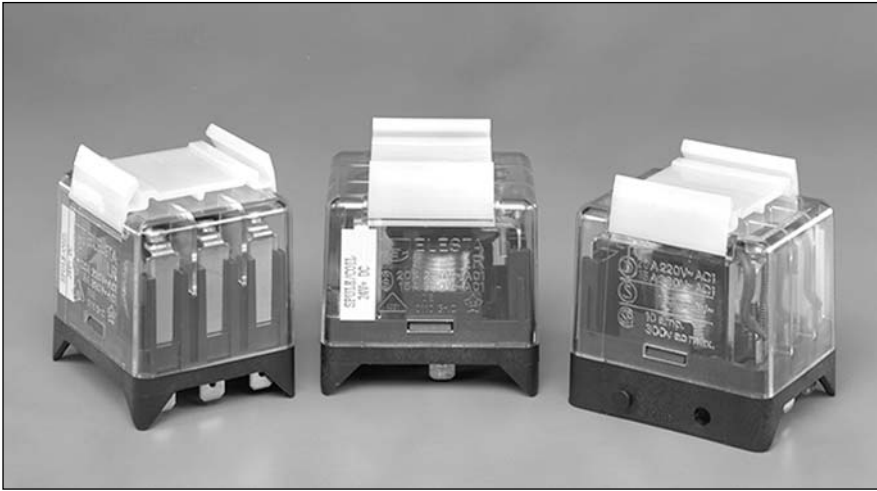


LR-power relay



the power relay LR

LR relays are power relays which convince by her brilliant simplicity. The mature and simple construction will predestine this relay for the rough and uncompromising use.

By using best materials and because of the simple construction a max. mechanical and electrical life time was achieved.

The special advantages of this mature relay lie in the high switching power as well as in the low power consumption of the coil.

The LR relay is available in AC- and also in DC- version

features

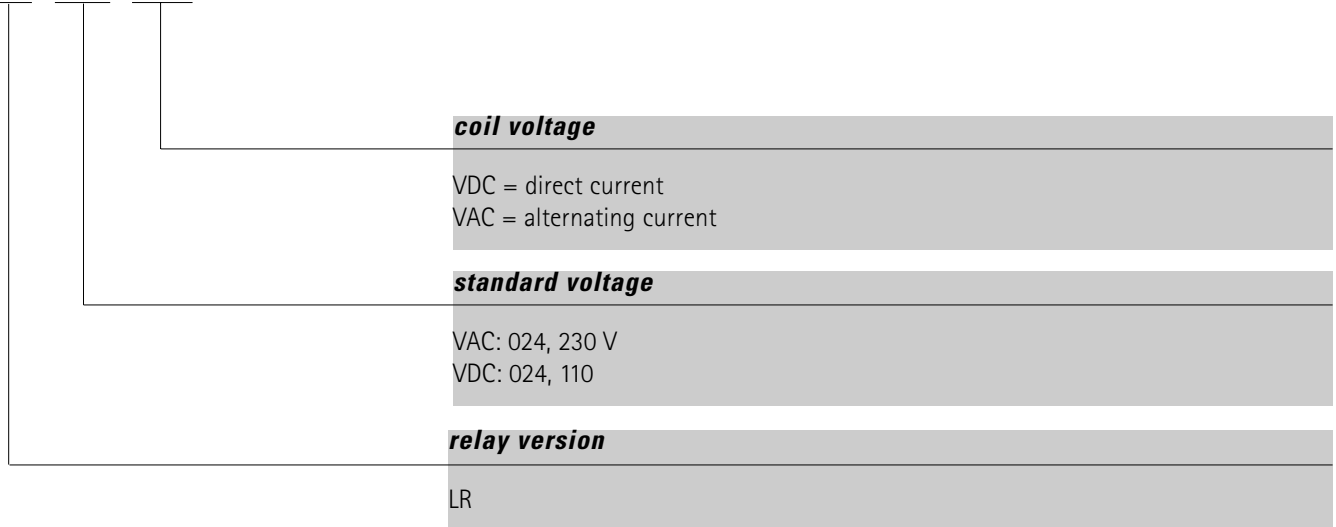
- simple construction
- high switching power
- low coil power
- extraordinary life time
- DIN rail mountable

applications

- switching of short-circuit runner engines
- radiators in household appliance
- radiators in electromechanical ovens

type number key

LR 024 VDC



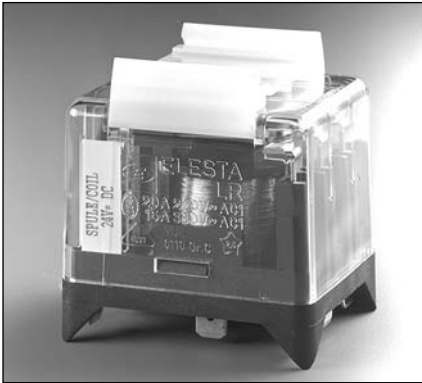
order sample

LR 230 VAC

- 3 normally open contacts
- coil voltage 230 VAC
- AMP connections
- DIN-rail installation



LR - power relay



Power relays especially for switching high AC- loads.

order numbers

| | |
|----------------|------------|
| serial version | LR 220 VAC |
| | LR 24 VDC |

contact specifications

(see data sheet for curves)

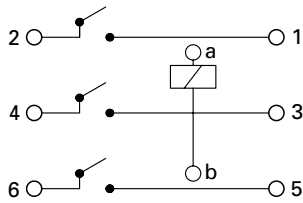
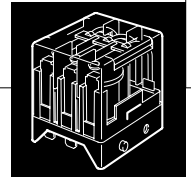
| | |
|----------------------------|--|
| contact material | AgCdO |
| contact type | single contact |
| nominal switching capacity | 250 VAC 20A AC1 5000 VA 400 VAC 15A AC1 |
| electric life expectancy | app. 900'000 operations 250 VAC 20A AC1 (360 Schaltung/h) |
| inrush current max. | 50A for 200 ms |
| switching current range | 500mA to 20A |
| switching power range | 8VA(W) to 5000VA |

general data

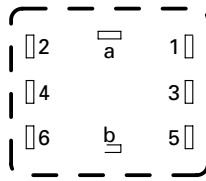
| | |
|-------------------------------------|-----------------------------|
| max. switching frequency mechanical | 15 |
| mechanic life expectancy | 20 Mio. |
| pull-in time | 13 ms (VDC) /6-14 ms (VAC) |
| release time | 2,5 ms (VDC) /3-12 ms (VAC) |
| bounce time | 2 ms (VDC) /3 - 8 ms (VAC) |
| shock resistance | AK: 10 g |
| test voltage, coil/contact | 2'500 V _{eff} |
| test voltage, open contact | 2'500 V _{eff} |
| insulation resistance | >10 ¹² Ohm |
| weight | 120 g |
| installation situation | any |
| ambient temperature max. | +60 °C |

tests, instructions

| | |
|------------------|----------------------------|
| certificates | CSA, VDE |
| insulation group | VDE 0110 / group C 250 VAC |

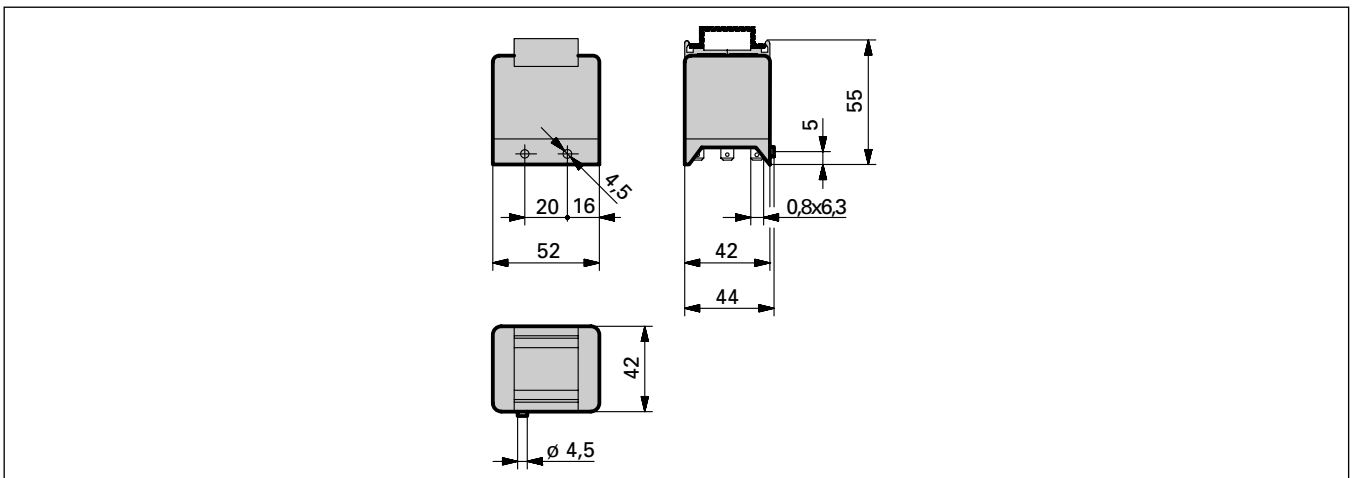


circuit diagram



AMP connection side

dimensions



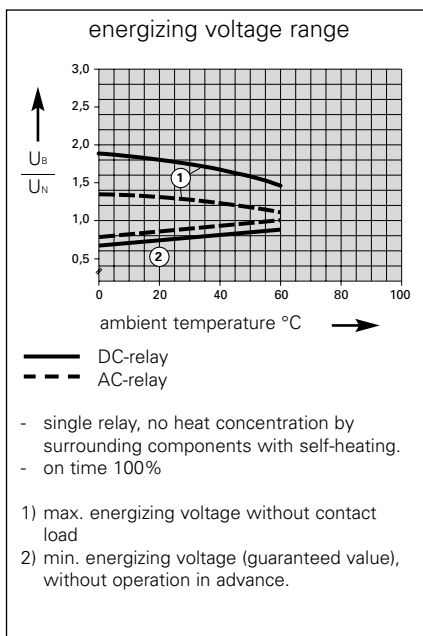
coil specifications

standard coils for direct current (other voltages on enquiry)

| rated voltage VDC | pull-in voltage at 20 °C | reset voltage at 20 °C | nominal current mA | resistance Ohm at 20 °C | tolerance % |
|-------------------|--------------------------|------------------------|--------------------|-------------------------|-------------|
| 12 | 9 | ≥ 0,6 | 114 | 105 | +/-10 |
| 24 | 18 | ≥ 1,2 | 58,5 | 410 | +/-10 |
| 48 | 36 | ≥ 2,4 | 30,0 | 1'600 | +/-10 |
| 110 | 82,5 | ≥ 5,5 | 13,8 | 8'000 | +/-10 |

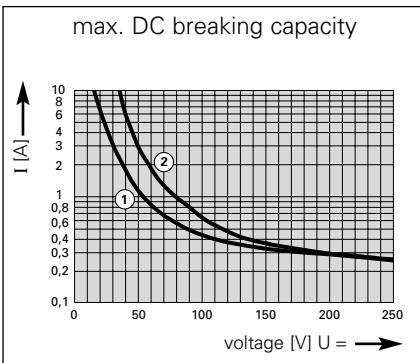
standard coils for alternated current (other voltages on enquiry)

| VAC | | | | | |
|-----|------|-------|-----|-------|-------|
| 12 | 10,2 | ≥ 0,6 | 260 | 10 | +/-10 |
| 24 | 20,4 | ≥ 1,2 | 130 | 40 | +/-10 |
| 48 | 40,8 | ≥ 2,4 | 60 | 180 | +/-10 |
| 110 | 93,5 | ≥ 5,5 | 29 | 950 | +/-10 |
| 220 | 187 | ≥ 11 | 14 | 3'900 | +/-10 |



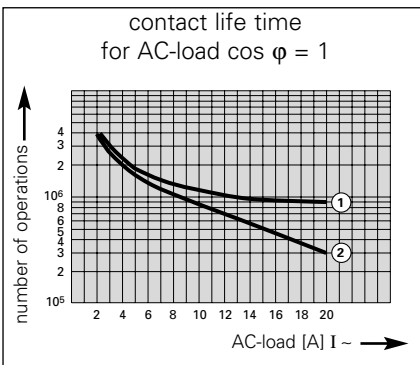
LR - contact specifications

AgCdO



- 1 inductive load $L/R = 40$ ms
- 2 resistive load

| | |
|----------------------------|--|
| data valid for relay | LR |
| contact material | AgCdO |
| contact type | single contact |
| nominal switching capacity | 250VAC 20A AC1 5000VA 400VAC 15A AC1 |
| electric life expectancy | app. 900'000 operations 250 VAC 20A AC1 (360 Schaltung/h) |
| inrush current max. | 50A for 200 ms |
| switching current range | 500mA to 20A |
| switching power range | 8VA(W) to 5000VA(W) |



- 1: for 220 VAC (1-phase)
 - $I < 10$ A, max. 360 operations/h
 - $I > 10$ A, max. 180 operations/h
- 2: for 3 x 380 VAC (3-phase, star- or triangle circuit)
 - $I < 10$ A, max. 360 operations/h
 - $I > 10$ A, max. 180 operations/h

