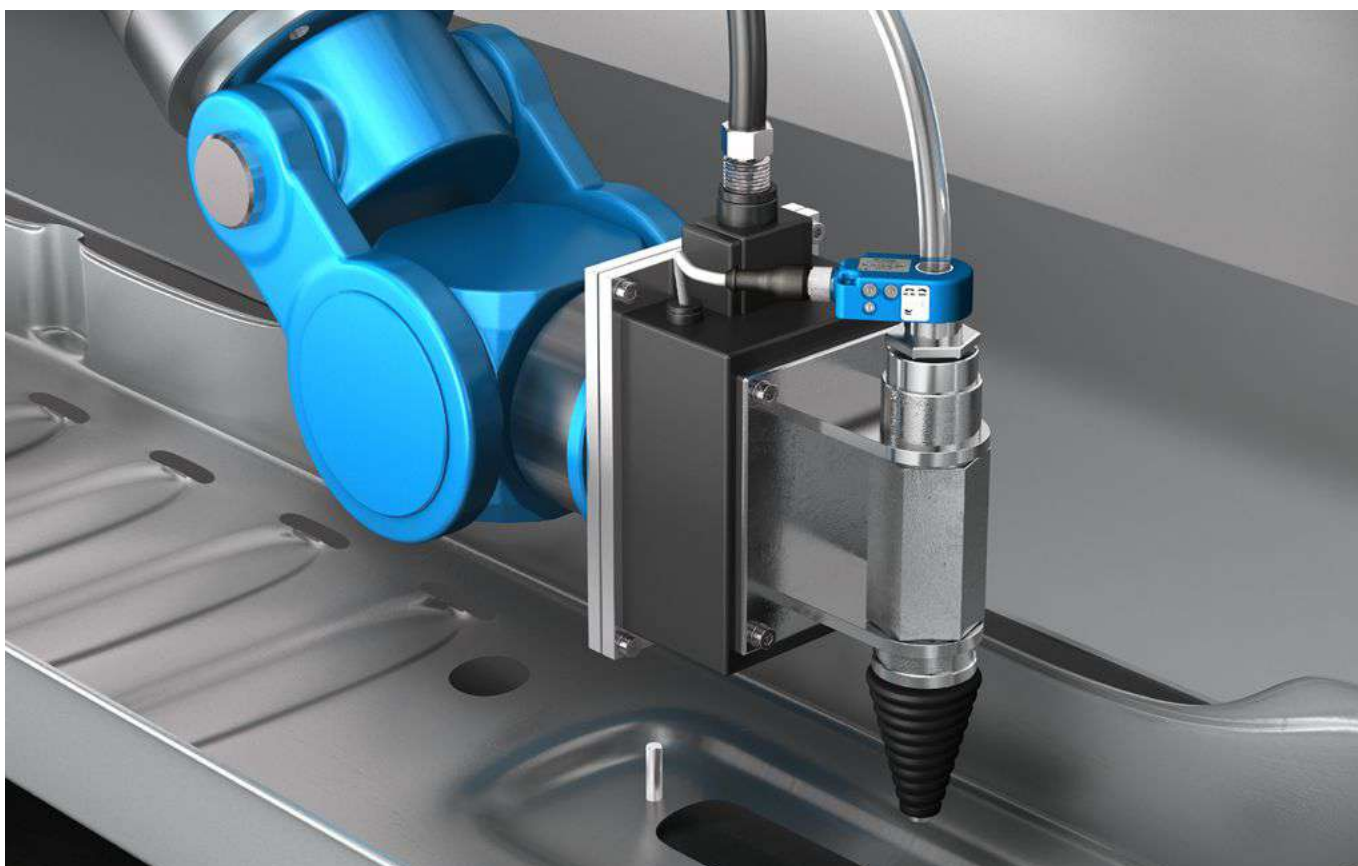


Inductive ring sensors



Our inductive ring and wire breakage sensors detect the smallest metallic parts that are conveyed in supply tubes for further processing. In the case of parts that are fed very quickly, the integrated pulse stretching generates an output signal that can be easily analyzed. All devices from di-soric are reliably protected against overload, short-circuit and polarity reversal.



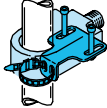
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IRB STANDARD

The inductive ring sensors in the IRB Standard series in the sizes Ø 10.1 mm to 27 mm detect the smallest metallic parts. They can be put into service quickly and have no adjusting elements. These sensors work according to the static operating principle and exhibit a short response time.



Technical data (typ.)	+20 °C, 24 VDC
Service voltage	10 to 35 V DC
Voltage drop	2.0 V
Speed of parts	< 35 m/s
Ambient temperature	-25 to 70 °C
Protection class	IP 67
Insulation proof voltage	1,000 V
Housing material	Polyamide, ring POM

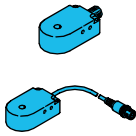
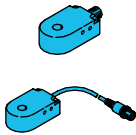
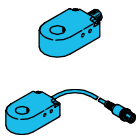
	Ring diameter (mm)	Evaluation: Static (S)	No-load current (mA)	Resolution, steel ball (mm)	Switching output	Pulse stretching (ms)	Cable length, Plug connector	Product description
IRB Standard								
	10.1	S	11	2.0	pnp, 200 mA, NO	150	M12	IRB 10 PS-B3
					npn, 200 mA, NO			IRB 10 NS-B3
	15.1	S	11	2.5	pnp, 200 mA, NO	150	M12	IRB 15 PS-B3
					npn, 200 mA, NO			IRB 15 NS-B3
	20.1	S	11	3.0	pnp, 200 mA, NO	150	M12	IRB 20 PS-B3
					npn, 200 mA, NO			IRB 20 NS-B3
	27.1	S	11	5.0	pnp, 200 mA, NO	150	M12	IRB 27 PS-B3
 Mounting bracket for ring sensors IRB 6-27 see "Accessories for ring sensors", page 206								

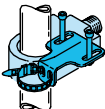
IR STATIC

The devices in the IR series are inductive standard ring sensors that can be used to detect even the smallest metallic parts. They are available in Ø 6.1 mm to 151.0 mm models and are well suited for quickly supplied parts.



Technical data (typ.)	+20 °C, 24 VDC
Service voltage	10 to 35 V DC
Sensitivity adjustment	Potentiometer
Voltage drop	2.0 V
Speed of parts	< 35 m/s
Ambient temperature	-25 to 70 °C
Protection class	IP 67
Insulation proof voltage	1,000 V
Housing material	Polyamide, ring POM
	Die-cast aluminum, ring POM (only IR 150 ...)

	Ring diameter (mm)	Evaluation: Static (S) / Dynamic (D)	No-load current (mA)	Resolution, steel ball (mm)	Switching output	Pulse stretching (ms)	Cable length, Plug connector	Product description
IR Static								
  	6.1	S	11	1.0	pnp, 200 mA, NO/NC	10 to 150	M12	IR 6 PSOK-IBS
					nnp, 200 mA, NO/NC			IR 6 NSOK-IBS
					pnp, 200 mA, NO/NC		0.3m/M12	IR 6 PSOK-K-BS
	10.1	S	11	1.5	pnp, 200 mA, NO/NC	10 to 150	M12	IR 10 PSOK-IBS
					pnp, 200 mA, NO/NC			IR 10 NSOK-IBS
					pnp, 200 mA, NO/NC		0.3m/M12	IR 10 PSOK-K-BS
	15.1	S	11	2.0	pnp, 200 mA, NO/NC	10 to 150	M12	IR 15 PSOK-IBS
					pnp, 200 mA, NO/NC			IR 15 NSOK-IBS
					pnp, 200 mA, NO/NC		0.3m/M12	IR 15 PSOK-K-BS

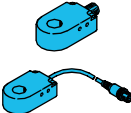
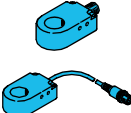
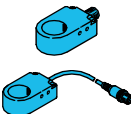
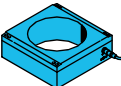
	Ring diameter (mm)	Evaluation: Static (S) / Dynamic (D)	No-load current (mA)	Resolution, steel ball (mm)				
IR Static								
	20.1	S	11	2.5	pnp, 200 mA, NO/NC	10 to 150	M12	IR 20 PSOK-IBS
					npn, 200 mA, NO/NC			IR 20 NSOK-IBS
								
	25.1	S	11	3.0	pnp, 200 mA, NO/NC	10 to 150	M12	IR 25 PSOK-IBS
					npn, 200 mA, NO/NC			IR 25 NSOK-IBS
								
	35.2	S	11	4.5	pnp, 200 mA, NO/NC	10 to 150	M12	IR 35 PSOK-IBS
					npn, 200 mA, NO/NC			IR 35 NSOK-IBS
	51.0	S	11	6.0	pnp, 200 mA, NO/NC	10 to 150	M12	IR 50 PSOK-IBS
					npn, 200 mA, NO/NC			IR 50 NSOK-IBS
	101.0	S	15	10.0	pnp, 200 mA, NO/NC	10 to 150	M12	IR 100 PSOK-IBS
					npn, 200 mA, NO/NC			IR 100 NSOK-IBS
	151.0	S	15	19.0	pnp, 200 mA, NO/NC	10 to 150	M12	IR 150 PSOK-IBS
					npn, 200 mA, NO/NC			IR 150 NSOK-IBS
Mounting bracket for ring sensors IRB 6-27								
	see "Accessories for ring sensors", page 206							

IRD DYNAMIC

Ring sensors with dynamic evaluation have a higher resolution than ring sensors with static resolution, making them particularly suitable for detecting very small parts with a low mass. The dynamic operating principle independently compensates for contamination in the supply tube.



Technical data (typ.)	+20 °C, 24 VDC
Service voltage	10 to 35 V DC
Sensitivity adjustment	Potentiometer
Voltage drop	2.0V
Speed of parts	<35 m/s
Ambient temperature	-25 to 70 °C
Protection class	IP 67
Insulation proof voltage	1,000V
Housing material	Polyamide, ring POM
	Die-cast aluminum, ring POM (only IRD 150 ...)

	Ring diameter (mm)	Evaluation: Static (S) / Dynamic (D)	No-load current (mA)	Resolution, steel ball (mm)	Switching output	Pulse stretching (ms)	Cable length, Plug connector	Product description
IRD Dynamic								
	6.1	D	<20	0.5	pnp, 200 mA, NO/NC	0.1 to 150	M12	IRD 6 PSOK-IBS
					npn, 200 mA, NO/NC			IRD 6 NSOK-IBS
	10.1	D	<20	0.6	pnp, 200 mA, NO/NC	0.1 to 150	M12	IRD 10 PSOK-IBS
					npn, 200 mA, NO/NC			IRD 10 NSOK-IBS
	15.1	D	<20	0.8	pnp, 200 mA, NO/NC	0.1 to 150	M12	IRD 15 PSOK-IBS
					npn, 200 mA, NO/NC			IRD 15 NSOK-IBS
					pnp, 200 mA, NO/NC		0.3m/M12	IRD 15 PSOK-K-BS
	20.1	D	<20	1.0	pnp, 200 mA, NO/NC	0.1 to 150	M12	IRD 20 PSOK-IBS
					npn, 200 mA, NO/NC			IRD 20 NSOK-IBS
					pnp, 200 mA, NO/NC		0.3m/M12	IRD 20 PSOK-K-BS
	25.1	D	<20	1.2	pnp, 200 mA, NO/NC	0.1 to 150	M12	IRD 25 PSOK-IBS
					npn, 200 mA, NO/NC			IRD 25 NSOK-IBS
					pnp, 200 mA, NO/NC		0.3m/M12	IRD 25 PSOK-K-BS
	35.2	D	<20	2.0	pnp, 200 mA, NO/NC	0.1 to 150	M12	IRD 35 PSOK-IBS
					npn, 200 mA, NO/NC			IRD 35 NSOK-IBS
	51.0	D	<20	2.5	pnp, 200 mA, NO/NC	0.1 to 150	M12	IRD 50 PSOK-IBS
					npn, 200 mA, NO/NC			IRD 50 NSOK-IBS
	101.0	D	<20	5.0	pnp, 200 mA, NO/NC	0.1 to 150	M12	IRD 100 PSOK-IBS
					npn, 200 mA, NO/NC			IRD 100 NSOK-IBS
	151.0	D	<20	10.0	pnp, 200 mA, NO/NC	0.1 to 150	M12	IRD 150 PSOK-IBS
					npn, 200 mA, NO/NC			IRD 150 NSOK-IBS

IRDB INDUCTIVE WIRE-BREAK SENSOR

The inductive wire breakage sensors in the IRDB series are used for detecting wire breaks. The sensors are available in the sizes Ø 4 mm and 6 mm. They can be put into service quickly and have no adjusting elements. These sensors work according to the static operating principle and exhibit a short response time.

Technical data (typ.)	+20 °C, 24 VDC
Service voltage	10 to 35 V DC
Sensitivity adjustment	Potentiometer
Voltage drop	2.0 V
Speed of parts	< 35 m/s
Ambient temperature	-25 to 70 °C
Protection class	IP 67
Insulation proof voltage	1,000 V
Housing material	Polyamide, ring POM ceramic insert (IRDBx 4 ...)
	Polyamide, ring POM (IRDBx 6 ...)



	Ring diameter (mm)	Evaluation: Static (S) / Dynamic (D)	No-load current (mA)	Resolution, Cu wire (mm)	Switching output	Pulse stretching (ms)	Cable length, Plug connector	Product description
IRDB Inductive wire-break sensor								
	4.0	S	11	0.2	pnP, 200 mA, NO	10 to 150	M12	IRDB 4 PSOK-IBS
					nPN, 200 mA, NO			IRDB 4 NSOK-IBS
		D	<20	0.1	pnP, 200 mA, NO	0.1 to 150		IRDBD 4 PSOK-IBS
					nPN, 200 mA, NO			IRDBD 4 NSOK-IBS
	6.1	S	11	0.2	pnP, 200 mA, NO	10 to 150	M12	IRDB 6 PSOK-IBS
					nPN, 200 mA, NO			IRDB 6 NSOK-IBS
		D	<20	0.1	pnP, 200 mA, NO	0.1 to 150		IRDBD 6 PSOK-IBS
					nPN, 200 mA, NO			IRDBD 6 NSOK-IBS