

# Photo Sensor

## Ordering Guide :

### CDR - 30 X - B - V M12

① Model Type	② Sensing Distance	③ Light Source	④ Output Status	⑤ Sensing Direction	⑥ Connecting Type
<b>CDR</b> DC Reflex Type	<b>30</b> = 30cm	<b>X</b> Infrared LED	<b>B</b> NC type	<b>V</b> Vertical Type	<b>M12</b> M12 x 1.0 Connector
<b>CAR</b> AC Reflex Type	<b>2M</b> = 2M	<b>R</b> Red LED	(Non) NO type	(Non) Horizontal Type	(Non) Lead Wire 5øx2M
<b>CDM</b> DC mirror Reflex Type	<b>10M</b> = 10M				
<b>CAM</b> AC Mirror Reflex Type					
<b>CDT</b> DC Thru Beam Type					



Model No.	Output Status	Sensing Direction	Sensing Distance	Operating Voltage	Current Consumption	Output Method	Sensitivity Adjuster	
<b>Reflex Type</b>								
Lead Wire	<b>CDR-10X</b>	NO	Horizontal	10cm	10~30VDC	25mA max.	NPN & PNP 150mA max.	270° Trimmer
	<b>CDR-10XB</b>	NC						
	<b>CDR-30X</b>	NO						
	<b>CDR-30XB</b>	NC						
	<b>CDR-30X-V</b>	NO	Vertical	30cm	90~250VAC 50/60Hz	0.5VA max.	SCR 100mA	270° Trimmer
	<b>CDR-30XB-V</b>	NC						
	<b>CAR-10X</b>	NO	Horizontal	10cm	10~30VDC	25mA max.	NPN & PNP 150mA max.	270° Trimmer
	<b>CAR-10XB</b>	NC						
	<b>CAR-10X-V</b>	NO						
	<b>CAR-10XB-V</b>	NC						
Connector	<b>CDR-10X-M12</b>	NO	Horizontal	10cm	10~30VDC	25mA max.	NPN & PNP 150mA max.	270° Trimmer
	<b>CDR-10XB-M12</b>	NC						
	<b>CDR-30X-M12</b>	NO	Horizontal	30cm				
	<b>CDR-30XB-M12</b>	NC						
	<b>CDR-30X-V-M12</b>	NO	Vertical	30cm				
<b>CDR-30XB-V-M12</b>	NC							
<b>Mirror Reflex Type</b>								
Lead Wire	<b>CDM-1MN</b>	NO	Horizontal	0.1M~1.6M	10~30VDC	20mA max.	NPN & PNP 150mA max.	270° Trimmer
	<b>CDM-1MR</b>	NO		0.1M~1.6M				
	<b>CDM-1MRB</b>	NC	Horizontal	0.1M~2.5M	90~250VAC	0.5VA max.	SCR 100mA	270° Trimmer
	<b>CDM-2MX</b>	NO						
	<b>CDM-2MXB</b>	NC	Vertical	0.1M~2.0M	10~30VDC	20mA max.	NPN & PNP 150mA max.	270° Trimmer
	<b>CDM-2MX-V</b>	NO						
	<b>CDM-2MXB-V</b>	NC	Horizontal	0.1M~2.0M	10~30VDC	20mA max.	NPN & PNP 150mA max.	270° Trimmer
	<b>CAM-2MX</b>	NO						
	<b>CAM-2MXB</b>	NC						
	<b>CAM-2MX-V</b>	NO						
<b>CAM-2MXB-V</b>	NC	Vertical						
Connector	<b>CDM-2MX-M12</b>	NO	Horizontal	0.1M~2.5M	10~30VDC	20mA max.	NPN & PNP 150mA max.	270° Trimmer
	<b>CDM-2MXB-M12</b>	NC						
	<b>CDM-2MX-V-M12</b>	NO	Vertical	0.1M~2.0M				
	<b>CDM-2MXB-V-M12</b>	NC						
<b>Thru Beam Type</b>								
Lead Wire	<b>CDT-10MX</b>	NO	Horizontal	10M	10~30VDC	P<20mA R<25mA	NPN & PNP 150mA max.	270° Trimmer
	<b>CDT-10MXB</b>	NC						
	<b>CDT-6MX-V</b>	NO	Vertical	6M				
	<b>CDT-6MXB-V</b>	NC						
Connector	<b>CDT-10MX-M12</b>	NO	Horizontal	10M	10~30VDC	P<20mA R<25mA	NPN & PNP 150mA max.	270° Trimmer
	<b>CDT-10MXB-M12</b>	NC						
	<b>CDT-6MX-V-M12</b>	NO	Vertical	6M				
	<b>CDT-6MXB-V-M12</b>	NC						

# Photo Sensor / Mark Sensor

## FIBER SENSOR



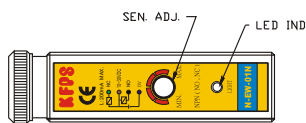
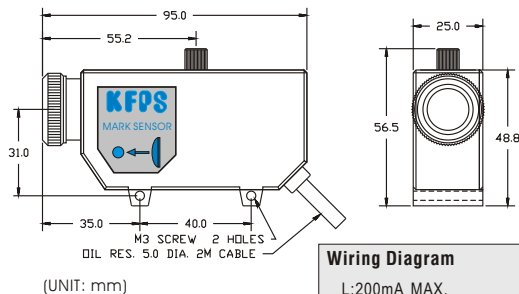
### ■ Features

- High speed response time: 0.2ms
- Auto-tuning of sensitivity and emitting strength, easy to finish the function setting
- Output off delay: 0.1s (optioned)
- Dark ON / Light ON changeable
- NPN & PNP TWO OUTPUTS

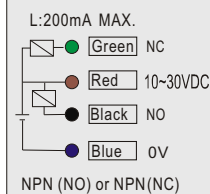
### ■ Specification

Wiring Type	Lead Wire (4C/0.5x2M)		M8 Lead-wire with connector	
Model No	<b>MF-06R</b>	<b>MF-06RT</b>	<b>MF-06R-M8</b>	<b>MF-06RT-M8</b>
Output Delay	None	0.1s	None	0.1s
Response Time	0.2ms			
Emitter	High efficiency Red LED			
Operating Voltage	10~30VDC ; Ripple < 20% of peak to peak			
Current Consumption	45mA max.			
Output Method	NPN & PNP two outputs			
Output Status	NO / NC changeable			
Output Current	150mA max.			
Leakage Current	0.8mA. Max.			
Residual Voltage	0.8V Max.			
Protection Circuit	Short circuit & Polarity Reversed protection			
Housing Material	Intensive ABS			
Protection Class	IP 65			
Operating Ambient	-20°C ~ +60°C ; 35 ~ 85% RH			

## N-EW-01N



### Wiring Diagram



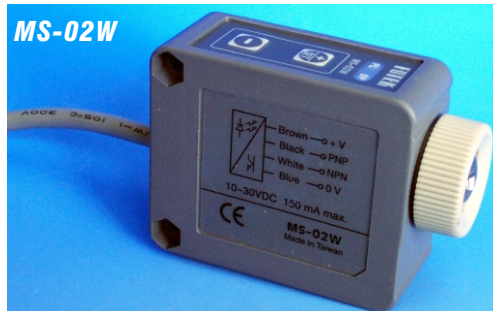
## MARK SENSOR

### Model No. N-EW-01N

SPECIFICATION	DESCRIPTION
METHOD OF DETECTION	DIFFUSE REFLECTION TYPE
OPERATING VOLTAGE	10-30VDC PERMISSIBLE(P-P) 10% MAX.
CURRENT CONSUMPTION	<40mA
DETECTING DISTANCE	14~20MM
OBJECT	1MM dia. Min.
LOAD CURRENT	200mA MAX.
SWITCHING FREQUENCY	1KHz
PROTECTION CIRCUIT	SHORT CIRCUIT & POLARITY REVERSED PROTECTION
INDICATOR	LIGHT INDICATOR (RED)
LIGHT SOURCE	WHITE LIGHT LED
SENSITIVITY	SINGLE TURN
OUTPUT TYPE	NPN NO / NPN NC
INSULATION RESISTANCE	MIN. 20M OHM (500VDC) MEGGER
DIELECTRIC STRENGTH	AC 1000V 50/60 1 MINUTE
AMBIENT TEMPERATURE AND HUMIDITY	-25° to +70°C ; 35 ~ 95% RH
ALLOWABLE AMBIENT ILLUMINATION	LAMPLIGHT: 3000Lux SUNLIGHT: 10000 Lux
VIBRATION RESISTANCE	Double Amplitude 1.5mm 10 to 55Hz each 2hours X,Y,Z, DIRECTION
IMPACT RESISTANCE	490M/S <sup>2</sup> (approx. 50G'S) 3 TIMES EACH OF X.Y.Z. AXES
PROTECTION GRADGE	IEC IP-67
HOUSING MATERIAL	PBT
WEIGHT	170g

## MARK SENSOR

### MS-02W



Model No: **MS-02W** (Lead-wire Type)

Response Time: 0.2ms

Setting Distance: 25.0 2.0mm

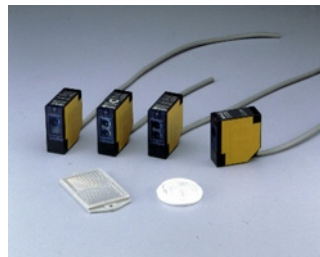
Emitter & Light spot: White Light Led with spot 2.0 d:

Output Method: NPN & PNP (Two Outputs) ; NO or NC changeable

Output Current: Max. 150mA

Current Consumption: Max. 40mA

## FREE POWER PHOTO SENSOR A3-series



Extensive Operating Voltage: DC12~240V or 24~240VAC  
 High capacity Relay output 3A/250VAC  
 Standard structure IP-65 or Water-proof model with structure IP-67

Reflex Type - Model No	A3R-30X	A3R-1MX	A3R-2MX
Sensing Distance	30cm	100cm	200cm
Output Status	NO <Received ON>		
Min. Sensible Object	5.0		
Mirror Reflex - Model No	A3G-2MR	A3G-2MRS	A3G-4MX
Sensing Distance	3M	2M	4M
Output Status	NO <Break ON>		
Min. Sensible Object	2.0	5.0	
Thru Beam - Model No	A3T-3MX	A3R-10MX	A3R-20MX
Sensing Distance	3M	10M	20M
Output Status	NO <Break ON>		
Min. Sensible Object	2.0	5.0	10.0

Note 1): Above model plus code "P" for water-proof model

Note 2): Standard model is NO type, plus code "B" for NC type

