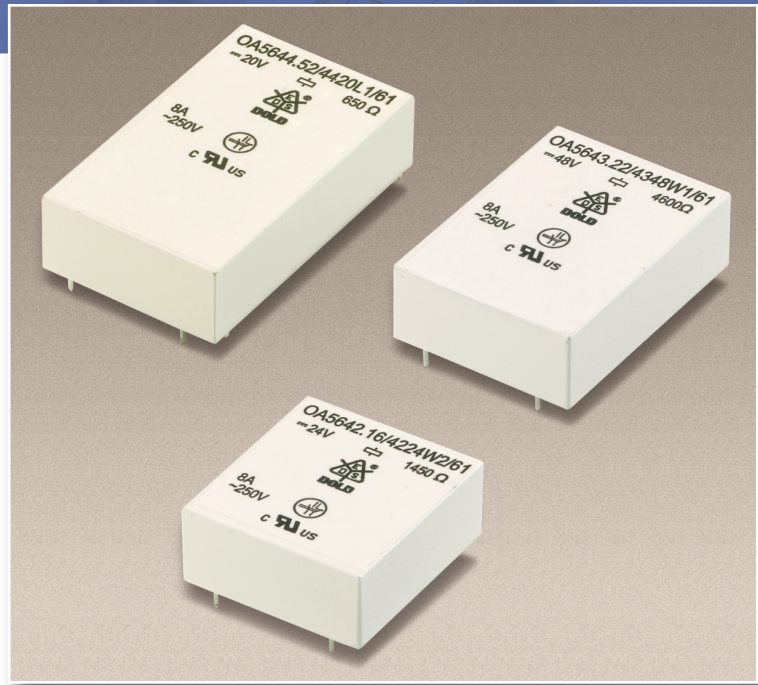


Safety Relay OA 5642/43/44

Features

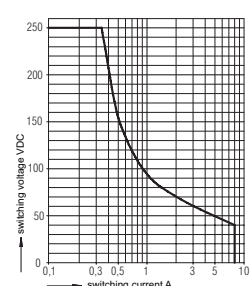
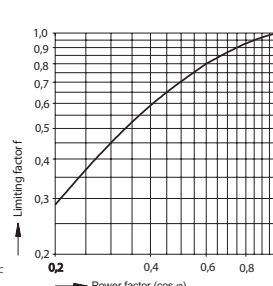
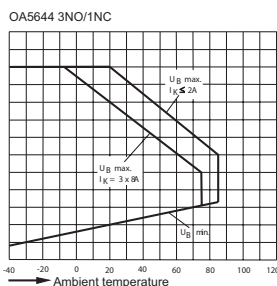
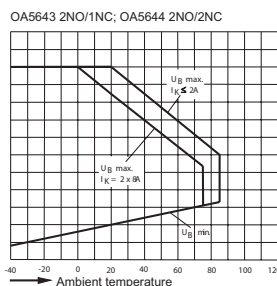
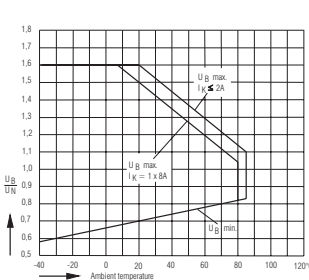
- 2-4 output contacts
- International approvals: TÜV, UL, cUL
- Quality control check for each safety relay
- Forced-guided contacts, all gold flash plated
- Contact Gap > 0.5 mm throughout life of relay
- Various contact materials, mixed contact material optional
- High coil voltage range
- High switching voltage
- High breakdown voltage: contact/coil ≥ 4 kV
- High creeping distance: contact/coil ≥ 5.5 mm
contact/contact ≥ 5.5 mm
- Protection Rating RTIII wash proof
- Compact size- only 10.3 mm height
- SMD component can be mounted under relay
- Custom design available,
 - coil voltage
 - operate/release time
 - contact pressure
 - coil resistance
- Special reflow solder version available for SMD applications
- Standard Pack:
 - OA5642:** 32 piece sleeve or 320 piece case
 - OA5643:** 28 piece sleeve or 280 piece case
 - OA5644:** 20 piece sleeve or 200 piece case



Technical Data

- **Nominal Coil Voltage**6, 12, 21, 24, 48, 60, 110, DC
- **Coil Power Dissipation**0.4/0.5/0.65 W
- **Min./Max. Switching Voltage**AC/DC10V / 250VDC, 400VAC¹
- **Min./Max. Switching Current**10mA / 8 A¹
- **Min./Max. Switching Power — DC**0.1W / 200W¹
- **Min./Max. Switching Power — AC**0.1VA / 2000VA¹
- **Contact Switching Rate**20 operations per second
- **Relay Operate Time** ≤ 10 ms
- **Relay Release Time** ≤ 5 ms
- **Operation Vibration**0.35 mm Ampl. max
@ 10...60Hz, 5g max
- **Protection Rating**RTIII wash proof
- **Contact Arrangements**1NO/1NC, 2NO/1NC, 2NO/2NC, 3NO/1NC,
- **Contact Material**AgNi10+0.2 μ mAu, AgSnO₂+0.2 μ mAu, AgNi10+5 μ mAu
- **Mechanical Life**>40x10⁶ operation cycles
- **Electrical Life**>10⁵ operation cycles @ 230V AC, 8A, cos φ =1
- **Ambient Temperature**-40...+85°C
- **Cover Material**Thermoplastic
- **Weight**14/15/16 g
- **Wave Solder Temperature/Duration**260°C/5s
- More detailed data upon request

Diagrams



Relay operation voltage vs. ambient temperature

¹ AgNi10+5 μ mAu contact material has limited switching capacity (Min./Max. 2V/60VAC/DC, 2mA/0.3A, 10mVA/12VA, 10mW/12W)

Operations =
Operations (ohmic) x
limitation factor F

Limitation factor for inductive loads

Maximum switching power curve

Relay Data

Ordering Information

Rated Voltage	Voltage Range	Coil Resistance (10%)	1 NO/1 NC Type	Coil Resistance (10%)	2NO/1NC Type	Coil Resistance (10%)	3NO/1NC Type	2NO/2NC Type
6V	4.2 - 9.6V	90 Ω	56.OA42.0611□	70 Ω	56.OA43.0621□	55 Ω	56.OA44.0631□	56.OA44.0622□
12V	8.4 - 19.2V	370 Ω	56.OA42.1211□	290 Ω	56.OA43.1221□	230 Ω	56.OA44.1231□	56.OA44.1222□
21V	15.0 - 33.6V	1050 Ω	56.OA42.2111□	840 Ω	56.OA43.2121□	680 Ω	56.OA44.2131□	56.OA44.2122□
24V	16.8 - 38.4V	1450 Ω	56.OA42.2411□	1150 Ω	56.OA43.2421□	900 Ω	56.OA44.2431□	56.OA44.2422□
48V	33.6 - 76.8V	6000 Ω	56.OA42.4811□	4600 Ω	56.OA43.4821□	3600 Ω	56.OA44.4831□	56.OA44.4822□
60V	42.0 - 96.0V	9250 Ω	56.OA42.6011□	7100 Ω	56.OA43.6021□	5600 Ω	56.OA44.6031□	56.OA44.6022□
110V	77.0 - 176.0V	31000 Ω	56.OA42.1111□	24000 Ω	56.OA43.1121□	18500 Ω	56.OA44.1131□	56.OA44.1122□

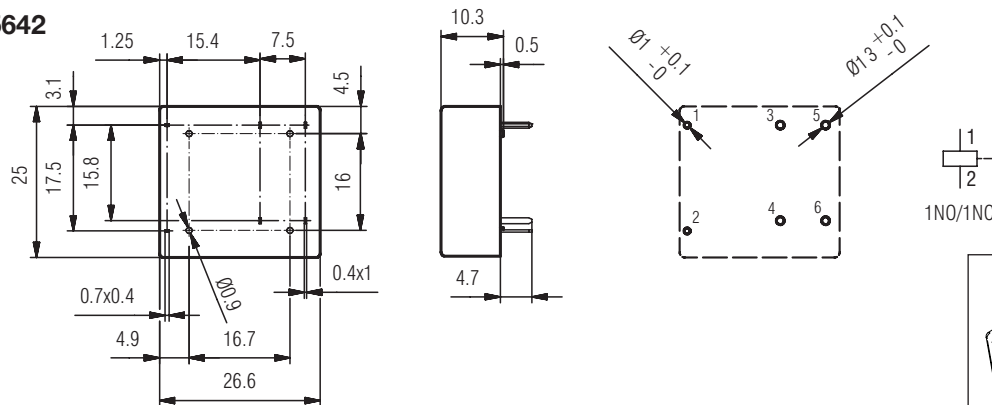
Contact Material, Example: C AgSnO₂+2μmAu

N AgNi10+.2μmAu

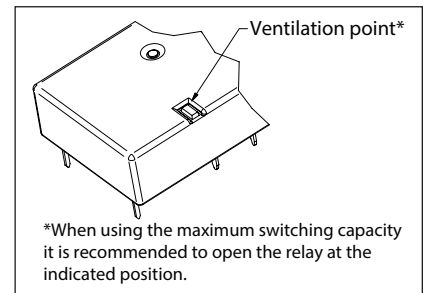
S AgNi10+5μmAu

Dimensions & Pin Configurations

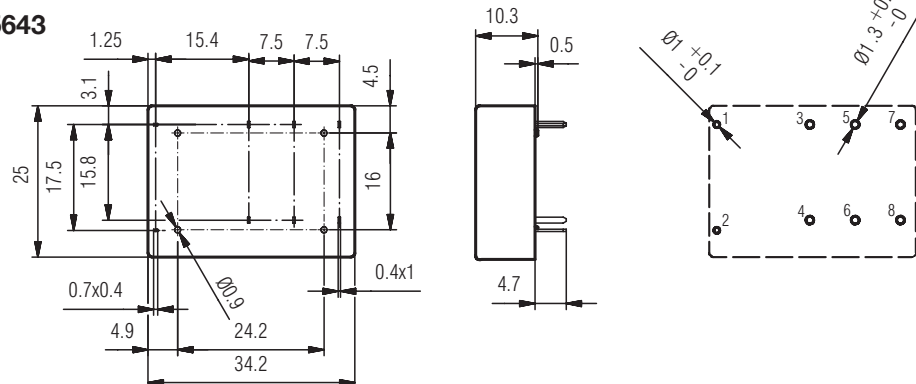
5642



1NO/1NC

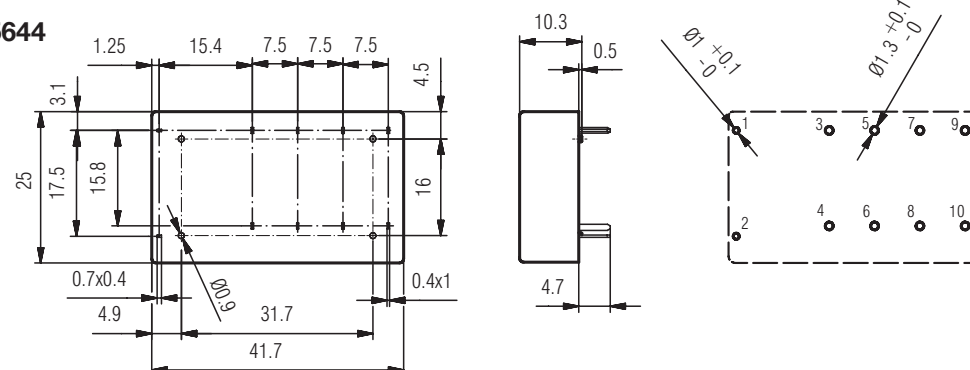


5643



2NO/1NC

5644



3NO/1NC

2NO/2NC

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