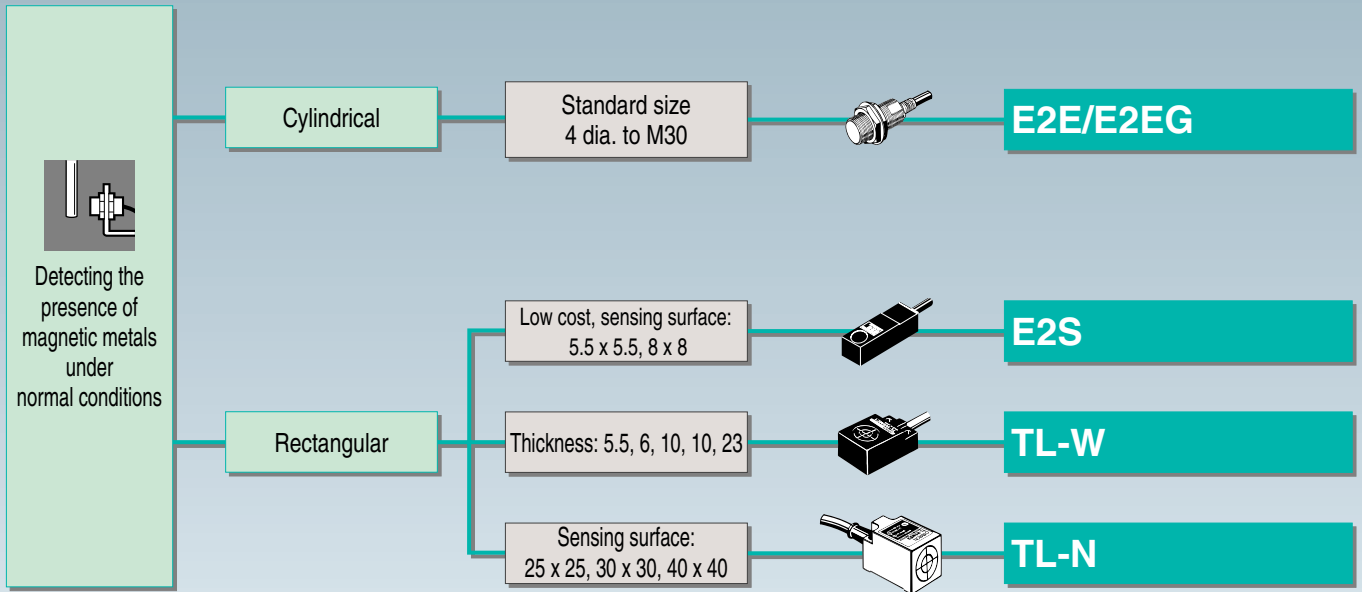
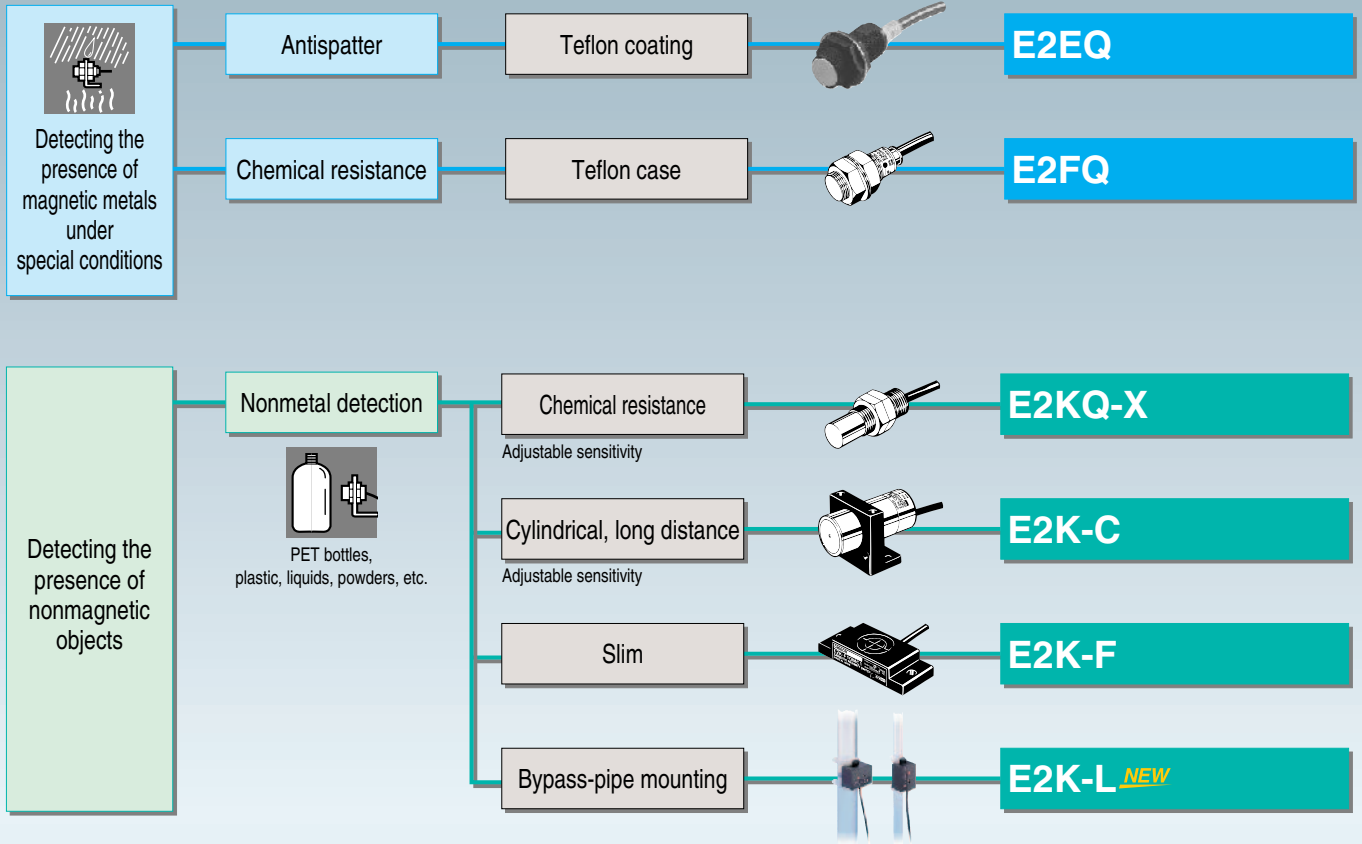


## Selection Guide

## ■ Proximity Sensors

Classified According to Application







# Selection Guide

■ Proximity Sensors

Classified According to Specifications

Appearance		Cylindrical										
		4 dia.	M5	5.4 dia.	M8	M12			M18			
 Shielded	Sensing distance * (Units: mm)	0.8	1	1	1.5	2	4	2	5	8	5	
	General purpose (fixed distance) General purpose (variable distance)											
 Unshielded	Sensing distance * (Units: mm)				2	5			10			
	General purpose (fixed distance) General purpose (variable distance)										6 to 10 (nonmetal)	
Name		Cylindrical	Cylindrical	Cylindrical	Cylindrical	Cylindrical	Antispatter	Chemical resistant	Cylindrical	Antispatter	Chemical resistant	Capacitive (Teflon)
Model		E2E	E2E	E2E	E2E	E2E/G	E2EQ	E2FQ	E2E/G	E2EQ	E2FQ	E2KQ-X
Power supply, output	DC 2-wire				○	○	○	○	○	○	○	
	DC 3-wire	○	○	○	○	○		○	○		○	○
	AC				○	○			○		○	
	AC or DC					○			○			
Presence detection	Passage detection	○	○	○	○	○	○	○	○	○	○	○
	Transparent-object detection											○
	Liquid-surface detection											○
	Nonmagnetic-body (only) detection											○
Mounting/maintenance	Wiring-reduction connector				○	○	○		○	○		
	Proximity mounting	○				○			○			
	Moving-part mounting	○		○	○	○			○			
		Only sections using a robot cord										
Special environments	Chemical resistant							○			○	○
	Oil resistant (IP69g or higher) <small>Note: Except the connector.</small>	○	○	○	○	○	○	○	○	○	○	△
	Water resistant (IP67 or higher)	○	○	○	○	○	○	○	○	○	○	△
	Antispatter						○			○		
	Aluminum-dust resistant											
Remarks	CE marking/EN standards	○	○	○	○	○	○	○	○	○	○	○

\* Where there is more than one model, the figures for sensing distance indicate the maximum values.

\* Teflon is a registered trademark of the DuPont Company and the Mitsui DuPont Chemical Company for their fluoride resin.

## ■ Proximity Sensors

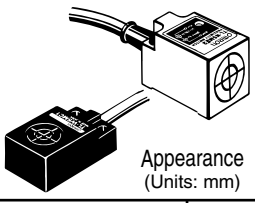
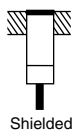
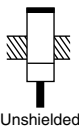
### Classified According to Specifications

Appearance		Cylindrical			
		M30			34 dia.
Sensing distance* (Units: mm) Shielded	Unshielded	10	15	10	
		18			3 to 25 (Nonmetal)
General purpose (fixed distance) General purpose (variable distance) Rated sensing distance (Maximum operating distance) Rated sensing distance Rated sensing distance Rated sensing distance Rated sensing distance All metal Aluminum Nonmetal	Name ○ Ideal ● Suitable ▲ Suitable depending on conditions	Cylindrical	Antispatter	Chemical resistant	Capacitive
	Model	E2E/G	E2EQ	E2FQ	E2K-C
Power supply, output	DC 2-wire	●	●	●	
	DC 3-wire	●		●	●
	AC	●		●	●
	AC or DC	●			
Presence detection	Passage detection	●	●	●	●
	Transparent-object detection				●
	Long-distance detection				●
	Liquid-surface detection				○
	Nonmagnetic-body (only) detection				●
Mounting/maintenance	Wiring-reduction connector	○	●		
	Fault diagnosis	○			
	Proximity mounting	●			
	Moving-part mounting	●			
Special environments	Heat resistant <small>(Only sections using a robot cord)</small>				
	Chemical resistant			○	
	Oil resistant <small>(IP66g or higher) Note: Except the connector.</small>	●	●	●	
	Water resistant <small>(IP67 or higher)</small>	●	●	●	
	Antispatter		○		
	Aluminum-dust resistant				
Remarks	CE marking/EN standards	●	●	●	●

# Selection Guide

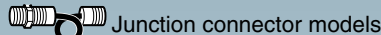
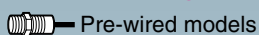
■ Proximity Sensors

Classified According to Specifications

 Appearance (Units: mm)		Rectangular/groove-type/bypass-pipe mounting												
		W × L × D	5.5 × 19 × 5.5	8 × 25 × 5.5	8 × 7.4 × 20 8 × 8 × 23	10 × 27 × 6	18 × 30.5 × 10	20 × 50 × 10	25 × 25 × 35	30 × 30 × 54	25 × 50 × 10	40 × 53 × 23	40 × 40 × 53	33 × 24 × 20 24 × 33 × 20
Sensing distance* (Units: mm)	 Shielded										5			
	 Unshielded	General purpose (fixed distance) Aluminum: 1.6 Nonmetal: 1.5	1.6	1.5	2.5	3	5	10 (nonmetal)	7	12		20	20	20 (Nonmetal) 8 to 11 dia. (liquid) 20 (Nonmetal) 12 to 26 dia. (liquid)
Name ○ Ideal ● Suitable ▲ Suitable depending on conditions		Rectangular	Flat	Rectangular	Flat	Flat	Capacitive	Rectangular	Rectangular	Flat	Flat	Rectangular	Capacitive	
Model		E2S	TL-W	E2S	TL-W	TL-W	E2K-F	TL-N	TL-N	TL-W	TL-W	TL-N	E2K-L	
Power supply, output	DC 2-wire	●		●		●		●	●			●		
	DC 3-wire	●	●	●	●	●	●	●	●	●	●	●	●	
	AC							●	●			●		
Presence detection	Passage detection	●	●	●	●	●	●	●	●	●	●	●		
	Transparent-object detection						○							
	Long-distance detection	●		●										
	Liquid-surface detection						○						●	
Mounting/maintenance	Wiring-reduction connector													
	Space-saving	●	●	●	●	●	●			●	●			
	Proximity mounting	●	●	●	●	●		●	●		●	●		
	Moving-part mounting		●		●	●		●	●		●	●		
Special environments	Oil resistant		●		●	●		●	●	●	●	●		
	Water resistant (IP67 or higher)	●	●	●	●	●	▲	●	●	●	●	●		
Remarks	CE marking/EN standards	●	●	●	●	●	●	●	●	●	●	●		

■ Proximity Sensors

Classified According to Product Model Cylindrical Models



Series	Appearance	Shielded/unshielded	Size	Sensing distance (Units: mm)	Features	Specifications					Model	
						Power supply	Output configuration		Connector	Different frequencies		Flexible cable
							NPN	PNP				
E2E/E2EG	DC 2-wire models 	Shielded 	M 8	2	<ul style="list-style-type: none"> <li>• Short size</li> <li>• Resistant to oil</li> <li>• Higher tensile strength</li> <li>• Equipped with cable protector as standard</li> </ul>	DC (2-wire)	NO/NC or NO	—	O For some models	—	O* For some models	E2E-X2D□□□
			M12	3								E2E-X3D□□□
			M18	7								E2E-X7D□□□
		Unshielded 	M 8	4								E2E-X10D□□□
			M12	8								E2E-X4MD□□□
			M18	14								E2E-X8MD□□□
			M30	20								E2E-X14MD□□□
	DC 3-wire models AC 2-wire models 	Shielded 	M 8	1.5	<ul style="list-style-type: none"> <li>• Resistant to oil</li> <li>• Equipped with cable protector as standard</li> <li>• Higher tensile strength</li> </ul>	DC (3-wire) or AC	DC models: NPN, NO/NC	—	O For some models	—	O* For some models	E2E(G)-X1R5□□□
			M12	2								E2E(G)-X2□□□
			M18	5								E2E(G)-X5□□□
		Unshielded 	M30	10								E2E(G)-X10□□□
			M 8	2								E2E(G)-X2M□□□
			M12	5								E2E(G)-X5M□□□
			M18	10								E2E(G)-X10M□□□
	DC 3-wire models 	Shielded 	4 dia.	0.8	• Small diameter	DC (3-wire)	NPN, NO/NC	PNP, NO	—	—	O* For some models	E2E-CR8□□
			M 5	1								E2E-X1□□□
			5.4 dia.	1								E2E-C1□□□
	AC/DC 2-wire models 	Shielded 	M12	3	• Ideal for maintenance	DC or AC (2-wire)	NO	—	—	—	—	E2E-X3T1
			M18	7								E2E-X7T1
			M30	10								E2E-X10T1

\* Standard models are not equipped with flexible cables. Flexible cable versions, however, of all standard models are available. Add "-R" to the end of any standard model number when ordering.

## Selection Guide

## ■ Proximity Sensors

Classified According to Product Model **Cylindrical Models**







Pre-wired models



Connector models



Junction connector models

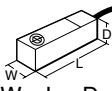
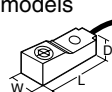
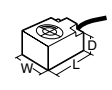
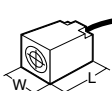
Series	Appearance	Shielded/ unshielded	Size	Sensing distance (Units: mm)	Features	Specifications		Model
						Power supply	Output configura- tion	
E2EQ	Long-dis- tance, anti- patter models 	Shielded 	M12	4	<ul style="list-style-type: none"> <li>• Long distance</li> <li>• Junction connector models available</li> <li>• Metal case with Teflon coating</li> </ul>	DC (2-wire)	NPN, NO	E2EQ-X4X1-□
			M18	8				E2EQ-X8X1-□
			M30	15				E2EQ-X15X1-□
	Antispatter models 	Shielded 	M12	3	<ul style="list-style-type: none"> <li>• Standard model</li> <li>• Junction connector models available</li> <li>• Metal case with Teflon coating</li> <li>• Higher tightening strength</li> </ul>	DC (2-wire)	NPN, NO	E2EQ-X3D1-□
			M18	7				E2EQ-X7D1-□
			M30	10				E2EQ-X10D1-□
E2FQ	Chemical- resistant models 	Shielded 	M12	2	<ul style="list-style-type: none"> <li>• Teflon case</li> </ul>	DC (2-wire or 3-wire) AC	DC 3-wire models: NPN, NO  DC 2-wire and AC models: NO	E2FQ-X2□
			M18	5				E2FQ-X5□
			M30	10				E2FQ-X10□

Note: Only the overall specifications are provided in the above table. Be sure to refer to the page numbers given for detailed specifications and details on safety precautions.

■ Proximity Sensors

Classified According to Product Model

Rectangular Models


Series	Appearance	Shielded/ unshielded	Size	Sensing distance (Units: mm)	Features	Specifications					Model						
						Power supply	Output configura- tion		Con- nector	Different frequen- cies		Flexi- ble ca- ble					
							NPN	PNP									
E2S	Miniature, rectangular, DC 2-wire models  W x L x D	Unshielded	5.5 x 19 x 5.5	1.6	<ul style="list-style-type: none"> <li>• Miniature</li> <li>• Long distance</li> <li>• Top surface and front surface detection</li> <li>• Low current consumption</li> </ul>	DC (2-wire)	NO/NC	---	---	---	E2S-W1□						
			8 x 20 x 5.3	2.5							E2S-Q1□						
	DC 3-wire models  W x L x D	Unshielded	5.5 x 19 x 5.5	1.6		DC (3-wire)	NO/NC	---	O	---	E2S-W□□						
			8 x 20 x 5.3	2.5							E2S-Q□□						
	TL-W	Flat models  W x L x D	Shielded	24.9 x 50 x 10		5	<ul style="list-style-type: none"> <li>• Top surface detection</li> <li>• 5-mm (unshielded) DC 2-wire models available</li> </ul>	DC (3-wire; 2-wire for some models)	NO/NC	NO/NC	---	O	TL-W5□				
				Unshielded		8 x 25 x 5.5			1.5	3-wire models: NPN, NO			3-wire models: PNP	---	O	TL-W1R5MC□1	
10 x 27 x 6		3	2-wire models: NPN, NO/NC		TL-W3MC□												
18 x 30.5 x 10		5			TL-W5M□												
40 x 53 x 23		20			TL-W20ME□												
TL-N		 W x L	Unshielded	□25 x 38.5	7	<ul style="list-style-type: none"> <li>• Long distance</li> <li>• DC 2-wire</li> </ul>		DC (2-wire)	NO/NC	---	---	---	TL-N7MD□				
	□30 x 52.5			12			TL-N12MD□										
	□40 x 53			20			TL-N20MD□										
	□25 x 38.5			5	<ul style="list-style-type: none"> <li>• DC 3-wire</li> <li>• AC 2-wire</li> </ul>	DC (3-wire)	DC models: NPN, NO/NC	---	O	---	O	TL-N5ME□					
	□25 x 50					AC (3-wire)					---	---	TL-N5MY□				
	□30 x 52.5			10		AC (3-wire)					AC models: NO/NC	---	O	---	O	TL-N10ME□	
						AC (3-wire)									---	---	TL-N10MY□
						DC (3-wire)									---	---	TL-N20ME□
						AC									---	---	TL-N20MY□












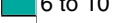

\* Standard models are not equipped with flexible cables. Flexible cable versions, however, of all standard models are available. Add "-R" to the end of any standard model number when ordering.



## Selection Guide

## ■ Proximity Sensors



Classified According to Product Model **Capacitive Models** Pre-wired models

Series	Appearance	Shielded/ unshielded	Size	Sensing distance (Units: mm)	Features	Specifications					Model	
						Power supply	Output configura- tion		Con- nector	Differ- ent fre- quenci- es		Flexi- ble ca- ble
							NPN	PNP				
E2K-C	Long-dis- tance mod- els 	Unshielded 	34 dia.	 3 to 25	<ul style="list-style-type: none"> <li>Adjust- able sen- sitivity</li> </ul>	 (3-wire) or 	DC models: NPN, NO/NC  AC models: NO/NC	—	—	—	—	E2K-C25M□
E2K-F	Flat models  W x L x D	Unshielded 	50 x 20 x 10.1	 10	<ul style="list-style-type: none"> <li>Thick- ness: 10 mm</li> </ul>	 (3-wire)	NPN, NO/ NC- setta- ble	—	—	—	—	E2K-F10MC1
E2KQ-X	Chemical- resistant models 	Unshielded 	M18	 6 to 10	<ul style="list-style-type: none"> <li>Teflon* case</li> <li>Adjust- able sen- sitivity</li> </ul>	 (3-wire)	NPN, NO	—	—	—	—	E2KQ-F10ME1

\* Teflon is a registered trademark of DuPont Company and Mitsui DuPont Chemical Company for their fluoride resin.

Classified According to Product Model **Capacitive Models**

Bypass-pipe Mounting Models

Series	Appear- ance	Applicable pipe diameter	Features	Specifications		Model
				Power supply	Output configura- tion	
E2K-L	 <sup>NEW</sup>	8 to 11 dia.	<ul style="list-style-type: none"> <li>Can be used for a wide range of pipe diameters</li> <li>Built-in amplifier, space-saving</li> </ul>	 (3-wire)	NPN, NO	E2K-L13MC1
		12 to 26 dia.				E2K-L26MC1

Note: Only the overall specifications are provided in the above table. Be sure to refer to the page numbers given for detailed specifications and details on safety precautions.