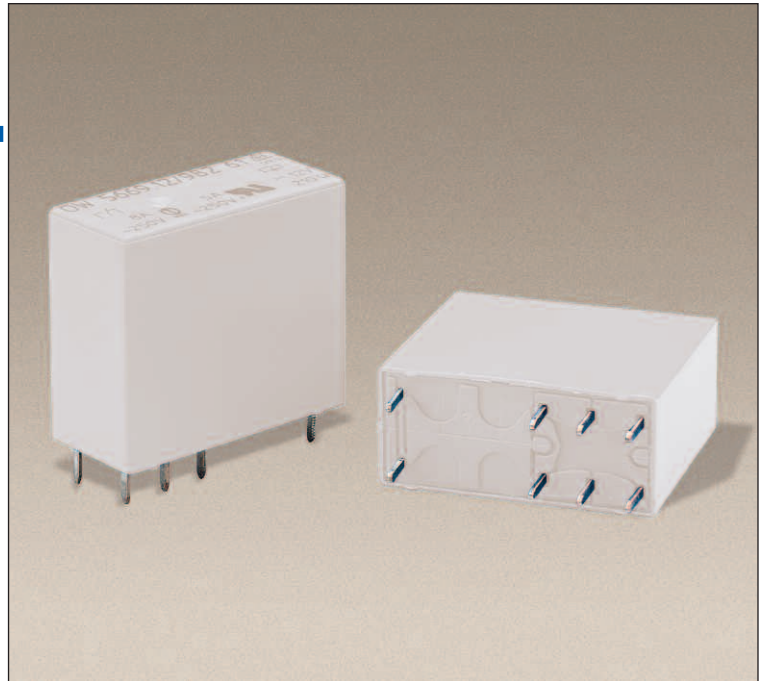


# Safety Relay

## OA/OW 5669

### Features

- n 2 output contacts
- n International approvals:  
TÜV, CSA, UL, cUL
- n Quality control check for each safety relay
- n Forced-guided contacts, all gold flash plated
- n Contact Gap > 0.5 mm throughout life of relay
- n Various contact materials,  
mixed contact material optional
- n High coil voltage range
- n High breakdown Voltage: contact/coil > 4 KV
- n High Creeping Distance: contact/coil > 8 mm
- n Protection Rating  
OA Version: IP 40, flow solder proof  
OW Version: IP 67, washable
- n Custom design available,  
-coil voltage                      -coil resistance,  
-contact pressure                -operate/release time



GERMANY



USA/CANADA

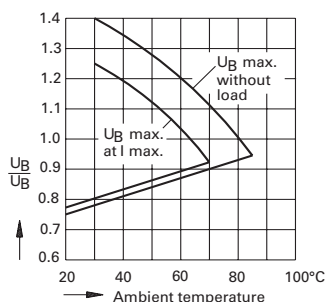


CANADA

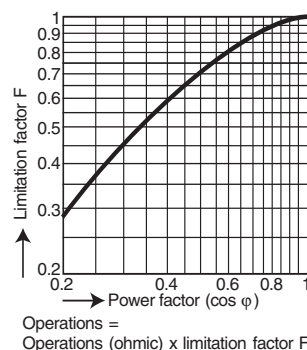
## Technical Data

- n **Nominal Coil Voltage** .....5, 6, 12, 20, 24, 48, 60, 110, DC
- n **Coil Power Dissipation** .....0.7 W
- n **Max. Switching Voltage** .....250V DC, 400V AC
- n **Max. Switching Current** .....8 A (2 x 5A simultaneous)
- n **Max. Switching Power — DC** .....200W (2 x 160W simultaneous)
- n **Max. Switching Power — AC** .....2000VA (2 x 1250VA simultaneous)
- n **Contact Switching Rate** .....10 operations per second
- n **Relay Operate Time** .....≤15 ms
- n **Relay Release Time** .....≤12 ms
- n **Operation Vibration** .....0.35 mm Ampl. max  
.....@ 10...55Hz, 5g max
- n **Contact Arrangements** .....1NO/1NC, 2CO, 2NO, 2NC
- n **Contact Material** .....AgNi10+0.2μmAu Standard  
.....AgSnO<sub>2</sub>+0.2μmAu, AgNi0.15+5μmAu Optional
- n **Mechanical Life** .....50x10<sup>6</sup> operation cycles
- n **Electrical Life** .....AgSnO<sub>2</sub> >2x10<sup>5</sup>, AgNi10 >10<sup>5</sup>  
.....operation cycles @ 230V AC, 6A, cos φ=1
- n **Ambient Temperature** .....-20...+85°C
- n **Cover Material** .....Polyamide 6
- n **Weight** .....15 g
- n More detailed data upon request

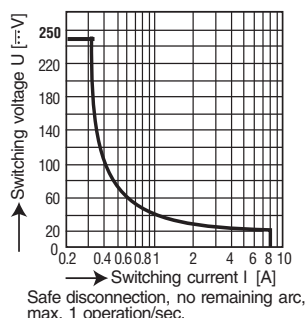
## Diagrams



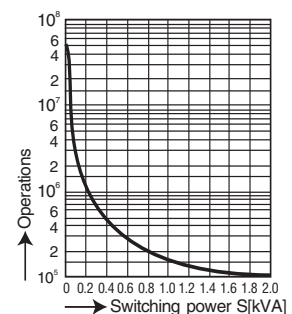
Relay operation voltage vs. ambient temperature



Limitation factor for inductive loads



Maximum switching power curve



Mechanical life

## Safety Relay 5669 Data

| Relay Data    |               |                 |                | Ordering Information |               |               |  |
|---------------|---------------|-----------------|----------------|----------------------|---------------|---------------|--|
| Rated Voltage | Voltage Range | Coil Resistance | 1 NO/1 NC Type | 2 CO Type            | 2 NO Type     | 2 NC Type     |  |
| 5V            | 4.0 - 8.0V    | 36 $\Omega$     | 56.O□69.0511□  | 56.O□69.0500□        | 56.O□69.0520□ | 56.O□69.0502□ |  |
| 6V            | 4.8 - 9.6V    | 50 $\Omega$     | 56.O□69.0611□  | 56.O□69.0600□        | 56.O□69.0620□ | 56.O□69.0602□ |  |
| 12V           | 9.6 - 19.2V   | 210 $\Omega$    | 56.O□69.1211□  | 56.O□69.1200□        | 56.O□69.1220□ | 56.O□69.1202□ |  |
| 20V           | 16.0 - 32.0V  | 580 $\Omega$    | 56.O□69.2011□  | 56.O□69.2000□        | 56.O□69.2020□ | 56.O□69.2002□ |  |
| 24V           | 19.2 - 38.4V  | 820 $\Omega$    | 56.O□69.2411□  | 56.O□69.2400□        | 56.O□69.2420□ | 56.O□69.2402□ |  |
| 48V           | 38.4 - 76.8V  | 3200 $\Omega$   | 56.O□69.4811□  | 56.O□69.4800□        | 56.O□69.4820□ | 56.O□69.4802□ |  |
| 60V           | 48.0 - 96.0V  | 5200 $\Omega$   | 56.O□69.6011□  | 56.O□69.6000□        | 56.O□69.6020□ | 56.O□69.6002□ |  |
| 110V          | 88.0 - 176.0V | 18000 $\Omega$  | 56.O□69.1111□  | 56.O□69.1100□        | 56.O□69.1120□ | 56.O□69.1102□ |  |

Protection Class, Example:

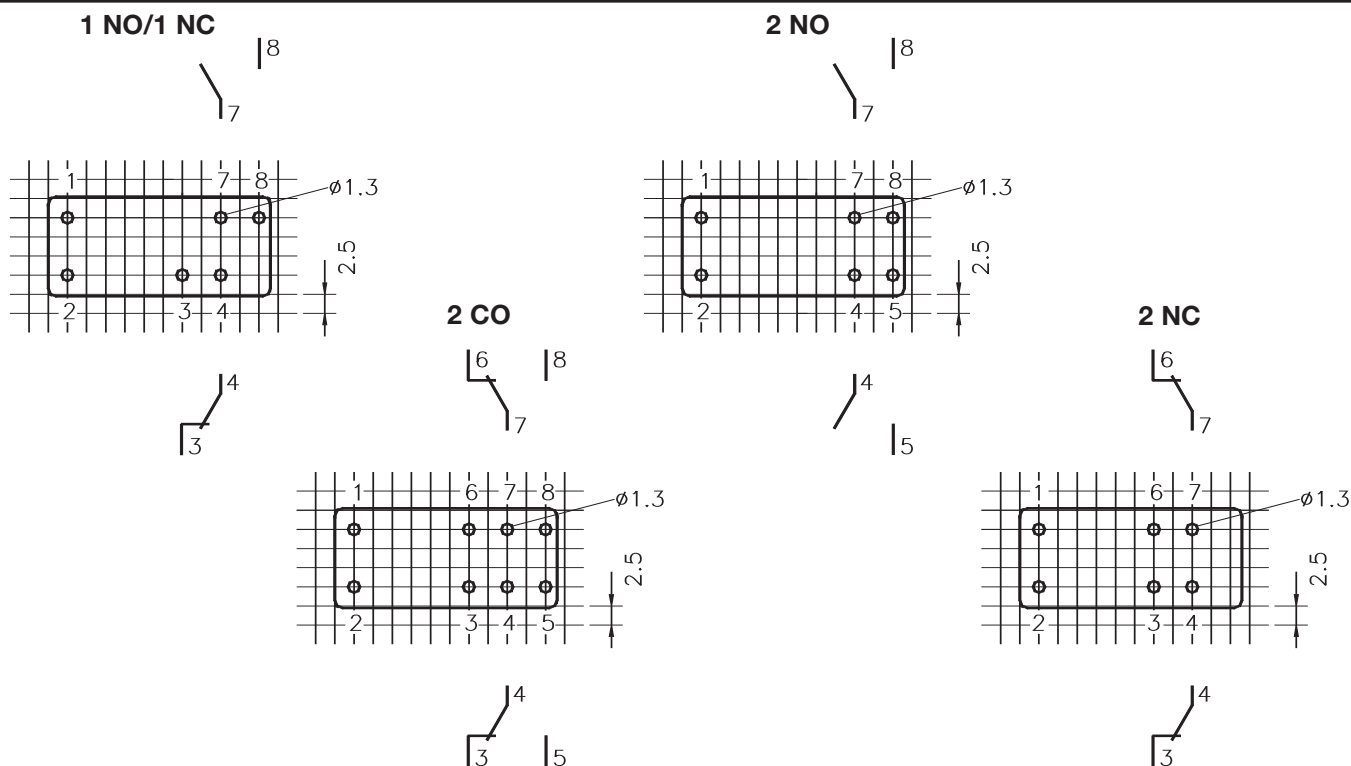
- A IP 40, Flow Solder Proof  
W IP 67, Washable

Contact Material, Example:

- C AgSnO<sub>2</sub>+2 $\mu$ mAu  
N AgNi10+2 $\mu$ mAu  
S AgNi0.15+5 $\mu$ mAu

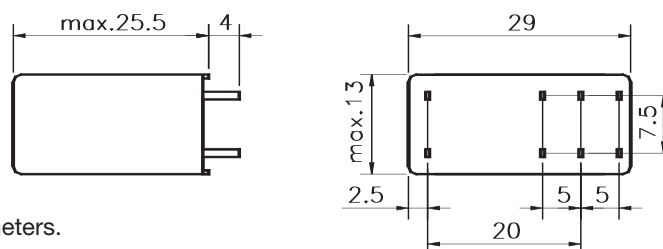
## Footprints

(Note: Shown at their actual size.)



## Dimensions

(Note: Shown at their actual size.)



Note: All dimensions are shown in millimeters.  
To convert to inches, divide by 25.4.