

Linking your system



Inductive Proximity Sensors

Inductive proximity sensors are essential to modern applications in the field of industrial automation. Compared to mechanical proximity switches, inductive sensors offers several advantages: Non-contact and non-abrasion working, high switching frequency, and high accuracy. Besides, the units are resistant to shake, dust, and damp. Mostly common application: Position recognition in automation procedure. Inductive proximity sensors can detect all kinds of metals.



Features



- IC smart inductive proximity sensor. Through an orientation mode, user can set the sensing range and the warning point discretionarily
- Sensing objects: Metals
- Output: NPN, PNP, AC, DC, N/O, N/C
- Display: LED
- Electric Protection: Overload, short-circuit, reverse polarity
- Protection Classification: IP67
- Certification: CE and RoHS
- A variety of size and of outputs, easy installation, user-friendly handling
- Ambient temperature: -25~80°C; High temperature type: -25~120°C

Summary

Inductive proximity sensors are essential to modern applications in the field of industrial automation. Compared to mechanical proximity switches, inductive sensors offers several advantages: Non-contact and non-abrasion working, high switching frequency, and high accuracy. Besides, units are resistant to shake, dust, and damp. Mostly common application: Position recognition in automation procedure.

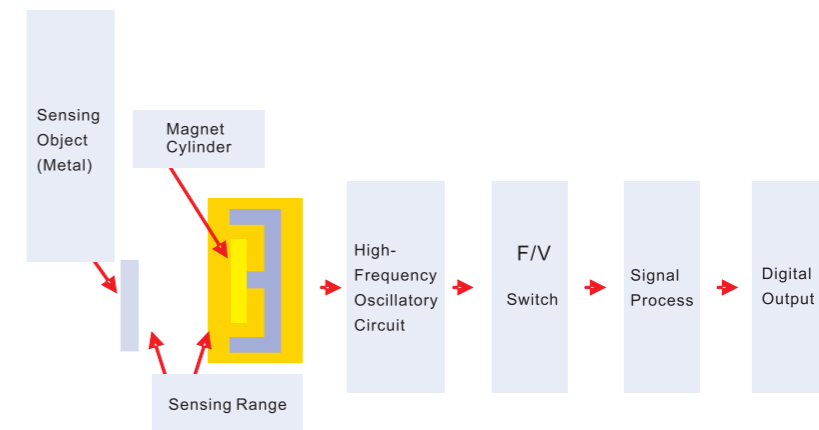
Inductive proximity sensors can detect all kinds of metals.

Operating Principle

Inductive proximity sensors include coils and electromagnets, and these two components are combined to the inductive part of a LC tuned circuit which activates the oscillator. Coils and electromagnets generate a low frequency electromagnetic field (EMF), and it is radiated from the sensing surface of the sensor. When a conductive object such as metals enters EMF, the eddy current starts to be transmitted inside the conductor. By absorbing the energy from EMF, this eddy current increases to the degree which is too large to be outputted by an amplifier so that the oscillator stop working and EMF disappears. It has been a well-known eddy current oscillator in the past.

Inductive proximity sensors are a sort of position sensors and composed of LC high-frequency oscillator and amplified resistor. When the metals approach the oscillatory sensing interface, it can generate an electric field and an eddy current appearing inside the objects. This current retroacts to the proximity sensor and weaken the oscillation amplitude as to change the parameters of internal circuit in order to detect whether any metal approaches and to control the output of switches. The sensing objects for inductive proximity sensors should be all metals or conductive materials.

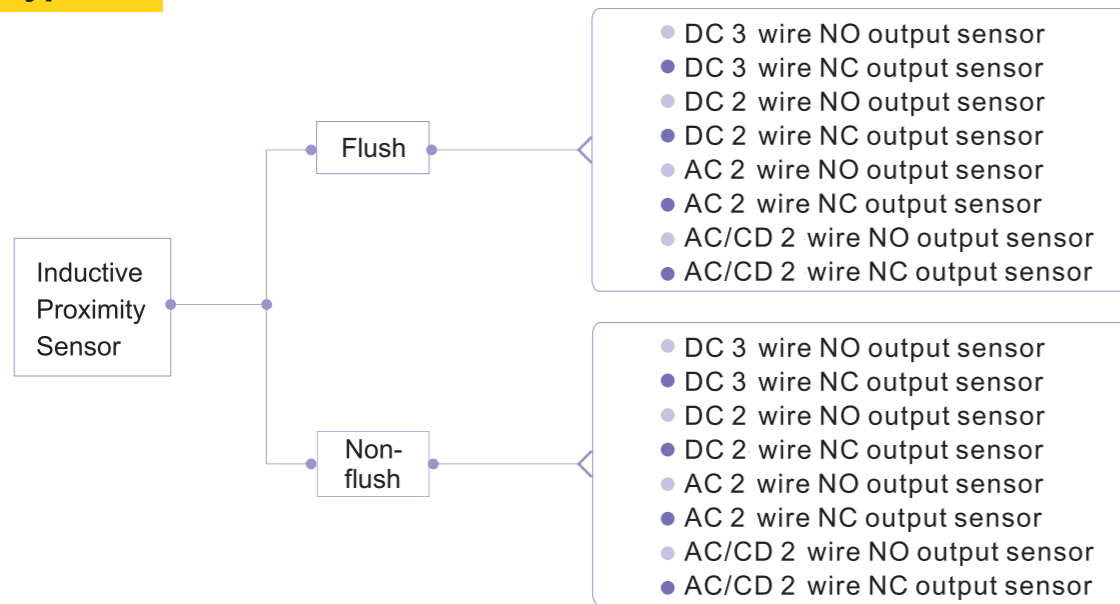
Operation Procedure of Inductive Proximity Sensors



Application

Inductive Proximity Sensors are usually applied to sense metals or conductive materials. Sensing range is determined by the size of sensors objects. The value of energy is determined by the size of the coils inside the sensors. The bigger sensors equip bigger coils which can possible to offer and are possible to offer the longer sensing range. Therefore, this is better to choose an adequate sensor in size to match the sensing rangeneeded, and it can avoid any unstable condition happened.

Type







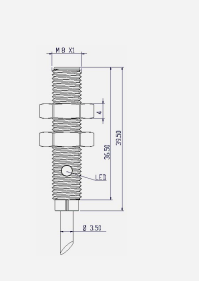
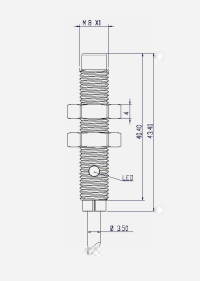
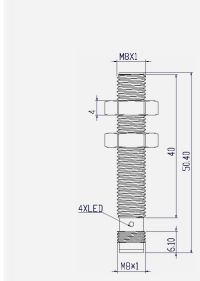
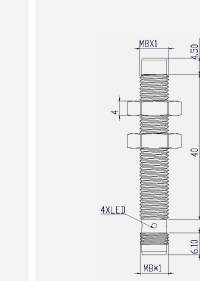
Note: In the following specification of products, "nf" =non flush, "f"=flush.





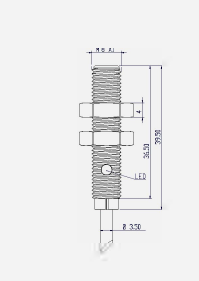
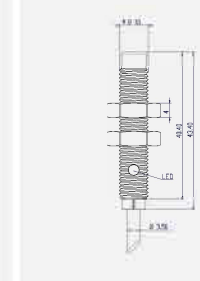
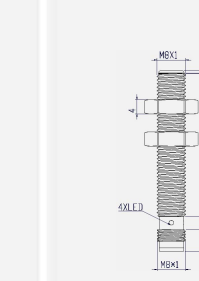
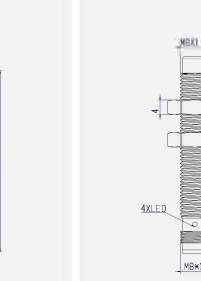
Accessories

Type	Drawing	Connector Order No.					
I		C	02	I	3	C	12
L		C: Cable	Length 02: 2M 05: 5M 10: 10M	Connector I: Straight L: Angled	Pole 2:2pin 3:3pin	Material R: PUR C: PVC S: PVC Shield	Size 8: M8 12: M12

Connection

Electric Design	Size	Connection	Wire/Core Color	Wiring
2 Wire	M12	2M Cable	BN Brown BU Blue	
		Socket	WH white BN Brown BU Blue BK Black	
3 Wire	M8	2M Cable	BN Brown BU Blue BK Black	PNP connection NPN connection
		Socket	WH White BN Brown BU Blue BK Black	PNP connection NPN connection
	M12	2M PVC	BN Brown BU Blue BK Black	PNP connection NPN connection
		Socket	WH White BN Brown BU Blue BK Black	PNP connection NPN connection

Size	M8 Standard			
Standard	Cable		Connector	
Sensing range	1.5mm	2.5mm	1.5mm	2.5mm
				
3 wire PNP NO	IA1001	IA1005	IA1009	IA1013
3 wire PNP NC	IA1002	IA1006	IA1010	IA1014
3 wire NPN NO	IA1003	IA1007	IA1011	IA1015
3 wire NPN NC	IA1004	IA1008	IA1012	IA1016
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	100	100	100	100
Short-circuit protection	Yes	Yes	Yes	
Reverse polarity protection	Yes	Yes	Yes	
Overload protection	Yes	Yes	Yes	
Voltage drop[V]	<2	<2	<2	<2
Current consumption[mA]	<10(24VDC)	<10(24VDC)	<10(24VDC)	<10(24VDC)
Real sensing range[mm]	1.5 ± 10%	2.5 ± 10%	1.5 ± 10%	2.5 ± 10%
Operating range[mm]	0...1.2	0...2	0...1.2	0...2
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	1300	1300	1300	1300
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Ambient humidity [%]	35...95	35...95	35...95	35...95
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT		PBT+GF	
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;3 × 0.14mm ²		M8 Connector	
Accessories	Two fixed nuts			
Drawing				

Size	M8 Standard			
Standard	Cable		Connector	
Sensing range	1.5mm	2.5mm	1.5mm	2.5mm
				
2 wire NO	IA1017	IA1019	IA1021	IA1023
2 wire NC	IA1018	IA1020	IA1022	IA1024
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	100	100	100	100
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	<8	<8	<8	<8
Current consumption[mA]	<10(24VDC)	<10(24VDC)	<10(24VDC)	<10(24VDC)
Real sensing range[mm]	1.5 ± 10%	2.5 ± 10%	1.5 ± 10%	2.5 ± 10%
Operating range[mm]	0...1.2	0...2	0...1.2	0...2
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	1300	1300	1300	1300
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Ambient humidity [°C]	35...95	35...95	35...95	35...95
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;2 × 0.14mm ²		M8 Connector	
Accessories	Two fixed nuts			
Drawing				

Size	M12 Standard			
Standard	Cable		Connector	
Sensing range	2mm	4mm	2mm	4mm
3 wire PNP NO	IB1001	IB1005	IB1009	IB1013
3 wire PNP NC	IB1002	IB1006	IB1010	IB1014
3 wire NPN NO	IB1003	IB1007	IB1011	IB1015
3 wire NPN NC	IB1004	IB1008	IB1012	IB1016
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	100	100	100	100
Short-circuit protection	Pulsed	Pulsed	Pulsed	Pulsed
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	IB1001,IB1002<2.5 IB1003,IB1004<3	IB1005,IB1006<2.5 IB1007,IB1008<3	IB1009,IB1010<2.5 IB1011,IB1012<3	IB1013,IB1014<2.5 IB1015,IB1016<3
Current consumption[mA]	<10(24VDC)	<10(24VDC)	<10(24VDC)	<10(24VDC)
Real sensing range[mm]	2 ± 10%	4 ± 10%	2 ± 10%	4 ± 10%
Operating range[mm]	0...1.6	0...3.2	0...1.6	0...3.2
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	3...20	3...20	3...20	3...20
Switching frequency [Hz]	1000	1000	1000	1000
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Ambient humidity [%]	35...95	35...95	35...95	35...95
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;3 × 0.14mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				





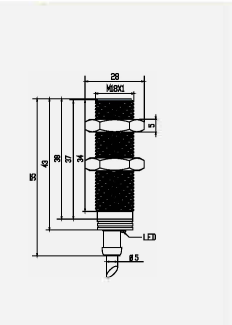
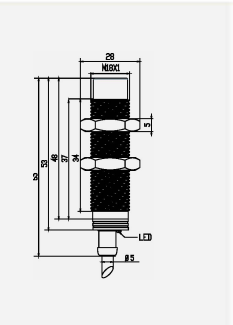
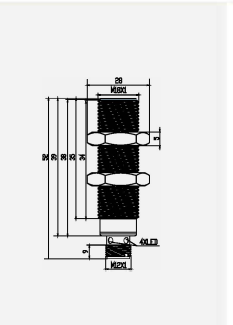
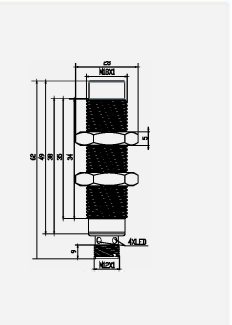
Size	M12 Standard			
Standard	Cable		Connector	
Sensing range	2mm	4mm	2mm	4mm
2 wire NO	IB1017	IB1019	IB1021	IB1023
2 wire NC	IB1018	IB1020	IB1022	IB1024
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	100	100	100	100
Short-circuit protection	Pulsed	Pulsed	Pulsed	Pulsed
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	<4	<4	<4	<4
Leakage current	<0.6(24VDC)	<0.6(24VDC)	<0.6(24VDC)	<0.6(24VDC)
Real sensing range[mm]	2 ± 10%	4 ± 10%	2 ± 10%	4 ± 10%
Operating range [mm]	0...1.6	0...3.2	0...1.6	0...3.2
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	3...20	3...20	3...20	3...20
Switching frequency [Hz]	1000	1000	1000	1000
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Ambient humidity[%]	35...95	35...95	35...95	35...95
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;2 × 0.25mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				

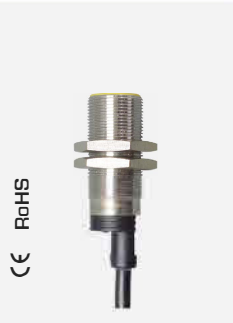



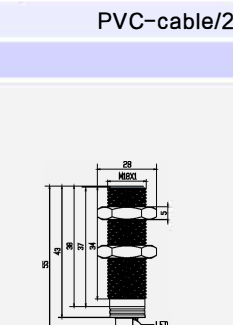
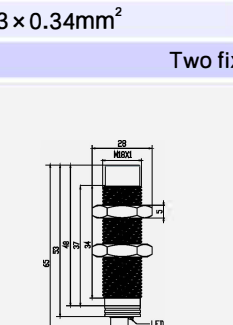
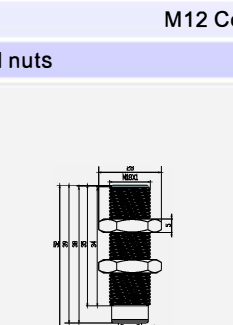
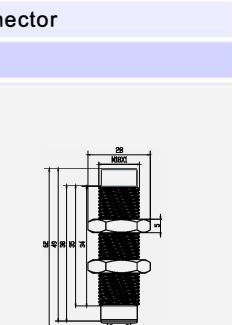
Size	M12 Extra length			
Standard	Cable		Connector	
Sensing range	4mm	6mm	4mm	6mm
3 wire PNP NO	IB1101	IB1105	IB1109	IB1113
3 wire PNP NC	IB1102	IB1106	IB1110	IB1114
3 wire NPN NO	IB1103	IB1107	IB1111	IB1115
3 wire NPN NC	IB1104	IB1108	IB1112	IB1116
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	100	100	100	100
Short-circuit protection	Pulsed	Pulsed	Pulsed	Pulsed
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	IB1101,IB1102<2.5 IB1103,IB1104<3	IB1105,IB1106<2.5 IB1107,IB1108<3	IB1109,IB1110<2.5 IB1111,IB1112<3	IB1113,IB1114<2.5 IB1115,IB1116<3
Current consumption[mA]	<10(24VDC)	<10(24VDC)	<10(24VDC)	<10(24VDC)
Real sensing range[mm]	4 ± 10%	6 ± 10%	4 ± 10%	6 ± 10%
Operating range[mm]	0...3.2	0...4.8	0...3.2	0...4.8
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	3...20	3...20	3...20	3...20
Switching frequency [Hz]	1000	1000	1000	1000
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Operation humidity [%]	35...95	35...95	35...95	35...95
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;3×0.14mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				

Size	M12 Extra length			
Standard	Cable		Connector	
Sensing range	4mm	6mm	4mm	6mm
2 wire NO	IB1117	IB1119	IB1121	IB1123
2 wire NC	IB1118	IB1120	IB1122	IB1124
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	100	100	100	100
Short-circuit protection	Pulsed	Pulsed	Pulsed	Pulsed
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	<4	<4	<4	<4
Current consumption[mA]	<0.6(24VDC)	<0.6(24VDC)	<0.6(24VDC)	<0.6(24VDC)
Real sensing range[mm]	4 ± 10%	6 ± 10%	4 ± 10%	6 ± 10%
Operating range[mm]	0...2	0...4.8	0...3.2	0...3.2
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	3...20	3...20	3...20	3...20
Switching frequency [Hz]	1000	1000	1000	1000
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Ambient humidity [%]	35...95	35...95	35...95	35...95
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;2×0.14mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				

Size	M18 Standard			
Standard	Cable		Connector	
Sensing range	5mm	8mm	5mm	8mm
3 wire PNP NO	IC1001	IC1005	IC1009	IC1013
3 wire PNP NC	IC1002	IC1006	IC1010	IC1014
3 wire NPN NO	IC1003	IC1007	IC1011	IC1015
3 wire NPN NC	IC1004	IC1008	IC1012	IC1016
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	< 2.5	< 2.5	< 2.5	< 2.5
Current consumption[mA]	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)
Real sensing range[mm]	5 ± 10%	8 ± 10%	5 ± 10%	8 ± 10%
Operating range[mm]	0...4	0...6.4	0...4	0...6.4
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	400	400	400	400
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Aluminium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;3 × 0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				

Size	M18 Standard			
Standard	Cable		Connector	
Sensing range	5mm	8mm	5mm	8mm
2 wire NO	IC1017	IC1019	IC1021	IC1023
2 wire NC	IC1018	IC1020	IC1022	IC1024
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	< 4.3DC	< 4.3DC	< 4.3DC	< 4.3DC
Current consumption[mA]	< 1(24VDC)	< 1(24VDC)	< 1(24VDC)	< 1(24VDC)
Real sensing range[mm]	5 ± 10%	8 ± 10%	5 ± 10%	8 ± 10%
Operating range[mm]	0...4	0...6.4	0...4	0...6.4
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	70	70	70	70
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Aluminium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;2 × 0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				

Size	M18 Extra length			
Standard	Cable		Connector	
Sensing range	7mm	12mm	7mm	12mm
				
2 wire NO	IC1117	IC1119	IC1121	IC1123
2 wire NC	IC1118	IC1120	IC1122	IC1124
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	< 4.3DC	< 4.3DC	< 4.3DC	< 4.3DC
Current consumption[mA]	< 1(24VDC)	< 1(24VDC)	< 1(24VDC)	< 1(24VDC)
Real sensing range[mm]	7 ± 10%	12 ± 10%	7 ± 10%	12 ± 10%
Operating range[mm]	0...5.6	0...9.6	0...5.6	0...9.6
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	70	70	70	70
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;2×0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				

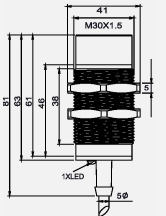
Size	M18 Extra length			
Standard	Cable		Connector	
Sensing range	7mm	12mm	7mm	12mm
				
3 wire PNP NO	IC1101	IC1105	IC1109	IC1113
3 wire PNP NC	IC1102	IC1106	IC1110	IC1114
3 wire NPN NO	IC1103	IC1107	IC1111	IC1115
3 wire NPN NC	IC1104	IC1108	IC1112	IC1116
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	< 2.5	< 2.5	< 2.5	< 2.5
Current consumption[mA]	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)
Real sensing range[mm]	7 ± 10%	12 ± 10%	7 ± 10%	12 ± 10%
Operating range[mm]	0...5.6	0...9.6	0...5.6	0...9.6
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	400	400	400	400
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;3×0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				

Size	M18 High temperature			
Standard	Cable		Connector	
Sensing range	5mm	8mm	5mm	8mm
3 wire PNP NO	IC1201	IC1205	IC1209	IC1213
3 wire PNP NC	IC1202	IC1206	IC1210	IC1214
3 wire NPN NO	IC1203	IC1207	IC1211	IC1215
3 wire NPN NC	IC1204	IC1208	IC1212	IC1216
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	< 2.5	< 2.5	< 2.5	< 2.5
Current consumption[mA]	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)
Real sensing range[mm]	5 ± 10%	8 ± 10%	5 ± 10%	8 ± 10%
Operating range[mm]	0...4	0...6.4	0...4	0...6.4
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	400	400	400	400
Ambient temperature [°C]	-25...120	-25...120	-25...120	-25...120
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	silicone-cable/2m;3 × 0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				





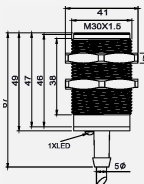
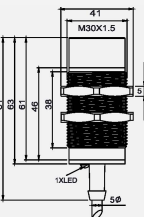
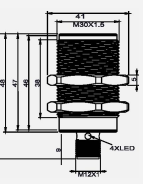
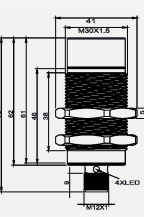
Size	M18 High temperature			
Standard	Cable		Connector	
Sensing range	5mm	8mm	5mm	8mm
2 wire NO	IC1217	IC1219	IC1221	IC1223
2 wire NC	IC1218	IC1220	IC1222	IC1224
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	4.3DC	4.3DC	4.3DC	4.3DC
Current consumption[mA]	< 1(24VDC)	< 1(24VDC)	< 1(24VDC)	< 1(24VDC)
Real sensing range[mm]	5 ± 10%	8 ± 10%	5 ± 10%	8 ± 10%
Operating range[mm]	0...4	0...6.4	0...4	0...6.4
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	70	70	70	70
Ambient temperature [°C]	-25...120	-25...120	-25...120	-25...120
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	silicone-cable/2m;2 × 0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				


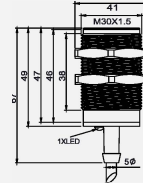
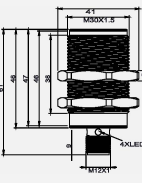
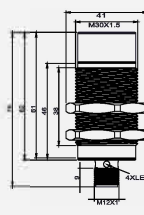
Size	M30 Standard			
Standard	Cable		Connector	
Sensing range	10mm	15mm	10mm	15mm
3 wire PNP NO	ID1001	ID1005	ID1009	ID1013
3 wire PNP NC	ID1002	ID1006	ID1010	ID1014
3 wire NPN NO	ID1003	ID1007	ID1011	ID1015
3 wire NPN NC	ID1004	ID1008	ID1012	ID1016
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	< 2.5	< 2.5	< 2.5	< 2.5
Current consumption[mA]	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)
Real sensing range[mm]	10 ± 10%	15 ± 10%	10 ± 10%	15 ± 10%
Operating range[mm]	0...8	0...12	0...8	0...12
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	100	100	100	100
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;3 × 0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				

Size	M30 Standard			
Standard	Cable		Connector	
Sensing range	10mm	15mm	10mm	15mm
2 wire NO	ID1017	ID1019	ID1021	ID1023
2 wire NC	ID1018	ID1020	ID1022	ID1024
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	< 5	< 5	< 5	< 5
Current consumption[mA]	< 0.6(24VDC)	< 0.6(24VDC)	< 0.6(24VDC)	< 0.6(24VDC)
Real sensing range[mm]	10 ± 10%	15 ± 10%	10 ± 10%	15 ± 10%
Operating range[mm]	0...8	0...12	0...8	0...12
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	60	60	60	60
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;2 × 0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				



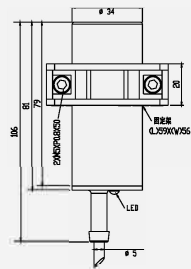
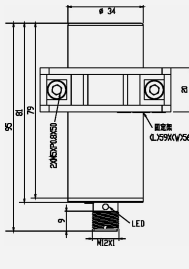
Size	M30 Extra length			
Standard	Cable		Connector	
Sensing range	15mm	22mm	15mm	22mm
				
2 wire NO	ID1117	ID1119	ID1121	ID1123
2 wire NC	ID1118	ID1120	ID1122	ID1124
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	<5V	<5V	<5V	<5V
Current consumption[mA]	<0.6(24VDC)	<0.6(24VDC)	<0.6(24VDC)	<0.6(24VDC)
Real sensing range[mm]	15 ± 10%	22 ± 10%	15 ± 10%	22 ± 10%
Operating range[mm]	0...12	0...17.6	0...12	0...17.6
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	60	60	60	60
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;2×0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				



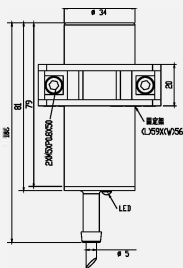
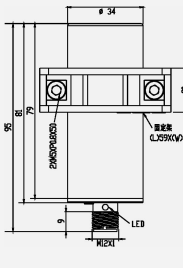
Size	M30 Extra length			
Standard	Cable		Connector	
Sensing range	15mm	22mm	15mm	22mm
				
3 wire PNP NO	ID1101	ID1105	ID1109	ID1113
3 wire PNP NC	ID1102	ID1106	ID1110	ID1114
3 wire NPN NO	ID1103	ID1107	ID1111	ID1115
3 wire NPN NC	ID1104	ID1108	ID1112	ID1116
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	<2.5	<2.5	<2.5	<2.5
Current consumption[mA]	<15(24VDC)	<15(24VDC)	<15(24VDC)	<15(24VDC)
Real sensing range[mm]	15 ± 10%	22 ± 10%	15 ± 10%	22 ± 10%
Operating range[mm]	0...12	0...17.6	0...12	0...17.6
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	100	100	100	100
Ambient temperature [°C]	-25...80	-25...80	-25...80	-25...80
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	PVC-cable/2m;3×0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				



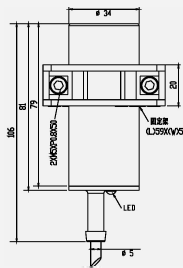
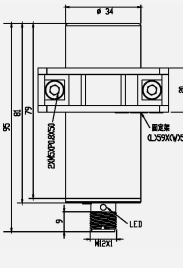
Size	M30 High temperature			
Standard	Cable		Connector	
Sensing range	10mm	15mm	10mm	15mm
				
3 wire PNP NO	ID1201	ID1205	ID1209	ID1213
3 wire PNP NC	ID1202	ID1206	ID1210	ID1214
3 wire NPN NO	ID1203	ID1207	ID1211	ID1215
3 wire NPN NC	ID1204	ID1208	ID1212	ID1216
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	< 2.5	< 2.5	< 2.5	< 2.5
Current consumption[mA]	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)	< 15(24VDC)
Real sensing range[mm]	10 ± 10%	15 ± 10%	10 ± 10%	15 ± 10%
Operating range[mm]	0...8	0...12	0...8	0...12
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	100	100	100	100
Ambient temperature [°C]	-25...120	-25...120	-25...120	-25...120
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	silicone-cable/2m;3 × 0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				

Size	M30 High temperature			
Standard	Cable		Connector	
Sensing range	10mm	15mm	10mm	15mm
				
2 wire NO	ID1217	ID1219	ID1221	ID1223
2 wire NC	ID1218	ID1220	ID1222	ID1224
Sensing surface	Flush	Non-flush	Flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC	10...36DC	10...36DC
Current loading[mA]	250	250	250	250
Short-circuit protection	Yes	Yes	Yes	Yes
Reverse polarity protection	Yes	Yes	Yes	Yes
Overload protection	Yes	Yes	Yes	Yes
Voltage drop[V]	< 5	< 5	< 5	< 5
Current consumption[mA]	< 0.6(24VDC)	< 0.6(24VDC)	< 0.6(24VDC)	< 0.6(24VDC)
Real sensing range[mm]	10 ± 10%	15 ± 10%	10 ± 10%	15 ± 10%
Operating range[mm]	0...8	0...12	0...12	0...12
Switch-point drift [%Sr]	-10...10	-10...10	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15	1...15	1...15
Switching frequency [Hz]	60	60	60	60
Ambient temperature [°C]	-25...120	-25...120	-25...120	-25...120
Protection classification	IP67	IP67	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.4/Alumium approx 0.3/Copper approx 0.2			
Housing material	Stainless steel ; Sensing surface: PBT			
Display LED	Red(90°)	Red(90°)	Red(90°)	Red(90°)
Connection	silicone-cable/2m;2 × 0.34mm ²		M12 Connector	
Accessories	Two fixed nuts			
Drawing				



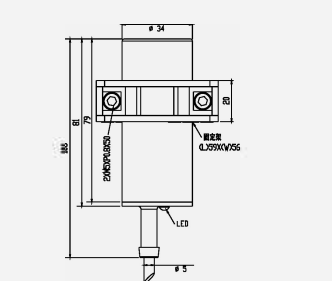
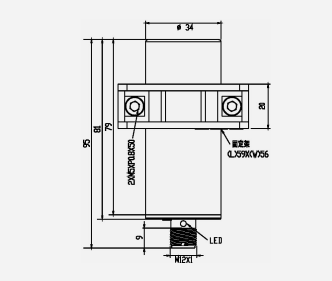
Size	Ø34 Standard	
Standard	Cable	Connector
Sensing range	20mm	20mm
		
	CE RoHS	CE RoHS
3 wire PNP NO	IE1001	IE1005
3 wire PNP NC	IE1002	IE1006
3 wire NPN NO	IE1003	IE1007
3 wire NPN NC	IE1004	IE1008
Sensing surface	Non-flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC
Current loading[mA]	350	350
Short-circuit protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Overload protection	Yes	Yes
Voltage drop[V]	< 2.5	< 2.5
Current consumption[mA]	< 15(24VDC)	< 15(24VDC)
Real sensing range[mm]	20 ± 10%	20 ± 10%
Operating range[mm]	0...16	0...16
Switch-point drift [%Sr]	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15
Switching frequency [Hz]	100	100
Ambient temperature [°C]	-25...80	-25...80
Protection classification	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3	
Housing material	PBT	PBT
Display LED	Red(90°)	Red(90°)
Connection	PVC-cable/2m;3 × 0.34mm ²	M12 Connector
Accessories	Fixed bracket	
Drawing		

Size	Ø34 Standard	
Standard	Cable	Connector
Sensing range	20mm	20mm
		
	CE RoHS	CE RoHS
2 wire NO	IE1009	IE1011
2 wire NC	IE1010	IE1012
Sensing surface	Non-flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC
Current loading[mA]	350	350
Short-circuit protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Overload protection	Yes	Yes
Voltage drop[V]	< 5.5	< 5.5
Current consumption[mA]	< 0.6(24VDC)	< 0.6(24VDC)
Real sensing range[mm]	20 ± 10%	20 ± 10%
Operating range[mm]	0...16	0...16
Switch-point drift [%Sr]	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15
Switching frequency [Hz]	50	50
Ambient temperature [°C]	-25...80	-25...80
Protection classification	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3	
Housing material	PBT	PBT
Display LED	Red(90°)	Red(90°)
Connection	PVC-cable/2m;2 × 0.34mm ²	M12 Connector
Accessories	Fixed bracket	
Drawing		

Size	Ø34 Extra length	
Standard	Cable	Connector
Sensing range	30mm	30mm
		
	CE RoHS	CE RoHS
2 wire NO	IE1109	IE1111
2 wire NC	IE1110	IE1112
Sensing surface	Non-flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC
Current loading[mA]	350	350
Short-circuit protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Overload protection	Yes	Yes
Voltage drop[V]	< 5.5	< 5.5
Current consumption[mA]	< 0.6(24VDC)	< 0.6(24VDC)
Real sensing range[mm]	30 ± 10%	30 ± 10%
Operating range[mm]	0...24	0...24
Switch-point drift [%Sr]	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15
Switching frequency [Hz]	50	50
Ambient temperature [°C]	-25...80	-25...80
Protection classification	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3	
Housing material	PBT	PBT
Display LED	Red(90°)	Red(90°)
Connection	PVC-cable/2m;2×0.34mm ²	M12 Connector
Accessories	Fixed bracket	
Drawing		

Size	Ø34 Extra length	
Standard	Cable	Connector
Sensing range	30mm	30mm
		
	CE RoHS	CE RoHS
3 wire PNP NO	IE1101	IE1105
3 wire PNP NC	IE1102	IE1106
3 wire NPN NO	IE1103	IE1107
3 wire NPN NC	IE1104	IE1108
Sensing surface	Non-flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC
Current loading[mA]	350	350
Short-circuit protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Overload protection	Yes	Yes
Voltage drop[V]	< 2.5	< 2.5
Current consumption[mA]	< 15(24VDC)	< 15(24VDC)
Real sensing range[mm]	30 ± 10%	30 ± 10%
Operating range[mm]	0...24	0...24
Switch-point drift [%Sr]	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15
Switching frequency [Hz]	100	100
Ambient temperature [°C]	-25...80	-25...80
Protection classification	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3	
Housing material	PBT	PBT
Display LED	Red(90°)	Red(90°)
Connection	PVC-cable/2m;3×0.34mm ²	M12 Connector
Accessories	Fixed bracket	
Drawing		

Size	Ø34 High temperature	
Standard	Cable	Connector
Sensing range	20mm	20mm
		
3 wire PNP NO	IE1201	IE1205
3 wire PNP NC	IE1202	IE1206
3 wire NPN NO	IE1203	IE1207
3 wire NPN NC	IE1204	IE1208
Sensing surface	Non-flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC
Current loading[mA]	350	350
Short-circuit protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Overload protection	Yes	Yes
Voltage drop[V]	< 2.5	< 2.5
Current consumption[mA]	< 15(24VDC)	< 15(24VDC)
Real sensing range[mm]	20 ± 10%	20 ± 10%
Operating range[mm]	0...16	0...16
Switch-point drift [%Sr]	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15
Switching frequency [Hz]	100	100
Ambient temperature [°C]	-25...120	-25...120
Protection classification	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3	
Housing material	PBT	PBT
Display LED	Red(90°)	Red(90°)
Connection	silicone-cable/2m;3 x 0.34mm ²	M12 Connector
Accessories	Fixed bracket	
Drawing		

Size	Ø34 High temperature	
Standard	Cable	Connector
Sensing range	20mm	20mm
		
2 wire NO	IE1209	IE1211
2 wire NC	IE1210	IE1212
Sensing surface	Non-flush	Non-flush
Operating voltage[V]	10...36DC	10...36DC
Current loading[mA]	350	350
Short-circuit protection	Yes	Yes
Reverse polarity protection	Yes	Yes
Overload protection	Yes	Yes
Voltage drop[V]	< 5.5	< 5.5
Current consumption[mA]	< 0.6(24VDC)	< 0.6(24VDC)
Real sensing range[mm]	20 ± 10%	20 ± 10%
Operating range[mm]	0...16	0...16
Switch-point drift [%Sr]	-10...10	-10...10
Hysteresis [%Sr]	1...15	1...15
Switching frequency [Hz]	50	50
Ambient temperature [°C]	-25...120	-25...120
Protection classification	IP67	IP67
Adjustment factors	Low carbon steel=1/stainless steel approx 0.7/Brass approx 0.5/Alumium approx 0.4/Copper approx 0.3	
Housing material	PBT	PBT
Display LED	Red(90°)	Red(90°)
Connection	silicone-cable/2m;2 x 0.34mm ²	M12 Connector
Accessories	Fixed bracket	
Drawing		

ООО "РусАвтоматизация"