

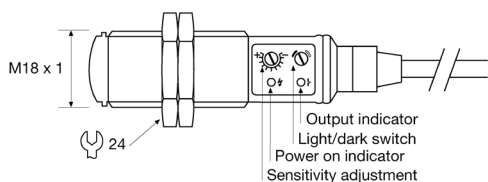
Product Data

Electrical Data		
	Transmitter	Receiver
Supply Voltage	10-30 V dc	
Voltage ripple	+/- 15%	
Reverse polarity protected	Yes	
Short circuit protected	-	Yes
Current consumption	25 mA	20 mA
Max. output load	-	120 mA / 30 V dc

Environmental Data		
Temperature, operation	-20 to +60 °C	
Sealing class	IP 67	
Approvals	CE	

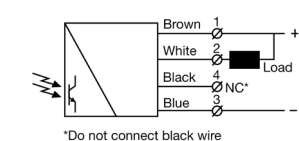
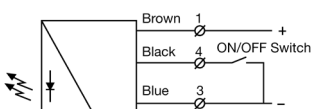
Available Models					
	Model	Supply Voltage	Output	Output Mode	Sensing Range
Transmitter	SMT 7000	10-30 V dc	-	-	20 m
Receiver	SMR 7607		NPN/PNP	Light/dark	0 – 7 m
	SMR 7620				0 – 20 m
	SMR 7707		PNP/PNP	Light/dark	0 – 7 m
	SMR 7720			0 – 20 m	

Illustration



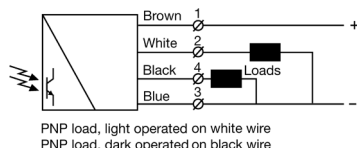
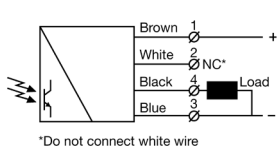
Connection

Wiring Diagrams



Transmitter SMT 7000
Test input

Receiver SMR 7600
Load as NPN



Receiver SMR 7600
Load as PNP

Receiver SMR 7700
Transistor PNP/PNP

Connection Wires/Pins

	Cable	4 pin, M8 plug	4 pin, M12 plug
Supply +	Brown	Pin 1	Pin 1
Supply -	Blue	Pin 3	Pin 3
Output	White	Pin 2	Pin 2
Control/Output	Black	Pin 4	Pin 4

	4 pin, M8 plug	4 pin, M12 plug
	Sensor plug	Sensor plug

Mounting & Alignment

Mounting & Alignment	
1	Mount the transmitter and receiver sensors facing each other. Make sure the distance between the sensors does not exceed the specified sensing range of the system.
2	Align the sensors by moving, either the transmitter or receiver sensor, horizontally and vertically until the output is: - Deactivated when no object is present. (Dark operated) - Activated when no object is present. (Light operated)
3	Fasten the transmitter and receiver sensors securely using the enclosed locking nuts and/or a mounting bracket. Avoid acute angles on cable close to sensor.

Adjustments

Output Mode Selection SMR 76XX

The output mode can be selected via an integral switch on the receiver sensor. Refer to Output Logic table for output mode reference.

Light Operated (N.C.)	Enables the output to be inactive when there is an object present.	Turn potentiometer to full clockwise position
Dark Operated (N.O.)	Enables the output to be active when there is an object present.	Turn potentiometer full counter clockwise position

Output Logic

Detection	Output Mode	Output status	Yellow LED
Object absent Transmitter → Receiver	Dark operated (N.O.)	Open	Off
	Light operated (N.C.)	Closed	On
Object present Transmitter → Receiver	Light operated (N.C.)	Open	Off
	Dark operated (N.O.)	Closed	On

Sensitivity Adjustment

Maximum sensitivity can be used for most applications and is advised for applications with contaminated environments. Increase the sensitivity to maximum by turning the potentiometer, on the receiver sensor, to full clockwise position.

Sensitivity adjustment may be required in applications where objects to be detected are small or translucent. Proceed with the following steps:

1	Start with the sensitivity at maximum by turning the potentiometer to full clockwise position.
2	Select target object with smallest dimensions and most translucent surface.
3	Place target object between transmitter and receiver sensors.
4	Decrease the sensitivity by turning the potentiometer counter clockwise until the output changes.
5	Remove target object. Check output status has changed.

Test Input

The transmitter can be externally disabled and enabled, via the control wire, for test purposes. The test input requires the control wire to be connected to - (negative) supply wire. Make sure no object is present in the detection area when transmitter is disabled for test. When the transmitter is disabled, the receiver should change output.

Enable transmitter	Open (off) control switch (connected to +, or not connected)
Disable transmitter	Close (on) control switch (connected to -)

Note: If the test input is not to be used, it is recommended to connect the control wire to + (positive) supply wire.



Warning
 This device is not to be used for Personnel Protection in Machine Guarding Safety applications. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel machine guarding stand-alone safety applications.