Safe contact expander

1 or 2 independent channels

4 contact sets per channel

(figure similar)

Article no.	BWU2539	BWU2548
General data		
Type of device	safe contacts, instantaneous	
Number of contact sets per channel	4	
Number of independent channels	2	1
Input		
Signal level	0-signal: < 2,4 V DC 1-signal: 18 ... 26,5 V DC	
Permissible test pulse time	max. 1,5 ms	
Rated current	60 mA per channel	
Output		
Connection	force-guided	
Short circuit protection of output circuits (external)	3 A quick; 2 A slow	
Max. inrush current	20 A for 20 ms	
Electrical life (switching operations)	AC1 (360 S/h) ca. 100 000	
Operate delay / delay time	< 20 ms / <20 ms	
Switching frequency	15 Hz	
Rated impulse voltage	4 kV [1]	
Contact load EDM (1.51, 1.52 and 2.51, 2.52)		
Switching current	max. 20 mA	
Contact load contact set (1.13, 1.14, 1,23, 1.24 and 2.13, 2.14, 2.23, 2.24)		
Switching voltage AC	10 … 230 V	
Switching voltage DC	10 … 230 V	
Insulation to input	double insulation	
Switching current	5 mA… 3 A	
Contact load contact set (1.33, 1.34, 1.43, 1.44 and 2.33, 2.34, 2.43, 2.44)		
Switching voltage AC	10 … 230 V	
Switching voltage DC	10 … 230 V	
Insulation to input	basic insulation	
Switching current	5 mA… 3 A	
Total current (per channel)	12A (see “Total current through all the contact sets of a channel:”)	
Usage category (acc. EN 60347-4-1 / EN 60947-5-1)	AC1: 230 V/3 A (ca. 150 x 10^3 cycles) AC 15: 230 V/3 A (ca. 80 x 10^3 cycles) DC 1: 24 V/3 A (ca. 500 x 10^3 cycles) DC 13: 24 V/3 A/0,1 Hz (ca. 50 x 10^3 cycles)	
B_{10d} (AC15)	1,96 x 10^6 cycles	
B_{10d} (DC13)	780 x 10^3 cycles	

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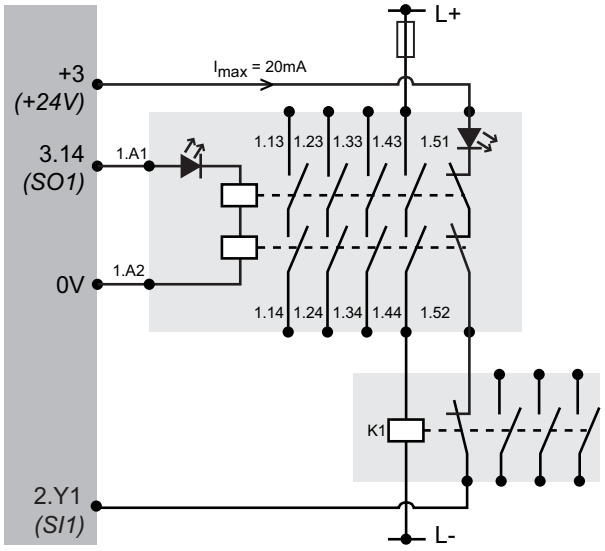
LED displays		
LED CH 1 (yellow)	safe input 1	
LED CH 2 (yellow)	safe input 2	–
LED EDM 1 (yellow)	EDM channel 1	
LED EDM 2 (yellow)	EDM channel 2	–
Environment		
Overvoltage category	III	
Degree of pollution	2	
Ambient temperature	-20 °C ... 50 °C	
Storage temperature	-40 °C ... 70 °C	
Relative humidity	not condensing	
Mechanical lifetime	approx. 10 x 10^6 swi	
Protection class (EN 60529)	IP20	
Dimensions (L / W / H in mm)	99 / 22,5 / 114	

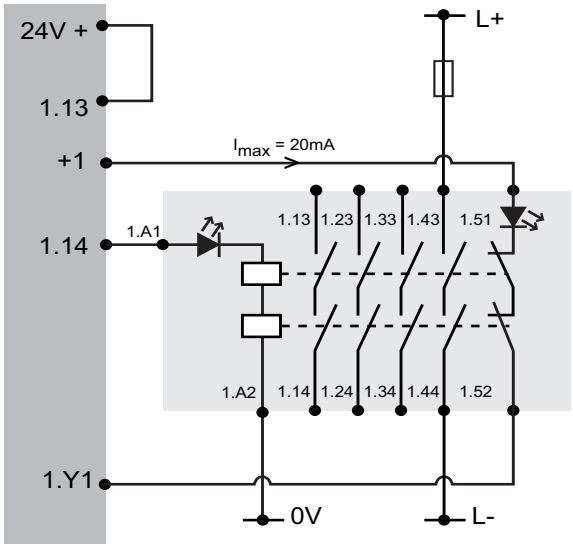
1 Safe isolation, reinforced insulation and 6 kV between A1/A2, 51/52, 43/44, 33/34 and 23/24, 13/14.
Outputs one below the other have basic insulation.

Connection examples:

Safe electr. output



Relay output



Total current through all the contact sets of a channel:

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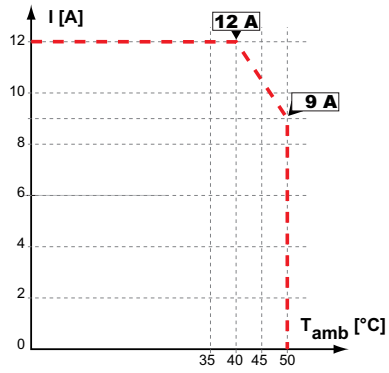

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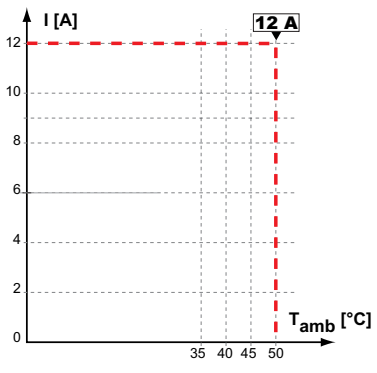

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output channel 1.1: terminals 1.13, 1.14 output channel 1.2: terminals 1.23, 1.24 output channel 1.3: terminals 1.33, 1.34 output channel 1.4: terminals 1.43, 1.44	
output channel 2.1: terminals 2.13, 2.14 output channel 2.2: terminals 2.23, 2.24 output channel 2.3: terminals 2.33, 2.34 output channel 2.4: terminals 2.43, 2.44	—
EDM (feedback circuit) channel 1: terminals 1.51, 1.52	
EDM (feedback circuit) channel 2: terminals 2.51, 2.52	—
channel 1 working contacts 1.A1, 1.A2	
channel 2 working contacts 2.A1, 2.A2	—

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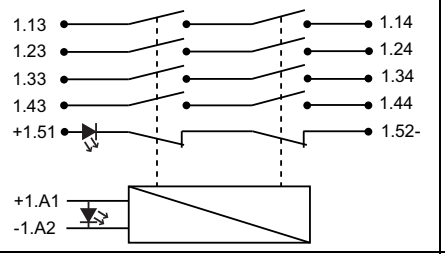	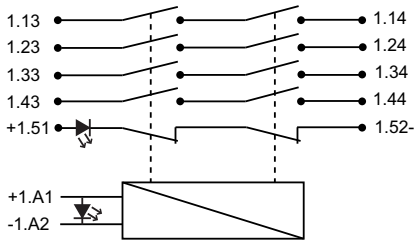
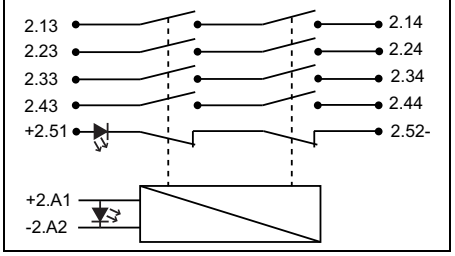	
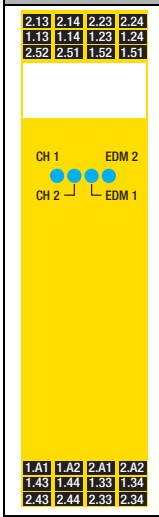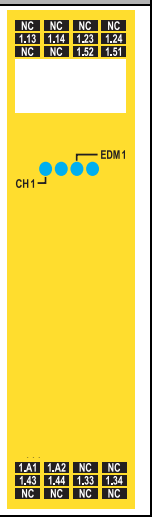
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