

Proximity Sensors and Limit Switches

Time-tested, Robust and Reliable Control



LISTEN.
THINK.
SOLVE.®



Allen-Bradley • Rockwell Software

**Rockwell
Automation**

INDUCTIVE SENSOR PRODUCT SPOTLIGHT

Allen-Bradley® proximity sensors set the standard for ruggedness, reliability and application flexibility. Choose from one of the industry's widest selections of proximity sensor models, all of which offer you non-contact object detection. This diverse offering serves the full spectrum of your needs, from light-duty packaging applications to the punishing environments on automotive welding equipment or the harsh washdowns in food processing plants.

Bulletin 872C and 872CP WorldProx™

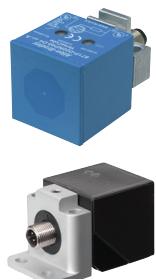
Cost-effective global solutions for general purpose applications

- 872C models designed with Nickel-plated brass housings and plastic sensing face
- 872CP models designed with an all plastic housing and sensing face
- Standard and short barrel versions
- Multiple operating voltages and output types
- Output indicator with 360° visibility for easy setup and maintenance
- IP67 Environmental rating
- Extended range versions available



Bulletin 871P - VersaCube™

Long-range sensing, versatility and durability



- Sensing ranges of up to 40 mm for general purpose models and 35 mm for weld-field immune models
- A unique five-way mount makes them easy to mount and adjust
- Same mounting hole pattern as similar cube- and limit switch-style sensors for easy retrofitting
- Equal sensing versions available

Bulletin 871TS

A tough new solution for the food and beverage industry

- 316L stainless steel barrel with FDA Certified PPS sensing face
- ECOLAB certified
- IP67, IP68 and IP69K enclosure ratings
- Extended temperature rating (-40...+80°C (-40...+176°F))
- Standard and extended sensing versions available
- Laser etched product markings



Bulletin 871TM All-Stainless Steel

The industry benchmark for harsh duty inductive sensing

- Stainless steel face and barrel for high impact and abrasion resistance
- 1200 psi washdown capability for contaminant and fluid ingress resistance (selected units meet IP69K requirements)
- Standard sensing, ferrous selective, nonferrous selective, equal sensing and intrinsically safe versions
- Available with abrasion resistant, fire retardant ToughLink™ cable that meets SOOW-A requirements
- Extended range models available



LIMIT SWITCH PRODUCT SPOTLIGHT

Rockwell Automation® offers one of the broadest and most durable lines of limit switches in the industry. Allen-Bradley® limit switches are used in a variety of applications and environments because of their ruggedness, simple, visible operation, ease of installation and reliability.



Bulletin 802T NEMA Style

Time-tested durability, versatility and reliability

- Plug-in versions reduce downtime by eliminating the need for re-wiring (head and switch body can be replaced while leaving the base, with wiring chamber, in place)
- NEMA Type 4 and 13 oil-tight (6P on select rotary shaft models)
- A wide variety of operating heads and levers available
- Operator heads can be rotated in 90° increments
- 2 or 4 Circuit versions
- -18 ° to 110 °C Temperature rating (-40° to 110°C available as an option)
- Optional LED output indication
- Standard 1/2" NPT Conduit Entry
- Pre-wired cable units and Mini connector versions

Bulletin 802M/802MC Pre-Wired

Factory sealed for demanding industrial environments

- NEMA 4, 4X, 6P and IP67 enclosure ratings
- Polymeric housings are highly resistant to moisture as well as volatile cleaning agents
- 802MC Corrosion resistant versions are factory sealed and all exposed metal parts are constructed of Stainless Steel 316
- 2 and 4 Circuit versions available (only 2 Circuit available for 802MC)
- Optional LED Output indication
- Standard pre-wired cable is a 5ft STOOW-A (oil resistant for indoor and outdoor use) cable
- Extended cable lengths and other connector options available



Bulletin 802B Compact, Precision and Small Precision

The ideal solution for areas too small for traditional NEMA-style limit switches

- Compact, Precision and Small Precision models
- Precision and Small Precision units offer low trip and reset points for more precise sensing
- Rugged die-cast housings with industry standard dimensions
- Wide range of operating voltages and current ratings
- All units available with a wide variety of operating heads



440P IEC Style Safety

A full range of IEC style solutions for both safety and standard sensing applications

- Cat. 1 devices per En954-1, dual channel interlocks suitable for Cat. 3 or 4 systems
- Four body styles: 30 mm metal, 22 mm metal, 22 mm plastic and 15 mm plastic
- Positive operation, forced disconnection of contacts (direct opening action)
- Snap acting or slow make/break contact arrangements
- Wide variety of operating heads (all lever-type switches are provided with their respective actuator arm)



INDUCTIVE SENSOR QUICK SELECTION GUIDE

	Product Family	Product Features			Housing Diameter/ Dimensions (mm)	Sensing Range Shielded (mm)	Sensing Range Unshielded (mm)	Enclosure Ratings	2-wire DC	3-wire DC	4-wire DC	2-wire AC	2-wire AC/DC
General Purpose	 872C WorldProx™	<ul style="list-style-type: none"> Nickel-Plated brass barrel with plastic face Standard length and short barrel versions (3-wire DC versions) Extended range versions available (3-wire DC and 2-wire AC) Wide variety of cable and connector options 	6.5	2	3			IP67					
			8	2 & 3	3 & 4								
			12	3 & 4	4 & 8								
			18	5 & 8	8 & 12								
			30	10 & 15	15 & 20								
Harsh Duty	 872C/871C Plastic Housing	<ul style="list-style-type: none"> Plastic barrel and sensing face Cable and QD models (AC units only available with cable) AC units available in 871C product family 	12	3	4			IP67					
			18	5	8								
			30	10	15								
	 871TM	<ul style="list-style-type: none"> Rugged Stainless Steel 304 barrel and sensing face Extended Range units available (3-wire DC versions) Wide variety of sensing types available (standard inductive, submersible units, low energy AC/DC units, and intrinsically safe versions) 	8	3	6			All units IP67 & 1200 psi wash down rated (Selected units meet IP69K)					
	12		2 & 6	4 & 10									
	18		5 & 10	8 & 20									
	30		10 & 20	15 & 40									
Food & Beverage	 871TM/871T Ferrous & Non-Ferrous	<ul style="list-style-type: none"> Rugged Stainless Steel 304 barrel and sensing face Ferrous versions only sense ferrous materials Non-ferrous versions only sense non-ferrous materials AC Ferrous Versions available in 871T product family 	12	1 & 2	NA			All units IP67 & 1200 psi rated (Selected units meet IP69K)					
			18	3 & 5	NA								
			30	7.5 & 10	NA								
	 871TS	<ul style="list-style-type: none"> Stainless Steel 316L barrel and FDA approved PPS plastic sensing face ECOLAB certified Extended temperature ratings (-40° to 100°C) Extended range units available Laser engraved part numbers 	12	2 & 4	4 & 8			IP67, IP68 & IP69K					
	18		5 & 8	8 & 12									
Hazardous Locations	 871T	<ul style="list-style-type: none"> Stainless Steel 304 barrel with plastic sensing face AC housing and sensing face constructed of stainless steel 304 Extended low end temperature ratings (-40° to 70°C) 	12	2	4			IP67					
			18	5	8								
	 871C Extended Temperature	<ul style="list-style-type: none"> Nickel-plated brass barrel and plastic sensing face Operating temperature from -40° to 100°C PUR cable and QD connector options 	12	2	4			IP67					
			18	5	8								
			30	10	15								
	 871C NAMUR	<ul style="list-style-type: none"> Conform to NAMUR specifications (DIN 19 234) Sensors are appropriate for Intrinsically Safe applications when used with NAMUR style isolators/amplifiers 	8	1	2			IP67					
			12	2	4								
			18	5	8								
			30	10	15								

Specialty Solutions

 871D WorldClamp™	<ul style="list-style-type: none"> Designed for use in power clamp and gripper applications to indicate open and closed position Weld Field Immune 3 different sensor head styles 3-wire DC and 2-wire AC/DC versions 	 871D Cylinder Position Indicator	<ul style="list-style-type: none"> Designed to detect the extended or retracted position of a hydraulic or pneumatic cylinder Weld Field Immune Multiple probe lengths to accommodate different size cylinders 3-wire DC and 2-wire AC/DC versions
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INDUCTIVE SENSOR QUICK SELECTION GUIDE

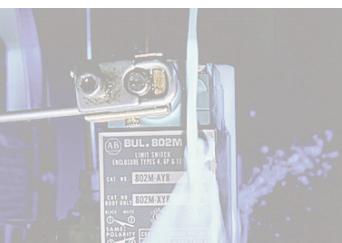
	Product Family	Product Features			Housing Diameter/ Dimensions (mm)	Sensing Range Shielded (mm)	Sensing Range Unshielded (mm)	Enclosure Ratings	2-wire DC	3-wire DC	4-wire DC	2-wire AC	2-wire AC/DC
Welding	871Z	<ul style="list-style-type: none"> Weld Field Immune PTFE coated brass housing Cable versions available with SOOW cable for excellent weld splatter protection 	12	2	4			IP67					
			18	5	8					✓			
			30	10	15								✓
	871ZC	<ul style="list-style-type: none"> Weld Field Immune Slag resistant copper barrel Thermoset plastic face Optional Toughcoat™ finish on sensor face for even greater weld splatter protection 	12	2	4			IP67					
			18	5	8 & 15					✓			
			30	10	15								✓
Material Handling & Welding	871ZT	<ul style="list-style-type: none"> Weld Field Immune PTFE coated brass housing Equal sensing (detects all metals at the same sensing distance) Unshielded versions offer extended range 	12	3	8			IP67					
			18	5	12					✓			
			30	10	20								
	871P VersaCube™	<ul style="list-style-type: none"> Head can be rotated in 5 different sensing positions Standard sensing and Weld Field Immune versions Optional Toughcoat™ slag resistant coating available on specific models 	40x40	20	40			All units IP67 & 1200 psi wash down rated (Selected units meet IP69K)		✓	✓		✓
			40x40 WFI	15 & 20	25 & 35								
	871F Flat Pack	<ul style="list-style-type: none"> Large Flat Pack style sensor for applications that require extremely long sensing range Standard sensing and Weld Field Immune versions 	80x80	50	65			All units IP67 & 1200 psi wash down rated (Selected units meet IP69K)		✓			✓
			80x80 WFI	40	50								
Automated Assembly & Robotics	871L and 872L	<ul style="list-style-type: none"> Head can be rotated in 17 different positions Standard NEMA limit switch mounting pattern Switch selectable N.O. or N.C. outputs on 871L Programmable N.O. or N.C. outputs (via jumper) on 872L 	40x40x120	20	40			IP67		✓		✓	✓
	871C Mini Tubular	<ul style="list-style-type: none"> Compact housing ideal for small part detection, robotic, and gripper applications Stainless Steel barrel and plastic sensing face Fully integrated electronics High switching frequency ($\geq 3\text{kHz}$) 	3 smooth barrel	0.6 & 1	NA			IP67		✓			
			4 smooth barrel	0.8 & 1	NA								
			4	0.8 & 1.5	NA								
			5	1 & 1.5	NA								
	871FM Mini Flat Pack	<ul style="list-style-type: none"> Compact sensor housings for applications with limited mounting area 5x5 and 8x8 solutions offer metal housings while other solutions offer plastic housings AC versions only available in the 28x16x11 and 40x26x12 mm packages 	5x5	0.8 & 1.5	NA			IP67					
			8x8	2	3					✓			
			28x16x11	2	NA								
			40x26x12	2	4								
			25x50x10	5	8								
			31x18x10	NA	5								

Specialty Solutions

	<ul style="list-style-type: none"> Provide a 0-10V output proportional to the distance from the sensor face Available in 12, 18, and 30 mm housings 2m cable connection 		<ul style="list-style-type: none"> Ring sensors available in 12, 20, 50, and 100 mm diameter sizes Slot sensors available with 30 mm gap All ring and slot sensors 3-wire DC
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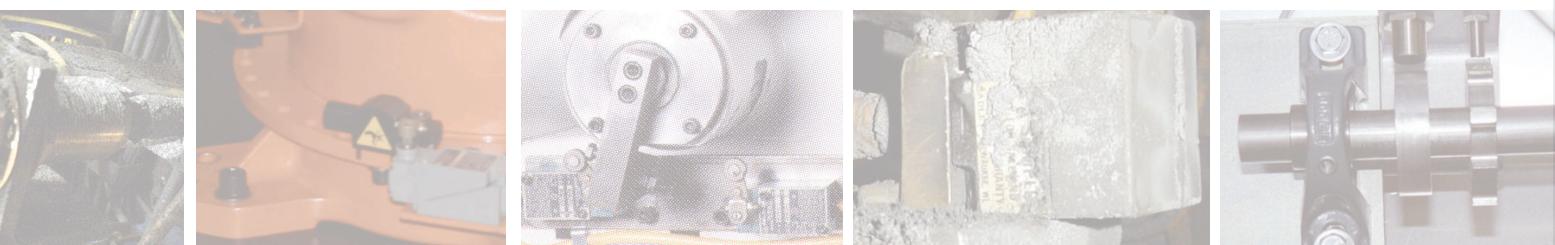
LIMIT SWITCH QUICK SELECTION GUIDE

	Product Family	Product Features	Contact Rating	Temperature Rating	Actuator Types	Enclosure Rating	QD Offered	Status Indicator Offered
NEMA General Purpose	802T Plug-In & Non Plug-In 	<ul style="list-style-type: none"> Rugged NEMA TYPE 4 and 13 oiltight construction Available in Standard Non Plug-In and Plug-In version Plug-in design provides for quick and easy installation 2 and 4 Circuit versions Simple mode change in head for easy set-up Low energy versions available 	2 Circuit: NEMA A600 4 Circuit: NEMA B300	-18 to 110°C (0° to 230°F) Optional -40° to 110°C (-40° to 230°F)	<ul style="list-style-type: none"> Lever Low operating force Top and side push (with or without rollers) Cat whisker Wobble stick Neutral position 	NEMA 1, 4, 6P (Select side rotary styles), 13	✓	✓
Washtdown	801 	<ul style="list-style-type: none"> General purpose limit switch for a wide variety of applications Multiple contact arrangements available (Including Slow Action and Snap Action) Snap Action contacts provide high snap through force 	NEMA A600	0° to 40°C (32° to 104°F)	<ul style="list-style-type: none"> Fork lever Roller lever Maintained Rod/Chain 	NEMA 1, Type 4 or Type 7, and 9		
Light Duty Conveyor	802M/MC 	<ul style="list-style-type: none"> Factory sealed to meet the demands of both wet and dry applications Polymeric housing material is highly resistant to moisture as well as volatile cleaning agents 802MC corrosion resistant versions are factory sealed and all exposed metal parts are constructed of Stainless Steel 316 Standard units provided with prewired 5ft.(1.52m) STO cable 	2 Circuit: NEMA A600 4 Circuit: NEMA B300	0° to 80°C (32° to 180°F)	<ul style="list-style-type: none"> Lever Maintained Top and side push (with or without rollers) 802MC corrosion resistant lever 	NEMA 1, 4, 4X, 6P, 13 and IP67	✓	✓
Hazardous Locations	802G 	<ul style="list-style-type: none"> Plug-in gravity return switch, designed for conveyor-type applications with small or lightweight objects Requires low operating torque Adjustable switch point (can be set from 10° to 180° of rotation) Three unique lever arms available 	NEMA B600	0° to 110°C (32° to 230°F)	<ul style="list-style-type: none"> Adjustable rod levers (Requires lever arms specifically designed for the 802G product family) 	NEMA 1		✓
	802X 	<ul style="list-style-type: none"> NEMA 7 and 9 units appropriate for use in: <ul style="list-style-type: none"> Class I, Groups B, C or D Class II, Groups E, F or G Class III NEMA 4 watertight versions designed for indoor use 	NEMA A600 NEMA P150	-46° to 121°C (-50° to 250°F)	<ul style="list-style-type: none"> Lever Maintained Top and side push (with or without rollers) Wobble stick Neutral position 	NEMA Types 7 and 9; NEMA 4/ nonhazardous locations		
	802XR 	<ul style="list-style-type: none"> Sealed limit switch features a single contact hermetically sealed in glass enclosure Offers excellent contact reliability in contaminated atmospheres Appropriate for use in: <ul style="list-style-type: none"> Class I, Groups B, C or D Class II, Groups E, F or G 	NEMA B600 NEMA P300	-29° to 121°C (-20° to 250°F)	<ul style="list-style-type: none"> Lever Top and side push (with or without rollers) Wobble stick 	NEMA Types 7 and 9		
	802R 	<ul style="list-style-type: none"> Sealed limit switch features a single contact hermetically sealed in glass enclosure Offers excellent contact reliability in contaminated atmospheres Appropriate for use in: <ul style="list-style-type: none"> Class I, Div 2, Groups A, B, C, and D 	NEMA B600 NEMA P300	-29° to 121°C (-20° to 250°F)	<ul style="list-style-type: none"> Lever Low operating force Top and side push (with or without rollers) Cat whisker Wobble stick 	NEMA 13		



LIMIT SWITCH QUICK SELECTION GUIDE

	Product Family	Product Features	Contact Rating	Temperature Rating	Actuator Types	Enclosure Rating	QD Offered	Status Indicator Offered
Compact & Precision	802B	<ul style="list-style-type: none"> Compact metal housing can be mounted in areas too small for traditional NEMA style solutions 3m pre-wired cable 13 unique head configurations AC or DC LED versions Low Current versions Booted and Panel mount versions 	NEMA B300	-10° to 70°C (14° to 158°F)	<ul style="list-style-type: none"> Rotary arm Center rotary arm Top push (with or without rollers) Top push bevel Top push cross roller Wobble stick 	NEMA 1, 3, 4, 6, 12, 13 and IP67	✓	✓
	802B Precision/ Small Precision	<ul style="list-style-type: none"> Low trip and reset points for more precise sensing 1/2" Conduit entry Booted versions Side and flange mounting available 	NEMA A300	-10° to 80°C (14° to 176°F)	<ul style="list-style-type: none"> Top push Top push roller Top push cross roller Roller lever One-way roller 	Precision: NEMA 1, 3, 4, IP60 & IP65 Small Precision: NEMA 1, 3, 4, 6, 13 & IP67		
	440P-M	<ul style="list-style-type: none"> Internationally accepted 30 mm cast aluminum housing for safety and non-safety applications Positive operation, forced disconnection of contacts Available with snap-acting, slow make before break or slow break before make contact blocks Actuator head can be rotated in 90° increments Category 1 device per EN954 -1 Suitable for Category 3 and 4 systems when ganged together 	NEMA A600 NEMA Q600	-25° to 80°C (-18° to 176°F)	<ul style="list-style-type: none"> Roller plunger Dome plunger Short lever Adjustable lever Rod lever Spring rod Telescope arm 	IP66	✓	
	440P-C	<ul style="list-style-type: none"> Internationally accepted 22 mm plastic housing for safety and non-safety applications Positive operation, forced disconnection of contacts Available with snap-acting, slow make before break or slow break before make contact blocks Actuator head can be rotated in 90° increments Category 1 device per EN954 -1 Suitable for Category 3 and 4 systems when ganged together 	NEMA A600 NEMA Q600	-25° to 80°C (-18° to 176°F)	<ul style="list-style-type: none"> Roller plunger Dome plunger Hinge lever Short Lever Offset hinge Adjustable lever Rubber roller 	IP66	✓	
	440P-A	<ul style="list-style-type: none"> Internationally accepted compact 22 mm metal housing for safety and non-safety applications Positive operation, forced disconnection of contacts Available with snap-acting contact blocks Pre-wired 2m cable, bottom or side exit Category 1 device per EN954 -1 Suitable for Category 3 and 4 systems when ganged together 	NEMA B300 NEMA Q300	2° to 70°C (36° to 158°F)	<ul style="list-style-type: none"> Roller plunger Dome plunger Cross roller plunger Short lever 	IP66/IP67		
NEMA Style Safety	802T Direct Opening	<ul style="list-style-type: none"> Rugged metal housing and plug-in body style utilize the same mounting dimensions as other NEMA style limit switches Direct opening contacts ensure normally closed contacts (safety contacts) open even in the event of a contact weld condition, up to 10 Newtons 2-Circuit versions suitable for Category 1 systems per EN954-1 4-Circuit versions suitable for Category 3 and 4 systems per EN954-1 	2 Circuit: NEMA A600 4 Circuit: NEMA A300 NEMA Q300	-18° to 110°C (0° to 230°F)	<ul style="list-style-type: none"> Lever Top push roller Side push vertical roller Side push horizontal roller 	NEMA 4, 6P, 12, 13, and IP67	✓	





Connection Systems

Consolidate component inventory and control cabling with Allen-Bradley connectivity. Take advantage of On-Machine connectivity to reduce Mean Time To Repair (MTTR), expedite commissioning and simplify device wiring by utilizing the broad offering of:

- Bulletin 889 Cordsets and Patchcords: Featuring industry standard overmolded connectors, Allen-Bradley cables provide secure connection for sensors and other field devices.
- Bulletin 879 V- and Y-Cables: These cable splitters consolidate two terminations into a single port. With similar configuration capabilities to cordsets, the split can occur right at a receptacle with a V-cable or at a pre-determined distance with a Y-cable.
- Bulletin 898 Distribution Boxes: These passive junction boxes lower labor costs by reducing installation and troubleshooting time. Distribution boxes reduce the number of terminations needed to be made in a cabinet.
- Bulletin 888 Receptacles: Increase your plug-and-play capabilities with easy to use receptacles. When used on panels or field devices, these solutions expedite maintenance and provide flexibility on system design.

Rockwell Automation® offers a breadth of quality Allen-Bradley® components to fit your specific needs. In order to assist you with your component selection, we offer a variety of configuration and selection tools.



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Product Selection Toolbox

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Sensors Catalog

Within this catalog you'll find an extensive selection of your Allen-Bradley® sensing products.
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