

Safety Relay

OA 5603

Features

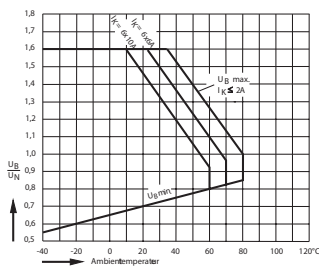
- 8 output contacts
- International approvals: TÜV, UL, cUL
- Quality control check for each safety relay
- Forced-guided contacts, all gold flash plated
- Contact gap > 0.5 mm throughout life of relay
- Various contact materials, mixed contact material optional
- High coil voltage range
- High switching voltage
- High breakdown voltage: contact/coil ≥ 4 KV
contact/contact ≥ 4 KV
- High creeping distance: contact/coil ≥ 8 mm
contact/contact ≥ 5.5 mm
- Crown contacts
- Solid connection between coil and contact housing
- Custom design available,
 - coil voltage
 - coil resistance,
 - contact pressure
 - operate/release time
- IP67 washable



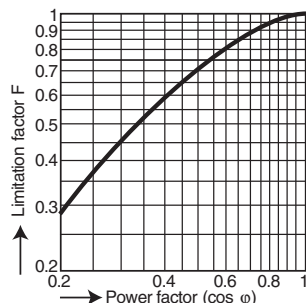
Technical Data

- **Nominal Coil Voltage** 6, 12, 24, 48, 60, 110, DC
- **Coil Power Dissipation** 1.25 - 1.65 W
- **Max. Switching Voltage** 250V DC, 400V AC
- **Max. Switching Current** 10 A
- **Max. Switching Power—DC** 240W
- **Max. Switching Power—AC** 2500VA
- **Contact Switching Rate** 10 operations per second
- **Relay Operate Time** 27 ms
- **Relay Release Time** 5 ms
- **Operation Vibration** 0.35 mm Ampl. max
..... @ 10...55Hz
- **Protection Rating** IP 40
- **Contact Arrangements**
.....2NO/6NC, 3NO/5NC, 4NO/4NC, 5NO/3NC,
.....6NO/2NC, 7NO/1NC
- **Contact Material**
AgSnO₂+0.2μmAu , AgNi10+0.2μmAu , AgNi10+5μmAu
- **Mechanical Life** >30x10⁶ Operation cycles
- **Electrical Life** AgSnO₂ >3x10⁵, AgNi10 >2x10⁵
.....operation cycles @ 230V AC, 10A, cos φ=1
- **Ambient Temperature** -40...+75°C
- **Cover Material** Thermoplast
- **Weight** 95 g
- More detailed data upon request

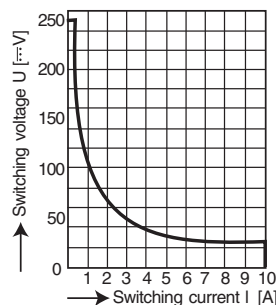
Diagrams



Relay operation voltage vs. ambient temperature

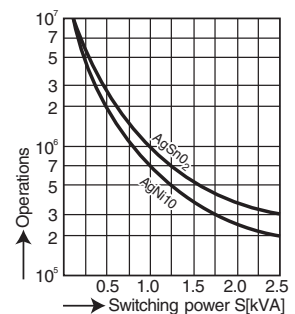


Limitation factor for inductive loads
Operations =
Operations (ohmic) x limitation factor F



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

Maximum switching power curve



Mechanical life

Safety Relay OA 5603 Data

Relay Data

Ordering Information

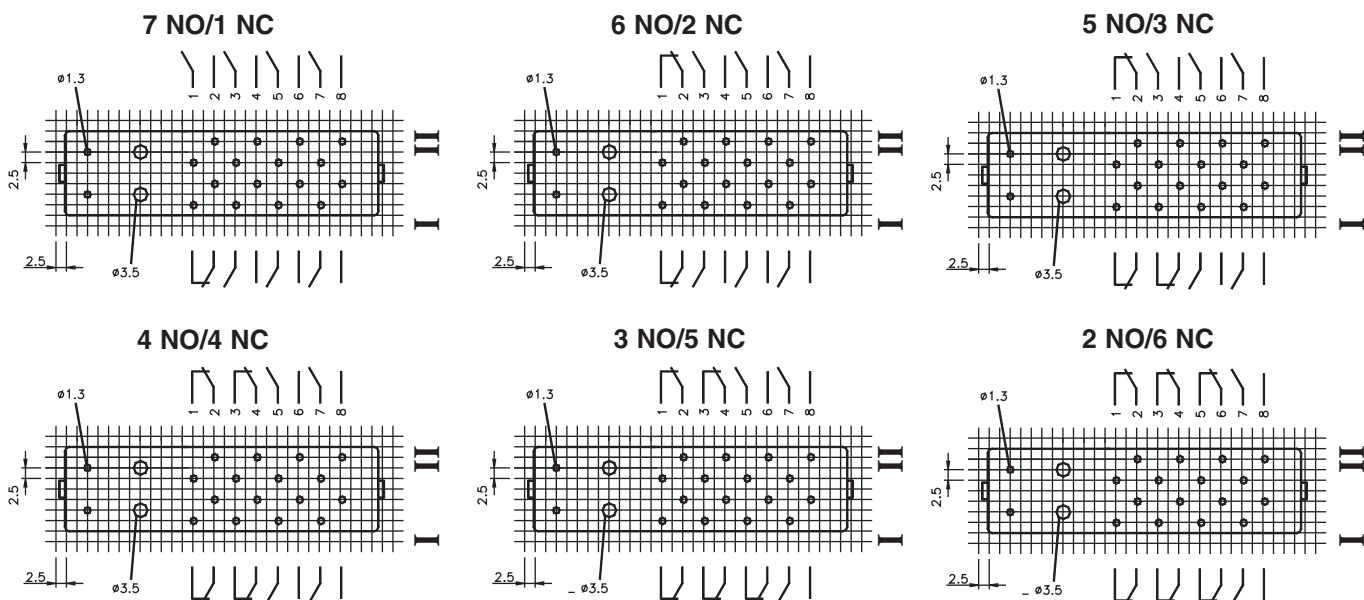
Rated Voltage	Voltage Range	Coil Resistance (10%)	2 NO/6 NC Type	3 NO / 5 NC Type	Coil Resistance (10%)	4 NO / 4 NC Type	5 NO / 3 NC Type	6 NO / 2 NC Type	7 NO / 1 NC Type
6V	4.2 - 9.6V	21 Ω	56.OA03.0626□	56.OA03.0635□	29 Ω	56.OA03.0644□	56.OA03.0653□	56.OA03.0662□	56.OA03.0671□
12V	8.4 - 19.2V	88 Ω	56.OA03.1226□	56.OA03.1235□	112 Ω	56.OA03.1244□	56.OA03.1253□	56.OA03.1262□	56.OA03.1271□
24V	16.8 - 38.4V	370 Ω	56.OA03.2426□	56.OA03.2435□	460 Ω	56.OA03.2444□	56.OA03.2453□	56.OA03.2462□	56.OA03.2471□
48V	33.6 - 76.8V	1400 Ω	56.OA03.4826□	56.OA03.4835□	1800 Ω	56.OA03.4844□	56.OA03.4853□	56.OA03.4862□	56.OA03.4871□
60V	42.0 - 96.0V	2230 Ω	56.OA03.6026□	56.OA03.6035□	2880 Ω	56.OA03.6044□	56.OA03.6053□	56.OA03.6062□	56.OA03.6071□
110V	77.0 - 176.0V	7150 Ω	56.OA03.1126□	56.OA03.1135□	9500 Ω	56.OA03.1144□	56.OA03.1153□	56.OA03.1162□	56.OA03.1171□

Contact Material, Example: □ AgSnO₂+2μmAu

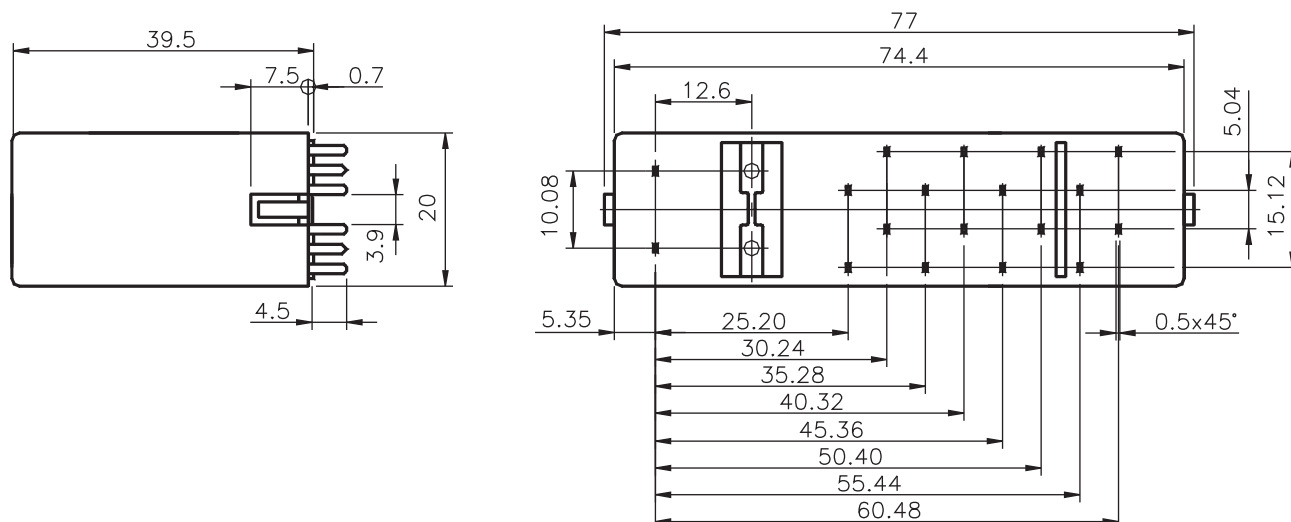
▢ AgNi10+2μmAu

▣ AgNi10+5μmAu

Footprints (solder side)



Dimensions



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