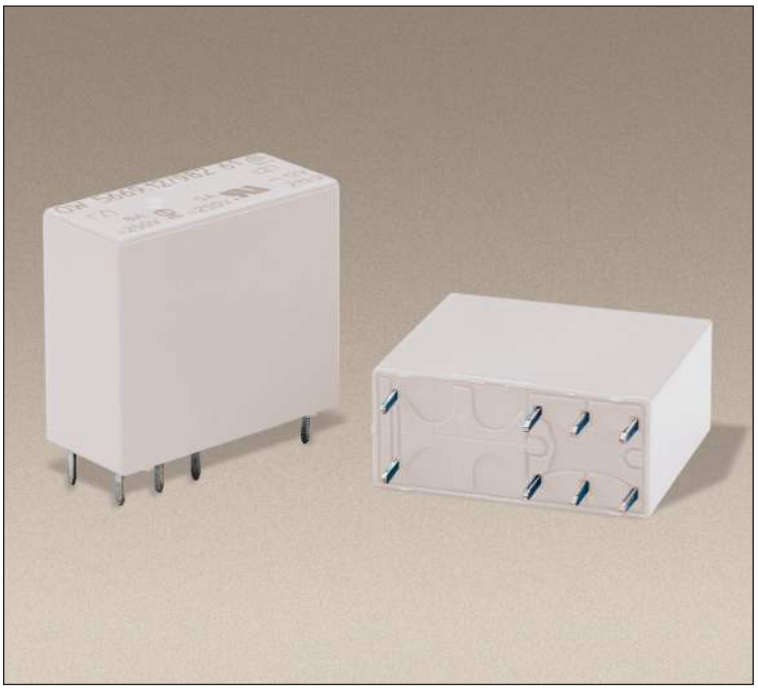
Safety Relay
OA/OW 5669



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 ≥ 4 KV
  contact/contact ≥ 4KV
- High creeping distance: contact/coil ≥ 8 mm
  contact/contact ≥ 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

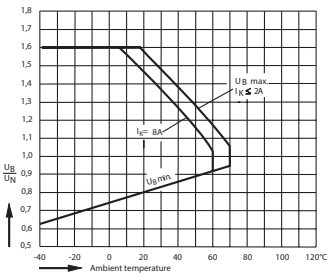
Type Approved
TÜVRheinland
GERMANY

C US
USA/CANADA
E146415

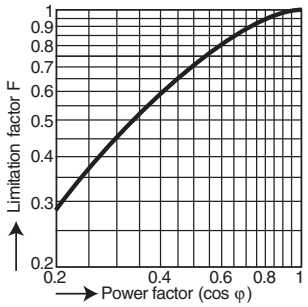
Technical Data

- **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 x1250VA simultaneous)
- **Contact Switching Rate** .....10 operations per second
- **Relay Operate Time** ..... ≤ 15 ms
- **Relay Release Time** ..... ≤ 12 ms
- **Operation Vibration** .....0.35 mm Ampl. max @ 10...55Hz, 5g max
- **Contact Arrangements** 1NO/1NC, 2CO, 2NO*, 2NC*
- **Contact Material**.....AgNi10+0.2µmAu Standard
  .....$AgSnO_2$+0.2µmAu, AgNi10+5µmAu Optional
- **Mechanical Life** .....≥ $50x10^6$ operation cycles
- **Electrical Life** .....$AgSnO_2$ $>2x10^5$, AgNi10 $>10^5$
  .....operation cycles @ 230V AC, 6A, cos φ=1
- **Ambient Temperature**.....-40...+70°C
- **Cover Material** .....Polyamide 6
- **Weight**.....15 g
- More detailed data upon request

Diagrams

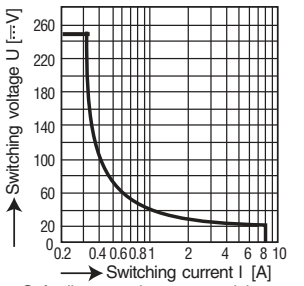


Relay operation voltage vs. ambient temperature



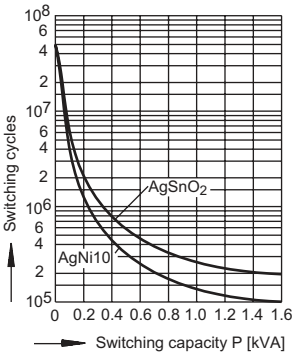
Operations =
Operations (ohmic) x limitation factor F

Limitation factor for inductive loads



Safe disconnection, no remaining arc, max. 1 operation/sec.

Maximum switching power curve



Mechanical life

*Special order.

Safety Relay OA/OW 5669 Data

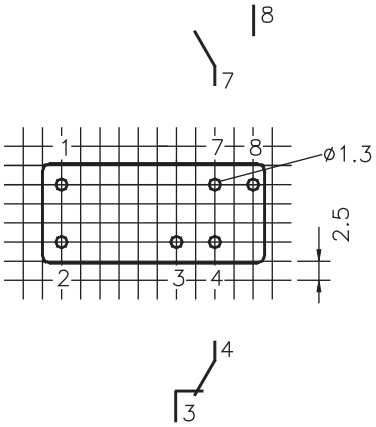
Relay Data			Ordering Information			
Rated Voltage	**Voltage Range**	**Coil Resistance (10%)**	**1 NO/1 NC Type**	**2 CO Type**	**2 NO* Type**	**2 NC* Type**
6V	4.8 - 9.6V	50 Ω	56.O□69.0611□	56.O□69.0600□	56.O□69.0620□	56.O□69.0602□
10V	8.0 - 16.0V	150 Ω	56.O□69.1011□	56.O□69.1000□	56.O□69.1020□	56.O□69.1002□
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

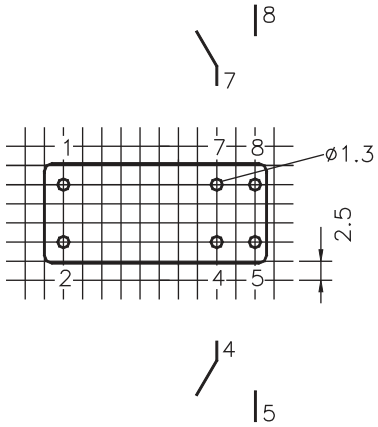
Contact Material, Example:
- C $AgSnO_2$+.2µmAu
- N AgNi10+.2µmAu
- S AgNi0.15+5µmAu

Footprints (solder side)

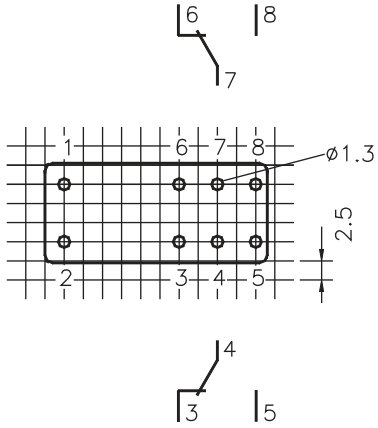
1 NO/1 NC



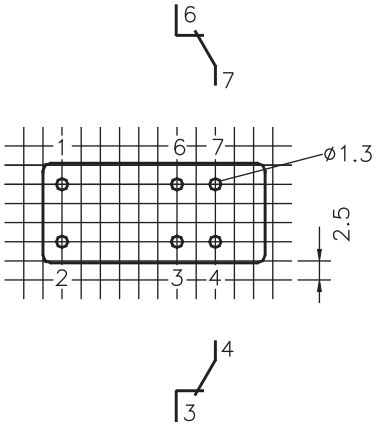
2 NO



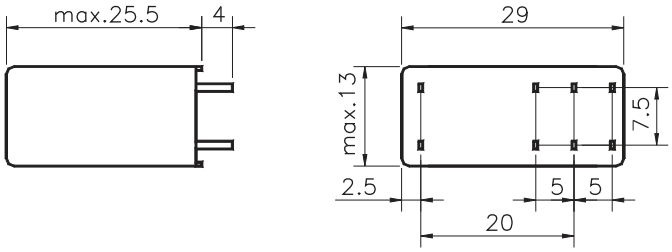
2 CO



2 NC



Dimensions



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

*Special order.