




# Sensors and Safety



## Quick Selection Table

Bulletin No.	440P	440R	440L	440K
<b>Type</b>	<b>Safety Limit Switches</b>	<b>Safety Relays</b>	<b>GuardShield Safety Light Curtains</b>	<b>Tongue Operated Switches</b>
<b>Features</b>	<ul style="list-style-type: none"> <li>• Large selection of actuator heads</li> <li>• Positive operation, forced disconnection of contacts</li> <li>• Snap-acting, slow make before break or slow break before make contacts</li> <li>• Selection of contact configurations</li> </ul>	<ul style="list-style-type: none"> <li>• Monitors multiple inputs in one base controller: interlocks, light curtains, footmats</li> <li>• Safety category 4, stop category 0</li> <li>• Interconnecting system - offers input units, output units, controller and display module</li> <li>• Removable terminal options</li> <li>• 24V DC only</li> </ul>	<ul style="list-style-type: none"> <li>• 14 mm or 30 mm object sensitivity</li> <li>• 320 mm to 1760 mm protective field in 160 mm increments</li> <li>• Range up to 18 m</li> <li>• PNP outputs (2 N.O. Safety + 1 N.O. Non Safety)</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of actuators available</li> <li>• Versions available with quick disconnect (QD)</li> <li>• GD2 versions offer increased robustness</li> </ul>
<b>Approvals</b>	—	CE marked for all applicable directives and approved by UL, BG and TUV where relevant	CE marked for all applicable directives and approved by TUV where relevant	CE marked for all applicable directives and approved by cULus and TUV where relevant
<b>Standards</b>	Conforms to EN 1088, EN 60947-5-1, EN 292 and EN 60204-1	Conform to EN 954-1, EN 292, EN 60204-1	Conform to relevant standards EN 61496 parts 1 & 2, EN 50100	Conform to standards EN 60947-5-1, EN 1088 (ISO14119), EN 292 (ISO 12100), EN 60204-1
<b>Page Number</b>	<b>Page 201</b>	<b>Page 203</b>	<b>Page 207</b>	<b>Page 208</b>

			
<b>Bulletin No.</b>	<b>440G</b>	<b>440N</b>	<b>440E</b>
<b>Type</b>	<b>Guard Locking Switches</b>	<b>Coded Non Contact Interlock Switches</b>	<b>Cable (Rope) Pull Switches</b>
<b>Features</b>	<ul style="list-style-type: none"> <li>• Selection of actuators available</li> <li>• Versions available with quick disconnect (QD)</li> <li>• Ideal for use in applications with machine run-down -ensuring the guard remains closed until hazardous motion has ceased</li> </ul>	<ul style="list-style-type: none"> <li>• Coded magnetic operation - resistant to defeat</li> <li>• Plastic or stainless steel housing options</li> <li>• Pre-wired or quick disconnect options (QD)</li> <li>• Sensor, controller and contactor monitoring</li> <li>• Selection of control units available</li> <li>• Ideal for medium to high risk applications</li> </ul>	<ul style="list-style-type: none"> <li>• Switches up to 125m span</li> <li>• Switch lockout on cable pulled and cable slack</li> <li>• Cable-status indicator on switch lid</li> <li>• Unique cable grip system</li> </ul>
<b>Approvals</b>	CE marked for all applicable directives and approved by cULus and TUV where relevant	CE marked for all applicable directives and approved by cULus and TUV where relevant	CE marked for all applicable directives and approved by cULus, BG and TUV where relevant
<b>Standards</b>	Conform to standards EN 60947-5-1, EN 1088 (ISO 14119), EN 292 (ISO 12100), EN 60204-1	Conform to standards EN 60947-5-1, EN 1088 (ISO14119), EN 292 (ISO 12100), EN 60204-1	Conform to standards EN 418 (ISO 13850), EN 292 (ISO 12100), EN 60947-5-1, BS 5304
<b>Page Number</b>	<b>Page 209</b>	<b>Page 210</b>	<b>Page 211</b>

## Sensors and Safety

### Quick Selection Table

		
<b>Bulletin No.</b>	<b>42CA</b>	<b>872C</b>
<b>Type</b>	<b>General Purpose Photoelectric Sensors</b>	<b>WorldProx™ Inductive Proximity Sensors</b>
<b>Features</b>	<ul style="list-style-type: none"> <li>• 18 mm industry standard package</li> <li>• Wide selection of sensing modes</li> <li>• 30V DC operation</li> <li>• NPN or PNP outputs</li> <li>• Fast response time</li> <li>• Variety of connection types</li> </ul>	<ul style="list-style-type: none"> <li>• Smooth or threaded nickel-plated brass barrel</li> <li>• 360° visible LED</li> <li>• Cable or quick-disconnect styles</li> <li>• Short circuit protection</li> <li>• Overload protection</li> <li>• Transient noise protection</li> <li>• False pulse protection</li> <li>• Reverse polarity protection</li> </ul>
<b>Connection Type</b>	Micro M12 Connector	Mini, Micro, Pico Style Connector
<b>Sensing Modes</b>	Retroreflective Polarized Retroreflective Standard Diffuse Background Suppression Transmitted Beam	—
<b>Approvals</b>	CE marked for all applicable directives	UL listed, c-UL listed, and CE marked for all applicable directives
<b>Standards</b>	—	—
<b>Page Number</b>	<b>Page 212, 223</b>	<b>Page 215, 222</b>

**440P Senator in Plastic Housing - EN 50047**

Description		Safety Contacts	Auxiliary Contacts	Contact Type	Cat. No.	PQ	
M20 Conduit Style	Roller Plunger	1 N.C.	1 N.O.	SA	440P-CRPS11B	1	
	Roller Plunger	2 N.C.	1 N.O.	BBM	440P-CRPB12B		
	Dome Plunger	1 N.C.	1 N.O.	SA	440P-CDPS11B		
	Dome Plunger	2 N.C.	1 N.O.	BBM	440P-CDPB12B		
	Short Lever	1 N.C.	1 N.O.	SA	440P-CSLS11B		
	Short Lever	2 N.C.	1 N.O.	BBM	440P-CSLB12B		
	Adjustable Lever	1 N.C.	1 N.O.	SA	440P-CALS11B		
	Adjustable Lever	2 N.C.	1 N.O.	BBM	440P-CALB12B		
QD Style	Roller Plunger	1 N.C.	1 N.O.	SA	440P-CRPS11D4	1	
	Roller Plunger	2 N.C.	1 N.O.	BBM	440P-CRPB12R6		
	Dome Plunger	1 N.C.	1 N.O.	SA	440P-CDPS11D4		
	Dome Plunger	2 N.C.	1 N.O.	BBM	440P-CDPB12R6		
	Short Lever	1 N.C.	1 N.O.	SA	440P-CSLS11D4		
	Short Lever	2 N.C.	1 N.O.	BBM	440P-CSLB12R6		
	Adjustable Lever	1 N.C.	1 N.O.	SA	440P-CALS11D4		
	Adjustable Lever	2 N.C.	1 N.O.	BBM	440P-CALB12R6		
	Recommended Mating Cable for 1 N.C.+1 N.O. - 2 m						889D-F4AC-2
	Recommended Mating Cable for 2 N.C.+1 N.O. - 2 m						889R-F6ACA-2

Other contact configurations and actuator types are available.

**Notes:** SA = Snap Acting contact operation. BBM = Break Before Make contact operation.  
 MBB = Make Before Break contact operation.

See Publication S115-CA001A-EN-P for complete product information  
 PQ = Package Quantity

## Sensors and Safety

## Product Selection: 440P Safety Limit Switches

## 440P Senator in Metal Housing - EN 50041



Description		Safety Contacts	Auxiliary Contacts	Contact Type	Cat. No.	PQ	
M20 Conduit Style	Roller Plunger	1 N.C.	1 N.O.	SA	440P-MRPS11B	1	
	Roller Plunger	2 N.C.	1 N.O.	MBB	440P-MRPB22B		
	Dome Plunger	1 N.C.	1 N.O.	SA	440P-MDPS11B		
	Dome Plunger	2 N.C.	1 N.O.	MBB	440P-MDPB22B		
	Short Lever	1 N.C.	1 N.O.	SA	440P-MSLS11B		
	Short Lever	2 N.C.	1 N.O.	MBB	440P-MSLB22B		
	Adjustable Lever	1 N.C.	1 N.O.	SA	440P-MALS11B		
	Adjustable Lever	2 N.C.	1 N.O.	MBB	440P-MALB22B		
QD Style	Roller Plunger	1 N.C.	1 N.O.	SA	440P-MRPS11N5	1	
	Roller Plunger	2 N.C.	1 N.O.	MBB	440P-MRPB22M9		
	Dome Plunger	1 N.C.	1 N.O.	SA	440P-MDPS11N5		
	Dome Plunger	2 N.C.	1 N.O.	MBB	440P-MDPB22M9		
	Short Lever	1 N.C.	1 N.O.	SA	440P-MSLS11N5		
	Short Lever	2 N.C.	1 N.O.	MBB	440P-MSLB22M9		
	Adjustable Lever	1 N.C.	1 N.O.	SA	440P-MALS11N5		
	Adjustable Lever	2 N.C.	1 N.O.	MBB	440P-MALB22M9		
	Recommended Mating Cable for 1 N.C.+1 N.O. - 2 m		—	—	—		889N-F5AE-6F
	Recommended Mating Cable for 2 N.C.+1 N.O. - 2 m		—	—	—		889M-F12X9AE-2

Other contact configurations and actuator types are available.

**Notes:** SA = Snap Acting contact operation. BBM = Break Before Make contact operation.  
MBB = Make Before Break contact operation.

See Publication S115-CA001A-EN-P for complete product information  
PQ = Package Quantity

**440R Safety Relays**



MSR126



MSR127T



MSR124



MSR131

**Features**

- Category 4 per EN954-1
- Removeable or Fixed Terminals
- Monitored Manual or Automatic Reset

**Model Key**

- T = Automatic / Manual Reset
- R = Monitored Manual Reset
- P = Removeable Terminals

**Approvals**

- C-Tick, CE, cULus, BG

**Stop Category 0 Relays**

Inputs	Safety Outputs	Auxiliary Outputs	Terminals	Supply Voltage	Model	Cat. No.	PQ
1 N.C.	3 N.O.	1 N.C.	Fixed	24V AC/DC	MSR5T	440R-B23020	
1 N.C. or Light Curtain	2 N.O.	—	Fixed	24V AC/DC	MSR126T	440R-N23117	1
				110V AC	MSR126T	440R-N23116	
				230V AC	MSR126T	440R-N23115	
				24V AC/DC	MSR126R	440R-N23123	
				110V AC	MSR126R	440R-N23122	
				230V AC	MSR126R	440R-N23121	
2 N.C.	2 N.O.	—	Fixed	24V AC/DC	MSR126.1T	440R-N23114	1
				110V AC	MSR126.1T	440R-N23113	
				230V AC	MSR126.1T	440R-N23112	
				24V AC/DC	MSR126.1R	440R-N23120	
				110V AC	MSR126.1R	440R-N23119	
				230V AC	MSR126.1R	440R-N23118	
1 N.C. or 2 N.C. or Light Curtain	3 N.O.	1 N.C.	Fixed	24V AC/DC	MSR127T	440R-N23126	1
				110V AC	MSR127T	440R-N23125	
				230V AC	MSR127T	440R-N23124	
				24V AC/DC	MSR127R	440R-N23129	
				110V AC	MSR127R	440R-N23128	
				230V AC	MSR127R	440R-N23127	
			Removeable	24V AC/DC	MSR127TP	440R-N23132	
				110V AC	MSR127TP	440R-N23131	
				230V AC	MSR127TP	440R-N23130	
	24V AC/DC			MSR127RP	440R-N23135		
	110V AC			MSR127RP	440R-N23134		
	230V AC			MSR127RP	440R-N23133		
	Fixed			24V AC/DC	MSR124RT	440R-G23110	
				110V AC / 24V DC	MSR124RT	440R-G23108	
				230V AC / 24V DC	MSR124RT	440R-G23107	
24V AC/DC		MSR131RTP	440R-C23139				
110V AC		MSR131RTP	440R-C23137				
230V AC		MSR131RTP	440R-C23136				
1 N.C. or 2 N.C. or Mat or Light Curtain	3 N.O.	2+2 PNP SS	Removeable	24V AC/DC	MSR131RTP	440R-C23139	1

See Publication S115-CA001A-EN-P for complete product information  
 PQ = Package Quantity

# Sensors and Safety

## Product Selection: 440R

### 440R Safety Relays with Delayed Outputs



MSR138



MSR132E

#### Features

- Category 4/3 per EN954-1
- Removeable Terminals
- Monitored Manual or Automatic Reset
- Can take 1NC,2NC or Light Curtain Input

#### Model Key

- T = Automatic / Manual Reset
- R = Monitored Manual Reset
- P = Removable Terminals
- D = Delay Outputs
- E = Expander

#### Approvals

- C-Tick, CE, cULus, BG

### Stop Category 1 Relays

Instant Safety Output	Delayed Safety Outputs	Time Range	Supply Voltage	Model	Cat. No.	PQ	
2 N.O.	3 N.O.	0.15...3 seconds	24V AC/DC	MSR138DP	440R-M23143	1	
			110V AC	MSR138DP	440R-M23141		
			230V AC	MSR138DP	440R-M23140		
		0.5...10 seconds	24V AC/DC	MSR138DP	440R-M23147		
			110V AC	MSR138DP	440R-M23145		
			230V AC	MSR138DP	440R-M23144		
	1.5...30 seconds	2 N.O. + 1 N.C.	0.15...3 seconds	24V AC/DC	MSR138DP		440R-M23151
				110V AC	MSR138DP		440R-M23149
				230V AC	MSR138DP		440R-M23148
	0.5...10 seconds		24V AC/DC	MSR138.1DP	440R-M23084		
			110V AC	MSR138.1DP	440R-M23082		
			230V AC	MSR138.1DP	440R-M23081		
	1.5...30 seconds	2 N.O. + 1 N.C.	0.5...10 seconds	24V AC/DC	MSR138.1DP		440R-M23088
				110V AC	MSR138.1DP		440R-M23086
230V AC				MSR138.1DP	440R-M23085		
1.5...30 seconds	2 N.O. + 1 N.C.		0.5...10 seconds	24V AC/DC	MSR138.1DP	440R-M23092	
				110V AC	MSR138.1DP	440R-M23090	
				230V AC	MSR138.1DP	440R-M23089	

### 22.5 mm wide Output expander units for use with Safety Relays

Safety Outputs	Auxiliary Outputs	Time Delay	Terminals	Supply Voltage	Model	Cat. No.	PQ	
4 N.C.	2 N.C.	0	Fixed	24V AC/DC	MSR132E	440R-E23191	1	
				24V DC	MSR132ED	440R-E23192		
				24V DC	MSR132ED	440R-E23193		
				24V DC	MSR132ED	440R-E23194		
				24V DC	MSR132ED	440R-E23195		
				24V DC	MSR132ED	440R-E23195		
		0.5	Removable	0	24V AC/DC	MSR132EP		440R-E23097
					24V DC	MSR132EDP		440R-E23159
					24V DC	MSR132EDP		440R-E23160
					24V DC	MSR132EDP		440R-E23098
					24V DC	MSR132EDP		440R-E23161
					24V DC	MSR132EDP		440R-E23162

See Publication S115-CA001A-EN-P for complete product information

PQ = Package Quantity

**440R Safety Relays with Solid State Outputs**



MSR30, 33, 35, 38



MSR125HP

**Features**

- Category 4/3 per EN954-1
- Removeable or Fixed Terminals
- Monitored Manual or Automatic Reset
- Solid State Outputs
- 24V DC Supply

**Model Key**

- T = Automatic / Manual Reset
- R = Monitored Manual Reset
- P = Removeable Terminals
- D = Delay Outputs

**Approvals**

- C-Tick, CE, cULus, BG

Inputs	Safety Outputs	Auxiliary Outputs	Terminals	Model	Cat. No	PQ
1N.C. or 2 N.C. or Safety Mat	2 N.O.	1 N.O.	Fixed	MSR30RT	440R-N23197	1
1N.C. or 2 N.C. or Safety Mat	2 N.O.	1 N.O.	Removeable	MSR30RTP	440R-N23198	
1 N.C. + 1 N.O input	2 N.O.	1 N.O.	Fixed	MSR33RT	440R-F23199	
1 N.C. + 1 N.O input	2 N.O.	1 N.O.	Removeable	MSR33RTP	440R-F23200	
Two-Hand Control	2 N.O.	1 N.O.	Fixed	MSR35H	440R-D23201	
Two-Hand Control	2 N.O.	1 N.O.	Removeable	MSR35HP	440R-D23202	
1N.C. or 2 N.C. or Safety Mat	2 N.O. ①	1 N.O.	Fixed	MSR38D	440R-M23203	
1N.C. or 2 N.C. or Safety Mat	2 N.O. ①	1 N.O.	Removeable	MSR38DP	440R-M23204	

① Time delay 0.5...300 seconds in 24 steps

**440R Two Hand Control Relay to EN574 Category IIIC**

Input Buttons	Safety Outputs	Terminals	Model	Supply Voltage	Cat. No	PQ
Mechanical or Bulletin 800Z	2 N.O.	Fixed	MSR125HP	24V DC	440R-D23166	1
				110V AC	440R-D23164	
				230V AC	440R-D23163	
				24V DC	440R-D23171	
				110V AC	440R-D23169	
				230V AC	440R-D23168	

See Publication S115-CA001A-EN-P for complete product information  
PQ = Package Quantity



## Sensors and Safety

### Product Selection: 440R

#### 440R Modular Safety Relays with Communications



GT = Gate  
 ES = E-Stop  
 SM = Safety Mat  
 LC = Light Curtain

MSR200 Series Safety Relays

Type	Application	Description	Supply Voltage	Catalogue No.	PQ
MSR210P	GT, ES, SM	Base module	24V DC	440R-H23176	1
MSR211P	GT, ES, LC	Base module	24V DC	440R-H23177	
MSR220P	GT, ES, SM	Input extension module	24V DC	440R-H23178	
MSR221P	GT, ES, LC	Input extension module	24V DC	440R-H23179	
MSR230P	—	Output extension module	24V DC	440R-H23180	
MSR238P	—	Output extension module	24V DC	440R-H23196	
MSR240P	—	RS232 interface	24V DC	440R-H23181	
MSR240P	—	RS485 interface	24V DC	440R-H23182	
MSR240P	—	RS232 + RS485 interface	24V DC	440R-H23183	
MSR245P	—	Display Module		440R-H23184	

See Publication S115-CA001A-EN-P for complete product information

PQ = Package Quantity

**440L GuardShield Safety Light Curtains**



**Features**

- Safety Category - Type 4
- PNP Outputs (2 N.O. Safety + 1 N.O. Aux.)
- 14 mm or 30 mm object sensitivity
- Fixed blanking - teachable
- Floating blanking - one or two beams
- Beam coding
- External device monitoring (EDM)
- Start/restart interlock
- TUV approved

Protected Height mm	Response Time		Resolution - 14 mm	Resolution - 30 mm	PQ
	Resolution	Resolution			
	14 mm	30 mm	Cat. No.	Cat. No.	
160	20 ms	20 ms	440L-P4J0160YD	440L-P4K0160YD	1
320	20 ms	20 ms	440L-P4J0320YD	440L-P4K0320YD	
480	20 ms	20 ms	440L-P4J0480YD	440L-P4K0480YD	
640	20 ms	20 ms	440L-P4J0640YD	440L-P4K0640YD	
800	20 ms	20 ms	440L-P4J0800YD	440L-P4K0800YD	
960	20 ms	20 ms	440L-P4J0960YD	440L-P4K0960YD	
1120	20 ms	20 ms	440L-P4J1120YD	440L-P4K1120YD	
1280	20 ms	20 ms	440L-P4J1280YD	440L-P4K1280YD	
1440	20 ms	20 ms	440L-P4J1440YD	440L-P4K1440YD	
1600	25 ms	20 ms	440L-P4J1600YD	440L-P4K1600YD	
1760	25 ms	20 ms	440L-P4J1760YD	440L-P4K1760YD	
Transmitter Cable: 4 pin Straight, 5m			889D-F4AC-5	—	
Receiver Cable: 8 pin Straight, 5m			889D-F8AB-5	—	

See Publication S115-CA001A-EN-P for complete product information  
PQ = Package Quantity

**Sensors and Safety**

**Product Selection: 440K**

**440K Tongue Operated Switches**



*Cadet 3*



*Trojan T15*



*MT GD2*



*Trojan 5*

**Features**

- Conform to EN1088,EN292,EN60947-5-1 & EN60204-1
- Metal & Plastic Bodies
- GD2 offer stainless steel heads for demanding applications
- All complete with actuator

**Approvals**

- CE, cULus, TUV

Model	Safety Contacts	Auxiliary Contacts	Material	Conduit Entry	Comment	Cat. No	PQ
Cadet 3	2 N.C.	1 N.O.	Plastic	M16	DIN 50047	440K-C21061	1
Cadet 3	3 N.C.	—	Plastic	M16	DIN 50047	440K-C21097	
T15	1 N.C.	1 N.O.	Plastic	M20		440K-T11305	
T15	2 N.C.	—	Plastic	M20		440K-T11267	
T15 GD2	1 N.C.	1 N.O.	Plastic	M20	GD2	440K-T11398	
T15 GD2	2 N.C.	—	Plastic	M20	GD2	440K-T11463	
Trojan 5	2 N.C.	1 N.O.	Plastic	M20		440K-T11090	
Trojan 5 GD2	2 N.C.	1 N.O.	Plastic	M20	GD2	440K-T11336	
MT GD2	2 N.C.	2 N.O.	Metal	M20	DIN 50041	440K-MT55076	
MT GD2	3 N.C.	1 N.O.	Metal	M20	DIN 50041	440K-MT55074	

See Publication S115-CA001A-EN-P for complete product information

PQ = Package Quantity

### 440G Guard Locking Switches



440G-MT



TLS-GD2



Atlas 5

#### Features

- Locks guard shut until open signal is given to interlock
- Conform to EN1088, EN292, EN60947-5-1 & EN60204-1
- Metal & Plastic Bodies
- LED Status Indication

#### Approvals

- CE, cULus, TUV

Holding Force (Newtons)	Voltage	Material	Safety Circuits	Auxiliary Circuits	Model	Catalogue No	PQ
1600N	24V AC/DC	Metal	3 N.C.	1 N.C.	440G-MT	440G-MT47037	
1600N	110V AC	Metal	3 N.C.	1 N.C.	440G-MT	440G-MT47070	
1600N	230V AC	Metal	3 N.C.	1 N.C.	440G-MT	440G-MT47112	
1600N	24V AC/DC	Metal	2 N.C.	2 N.C.	440G-MT	440G-MT47044	
1600N	110V AC	Metal	2 N.C.	2 N.C.	440G-MT	440G-MT47077	
1600N	230V AC	Metal	2 N.C.	2 N.C.	440G-MT	440G-MT47113	
2000N	24V AC/DC	Plastic	2 N.C.	2 N.C.	TLS 1 GD2	440G-T27251	
2000N	110V AC	Plastic	2 N.C.	2 N.C.	TLS 1 GD2	440G-T27253	1
2000N	230V AC	Plastic	2 N.C.	2 N.C.	TLS 1 GD2	440G-T27123	
2000N	24V AC/DC	Plastic	2 N.C.	1 N.C.	TLS 3 GD2	440G-T27259	
2000N	110V AC	Plastic	2 N.C.	1 N.C.	TLS 3 GD2	440G-T27261	
2000N	230V AC	Plastic	2 N.C.	1 N.C.	TLS 3 GD2	440G-T27136	
5500N	24V AC/DC	Metal	2 N.C.	1 N.C.	ATLAS 5	440G-L07264	
5500N	110V AC	Metal	2 N.C.	1 N.C.	ATLAS 5	440G-L07263	
5500N	230V AC	Metal	2 N.C.	1 N.C.	ATLAS 5	440G-L07262	

See Publication S115-CA001A-EN-P for complete product information  
PQ = Package Quantity

# Sensors and Safety

## Product Selection: 440N

### 440N Coded Non Contact Interlock Switches



*Sipher Control Units*





*Sipher Sensors*

#### Features

- Choice of heads - multiple sensors can be connected to one controller
- Mechanical switches with 1 N.O. + 1 N.C. contacts can be included in the circuit
- Magnetically coded system
- Conforms to EN 60947-5-1, EN1088
- Ideal for hygiene applications
- Controller doubles up as the safety relay

#### Approvals

- CE, cULus, TUV

Head Style	Cable Length	Aux. Contacts	Material	Cat. No.	PQ
 Safety Contacts 1 N.C. + 1 N.O.	3 m	—	ABS	440N-S32014	1
	10 m	—	ABS	440N-S32016	
	3 m	1 N.C.	ABS	440N-S32022	
	10 m	1 N.C.	ABS	440N-S32032	
	3 m	1 N.O.	ABS	440N-S32037	
	10 m	1 N.O.	ABS	440N-S32036	
 Safety Contacts 1 N.C. + 1 N.O.	3 m	—	ABS	440N-S32015	
	10 m	—	ABS	440N-S32017	
	3 m	1 N.C.	ABS	440N-S32023	
	10 m	1 N.C.	ABS	440N-S32033	
	3 m	1 N.O.	ABS	440N-S32038	
	10 m	1 N.O.	ABS	440N-S32039	

#### Controllers

Type	Voltage	Safety Outputs	Aux. Outputs	Case Size	Cat. No.	PQ
Sipher 1	24V AC/DC	1	1	22.5 mm	440N-S32013	1
Sipher 2	24V AC/DC,110/230V AC	2	1	45 mm	440N-S32021	
Sipher 6	24V AC/DC,110/230V AC	2 + 1 Delay	1	90 mm	440N-S32052	

See Publication S115-CA001A-EN-P for complete product information

PQ = Package Quantity

**440E Cable (Rope) Pull Switches**



**Features**

- Unique cable grip system
- Can be installed and commissioned in approximately 3 minutes
- Upto 300 mm of cable adjustment
- Cable tidy incorporated into grippers
- Easy to install
- Conform to EN418 ( ISO 13850 ) , EN60947-5-5, EN292

System Length	Safety Contacts	Auxiliary Contacts	Model	Cat. No.	PQ
≤ 30m	2 N.C.	2 N.O.	LRS3	440E-D13118	1
≤ 30m	3 N.C.	1 N.O.	LRS3	440E-D13112	
≤ 75m	2 N.C.	2 N.O.	LRS4	440E-L13137	
≤ 75m	3 N.C.	1 N.O.	LRS4	440E-L13042	
75...125m	2 N.C.	2 N.O.	LRS4	440E-L13153	
75...125m	3 N.C.	1 N.O.	LRS4	440E-L13150	

**LRTS Installation Kits**

Description	Length	Cat. No.	PQ
Comprises: 1 x length of cable (rope), 2 x grippers, 1 x tensioner and quantity of eyebolts.	10m	440E-A13080	1
	20m	440E-A13082	
	30m	440E-A13083	
	50m	440E-A13084	
	75m	440E-A13085	

See Publication S115-CA001A-EN-P for complete product information  
PQ = Package Quantity

## Sensors and Safety

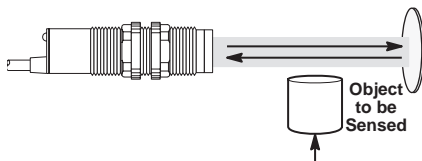
### Product Selection: 42CA General Purpose Photoelectric Sensors

#### 42CA General Purpose Photoelectric Sensors - 18 mm Cylindrical Style



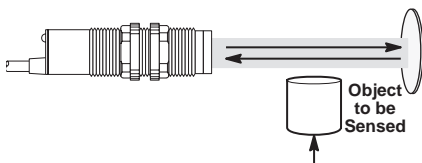
- The 42CA is a family of general purpose photoelectric sensors intended for light to medium duty industrial applications.
- They are packaged in an industry standard 18 mm cylindrical housing.
- Five possible modes of sensing include transmitted beam, diffuse, retroreflective, polarized retroreflective, and background suppression.

#### 42CA Retroreflective



Operating Voltage Supply Current	Sensing Distance @ 2x Margin	Output Energized	Output Type Capacity Response Time	Max Leakage Current	Connection Type	QD Cordsets 2 m	Cat. No.	PQ
10...30V DC 30 mA	3 mm to 4 m	Light	NPN 100 mA 4 ms	<10 $\mu$ A	2 m 300V cable	—	42CA-U1JNB-A2	1
					4-pin DC micro QD	889D-F4AC-2	42CA-U1JNB-D4	
		Dark	PNP 100 mA 4 ms		2 m 300V cable	—	42CA-U1KNB-A2	
					4-pin DC micro QD	889D-F4AC-2	42CA-U1KNB-D4	
		Light	PNP 100 mA 4 ms		2 m 300V cable	—	42CA-U1JPB-A2	
					4-pin DC micro QD	889D-F4AC-2	42CA-U1JPB-D4	
		Dark	PNP 100 mA 4 ms		2 m 300V cable	—	42CA-U1KPB-A2	
					4-pin DC micro QD	889D-F4AC-2	42CA-U1KPB-D4	

#### 42CA Polarized Retroreflective



Operating Voltage Supply Current	Sensing Distance @ 2x Margin	Output Energized	Output Type Capacity Response Time	Max Leakage Current	Connection Type	QD Cordsets	Cat. No.	PQ
10...30V DC 30 mA	3 mm to 4 m	Light	NPN 100 mA 2 ms	<10 $\mu$ A	2 m 300V cable	—	42CA-P2JNB-A2	1
					4-pin DC micro QD	889D-F4AC-2	42CA-P2JNB-D4	
		Dark	PNP 100 mA 2 ms		2 m 300V cable	—	42CA-P2KNB-A2	
					4-pin DC micro QD	889D-F4AC-2	42CA-P2KNB-D4	
		Light	PNP 100 mA 2 ms		2 m 300V cable	—	42CA-P2JPB-A2	
					4-pin DC micro QD	889D-F4AC-2	42CA-P2JPB-D4	
		Dark	PNP 100 mA 2 ms		2 m 300V cable	—	42CA-P2KPB-A2	
					4-pin DC micro QD	889D-F4AC-2	42CA-P2KPB-D4	

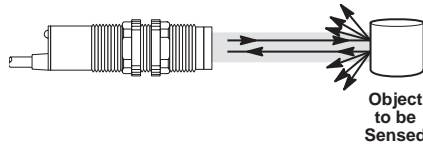
Additional QD Cordsets see Page 223

See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity

# Sensors and Safety

## Product Selection: 42CA General Purpose Photoelectric Sensors

### 42CA Standard Diffuse



Operating Voltage Supply Current	Sensing Distance @ 1x Margin	Output Energized	Output Type Capacity Response Time	Max Leakage Current	Connection Type	QD Cordsets 2 m	Cat. No.	PQ	
10...30V DC 30 mA	0 to 100 mm	Light	NPN 100 mA 2 ms	<10 $\mu$ A	2 m 300V cable	—	42CA-D1JNAE-A2	1	
		Dark			4-pin DC micro QD	889D-F4AC-2	42CA-D1JNAE-D4		
		Light	PNP 100 mA 2 ms		2 m 300V cable	—	42CA-D1KNAE-A2		
		Dark			4-pin DC micro QD	889D-F4AC-2	42CA-D1KNAE-D4		
		Light	PNP 100 mA 2 ms		2 m 300V cable	—	42CA-D1JPAE-A2		
		Dark			4-pin DC micro QD	889D-F4AC-2	42CA-D1JPAE-D4		
	0 to 400 mm	Light	NPN 100 mA 2 ms	<10 $\mu$ A	2 m 300V cable	—	42CA-D1JNAJ-A2		1
		Dark			4-pin DC micro QD	889D-F4AC-2	42CA-D1JNAJ-D4		
		Light	PNP 100 mA 2 ms		2 m 300V cable	—	42CA-D1KNAJ-A2		
		Dark			4-pin DC micro QD	889D-F4AC-2	42CA-D1KNAJ-D4		
		Light	PNP 100 mA 2 ms		2 m 300V cable	—	42CA-D1JPAJ-A2		
		Dark			4-pin DC micro QD	889D-F4AC-2	42CA-D1JPAJ-D4		
Dark	PNP 100 mA 2 ms	2 m 300V cable	—	42CA-D1KPAJ-A2					
Light		4-pin DC micro QD	889D-F4AC-2	42CA-D1KPAJ-D4					

Additional QD Cordsets see Page 223

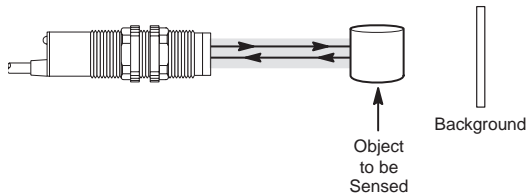
See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity



# Sensors and Safety

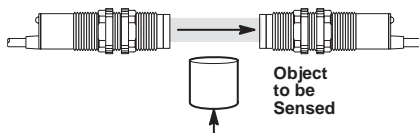
## Product Selection: 42CA General Purpose Photoelectric Sensors

### 42CA Background Suppression



Operating Voltage Supply Current	Sensing Distance @ 1x Margin	Output Energized	Output Type Capacity Response Time	Max Leakage Current	Connection Type	QD Cordsets 2 m	Cat. No.	PQ
10...30V DC 30 mA	50 mm	L.O./D.O. Selectable	NPN 100 mA 0.5 ms	<10 $\mu$ A	2 m 300V cable	—	42CA-B2LNBC-A2	1
			4-pin DC micro QD		889D-F4AC-2	42CA-B2LNBC-D4		
			PNP 100 mA 0.5 ms		2 m 300V cable	—	42CA-B2LPBC-A2	
			4-pin DC micro QD		889D-F4AC-2	42CA-B2LPBC-D4		
	NPN 100 mA 0.5 ms		2 m 300V cable		—	42CA-B2LNBE-A2		
	4-pin DC micro QD		889D-F4AC-2		42CA-B2LNBE-D4			
	PNP 100 mA 0.5 ms		2 m 300V cable		—	42CA-B2LPBE-A2		
	4-pin DC micro QD		889D-F4AC-2		42CA-B2LPBE-D4			

### 42CA Transmitted Beam



### Light Sources

Operating Voltage Supply Current	Sensing Distance	Connection Type	QD Cordsets	Cat. No.	PQ
10...30V DC 25 mA	3 mm to 8 m	2 m 300V cable	—	42CA-E1EZB-A2	1
		4-pin DC micro QD	889D-F4AC-2	42CA-E1EZB-D4	

### Receivers

Operating Voltage Supply Current	Output Energized	Output Type Capacity Response Time	Max Leakage Current	Connection Type	QD Cordsets	Cat. No.	PQ
10...30V DC 25 mA	L.O./D.O. Selectable	NPN 100 mA 2 ms	0.1 $\mu$ A	2 m 300V cable	—	42CA-R1LNA-A2	1
				4-pin DC micro QD	889D-F4AC-2	42CA-R1LNA-D4	
		PNP 100 mA 2 ms		2 m 300V cable	—	42CA-R1LPA-A2	
				4-pin DC micro QD	889D-F4AC-2	42CA-R1LPA-D4	

Additional QD Cordsets see Page 223

See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity

**Product Selection: 872C WorldProx™ Inductive Proximity Sensors**

**872C WorldProx™ 2-Wire AC**

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C AC  
Cable Style



872C AC Micro  
Quick-Disconnect Style

- 2-wire operation
- 3-conductor or 3-pin connection
- 20-250V AC
- Normally open or normally closed output
- False pulse and transient noise protection
- Extended sensing distance on 18 mm unshielded models
- CE marked for all applicable directives

Type	Barrel Diameter	Nominal Sensing Distance mm	Shielded	Output Configuration	Switching Frequency (Hz)	QD Cordsets 2 m	Cat. No.	PQ
Cable Style	12 mm	2	Yes	N.O.	15	—	872C-A2N12-A2	1
				N.C.			872C-A2C12-A2	
		4	No	N.O.			872C-A4N12-A2	
				N.C.			872C-A4C12-A2	
	18 mm	5	Yes	N.O.			872C-A5N18-A2	
				N.C.			872C-A5C18-A2	
		10	No	N.O.			872C-A10N18-A2	
				N.C.			872C-A10C18-A2	
	30 mm	10	Yes	N.O.			872C-A10N30-A2	
				N.C.			872C-A10C30-A2	
		15	No	N.O.			872C-A15N30-A2	
				N.C.			872C-A15C30-A2	
Micro QD Style	12 mm	2	Yes	N.O.	15	889R-F3ACA-2	872C-A2N12-R3	1
				N.C.			872C-A2C12-R3	
		4	No	N.O.			872C-A4N12-R3	
				N.C.			872C-A4C12-R3	
	18 mm	5	Yes	N.O.			872C-A5N18-R3	
				N.C.			872C-A5C18-R3	
		10	No	N.O.			872C-A10N18-R3	
				N.C.			872C-A10C18-R3	
	30 mm	10	Yes	N.O.			872C-A10N30-R3	
				N.C.			872C-A10C30-R3	
		15	No	N.O.			872C-A15N30-R3	
				N.C.			872C-A15C30-R3	

Additional QD Cordsets see Page 222

See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity

## Sensors and Safety

### Product Selection: 872C WorldProx™ Inductive Proximity Sensors

#### 872C WorldProx™ 2-Wire DC

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C DC  
Cable Style



872C DC Micro  
Quick-Disconnect Style

- 2-wire operation
- 2-conductor or 4-pin connection
- 10-30V DC
- Normally open or normally closed output
- Reverse polarity, short circuit, overload, false pulse, and transient noise protection
- UL listed, c-UL listed, and CE marked for all applicable directives

Type	Barrel Diameter	Nominal Sensing Distance mm	Shielded	Output Configuration	Switching Frequency (Hz)	QD Cordsets 2 m	Cat. No.	PQ
Cable Style	12 mm	3	Yes	N.O.	2000	—	872C-D3NE12-A2	1
				N.C.			872C-D3CE12-A2	
		4	No	N.O.			872C-D4NE12-A2	
				N.C.			872C-D4CE12-A2	
	18 mm	5	Yes	N.O.	1000		872C-D5NE18-A2	
				N.C.			872C-D5CE18-A2	
		8	No	N.O.			872C-D8NE18-A2	
				N.C.			872C-D8CE18-A2	
	30 mm	10	Yes	N.O.	500		872C-D10NE30-A2	
				N.C.			872C-D10CE30-A2	
		15	No	N.O.			872C-D15NE30-A2	
				N.C.			872C-D15CE30-A2	
Micro QD Style	12 mm	3	Yes	N.O.	2000	889D-F4AC-2	872C-D3NE12-D4	1
				N.C.			872C-D3CE12-D4	
		4	No	N.O.			872C-D4NE12-D4	
				N.C.			872C-D4CE12-D4	
	18 mm	5	Yes	N.O.	1000		872C-D5NE18-D4	
				N.C.			872C-D5CE18-D4	
		8	No	N.O.			872C-D8NE18-D4	
				N.C.			872C-D8CE18-D4	
	30 mm	10	Yes	N.O.	500		872C-D10NE30-D4	
				N.C.			872C-D10CE30-D4	
		15	No	N.O.			872C-D15NE30-D4	
				N.C.			872C-D15CE30-D4	

Additional QD Cordsets see Page 223

See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity

**Product Selection: 872C WorldProx™ Inductive Proximity Sensors**

**872C WorldProx™ 3-Wire DC**

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C DC Cable Style



872C DC Micro Quick-Disconnect Style



872C DC Pico Quick-Disconnect Style

- 3-wire operation
- 3-conductor, 3- or 4-pin connection
- 10-30V DC
- Normally open or normally closed
- Reverse polarity, short circuit, overload, false pulse, and transient noise protection
- UL listed, c-UL listed, and CE marked for all applicable directives

Type	Barrel Diameter	Nominal Sensing Distance mm	Shielded	Output Configuration		Switching Frequency (Hz)	QD Cordsets 2 m	Cat. No.	PQ	
				N.O.	N.C.					
Cable Style	8 mm	2	Yes	N.O.	PNP	2500	—	872C-D2NP8-E2	1	
				N.C.				872C-D2CP8-E2		
	3	No	N.O.	872C-D3NP8-E2						
			N.C.	872C-D3CP8-E2						
	12 mm	3	Yes	N.O.		872C-D3NP12-E2				
				N.C.		872C-D3CP12-E2				
	4	No	No	N.O.		872C-D4NP12-E2				
				N.C.		872C-D4CP12-E2				
	18 mm	5	Yes	N.O.		872C-D5NP18-E2				
				N.C.		872C-D5CP18-E2				
	8	No	No	N.O.		872C-D8NP18-E2				
				N.C.		872C-D8CP18-E2				
30 mm	10	Yes	N.O.	872C-D10NP30-E2						
			N.C.	872C-D10CP30-E2						
15	No	No	N.O.	872C-D15NP30-E2						
			N.C.	872C-D15CP30-E2						
Micro QD Style	8 mm	2	Yes	N.O.	PNP	2500	889D-F4AC-2	872C-D2NP8-D4	1	
				N.C.				872C-D2CP8-D4		
	3	No	No	N.O.				872C-D3NP8-D4		
				N.C.				872C-D3CP8-D4		
	12 mm	3	Yes	N.O.		872C-D3NP12-D4				
				N.C.		872C-D3CP12-D4				
	4	No	No	N.O.		872C-D4NP12-D4				
				N.C.		872C-D4CP12-D4				
	18 mm	5	Yes	N.O.		872C-D5NP18-D4				
				N.C.		872C-D5CP18-D4				
	8	No	No	N.O.		872C-D8NP18-D4				
				N.C.		872C-D8CP18-D4				
30 mm	10	Yes	N.O.	872C-D10NP30-D4						
			N.C.	872C-D10CP30-D4						
15	No	No	N.O.	872C-D15NP30-D4						
			N.C.	872C-D15CP30-D4						
Pico QD Style	8 mm	2	Yes	N.O.	PNP	2500	889P-F3AB-2	872C-D2NP8-P3	1	
				N.C.				872C-D2CP8-P3		
		3	No	No				N.O.		872C-D3NP8-P3
								N.C.		872C-D3CP8-P3

Additional QD Cordsets see Page 223

See Publication C114-CA001A-EN-P for complete product information  
 PQ = Package Quantity

# Sensors and Safety

## Product Selection: 872C WorldProx™ Inductive Proximity Sensors

### 872C WorldProx™ Short Barrel 3-Wire DC

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C DC  
Cable Style

872C DC Micro  
Quick-Disconnect Style

872C DC Pico  
Quick-Disconnect Style

- 3-wire operation
- 3-conductor 3-pin or 4-pin connection
- 10-30V DC
- Normally open or normally closed output
- Reverse polarity, short circuit, overload, false pulse and transient noise protection
- UL listed, c-UL listed, and CE marked for all applicable directives

Type	Barrel Diameter	Nominal Sensing Distance mm	Shielded	Output Configuration	Switching Frequency (Hz)	QD Cordsets 2 m	Cat. No.	PQ
Cable Style	12 mm	3	Yes	N.O.	2000	—	872C-DH3NP12-E2	1
		4	No	N.C.			872C-DH4NP12-E2	
		3	Yes	N.O.			872C-DH3CP12-E2	
		4	No	N.C.			872C-DH4CP12-E2	
	18 mm	5	Yes	N.O.	1000		872C-DH5NP18-E2	
		8	No	N.C.			872C-DH8NP18-E2	
		5	Yes	N.O.			872C-DH5CP18-E2	
		8	No	N.C.			872C-DH8CP18-E2	
	30 mm	10	Yes	N.O.	500		872C-DH10NP30-E2	
		15	No	N.C.			872C-DH15NP30-E2	
		10	Yes	N.O.			872C-DH10CP30-E2	
		15	No	N.C.			872C-DH15CP30-E2	
Micro QD Style	12 mm	3	Yes	N.O.	2000	889D-F4AC-2	872C-DH3NP12-D4	1
		4	No	N.C.			872C-DH4NP12-D4	
		3	Yes	N.O.			872C-DH3CP12-D4	
		4	No	N.C.			872C-DH4CP12-D4	
	18 mm	5	Yes	N.O.	1000		872C-DH5NP18-D4	
		8	No	N.C.			872C-DH8NP18-D4	
		5	Yes	N.O.			872C-DH5CP18-D4	
		8	No	N.C.			872C-DH8CP18-D4	
	30 mm	10	Yes	N.O.	500		872C-DH10NP30-D4	
		15	No	N.C.			872C-DH15NP30-D4	
		10	Yes	N.O.			872C-DH10CP30-D4	
		15	No	N.C.			872C-DH15CP30-D4	
Pico QD Style	12 mm	3	Yes	N.O.	2000	889P-F3AB-2	872C-DH3NP12-P3	1
		4	No	N.C.			872C-DH4NP12-P3	
		3	Yes	N.O.			872C-DH3CP12-P3	
		4	No	N.C.			872C-DH4CP12-P3	
	18 mm	5	Yes	N.O.	100		872C-DH5NP18-P3	
		8	No	N.C.			872C-DH8NP18-P3	
		5	Yes	N.O.			872C-DH5CP18-P3	
		8	No	N.C.			872C-DH8CP18-P3	

Additional QD Cordsets see Page 223

See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity

**Product Selection: 872C WorldProx™ Inductive Proximity Sensors**

**872C WorldProx™ Extended Sensing 3-Wire DC**

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C DC  
Cable Style



872C DC Micro  
Quick-Disconnect Style

- 3-wire operation
- 3-conductor, 4-pin connection
- 10-30V DC
- Normally open or normally closed
- Reverse polarity, short circuit, overload, false pulse, and transient noise protection
- UL and c-UL recognized and CE marked for all applicable directives

Type	Barrel Diameter	Nominal Sensing Distance mm	Shielded	Output Configuration		Switching Frequency (Hz)	QD Cordsets 2 m	Cat. No.	PQ
				N.O.	N.C.				
Cable Style	12 mm	4	Yes	N.O.	PNP	900	—	872C-M4NP12-A2	1
				N.C.				872C-M4CP12-A2	
		8	No	N.O.				872C-N8NP12-A2	
				N.C.				872C-N8CP12-A2	
	18 mm	8	Yes	N.O.		872C-M8NP18-A2			
				N.C.		872C-M8CP18-A2			
		12	No	N.O.		872C-N12NP18-A2			
				N.C.		872C-N12CP18-A2			
	30 mm	15	Yes	N.O.		872C-M15NP30-A2			
				N.C.		872C-M15CP30-A2			
		20	No	N.O.		872C-N20NP30-A2			
				N.C.		872C-N20CP30-A2			
Micro QD Style	12 mm	4	Yes	N.O.	PNP	900	889D-F4AC-2	872C-M4NP12-D4	1
				N.C.				872C-M4CP12-D4	
		8	No	N.O.				872C-N8NP12-D4	
				N.C.				872C-N8CP12-D4	
	18 mm	8	Yes	N.O.		872C-M8NP18-D4			
				N.C.		872C-M8CP18-D4			
		12	No	N.O.		872C-N12NP18-D4			
				N.C.		872C-N12CP18-D4			
	30 mm	15	Yes	N.O.		872C-M15NP30-D4			
				N.C.		872C-M15CP30-D4			
		20	No	N.O.		872C-N20NP30-D4			
				N.C.		872C-N20CP30-D4			

Additional QD Cordsets see Page 223

See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity

## Sensors and Safety

### Product Selection: 872C WorldProx™ Inductive Proximity Sensors

#### 872C WorldProx™ QuadroPlex™ 2-Wire DC

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C DC Micro Quick-Disconnect Style

- 2-wire operation
- 4-pin connection
- 10-30V DC
- Normally open or normally closed output
- Short circuit, overload, false pulse, and transient noise protection
- UL listed, c-UL listed, and CE marked for all applicable directives

Type	Barrel Diameter	Nominal Sensing Distance	Shielded	Output Configuration		Switching Frequency (Hz)	QD Cordsets 2 m	Cat. No.	PQ
Micro QD Style	12 mm	3 mm	Yes	N.O. or N.C.		2000	889D-F4AC-2	872C-M3Q12-D4	1
		4 mm	No					872C-N4Q12-D4	
	18 mm	5 mm	Yes			1000		872C-M5Q18-D4	
		8 mm	No					872C-N8Q18-D4	
	30 mm	10 mm	Yes			500		872C-M10Q30-D4	
		15 mm	No					872C-N15Q30-D4	

#### 872C WorldProx™ 4-Wire DC Complementary Output

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C DC Cable Style



872C DC Micro Quick-Disconnect Style

- 4-wire operation
- 4-conductor or 4-pin connection
- 10-30V DC
- Complementary normally open and normally closed outputs
- Short circuit, false pulse, reverse polarity, overload and transient noise protection
- UL listed, c-UL certified and CE marked for all applicable directives

Type	Barrel Diameter	Nominal Sensing Distance	Shielded	Output Configuration		Switching Frequency (Hz)	QD Cordsets 2 m	Cat. No.	PQ
Cable Style	12 mm	3 mm	Yes	N.O. and N.C.	PNP	2000	—	872C-D3BP12-E2	1
	18 mm	5 mm				1000		872C-D5BP18-E2	
	30 mm	10 mm				500		872C-D10BP30-E2	
Micro QD Style	12 mm	3 mm	Yes	N.O. and N.C.	PNP	2000	889D-F4AC-2	872C-D3BP12-D4	1
	18 mm	5 mm				1000		872C-D5BP18-D4	
	30 mm	10 mm				500		872C-D10BP30-D4	

Additional QD Cordsets see Page 223

See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity

**Product Selection: 872C WorldProx™ Inductive Proximity Sensors**

**872C WorldProx™ 2-Wire AC/DC Relay Output**

Plastic Face/Threaded Nickel-Plated Brass Barrel



872C AD/DC Cable Style

- High output current capability-up to 3amps
- N.O. and N.C. contacts in the same unit
- Isolated outputs
- 360° LED
- 30-132V AC/DC supply voltage
- Reverse polarity protection (DC)
- Circuit protected against industrial noise and transients
- UL listed, c-UL certified and CE marked for all applicable directives

Type	Barrel Diameter	Nominal Sensing Distance	Shielded	Output Configuration	Switching Frequency (Hz)	Cat. No.	PQ
Cable Style	30 mm	10 mm	Yes	SPDT Relay	100	872C-B10BR30-E2	1
		15 mm	No			872C-B15BR30-E2	

**872C WorldProx™ 3-Wire DC**

Plastic Face/Small Smooth Nickel-Plated Brass Barrel



872C DC Cable Style



872C DC Pico Quick-Disconnect Style

- 3-wire operation
- 3-conductor, 3-pin connection
- 10-30V DC
- Normally open or normally closed
- Reverse polarity, short circuit, overload, false pulse, and transient noise protection
- CE marked for all applicable directives

Type	Barrel Diameter	Barrel Type	Nominal Sensing Distance	Shielded	Output Configuration	Switching Frequency (Hz)	QD Cordsets 2 m	Cat. No.	PQ
Cable Style	6.5 mm	Smooth	2 mm	Yes	N.O.	2000	—	872C-MM1NN7-E2	1
								872C-MM1NP7-E2	
					N.C.			872C-MM1CN7-E2	
								872C-MM1CP7-E2	
Pico QD Style	6.5 mm	Smooth	2 mm	Yes	N.O.	2000	889P-F3AB-2	872C-MM1NN7-P3	1
								872C-MM1NP7-P3	
					N.C.			872C-MM1CN7-P3	
								872C-MM1CP7-P3	

Additional QD Cordsets see Page 223

See Publication C114-CA001A-EN-P for complete product information  
 PQ = Package Quantity



## Sensors and Safety

Accessories: 42CA, 872C

### AC Micro (Dual Keyway) Style QD Cordsets



AC Micro Cordset

- UL recognized and CSA certified
- Highly visible yellow PVC jacket offers good oil and chemical resistance
- Heavy-duty re-inforcing braiding (3 and 6 conductor only) can be used as a grounded shield to reduce noise
- Ratcheting coupling nut for vibration resistance

Female Connector (Sensor End)	Connector Style	Wire Colour	Cable		Cat. No.	PQ	
			Wire Rating	Length			
	Straight	1 Green (GND) 2 Red/Black Tr. 3 Red/White Tr.	<b>Braided</b> 22AWG 300V 3A	2 m	889R-F3ACA-2	1	
				5 m	889R-F3ACA-5		
				10 m	889R-F3ACA-10		
			18AWG 300V 3A	2 m	889R-F3AEA-2		
				5 m	889R-F3AEA-5		
				10 m	889R-F3AEA-10		
	Right Angle	1 Green (GND) 2 Red/Black Tr. 3 Red/White Tr.	<b>Braided</b> 22AWG 300V 3A	2 m	889R-R3ACA-2		
				5 m	889R-R3ACA-5		
			18AWG 300V 3A	2 m	889R-R3AEA-2		
				5 m	889R-R3AEA-5		
	Straight	1 Red/Black Tr. 2 Red/White Tr. 3 Red 4 Green (GND)	18AWG 300V 3A	2 m	889R-F4AEA-2		
				5 m	889R-F4AEA-5		
				10 m	889R-F4AEA-10		
				2 m	889R-R4AEA-2		
	Right Angle	1 Red/Black Tr. 2 Red/White Tr. 3 Red 4 Green (GND)	18AWG 300V 3A	5 m	889R-R4AEA-5		
				10 m	889R-R4AEA-10		
				2 m	889R-F5AEA-2		
				5 m	889R-F5AEA-5		
	Straight	1 Red/White Tr. 2 Red 3 Green	18AWG 300V 3A	10 m	889R-F5AEA-10		
				Right Angle	4 Red/Yellow Tr. 5 Red/Black Tr.	2 m	889R-R5AEA-2
						5 m	889R-R5AEA-5
	10 m	889R-R5AEA-10					
		Straight	1 Red/White Tr. 2 Red 3 Green 4 Red/Yellow Tr. 5 Red/Black Tr. 6 Red/Blue Tr.	<b>Braided</b> 22AWG 300V 3A	2 m	889R-F6ACA-2	
					5 m	889R-F6ACA-5	
Right Angle		10 m			889R-F6ACA-10		
		2 m			889R-R6ACA-2		
5 m	889R-R6ACA-5						
10 m	889R-R6ACA-10						

See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity

**DC Micro Style QD Cordsets**



*DC Micro Cordset*

- Ratcheting coupling nut (on 4-pin DC cordsets)
- Highly visible yellow PVC jacket offers good oil and chemical resistance
- UL recognized and CSA certified

Female Connector (Sensor End)		Cable			Cat. No.	PQ	
Face View of Female	Connector Style	Wire Colour	Wire Rating	Length			
	Straight	1 Brown 2 White 3 Blue 4 Black	22AWG 300V 3A	2 m	889D-F4AC-2	1	
				Right Angle	5 m		889D-F4AC-5
					Straight		10 m
	2 m						889D-R4AC-2
	Right Angle			5 m	889D-R4AC-5		
				18AWG 300V 3A	10 m		889D-R4AC-10
			2 m		889D-F4AE-2		
	5 m				889D-F4AE-5		
				10 m	889D-F4AE-10		
	Straight	1 Brown 2 White 3 Blue 4 Black 5 Gray	22AWG 300V 3A	2 m	889D-F5AC-2	1	
				Right Angle	5 m		889D-F5AC-5
					Straight		10 m
	Right Angle						2 m
				18AWG 300V 3A	5 m		889D-R5AC-5
					5 m		889D-F5AE-5
	10 m		889D-F5AE-10				

**Pico Style QD Cordsets**



*Pico Cordset*

- UL recognized and CSA certified
- Highly visible yellow PVC jacket offers good oil and chemical resistance
- Screw tight coupling nut

Female Connector (Sensor End)		Cable			Cat. No.	PQ	
Face View of Female	Connector Style	Wire Colour	Wire Rating	Length			
	Straight	1 Brown 3 Blue 4 Black	24AWG 300V 3A	2 m	889P-F3AB-2	1	
				Right Angle	5 m		889P-F3AB-5
					Straight		10 m
	Right Angle						2 m
				24AWG 300V 3A	5 m		889P-R3AB-5
					10 m		889P-R3AB-10
	Straight	1 Brown 2 White 3 Blue 4 Black	24AWG 300V 3A		2 m	889P-F4AB-2	1
				Right Angle	5 m	889P-F4AB-5	
					Straight	10 m	
	Right Angle					2 m	
				24AWG 300V 3A	5 m	889P-R4AB-5	
					10 m	889P-R4AB-10	

See Publication C114-CA001A-EN-P for complete product information  
PQ = Package Quantity