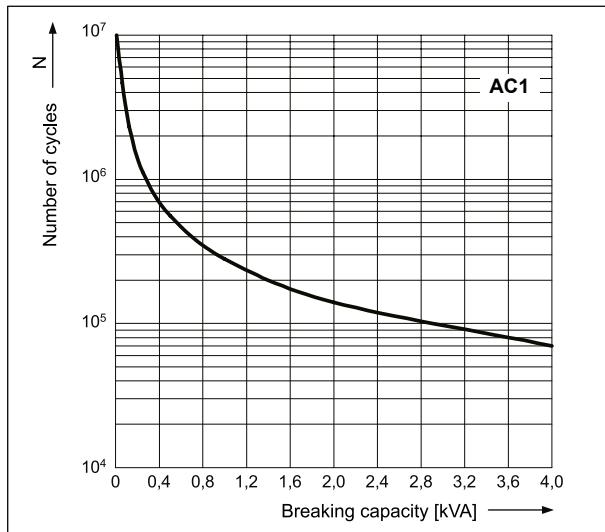


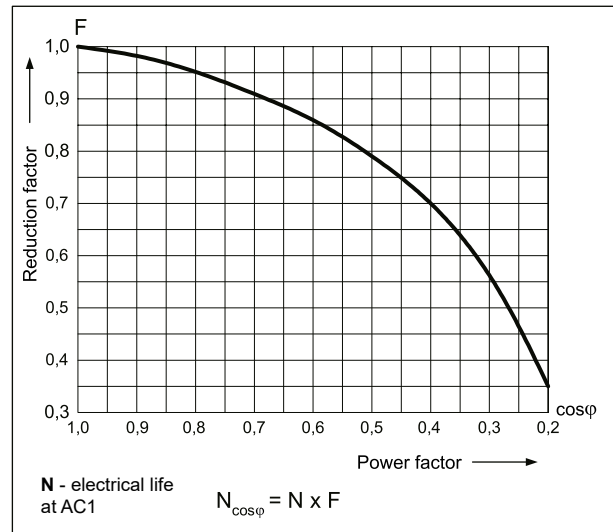
**Electrical life at AC resistive load.**  
Switching frequency: 600 cycles/hour

Fig. 1



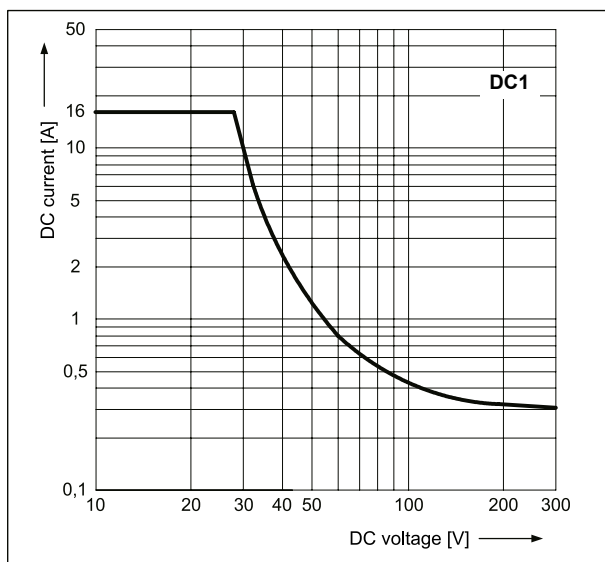
**Electrical life reduction factor at AC inductive load**

Fig. 2



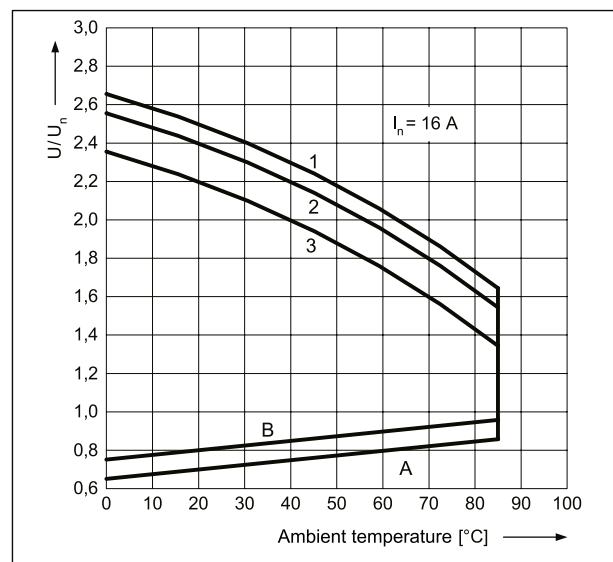
**Max. DC resistive load breaking capacity**

Fig. 3



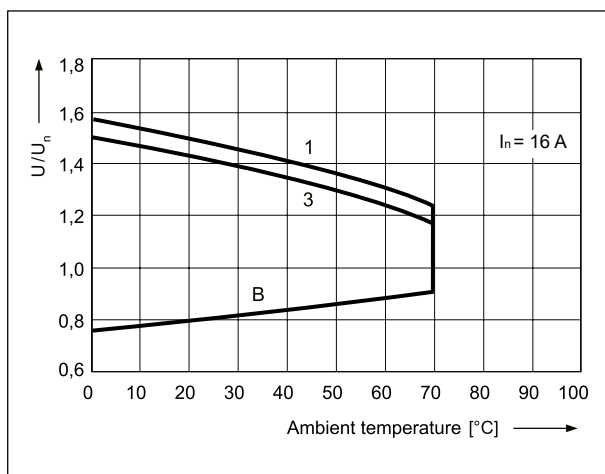
**Coil operating range - DC**

Fig. 4



**Coil operating range - AC 50 Hz**

Fig. 5



**Description of Fig. 4 and 5**

**A** - relations between make voltage and ambient temperature at no load on contacts. Coil temperature and ambient temperature are equal before coil energizing. Make voltage is not higher than the value read on Y axis (multiplication of rated voltage).

**B** - relations between make voltage and ambient temperature after initial coil heating up with  $1,1 U_n$ , at continues load of  $I_n$  on contacts. Make voltage is not higher than the value read on Y axis (multiplication of rated voltage).

**1, 2, 3** - values on Y axis represent allowed overvoltage on coil at certain ambient temperature and contact load:

- 1** - no load
- 2** - 50% of rated load
- 3** - rated load

## Mounting

Relays **RM85** ④ are designed for: • direct PCB mounting • screw terminals plug-in sockets **GZT80** ④ ⑤ and **GZM80** ④ ⑤ with clip **GZT80-0040** or **GZM80-0041**; sockets **GZS80** ④ ⑤ with clip **GZS-0040** or **GZM80-0041**; sockets **GZF80** ④ with clip **GZM80-0041**, 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with one M3 screw • spring terminals plug-in sockets **GZMB80** ④ ⑥ with clip **GZMB80-0040** or **GZM80-0041**, 35 mm rail mount acc. to PN-EN 60715. Signalling / protecting modules **type M...** ⑦ are available with sockets (see page 10) • plug-in sockets for PCB mounting **EC 50** with clip **MP16-2**, MH16-2; plug-in sockets **PW80** with clip **MH16-2**; plug-in sockets **GD50** with clip **MP16-2**, GD-0016, MH16-2.

④ Relate to the special versions - relays with transparent cover: the distance of min. 5 mm between the mounting relays. ⑤ Loads above 12 A (GZT80, GZM80) or 10 A (GZS80, GZF80, GZMB80) require bridging pairs of terminals: 11 with 21, 12 with 22, 14 with 24 - see page 2. ⑥ Plug-in sockets **GZT80**, **GZM80**, **GZS80** may be linked with interconnection strip type **ZGGZ80** (see page 11). ⑦ For sockets **GZMB80** - see page 7 (wire connection). ⑧ For sockets **GZF80** not applicable modules type **M...**

Coil data - DC voltage version

Table 1

| Coil code   | Rated voltage<br>V DC | Coil resistance<br>at 20 °C<br>Ω | Acceptable<br>resistance | Coil operating range<br>V DC |                 |
|-------------|-----------------------|----------------------------------|--------------------------|------------------------------|-----------------|
|             |                       |                                  |                          | min. (at 20 °C)              | max. (at 20 °C) |
| 1003        | 3                     | 22                               | ± 10%                    | 2,1                          | 7,6             |
| 1005        | 5                     | 60                               | ± 10%                    | 3,5                          | 12,7            |
| 1006        | 6                     | 90                               | ± 10%                    | 4,2                          | 15,3            |
| 1009        | 9                     | 200                              | ± 10%                    | 6,3                          | 22,9            |
| <b>1012</b> | <b>12</b>             | <b>360</b>                       | <b>± 10%</b>             | <b>8,4</b>                   | <b>30,6</b>     |
| 1018        | 18                    | 710                              | ± 10%                    | 12,6                         | 45,9            |
| <b>1024</b> | <b>24</b>             | <b>1 440</b>                     | <b>± 10%</b>             | <b>16,8</b>                  | <b>61,2</b>     |
| 1036        | 36                    | 3 140                            | ± 10%                    | 25,2                         | 91,8            |
| 1048        | 48                    | 5 700                            | ± 10%                    | 33,6                         | 122,4           |
| 1060        | 60                    | 7 500                            | ± 10%                    | 42,0                         | 153,0           |
| 1110        | 110                   | 25 200                           | ± 10%                    | 77,0                         | 280,0           |

The data in bold type relate to the standard versions of the relays.

Coil data - AC 50/60 Hz voltage version

Table 2

| Coil code   | Rated voltage<br>V AC | Coil resistance<br>at 20 °C<br>Ω | Acceptable<br>resistance | Coil operating range<br>V AC 50 Hz |                 |
|-------------|-----------------------|----------------------------------|--------------------------|------------------------------------|-----------------|
|             |                       |                                  |                          | min. (at 20 °C)                    | max. (at 20 °C) |
| 5012        | 12                    | 100                              | ± 10%                    | 9,6                                | 13,2            |
| <b>5024</b> | <b>24</b>             | <b>400</b>                       | <b>± 10%</b>             | <b>19,2</b>                        | <b>28,8</b>     |
| 5048        | 48                    | 1 550                            | ± 10%                    | 38,4                               | 57,6            |
| 5060        | 60                    | 2 600                            | ± 10%                    | 48,0                               | 72,0            |
| 5110        | 110                   | 8 900                            | ± 10%                    | 88,0                               | 132,0           |
| 5115        | 115                   | 9 600                            | ± 10%                    | 92,0                               | 138,0           |
| 5120        | 120                   | 10 200                           | ± 10%                    | 96,0                               | 144,0           |
| 5220        | 220                   | 35 500                           | ± 10%                    | 176,0                              | 264,0           |
| <b>5230</b> | <b>230</b>            | <b>38 500</b>                    | <b>± 10%</b>             | <b>184,0</b>                       | <b>276,0</b>    |
| 5240        | 240                   | 42 500                           | ± 15%                    | 192,0                              | 288,0           |

The data in bold type relate to the standard versions of the relays.