

Proximity Sensor Selection Guide



Specifications	PY3 Stainless Steel DC	PY4 Stainless Steel DC	AC1 Stainless Steel DC	PD Stainless Steel DC	AHS Stainless Steel DC
Description	Miniature inductive proximity sensors, 3mm DC, stainless steel	Miniature inductive proximity sensors, 4mm DC, stainless steel	Miniature inductive proximity sensors, 4mm DC, stainless steel	Miniature inductive proximity sensors, 5mm, DC, stainless steel	Miniature inductive proximity sensors, 6.5 mm, DC, stainless steel
Sensing Distances	Standard distance: 0.6 mm Extended distance: 1.0 mm	Standard distance: 0.6 mm Extended distance: 1.0 mm	Standard distance: 0.8 mm Extended distance: 1.5 mm	Standard distance: 0.8 mm Extended distance: 1.5 mm	Standard distance: 1.5 mm Extended distance: 2.0 mm
Output State	NO	NO	NO/NC	NO	NO/NC
Logic Output	NPN / PNP	NPN / PNP	NPN / PNP	NPN / PNP	NPN / PNP
Connection Type	Axial cable	Axial cable	Axial cable / M8 connector	Axial cable / M8 connector	Axial cable / M8 connector
Supply Voltage	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC
Switching Frequency	Standard distance: 5kHz	Extended distance: 3kHz	Standard and extended distance: 7kHz	Standard distance: 5kHz Extended distance: 3kHz	Standard and extended distance: 7kHz
Protection Degree	IEC-IP67	IEC-IP67	IEC-IP67	IEC-IP67	IEC-IP67



Specifications	AES Stainless Steel DC	AE1/AE6 Series	DW 3mm Stainless Steel DC	DW 4mm Stainless Steel DC
Description	Inductive proximity sensors, 8mm, DC, stainless steel	Inductive proximity sensors, 8mm, DC, nickel or chrome-plated brass	Inductive proximity sensors, 3mm, tubular stainless steel	Inductive proximity sensors, 4mm, tubular stainless steel
Sensing Distances	Standard distance: 1.5 mm Extended distance: 2mm	Standard distance 1.5 mm - 2.5 mm Extended distance 2.0 mm - 4.0 mm Triple distance 3.0 mm	Shielded: 1mm	Shielded: 1mm or 2.5 mm
Output State	NO / NC	NO	NO or NC	NO or NC
Logic Output	NPN / PNP	NPN / PNP	NPN or PNP	NPN or PNP
Connection Type	Axial cable / M8 connector	Axial cable / M12 connector	2m cable	2m cable or M8 quick-disconnect
Supply Voltage	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC
Switching Frequency	Standard and extended distance: 7kHz	shielded: 3 kHz unshielded: 2.5 kHz	Shielded: 8kHz or 3kHz	Extended distance: 8kHz or 3kHz Triple distance: 800Hz
Protection Degree	IEC-IP67	IEC-IP67	IP67	IP67

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Specifications	DW 5mm Nickel Silver DC	DW 8mm Nickel Silver/Chrome-Plated Brass DC	DW 8mm Full Stainless Steel DC	DW 12mm Chrome-Plated Brass DC
Description	Inductive proximity sensors, 5mm, tubular nickel silver	Inductive proximity sensors, 8mm, tubular nickel silver or chrome-plated brass	Inductive proximity sensors, 8mm, tubular stainless steel	Inductive proximity sensors, 12mm, tubular chrome-plated brass
Sensing Distances	Shielded: 2.5 mm	Shielded: 3mm Unshielded: 6mm	Unshielded: 6mm	Shielded: 6mm Unshielded: 10mm
Output State	NO or NC	NO or NC	NO or NC	NO or NC
Logic Output	NPN or PNP	NPN or PNP	NPN or PNP	NPN or PNP
Connection Type	2m cable or M8 quick-disconnect	2m cable/M8 or M12 quick-disconnect	2m cable/M8 or M12 quick-disconnect	2m cable or M12 quick-disconnect
Supply Voltage	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC
Switching Frequency	Shielded: 800Hz	Shielded: 1kHz Unshielded: 500Hz	Unshielded: 700Hz	Shielded: 800Hz Unshielded: 400Hz
Protection Degree	IP67	IP67	IP67/IP68	IP67



Specifications	DW 12mm Full Stainless Steel DC	DW 18mm Chrome-Plated Brass DC	DW 18mm Full Stainless Steel DC	DW 30mm Chrome-Plated Brass DC
Description	Inductive proximity sensors, 12mm, tubular stainless steel	Inductive proximity sensors, 18mm, tubular chrome-plated brass	Inductive proximity sensors, 18mm, tubular stainless steel	Inductive proximity sensors, 30mm, tubular chrome-plated brass
Sensing Distances	Unshielded: 10mm	Shielded: 12mm Unshielded: 20mm	Unshielded: 20mm	Shielded: 22mm Unshielded: 40mm
Output State	NO or NC	NO or NC	NO or NC	NO or NC
Logic Output	NPN or PNP	NPN or PNP	NPN or PNP	NPN or PNP
Connection Type	2m cable or M12 quick-disconnect	2m cable or M12 quick-disconnect	2m cable or M12 quick-disconnect	2m cable or M12 quick-disconnect
Supply Voltage	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC
Switching Frequency	Unshielded: 400Hz	Shielded: 600Hz Unshielded: 500Hz	Unshielded: 200Hz	Shielded: 200Hz Unshielded: 100Hz
Protection Degree	IP68/IP69K	IP67	IP68/IP69K	IP67

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Specifications	DW 30mm Full Stainless Steel DC	DW 20mm x 32mm Rectangular Proximity Sensors DC	PNM DC	PNK DC	PNT DC
Description	Inductive proximity sensors, 30mm, tubular stainless steel	Inductive proximity sensors, 20x32mm, rectangular stainless steel	Inductive proximity sensors, 12mm, DC, metal	Inductive proximity sensors, 18mm, DC, metal	Inductive proximity sensors, 30mm, DC, metal
Sensing Distances	Unshielded: 40mm	Shielded: 7mm	Shielded: 4mm Unshielded: 7mm	Shielded: 8mm Unshielded: 12mm	Shielded: 15mm Unshielded: 22mm
Output State	NO or NC	NO	NO, NC	NO, NC	NO, NC
Logic Output	NPN or PNP	NPN or PNP	NPN / PNP	NPN / PNP	NPN / PNP
Connection Type	2m cable or M12 quick-disconnect	2m cable or M12 quick-disconnect	Axial cable / M12 connector	Axial cable / M12 connector	Axial cable / M12 connector
Supply Voltage	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC
Switching Frequency	Unshielded: 90Hz	Unshielded: 180Hz	shielded/unshielded, 3 wire: 700Hz	shielded: 3-wire: 400Hz unshielded: 3-wire: 300Hz	shielded/unshielded, 3 wire: 100Hz
Protection Degree	IP68/IP69K	IP68/IP69K	IP65 / IP66 / IP67 / IP68 / IP69K	IP65 / IP66 / IP67 / IP68 / IP69K	IP65 / IP66 / IP67 / IP68 / IP69K

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Specifications	CR5 Rectangular DC	CR8 Rectangular DC	LF40 Rectangular DC	DR10 Rectangular DC	APS Rectangular DC
Description	5 x 5 rectangular inductive proximity sensors, DC, metal	8 x 8 rectangular inductive proximity sensors, DC, metal	40 x 40 x 66 rectangular inductive proximity sensors, DC, plastic	10 x 16 rectangular inductive prox sensor, DC, plastic	12 x 27 / 8 x 26.5 mm compact rectangular inductive proximity sensor; DC, plastic
Sensing Distances	Standard: 0.8 mm Extended distance: 1.5 mm	Standard distance: shielded: 0 to 1.5 mm Extended distance: shielded: 0 to 2 mm Triple distance: shielded: 3mm	Shielded: 20mm Unshielded: 35mm	Shielded: 3mm Unshielded: 6mm	2.5 mm, 4mm
Output State	NO	NO	NO; NO / NC Complementary	NO	NO/NC
Logic Output	NPN / PNP	NPN / PNP	PNP	NPN/ PNP	NPN/ PNP, NPN, PNP
Connection Type	Axial cable / M8 connector	Axial cable / M8 connector	M12 connector	Axial cable / M8 connector	Axial cable
Supply Voltage	10 to 30 VDC	10 to 30 VDC	10 to 36 VDC	10 to 30 VDC	10–30 VDC
Switching Frequency	Standard distance: 5kHz Extended distance: 3kHz	1kHz	Shielded: 100Hz Unshielded: 80Hz	3kHz	200Hz/500Hz
Protection Degree	IEC-IP67	IEC-IP67	IEC-IP67	IEC-IP67	IEC-IP67



Specifications	PEW Stainless Steel DC	PMW Stainless Steel DC	PKW Stainless Steel DC	PTW Stainless Steel DC	V Series AC
Description	Inductive proximity sensors, 8mm, DC, stainless steel	Inductive proximity sensors, 12mm, DC, stainless steel	Inductive proximity sensors, 18mm, DC, stainless steel	30mm inductive proximity sensors, DC, stainless steel	12mm/18mm/30mm inductive proximity sensor, AC, metal
Sensing Distances	Standard distance: 2mm	Standard distance: 2mm Extended distance: 3mm, 4mm Triple distance: 6mm	Standard distance: 5mm Extended distance: 8mm Triple distance: 10mm	PTW-A*-5: 20mm PTW-AP-1: 10mm	M12 models shielded: 2mm Unshielded: 4mm M18 models shielded: 5mm Unshielded: 8mm M30 models shielded: 10mm unshielded: 15mm
Output State	NO	NO; NO / NC	NO; NO / NC	NO	NO
Logic Output	PNP	NPN / PNP	NPN / PNP	PTW-A*-5: NPN / PNP PTW-AP-1: PNP	-
Connection Type	M8 / M12 connector	Axial Cable / M12 connector	Axial cable / M12 connector	PTW-A*-5: Axial Cable / M12 connector PTW-AP-1: M12 connector	Axial cable / M12 connector
Supply Voltage	10 to 36 VDC	10 to 30 VDC PMW-AP-1H: 10 to 36 VDC	10 to 30 VDC; PKW-AP-1H: 10 to 36 VDC	PTW-A*-5: 10 to 30 VDC; PTW-AP-1: 10 to 36 VDC	20 to 253 VAC, 50/60Hz
Switching Frequency	Standard distance, shielded: 100Hz	Standard/extended distance: 2kHz Triple distance: 400Hz	Standard/extended distance: 1kHz Triple distance: 200Hz	PTW-A*-5: 100Hz; PTW-AP-1: 50Hz	25Hz
Protection Degree	PEW-AP-1F: IEC-IP67 PEW-AP-1H: IEC-IP67 and IP68	Standard/extended distance: IEC-IP67/68 Triple distance: IEC-IP67 connector / IP68 (cable)	Standard/extended distance: IEC-IP67/68 Triple distance: IEC-IP67 connector / IP68 (cable)	PTW-A*-5: IEC-IP67 (connector/ IP68 cable) PTW-AP-1: IEC-IP67, IP68	IEC-IP67

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Specifications	CM Capacitive DC	CK Capacitive DC	CT Capacitive DC, AC/DC	CR Capacitive DC
Description	12mm capacitive proximity sensors; DC, metal	18mm capacitive proximity sensors; DC, plastic	30mm capacitive proximity sensors; DC, AC/DC, plastic and metal	Rectangular capacitive proximity sensors; DC, plastic
Sensing Distances	Shielded: 6mm Unshielded: 12mm	12mm	Shielded: 15mm Unshielded: 20mm, 40mm	12mm
Output State	NO	NO/NC	NO, NC, NO/NC	NO/NC
Logic Output	PNP	NPN/ PNP	NPN/ PNP, NPN, PNP	NPN/ PNP
Connection Type	M12 connector	M12 connector	Axial cable, M12 connector and 1/2 inch AC micro connector	Axial cable
Supply Voltage	10-36 VDC	10-36 VDC	10 to 30 VDC, 10 to 36 VDC, 20 to 250 VDC/30 to 250 VAC	10-36 VDC
Switching Frequency	50Hz	10Hz	100Hz, 10Hz	10Hz
Protection Degree	IEC-IP65	IEC-IP65, IEC-IP67	IEC-IP65, IEC-IP67	IEC-IP65, IEC-IP67



Specifications	AE Analog Prox	AM Analog Prox	AK Analog Prox	AT Analog Prox
Description	Analog inductive proximity sensors, 8mm, metal	Analog inductive proximity sensors, 12mm, metal	Analog inductive proximity sensors, 18mm, metal	Analog inductive proximity sensors, 30mm, metal
Sensing Distance	0-4mm	0-6mm	0-10mm	0-20mm
Output	0-10VDC	0-5 VDC, 1-5mA / 0-10 VDC, 4 -20mA	0-5 VDC, 1-5mA / 0-10 VDC, 4-20mA	0-5 VDC, 1-5mA / 0-10 VDC, 4-20mA
Supply Voltage	15-30 VDC	10-30 VDC / 15-30 VDC	10-30 VDC / 15-30 VDC	10-30 VDC / 15-30 VDC
Connection Type	Axial cable / M8 connector	Axial cable / M12 connector	Axial cable / M12 connector	Axial cable / M12 connector
Protection Degree	IEC-IP67	IEC-IP67	IEC-IP67	IEC-IP67

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Specifications	UK1 Ultrasonic Sensor DC	UK6 Ultrasonic Sensor DC	UT1 Ultrasonic Sensor DC	UT2 Ultrasonic Sensor DC
Description	Ultrasonic Sensor, 18mm, plastic, DC and analog output models	Ultrasonic Sensor, 18mm, plastic, DC and analog output models, short body	Ultrasonic Sensor, 30mm, plastic, DC and analog output models	Ultrasonic Sensor, 30mm, plastic, DC and analog output models
Sensing Distances	50-2200 mm	40-900 mm	250-3500 mm	350-6000 mm
Output	DC models: PNP, NPN, NO/NC Analog models: 0-10 VDC or 4-20 mA	DC models: PNP, NPN, NO/NC Analog models: 0-10 VDC or 4-20 mA	DC models: PNP, NPN, NO/NC Analog models: 0-10 VDC or 4-20 mA	DC models: PNP, NPN, NO/NC Analog models: 0-10 VDC or 4-20 mA
Supply Voltage	15-30 VDC	15-30VDC	12-30 VDC, 15-30 VDC (0-10 VDC)	12-30 VDC, 15-30 VDC (0-10 VDC)
Connection Type	M12 connector or 2m prewired output cable	M12 (12mm) connector or 2m prewired output cable	M12 (12mm) connector or 2m prewired output cable	M12 (12mm) connector or 2m prewired output cable
Protection Degree	IEC-IP67	IEC-IP67	IEC-IP67	IEC-IP67



Specifications	SU Ultrasonic Sensor DC	TU Ultrasonic Sensor DC	UHZ Ultrasonic Sensor DC	PFM Series DC
Description	Ultrasonic Sensor, 18mm, plastic, DC and analog output models	Ultrasonic Sensor, 30mm, plastic, DC and analog output models	Ultrasonic Sensor, 30mm x 20mm, plastic, thru-beam models	Food and Beverage Inductive Proximity Sensors 12 mm stainless steel, DC
Sensing Distances	100 to 600 mm 200 to 1500 mm	300 to 2500 mm	300mm	Standard Shielded: 2mm Unshielded: 4mm Extended Shielded: 4mm Unshielded: 7 - 8 mm
Output State	DC models: PNP NO Analog models: 0-10VDC	DC models: PNP NO Analog models: 0-10VDC	PNP/NPN, NO/NC	NO/NC selectable; N. O.
Logic Output		NA		NPN/PNP
Connection Type	Axial cable/M12 connector	M12 connector	2 meter Axial cable	M12 connector
Supply Voltage	DC models: 15-30VDC Analog models: 18-30VDC	19-30VDC	18-30VDC	NO only: 10 to 36 VDC; NO/NC: 10 to 30 VDC
Switching Frequency	NA	NA	NA	NO only - 800Hz NO/NC - 2000Hz
Protection Degree	IEC-IP67	IEC-IP67	IEC-IP67	IEC: IP68, IP69K

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Specifications	PFK Series DC	PFT Series DC	VF Series AC	MAE DC
Description	Food and Beverage Inductive Proximity Sensors 18 mm stainless steel, DC	IP69K-rated Inductive Proximity Sensors 30 mm stainless steel, DC	IP69K-rated Inductive Proximity Sensors 18mm/30mm stainless steel, AC	IP67 Magnetic Proximity Sensors 8mm stainless steel, DC
Sensing Distances	Standard Shielded: 5mm Unshielded: 8mm Extended Shielded: 8mm Unshielded: 12mm	Shielded: 14 - 15 mm Unshielded: 22mm	18mm models: Shielded: 5mm Unshielded: 12mm 30mm models: Shielded: 14mm Unshielded: 22mm	60mm
Output State	NO/NC selectable; N. O.	N. O.	N. O.	NO
Logic Output	NPN/PNP	PNP	NA	PNP
Connection Type	M12 connector	M12 connector	1/2" micro AC	M8 connector or 2m cable
Supply Voltage	NO only: 10 to 36 VDC; NO/NC: 10 to 30 VDC	10 to 36 VDC	20 to 140 AC/DC, 47 to 63 Hz AC	10 to 30 VDC
Switching Frequency	NO only - Shielded: 600Hz Unshielded: 300Hz NO/NC - 1500 Hz	NO only - Shielded: 50Hz Unshielded: 100Hz	AC - 25Hz DC 18 mm - 300Hz DC 30 mm - 100Hz	5kHz
Protection Degree	IEC IP68, IP69K	IEC IP68, IP69K	IEC IP68, IP69K	IP67



Specifications	MAF DC	MMW/ MKW DC	MDR DC
Description	IP69K Magnetic Proximity Sensors 12mm or 18mm stainless steel, DC	IP65/IP67 Magnetic Proximity Sensors 12mm or 18mm Stainless Steel, DC	IP67 Magnetic Proximity Sensors Rectangular Plastic, DC
Sensing Distances	12mm housing - 60mm 18mm housing - 70mm	12mm housing - 60mm 18mm housing - 70mm	60mm
Output State	NO	NO or NC	NO
Logic Output	PNP	PNP or NPN	PNP
Connection Type	M12 connector	M12 connector or 2m cable	M8 connector or 2m cable
Supply Voltage	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC
Switching Frequency	5kHz	5kHz	5kHz
Protection Degree	IEC IP68, IP69K	IP65, IP67	IP67