

Active Distributor ASi-5/IO-Link Master, IP67, M12

Active Distributor ASi-5/IO-Link Master with 1 Port, IP67, M12

New standard ASi-5

IO-Link port class A

Power supply of IO-Link ports out of ASi

Periphery connection via M12 cable sockets, straight, 5 poles



(figure similar)



| Figure | Type | Number of IO-Link ports | IO-Link port class A ⁽¹⁾ | IO-Link port class B ⁽²⁾ | Sensor supply (IO-Link supply and input/output voltage) ⁽³⁾ | Actuator supply (for ports class B) ⁽⁴⁾ | ASi connection ⁽⁵⁾ | Connection ⁽⁶⁾ | ASi address ⁽⁷⁾ | Article No. |
|--------|-------------------------|-------------------------|-------------------------------------|-------------------------------------|--|--|-------------------------------|---|----------------------------|----------------|
| | IP67, 35 mm deep, ASi-5 | 1 | 1 | – | out of ASi | – | ASi profile cable | 1 x M12 cable socket, straight, 5 poles | 1 ASi-5 address | BWU4748 |

- (1) **Port class A (M12):** Pin 4 configurable (IO-Link/DI/DO), additional digital input at pin 2. Compatible with 3 pol IO-Link devices (M8).
- (2) **Port class B (M12):** Pin 4 configurable (IO-Link/DI/DO), additional power supply (galvanically isolated) for IO-Link devices at pins 2 and 5. Compatible with 3 pol IO-Link devices (M8).
- (3) **Sensor supply (IO-Link supply and input/output supply)**
IO-Link and additional inputs/outputs are supplied by ASi or by AUX (auxiliary 24 V power). If supplied by ASi, inputs can neither be connected to earth nor to external potential.
- (4) **Actuator supply (for ports class B)**
Connection via M12: For ports class B the supply of actuators is provided by an additional (galvanically isolated) power supply by AUX (auxiliary 24 V power).
Connection via clamps: If connected IO-Link nodes with port class B need a higher current consumption, additionally they can be supplied directly via the power supply.
- (5) **ASi connection**
The connection to ASi as well to AUX (auxiliary 24 V power) is made via yellow or black ASi profile cable with piercing technology or via M12 socket (in IP20 via clamps).
- (6) **Connection:** further connection options are available on request.

| M12 cable socket, angled | M12 cable socket, straight | M8 cable socket, straight | round cable / connecting wires | Push in terminals |
|--------------------------|----------------------------|---------------------------|--------------------------------|-------------------|
| PUR line: oil resistant | | | | |
| | | | | |

- (7) **ASi address**
AB address (max. 62 AB addresses/ASi network), 2 AB addresses (max. 31 modules with 2 AB addresses), single addresses (max. 31 single addresses/ASi network), 1 ASi-5 address (max. 62 ASi-5 addresses/ASi network), mixed use allowed.
For modules with 2 nodes, the 2nd node is switched off as long as the 1st node is addressed "0".
Upon request, nodes are available with specific ASi address profiles.

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| | |
|---|---|
| Article No. | BWU4748 |
| Connection | |
| ASi/AUX connection | profile cable and piercing |
| Periphery connection | 1 x M12 cable socket, straight, 5 poles |
| Round cable | 1,0 m |
| | max. allowed tensile strain 10 N |
| ASi | |
| Address | 1 ASi-5 address |
| Operating voltage | 30 V (18 ... 31.6 V) |
| Required master | ASi-5 master |
| Since ASi specification | 5 |
| Process data width | 2 ... 32 bytes |
| Max. current consumption | 235 mA |
| Max. current consumption without sensor/actuator supply | 35 mA |
| IO-Link | |
| Number | 1 port class A |
| IO-Link data rate | COM1 / COM2 / COM3 |
| IO-Link data width | 0 ... 32 bytes |
| IO-Link revision | 1.1 |
| Switching threshold | U < 5 V (low) U > 15 V (high) |
| Power supply | out of ASi |
| Power supply of attached sensors (Pin1 = L+) | 200 mA per port, $\Sigma(L+, C/Q, I)$ 200 mA |
| Input (P2 = I) | 200 mA per port, $\Sigma(L+, C/Q, I)$ 200 mA |
| IO-Link / input/output current (Pin4 = C/Q) | 150 mA per port, $\Sigma(L+, C/Q, I)$ 200 mA |
| Max. actuator supply for port class B (P24) | 200 mA per port Class A, $\Sigma(\text{class A})$ 200 mA |
| Display | |
| LED ASi (green) | on: ASi voltage on flashing: ASi voltage on, but peripheral fault ⁽¹⁾ or address 0 off: no ASi voltage |
| LED FLT/FAULT (red) | on: ASi address 0 or ASi node offline flashing: peripheral fault ⁽¹⁾ off: node online |
| LEDs C/Q1 (red/green) | state of IO-Link ports 1: green: IO-Link communication OK yellow: switching signal at input or output at pin4 red: IO-Link communication error |
| LEDs I1 (yellow) | state of input I1 |

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| | |
|--|--|
| Article No. | BWU4748 |
| Environment | |
| Applied standards | EN 61000-6-2 EN 61000-6-3 EN 61131-2 EN 60529 |
| It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe | yes ⁽²⁾ |
| Operating altitude | max. 2000 m |
| Ambient temperature | -30 °C ... +70 °C |
| Storage temperature | -25 °C ... +85 °C |
| Housing | plastic, for screw mounting, suitable for cable ducts (≥35 mm installation depth) |
| Pollution degree | 2 |
| Protection category | IP67 |
| Maximum tolerable shock and vibration stress | ≤15g, T≤11 ms 10 ... 55 Hz, 0,5 mm amplitude |
| Insulation voltage | ≥500 V |
| Weight | 100 g |
| Dimensions (W / H / D) in mm | 60 / 45 / 35 |

(1) See table "Peripheral fault indication"

(2) The module is suitable for use in passively safe paths as it has no connection to an AUX potential.

| Article no. | Peripheral fault indication | | | |
|-------------|-----------------------------|------------------------|---------------------|---------------------|
| | Overload sensor supply | Output short circuited | AUX voltage missing | IO-Link error/event |
| BWU4748 | • | • | – | • |

Programming

- ASi-5 bit assignment: default 2 byte per port, configurable via ASi-5.

Pin assignment

| Signal name | Explanation |
|--------------------------------------|---|
| I _x | digital input x |
| L ⁺ _{out of ASi} | IO-Link sensor supply, out of ASi, positive pole |
| L ⁻ _{out of ASi} | IO-Link sensor supply, out of ASi, negative pole |
| C/Q _{x out of ASi} | connection x, optionally for IO-Link communication, input or output |

Connections: M12 cable sockets, straight, 5 poles

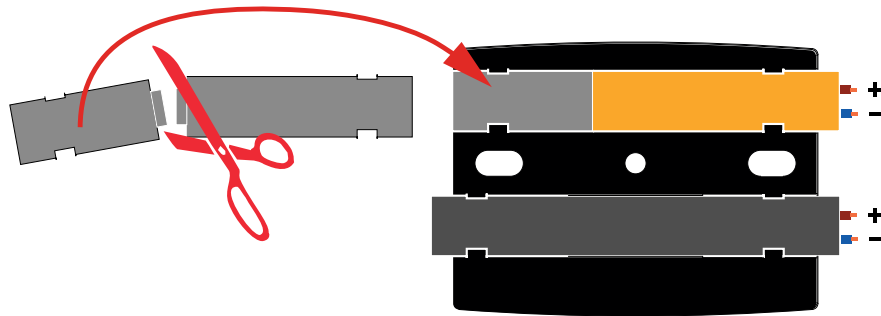
| Article no. | M12 connection | Function | Pin1 (BN) | Pin2 (WH) | Pin3 (BU) | Pin4 (BK) | Pin5 (GY) | |
|-------------|----------------|----------------------|---------------------------------------|-----------|--|-----------------|-----------|--|
| BWU4748 | X1 | IO-Link port Class A | L ⁺ _{1out of ASi} | I1 | L ⁻ _{1 out of ASi} | C/Q1 out of ASi | n.c. | |

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Line termination with sealing profile



max. IP54



Accessories:

- Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)