

M18 PHOTO-ELECTRIC SENSORS

TYPE CODE

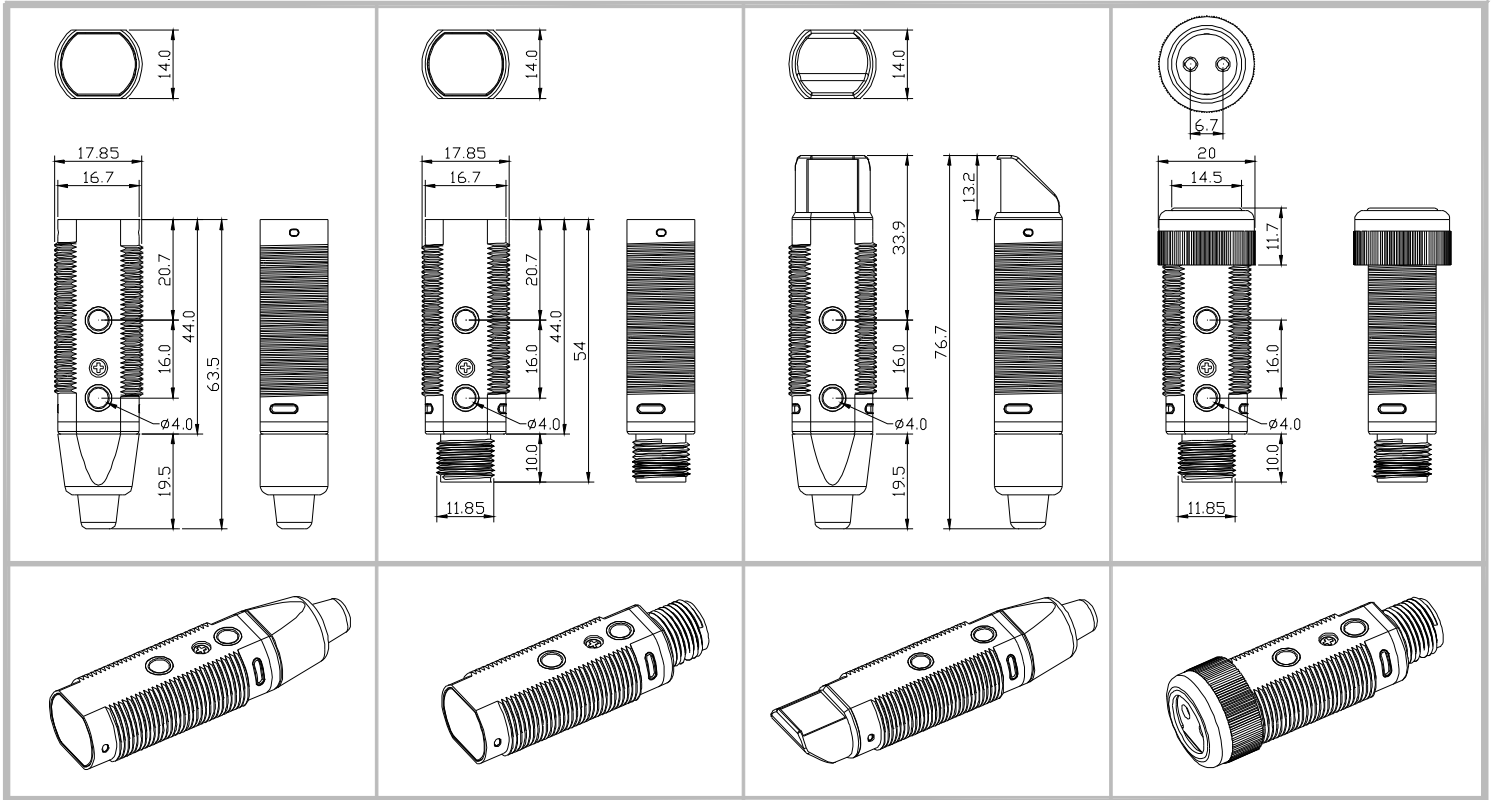
WL-

1 2 3 4 5 6 7 8

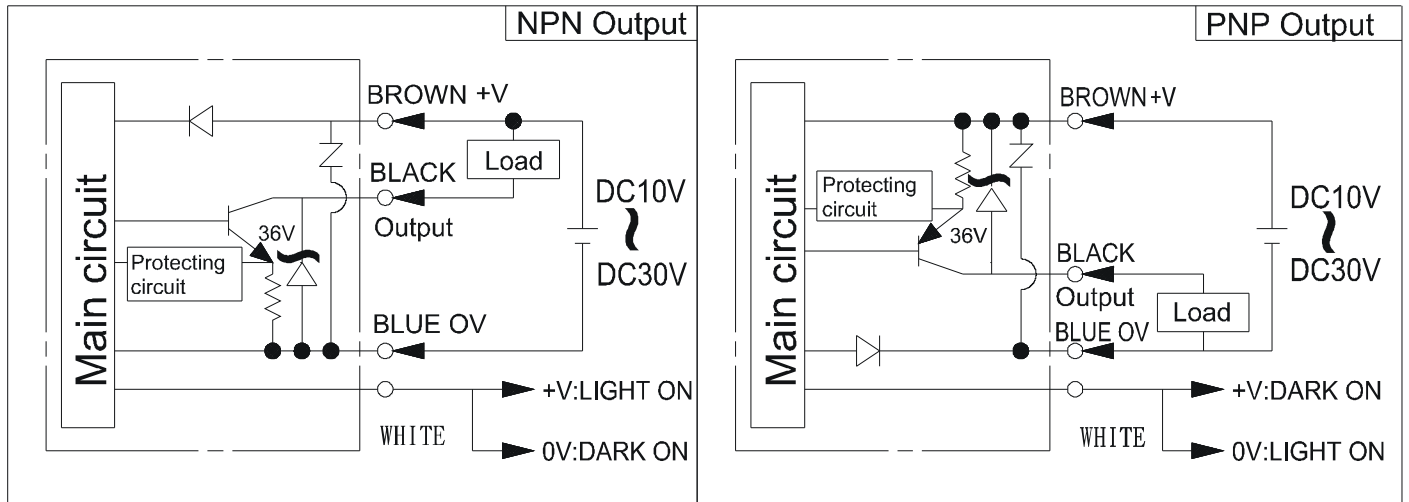
1---Sensing Mode 2---Output Mode 3---Material of Body 4---Outlet Mode for Cables
 5---Light Source 6---Potentiometer 7---Sensing Distance 8---Sense of Light Mode

- 1- Sensing Mode:** D--Diffuse Reflective R--Retro Reflective T--Thru Beam F--Fiber Optics
- 2- Output Mode:** N--NPN Open Collector P--PNP Open Collector
- 3- Material of Body:** P--Plastic M--Metal
- 4- Outlet Mode for Cables:** W1--Horizontal W3--Connected with Socket
- 5- Light Source:** I--Infra-red Light R--Visible Red Light P--Visible Red Light with Polarizer
- 6- Potentiometer:** O--Single-round Potentiometer N--Without Potentiometer
- 7- Sensing Distance:** U--Standard Distance S--Short Distance
- 8- Sense of Light Mode:** W--Wide-angle V-- Vertical Light Y-- Wide-angle and Vertical Light

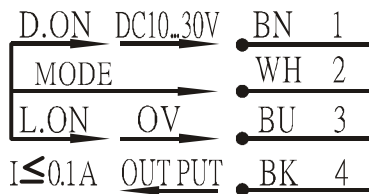
| | | | |
|------------|------------|------------|------------|
| WL-DNPW1 | WL-DPPW1 | WL-RNPW1 | WL-RPPW1 |
| WL-DNPW3 | WL-DPPW3 | WL-RNPW3 | WL-RPPW3 |
| WL-DNMW1 | WL-DPMW1 | WL-RNMW1 | WL-RPMW1 |
| WL-DNMW3 | WL-DPMW3 | WL-RNMW3 | WL-RPMW3 |
| WL-DNPW1S | WL-DPPW1S | WL-RNPW1R | WL-RPPW1R |
| WL-DNPW3S | WL-DPPW3S | WL-RNPW3R | WL-RPPW3R |
| WL-DNMW1S | WL-DPMW1S | WL-RNMW1R | WL-RPMW1R |
| WL-DNMW3S | WL-DPMW3S | WL-RNMW3R | WL-RPMW3R |
| WL-DNPW1R | WL-DPPW1R | WL-RNPW1P | WL-RPPW1P |
| WL-DNPW3R | WL-DPPW3R | WL-RNPW3P | WL-RPPW3P |
| WL-DNMW1R | WL-DPMW1R | WL-RNMW1P | WL-RPMW1P |
| WL-DNMW3R | WL-DPMW3R | WL-RNMW3P | WL-RPMW3P |
| WL-DNPW1SW | | WL-RNPW1N | |
| WL-DNPW3SW | | WL-RNPW3N | |
| WL-DNMW1SW | | WL-RNMW1N | |
| WL-DNMW3SW | | WL-RNMW3N | |
| WL-DNPW1V | WL-DPPW1V | WL-RNPW1V | WL-RPPW1V |
| WL-DNPW3V | WL-DPPW3V | WL-RNPW3V | WL-RPPW3V |
| WL-DNMW1V | WL-DPMW1V | WL-RNMW1V | WL-RPMW1V |
| WL-DNMW3V | WL-DPMW3V | WL-RNMW3V | WL-RPMW3V |
| WL-DNPW1Y | WL-DPPW1Y | WL-RNPW1RV | WL-RPPW1RV |
| WL-DNPW3Y | WL-DPPW3Y | WL-RNPW3RV | WL-RPPW3RV |
| WL-DNMW1Y | WL-DPMW1Y | WL-RNMW1RV | WL-RPMW1RV |
| WL-DNMW3Y | WL-DPMW3Y | WL-RNMW3RV | WL-RPMW3RV |
| WL-DNPW1RV | WL-DPPW1RV | | |
| WL-DNPW3RV | WL-DPPW3RV | | |
| WL-DNMW1RV | WL-DPMW1RV | | |
| WL-DNMW3RV | WL-DPMW3RV | | |
| WL-TNPW1 | WL-TPPW1 | WL-FNPW1 | WL-FPPW1 |
| WL-TNPW3 | WL-TPPW3 | WL-FNPW3 | WL-FPPW3 |
| WL-TNMW1 | WL-TPMW1 | WL-FNMW1 | WL-FPMW1 |
| WL-TNMW3 | WL-TPMW3 | WL-FNMW3 | WL-FPMW3 |
| WL-TNPW1R | WL-TPPW1R | | |
| WL-TNPW3R | WL-TPPW3R | | |
| WL-TNMW1R | WL-TPMW1R | | |
| WL-TNMW3R | WL-TPMW3R | | |
| WL-TNPW1V | WL-TPPW1V | | |
| WL-TNPW3V | WL-TPPW3V | | |
| WL-TNMW1V | WL-TPMW1V | | |
| WL-TNMW3V | WL-TPMW3V | | |
| WL-TNPW1RV | WL-TPPW1RV | | |
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| WL-TNMW1RV | WL-TPMW1RV | | |
| WL-TNMW3RV | WL-TPMW3RV | | |



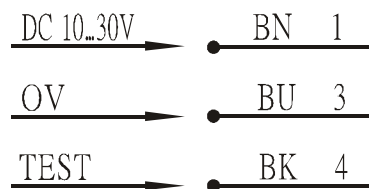
WIRING DIAGRAM



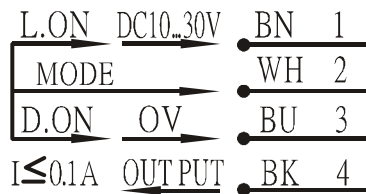
CONNECTIONS



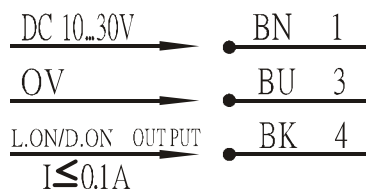
NPN TYPE



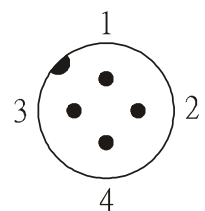
TRANSMITTER



PNP TYPE



UNADJUSTABLE OPERATION MODE



M12 CONNECTOR

PRODUCT PHOTO



TECHNICAL DATA

| Mode | Diffuse Axial Version | Diffuse Radial Version |
|------------------------------------|---|------------------------|
| Detection Range | 400mm | 320mm |
| Supply Voltage | DC10~30V, Ripple (P---P):10% Max | |
| Current Consumption | 30 ma. Max | |
| Max Output Current | 100 ma. Max | |
| Response Time; Switching Frequency | Less Than 1.0 mS (ON+OFF); ≤ 1000 Hz | |
| Circuit Protection | 1. Output Over Current Protection | |
| | 2. Reverse - Polarity Protected | |
| | 3. Interference Suppression | |
| Output Type | NPN or PNP Open Collector | |
| ⊙ Operation Mode | Light-On, Dark-On Selectable By Control Cable (White) | |
| Indicator | Yellow LED on, When Light is Received | |
| Ambient Temperature | Operating Temperature: -25° ~55° C | |
| Protection Degree | IP 67 | |
| Extraneous Light Immunity | Lamplight: 3000Lux; Sunlight: 10000 Lux Max | |
| Housing Material (Plastic Housing) | Housing and Nut: ABS resin, Color: Gray, Lens: PMMA | |
| ⊙ Adjustable Sensitivity | YES—By Potentiometer | |
| Cable | Length: 2M, Material: PVC, Color: Gray | |
| Weight | W1: 55g W3: 11g | W1: 57g W3:13g |

⊙ Only for Adjustable Type

| Mode | Retro Axial Version | Retro Radial Version |
|------------------------------------|---|------------------------|
| Detection Range | 2M (M46), 3M (M51) | 1.6M (M46), 2.4M (M51) |
| Supply Voltage | DC10~30V, Ripple (P---P):10% Max | |
| Current Consumption | 30 ma. Max | |
| Max Output Current | 100 ma. Max | |
| Response Time; Switching Frequency | Less Than 1.0 mS (ON+OFF); ≤ 1000 Hz | |
| Circuit Protection | 1. Output Over Current Protection | |
| | 2. Reverse - Polarity Protected | |
| | 3. Interference Suppression | |
| Output Type | NPN or PNP Open Collector | |
| ⊙ Operation Mode | Light-On, Dark-On Selectable By Control Cable (White) | |
| Indicator | Yellow LED on, When Light is Received | |
| Ambient Temperature | Operating Temperature: -25° ~55° C | |
| Protection Degree | IP 67 | |
| Extraneous Light Immunity | Lamplight: 3000Lux; Sunlight: 10000 Lux Max | |
| Housing Material (Plastic Housing) | Housing and Nut: ABS resin, Color: Gray, Lens: PMMA | |
| ⊙ Adjustable Sensitivity | YES—By Potentiometer | |
| Cable | Length: 2M, Material: PVC, Color: Gray | |
| Weight | W1: 55g, W3: 11g | W1: 57g, W3:13g |

⊙ Only for Adjustable Type

| Mode | Thru Beam Axial Version | Thru Beam Radial Version |
|------------------------------------|---|--------------------------|
| Detection Range | 12M | 9.6M |
| Supply Voltage | DC10~30V, Ripple (P---P):10% Max | |
| Current Consumption | 30 ma. Max | |
| Max Output Current | 100 ma. Max | |
| Response Time; Switching Frequency | Less Than 1.0 mS (ON+OFF); ≤ 1000 Hz | |
| Circuit Protection | 1. Output Over Current Protection | |
| | 2. Reverse - Polarity Protected | |
| | 3. Interference Suppression | |
| Output Type | NPN or PNP Open Collector | |
| ⊙ Operation Mode | Light-On, Dark-On Selectable By Control Cable (White) | |
| Indicator | Yellow LED on, When Light is Received | |
| Ambient Temperature | Operating Temperature: -25° ~55° C | |
| Protection Degree | IP 67 | |
| Extraneous Light Immunity | Lamplight: 3000Lux; Sunlight: 10000 Lux Max | |
| Housing Material (Plastic Housing) | Housing and Nut: ABS resin, Color: Gray, Lens: PMMA | |
| ⊙ Adjustable Sensitivity | YES—By Potentiometer | |
| Cable | Length: 2M, Material: PVC, Color: Gray | |
| Weight | W1: 110g, W3: 22g | W1: 114g, W3: 26g |

⊙ Only for Adjustable Type