

# Remote I/O Boxes

## IO-Link Hub Type

### Digital I/O, Digital Input Type



## ADIO Series

### PRODUCT MANUAL

**For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.**

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

#### Features

- Upper level communication protocol: IO-Link ver. 1.1 (port class: Class A)
- Housing material: Zinc die casting
- Protection rating: IP67, IP69K
- I/O port setting and status monitoring  
(cable short circuit and connection status, etc.)

#### Safety Considerations

- Observe all 'Safety Considerations' for safe and proper operation to avoid hazards.
- ⚠ symbol indicates caution due to special circumstances in which hazards may occur.

**⚠ Warning** Failure to follow instructions may result in serious injury or death.

- 01. Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss.**(e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)  
Failure to follow this instruction may result in personal injury, economic loss or fire.
- 02. Do not use the unit in the place where flammable/explosive/corrosive gas, high humidity, direct sunlight, radiant heat, vibration, impact or salinity may be present.**  
Failure to follow this instruction may result in explosion or fire.
- 03. Do not connect, repair, or inspect the unit while connected to a power source.**  
Failure to follow this instruction may result in fire.
- 04. Check 'Connections' before wiring.**  
Failure to follow this instruction may result in fire.
- 05. Do not disassemble or modify the unit.**  
Failure to follow this instruction may result in fire.
- 06. Do not touch the product during operation or for a certain period of time after stopping.**  
Failure to follow this instruction may result in burn.

**⚠ Caution** Failure to follow instructions may result in injury or product damage.

- 01. Use the unit within the rated specifications.**  
Failure to follow this instruction may result in fire or shortening the life cycle of the product.
- 02. Use a dry cloth to clean the unit, and do not use water or organic solvent.**  
Failure to follow this instruction may result in fire.
- 03. Keep the product away from metal chip, dust, and wire residue which flow into the unit.**  
Failure to follow this instruction may result in fire or product damage.
- 04. Connect the cable correctly and prevent poor contact.**  
Failure to follow this instruction may result in fire or product damage.
- 05. Do not connect or cut off the wire of the cable while operating the unit.**  
Failure to follow this instruction may result in fire or product damage.

#### Cautions during Use

- Follow instructions in 'Cautions during Use'.  
Otherwise, it may cause unexpected accidents.
- The UA power (actuator power) and US power (sensor power) should be insulated by the individually isolated power device.
- Power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
- Use the rated standard cables and connectors. Do not apply excessive power when connecting or disconnecting the connectors of the product.
- Keep away from high voltage lines or power lines to prevent inductive noise.  
In case installing power line and input signal line closely, use line filter or varistor at power line and shielded wire at input signal line.  
For stable operation, use shield wire and ferrite core, when wiring communication wire, power wire, or signal wire.
- Do not use near the equipment which generates strong magnetic force or high frequency noise.
- Do not connect, or remove this unit while connected to a power source.
- This unit may be used in the following environments.
  - Indoors (in the environment condition rated in 'Specifications')
  - Altitude max. 2,000 m
  - Pollution degree 2
  - Installation category II

## Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

ADIO - ① - ② ③ ④ ⑤ ⑥ ⑦ ⑧ - ⑨

### ① Communication

IL: IO-Link

### ② Material

M: Zinc die casting

### ③ Port class

A: Class A

### ④ Ports

08: 8-port

### ⑤ I/O connector type

No mark: M12

### ⑥ I/O configuration

B: Digital input and output, 16-CH

C: Digital input, 16-CH

### ⑦ Power connector type

No mark: 7/8" (Plug-Male), 5-pin

A: Auxiliary power unsupported

### ⑧ I/O specification

N: NPN (sink type)

P: PNP (source type)



### ⑨ IO-Link product type

HUB3: IO-Link hub (transmission rate: COM3)

## Product Components

- Product × 1
- Name plates × 20
- M4×10 screw with washer × 1
- Instruction manual × 1
- Waterproof cover × 4

## Sold Separately

Sold separately	Appearance	Packaging unit
Name plates: NAMEP-1-10		× 10
Waterproof cover: P96-M12-2 <sup>01)</sup>		× 1

01) The protection rating of the product is guaranteed when using the waterproof cover.

## Software

Download the installation file and the manuals from the Autonics website.

### ■ atIOLink

The Port and Device Configuration Tool (PDCT) software, atIOLink, is designed for configuring, diagnosing, and maintaining IO-Link devices using an IODD file.

- IODD (IO-Link Device Description)

This file contains information such as manufacturer details, process data, diagnostic data, and parameter settings for a sensor using IO-Link communication.

By uploading the IODD file to the PDCT software, you can check the settings and communication data based on the user interface.

You can download the IODD file from the Autonics website.

## ISDU Parameters and Functions

### ■ Process data input

- Switch state (digital input mode) P□ - Pin 4 / Pin 2
- Supply Short Circuit P□ - Pin 1
- Under voltage US1 (module)
- Under voltage US2 (sensor)
- Under voltage UA (actuators)
- Output off (UA too low)
- Actor Short Circuit P□ - Pin 4 / Pin 2
- Actor Warning P□ - Pin 4 / Pin 2

### ■ Process data output

- Switch state (digital output mode) P□ - Pin 4 / Pin 2

### ■ Parameter configuration

- Inversion P□ - Pin 4 / Pin 2
- Direction P□ - Pin 4 / Pin 2
- Safe state P□ - Pin 4 / Pin 2
- Input filter P□ - Pin 4 / Pin 2
- Data storage lock
- Operating hours alarm setting
- Restore factory settings

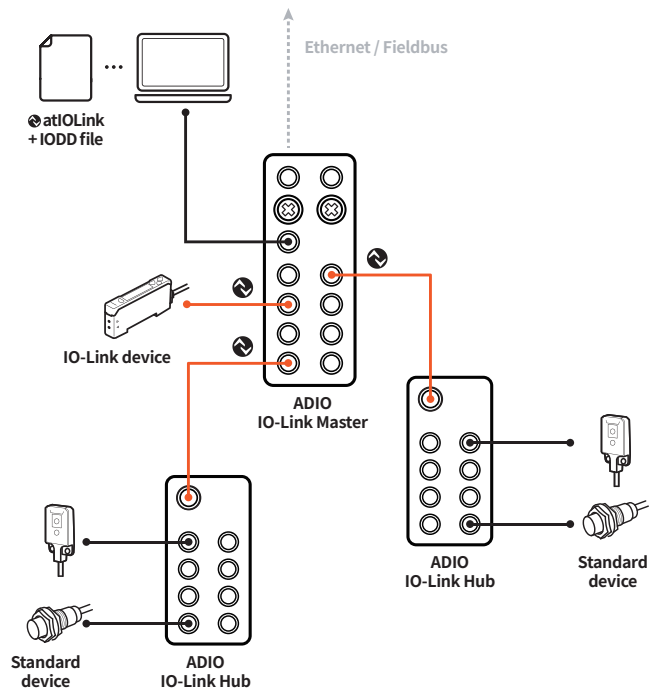
### ■ Diagnosis

- Short Circuit P□ - Pin 1 / Pin 4 / Pin 2
- Under voltage US1 (module)
- Under voltage US2 (sensor)
- Under voltage UA (actuators)
- Output off (UA too low)
- Actor Warning P□ - Pin 4 / Pin 2
- Operating hours

## Configuration of ADIO IO-Link Hub

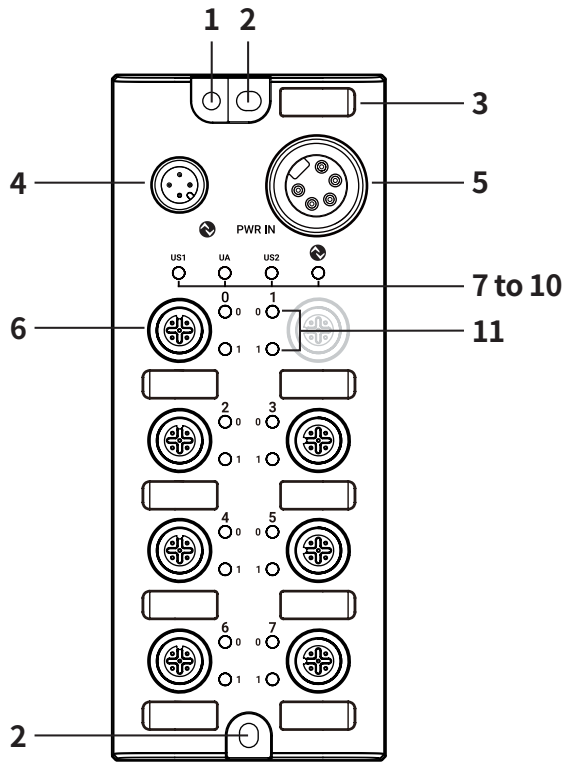
The figure below shows the ADIO IO-Link Hubs and the devices that make up the configuration. For proper use of the product, refer to the manuals and be sure to follow the safety precautions in the manuals.

You can download the relevant manuals from the Autonics website.



Step	Reference manual
<b>1. Hardware installation</b> Mounting and grounding, connecting the ports	→ ADIO IO-Link Master Product Manual, ADIO IO-Link Hub Product Manual
<b>2. Power supply</b> IO-Link master: Connecting the power ↓ IO-Link hub: Connecting the power (power supply through the IO-Link master)	→ ADIO IO-Link Master Product Manual, ADIO IO-Link Hub Product Manual
<b>3. Parameter configuration</b> IO-Link master: Configuring the communication mode of ports connected to the IO-Link hub • Pin 4 (C/Q): IO-Link mode ↓ IO-Link hub: Configuring the parameters and functions	→ ADIO IO-Link Hub Product Manual, atIOLink User Manual
<b>4. Verification of normal operation</b> Checking the indicators	→ ADIO IO-Link Master Product Manual, ADIO IO-Link Hub Product Manual

## Unit Descriptions



- 01. Grounding hole
- 02. Mounting hole
- 03. Insertion part for the name plate
- 04. IO-Link port
- 05. Auxiliary power port <sup>01)</sup>
- 06. Standard I/O port
- 07. Power supply status indicator
- 08. Actuator power supply status indicator <sup>01)</sup>
- 09. Sensor power supply status indicator <sup>01)</sup>
- 10. IO-Link status indicator
- 11. Standard I/O port status indicator

01) The digital input type is not supported.

### Port specifications

Before connecting the device, be sure to check the port specifications below and select the correct connector cable. We recommend that the selected connector cable comply with the protection ratings of IP67 or IP69K.

- IO-Link port: We do not recommend using M12 connector cables manufactured by Autonics.
- Standard I/O port: If you are using a standard sensors, you can find the relevant connector cables in the 'M8/M12 Connector Cable Product Manual.'

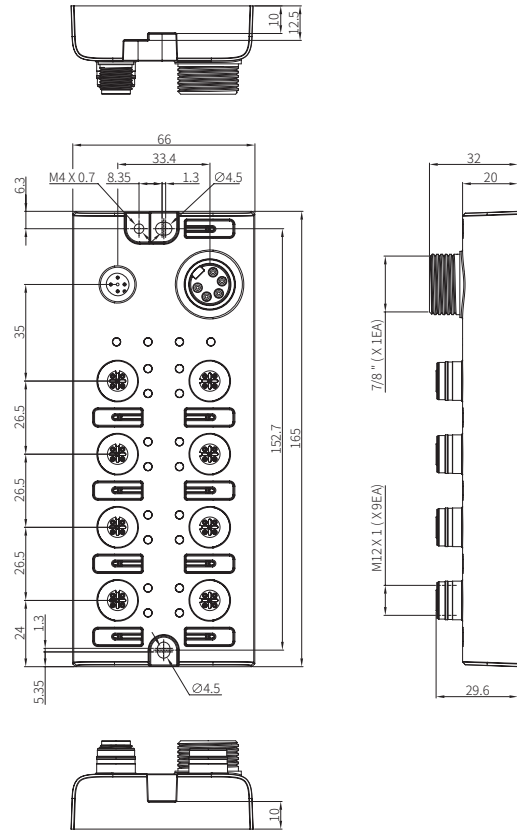
	IO-Link port	Aux. power port <sup>01)</sup>	Standard I/O port
<b>Connector type</b>	M12 (Plug-Male), A-coded	7/8" (Plug-Male)	M12 (Socket-Female), A-coded
<b>No. of pins</b>	4-pin	5-pin	4-pin
<b>No. of ports</b>	1	1	8
<b>Tightening torque</b>	0.6 N m	1.5 N m	0.6 N m
<b>Push-Pull</b>	-	-	YES
<b>Functions</b>	IO-Link communication connection and power supply	Additional supply voltage to the sensor and actuator	External standard device connection

01) Only the digital I/O type is supported.

## Dimensions

- Unit: mm, For the detailed dimensions of the product, follow the Autonics website.

### Digital input/output type



### Digital input type

