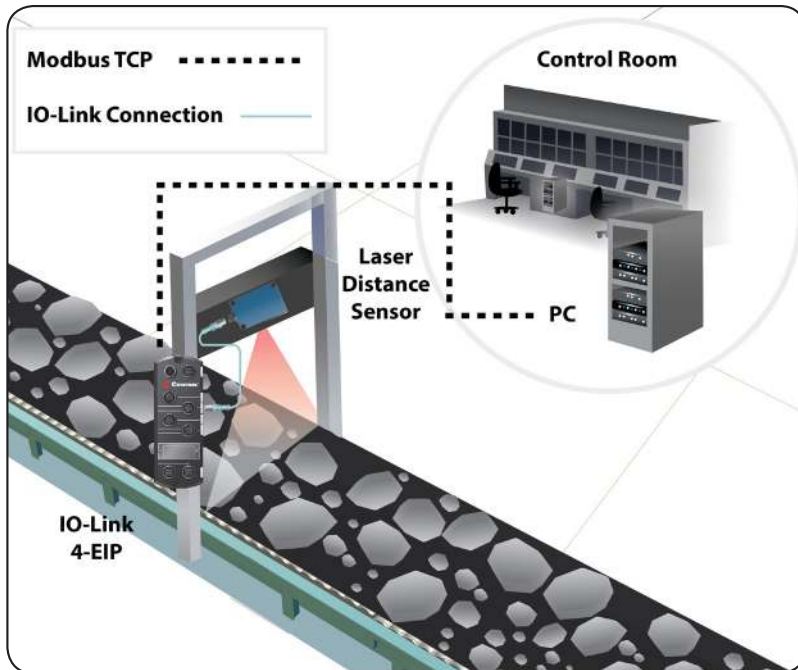


MINING APPLICATION USING IO-LINK MASTER AND PC

A North American mining systems integrator implemented a solution for a mining company seeking a better way to identify particle size and increase awareness of jams on their mineral mineral fragmentation conveyor line.



Control's IO-Link Master 4-EIP with the IO-Link laser distance sensor connected helped them achieve both of these tasks. The main reasons they decided to use Control's IO-Link master were:

- Control's master is able to work directly with a PC, no PLC required
- Other IO-Link master solutions rely on a PLC to use and set up the master, which was not desired for this application
- The ease of set-up, powerful web interface and Modbus TCP support were other determining factors.

The end-user was using a vision system for analyzing mineral fragmentation on a conveyor line. The mineral would be broken down and sent along the line where the vision system would ensure the particle size was correct.

However, problems exist with picking up accurate readings when the bed depth, or amount of mineral on the line, is great. Working with Control's IO-Link Master that is used to connect the IO-Link distance sensor has helped the company increase their accuracy with reading the bed depth. The laser distance sensor is also used to pick up the distance to the top layer of mineral going down the line which helps normalize the data along with the vision system. This improves accuracy in analyzing mineral particle sizes as the line moves along.

Another issue that the company was facing when they had their conveyor line jam, was that no one was notified until someone visually saw it. By utilizing the Control IO-Link Master 4-EIP, it sends the data to a PC running custom software using a Modbus TCP driver. The software takes in the data and would contribute to setting off an alarm if a steady reading was displayed which would mean there is a jam in the line.

In the end, this application helped prove that Control's IO-Link master is a superior solution that can be used in all kinds of projects, including those without a PLC or another controller. For those applications that do have a PLC, HMI, OPC or SCADA, Control's master works with multiple industrial Ethernet protocols and offers MultiLink™ which allows the user to communicate to two different protocols simultaneously.

continued on back

IO-Link Master 4-EIP

Part Number: 99570-8



KEY FEATURES AND BENEFITS

- Four channel IO-Link Master to Modbus TCP and EtherNet/IP™
- Modbus TCP and EtherNet/IP™ access to IO-Link process, event and service data
- Modbus TCP and EtherNet/IP™ Class 1 (Implicit) and Class 3 (Explicit) interfaces
- Write-to-Tag/File, Read-from-Tag/File
- PLC access to IO-Link ISDU blocks without complex programming
- Rugged IP67 housing designed for harsh environments, M12 connectors allowing up to four sensor connections on one master block
- Powerful web GUI for configuration and diagnostics, including:
 - IO-Link device management using the IO-Link device manufacturers IODD file for easy device configuration
 - Automatic data storage (upload and download)
 - Manual data storage (upload and download)
 - Device validation
 - Data validation
- Wide operating temperature (0° to +55°C)
- Multi-side LED visibility for device, network and port status
- Additional digital input on every port
- Works with PortVision DX
- IO-Link V1.1 compatibility
- IO-Link COM1, COM2 and COM3 support (230K baud rate)
- Slim-line machine-mount installation
- MultiLink™ – Simultaneously provides IO-Link device access to multiple controllers



PRODUCT DESCRIPTION

Control's IO-Link Master combines the benefits of the IO-Link standard with the popular industrial EtherNet/IP protocol by providing a gateway that's a streamlined bridge between the field level sensor network and the industrial EtherNet/IP backbone, making retrofitting or expansion simple.

The IO-Link Master features a rugged IP67 slim-line design incorporating two Fast Ethernet ports and four IO-Link ports with Class A M12 connectors. This product is for industrial applications with its machine-mount design using industrial grade components. The IO-Link Master is easily integrated into factory automation networks and is compatible with both IO-Link and digital IO sensor technologies.



Warranty Information

Control offers a 30-day satisfaction guarantee and 5-year limited warranty.

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