Safety Relay
OA 5603

Features

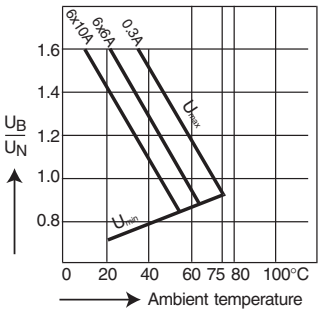
- 8 output contacts
- International approvals: TÜV, UL, cUL, CSA
- Quality control check for each safety relay
- Forced-guided contacts, all gold flash plated
- Contact gap > 0.5 mm throughout life of relay
- Various contact materials, mixed contact material optional
- High coil voltage range
- High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

GERMANY USA/CANADA CANADA

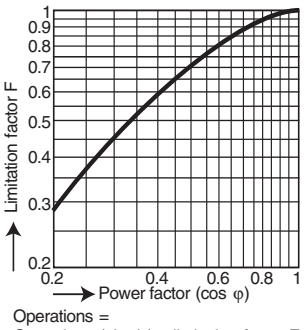
Technical Data

- **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**..... $AgSnO_2$+0.2µmAu , AgNi10+0.2µmAu , AgNi10+5µmAu
- **Mechanical Life**.....$30x10^6$ Operation cycles
- **Electrical Life**.....$AgSnO_2$ $>7x10^5$, AgNi10 $>5x10^5$ .....operation cycles @ 230V AC, 5A, cos φ=1 .....$AgSnO_2$ $>3x10^5$, AgNi10 $>2x10^5$ .....operation cycles @ 230V AC, 10A, cos φ=1
- **Ambient Temperature**.....-25...+75°C
- **Cover Material**.....Thermoplast
- **Weight**.....95 g
- More detailed data upon request

Diagrams

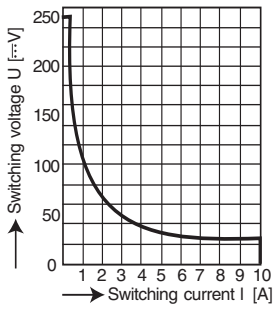


Relay operation voltage vs. ambient temperature



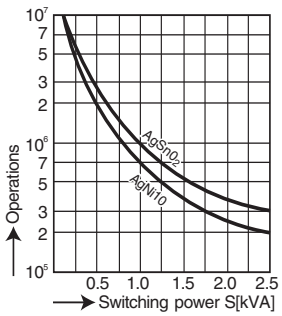
Operations =
Operations (ohmic) x limitation factor F

Limitation factor for inductive loads



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

Maximum switching power curve



Mechanical life

Safety Relay 5603 Data

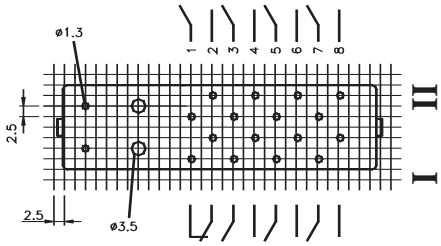
Relay Data / Ordering Information

Rated Voltage	Voltage Range	Coil Resistance	2 NO/6 NC Type	3 NO / 5 NC Type	Coil Resistance	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☐

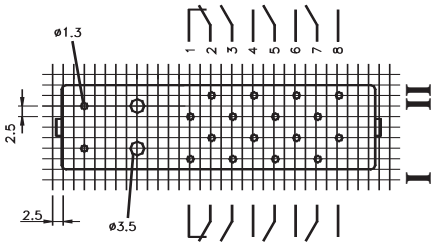
Contact Material, Example: C $AgSnO_2$+.2µmAu
N AgNi10+.2µmAu
S AgNi10+5µmAu

Footprints (Note: Dimensions on the following footprints are not shown at their actual size.)

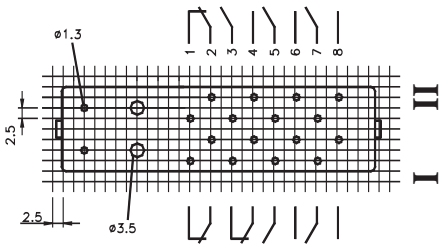
7 NO/1 NC



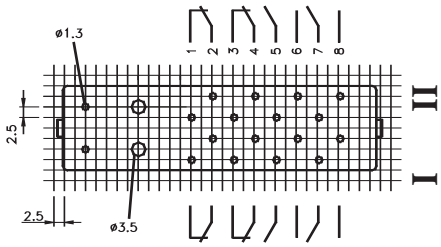
6 NO/2 NC



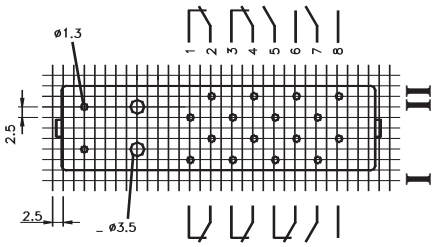
5 NO/3 NC



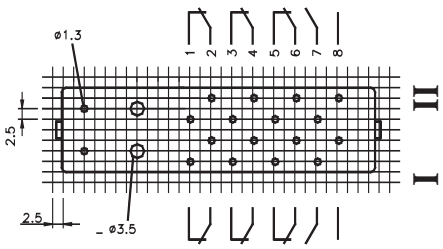
4 NO/4 NC



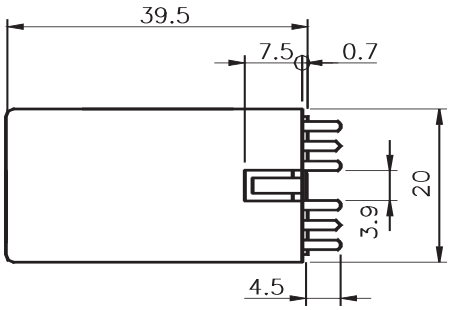
3 NO/5 NC

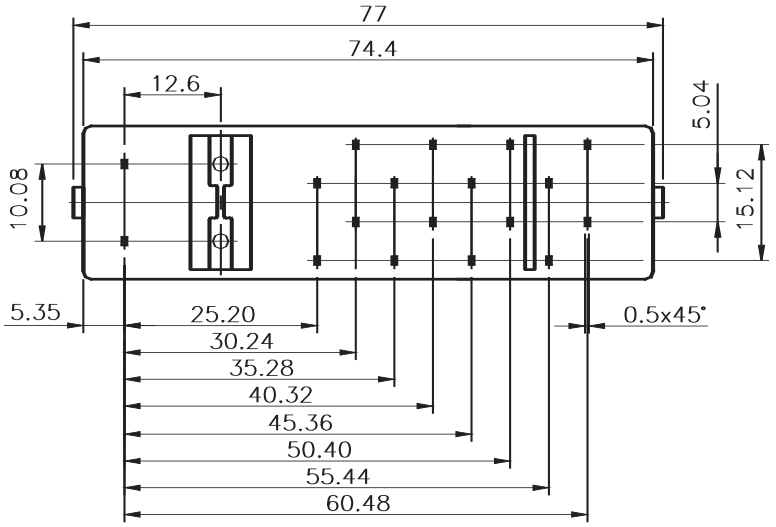


2 NO/6 NC



Dimensions (Note: Shown at their actual size.)





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