

## Safety Basic Monitors

### 2 fast electronic safe outputs

#### Up to 4 x 2 channels safe inputs

- optionally the safe inputs will be used as well as standard inputs and signal outputs

#### Safe AS-i outputs are supported

- max. 8 independent AS-i outputs  
multiple safe AS-i outputs possible via a single address

#### Chip card for storage of configuration data

#### Protection category IP20



(Figure similar)



Figure	Model	Inputs Safety, SIL 3, Cat. 4	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Fieldbus interface	1 power supply, 1 gateway for 2 AS-i networks, inexpensive power supplies	Diagnostic and configuration interface	Article no.
	Safety Basic Monitor with extended features	4 x 2 channels inputs 3+4 optional for speed monitor up to 4 kHz	max. 31 x 2 channels	2 release circuits; 2 x fast electronic safe output	max. 8	–	Signaling contacts	yes, max. 0.5 A/AS-i network, max. 8 A with AS-i power supply	USB	BWU2699

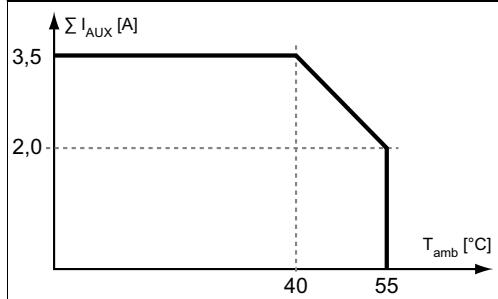
<b>Article no.</b>		<b>BWU2699</b>
<b>Connection</b>		
Connection		COMBICON clamps
Length of connector cable		unlimited <sup>1</sup>
<b>Safety Monitor</b>		
Respond delay	< 40 ms	
<b>AS-i Master</b>		
AS-i Master	integrated	
<b>Interface</b>		
Diagnostic and configuration interface	USB	
	chip card slot	
<b>AS-i</b>		
Voltage	30 V (18 ... 31.6 V)	
Max. current consumption	200 mA <sup>2</sup>	
Max. current with internal decoupling out of AUX	500 mA <sup>2</sup>	
<b>AUX</b>		
Voltage	24 V (20 ... 30 V) (PELV)	
Max.current consumption	max. 4 A	

<b>Article no.</b>	<b>BWU2699</b>
<b>Input</b>	
Number	8 / 4 safe inputs cat. 4 or 8 standard inputs and signaling outputs
Switching current	static 4 mA at 24 V, dynamic 15 mA at 24 V ( $T = 100 \mu\text{s}$ )
Safety signal	floating contacts or OSSDs
Supply voltage	out of AUX
Network connection between the safe input terminals	max. resistance 150 $\Omega$
<b>Output</b>	
2 (4) output switching elements	semiconductor outputs (output circuits 1 and 2) max. contact load: 700 mA <sub>DC-13</sub> at 24 V <sup>2</sup>
Supply voltage	out of AUX
Max. output current signal outputs	10 mA per output
Max. output current for OSSD supply	1,4 A (S71) <sup>2</sup>
Test pulse	if output is on: minimum interval between 2 test pulses: 250 ms (from safety version 4.3); maximum pulse width 1 ms
<b>Display</b>	
LED S1 ... S8 (yellow)	state of safe input S1 ... S8
LED SM (green/yellow/red)	state of Safety Monitor
LED AS-i M (green/yellow/red)	state of AS-i master
LED O1 (green/yellow/red)	output 1 has switched
LED O2 (green/yellow/red)	output 2 has switched
1 button	Service
<b>Environment</b>	
Applied standards	EN 61508:2001 EN 62061:2005 EN ISO 13849-1:2008/AC:2009
Operation altitude	max. 2000 m
Ambient temperature	0 °C ... +55 °C
Storage temperature	-25 °C ... +85 °C
Housing	plastic, for DIN rail mounting
Protection class (EN 60529)	IP20
Voltage of insulation AS-i/AUX	≥ 500 V
Weight	160 g
Dimensions (W / H / D in mm)	22,5 / 99 / 114

1 Loop resistance ≤ 150  $\Omega$

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### Derating for total current at power supply out of AUX (24 V)



Article no.	BWU2699
<b>AS-i Safety Monitor</b>	
Safety Monitor	Safety Basis Monitor, with extended features
Optimized to AS-i Monitor operations	no
Release circuits	8 additionally 8 release circuits (9 ... 16) for actuating standard AS-i outputs
Antivalent switches for local inputs	yes
Standstill monitors of local inputs	4 x 50 Hz
Standstill/speed monitors of local inputs	2-4 axes, up to 4 kHz
<b>Electrical data</b>	
Power supply decoupling unit	integrated

BWU2699	Clamps	Description
S22 S21 S12 S11 S42 S41 S32 S31 S62 S61 S52 S51	S22, S21, S12, S11	safety input terminal input 1
S1 S2 S3 S4 S5 S6 S7 S8 AS-I M 1-01 02 SM	S42, S41, S32, S31	safety input terminal input 2
S62, S61, S52, S51	S62, S61, S52, S51	safety input terminal input 3
S71, S72, S81, S82	S71, S72, S81, S82	safety input terminal input 4
1.14 <sub>ext.out</sub>	1.14 <sub>ext.out</sub>	semiconductor output 1
2.14 <sub>ext.out</sub>	2.14 <sub>ext.out</sub>	semiconductor output 2
0 V <sub>ext.out</sub>	0 V <sub>ext.out</sub>	mass connection for semiconductor output
AS-i+, AS-i-	AS-i+, AS-i-	connection to the AS-i Bus
AUX+ <sub>ext.in</sub> , AUX- <sub>ext.in</sub>	AUX+ <sub>ext.in</sub> , AUX- <sub>ext.in</sub>	power supply input
S71 S72 S81 S82 1.14 ext.out ext.out 0V ext.out AS-i+ AS-i- AUX+ AUX- ext.in ext.in ext.in ext.in		

#### **Accessories:**

- Software ASIMON 3 G2 and AS-i Control Tools (art. no. BW2501)
  - Safe contact expander 1 or 2 independent channels (art. no. BWU2548 / 2539)
  - AS-i Safety 4I/2O Module, 4 x 2 channels safety inputs and 2 fast electronic safety outputs in IP20 (art. no. BWU2314) as supplementary module
  - AS-i Speed Monitor (art. no. BWU2427) as supplementary module
  - USB cable for Safety Basic Monitor (art. no. BW2530)