

ASi-5 Module with integrated IO-Link Master with 4 Ports, IP20

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New standard ASi-5

Quadruple IO-Link master


Suitable for port class A and class B

Power supply of IO-Link ports out of AUX



(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⁾	ASi address ⁽⁶⁾	Art. no.
	IP20, 22,5 mm x 114 mm, 6 x COM-BICON, ASi-5	4	configurable terminals	configurable terminals	out of AUX	out of AUX	clamps	ASi-5 address	BWU3843

(1) IO-Link Port Class A

Configurable terminals: Terminal assignment (C/Q, L+, L-, I) compatible with pin assignment of IO-Link port class A (M12). Connected IO-Link devices with port class B (M12) with a higher current consumption have to be supplied directly via a separate power supply. Compatible with 3 pol IO-Link devices (M8).

(2) IO-Link Port Class B

Configurable terminals: Terminal assignment (C/Q, L+, L-, I) compatible with pin assignment of IO-Link port class A (M12). Connected IO-Link devices with port class B (M12) with a higher current consumption have to be supplied directly via a separate power supply. 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) 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.

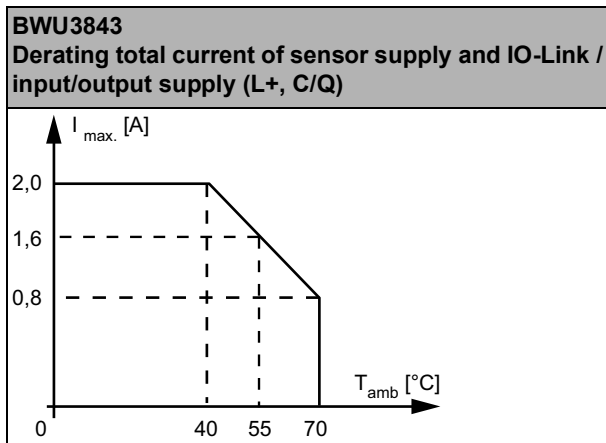
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Article no.		BWU3843
Connection		
ASi / AUX connection	COMBICON plug, push-in terminals	
Periphery connection	COMBICON plug, push-in terminals	
Primary application	control cabinet	
Length of connector cable	I/O: max. 20 m	
ASi		
Address	1 ASi-5 address	
Operating voltage	30 V (18 ... 31.6 V)	
Required master profile	M5	
Since ASi specification	5	
Process data width	8 ... 32 bytes	
Max. current consumption	35 mA	
Max. current consumption without sensor/actuator supply	35 mA	
AUX		
Voltage	24 V (18 ... 30 V)	
Max. current consumption	2 A	
Configurable I/O's		
Number	4 ports 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 AUX	
Power supply of attached sensors (L+)	up to +40 °C	500 mA per port, $\Sigma(L+, C/Q)$ 2 A ⁽¹⁾
	at +55 °C	400 mA per port, $\Sigma(L+, C/Q)$ 1,6 A ⁽¹⁾
	at +70 °C	200 mA per port, $\Sigma(L+, C/Q)$ 0,8 A ⁽¹⁾
IO-Link / input/output current (C/Q)	up to +40 °C	500 mA per port, $\Sigma(L+, C/Q)$ 2 A ⁽¹⁾
	at +55 °C	400 mA per port, $\Sigma(L+, C/Q)$ 1,6 A ⁽¹⁾
	at +70 °C	200 mA per port, $\Sigma(L+, C/Q)$ 0,8 A ⁽¹⁾
Display		
LED ASI (green)	on: ASi voltage on flashing: ASi voltage on, but peripheral fault ⁽²⁾ or address 0 off: no ASi voltage	
LED FLT/FAULT (red)	on: ASi address 0 or node offline flashing: peripheral fault ⁽²⁾ off: node online	
LED AUX (red/green)	green: AUX voltage OK red: AUX voltage < 18 V	
LEDs C/Q1 ... C/Qn (red/green)	state of IO-Link ports 1 ... 4: green: IO-Link communication OK yellow: switching signal at input or output at terminal C/Q1 ... C/Q4 red: IO-Link communication error	
LEDs I1 ... In (yellow)	state of inputs I1 ... I4	

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Article no.	BWU3843
Environment	
Applied standards	EN 61000-2 EN 61000-3 EN 61131-2 EN 60529
Can be used in passively safe paths up to SIL3/PLe	yes ⁽³⁾
Operating altitude	max. 2000 m
Operating temperature	-25 °C ... +55 °C (up to max. +70 °C) ^{(1) (4)} no condensation permitted
Storage temperature	-25 °C ... +85 °C
Housing	plastic, din-rail mounting
Pollution degree	2
Protection category	IP20
Tolerable loading referring to humidity	according to EN 61131-2
Insulation voltage	≥500 V
Weight	120 g
Dimensions (W / H / D in mm)	22,5 / 99 / 114

(1)



(2) See table "Peripheral fault indication"

(3) The module is suitable for use in passively safe paths because an exclusion of errors can be assumed for the connection of the two potentials, ASi and AUX.

(4) Maximum ambient operating temperature +55 °C according UL certificate for the use in the USA and Canada.

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Wiring rules

Push-in terminals	
General	
Nominal cross section	2.5 mm ²
Conductor cross section	
Conductor cross section solid	0.2 ... 2.5 mm ²
Conductor cross section flexible	0.2 ... 2.5 mm ²
Conductor cross section flexible, with ferrule	without plastic sleeve: 0.2 ... 2.5 mm ²
	with plastic sleeve: 0.25 ... 2.5 mm ²
2 conductors with same cross section, stranded, with TWIN ferrules	without plastic sleeve: 0.5 ... 1.5 mm ²
AWG	24 ... 14
Stripped insulation length	10 mm

Article no.	Peripheral fault indication			
	Overload sensor supply	Output short circuited	AUX voltage missing	IO-Link error/event
BWU3843	•	•	•	•

Programming

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

Connections

BWU3843	Name	Explanation
	Ix	digital input x
	L+	IO-Link sensor supply out of external voltage, positive pole
	L-	IO-Link sensor supply, out of external voltage, negative pole
	C/Qx	connection x, optionally for IO-Link communication, input or output
	ASi+, ASi-	connection to ASi bus
	AUX+ _{ext.in}	External power supply, input, positive pole
	AUX- _{ext.in}	External power supply, input, negative pole
	ADDR	connection for ASi addressing device
	<p>Note</p> <p><i>If connected IO-Link nodes with Port Class B need a higher current consumption, additionally they can be supplied directly via the power supply.</i></p>	

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Accessories:

- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)