

IO-LINK BLOCK

IOLB-8318

8 Point Digital Input/Output M12

User Guide



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Overview

IOLB-8318 Module Overview

The IOLB-8318 has eight digital points, each of which can be operated as an input or as an output and is connected to an IO-Link Master. Each point is configurable in that it can be used either as an input or output; the input circuit is internally connected to the output driver, so that a set output is displayed automatically in the input process image.

The outputs handle load currents of up to 0.5 A, and although the total current is limited to 4 A, they are short-circuit proof and protected against inverse polarity. The state of each signal is indicated by means of light emitting diodes. The signals are connected via M12 connectors.

The small IOLB-8318 form factor (H126 x W30 x D26.5 mm) means that they are suitable for use where space is at a premium. The small mass of the IOLB-8318 module facilitates applications with mobile I/O interface, for example, a robot arm.

The robust design of the IOLB-8318 module enables them to be used directly at the machine. Control cabinets and terminal boxes are now no longer required. The module is fully sealed and therefore ideally prepared for wet, dirty or dusty conditions (IP67).

Pre-assembled cables significantly simplify IO-Link and signal wiring. Very few wiring errors are made, so that commissioning is optimized. In addition to pre-assembled IO-Link, power and sensor cables, field-configurable connectors and cables are available for maximum flexibility. Sensors and actuators are connected through M12 connectors.

8 Digital In or Output (24VDC)

The IOLB-8318 has eight digital points, each of which can be operated as an input or as an output. You do not need to configure a point as input or output in software because the input circuit is internally connected to the output driver, so a set output is displayed automatically to the input process image.

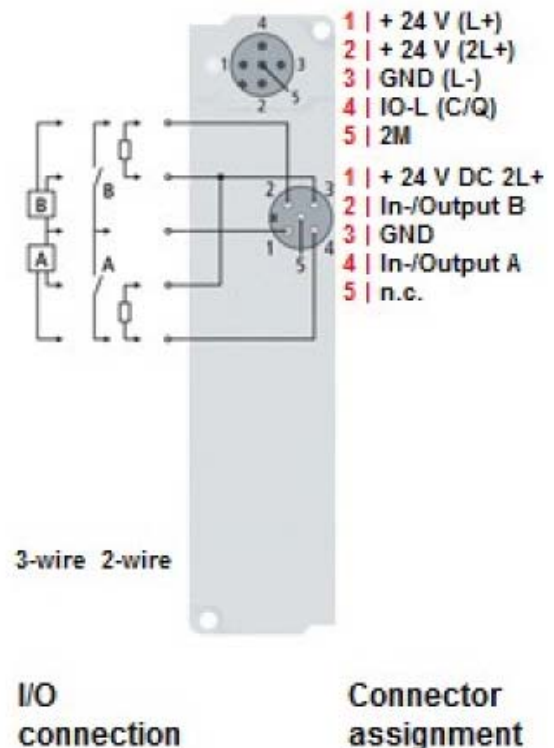
The outputs handle load currents of up to 0.5 A, are short-circuit proof and protected against inverse polarity.

The filter constant of the inputs is 3.0 ms.

The state of each signal is indicated with LEDs.


Note: The connected sensors are powered via 2L+, not from L+. The IOLB-8318 supplies digital sensors in contrast to many other modules from the additional supply voltage 2L+, not from the voltage L+. This happens because the connectors can be used alternatively as input or as output. If an overload of the sensor supply (current > 0.5 A) occurs, the 24V LED is red.


If the 2L+ supply power of the IOLB-8318 is switched through an E-Stop or similar circuit safety circuit – **DO NOT** externally power any of the devices connected to the IOLB-8318 since they could supply power to the IOLB-8318 and the outputs of the IOLB-8318 could still be powered even after 2L+ is de-energized.



IOLB-8318 LEDs

This subsection provides information about the IOLB-8318 LEDs.

| X1 (IO-Link LED)  | Description |
|--|---|
| Off | IO-Link communications not active. |
| Flashing green (1 Hz) | IO-Link communications active. |
| Lit (Red) | Short circuit on C / Q line or overheating. |

| Power Supply LEDs  | Description | |
|---|--------------------|------------------------------------|
| 24V (L+) | Off | Voltage L+ Unavailable |
| | Green | Voltage L+ Ok |
| | Red | Voltage L+ Too Low |
| 24 (2L+) | Off | Voltage 2L+ Unavailable |
| | Green | Voltage 2L+ Ok |
| | Red | Voltage 2L+ Too Low, Short Circuit |

IOLB-8318 Technical Specifications

| IOLB-8318 Technical Specifications | |
|---|---|
| Communication | IO-Link |
| Data transfer rate | 230.4 KBaud (COM3) |
| IO-Link connection | 1 x M12 connector, A-coded |
| Specification version | IO-Link V1.1, Class B |
| Requirements IO-Link Master | V1.1 |
| Number of outputs | 0 to 8 |
| Output connector | M12 |
| Load type | Ohmic, inductive, lamp load |
| Rated output voltage | 24VDC (-15%/+20%) |
| Output current | Max. 0.5 A each point |
| Short circuit current | Max. 1.5 A |
| Module electronic current consumption | Typically 100 mA from L+ |
| Output driver current consumption | Typically 20 mA |
| Module electronic supply | L+ |
| Output driver supply | 2L+ (Port Class B wiring) |
| Number of inputs | 0 to 8 |
| Input connections | M12 |
| Nominal input voltage | 24VDC (-15%/+20%) |
| Input filter (adjustable) | 3.0 ms (default), adjustable between 0 ms and 20 ms |
| Input signal extension time (adjustable) | 0 ms (default), adjustable between 0 ms and 100 ms |
| "0" signal voltage | -3...+5 V (EN 61131-2, Type 3) |
| "1" signal voltage | +11...+30 V (EN 61131-2, Type 3) |
| Input current | Typically 3 mA (EN 61131-2, Type 3) |
| Sensor supply | U _{S1} (derived from L+) |
| Process image | 8 input bits, 8 output bits |
| Permissible ambient temperature during operation | |
| Note: To meet the UL requirements, the IOLB-8318 has to be operated only at an ambient temperature range of 0 to 55°C! | -25°C to +60°C |

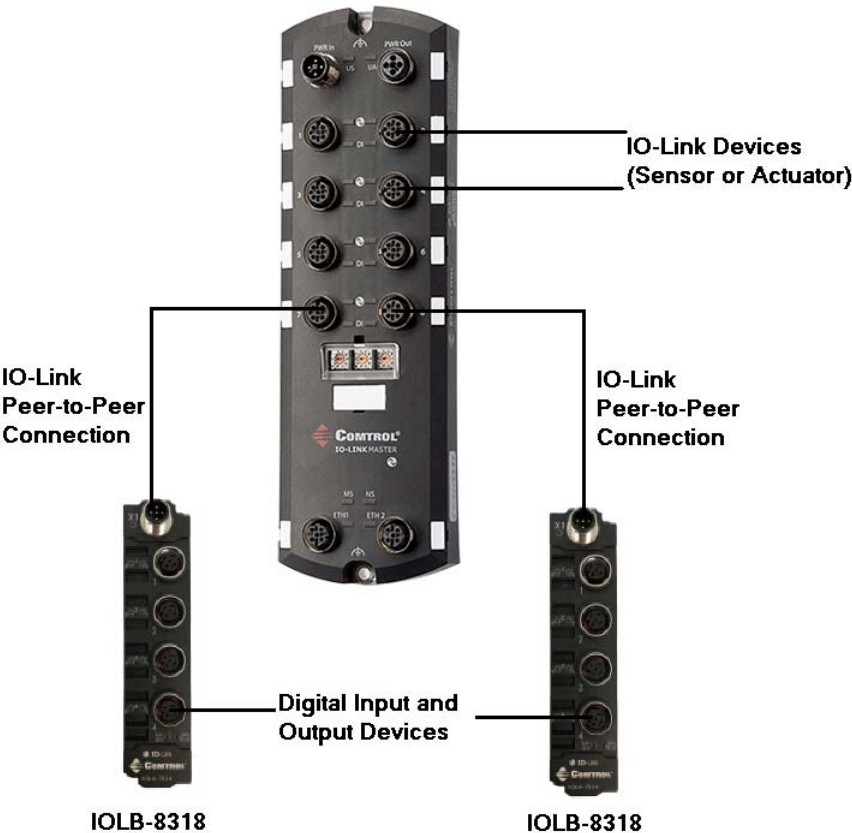
| IOLB-8318 Technical Specifications | |
|--|--|
| Permissible ambient temperature during storage | -40°C to +85°C |
| Vibration / shock resistance | Conforms to EN 60068-2-6 / EN 60068-2-27 |
| EMC resistance/emission | Conforms to EN 61000-6-2 / EN 61000-6-4 |
| Protection class | IP65, IP66, IP67 (conforms to EN 60529) |

IO-Link Basics

IO-Link is a communications system for connecting intelligent sensors and actuators to an automation system in IEC 61131-9 under the name *Single-drop digital communication interface for small sensors and actuators* (SDCI). Both the electrical connection data and the communication protocol are standardized and in the IO-Link specification summarized.

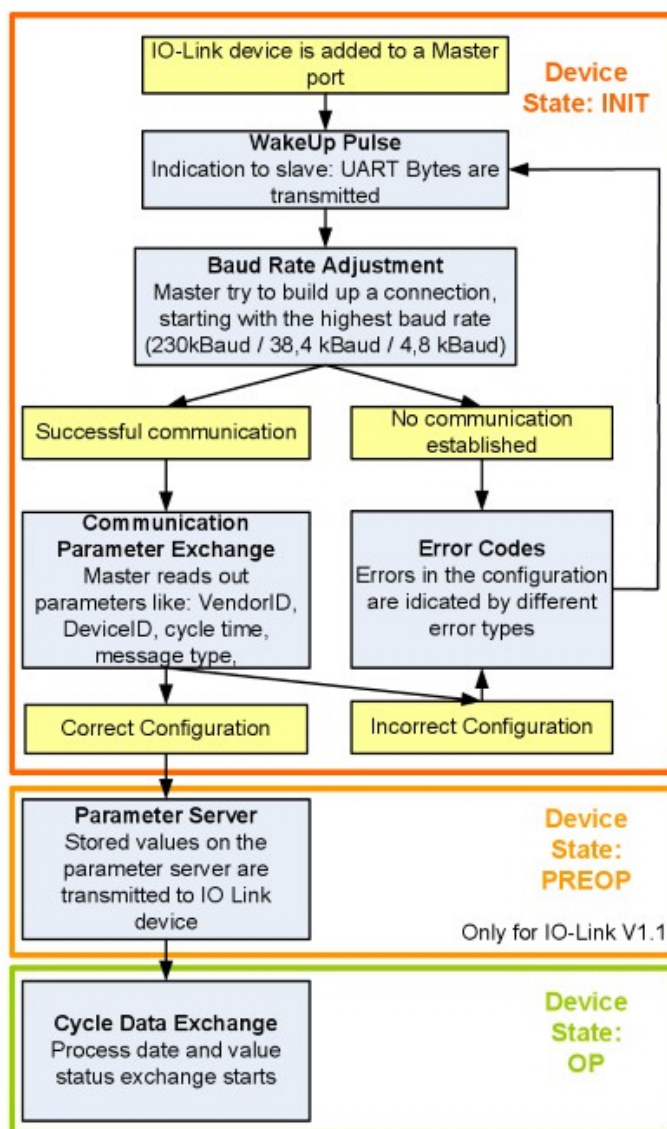
The IOLB-8318 meets the IO-Link specification 1.1. The IO-Link specification is included in the IEC standards and is accepted as IEC 61131-9 in an extended form. In this case, the new designation voltage SDCI is introduced.

An IO-Link system consists of an IO-Link Master, one or more IO-Link devices and sensors or actuators. The IO-Link Master provides the interface to the higher-level controller and controls the communication with the connected IO-Link devices. The Control IO-Link Master series has four or eight IO-Link ports at which each one IO-Link device can be connected. Therefore, IO-Link is not a fieldbus, but rather is a peer-to-peer connection as shown in the figure below.



The connected IO-Link devices have individual parameter information detected during automatic scanning with the Control IO-Link Master. Refer to [Configuring the IOLB-8318](#) on Page 19 for more information.

The structure of the IO-Link communication is shown in the following figure. In particular, this represents the sequence in the automatic scanning of the IO-Link ports.



The Pre-operate State occurs if the IO-Link device is v1.1 and if Data Storage is enabled then the device parameters are uploaded or downloaded.

Hardware Installation

This section provides installation information for the IOLB-8318.

Mounting the IOLB-8318

The following table provides information that you may require for installation.

| IOLB-8318 | |
|------------------------------|---|
| Housing material | PA6 (polyamide) |
| Casting compound | Polyurethane |
| Mounting | two fastening holes Ø 3 mm for M3 |
| Metal parts | Brass, nickel-plated |
| Contacts | CuZn, gold-plated |
| Power feed through (maximum) | 4 A |
| Installation position | Any |
| Protection class | IP65, IP66, IP67 (conforms to EN 60529) |
| Dimensions (H x W x D) | 126 x 30 x 26.5 mm |
| Weight | Approximately 125 g |

Note: While mounting the IOLB-8318, protect all connectors against contamination. All connectors must have either a cable or plug to guarantee IP67 rating.

Keep the following in mind when mounting the IOLB-8318.

- Mount the IOLB-8318 with two M3 bolts.
- The bolts must be longer than 15 mm. The fixing holes of the modules are not threaded.
- When assembling, remember that the connectors increases the overall height.

Connecting the IOLB-8318

Use the appropriate procedure to connect the IOLB-8318 to an IO-Link Master.

- [Installation With an IP67 Class A IO-Link Master](#) on Page 13
- [Installation With a Class A IP20 IO-Link Master](#) on Page 16

IOLB-8318 Power Supply Requirements

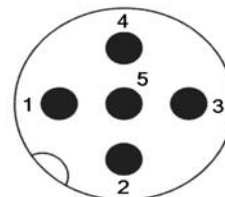
The power supply and safety circuit that you connect to the IOLB-8318 must meet the following requirements:

- 24VDC supplied by an isolating source and protected by means of a fuse (in accordance with UL248), rated maximum 4A or a 24VDC power source that satisfies NEC Class 2.
- A NEC Class 2 power supply shall not be connected in series or parallel with another (Class 2) power source.
- To meet the UL requirements, the IOLB-8318 must not be connected to unlimited power sources!

Note: To meet the UL requirements, the IOLB-8318 must not be connected to telecommunications networks and must be operated at the ambient temperature range specified in the specifications.

For additional information, see [IOLB-8318 Technical Specifications](#) on Page 7.

| Pin | Input - Male |
|-----|------------------------------------|
| 1 | 24V (L+) - electronics power |
| 2 | 24V (2L+) - sensor or device power |
| 3 | GND (L-) |
| 4 | IO-Link (C/Q) |
| 5 | GND (2M) |



The connected sensors are powered via 2L+, not from L+. The IOLB-8318 supplies digital sensors in contrast to many other modules from the additional supply voltage 2L+, not from the voltage L+. This happens because the connectors can be used alternatively as input or as output. If an overload of the sensor supply (current > 0.5 A) occurs, the 24V LED is red.

If the 2L+ supply power of the IOLB-8318 is switched through an E-Stop or similar circuit safety circuit – **DO NOT** externally power any of the devices connected to the IOLB-8318 since they could supply power to the IOLB-8318 and the outputs of the IOLB-8318 could still be powered even after 2L+ is de-energized.

The following Control cables and M12 Y-splitter can be used to connect the IOLB-8318 to the Class A IP67 IO-Link Master models.

| Control Part Number | Description |
|--|--|
| 1200143 | Y Splitter, M12 5-poles, A-Coded, M to 2F |
| Varies by length† | Sensor cable, M12 5-poles, A-coded, M to F |
| Varies by length† | Power Cable, Control IOLB, M12 A-Coded, M to wires |
| † Contact Control Sales for the part number. | |

Note: It is recommended to pull the M12 connectors tight with a nut torque of 0.6 Nm.

Installation With an IP67 Class A IO-Link Master

Use the following procedure to connect the IOLB-8318 to a Class A IP67 IO-Link Master.

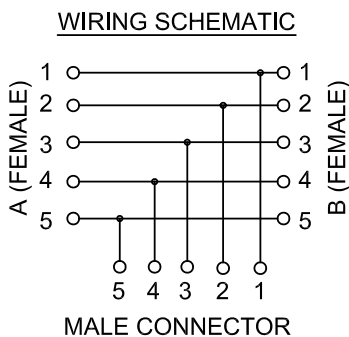
The images in this subsection shows connecting the 8-port IP67 model. Please note that the same procedures work for the 4-port model.

Note: This procedure assumes that the IO-Link Master is powered on, connected to the network and the IP address has been programmed for your environment.

1. Connect the M12 Y splitter to an available Control IO-Link Master IO-Link port.

This image shows:

- IO-Link sensor cable connected between the IO-Link Master port and the Y Splitter (1200143).
- Y Splitters connected directly to Ports 4 and 5.



Note: In the next step, make sure that the 24V power supply or switched through an E-Stop or similar circuit safety circuit is not energized during the wiring.

2. Connect the white and green wires of the Control IOLB power cable to a U_a power source.
 - a. Connect the white wire to the positive 24V terminal.
 - b. Connect the green wire to the negative 24V terminal.
3. Connect the M12 connector end of the Control IOLB power cable to Port B on the Y-Splitter.



Note: Connectors A and B are interchangeable on the Y Splitter.



4. Connect the 5-pole (M12) sensor cable between Port A on the Y-splitter and the IOLB-8318 IO-Link Port X1.



5. Apply power to the U_a power source connected to the IOLB-8318.
6. Verify that the following LEDs are lit:
 - Green 24V (L+) and 24V (2L+) LEDs on the IOLB-8318
 - Green IO-Link on the Control IO-Link Master is lit
 - Amber DI LED on the Control IO-Link Master flickers because power is being injected into the DI pin to power the IOLB-8318.

Note: Refer to [IOLB-8318 LEDs](#) on Page 6 for detailed LED information.



Installation With a Class A IP20 IO-Link Master

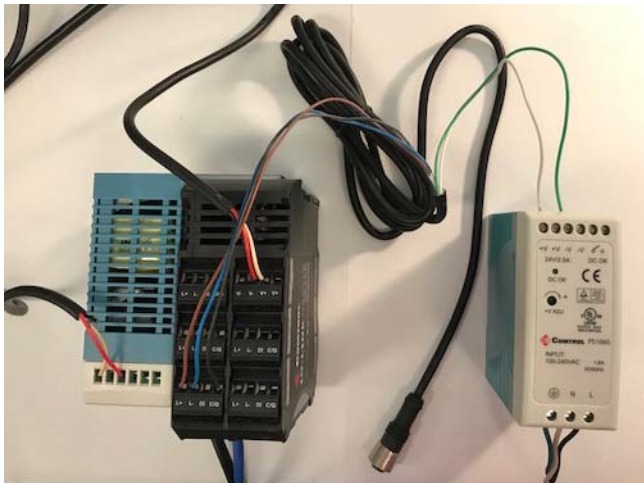
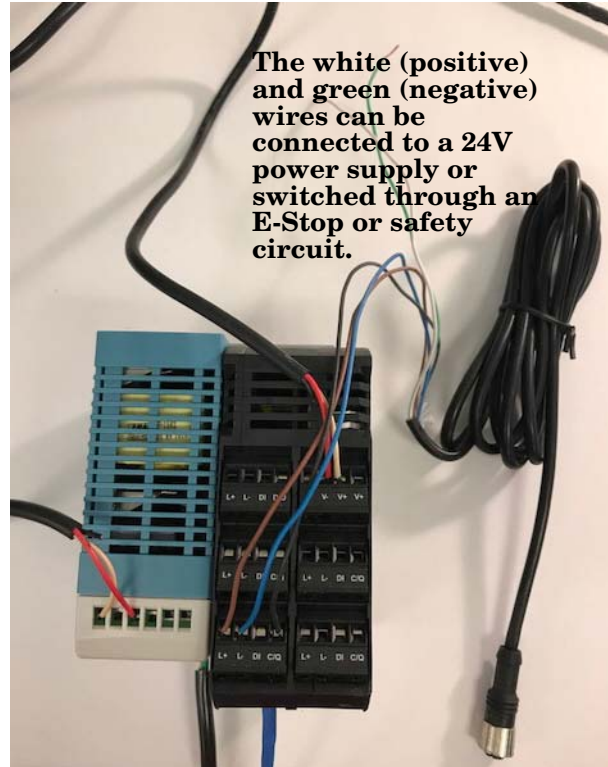
Use the following procedure to connect the IOLB-8318 to a Class A IP20 (DIN rail model) IO-Link Master.

Note: This procedure assumes that the IO-Link Master is powered on, connected to the network and the IP address has been programmed for your environment.

1. Connect a M12 A-coded to bare wire cable to the IO-Link Master:
 - Black to C/Q
 - Blue to L-
 - Brown to L+

Note: In the next step, make sure that the 24V power supply or switched through an E-Stop or similar circuit safety circuit is not energized during the wiring.

2. Connect the white and green wires of the IO-Link cable to a U_a power source. The image below illustrates connecting to a power supply.
 - c. Connect the white wire to the positive 24V terminal.
 - d. Connect the green wire to the negative 24V terminal.
 - e. Apply power to the U_a power source.

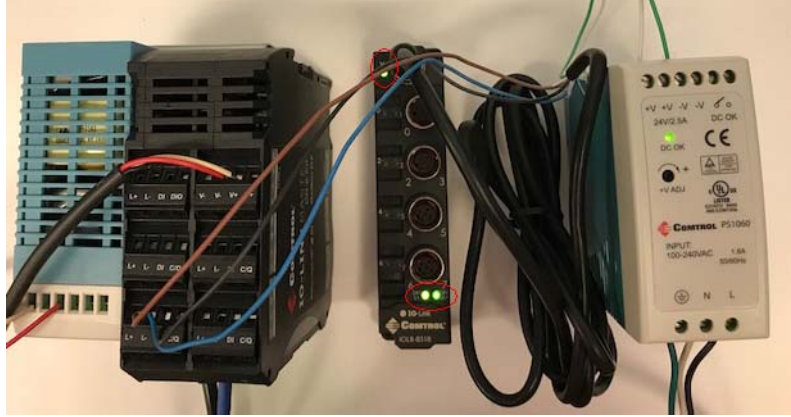


3. Connect the M12 connector from the IO-Link Master to the IOLB-8318 X1 connector.

4. Verify that the following LEDs are lit:

- Green 24V (L+) and 24V (2L+) LEDs on the IOLB-8318
- Green IO-Link on the Control IO-Link Master is lit

Note: Refer to [IOLB-8318 LEDs](#) on Page 6 for detailed LED information.

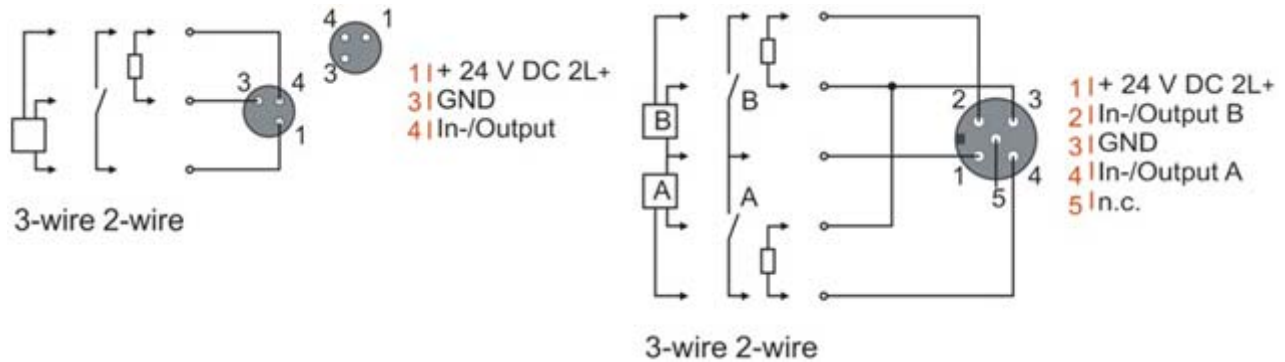


Digital In-/Outputs (M12)

Each of the points of the IOLB-8318 optionally operated as an input or as an output.

The digital inputs acquire the binary control signals from the process level and transmit them to the higher-level automation unit. The digital outputs connect the binary control signals from the automation unit on to the actuators at the process level.

The signals are connected via screw-in M12 connectors. The inputs/outputs indicate their status through light emitting diodes.




The outputs are protected against short-circuits and the inputs are protected against reverse voltage.

Control IO-Link Master Diagnostic Page

You can also verify the IOLB-8318 operation by viewing the Control IO-Link Master **IO-Link Diagnostics** page.

- 1. Log into the Control IO-Link Master using the IP address.
- 2. Click **Diagnostics | IO-Link**.



HomeDiagnosticsConfigurationAdvancedAttached DevicesHelpIO-Link Master 8-PNIOLogout

IO-LINKPROFINET IOMODBUS/TCP

IO-Link Diagnostics

UPDATESTOP LIVE UPDATESRESET STATISTICS

The complete Diagnostics page is not displayed in this image

| IO-LINK PORT STATUS | PORT 1 | | | | | | | |
|--------------------------------------|------------------------|--|--|--|--|--|--|--|
| Port Name | IO-Link Port 1 | | | | | | | |
| Port Mode | IOLink | | | | | | | |
| Port Status | Operational, PDI Valid | | | | | | | |
| IOLink State | Operate | | | | | | | |
| Device Vendor Name | Control Corporation | | | | | | | |
| Device Product Name | Control IOLB-8318 | | | | | | | |
| Device Serial Number | 9657-5 | | | | | | | |
| Device Hardware Version | 00 | | | | | | | |
| Device Firmware Version | 04 | | | | | | | |
| Device IO-Link Version | 1.1 | | | | | | | |
| Actual Cycle Time | 4.0ms | | | | | | | |
| Device Minimum Cycle Time | 0.5ms | | | | | | | |
| Configured Minimum Cycle Time | 4ms | | | | | | | |
| Data Storage Capable | Yes | | | | | | | |
| Automatic Data Storage Configuration | Disabled | | | | | | | |
| Auxiliary Input (AI) Bit Status | Off | | | | | | | |
| Device PDI Data Length | 1 | | | | | | | |
| PDI Data Valid | Yes | | | | | | | |

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Configuring the IOLB-8318

This section discusses loading the IODD on the Control IO-Link Master.

Locating the IOLB-8318 IODD Files

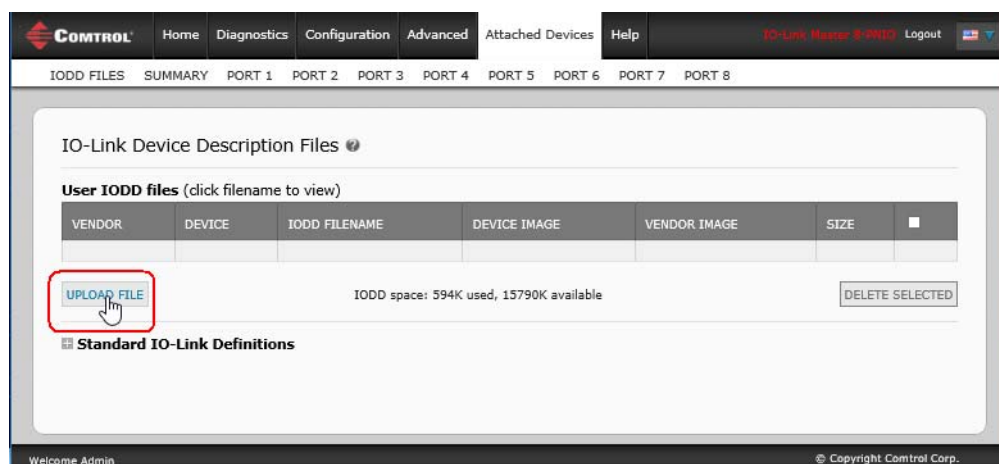
The IOLB-8318 IODD files are located on the Control download site using one of these addresses:

- http://downloads.control.com/IO_Link_Block/IOLB-8318/IODD/
- ftp://ftp.control.com/IO_Link_Block/IOLB-8318/IODD/

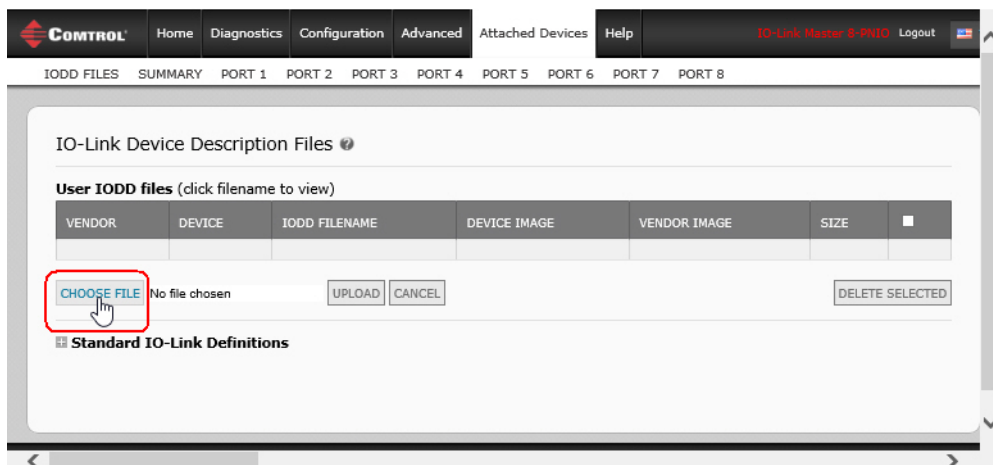
Loading the IODD Files Onto the Control IO-Link Master

Use the following procedure to load the IOLB-8318 IODD file.

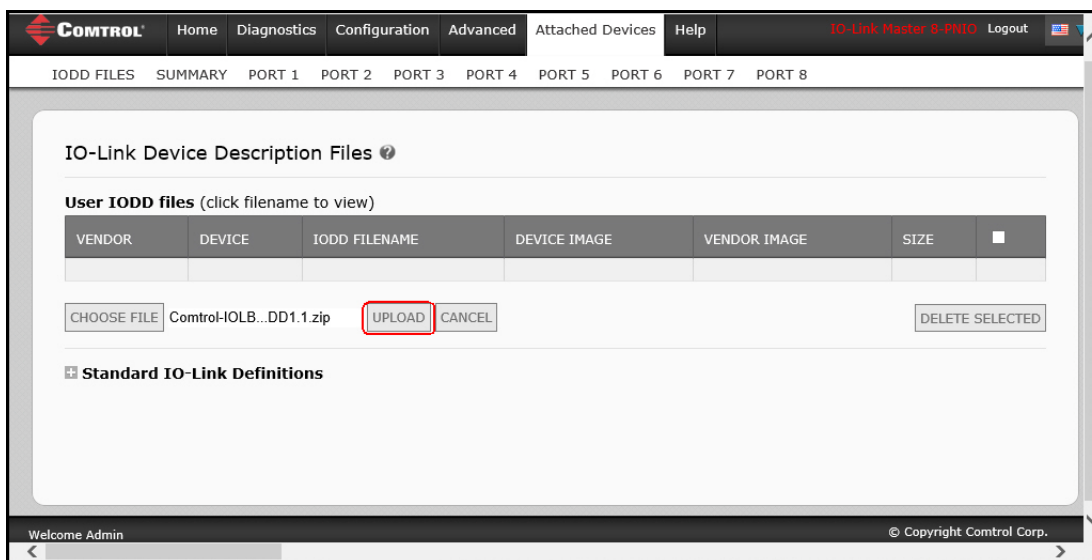
1. If necessary, download the IOLB-8318 IODD files.
2. Log into the Control IO-Link Master using the IP address.
3. Click **Attached Devices**.
4. Click the **UPLOAD FILE** button.



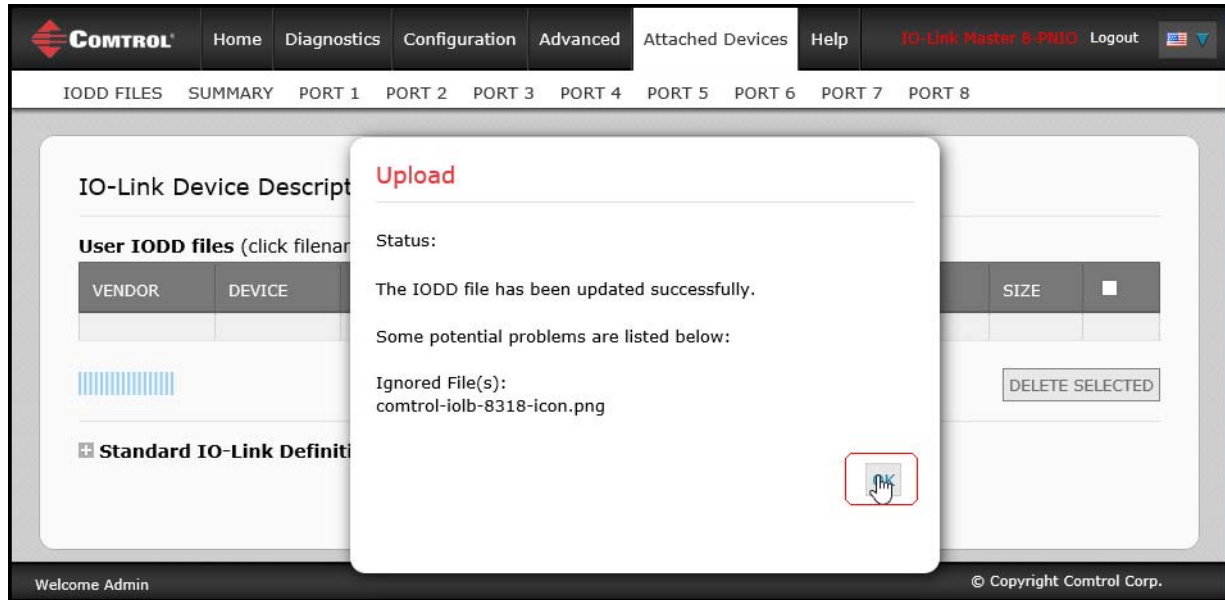
- Click the **CHOOSE FILE** button.



- Browse to and select the **Control-IOLB-20180612-IODD1.1.zip** file.
- Click the **UPLOAD** button.

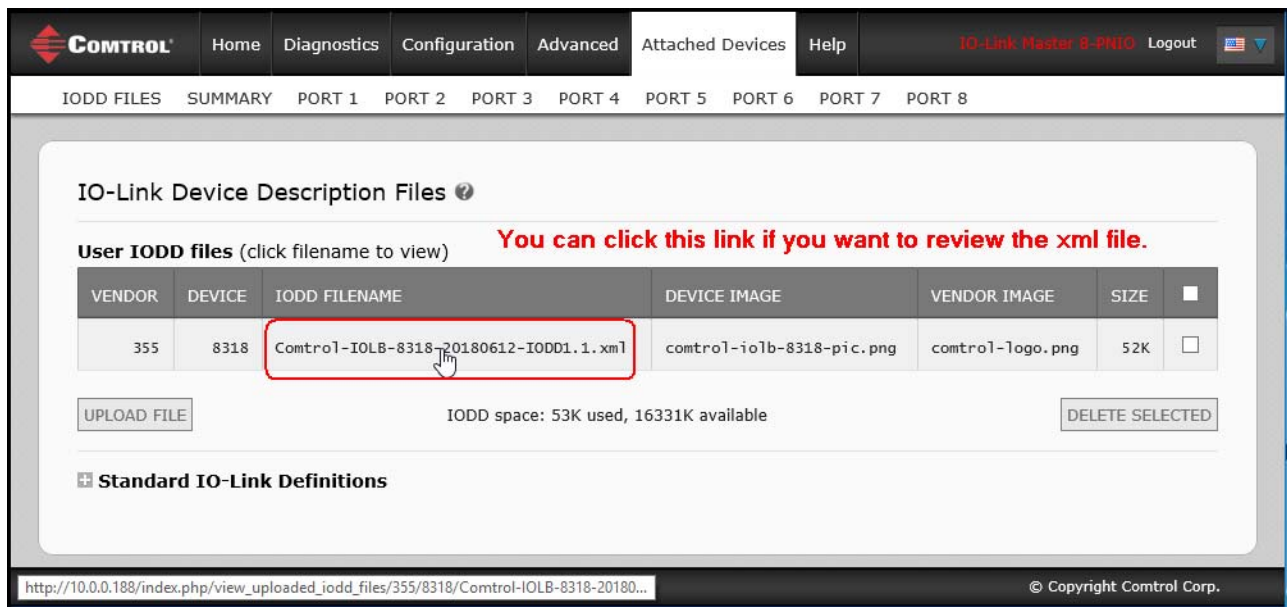


8. Click the **Ok** button.

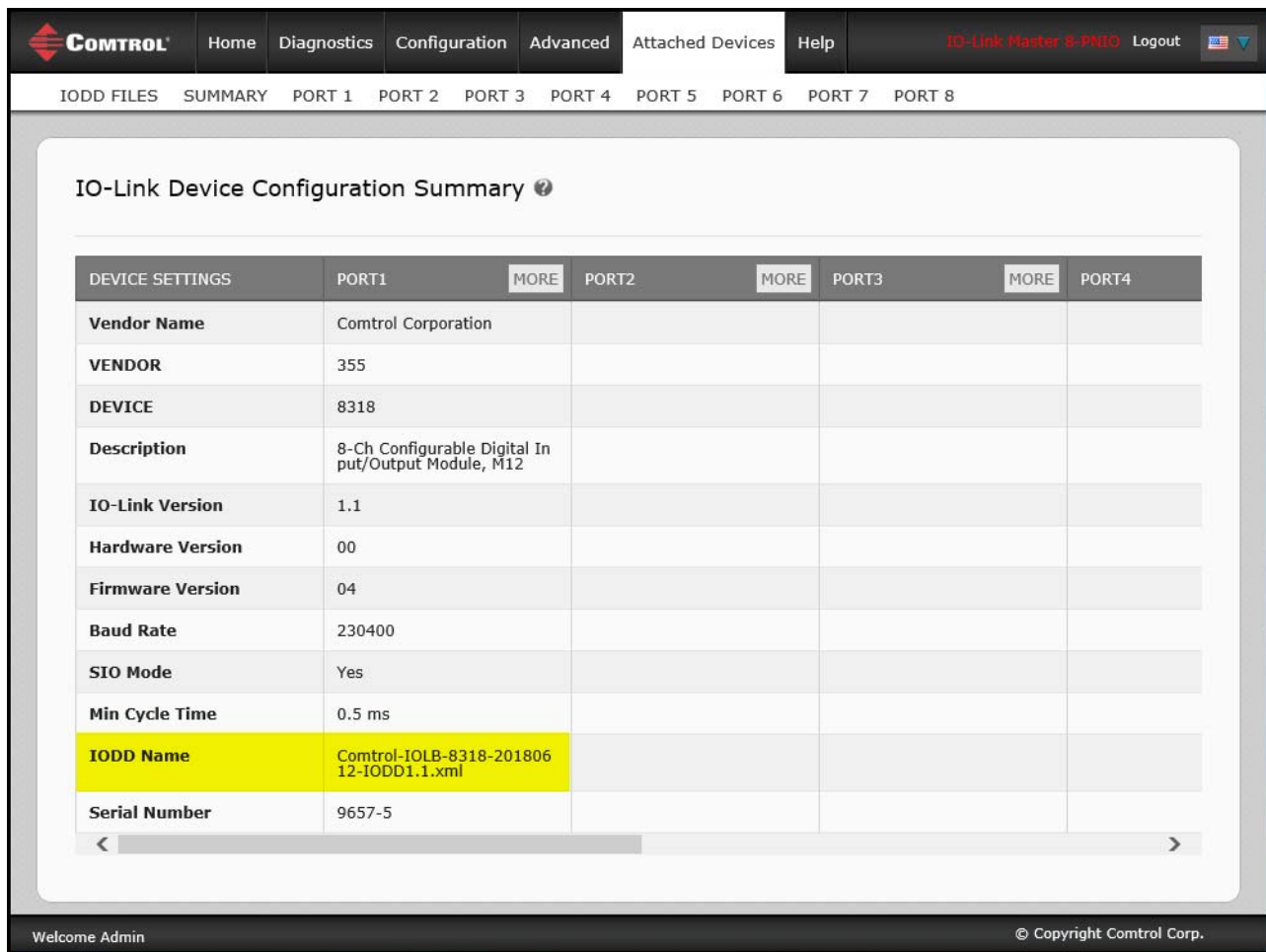


Note: The above message is expected behavior because the .icon file is not required by the XML file.

9. Optionally, click the file name if you want to view the xml file.



10. Click the **SUMMARY** link to verify that the correct IODD file loaded.



The screenshot shows the Control IO-Link Master web interface. The top navigation bar includes links for Home, Diagnostics, Configuration, Advanced, Attached Devices, and Help. The user is logged in as 'IO-Link Master 8-PNIO' and can click 'Logout'. Below the navigation bar, there are tabs for IODD FILES, SUMMARY, and PORT 1 through PORT 8. The 'SUMMARY' tab is selected, displaying the 'IO-Link Device Configuration Summary' for PORT1. The summary table lists various device settings for PORT1, including Vendor Name, Vendor, Device, Description, IO-Link Version, Hardware Version, Firmware Version, Baud Rate, SIO Mode, Min Cycle Time, IODD Name, and Serial Number. The 'IODD Name' row is highlighted in yellow.

| DEVICE SETTINGS | PORT1 | MORE | PORT2 | MORE | PORT3 | MORE | PORT4 |
|------------------|--|------|-------|------|-------|------|-------|
| Vendor Name | Control Corporation | | | | | | |
| VENDOR | 355 | | | | | | |
| DEVICE | 8318 | | | | | | |
| Description | 8-Ch Configurable Digital Input/Output Module, M12 | | | | | | |
| IO-Link Version | 1.1 | | | | | | |
| Hardware Version | 00 | | | | | | |
| Firmware Version | 04 | | | | | | |
| Baud Rate | 230400 | | | | | | |
| SIO Mode | Yes | | | | | | |
| Min Cycle Time | 0.5 ms | | | | | | |
| IODD Name | Control-IOLB-8318-20180612-IODD1.1.xml | | | | | | |
| Serial Number | 9657-5 | | | | | | |

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Configuring the IOLB-8318

After loading the IODD file, you are ready to configure the points on the IOLB-8318.

1. If necessary, log into the Control IO-Link Master.
2. Click **Attached Devices | Port x**, where x is the IO-Link port that you have attached the IOLB-8318.
3. Click the **EDIT** button.

IO-Link Device - Port 1 User role menu REFRESH EDIT COMMAND

| Parameter Name | Index | Subindex | Value | Description | R/W | Unit | Min | Max |
|--------------------------|-------|----------|--|-------------|-----|------|-----|-----|
| - Identification | | | | | | | | |
| Vendor Name | 16 | | Control Corporation | | RO | | | |
| Vendor Text | 17 | | www.control.com | | RO | | | |
| Product Name | 18 | | Control IOLB-8318 | | RO | | | |
| Product Text | 20 | | 8-Ch Configurable Digital Input/Output Module, M12 | | RO | | | |
| Serial Number | 21 | | 9657-5 | | RO | | | |
| Hardware Version | 22 | | 00 | | RO | | | |
| Firmware Version | 23 | | 04 | | RO | | | |
| Application Specific Tag | 24 | | ***** | | RW | | | |

Parameter You can expand and collapse parameter groups

IO-Link Device ISDU Interface - Port 1 Port Status: Operational, PDI Valid, PDO Invalid

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Note: For information about using the Control IO-Link Master, refer to the help system or appropriate User Guide for the model.

- Make the necessary changes to reflect the devices that you intend on connecting and click the **SAVE** button.

IO-Link Device - Port 1 User role menu SAVE CANCEL

| Parameter Name | Index | Subindex | Value | Description | R/W | Unit | Min | Max |
|-------------------------------|-------|----------|--|--|-----|------|-----|-----|
| - Identification | | | | | | | | |
| Vendor Name | 16 | | Control Corporation | | RO | | | |
| Vendor Text | 17 | | www.control.com | | RO | | | |
| Product Name | 18 | | Control IOLB-8318 | | RO | | | |
| Product Text | 20 | | 8-Ch Configurable Digital Input/Output Module, M12 | | RO | | | |
| Serial Number | 21 | | 9657-5 | | RO | | | |
| Hardware Version | 22 | | 00 | | RO | | | |
| Firmware Version | 23 | | 04 | | RO | | | |
| Application Specific Tag | 24 | | ***** | | RW | | | |
| - Parameter | | | | | | | | |
| Input Filter | 2048 | 1 | 3 | 0:off 1:0,5 ms 2:3 ms 3:10 ms 4:20 ms | RW | | 0 | 4 |
| Signal Extension | 2048 | 2 | 0 | 0:off 1:0,5 ms 2:3 ms 3:10 ms 4:20 ms 5:50 ms 6:100 ms | RW | | 0 | 6 |
| Miscellaneous Settings | | | | | | | | |

IO-Link Device ISDU Interface - Port 1 Port Status: Operational, PDI Valid, PDO Invalid

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After the page is saved, note that the changes have been implemented.

The screenshot displays the 'IO-Link Device - Port 1' configuration page. The interface includes a top navigation bar with tabs for Home, Diagnostics, Configuration, Advanced, Attached Devices, and Help. The 'Attached Devices' tab is active, showing a list of ports from PORT 1 to PORT 8. The main content area is titled 'IO-Link Device - Port 1' and includes a 'User role menu' dropdown, a 'REFRESH' button, an 'EDIT' button, and a 'COMMAND' button. Below this is a table with columns: Parameter Name, Index, Subindex, Value, Description, R/W, Unit, Min, and Max. The table is divided into three sections: Identification, Parameter, and Miscellaneous Settings. The 'Parameter' section shows two rows: 'Input Filter' and 'Signal Extension'. The 'Input Filter' row has a value of 3, which is highlighted in yellow. The 'Signal Extension' row has a value of 0. The 'Miscellaneous Settings' section is currently collapsed. At the bottom of the page, there is a status bar showing 'Port Status: Operational, PDI Valid, PDO Invalid' and a copyright notice for Control Corp.

| Parameter Name | Index | Subindex | Value | Description | R/W | Unit | Min | Max |
|---------------------------------|-------|----------|--|--|-----|------|-----|-----|
| - Identification | | | | | | | | |
| Vendor Name | 16 | | Control Corporation | | RO | | | |
| Vendor Text | 17 | | www.control.com | | RO | | | |
| Product Name | 18 | | Control IOLB-8318 | | RO | | | |
| Product Text | 20 | | 8-Ch Configurable Digital Input/Output Module, M12 | | RO | | | |
| Serial Number | 21 | | 9657-5 | | RO | | | |
| Hardware Version | 22 | | 00 | | RO | | | |
| Firmware Version | 23 | | 04 | | RO | | | |
| Application Specific Tag | 24 | | ***** | | RW | | | |
| - Parameter | | | | | | | | |
| Input Filter | 2048 | 1 | 3 | 0:off 1:0.5 ms 2:3 ms 3:10 ms 4:20 ms | RW | | 0 | 4 |
| Signal Extension | 2048 | 2 | 0 | 0:off 1:0.5 ms 2:3 ms 3:10 ms 4:20 ms 5:50 ms 6:100 ms | RW | | 0 | 6 |
| - Miscellaneous Settings | | | | | | | | |

IO-Link Device ISDU Interface - Port 1 Port Status: Operational, PDI Valid, PDO Invalid

Welcome Admin © Copyright Control Corp.

Technical Data Overview

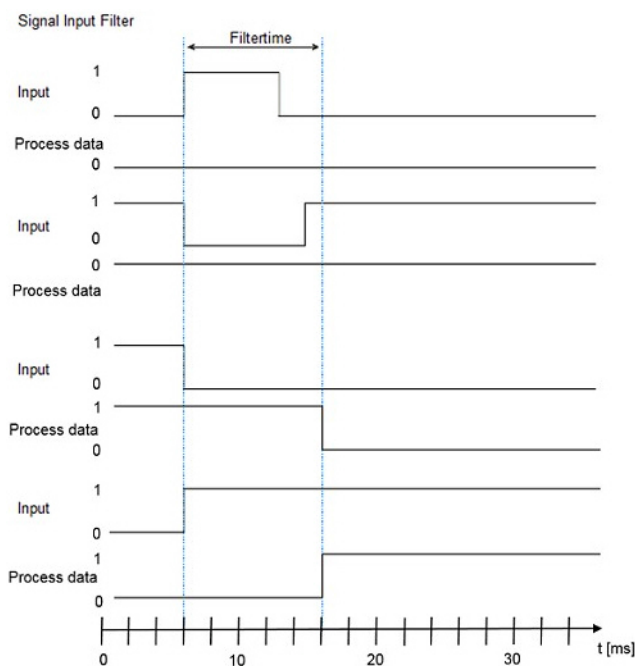
This section provides supporting information for the IOLB-8318.

Input Debouncing and Input Signal Extension

The IOLB-8318 supports a configurable input debouncing and a variable input signal extension for all digital inputs. This can be set through Index 2048. The set value applies for all digital inputs.

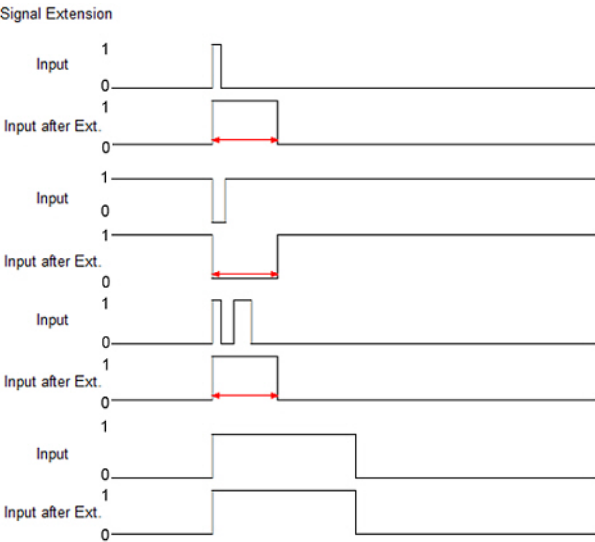
| Input filter: Variable Adjustable Over Device Parameter (Index 2048 Subindex 1) | |
|--|-----------------|
| Value | Filtertime [ms] |
| 0 | 0 |
| 1 | 0.5 |
| 2 | 3 |
| 3 | 10 |
| 4 | 20 |

The value decides the delay with which the input value is transferred to the higher-level control. Impulses that are smaller than the filter time will be ignored. In the figure below function examples are presented with a filter time of 10 ms.



| Input Signal Extension Time: Variable Adjustable Over Device Parameter (Index 2048 Subindex 2) | |
|--|----------------------------------|
| Value | Input Signal Extension Time [ms] |
| 0 | 0 |
| 1 | 0.5 |
| 2 | 3 |
| 3 | 10 |
| 4 | 20 |
| 5 | 50 |
| 6 | 100 |

When the filtered input signal transitions either off/on or on/off a minimum pulse width of the value selected in the table above will be generated to the process data.



Object Descriptions

This section provides supporting information for the IOLB-8318 object descriptions.

IOLB-8318 Parameters

Note: The Index and Sub-indexes are displayed as decimal numbers, which match the Control IO-Link Master.

| Index | Subindex | Name | Meaning | Data type | Flags | Default |
|------------------------|----------|-----------------------------|---|-----------|-------|---------------|
| IDENTIFICATION | | | | | | |
| 16 | | Vendor Name | Comtrol Corporation | StringT64 | RO | N/A |
| 17 | | Vendor Text | www.comtrol.com | StringT64 | RO | N/A |
| 18 | | Product Name | Comtrol IOLB-8318 | StringT64 | RO | N/A |
| 20 | | Product Text | 8-Ch Configurable Digital Input/ Output Module, M12 | StringT64 | RO | N/A |
| 21 | | Serial Number | 9657-XXXXXX | StringT16 | RO | N/A |
| 22 | | Hardware Version | 00 | StringT64 | RO | N/A |
| 23 | | Firmware Version | 04 | StringT64 | RO | N/A |
| 24 | | Application Specific Tag | ***** | StringT32 | RO | N/A |
| PARAMETER | | | | | | |
| 2048 | 01 | Input Filter | 0: Off 1: 0.5ms 2: 3ms 3: 10ms 4: 20ms | RecordT8 | RW | 0x0020 (2dec) |
| 2048 | 02 | Signal Extension | 0: Off 1: 0.5ms 2: 3ms 3: 10ms 4: 20ms 5: 50ms 6: 100ms | RecordT8 | RW | 0x0000 (0dec) |
| MISCELLANEOUS SETTINGS | | | | | | |
| 2 | | Standard Command | 130 - Restore factory defaults | UINT8 | WO | 0x0000 (0dec) |
| 12 | 02 | Data Storage Lock | | BOOLEAN | RW | 0x0000 (0dec) |

Diagnostics Parameters

| Index | Subindex | Name | Meaning | Data type | Flags |
|-------------|----------|-----------------|-----------------------------|-----------|-------|
| DIAGNOSTICS | | | | | |
| 2560 | 01 | Overtemperature | Temperature exceeded limits | RecordT | RO |
| 2560 | 02 | Short detected | Short detected | RecordT | RO |
| 2560 | 03 | US low | US power low | RecordT | RO |
| 2560 | 04 | UA low | UA power low | RecordT | RO |
| 2560 | 05 | UA stat | UA state | RecordT | RO |