

PI84 with socket GZT80 interface relays

RM84 + GZT80



- Interface relay **PI84 with socket GZT80** consists of: electromagnetic relay **RM84**, grey plug-in socket **GZT80**, signalling / protecting module: version **LD** - M41G or M43G (L - LED green, D - diode, polarization N: +A1/-A2); version **LV** - M91G or M93G (L - LED green, V - varistor), retainer / retractor clip **GZT80-0040** (plastic), white description plate **GZT80-0035**
- 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with one M3 screw
- May be linked with interconnection strip type **ZGGZ80**
- Recognitions, certifications, directives: recognitions RM84, RoHS, **CE EAC**

Contact data

| | | |
|--------------------------------|------|----------------------------------------|
| Number and type of contacts | | 2 CO |
| Contact material | | AgNi |
| Rated / max. switching voltage | AC | 250 V / 440 V |
| Min. switching voltage | | 5 V |
| Rated load (capacity) | AC1 | 8 A / 250 V AC |
| | AC15 | 3 A / 120 V 1,5 A / 240 V (B300) |
| | AC3 | 550 W (single-phase motor) |
| | DC1 | 8 A / 24 V DC (see Fig. 3) |
| | DC13 | 0,22 A / 120 V 0,1 A / 250 V (R300) |
| Min. switching current | | 5 mA |
| Max. inrush current | | 15 A |
| Rated current | | 8 A |
| Max. breaking capacity | AC1 | 2 000 VA |
| Min. breaking capacity | | 0,3 W |
| Contact resistance | | ≤ 100 mΩ |
| Max. operating frequency | | |
| • at rated load | AC1 | 600 cycles/hour |
| • no load | | 72 000 cycles/hour |

Coil data

| | | |
|-----------------------------------|-------------|----------------------------------------------------|
| Rated voltage | 50/60 Hz AC | 12 ... 230 V |
| | DC | 12 ... 110 V |
| Must release voltage | | AC: ≥ 0,15 U _n DC: ≥ 0,1 U _n |
| Operating range of supply voltage | | see Tables 1, 2 and Fig. 4, 5 |
| Rated power consumption | AC | 0,75 VA |
| | DC | 0,4 ... 0,48 W |

Insulation according to PN-EN 60664-1

| | | |
|-----------------------------|--|--------------------------------------------------------------|
| Insulation rated voltage | | 300 V AC |
| Rated surge voltage | | 4 000 V 1,2 / 50 μs |
| Overvoltage category | | III |
| Insulation pollution degree | | 3 |
| Dielectric strength | | |
| • between coil and contacts | | 5 000 V AC type of insulation: reinforced |
| • contact clearance | | 1 000 V AC type of clearance: micro-disconnection |
| • pole - pole | | 2 500 V AC type of insulation: basic |
| Contact - coil distance | | |
| • clearance | | ≥ 10 mm |
| • creepage | | ≥ 10 mm |

General data

| | | |
|-------------------------------------------|-------------|------------------------------------------------------------|
| Operating / release time (typical values) | | 7 ms / 3 ms |
| Electrical life | | |
| • resistive AC1 | | > 10 ⁵ 8 A, 250 V AC |
| • cosφ | | see Fig. 2 |
| • DC L/R=40 ms | | > 10 ⁵ 0,12 A, 220 V DC |
| Mechanical life (cycles) | | > 3 x 10 ⁷ |
| Dimensions (L x W x H) | | 75,3 x 15,5 x 67 mm |
| Weight | | 62 g |
| Ambient temperature | • storage | -40...+85 °C |
| | • operating | AC: -40...+70 °C DC: -40...+85 °C |
| Cover protection category | | IP 20 PN-EN 60529 |
| Environmental protection | | RM84: RTII GZT80: RT0 PN-EN 116000-3 |
| Shock resistance | | 20 g |
| Vibration resistance | (NO/NC) | 10 g / 5 g 10...150 Hz |

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

Coil data - DC voltage version

Table 1

| Coil code | Rated voltage V DC | Coil resistance at 20 °C Ω | Acceptable resistance | Coil operating range V DC | |
|-------------|-----------------------|----------------------------------|--------------------------|------------------------------|-----------------|
| | | | | min. (at 20 °C) | max. (at 20 °C) |
| 12DC | 12 | 360 | ± 10% | 8,4 | 30,6 |
| 24DC | 24 | 1 440 | ± 10% | 16,8 | 61,2 |
| 110DC | 110 | 25 200 | ± 10% | 77,0 | 280,0 |

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

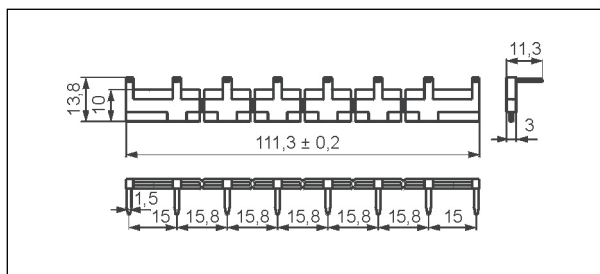
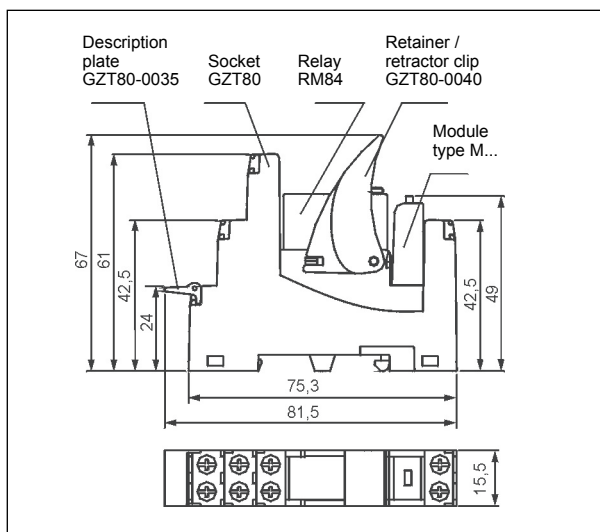
Coil data - AC 50/60 Hz voltage version

Table 2

| Coil code | Rated voltage V AC | Coil resistance at 20 °C Ω | Acceptable resistance | Coil operating range V AC 50 Hz | |
|--------------|-----------------------|----------------------------------|--------------------------|------------------------------------|-----------------|
| | | | | min. (at 20 °C) | max. (at 20 °C) |
| 12AC | 12 | 100 | ± 10% | 9,6 | 13,2 |
| 24AC | 24 | 400 | ± 10% | 19,2 | 26,4 |
| 120AC | 120 | 10 200 | ± 10% | 96,0 | 144,0 |
| 230AC | 230 | 38 500 | ± 10% | 184,0 | 253,0 |

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

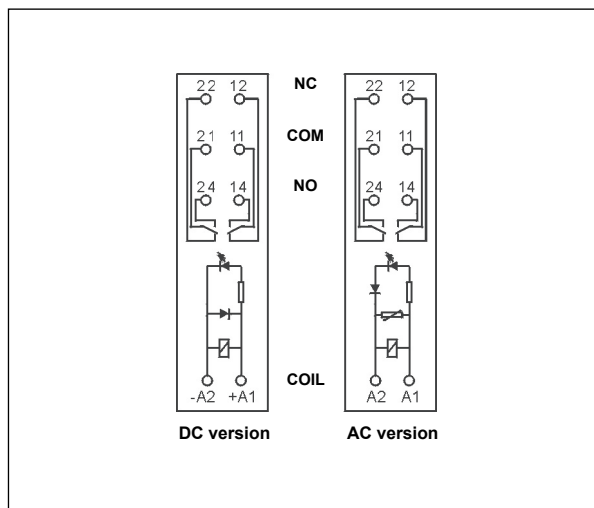
Dimensions



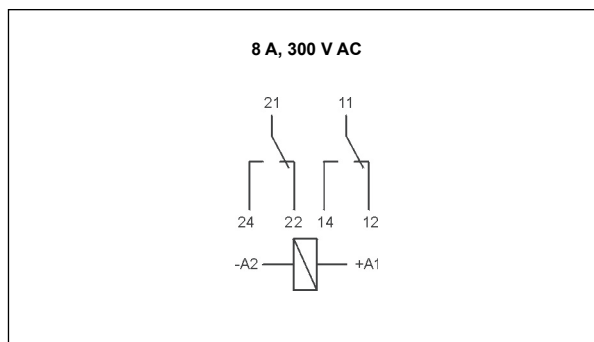
Interconnection strip type **ZGGZ80**

Connection diagrams

(screw terminals side view)

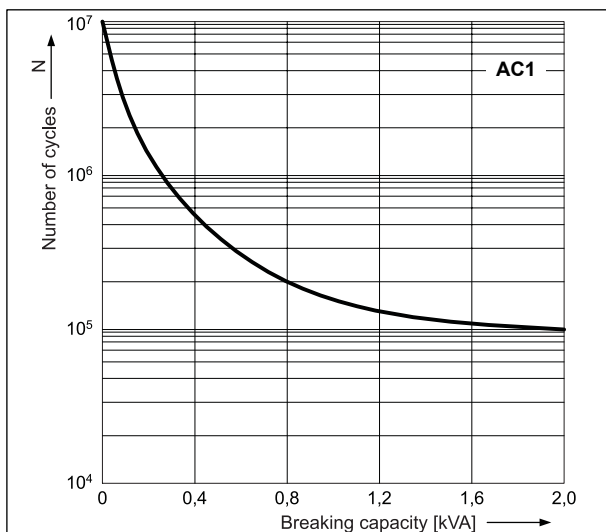


Connection of GZT80 socket



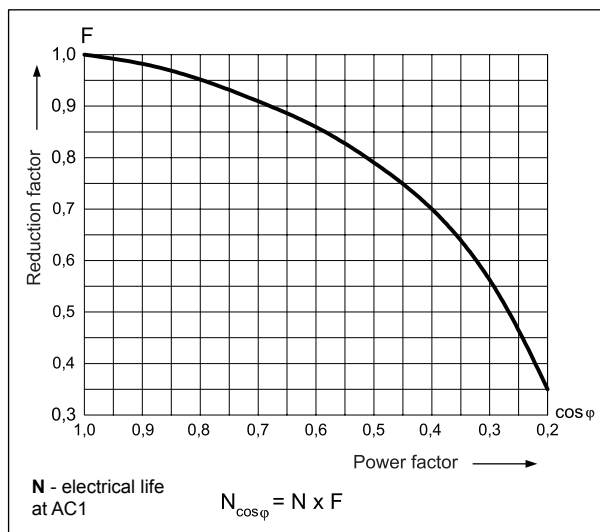
Electrical life at AC resistive load.
Switching frequency: 600 cycles/hour

Fig. 1



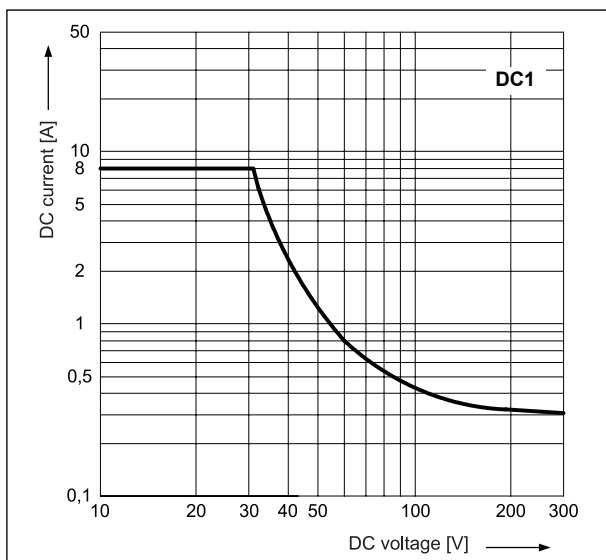
Electrical life reduction factor at AC inductive load

Fig. 2



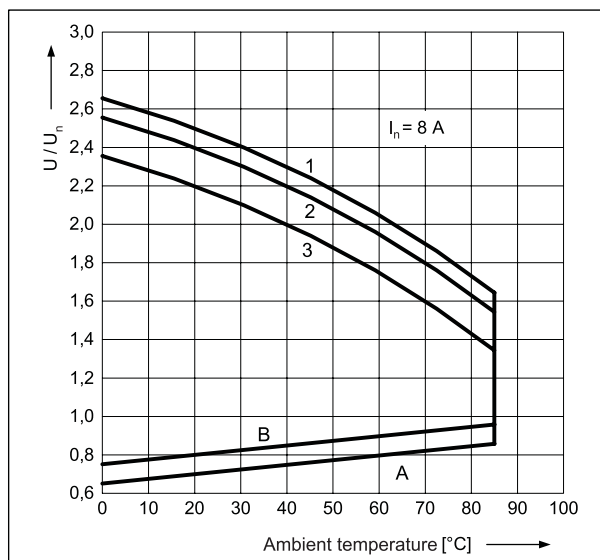
Max. DC resistive load breaking capacity

Fig. 3



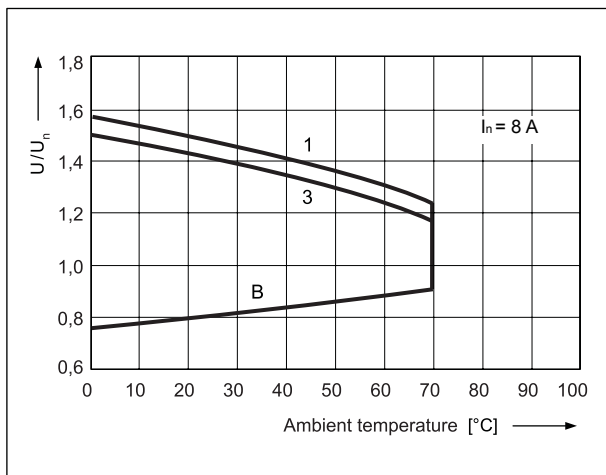
Coil operating range - DC

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

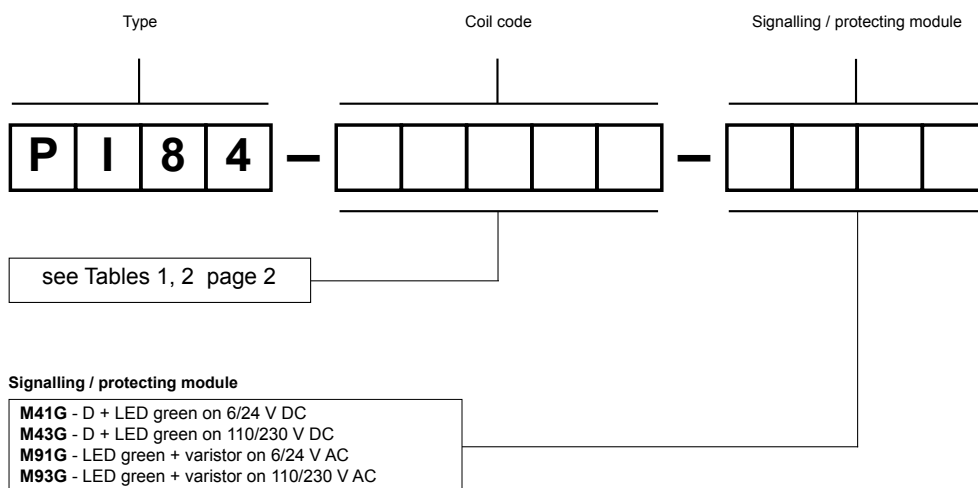
PI84 with socket GZT80 interface relays

Mounting

Relays **PI84 with socket GZT80** are designed for direct mounting on 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with one M3 screw. **Connections:** max. cross section of the cables (stranded): 2 x 2,5 mm² (2 x 14 AWG), length of the cable deinsulation: 6,5 mm, max. tightening moment for the terminal: 0,7 Nm.

Plug-in sockets **GZT80** may be linked with interconnection strip type **ZGGZ80**. Strip **ZGGZ80** bridges common input signals, maximum permissible current is 10 A / 250 V AC. Possibility of connection of 8 sockets. Colours of strips: **ZGGZ80-1** grey, **ZGGZ80-2** black (see page 5).

Ordering codes



Examples of ordering codes:

PI84-12DC-M41G

interface relay **PI84**, which consists of: relay **RM84** with coil 12 V DC, grey plug-in socket **GZT80** (screw terminals), signalling / protecting module **M41G** (version **LD**: L - LED green, D - diode, polarization N: +A1/-A2), retainer / retractor clip **GZT80-0040** (plastic), white description plate **GZT80-0035**

PI84-24AC-M91G

interface relay **PI84**, which consists of: relay **RM84** with coil 24 V AC 50/60 Hz, grey plug-in socket **GZT80** (screw terminals), signalling / protecting module **M91G** (version **LV**: L - LED green, V - varistor), retainer / retractor clip **GZT80-0040** (plastic), white description plate **GZT80-0035**

PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.

Interconnection strips ZGGZ80



PI85-...-00L.
(RM85 + GZM80)

ZGGZ80

ZGGZ80 for:

| Plug-in sockets | Relays for plug-in sockets | Interface relays ^① |
|-----------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| GZT80 | RM84, RM85, RM85 inrush, RM85 105 °C sensitive, RMB841, RMB851, RM87L ^② , RM87P ^② , RM87N ^② | PI84-...-M...G (RM84 + GZT80) |
| GZM80 | | PI84-...-00L. (RM84 + GZM80) |
| GZS80 | | PI85-...-M...G (RM85 + GZT80) |
| GZT92 | | PI85-...-00L. (RM85 + GZM80) |
| GZM92 | | |
| GZS92 | | |
| ES 32 | RM96 1 CO | |

^① Interface relay PI84 (PI85) is offered as a set: plug-in socket GZT80 or GZM80 + miniature relay RM84 (RM85) + signalling / protecting module type M... + retainer / retractor clip GZT80-0040 + description plate GZT80-0035. ^② Also versions RM87. sensitive

Interconnection strip ZGGZ80

- designed for the co-operation with plug-in sockets of miniature relays and with interface relays PI84 and PI85, which are equipped with screw terminals; sockets and relays are mounted on 35 mm rail mount acc. to PN-EN 60715,
- bridges common input signals (coil terminals A1 or A2) or output signals - see photo at the top,
- maximum permissible current is 10 A / 250 V AC,
- possibility of connection of 8 sockets or relays,
- colours of strips: **ZGGZ80-1** grey, **ZGGZ80-2** black.

