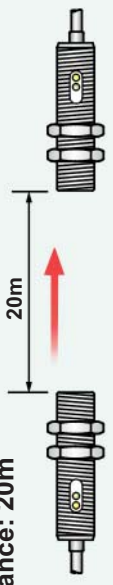



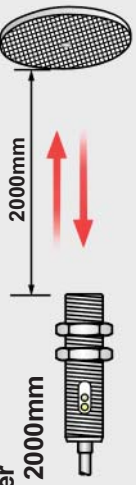



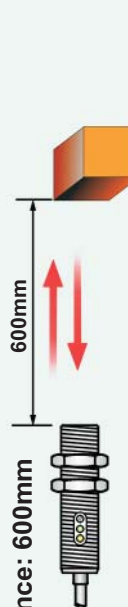



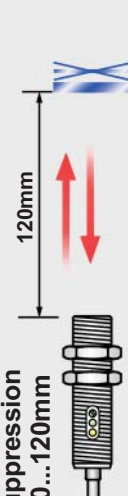





Through-beam and Reflex sensor

Sensing mode	Appearance	Supply voltage	OUTPUT MODE	Part Number
Through-beam mode LED red 660nm Sensing distance: 20m 		10-36VDC	Emitter	M18B-T020MD-EX6C4U2
			NPN light-ON	M18B-T020MN-LX6C4U2
			NPN dark-ON	M18B-T020MN-DX6C4U2
			NPN changeover	M18B-T020MN-CX6C4U2
			PNP light-ON	M18B-T020MP-LX6C4U2
			PNP dark-ON	M18B-T020MP-DX6C4U2
	PNP changeover	M18B-T020MP-CX6C4U2		
		10-36VDC	Emitter	M18B-T020MD-EX6Q4UE
			NPN light-ON	M18B-T020MN-LX6Q4UE
			NPN dark-ON	M18B-T020MN-DX6Q4UE
			NPN changeover	M18B-T020MN-CX6Q4UE
			PNP light-ON	M18B-T020MP-LX6Q4UE
PNP dark-ON			M18B-T020MP-DX6Q4UE	
PNP changeover	M18B-T020MP-CX6Q4UE			
	10-36VDC	Emitter	M18B-T020MD-EX6P4UE	
		NPN light-ON	M18B-T020MN-LX6P4UE	
		NPN dark-ON	M18B-T020MN-DX6P4UE	
		NPN changeover	M18B-T020MN-CX6P4UE	
		PNP light-ON	M18B-T020MP-LX6P4UE	
		PNP dark-ON	M18B-T020MP-DX6P4UE	
PNP changeover	M18B-T020MP-CX6P4UE			
Retro-reflective mode with polarizing filter LED red polarized 660nm Sensing distance: 2000mm 		10-36VDC	NPN light-ON	M18B-L2000N-LX6C3U2-PF
			NPN dark-ON	M18B-L2000N-DX6C3U2-PF
			PNP light-ON	M18B-L2000P-LX6C3U2-PF
			PNP dark-ON	M18B-L2000P-DX6C3U2-PF
		10-36VDC	NPN light-ON	M18B-L2000N-LX6Q4UE-PF
			NPN dark-ON	M18B-L2000N-DX6Q4UE-PF
			PNP light-ON	M18B-L2000P-LX6Q4UE-PF
			PNP dark-ON	M18B-L2000P-DX6Q4UE-PF
		10-36VDC	NPN light-ON	M18B-L2000N-LX6P4UE-PF
			NPN dark-ON	M18B-L2000N-DX6P4UE-PF
			PNP light-ON	M18B-L2000P-LX6P4UE-PF
			PNP dark-ON	M18B-L2000P-DX6P4UE-PF

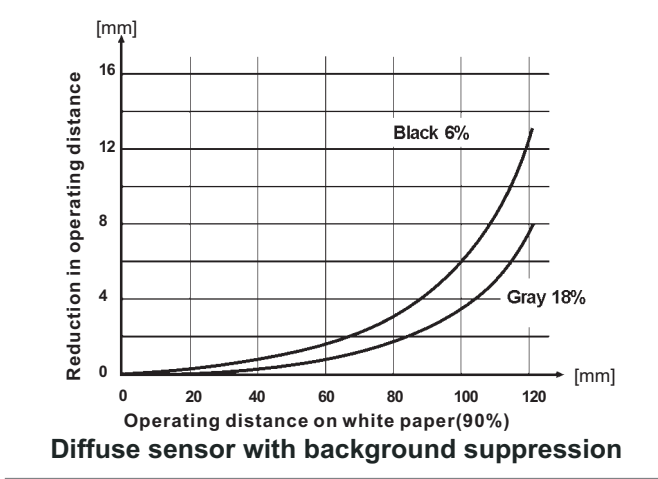
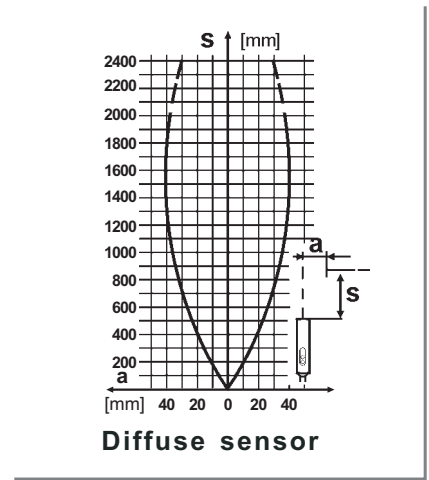
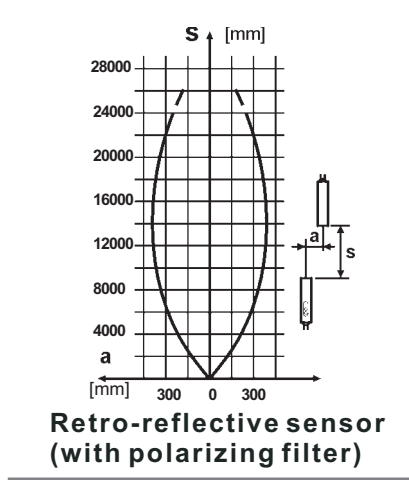
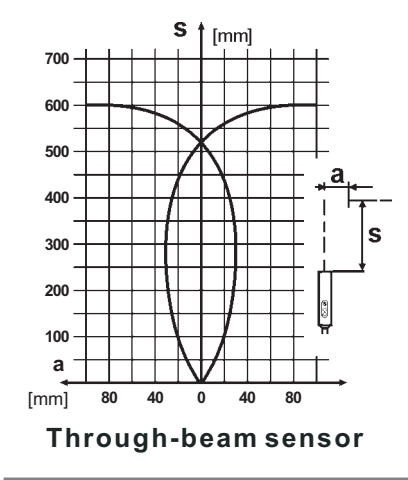
Diffuse sensor and diffuse sensor with background suppression

Sensing mode	Appearance	Supply voltage	OUTPUT MODE	Part Number
Diffuse mode LED red 660nm Sensing distance: 600mm 		10-36VDC	NPN light-ON	M18B-D0600N-LX6C3U2
			NPN dark-ON	M18B-D0600N-DX6C3U2
			PNP light-ON	M18B-D0600P-LX6C3U2
			PNP dark-ON	M18B-D0600P-DX6C3U2
		10-36VDC	NPN light-ON	M18B-D0600N-LX6Q4UE
			NPN dark-ON	M18B-D0600N-DX6Q4UE
			PNP light-ON	M18B-D0600P-LX6Q4UE
			PNP dark-ON	M18B-D0600P-DX6Q4UE
		10-36VDC	NPN light-ON	M18B-D0600N-LX6P4UE
			NPN dark-ON	M18B-D0600N-DX6P4UE
			PNP light-ON	M18B-D0600P-LX6P4UE
			PNP dark-ON	M18B-D0600P-DX6P4UE
Diffuse Mode with Background Suppression LED red 660nm Sensing distance: 10...120mm 		10-36VDC	NPN light-ON	M18B-D0120N-LX6C3U2-BS
			NPN dark-ON	M18B-D0120N-DX6C3U2-BS
			PNP light-ON	M18B-D0120P-LX6C3U2-BS
			PNP dark-ON	M18B-D0120P-DX6C3U2-BS
		10-36VDC	NPN light-ON	M18B-D0120N-LX6Q4UE-BS
			NPN dark-ON	M18B-D0120N-DX6Q4UE-BS
			PNP light-ON	M18B-D0120P-LX6Q4UE-BS
			PNP dark-ON	M18B-D0120P-DX6Q4UE-BS
		10-36VDC	NPN light-ON	M18B-D0120N-LX6P4UE-BS
			NPN dark-ON	M18B-D0120N-DX6P4UE-BS
			PNP light-ON	M18B-D0120P-LX6P4UE-BS
			PNP dark-ON	M18B-D0120P-DX6P4UE-BS

Sensors specifications

Item	Type Model No.	Through-beam	Diffuse reflective		Retro-reflective mode with polarizing filter
				With background suppression	
		M18B-T020Mx-xxxxxx	M18B-L0120x-xxxxxx-BS	M18B-D0600x-xxxxxx	M18B-L2000x-xxxxxx-PF
Sensing range		20,000mm	10-120mm	600mm	2000mm
Sensing object		—	100x100mm white	200x200mm white	Reflector type RE-D82
Hysteresis		10% typ.			
Supply Voltage		10-36V			
Max. ripple content		20%			
Output current		200mA max.			
No-load supply current		15mA Typ.			
Output voltage drop		2.0V max. At 200mA			
Max. Switching frequency		1000Hz/500Hz			
Short-circuit protection		Yes			
Reverse polarity protection		Yes			
Overload current protection		Yes			
Switching time(↑ and ↓)		0.5msec/1msec			
Operation indicator		The yellow LED lights up when the output is switched on. The green LED lights up when sufficient light is available for reliable operation (approx.80% of the maximum operating distance).			
Sensitivity setting		The sensitivity can be adjusted by means of the built-in potentiometer(diffuse sensor; optional for other models). Turning clockwise increases the sensitivity.			
Protection		IP67(IEC)			
Ambient temperature		-25 to 55°C			
EMC		IEC 60947-5-2, Parts 7.2.6.1. 2. 3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)			
Emitting element		LED red 660nm	LED red 660nm	LED red 660nm	LED red polarized 660nm
Cable		cable 2m or 9m long			
Pigtail type		M12 Euro 4pin+6" cable			
Connection type		M12 EURO 4pin			
Weight(cable/connector model)		230/80g	121/53g	121/53g	121/53g

Curve

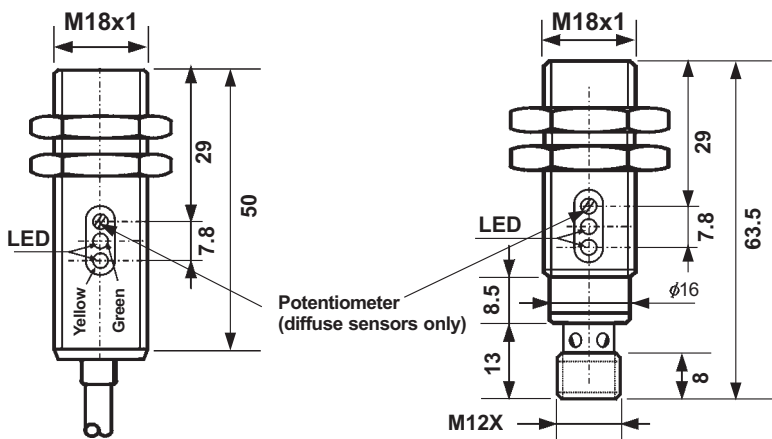


Dimensions

X-state, Cable version

X-state, EURO-style quick connector

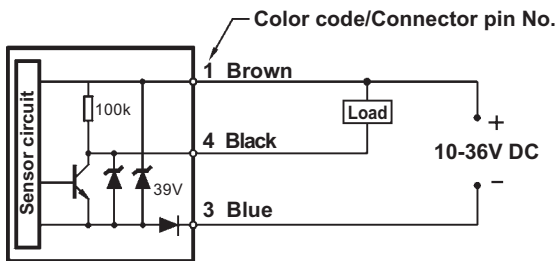
EURO-style quick connector for pig-tail series



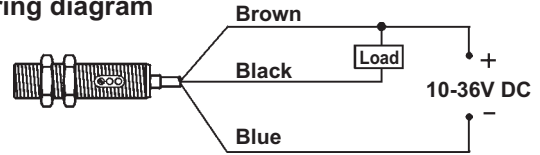
NPN output type

1 NPN light-ON/dark-ON output

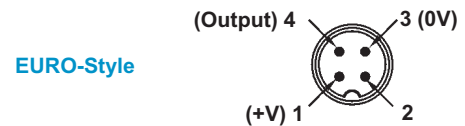
I/O circuit diagram



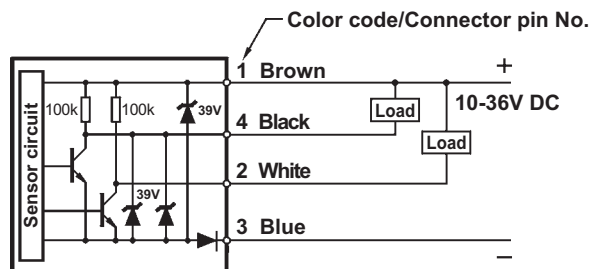
Wiring diagram



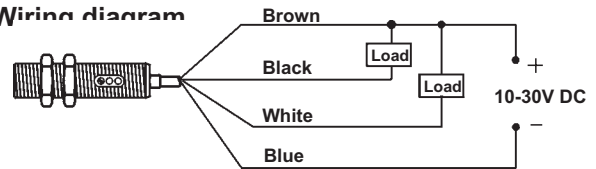
Connector pin position



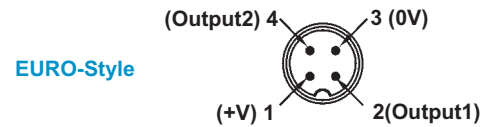
2 NPN changeover outputs



Wiring diagram



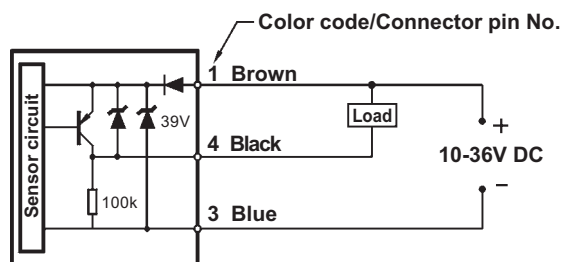
Connector pin position



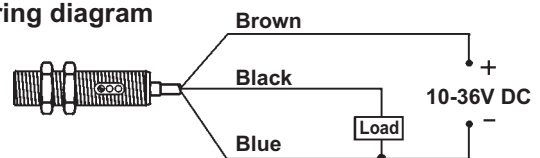
PNP output type

1 PNP light-ON/dark-ON output

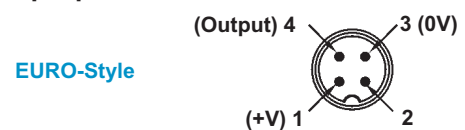
I/O circuit diagram



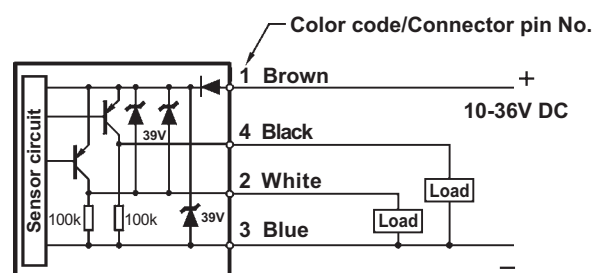
Wiring diagram



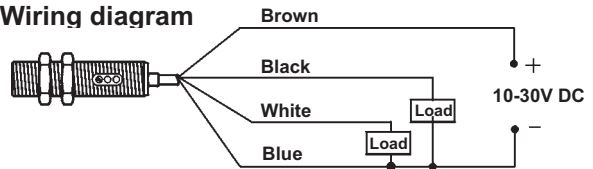
Connector pin position



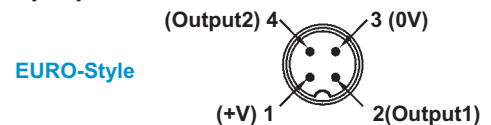
2 PNP changeover outputs



Wiring diagram

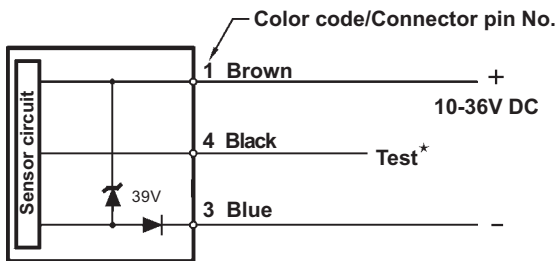


Connector pin position



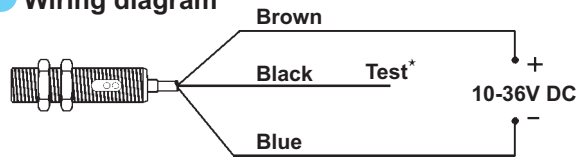
Emitter

I/O circuit diagram



*: Test(black wire)=0V, Emitter off.

Wiring diagram



Connector pin position

EURO-Style

