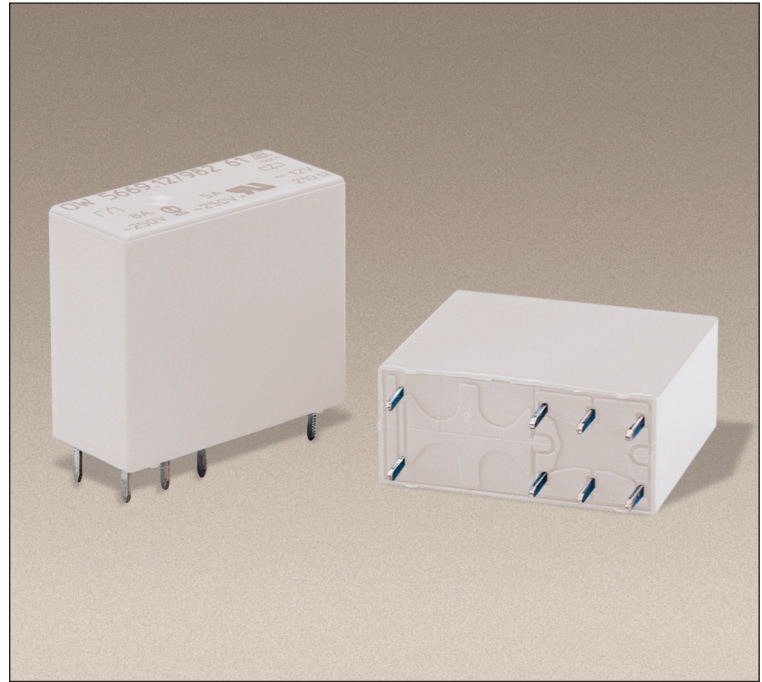


# Safety Relay

## OA/OW 5669

### Features

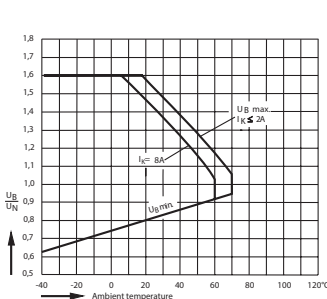
- 2 output contacts
- International approvals:  
TÜV, UL, cUL
- Quality control check for each safety relay
- Forced-guided contacts, all gold flash plated
- Contact Gap > 0.5 mm throughout life of relay
- Various contact materials,  
mixed contact material optional
- High coil voltage range
- High breakdown voltage: contact/coil  $\geq 4$  KV  
contact/contact  $\geq 4$  KV
- High creeping distance: contact/coil  $\geq 8$  mm  
contact/contact  $\geq 5.5$  mm
- Protection Rating  
OA Version: IP 40, flow solder proof  
OW Version: IP 67, washable
- Custom design available,  
-coil voltage                      -coil resistance,  
-contact pressure                -operate/release time



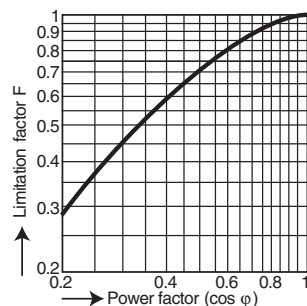
### Technical Data

- **Nominal Coil Voltage** ..... 6, 12, 20, 24, 48, 60, 110, DC
- **Coil Power Dissipation** ..... 0.7 W
- **Max. Switching Voltage** ..... 250V DC, 400V AC
- **Max. Switching Current** ..... 8 A (2 x 5A simultaneous)
- **Max. Switching Power — DC** ..... 200W (2 x 160W simultaneous)
- **Max. Switching Power — AC** ..... 2000VA (2 x 1250VA simultaneous)
- **Contact Switching Rate** ..... 10 operations per second
- **Relay Operate Time** .....  $\leq 15$  ms
- **Relay Release Time** .....  $\leq 12$  ms
- **Operation Vibration** ..... 0.35 mm Ampl. max  
@ 10...55Hz, 5g max
- **Contact Arrangements** ..... 1NO/1NC, 2CO, 2NO\*, 2NC\*
- **Contact Material** ..... AgNi10+0.2 $\mu$ mAu Standard  
..... AgSnO<sub>2</sub>+0.2 $\mu$ mAu, AgNi10+5 $\mu$ mAu Optional
- **Mechanical Life** .....  $\geq 50 \times 10^6$  operation cycles
- **Electrical Life** ..... AgSnO<sub>2</sub> >  $2 \times 10^5$ , AgNi10 >  $10^5$   
..... operation cycles @ 230V AC, 6A,  $\cos \varphi = 1$
- **Ambient Temperature** ..... -40...+70°C
- **Cover Material** ..... Polyamide 6
- **Weight** ..... 15 g
- More detailed data upon request

### Diagrams

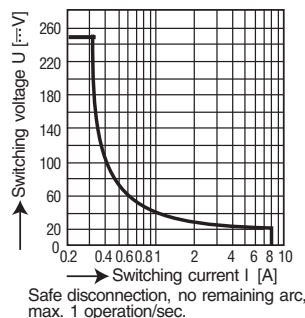


Relay operation voltage vs. ambient temperature

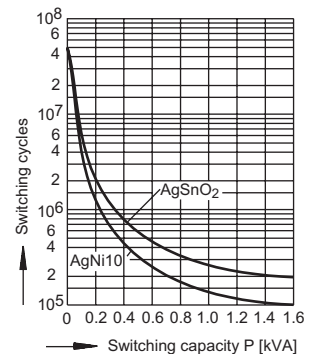


Operations =  
Operations (ohmic) x limitation factor F

Limitation factor for inductive loads



Maximum switching power curve



Mechanical life

\*Special order.

# Safety Relay OA/OW 5669 Data

## Relay Data

## Ordering Information

| Rated Voltage | Voltage Range | Coil Resistance (10%) | 1 NO/1 NC Type | 2 CO Type     | 2 NO* Type    | 2 NC* Type    |
|---------------|---------------|-----------------------|----------------|---------------|---------------|---------------|
| 6V            | 4.8 - 9.6V    | 50 Ω                  | 56.O□69.0611□  | 56.O□69.0600□ | 56.O□69.0620□ | 56.O□69.0602□ |
| 10V           | 8.0 - 16.0V   | 150 Ω                 | 56.O□69.1011□  | 56.O□69.1000□ | 56.O□69.1020□ | 56.O□69.1002□ |
| 12V           | 9.6 - 19.2V   | 210 Ω                 | 56.O□69.1211□  | 56.O□69.1200□ | 56.O□69.1220□ | 56.O□69.1202□ |
| 20V           | 16.0 - 32.0V  | 580 Ω                 | 56.O□69.2011□  | 56.O□69.2000□ | 56.O□69.2020□ | 56.O□69.2002□ |
| 24V           | 19.2 - 38.4V  | 820 Ω                 | 56.O□69.2411□  | 56.O□69.2400□ | 56.O□69.2420□ | 56.O□69.2402□ |
| 48V           | 38.4 - 76.8V  | 3200 Ω                | 56.O□69.4811□  | 56.O□69.4800□ | 56.O□69.4820□ | 56.O□69.4802□ |
| 60V           | 48.0 - 96.0V  | 5200 Ω                | 56.O□69.6011□  | 56.O□69.6000□ | 56.O□69.6020□ | 56.O□69.6002□ |
| 110V          | 88.0 - 176.0V | 18000 Ω               | 56.O□69.1111□  | 56.O□69.1100□ | 56.O□69.1120□ | 56.O□69.1102□ |

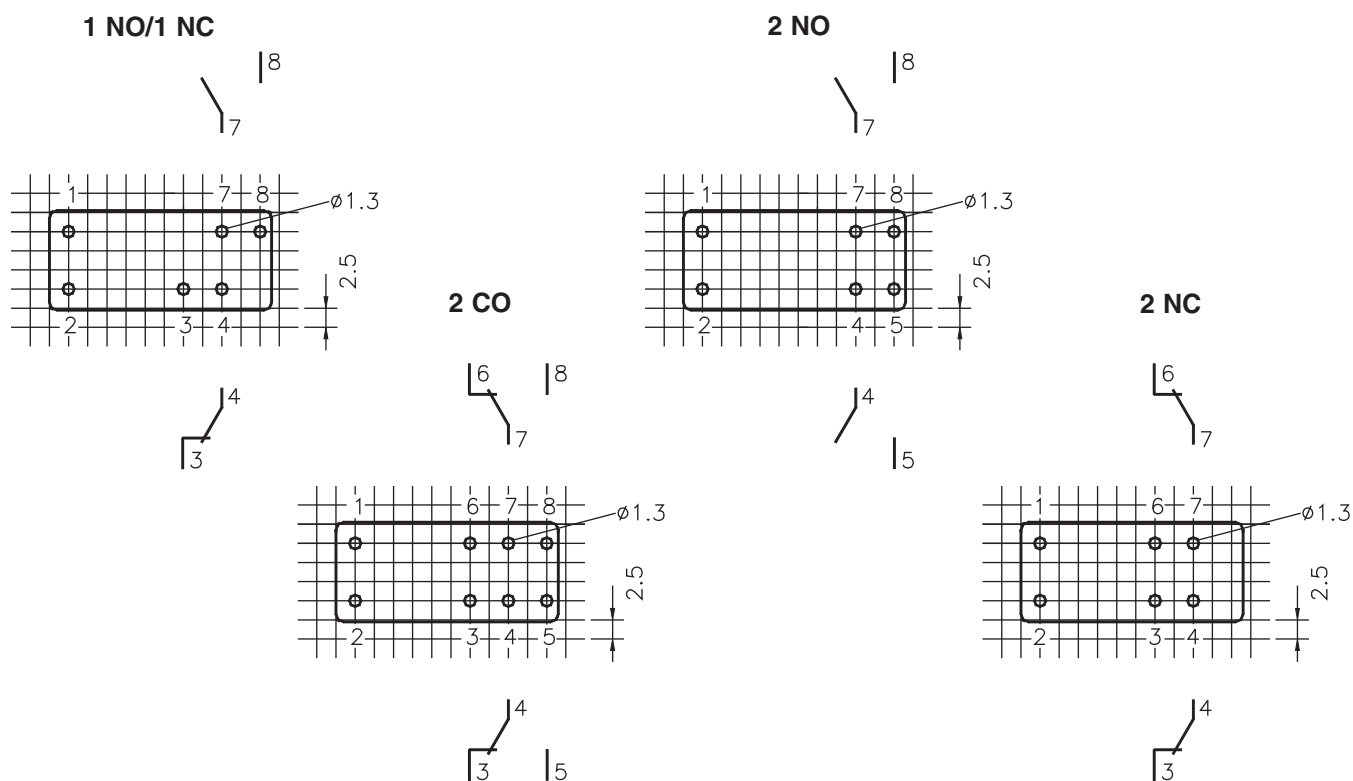
Protection Class, Example:

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

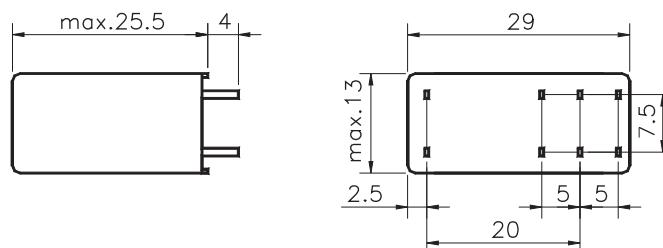
Contact Material, Example:

- C AgSnO<sub>2</sub>+2μmAu  
N AgNi10+.2μmAu  
S AgNi0.15+5μmAu

## Footprints (solder side)



## Dimensions



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

\*Special order.