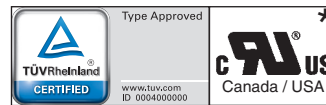


- According to DIN EN 61810-1, DIN EN 61810-3
- With forcibly guided contacts
- Energy efficient; Low energy consumption, because of impulse control, no holding consumption
- Bistable  
Mechanical latching of contact position
- Safe separation between all current circuits
- Both coils non-polarised, neutral
- Defined position when both coils are operated simultaneously
- Impulse operation, duty cycle possible (under fault condition)
- Wide temperature range
- As option with manual operation (mechanical indication)
- Washproof (only without manual operation)
- Height 15.8 mm

### Applications

- Railway and signalling applications
- Automation
- Medical devices
- Radio- and telecontrol applications
- Fuel applications
- Process applications

### Approvals and Markings



\* in preparation

### Technical Data

Relay type	OB 5623		OB 5623
<b>1.0 Coil</b>	interlocking		unlocking
1.1 Nominal voltage	DC V	6, 12, 24, 48, 60, 110 (others on request)	6; 12; 24; 48; 60, 110 <sup>3)</sup> (others on request)
1.2 Nominal consumption	W	approx. 1.2	approx. 0.7
1.4 Pulse length	ms		≥ 200
1.11 Voltage range	U <sub>N</sub>		0.85 ... 1,2
<b>2.0 Contacts</b>	4 NO / 4 NC (other on request)		
2.1 Contact arrangement	AgSnO <sub>2</sub> + 0.2 μm Au; AgNi + 0.2 μm Au, AgNi + 5 μm Au		
2.2 Contact material	250		
2.3 Rated insulation voltage	AC V	AC/DC 10 / DC 250, AC 400 (AC/DC 2 V / 60 V) <sup>7)</sup>	
Switching voltage min./max	V	7 x 8 <sup>8)</sup> (see Operating voltage limit curve)	
2.4 Limiting continuous current I <sub>th</sub>	A	10 mA <sup>6)</sup> / 8 (2 mA / 0,3 A) <sup>7)</sup>	
Switching current min./max	A	0.1 <sup>6)</sup> / 2000 (10 mVA / 12 VA) <sup>7)</sup>	
2.5 Switching power min./max	VA	0.1 <sup>6)</sup> / 200 (10 mW / 12 W) <sup>7)</sup>	
Switching power min./max	W		
2.6 Switching capacity to IEC/EN 60947-5-1			
AC 15 <sup>9)</sup>	AC V/A	NC: 230 / 3	NO: 230 / 2
AC 15 <sup>2)</sup>	AC V/A	NC: 230 / 5	NO: 230 / 2
DC 13 <sup>9)</sup>	DC V/A	NC: 24 / 2	NO: 24 / 2
2.7 Electrical life	at 1 s On, 4 s Off (see contacts service life)		
at AC 230 V, 8 A, cosφ = 1	switching cycles	> 10 <sup>5</sup> AgNi	
at DC 24 V 8 A ohmic	switching cycles	> 0.75 x 10 <sup>5</sup> AgNi	
2.8 Switching frequency max	switching cycles/s	2	
2.9 Response time <sup>4)</sup> / Release time <sup>5)</sup>	ms	typically 20 / typically 12	
2.10 Contact force	cN	≥ 8	
2.14 Contact gap	mm	1.0 (> 0.5 <sup>1)</sup> )	
<b>3.0 Other</b>			
3.1 Mechanical life	switching cycles	10 x 10 <sup>6</sup>	
3.2 Temperature range	°C	- 40 ... + 75	
3.3 Degree of protection, housing	Solder line proof RT II as option wash proof RT III (without manual operation)		
3.4 Test procedure	A (group mounting)		
3.5 Vibration resistance	10 ... 85 Hz; 0.35 mm amplitude; 4 g max. IEC/EN 60068-2-6		
3.6 Climate resistance	40 / 075 / 04; A / B / D IEC/EN 60068-1		
3.7 Short circuit strength	1 kA / AC 250 V IEC/EN 60947-5-1 <sup>2) 9)</sup>		
SCPD / Fuse	NO contact: 10 A gG/gL / NC contact: 6 A gG/gL IEC/EN 60269-1 <sup>2) 9)</sup>		

<sup>1)</sup> Over entire service life, even when under fault and at 1.1 x U<sub>N</sub>  
<sup>4)</sup> Interlocking  
<sup>7)</sup> Typical values for AgNi-contacts + 5 μm Au

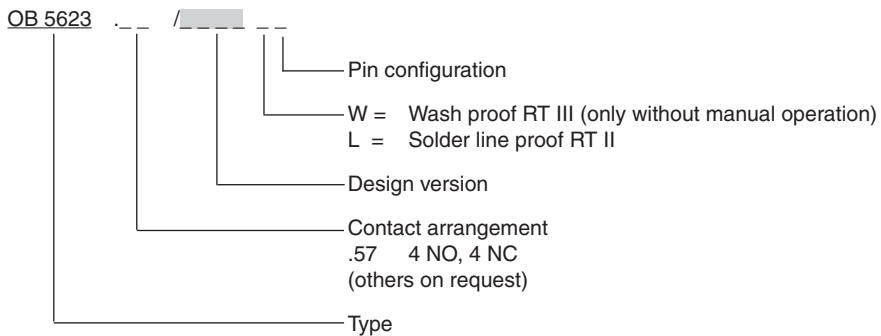
<sup>2)</sup> Values for AgSnO<sub>2</sub>-contacts  
<sup>5)</sup> Unlocking  
<sup>8)</sup> See notes

<sup>3)</sup> Only impulse operation  
<sup>6)</sup> Typical values  
<sup>9)</sup> Values for AgNi-contacts

## Technical Data

3.8	Insulation acc. to IEC 60664-1, EN 50178		OB 5623 (interlocking)	OB 5623 (unlocking)
	Rated insulation voltage	AC V	250	250
	Pollution degree		2	2
	Overvoltage category		III	III
	Test voltage			
	contact-coil (1 min)	AC kV eff.	≥ 4	≥ 4
	contact-contact (1 min)	AC kV eff.	≥ 4	≥ 4
	between open contacts	AC kV eff.	≥ 1,5	≥ 1,5
	Transient voltage			
	contact-coil (1.2 - 50 μs)	kV	≥ 6	≥ 6
	Clearance and creepage distance		≥ 5,5	≥ 4,5
3.9	Weight	g	approx. 47	
<b>4.0 Packing unit</b>				
4.1	on cardboard in slipcase	piece	10	
4.2	in case package	piece	100	
<b>5.0 Solder method</b>				
5.1	Solder method /-temperature /-duration	°C / s	Wave soldering / 260 / 5	

## Ordering Example

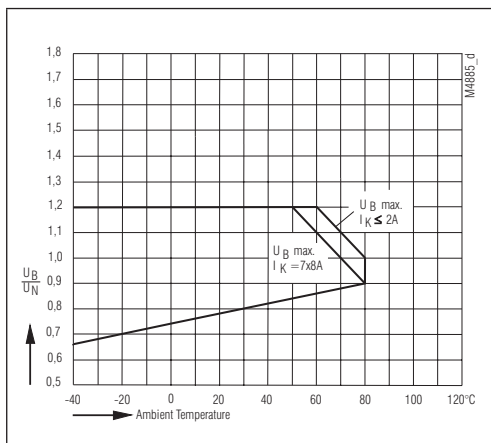


OB 5623 with manual operation				
		interlocking	unlocking	OB 5623
$U_N$ (DCV)	Voltage range (DC V)	$R_{Coil}$ at 20° C $\Omega \pm 10\%$	$R_{Coil}$ at 20° C $\Omega \pm 10\%$	.57
				4NO, 4NC
AgNi-contacts + 0.2 $\mu$ m Au				
6	5.1 ... 7.2	31	52	6001L
12	10.2 ... 14.4	120	200	6002L
24	20.4 ... 28.8	500	750	6003L
48	40.8 ... 57.6	2000	3600	6004L
60	51.0 ... 72.0	2880	4350	6005L
110 <sup>3)</sup>	93.5 ... 132.0	10100	9216	6006L
AgNi-contacts + 5 $\mu$ m Au (gold plated contacts)				
6	5.1 ... 7.2	31	52	6041L
12	10.2 ... 14.4	120	200	6042L
24	20.4 ... 28.8	500	750	6043L
48	40.8 ... 57.6	2000	3600	6044L
60	51.0 ... 72.0	2880	4350	6045L
110 <sup>3)</sup>	93.5 ... 132.0	10100	9216	6046L
AgSnO <sub>2</sub> -contacts +0.2 $\mu$ m Au				
6	5.1 ... 7.2	31	52	6081L
12	10.2 ... 14.4	120	200	6082L
24	20.4 ... 28.8	500	750	6083L
48	40.8 ... 57.6	2000	3600	6084L
60	51.0 ... 72.0	2880	4350	6085L
110 <sup>3)</sup>	93.5 ... 132.0	10100	9216	6086L

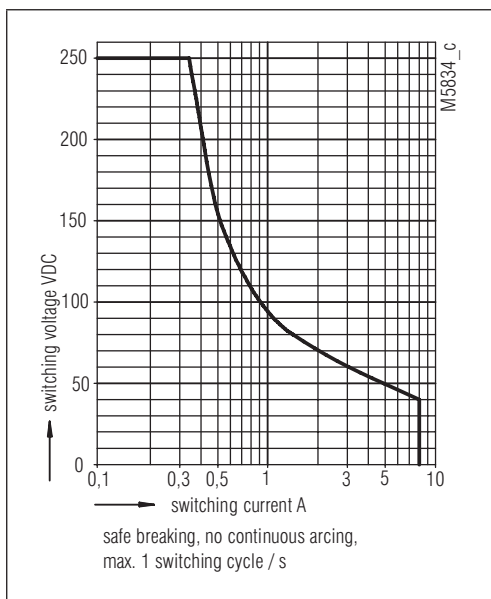
<sup>3)</sup> only impulse operation

OB 5623 without manual operation				
		interlocking	unlocking	OB 5623
$U_N$ (DCV)	Voltage range (DC V)	$R_{Coil}$ at 20° C $\Omega \pm 10\%$	$R_{Coil}$ at 20° C $\Omega \pm 10\%$	.57
				4NO, 4NC
AgNi-contacts + 0.2 $\mu$ m Au				
6	5.1 ... 7.2	31	52	6121W
12	10.2 ... 14.4	120	200	6122W
24	20.4 ... 28.8	500	750	6123W
48	40.8 ... 57.6	2000	3600	6124W
60	51.0 ... 72.0	2880	4350	6125W
110 <sup>3)</sup>	93.5 ... 132.0	10100	9216	6126W
AgNi-contacts + 5 $\mu$ m Au (gold plated contacts)				
6	5.1 ... 7.2	31	52	6161W
12	10.2 ... 14.4	120	200	6162W
24	20.4 ... 28.8	500	750	6163W
48	40.8 ... 57.6	2000	3600	6164W
60	51.0 ... 72.0	2880	4350	6165W
110 <sup>3)</sup>	93.5 ... 132.0	10100	9216	6166W
AgSnO <sub>2</sub> -contacts + 0.2 $\mu$ m Au				
6	5.1 ... 7.2	31	52	6201W
12	10.2 ... 14.4	120	200	6202W
24	20.4 ... 28.8	500	750	6203W
48	40.8 ... 57.6	2000	3600	6204W
60	51.0 ... 72.0	2880	4350	6205W
110 <sup>3)</sup>	93.5 ... 132.0	10100	9216	6206W

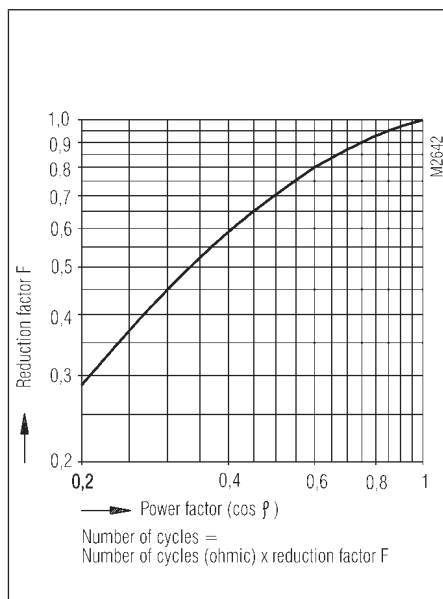
<sup>3)</sup> only impulse operation



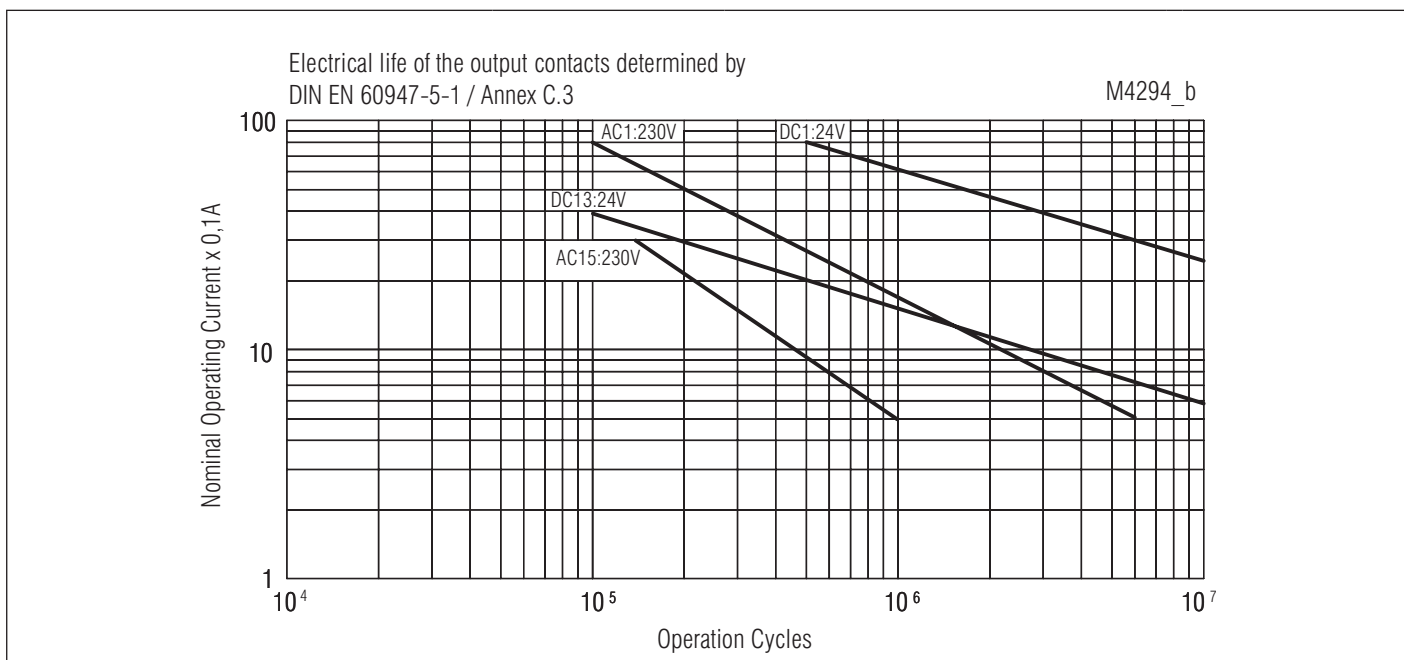
Operating voltage limit curve without influence through self-heating of surrounding components



Arc limit curve (load limit curve)

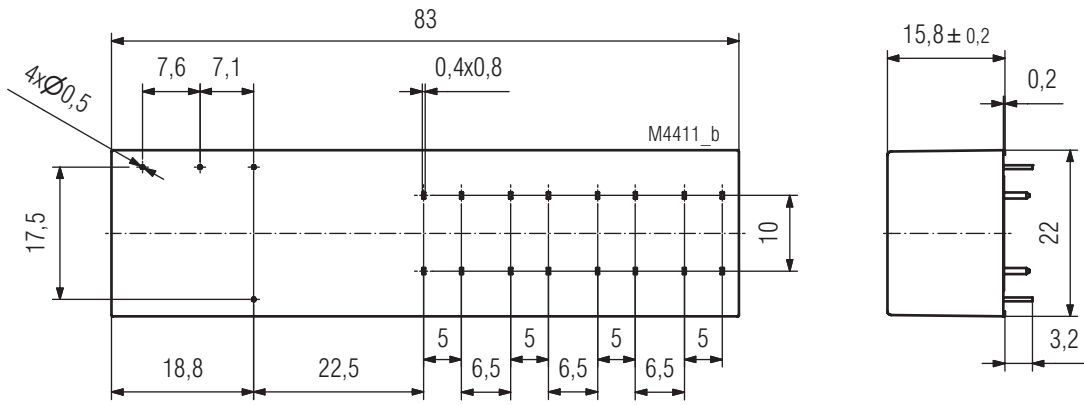


Reduction factor for inductive loads

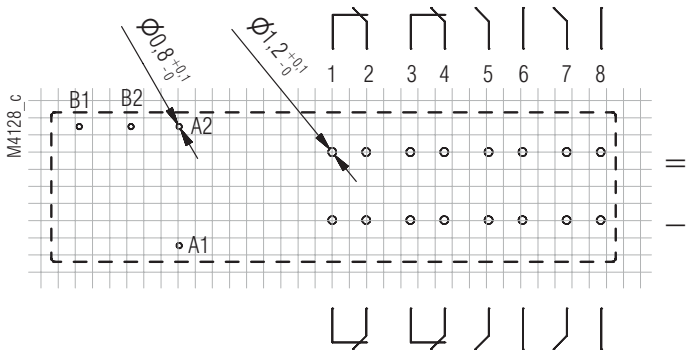


Electrical life

Pin configuration L1 / W1



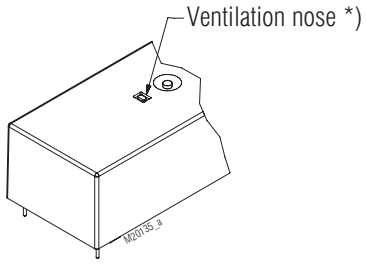
Pin configuration L1 / W1  
Drilling plan (solder side)



A: interlocking; B: unlocking

OB5623.57/\_ \_ \_ \_L1 4S/4Ö  
OB5623.57/\_ \_ \_ \_W1 4S/4Ö

Connection for basic grid dimensions 2.50 mm as well as 2.54 mm according to IEC/EN 60 097, IEC 60 326 average



\*) When using the maximum switching capacity it is recommended to open the relay without manual operation at the indicated position.