

Transmitter IT... / Receiver IR...

- Extremely dirt-resistant
- High penetration
- Large detection range up to 70 m / 230 ft (determined by the amplifier)
- Small design
- High switching accuracy
- Easy adjustment

Short description

The transmitter and receiver have a special small design, which allows them to be used in micro constructions. The sensor heads are fully sealed, giving them a high protection class of IP 67. It is possible to use the sensor heads in areas with extremely high humidity and dust.

The wide opening angles allows easy adjustment at detection ranges up to approximately 70 m / 230 ft and enables the sensors to be insensitive to vibration, shock and misalignment.

Notes



Warning!

The infrared systems are not safety systems and should not be used as such systems. The devices are not to be used for applications where personal safety is dependent on their function.



Information!

The sensor heads are only for use with amplifier and mutiplexer type ICL..., IMX..., ISG... or ISM...

Range overview (different sensor-amplifier combinations)

		Sensors						
		Transmitter	IT-... / ITL-...		IT-...HP... / ITH-...		ITA-...	
		Receiver	IRL-...	IR-...	IRL-...	IR-...	IRL-...	IR-...
Amplifier	ISM-Series	ISM-1000/1100/1200	7 m	15 m	10 m	25 m	20 m	55 m
		ISM-1220	8 m	15 m	10 m	20 m	20 m	50 m
		ISM-15xx	20 m	25 m	30 m	35 m	50 m	70 m
		ISM-2x00	8 m	20 m	10 m	30 m	20 m	55 m
		ISM-4x00 / ISM-8x00	10 m	15 m	12 m	25 m	25 m	60 m
	ISG-Series	ISG-Nxx	20 m	25 m	30 m	35 m	50 m	70 m
		ISG-N124M	10 m	20 m	20 m	35 m	35 m	55 m
		ISG-N1xx	10 m	20 m	20 m	35 m	35 m	55 m
		ISG-A1xx	7 m	15 m	10 m	25 m	20 m	50 m
	IMX-Series	IMX-Nxx	10 m	20 m	15 m	30 m	25 m	50 m
		IMX-N4x0 / IMX-N8x0	10 m	20 m	15 m	30 m	20 m	40 m
		IMX-A20xx	7 m	13 m	9 m	20 m	15 m	40 m
		IMX-A8xx	8 m	15 m	10 m	20 m	20 m	55 m
	ICL-Series	ICL-2x00	4 m	12 m	7 m	19 m	12 m	35 m
		ICL-6x00	5 m	15 m	8 m	20 m	14 m	35 m
ICL-8x00		5 m	15 m	8 m	20 m	14 m	35 m	

Transmitter IT... / Receiver IR...

Connection diagram

Cable version				Plug version			
transmitter		receiver		transmitter		receiver	
core colour	connection	core colour	connection	PIN	connection	PIN	connection
red	+	yellow	+	① (brown) ¹	+	④ (black) ¹	+
black	-	shield	-	③ (blue) ¹	-	③ (blue) ¹	-

¹) cable core colour of the connection cable CAB-... (see accessories)

Technical Data (at +20 °C / +68 °F)

General			
Operation temperature	-25 °C ... +65 °C		
Storage temperature	-40 °C ... +80 °C		
Vibration	10 ... 55 Hz, 1,5 mm		
Shock	30 g		
Protection class	IP 67		
Transmitter			
Type	IT-..., ITL-...	IT-...HP..., ITH-...	ITA-...
Transmit light	infrared 880 nm, modulated	infrared 870 nm, modulated	infrared 870 nm, modulated
Transmit power (IF = 100 mA)	40 mW / sr	70 mW / sr	350 mW / sr
Opening angle	± 5 °	± 10 °	± 3 °
MTBF (EN/IEC 61709)	565 a (8760 h/a, 40 °C)		
Cable sheathing	PVC, Ø 3,8 mm ± 0,2 mm, black ²		
Cable core	2 x 0,25 mm, red / black		
Receiver			
Type	IRL-...	IR-...	
Opening angle	± 12 °		
Light immunity	40000 LUX	60000 LUX	
MTBF (EN/IEC 61709)	238 a (8760 h/a, 40 °C)	208 a (8760 h/a, 40 °C)	
Cable sheathing	PVC, Ø 3,8 mm ± 0,2 mm, black ²		
Cable core	1 x 0,34 mm, yellow shielded		

²) other cable styles on request

Accessories



Cable connector for sensors with plug



Light shutter/protective glass shield for sensors with M12 thread



Blower cap for sensors with M12 thread



Sensor holder for sensors with Ø10 mm

Transmitter IT... / Receiver IR...

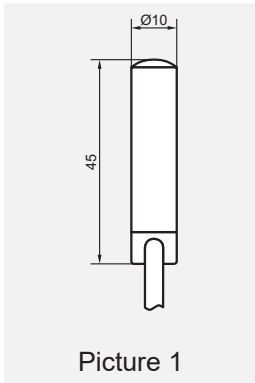
Order table

Transmitter IT-..., ITL-...	Transmitter IT-...HP..., ITH-...	Transmitter ITA-...	Receiver	Connection	Material	Outline-drawing	Picture
IT-P10-5 IT-P10-15	IT-P10HP-5 IT-P10HP-15	ITA-TLP-5 ITA-TLP-15	IR-P10-5 IR-P10-15	cable 5m ³ cable 15m ³	polyamide	Picture 1	
IT-P10-3QD	IT-P10HP-3QD	ITA-TLP-B3	IR-P10-3QD	plug M8	polyamide	Picture 2	
IT-M12-5 IT-M12-15	IT-M12HP-5 IT-M12HP-15	ITA-CLN-5 ITA-CLN-15	IR-M12-5 IR-M12-15	cable 5m ³ cable 15m ³	nickel plated brass	Picture 3	
IT-M12VA-5 IT-M12VA-15	IT-M12VAHP-5 IT-M12VAHP-15	ITA-CLV-5 ITA-CLV-15	IR-M12VA-5 IR-M12VA-15	cable 5m ³ cable 15m ³	stainless steel	Picture 3	
IT-M12-3QD	IT-M12HP-3QD	ITA-CLN-B3	IR-M12-3QD	plug M8	nickel plated brass	Picture 4	
IT-M12VA-3QD	IT-M12VAHP-3QD	ITA-CLV-B3	IR-M12VA-3QD	plug M8	stainless steel	Picture 4	
IT-M12-4QD	IT-M12HP-4QD	ITA-CLN-C4	IR-M12-4QD	plug M12	nickel plated brass	Picture 5	
IT-M12VA-4QD	IT-M12VAHP-4QD	ITA-CLV-C4	IR-M12VA-4QD	plug M12	stainless steel	Picture 5	
IT-AE-5 IT-AE-15			IR-AE-5 IR-AE-15	cable 5m ³ cable 15m ³	polyoxymethylene	Picture 6	
IT-AE-3QD			IR-AE-3QD	plug M8	polyoxymethylene	Picture 7	
IT-AS-5 IT-AS-15				cable 5m ³ cable 15m ³	polyoxymethylene	Picture 8	
			IR-AS-5 IR-AS-15	cable 5m ³ cable 15m ¹	polyoxymethylene	Picture 9	
IT-AS-3QD				plug M8	polyoxymethylene	Picture 10	
			IR-AS-3QD	plug M8	polyoxymethylene	Picture 11	
IT-SLA-5 IT-SLA-15	IT-SLAHP-5 IT-SLAHP-15	ITA-LLA-5 ITA-LLA-15	IR-SLA-5 IR-SLA-15	cable 5m ³ cable 15m ³	aluminium	Picture 12	
IT-SLA-3QD	IT-SLAHP-3QD	ITA-LLA-B3	IR-SLA-3QD	plug M8	aluminium	Picture 13	
ITL-TSP-5 ITL-TSP-15	ITH-TSP-5 ITH-TSP-15	ITA-TSP-5 ITA-TSP-15	IRL-TSP-5 IRL-TSP-15	cable 5m ³ cable 15m ³	polycarbonate	Picture 14	
ITL-TSP-B3	ITH-TSP-B3	ITA-TSP-B3	IRL-TSP-B3	plug M8	polycarbonate	Picture 15	
ITL-SSP-5 ITL-SSP-15	ITH-SSP-5 ITH-SSP-15	ITA-SSP-5 ITA-SSP-15	IRL-SSP-5 IRL-SSP-15	cable 5m ³ cable 15m ³	polycarbonate	Picture 16	
ITL-SSP-B3	ITH-SSP-B3	ITA-SSP-B3	IRL-SSP-B3	plug M8	polycarbonate	Picture 17	
ITL-CSN-5 ITL-CSN-15	ITH-CSN-5 ITH-CSN-15	ITA-CSN-5 ITA-CSN-15	IRL-CSN-5 IRL-CSN-15	cable 5m ³ cable 15m ³	nickel plated brass	Picture 18	
ITL-CSV-5 ITL-CSV-15	ITH-CSV-5 ITH-CSV-15	ITA-CSV-5 ITA-CSV-15	IRL-CSV-5 IRL-CSV-15	cable 5m ³ cable 15m ³	stainless steel	Picture 18	
ITL-CSN-B3	ITH-CSN-B3	ITA-CSN-B3	IRL-CSN-B3	plug M8	nickel plated brass	Picture 19	
ITL-CSV-B3	ITH-CSV-B3	ITA-CSV-B3	IRL-CSV-B3	plug M8	stainless steel	Picture 19	
ITL-CSN-C4	ITH-CSN-C4	ITA-CSN-C4	IRL-CSN-C4	plug M12	nickel plated brass	Picture 20	
ITL-CSV-C4	ITH-CSV-C4	ITA-CSV-C4	IRL-CSV-C4	plug M12	stainless steel	Picture 20	

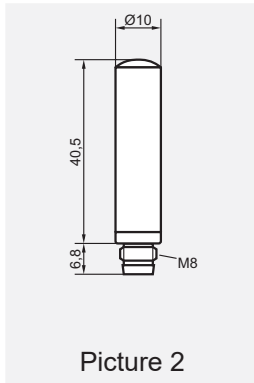
³⁾ other cable length on request

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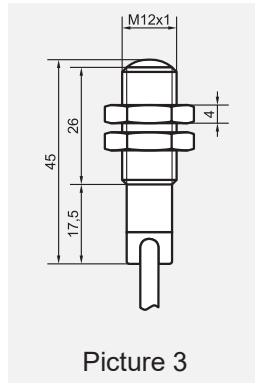
Dimension drawings (in mm)



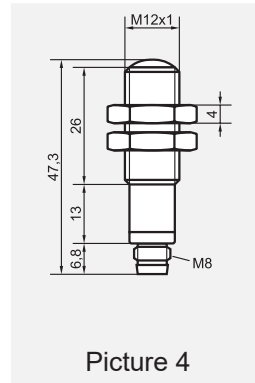
Picture 1



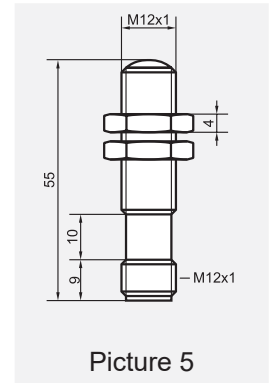
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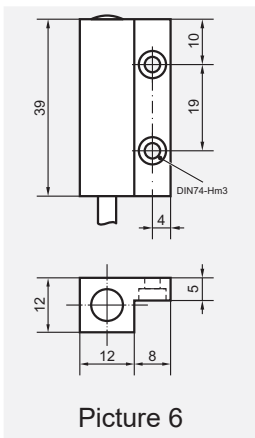
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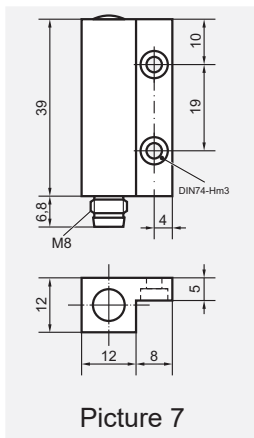
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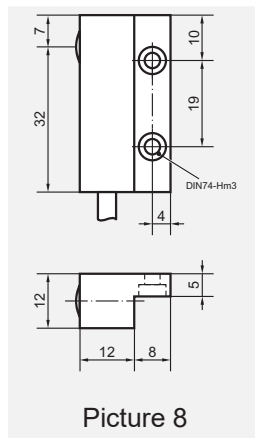
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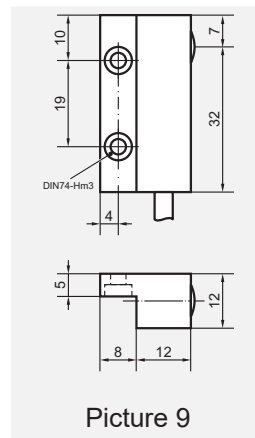
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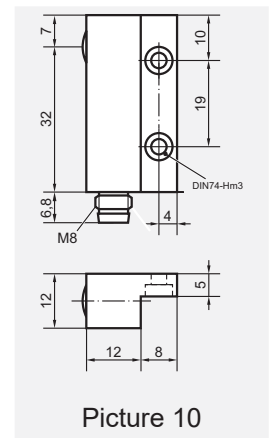
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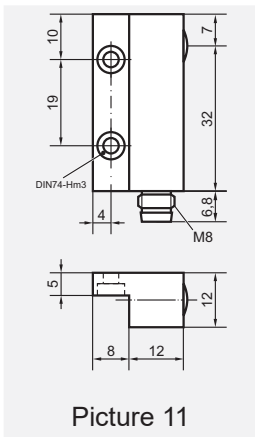
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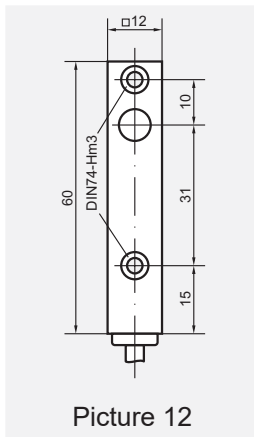
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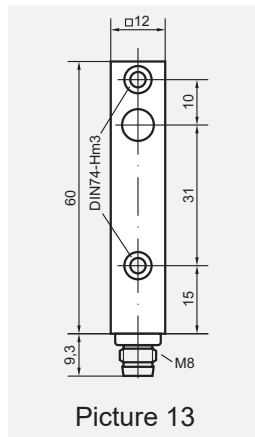
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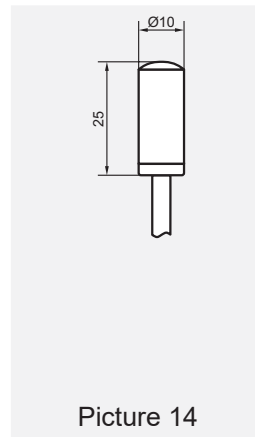
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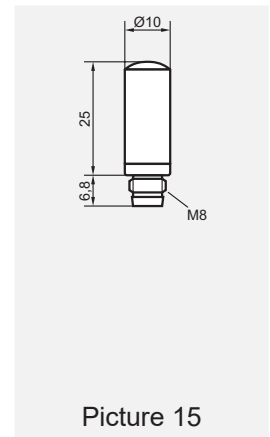
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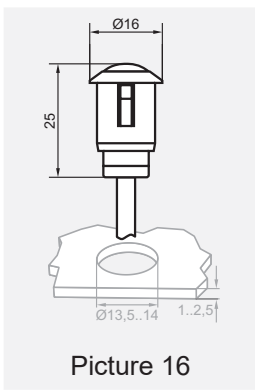
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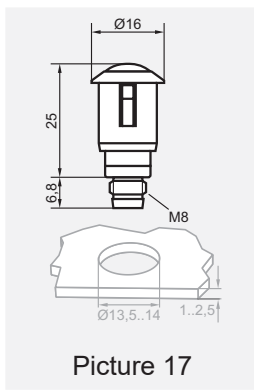
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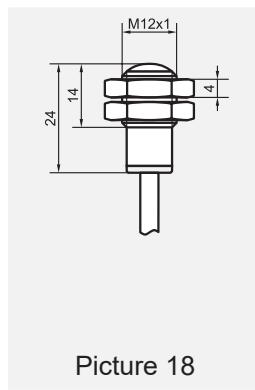
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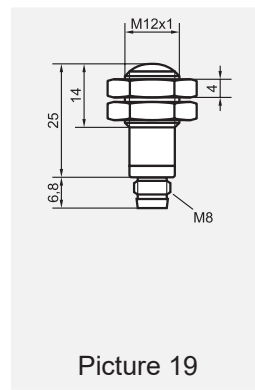
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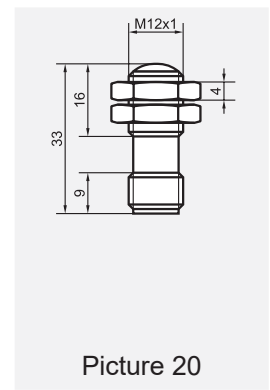
Picture 17



Picture 18



Picture 19



Picture 20