	DSL-205PA-E	DSK-206PA-E
Basic Features					
Working principle	Photoelectric Sensors				
Enclosure style	Type U	Type F	Type R	Type L	Type K
How optics work	Shooting				
Light source	Infrared LED, 940nm				
Slot width	5.0mm				
Groove depth	5.6mm	5.9mm	5.75mm	6.2mm	5.8mm
Detection	1.2x1.8mm				
Light	Red LED				
Electrical Data					
Switch mode	Light.on (Light Action) / D.on (shading action) Switchable				
Output mode	NPN or PNP open collector				
Response time	0.33ms				
Switching frequency	6.06kHz				
Repeatability	<0.03mm				
Hysteresis (Return/Response)	<0.2mm				
Operating voltage	5~24V DC				
Current consumption	≤16mA				
Residual voltage	1 V or less (at 50 mA load current)				
Load current	≤100mA (24VDC)				
Insulation resistance	≥20MΩ (250VDC)				
Resistance	1000VAC (50/60Hz)				
Protection circuits	Reverse polarity protection/short circuit protection/surge protection				
Environmental Conditions					
Operating ambient temperature	-25~55°C (no freezing)				
Storage temperature	-30~80°C (non-icing)				
Humidity of the working environment	5~85%RH (no condensation)				
Store humidity	5~95%RH (no condensation)				
Ambient illumination	Incandescent lamp ≤ 1000 Lux; LED lamp ≤ 1000 Lux; Sunlight ≤ 10000 Lux				
Anti-vibration	10~55Hz sweep, 1.5mm amplitude, XYZ 3 directions for 2 hours each				
Ingress protection	IP50				
Mechanical Data					
Connection	2m/4 core cable				
Size	6.6x14.0x15.9mm	15.5x14.7x12.3mm	15.9x14.7x12.3mm	13.8x12.1x12.4mm	24.0x14.0x6.5mm
Material	ABS				
Weight	0.025kg	0.023kg	0.024kg	0.024kg	0.023kg
Fittings	/				

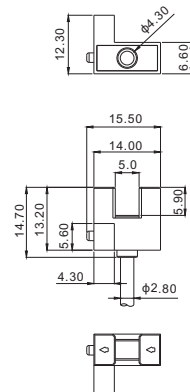
Note: For DSL-205NA/PA-E, it is recommended to use small-head or non-standard M3 (screw head diameter less than 5.2mm) screws for installation; for other models, it is recommended to use general-purpose M3 screws for installation.

Dimensions

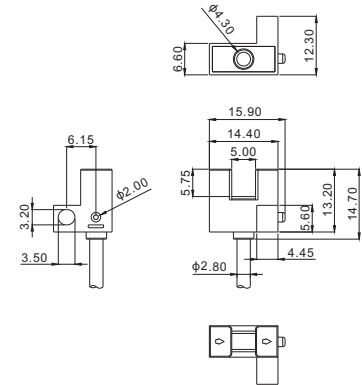
Type U



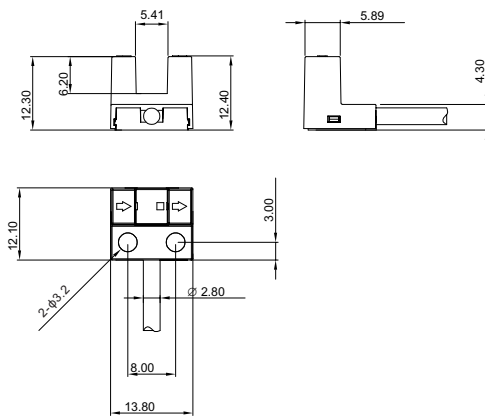
Type F



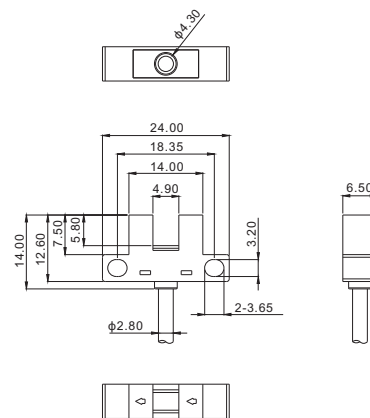
Type R



Type L

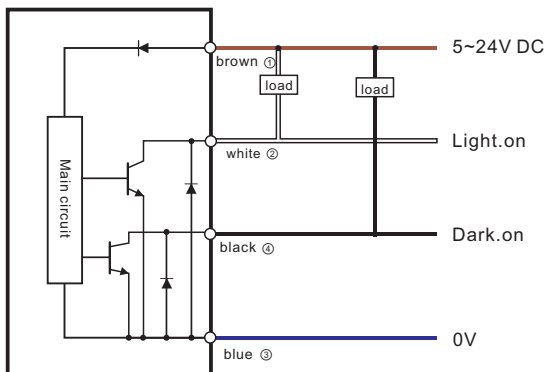


Type K



Wiring Diagram

NPN



PNP

