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Hard copy product catalogues, and CDRoms have been published describing Kuhnke Pneumatics, Solenoids, Relays and Electronics; some divided into different books. A list of current publications is available on this web site or from our sales offices. Some may be available for download, but as substantially larger files.

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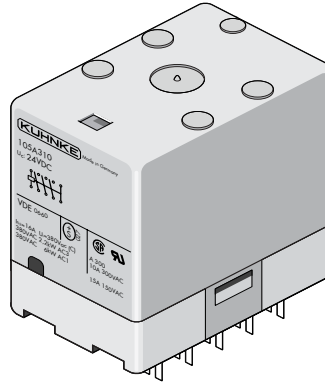
Important Note

The information shown in these documents is for guidance only. No liability is accepted for any errors or omissions. The designer or user is solely responsible for the safe and proper application of the parts, assemblies or equipment described.



Relay-Contactor 105

- Standard type , , 
- Mechanically guided contacts for security controls in accordance with DIN VDE 0113 part 1
- High switching capability through bridge contacts
- High contact making reliability through twin contacts
- Version for printed circuit



Order Code

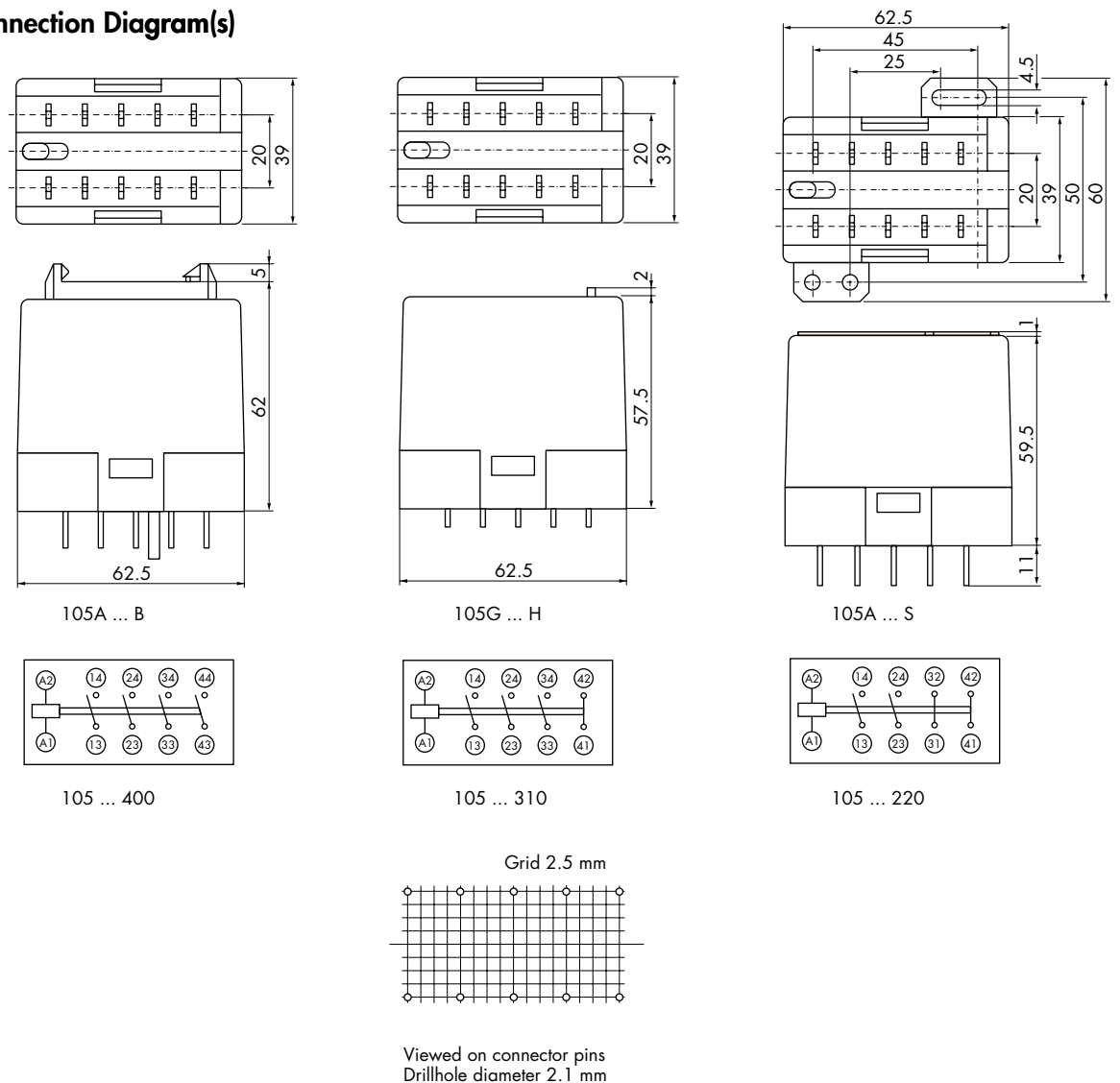
| | | | | | | | | |
|--|------------|----------|------------|---|----------|-------------|-----------|---|
| Order code | 105 | A | 400 | | - | 24 V | DC | |
| Type of relay | 105 | | | | | | | |
| Model | | | | | | | | |
| A Plug-in type for socket 6.3 mm or 2 x B 2.8 resp. in accordance with DIN 46247 | | A | | | | | | |
| G For printed circuit | | G | | | | | | |
| Contact arrangement | | | | | | | | |
| 400 4 N/O | | | 400 | | | | | |
| 310 3 N/O, 1 N/C | | | 310 | | | | | |
| 220 2 N/O, 2 N/C | | | 220 | | | | | |
| Contact material, type of contact | | | | | | | | |
| - Hard silver (no code letter) | | | | - | | | | |
| C AgCdO (model A only) | | | | C | | | | |
| F Twin contacts hard silver | | | | F | | | | |
| Nominal operation coil voltage (see coil data) | | | | | | | | |
| 24 V | | | | | 24 V | | | |
| Coil current type | | | | | | | | |
| DC Direct current | | | | | | | DC | |
| AC Alternating current 50 / 60 Hz with bridge rectifier | | | | | | | AC | |
| Extensions | | | | | | | | |
| - None (no code letter) | | | | | | | | - |
| B Quick-action fastening for rail EN50022-35 x 7.5 | | | | | | | | B |
| H Manual override (combination B and H not possible) | | | | | | | | H |
| S Screw mounting | | | | | | | | S |



Contact Data

| | 105 | |
|-------------------------------------|---|---|
| Contact arrangement | 4 N/O 3 N/O and 1 N/C 2 N/O and 2 N/C | |
| Contact arrangement | Single contact | Control contact |
| Type of contact | Bridge contact | Bridge contact as twin contact |
| Contact material | Hard silver AgCdO | Hard silver |
| Nominal contact current | 16 A | 10 A |
| Inrush current | ≤ 60 A | ≤ 20 A |
| Nominal contact voltage | 400 VAC / DC | |
| Max. switching capacity (resistive) | 6000 VA | 3000 VA |
| Min. switching capacity | 200 mA / 60 VDC | 50 mA / 20 VDC |
| Switching capacity | AC1 AC3 DC1 AC4 | 3 kW / 400 V 0.75 kW / 400 V 100 W (for security circuit in accordance with professional association) not suitable |

Dimensions, Connection Diagram(s)





General Data

| 105 | | | |
|---|--|---|---|
| Pull-in-time | approx. 25 ms | | |
| Drop-out time | approx. 8 ms DC, approx. 35 ms AC | | |
| Bounce time | approx. 5 ms | | |
| Mechanical service life | > 10 x 10 ⁶ switching cycles | | |
| Test voltage | | | |
| Coil - contact | 2500 VAC | | |
| Contact - contact | 2500 VAC | | |
| Insulation group VDE 0110b/2.79 | C380 | | |
| Short-circuit protection VDE 0660 part 200 | 1000 A | | |
| Ambient temperature | -25 °C to +60 °C | | |
| Vibration resistance (30 - 100 Hz) | > 4 g | | |
| Weight | approx. 260 g | | |
| Operating range | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">DC Class 2 (0.85 - 1.1 U_N)</td> <td style="text-align: center;">AC, 50 / 60 Hz Class 2 (0.85 - 1.1 U_N)</td> </tr> </table> | DC Class 2 (0.85 - 1.1 U _N) | AC, 50 / 60 Hz Class 2 (0.85 - 1.1 U _N) |
| DC Class 2 (0.85 - 1.1 U _N) | AC, 50 / 60 Hz Class 2 (0.85 - 1.1 U _N) | | |
| Pull-in after coil excitation with U _N at T _U | 35 °C | | |
| Drop-out | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">> 0.05 U_N</td> <td style="text-align: center;">> 0.15 U_N</td> </tr> </table> | > 0.05 U _N | > 0.15 U _N |
| > 0.05 U _N | > 0.15 U _N | | |

Coil Data

| Coil voltage DC* | 105 Pull-in power approx. 1.3 W Nom. operation coil power approx. 3.6 W | | Coil voltage AC* | 105 Pull-in power approx. 1.5 VA Nom. operation coil power approx 4.2 VA. | |
|---------------------|---|---------------------|---------------------|---|---------------------|
| | Nominal voltage (V) | Nom. resistance (Ω) | | Nominal current (mA) | Nominal voltage (V) |
| 12 | 41 | 290 | 12 | 32 | 340 |
| 24 | 151 | 160 | 24 | 120 | 180 |
| 40 | 473 | 85 | 42 | 390 | 97 |
| 60 | 968 | 62 | 60 | 780 | 69 |
| 110 | 3370 | 33 | 110 | 2710 | 37 |
| 220 | 13700 | 16 | 230 | 13400 | 15 |

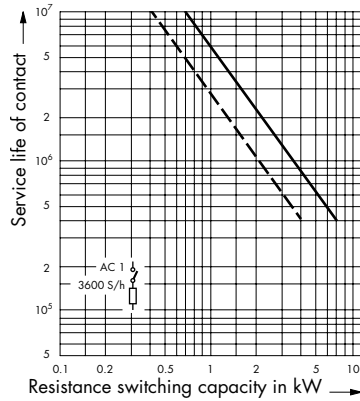
* Other voltages on request



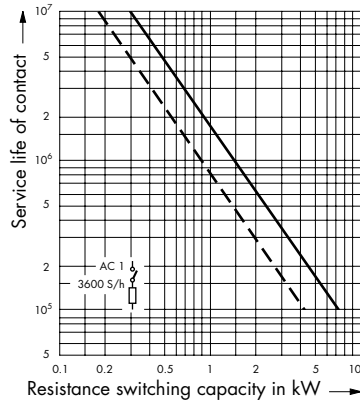
Electrical Service Life

Electrical Service Life AC 1

90 % operating
 ——— 400 V
 - - - - 230 V



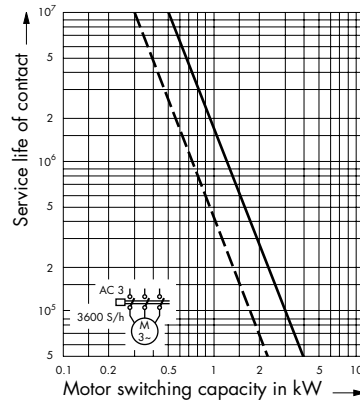
Single contacts



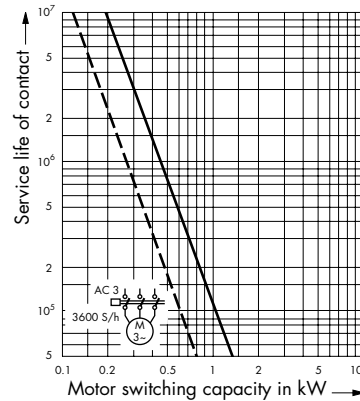
Control contacts

Electrical Service Life AC 3

90 % operating
 ——— 400 V
 - - - - 230 V



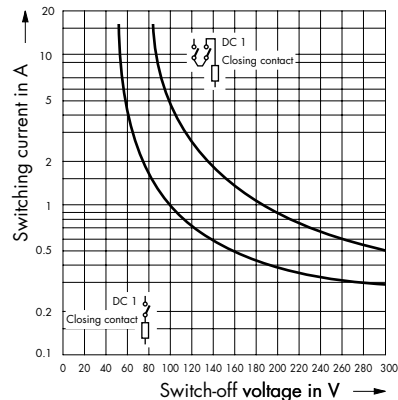
Single contacts



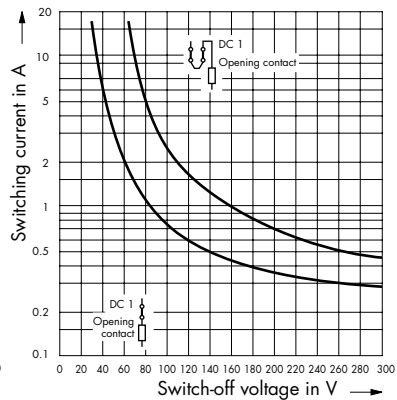
Control contacts

Switching Capability DC 1

90 % operating



Single contact closing contact



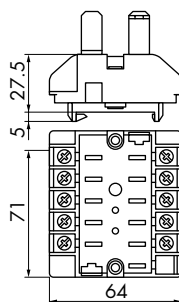
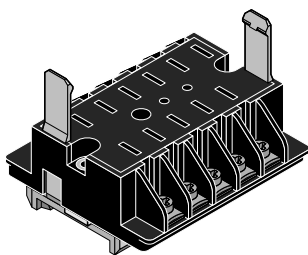
Single contact opening contact



Order Specifications for Accessories

| Relay | 105 |
|--|---------|
| Socket for screw connection with quick-action fastening | Z320.02 |

Socket Z320.02



| Socket | Z320.02 |
|---|--|
| Terminal capacity solid conductor flexible conductor with ferrule | 2 x 2.5 mm ² 2 x 1.5 mm ² |
| Terminal designation | in accordance with EN50005 |
| Mounting | Rail EN50022-35 x 7.5/15 |
| Screw terminals | Head screws metric M4 |
| Torque in accordance with DIN EN 60999 | 1.2 Nm |
| Nominal current | 16 A |
| Insulation group VDE 0110b/2.79 | C380 |
| Weight | 110 g |
| Retaining clip | enclosed retaining clips |