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**E52 Cube Style  
Inductive Proximity Sensors****Contents**

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The Cutler-Hammer® E52 Cube from Eaton's electrical business is a high performance inductive proximity sensor. The E52 Cube family of inductive sensors provides long sensing ranges in a compact, industry-standard package.

The E52 Cube family features Eaton's Autoconfigure output technology, which automatically detects NPN or PNP wiring states and switches the sensor accordingly, without user intervention. The E52 also utilizes complementary outputs to further reduce the number of models needed to cover a wide array of inductive sensing applications. Individual power and output LEDs make installation and troubleshooting easy. Combine the above features with the range and five-way mounting flexibility of the E52 Cube family, and chances are there's an E52 solution to your sensing needs.

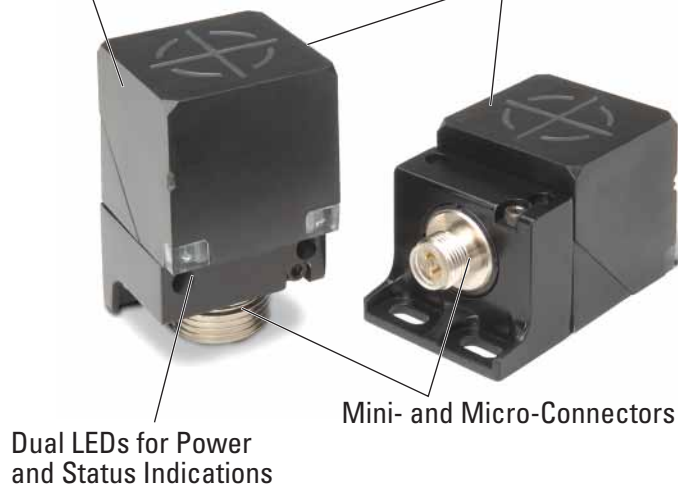
The E52 Cube was designed with the most heavy-duty applications in mind. Some of those applications include automotive manufacturing, aggregate machinery, and metalworking applications. Try the E52 Cube in some your most demanding applications today.

**Approvals**

CE



Unless otherwise noted, the products contained in this document are not designed or intended for use in human safety applications.

**Rugged Inductive Sensors in Industry-Standard Cube Package**Industry-Standard Cube Package  
Size and Mounting Hole LocationsAdjustable Sensing Head  
for Top- and Side-SensingDual LEDs for Power  
and Status Indications

Mini- and Micro-Connectors

**Product Features**



- Long inductive proximity ranges available (up to 40 mm sensing distance)
- 4-wire DC models have complementary outputs (1 N.O. / 1 N.C.)
- 4-wire DC models use auto-configure technology, which allows the sensor to automatically adapt for NPN or PNP without user intervention
- Robust design featuring vibration and impact-absorbing potting compound
- Ideal for extreme temperatures or high pressure washdown environments

**Typical Applications**

- Automotive manufacturing
- Metalworking
- Machinery OEMs
- Pipe and rod manufacturing
- Block and brick manufacturing equipment
- Amusement parks
- Heavy-duty trucks, cranes and lifts

For Customer Service in the U.S. call 1-877-ETN CARE (386-2273),  
in Canada call 1-800-268-3578.  
For Application Assistance in the U.S. and Canada  
call 1-800-426-9184.


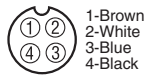

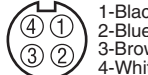
### Model Selection — E52 Cube Inductive Proximity Sensors

	Voltage Type	Output Configuration	Shielding	Output Type	Sensing Range	Connector Style	Catalog Number
<b>DC 4-Wire Sensors</b>							
Cube Package (40 x 40 x 40 mm)   <i>Mini-Connector</i>   <i>Micro-Connector</i>	10 – 48V DC	NPN / PNP Autoconfigure ①	Shielded	1 N.O. & 1 N.C.	15 mm	DC 4-Pin Micro	<b>E52Q-DL15SAD01</b> ☼
			Unshielded			DC 4-Pin Mini	<b>E52Q-DL15SAE01</b> ☼
			Shielded			DC 4-Pin Micro	<b>E52Q-DL15UAD01</b> ☼
						DC 4-Pin Mini	<b>E52Q-DL15UAE01</b> ☼
			Unshielded		20 mm	DC 4-Pin Micro	<b>E52Q-DL20SAD01</b> ☼
						DC 4-Pin Mini	<b>E52Q-DL20SAE01</b> ☼
					25 mm	DC 4-Pin Micro	<b>E52Q-DL25UAD01</b> ☼
						DC 4-Pin Mini	<b>E52Q-DL25UAE01</b> ☼
			30 mm		DC 4-Pin Micro	<b>E52Q-DL30UAD01</b> ☼	
					DC 4-Pin Mini	<b>E52Q-DL30UAE01</b> ☼	
			35 mm		DC 4-Pin Micro	<b>E52Q-DL35UAD01</b> ☼	
					DC 4-Pin Mini	<b>E52Q-DL35UAE01</b> ☼	
			40 mm		DC 4-Pin Micro	<b>E52Q-DL40UAD01</b> ☼	
					DC 4-Pin Mini	<b>E52Q-DL40UAE01</b> ☼	



① Autoconfigure technology allows the sensor to automatically adapt to NPN or PNP without user intervention.

☼ See listing of compatible connector cables below.

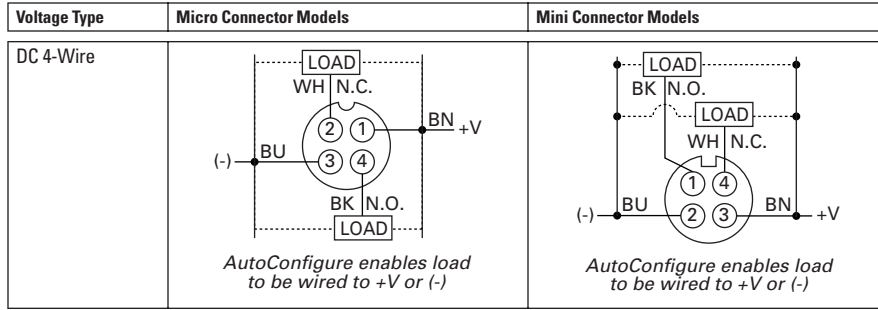
### Model Selection — Compatible Connector Cables ②

	Voltage Style	Number of Pins	Gauge	Length	Catalog Number			Pin Configuration/Wire Colors (Face View Female Shown)
					PVC Jacket	PUR Jacket	IRR PUR Jacket	
<b>Standard Cables — Micro Style</b>								
Micro Style Straight Female  	DC	4-pin, 4-wire	22 AWG	6.0 ft. (2m)	<b>CSDS4A4CY2202</b>	<b>CSDS4A4RY2202</b>	<b>CSDS4A4I02202</b>	 1-Brown 2-White 3-Blue 4-Black
				16.4 ft. (5m)	<b>CSDS4A4CY2205</b>	<b>CSDS4A4RY2205</b>	<b>CSDS4A4I02205</b>	
				32.8 ft. (10m)	<b>CSDS4A4CY2210</b>	<b>CSDS4A4RY2210</b>	<b>CSDS4A4I02210</b>	
<b>Standard Cables — Mini Style</b>								
Mini Style Straight Female    Current Rating @ 600V 3-pin: 13A 4-pin: 10A	AC/DC	4-pin, 4-wire	16 AWG	6.0 ft. (2m)	<b>CSMS4A4CY1602</b>	—	—	 1-Black 2-Blue 3-Brown 4-White
				13.1 ft. (4m)	<b>CSMS4A4CY1604</b>	—	—	
				19.7 ft. (6m)	<b>CSMS4A4CY1606</b>	—	—	

② For a full selection of connector cables, see **PG.05.05.T.E.**

-  Fast turn product with typical one business day lead-time to shipment.
-  Stocked product, typical order quantities guaranteed in stock.

**Wiring Diagrams** (Pin numbers are for reference only, rely on pin location when wiring)

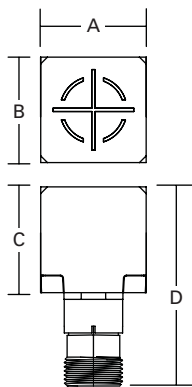


**Specifications**

	DC 4-Wire
Operating Voltage	10 – 48V DC
Load Current (Max.)	300 mA
Burden Current	< 25 mA
Off-State Leakage	< 150 µA per Output
Voltage Drop	< 2.5V
Outputs	1 N.O. / 1 N.C. (Complementary)
Standard Target Size (Mild Steel)	120 mm
Frequency of Operation	100 Hz
Repeatability	< 3%
Hysteresis (Max.)	10 – 15%
Time Delay Before Availability	300 mS
Circuit Protection	Short Circuit Protection with Auto-Reset
Operating Temperature ①	-25° to +158°F (-25° to +70°C)
Temperature Drift	±10%
Enclosure Rating	NEMA 4, 4X, 6, 6P, 12 and 13 (IP67, IP68)
Approvals	CE
Indicator LEDs	Power = Green; Output = Red
Material of Construction	Zinc Alloy Housing, PPS, PC

① Will operate at -40°C, but range drift will occur.

**Approximate Dimensions in Inches (mm)**



Model	A (Width)	B (Depth)	C (Height)	D (Overall Height)
Micro Connector	1.57 (40)	1.57 (40)	1.57 (40)	2.725 (69.2)
Mini Connector				2.965 (75.3)