

IO-LINK DEVICES

INTELLIGENT NETWORKING

- Flexible
- Easy handling
- Economical

IO-LINK ANALOG CONVERTER

The IO-Link analog converter from Murrelektronik can be used to connect regular analog sensors and actuators easily to the IO-Link master.

IO-LINK COUPLER

The IO-Link inductive couplers from Murrelektronik are designed for a non-contact transmission of energy and bi-directional IO-Link communication through an air gap. This prevents mechanical wear and is ideally suited to replace intensively stressed plug-in or looped connections.

IO-LINK HUB

The IO-Link hubs from Murrelektronik can be used to connect several digital sensors and actuators easily to the IO-Link master ports via a standard sensor cable.

 **IO-Link**
by Murrelektronik

IO-LINK DEVICES



IO-Link/Analog Converters

- Analog inputs
- Analog outputs

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IO-Link Coupler

- Primary
- Secondary

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IO-Link Hubs

- Metal version
- Plastic version


Page 4.7.8


IO-LINK DEVICES

Analog inputs

– Plug & Play

– IO-Link V1.1

 IO-Link

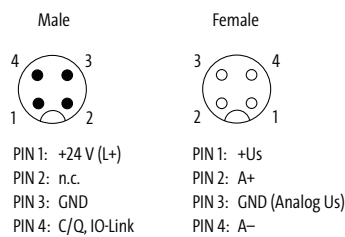
Approvals: 

IO-Link/Analog Converter

Current



Contact layout



Order Data

INPUT: 0...20 mA

Art-No.

5000-00501-110000

INPUT: 4...20 mA

5000-00501-111000

Connections

IO-Link M12 (male) 5-pole, A-coded

Analog input M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage 24 V DC (18...30 V DC)

IO-Link

Specification IO-Link V1.1

Operating modes COM2 (38.4 kBit/s)

Port class A

Cycle time min. 2.3 ms

Data width 16 Bit / 2 Byte

Input

Sensor supply US 24 V DC (EN 61131-2), max. 200 mA

Resolution (analog) 15 Bit + sign

Accuracy 0.10% (25° C)

Conversion time (analog) max. 5 ms

Parameterization

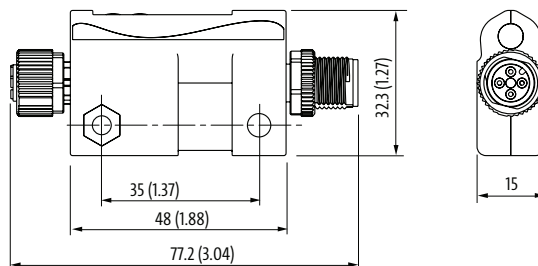
Diagnostics lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor supply over current, overrun

General data

Protection IP65/IP67

Temperature range -30...+70 °C (storage temperature -40...+85 °C)

Dimension drawing




Notes

IO-LINK DEVICES

Analog inputs

– Plug & Play

– IO-Link V1.1

 IO-Link

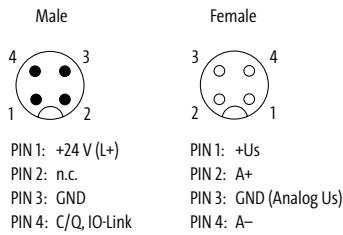
Approvals: 

IO-Link/Analog Converter

Voltage



Contact layout



Order Data	Art-No.
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INPUT: 0...10 V	5000-00501-1200000
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INPUT: -10...+10 V	5000-00501-1210000
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Connections

IO-Link	M12 (male) 5-pole, A-coded
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Analog input	M12 (female) 5-pole, A-coded, shielded
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Module Supply

Operating voltage	24 V DC (18...30 V DC)
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IO-Link

Specification	IO-Link V1.1
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Operating modes	COM2 (38.4 kBit/s)
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Port class	A
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Cycle time	min. 2.3 ms
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Data width	16 Bit / 2 Byte
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Input

Sensor supply US	24 V DC (EN 61131-2), max. 200 mA
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Resolution (analog)	15 Bit + sign
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Accuracy	0.10% (25° C)
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Conversion time (analog)	max. 5 ms
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Parameterization

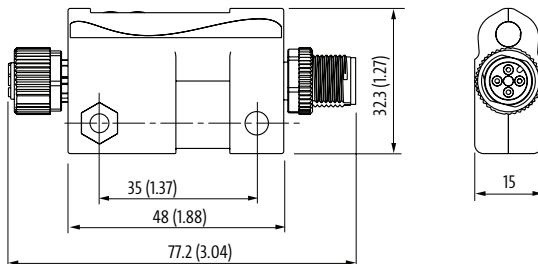
Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor supply over current, overrun
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General data

Protection	IP65/IP67
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Temperature range	-30...+70 °C (storage temperature -40...+85 °C)
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Dimension drawing




Notes

IO-LINK DEVICES

Analog inputs

– Multifunctional

– IO-Link V1.1

 IO-Link

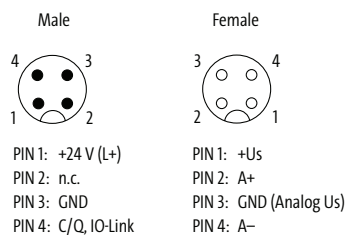
Approvals: 

IO-Link/Analog Converter

Current/Voltage



Contact layout



Order Data

INPUT: 0...20 mA, 4...20 mA, 0...10 V, -10...+10 V

Art-No.

5000-00501-130001

Connections

IO-Link M12 (male) 5-pole, A-coded
 Analog input M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage 24 V DC (18...30 V DC)

IO-Link

Specification IO-Link V1.1
 Operating modes COM2 (38.4 kBit/s)
 Port class A
 Cycle time min. 2.3 ms
 Data width 16 Bit / 2 Byte

Input

Sensor supply US 24 V DC (EN 61131-2), max. 200 mA
 Resolution (analog) 15 Bit + sign
 Accuracy 0.10% (25° C)
 Conversion time (analog) max. 5 ms

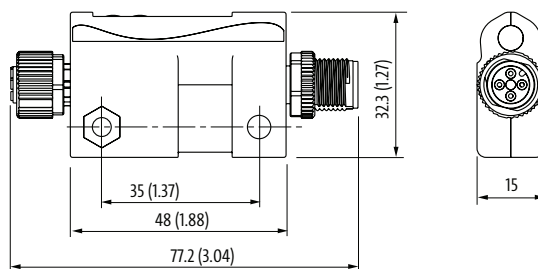
Parameterization

Diagnostics 2 Byte

General data

Protection IP65/IP67
 Temperature range -30...+70 °C (storage temperature -40...+85 °C)

Dimension drawing




Notes

IO-LINK DEVICES

Analog outputs

– Plug & Play

– IO-Link V1.1

 IO-Link

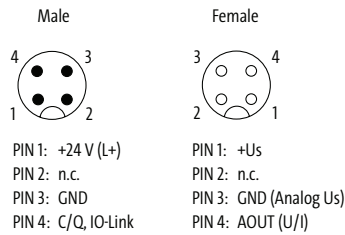
Approvals:  Listed

IO-Link/Analog Converter

Current



Contact layout



Order Data	Art-No.
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OUTPUT: 0...20 mA	5000-00501-2100000
OUTPUT: 4...20 mA	5000-00501-2110000

Connections

IO-Link	M12 (male) 5-pole, A-coded
Analog output	M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage	24 V DC (18...30 V DC)
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IO-Link

Specification	IO-Link V1.1
Operating modes	COM2 (38.4 kBit/s)
Port class	A
Cycle time	min. 2.3 ms
Data width	16 Bit / 2 Byte

Output

Actuator supply UA	24 V DC (EN 61131-2), max. 200 mA
Resolution (analog)	15 Bit + sign
Type	2-, 3-, 4-wire technology
Accuracy	0.10% (25° C)
Conversion time (analog)	max. 5 ms
Over voltage protection	30 V DC

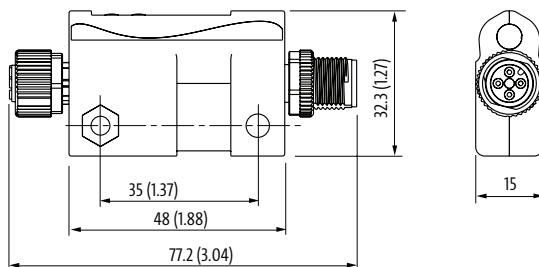
Parameterization

Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor cable break, sensor supply over current, overrun
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General data

Protection	IP65/IP67
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)

Dimension drawing




Notes


IO-LINK DEVICES

Analog outputs

– Plug & Play

– IO-Link V1.1

 IO-Link

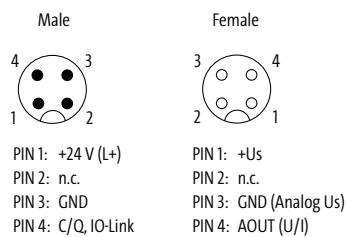
Approvals:  Listed

IO-Link/Analog Converter

Voltage



Contact layout



Order Data

OUTPUT: 0...10 V

Art-No.

5000-00501-220000

OUTPUT: -10...+10 V

5000-00501-221000

Connections

IO-Link M12 (male) 5-pole, A-coded

Analog output M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage 24 V DC (18...30 V DC)

IO-Link

Specification IO-Link V1.1

Operating modes COM2 (38.4 kBit/s)

Port class A

Cycle time min. 2.3 ms

Data width 16 Bit / 2 Byte

Output

Actuator supply UA 24 V DC (EN 61131-2), max. 200 mA

Resolution (analog) 15 Bit + sign

Type 2-, 3-, 4-wire technology

Accuracy 0.10% (25° C)

Conversion time (analog) max. 5 ms

Over voltage protection 30 V DC

Parameterization

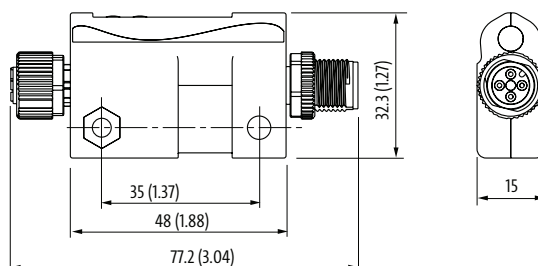
Diagnosics lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor cable break, sensor supply over current, overrun

General data

Protection IP65/IP67

Temperature range -30...+70 °C (storage temperature -40...+85 °C)

Dimension drawing




Notes

IO-LINK DEVICES

Analog outputs

– Multifunctional

– IO-Link V1.1

 IO-Link

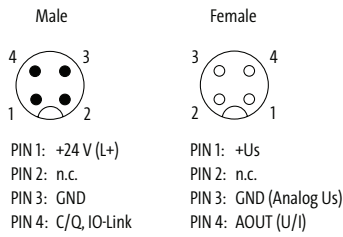
Approvals: 

IO-Link/Analog Converter

Current/Voltage



Contact layout



Order Data	Art-No.
OUTPUT: 0...20 mA, 4...20 mA, 0...10 V, -10...+10 V	5000-00501-2300001

Connections

IO-Link	M12 (male) 5-pole, A-coded
Analog output	M12 (female) 5-pole, A-coded, shielded

Module Supply

Operating voltage	24 V DC (18...30 V DC)
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IO-Link

Specification	IO-Link V1.1
Operating modes	COM2 (38.4 kBit/s)
Port class	A
Cycle time	min. 2.3 ms
Data width	16 Bit / 2 Byte

Output

Actuator supply UA	24 V DC (EN 61131-2), max. 200 mA
Resolution (analog)	15 Bit + sign
Type	2-, 3-, 4-wire technology
Accuracy	0.10% (25° C)
Conversion time (analog)	max. 5 ms
Over voltage protection	30 V DC

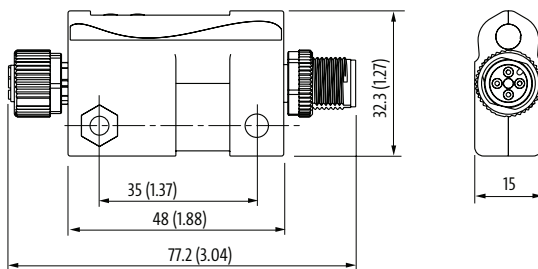
Parameterization

Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor cable break, sensor supply over current, overrun
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General data

Protection	IP65/IP67
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)

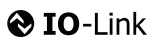
Dimension drawing



Notes

IO-LINK DEVICES

IO-Link V1.1



IO-Link Coupler (prim.)

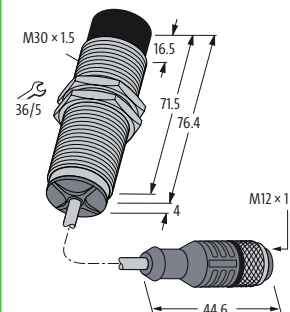
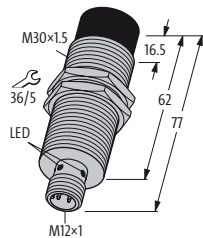


IO-Link Coupler (sec.)

Connection cable L = 300 mm



Order Data	Art-No.	Art-No.
Primary	59450	
Secondary		59451
Accessories	Art-No.	
M30 holder		59452
Connections		
IO-Link	M12 (male) 4-pole, A-coded	M12 (female) 4-pole, A-coded
Technical Data		
Nominal distance	0...7 mm (prim./sec.)	
Standby power (coupled)	4 W	
Standby power (uncoupled)	1 W	
Short circuit protection	yes	
Invers-polarity protection	yes	
Start-/coupling time	–	10 ms
Rotation	1250 rpm	
Standby time	–	160 ms
Supply (prim.)		
Operating voltage	24 V DC ±10%	–
Operating current	750 mA	–
Output (sec.)		
Operating voltage	–	24 V DC ±10%
Output current	–	500 mA
Highest current	–	2.4 A (0.1 ms); 10 A (0.02 ms)
IO-Link		
Specification	IO-Link V1.1	
Operating modes	COM2 (38.4 kBit/s)	
Port class	A	
General data		
Protection	IP67/IP68	
Temperature range	-20...+55 °C	
Dimension drawing		




Notes

IO-LINK DEVICES

Expanded diagnostic

– IO-Link V1.1

– Single channel diagnostic

 IO-Link

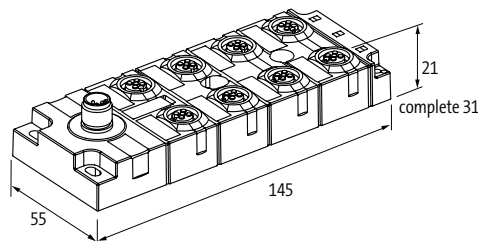
IO-Link Hub

Galvanic isolation

IO-Link Hub



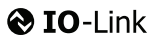
Order Data	Art-No.	Art-No.
DI8 DO8 IOL - K3	55518	
DI16 IOL		55519
Internal communication		
Current consumption	max. 35 mA	
LED display	US: sensor supply (green: OK); IOL: (green: OK); UA: actuator supply (green: OK)	US: sensor supply (green: OK); IOL: (green: OK)
IO-Link		
IO-Link	Device	
Operating modes	COM2 (38.4 kBaud)	
Transfer parameters	1 Byte (Inputs), 1 Byte (Outputs), 2 Byte (Diagnostic)	2 Byte (Inputs), 1 Byte (Diagnostic)
Port class	B	A
Specification	IO-Link V1.1	
Cycle time	2.3 ms	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 100 mA (M12 female), short-circuit and overload protected	
Type	PNP (EN 61131-2) Type 3	
Input filter	1 ms	
Input delay time	max. 8 ms (incl. IO-Link cycle time)	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 4 A	–
Switching current per output	max. 0.4 A (short-circuit and overload protected)	–
Parameterization		
PIN 2	Input (port 0...3); Output (port 4...7)	Input
PIN 4	Input (port 0...3); Output (port 4...7)	Input
General data		
Protection	IP67	
Mounting method	4 hole screw mounting	
Temperature range	-25...+70 °C (storage temperature -40...+70 °C)	
Dimension drawing		



Notes

IO-LINK DEVICES

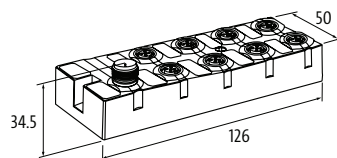
IO-Link V1.1



IO-Link Hub









Order Data	Art-No.	Art-No.
D18 DO8 IOL	59402	
D116 IOL		59401
Internal communication		
Current consumption	max. 35 mA	
LED display	US-IOL: sensor supply-IOL (green: OK); UA: actuator supply (green: OK)	US: sensor supply (green: OK); IOL: (green: OK)
IO-Link		
IO-Link	Device	
Operating modes	COM2 (38.4 kBaud)	
Transfer parameters	1 Byte (Inputs), 1 Byte (Outputs), 2 Byte (Diagnostic)	2 Byte (Inputs), 1 Byte (Diagnostic)
Port class	B	A
Specification	IO-Link V1.1	
Cycle time	2.3 ms	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 100 mA (M12 female), short-circuit and overload protected	
Type	PNP (EN 61131-2) Type 3	
Input filter	1 ms	
Input delay time	max. 8 ms (incl. IO-Link cycle time)	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 4 A	–
Switching current per output	max. 0.4 A (short-circuit and overload protected)	–
Parameterization		
PIN 2	Input (port 0...3); Output (port 4...7)	Input
PIN 4	Input (port 0...3); Output (port 4...7)	Input
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+70 °C (storage temperature -40...+70 °C)	
Dimension drawing		



Notes

IO-LINK DEVICES

Accessories			Art-No.
	Label plates 20 × 8 mm	(20 pieces per plate)	55318
	Screw plug M12 × 1 mm (for female) Plastic, hex without gasket	Quantity: 10 pcs.	58627
	M30 holder		59452
	Holding plate for T-couplers M12 (SlimLine)	without mounting set	7000-99061-0000000
	Holding plate for T-couplers M12 (SlimLine)	with mounting set	7000-99062-0000000
	T-coupler (Slim Line) IO-Link IO-Link supply power		7000-42771-0000000