

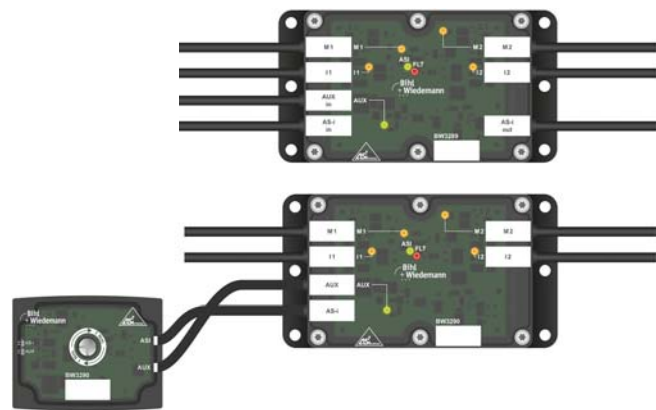
Cable Duct AS-i 3.0 Motor Modules for two 24 V Motorized Rollers Interroll (EC310) resp. RULMECA (RDR BL-2)

- AS-i and AUX via M8 connectors
- AS-i and AUX via profile cable

Flat design,
optimized for use in cable channels

Inputs and Outputs in one module

Speed setting via AS-i parameters



(Figure similar)



Figure	Drive ⁽¹⁾	Number of drives	Line protection fuse ⁽²⁾	Flat design, montage in cable duct possible	Inputs digital	Outputs digital	Outputs analog	Input voltage (sensor supply) ⁽³⁾	Output voltage (actuator supply) ⁽⁴⁾	Connection	AS-i connection ⁽⁵⁾	Article No.
	Interroll, RULMECA	2	yes	yes	4	2	2	out of AS-i	out of AUX	2 x M8 cable sockets, 5 poles + 2 x M8 cable sockets, 4 poles	AS-i profile cable	BWU3290
	Interroll, RULMECA	2	yes	yes	4	2	2	out of AS-i	out of AUX	2 x M8 cable sockets, 5 poles; 2 x M12 cable sockets 5 poles	AS-i profile cable	BW3409
	Interroll, RULMECA	2	yes	yes	4	2	2	out of AS-i	out of AUX	3 x M8 cable sockets, 5 poles + 4 x M8 cable sockets, 4 poles	AS-i using M8	BW3289

(1) **Interroll (EC310), RULMECA (RDR BL-2):**

Motor module to control 24 V motorized rollers Interroll Typ EC310 or RULMECA Typ RDR BL-2.

(2) **yes, separately for each motor, 3,5 A (slow-blow fuse):**

In the motor module UL approved fuses are placed before each of the motor supply connections. A short circuit in the motor causes this fuse to blow, protecting the connection cable between the module and motor.

After blowing the fuse the module is no longer functional and needs to be replaced. The characteristics of the fuse must be checked against the motor data before using the module.

The protection circuit in the module allows a very simple protection of the motor cables. The fuse for the cable protection is a slow-blow one; without short circuit the robust behavior of the module remains.

(3) **Input voltage (sensor supply):**

Inputs are supplied by AS-i or by AUX (auxiliary 24 V power). If supplied by AS-i, inputs shall not be connected to earth or to external potential.

(4) **Output voltage (actuator supply):**

Outputs are supplied by AS-i or by AUX (auxiliary 24 V power). If supplied by AS-i, outputs shall not be connected to earth or to external potential.

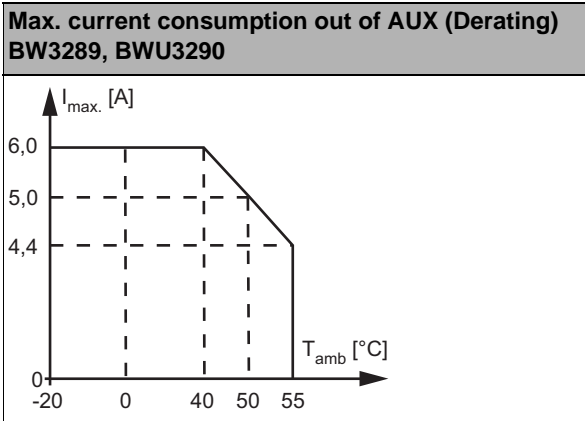
(5) **AS-i connection:**

The connection to AS-i as well to AUX (auxiliary 24 V power) is made via yellow resp. black AS-i profile cable with piercing technology or via M8 socket.

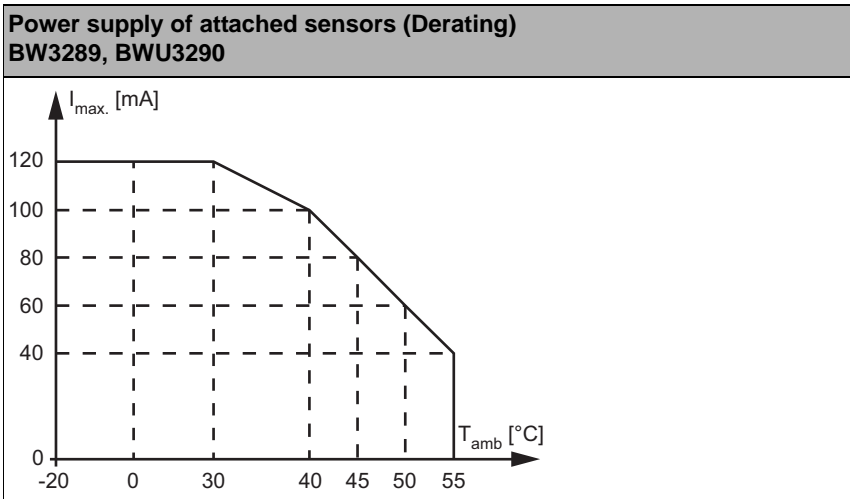
Article No.	BWU3290	BW3289
General data		
Roller drives	2 x Interroll (EC310) or 2 x RULMECA (RDR BL-2)	
Connection		
AS-i/AUX connection	profile cable and piercing	M8
Periphery connection	M8	
AS-i		
Profile	S-7.A.7, ID1 = 7 (fixed)	
Address	1 AB slave	
Required Master profile	≥M4	
As of AS-i specification	3.0	
Operating voltage	30 V (18 ... 31.6 V)	
Max. current consumption	200 mA	
AUX		
Operating voltage	24 V (18 ... 30V)	
Max. current consumption	6 A continuously, 11 A peak ⁽¹⁾	
Input		
Number	2 x sensor inputs + 2 x motor fault inputs	
Power supply	sensor inputs: out of AS-i motor fault inputs: out of AUX	
Power supply of attached sensors	100 mA ⁽²⁾	
Switching threshold	U _{in} < 5 V (low) U _{in} > 15 V (high)	
Output		
Number (digital)	2	
Number (analog)	2	
Power supply	out of AUX (galvanic separation)	
Overvoltage tolerated by reaction (AUX)	35 V resistant brake resistor compatible	
Max. output current	10 mA per output, in sum 40 mA at T _{amb} ≤ 50 °C, 25 mA at T _{amb} > 50 °C	
Motor supply	out of AUX, 3 A continuously, 5,5 A max.	
Line protection fuse	yes, separately for each motor, 3.5 AT, at 7 A (200%) release between 1 s and 120 s, fuse UL certified ⁽³⁾	
Display		
LED I1 ...I _x (yellow)	state of inputs I1, I2	
LED M1, M2 (yellow)	state of outputs M1 (O1), M2 (O3)	
LED ASI (green)	on: AS-i voltage on off: no AS-i voltage	
LED AUX (green)	on: 24 V _{DC} AUX off: no 24 V _{DC} AUX	
LED FLT/FAULT (red)	on: slave address 0 or slave offline flashing: AUX voltage is missing, overload output, an output is short circuited, at least one motor fuse has blown or overload sensor off: slave online	
UL-specifications (UL 61010-1 and UL 61010-2-201)		
External protection	an isolated source with a secondary open circuit voltage of ≤30 V _{DC} with a 3 A maximum over current protection. Over current protection is not required when a Class 2 source is employed.	

Article No.	BWU3290	BW3289
Environment		
Applied standards	EN 61000-6-2 EN 61000-6-4 EN60529	
Operating altitude	max. 2000 m	
Ambient temperature	-5 °C ... +40 °C (non-condensing) (-5 °C ... +55 °C at max. 4,4 A current consumption) ^{(1) (4)}	
Storage temperature	-25 °C ... +85 °C	
Housing	plastic, screw mounting	
Protection category	IP54	
Weight	module: 200 g passive distributor: 75 g	module: 200 g
Dimensions (W / H / D) in mm	module: 90 / 60 / 18 passive distributor: 60 / 45 / 19	module: 90 / 60 / 18

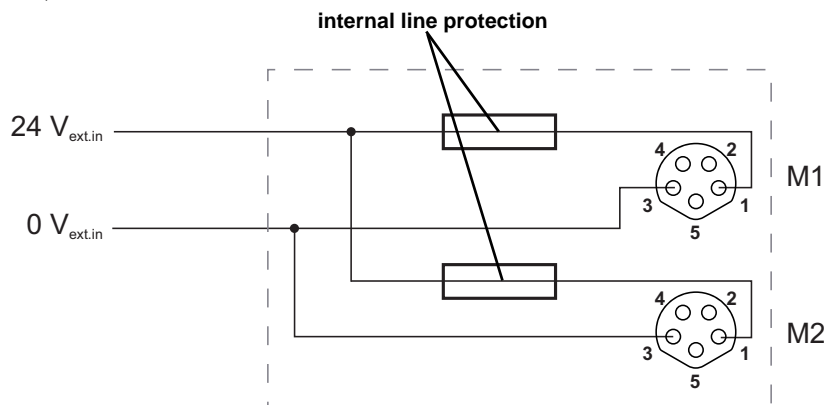
(1)



(2)



(3) In the motor module UL approved fuses are placed before each of the motor supply connections. A short circuit in the motor causes this fuse to blow, protecting the connection cable between the module and motor. After blowing the fuse the module is no longer functional and needs to be replaced. The characteristics of the fuse must be checked against the motor data before using the module. The protection circuit in the module allows a very simple protection of the motor cables. The fuse for the cable protection is a slow-blow one; without short circuit the robust behavior of the module remains.

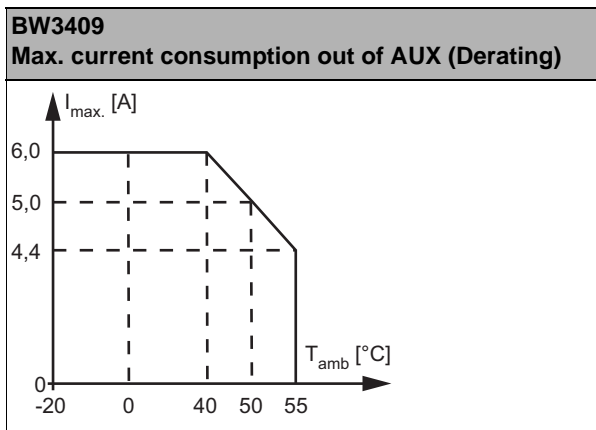


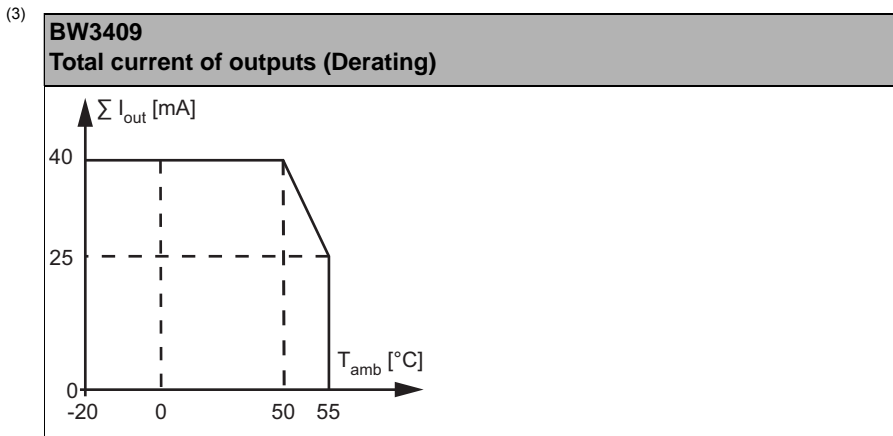
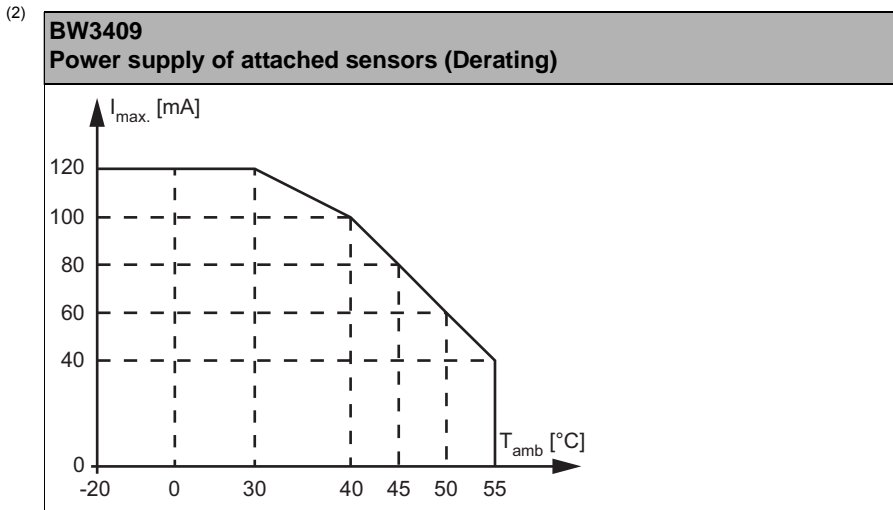
(4) If the cables are fixed installed, an operating temperature up to -20 °C ... +55 °C is permissible.

Article No.	BW3409	
General data		
Roller drives	2 x Interroll (EC310) or 2 x RULMECA (RDR BL-2)	
Connection		
AS-i/AUX connection	profile cable and piercing	
Periphery connection	M8 / M12	
AS-i		
Profile	S-7.A.7, ID1 = 7 (fixed)	
Address	1 AB slave	
Required Master profile	≥M4	
As of AS-i specification	3.0	
Operating voltage	30 V (18 ... 31.6 V)	
Max. current consumption	200 mA	
AUX		
Operating voltage	24 V (18 ... 30V)	
Max. current consumption	up to +40 °C	6 A continuously, 11 A peak ⁽¹⁾
	at +55 °C	4,4 A continuously, 8 A peak ⁽¹⁾
Input		
Number	2 x sensor inputs + 2 x motor fault inputs	
Power supply	sensor inputs: out of AS-i motor fault inputs: out of AUX	
Power supply of attached sensors	up to +30 °C	120 mA ⁽²⁾
	at +40 °C	100 mA ⁽²⁾
	at +55 °C	40 mA ⁽²⁾
Switching threshold	U _{in} < 5 V (low) U _{in} > 15 V (high)	

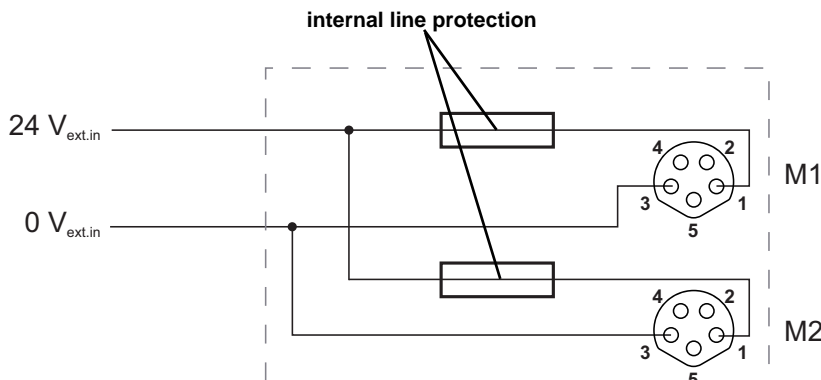
Article No.		BW3409
Output		
Number (digital)		2
Number (analog)		2
Power supply		out of AUX (galvanic separation)
Overvoltage tolerated by reaction (AUX)		35 V resistant brake resistor compatible
Max. output current	up to +50 °C	10 mA per output, Σ (Outputs) 40 mA ⁽³⁾
	at +55 °C	10 mA per output, Σ (Outputs) 25 mA ⁽³⁾
Motor supply	up to +40 °C	out of AUX, 3 A continuously, 5,5 A max. ⁽¹⁾
	at +55 °C	out of AUX, 2,2 A continuously, 4 A max ⁽¹⁾
Line protection fuse		yes, separately for each motor, 3,5 A (slow blow fuse), at 7 A (200%) release between 1 s and 120 s, fuse UL certified ⁽⁴⁾
Display		
LED I1 ...Ix (yellow)		state of inputs I1, I2
LED M1, M2 (yellow)		state of outputs M1 (O1), M2 (O3)
LED ASI (green)		on: AS-i voltage on off: no AS-i voltage
LED AUX (green)		on: 24 V _{DC} AUX off: no 24 V _{DC} AUX
LED FLT/FAULT (red)		on: slave address 0 or slave offline flashing: AUX voltage is missing, overload output, an output is short circuited, at least one motor fuse has blown or overload sensor off: slave online
Environment		
Applied standards		EN 61000-6-2 EN 61000-6-4 EN60529
Operating altitude		max. 2000 m
Ambient temperature		-5 °C ... +55 °C ^{(1) (2) (3) (5)}
		no condensing allowed
Storage temperature		-25 °C ... +85 °C
Housing		plastic, screw mounting suitable for cable ducts (installation depth \geq 19 mm)
Protection category		IP54
Weight		module: 200 g
		passive distributor: 75 g
Dimensions (W / H / D) in mm		module: 90 / 60 / 18 passive distributor: 60 / 45 / 19

⁽¹⁾





(4) In the motor module UL approved fuses are placed before each of the motor supply connections. A short circuit in the motor causes this fuse to blow, protecting the connection cable between the module and motor. After blowing the fuse the module is no longer functional and needs to be replaced. The characteristics of the fuse must be checked against the motor data before using the module. The protection circuit in the module allows a very simple protection of the motor cables. The fuse for the cable protection is a slow-blow one; without short circuit the robust behavior of the module remains.



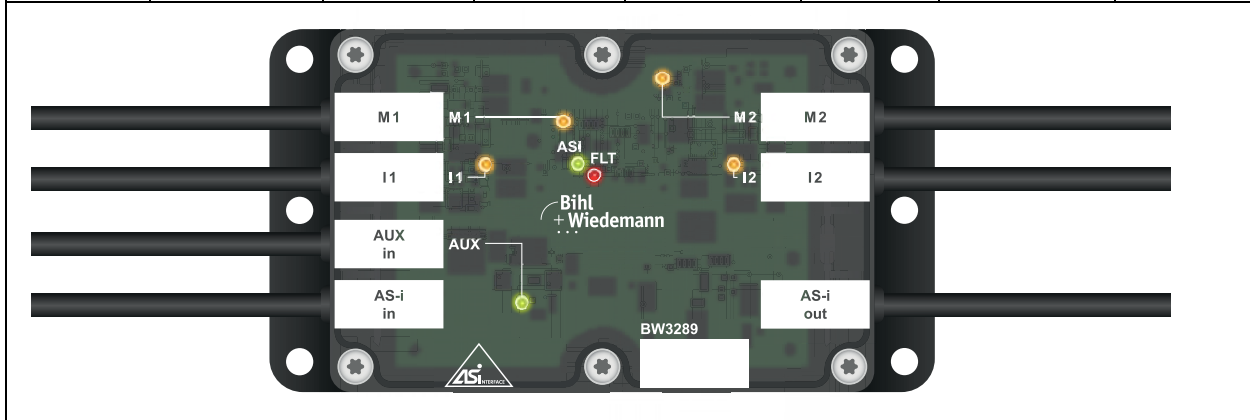
(5) If the cables are fixed installed, an operating temperature up to $-20\text{ °C} \dots +55\text{ °C}$ is permissible.

Configuration analog value BW3289, BWU3290, BW3409				
AS-i parameters				analog value Pin 5
P0	P1	P2	O1/O3	
0	0	0	0	0 V
			1	2,3 V
1	0	0	0	0 V
			1	3,4 V
0	1	0	0	0 V
			1	4,5 V
1	1	0	0	0 V
			1	5,6 V
0	0	1	0	0 V
			1	6,7 V
1	0	1	0	0 V
			1	7,8 V
0	1	1	0	0 V
			1	8,9 V
1	1	1	0	0 V
			1	10 V

Bit assignment BW3289, BWU3290, BW3409

Data bit		Function
DI0	I1	input I1
DI1	I2	input I2
DI2	I3	state (motor fault) motor 1
DI3	I4	state (motor fault) motor 2
DO0	O1	start/stop motor 1
DO1	O2	direction of rotation motor 1
DO2	O3	start/stop motor 2
DO3	O4	direction of rotation motor 2

Connections M8 BW3289			Pins				
Connection	Name / Number	Cable length	1	2	3	4	5
	M1 (motor 1)	41,5 cm	24 V _{ext out}	O2 (0: 0 V; 1: 24 V)	0 V _{ext out}	I3 (0: 0 V; 1: 24 V)	analog value O1
	M2 (motor 2)			O4 (0: 0 V; 1: 24 V)		I4 (0: 0 V; 1: 24 V)	analog value O3
	I1	7,5 cm	24 V _{out of AS-i}	n.c.	0 V _{out of AS-i}	I1	n.c.
	I2			n.c.		I2	
	AUX _{in}	11,5 cm	24 V _{ext in}	24 V _{ext in}	0 V _{ext in}	0 V _{ext in}	n.c.
	AS-i _{in}	10 cm	AS-i+	AS-i+	AS-i-	AS-i-	-
	AS-i _{out}						

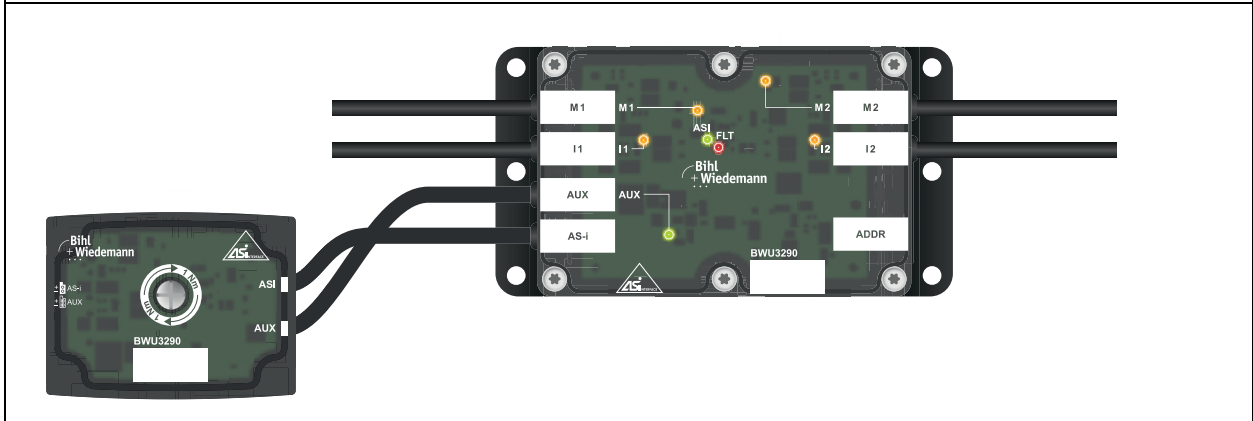


Connections M8 BWU3290			Pins				
Connection	Name / Number	Cable length	1	2	3	4	5
	M1 (motor 1)	41,5 cm	24 V _{ext out}	O2 (0: 0 V; 1: 24 V)	0 V _{ext out}	I3 (0: 0 V; 1: 24 V)	analog value O1
	M2 (motor 2)			O4 (0: 0 V; 1: 24 V)		I4 (0: 0 V; 1: 24 V)	analog value O3
	I1	7,5 cm	24 V _{out of AS-i}	n.c.	0 V _{out of AS-i}	I1	n.c.
	I2			n.c.		I2	

1 $\begin{matrix} + \\ - \end{matrix}$ (brown)
 (blue)

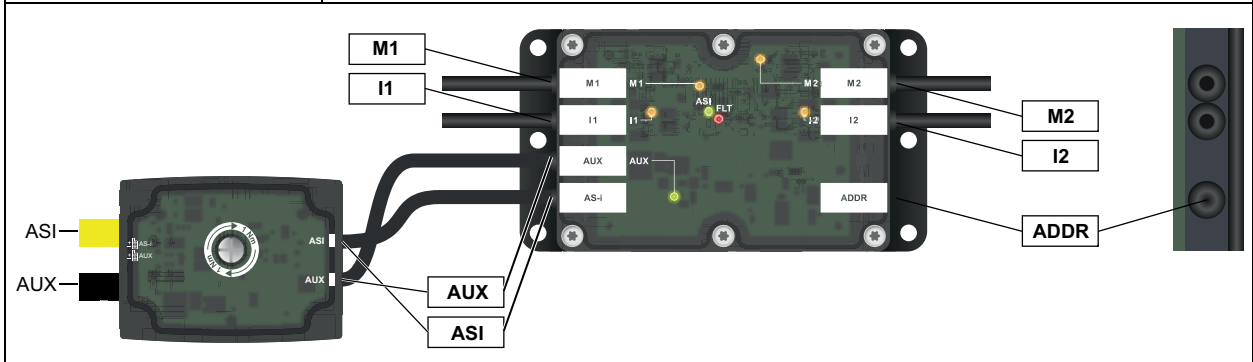
2 $\begin{matrix} + \\ - \end{matrix}$ (brown)
 (blue)

AS-i and AUX via profile cable.
The cable length between motor module and passive distributor is 25 cm.



Connections BW3409			Pins				
Connection	Name / Number	cable length	1	2	3	4	5
M8, 5 poles 	M1 (Motor 1)	60 cm	24 V _{ext out}	O2 (0: 0 V; 1: 24 V)	0 V _{ext out}	I3 (0: 0 V; 1: 24 V)	analog value O1
	M2 (Motor 2)			O4 (0: 0 V; 1: 24 V)		I4 (0: 0 V; 1: 24 V)	analog value O3
M12, 5 poles 	I1	100 cm	24 V _{out of AS-i}	I1	0 V _{out of AS-i}	I1	n.c.
	I2			I2		I2	

ADDR (dummy plug) connection for AS-i addressing device



1 $\begin{matrix} + \\ - \end{matrix}$ (brown)
 (blue)

2 $\begin{matrix} + \\ - \end{matrix}$ (brown)
 (blue)

AS-i and AUX via profile cable

Accessories:

- for BW3289:
 - passive distributor (article no. BW3276)
- for BWU3290:
 - AS-i connecting cable for addressing with a hand held address programming device (article no. BW3304)
 - AS-i connecting cable for addressing with AS-i gateways (article no. BW3305)