

42EF Photoelectric Sensors



IO-Link functionality, brighter LEDs and other enhancements

Features and Benefits

- Embedded IO-Link communication protocol helps minimize downtime and increase productivity
- Two ultra-bright, 360° visible status LEDs provide clear indication during setup, operation and troubleshooting
- Visible red light source on Diffuse and Transmitted Beam models simplifies alignment
- Universal 18 mm threaded base and nose for enhanced flexibility and ease of mounting
- Linear sensing range adjustment on models with sensitivity knob
- Improved high frequency ballast immunity
- IP69K rated enclosure

What is IO-Link?

IO-Link is a worldwide open-standard protocol that allows sensors to easily integrate into The Connected Enterprise. Benefits of IO-Link technology include:

- Reduced inventory and operating costs
- Increased uptime/productivity
- Simplified design, installation, setup and maintenance
- Enhanced flexibility and scalability

IO-Link enabled sensors offer advanced features and diagnostics that can only be accessed through an IO-Link master. These sensors act like standard sensors when not interfaced to an IO-Link enabled control system, so you can stock the same sensors for standard I/O (SIO) applications and IO-Link applications, simplifying the selection process and reducing stocking costs.



1732 ArmorBlock®
IO-Link Master



Rockwell Automation announces enhancements to the 42EF RightSight™ line with the introduction of embedded IO-Link functionality along with many new features. IO-Link allows sensors to easily integrate into The Connected Enterprise, delivering data from the sensor directly into a control system in a very cost efficient and easy-to-use manner via an IO-Link Master and EtherNet/IP™.

The Allen-Bradley® 42EF RightSight with IO-Link features a new user interface boasting ultra-bright LEDs that are visible from 360° up to 7 m (23 ft) away for clear status indication during setup, operation and troubleshooting. The visible red light source, linear sensitivity adjustment and industry-leading form factor with 18 mm threaded base and nose mount make RightSight a flexible, easy-to-use sensing solution. Plus, the rugged IP69K rated housing and improved high frequency ballast immunity ensure reliable sensing in the toughest industrial environments.

Connecting the 42EF RightSight to an IO-Link master also allows you to take advantage of advanced sensing functionality including real-time diagnostics, automatic device configuration (ADC) and access to multiple configurable parameters that help minimize downtime and increase productivity.

LISTEN.
THINK.
SOLVE.®

42EF, IO-Link Version 1.1

- IO-Link is a worldwide open-standard peer-to-peer serial communication protocol (IEC 61131-9) that allows sensors and actuators to easily integrate into The Connected Enterprise.
- The IO-Link enabled 42EF sensor—when connected to an IO-Link master—shares device identity, parameters, real-time diagnostics and process data with the control system to optimize machine setup, maintenance and troubleshooting.
- By combining simple implementation with powerful data and diagnostics, IO-Link sensors provide simplified integration and seamless visibility of your processes to increase uptime and productivity.



1734 POINT IO Master
for POINT I/O™

42EF IO-Link Benefits

- Sensor Heartbeat** helps ensure reliable operation by indicating sensor failure or faulty wiring to the PLC.
- Low Margin Bit Indication** minimizes downtime by notifying the user when the lens is getting dirty and needs to be cleaned.
- Signal Strength** provides the raw measurement value of the amount of light reflected from the target.
- Margin Levels** display the excess gain above the sensor's threshold to ensure reliable detection of the target.
- Process Data Maps** allow users to select the type of information that should be continuously sent to the PLC as a process data parameter.

Linear Potentiometer Adjustment: Simplifies sensor setup and commissioning since any change in the potentiometer is directly proportional to the sensing range

Visible Beam: The bright red LED light source ensures easy alignment



Ultra-Bright LED User Interface: New User Interface LEDs allow for a highly visible 360° indication of sensor status at distances of up to 20 m away

Universal Mounting: Industry standard 18 mm threaded base mount and nose mounts maximize application flexibility

Product Selection Additional product selection available on <http://ab.rockwellautomation.com/>.

42EF Photoelectric Sensors								
Sensing Mode	Operating Voltage	Light Source	Sensing Range	Sensitivity Adjustment	Output Function	Catalog Number		
						2 m 300V Cable	Pico QD Style	Micro QD Style
Transmitted Beam Emitter	10.8...30V DC	Visible Red	NA	None	NA	42EF-E2EZB-A2 	42EF-E2EZB-Y4 	42EF-E2EZB-F4 
Transmitted Beam Receiver			8 m (26.2 ft)		L.O. & D.O., PNP	42EF-R2MPBT-A2 	42EF-R2MPBT-Y4 	42EF-R2MPBT-F4 
					D.O, PNP & NPN	42EF-R2KBBT-A2 	NA	42EF-R2KBBT-F4 
					L.O., PNP & NPN	42EF-R2JBBT-A2 		42EF-R2JBBT-F4 
			20 m (65.6 ft)		L.O. & D.O., PNP	42EF-R2MPB-A2 	42EF-R2MPB-Y4 	42EF-R2MPB-F4 
					D.O., PNP & NPN	42EF-R2KBB-A2 	NA	42EF-R2KBB-F4 
L.O., PNP & NPN			42EF-R2JBB-A2 		42EF-R2JBB-F4 			
Diffuse			3...500 mm (0.12...20 in.)	Single-turn knob	L.O. & D.O., PNP	42EF-D2MPAK-A2 	42EF-D2MPAK-Y4 	42EF-D2MPAK-F4 
					D.O., PNP & NPN	42EF-D2KBAK-A2 	NA	42EF-D2KBAK-F4 
					L.O, PNP & NPN	42EF-D2JBAK-A2 		42EF-D2JBAK-F4 
Polarized Retroreflective			25 mm... 3 m (1 in...9.8 ft)	None	L.O. & D.O., PNP	42EF-P2MPB-A2 	42EF-P2MPB-Y4 	42EF-P2MPB-F4 
					D.O., PNP & NPN	42EF-P2KBB-A2 	NA	42EF-P2KBB-F4 
					L.O., PNP & NPN	42EF-P2JBB-A2 		42EF-P2JBB-F4 

Note: IO-Link Master Module (Catalog No. 1734-4IO1 or 1732-8IOLM12R) is required for premier IO-Link integration experience.

IO-Link enabled

Cordsets and Accessories

Description	Catalog Number
IO-Link Master Module for POINT I/O™	1734-4IOL
ArmorBlock IO-Link Master	1732E-8IOLM12R

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