



RM85 + GZM80



- 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with one M3 screw.
- Interface relay **PI85 with socket GZM80** consists of:
 - electromagnetic relay **RM85**, plug-in socket **GZM80** grey,
 - signalling / protecting module **type M...** LED green: version **LD** (polarization N: +A1/-A2) - M41G or M43G; version **LV** - M91G or M93G,
 - retainer / retractor clip **GZT80-0040**, white description plate **GZT80-0035**.
- Recognitions, certifications, directives: recognitions RM85, RoHS,  

Contact data

Number and type of contacts		1 C/O	
Contact material		AgNi	
Rated / max. switching voltage	AC	250 V / 440 V	
Min. switching voltage		5 V	
Rated load (capacity)	AC1	16 A / 250 V AC	
	AC15	3 A / 120 V 1,5 A / 240 V (B300)	
	AC3	750 W (single-phase motor)	
	DC1	16 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		30 A	
Rated current		16 A	
Max. breaking capacity	AC1	4 000 VA	
Min. breaking capacity		0,3 W	
Contact resistance		≤ 100 mΩ	
Max. operating frequency	AC1	• at rated load	600 cycles/hour
		• no load	72 000 cycles/hour

Coil data

Rated voltage	50/60 Hz AC	12-24-120-230 V
	DC	12-24-110 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
Overtoltage 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
Contact - coil distance	• clearance	≥ 10 mm
	• creepage	≥ 10 mm

General data

Operating / release time (typical values)		7 ms / 3 ms
Electrical life	• resistive AC1	> 0,7 x 10 ⁵ 16 A, 250 V AC
	• cos φ	see Fig. 2
	• 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)		78,1 x 15,9 x 66,5 mm
Weight		59 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		RM85: RTII GZM80: RTO PN-EN 116000-3
Shock resistance		30 g
Vibration resistance		10 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 ±10% at 20 °C Ω	Coil operating range at 20 °C V DC	
			min.	max.
012DC	12	360	8,4	30,6
024DC	24	1 440	16,8	61,2
110DC	110	25 200	77,0	280,0

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

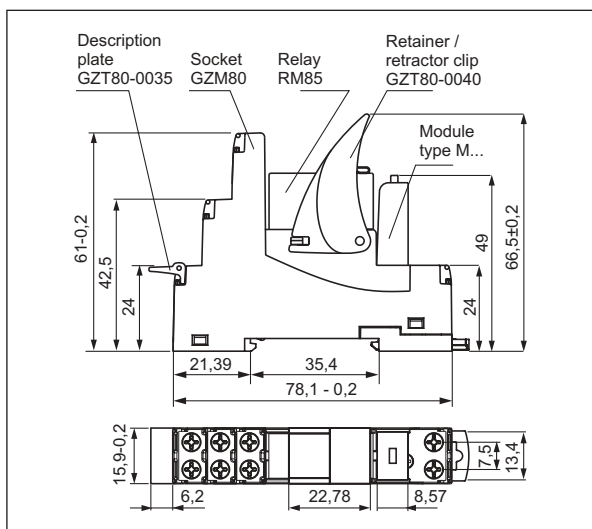
Coil data - AC 50/60 Hz voltage version

Table 2

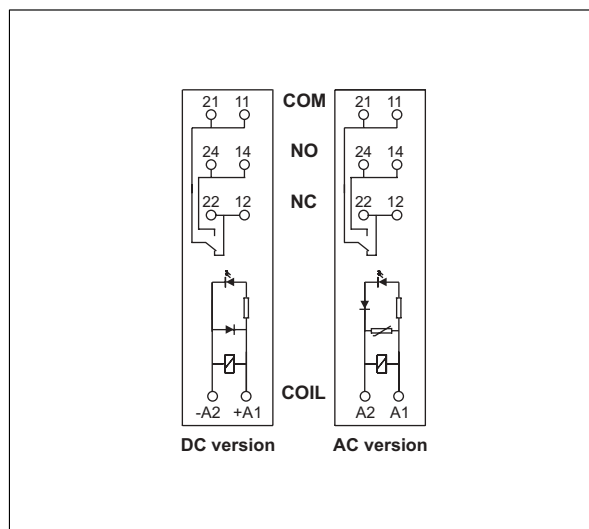
Coil code	Rated voltage V AC	Coil resistance ±10% at 20 °C Ω	Coil operating range at 20 °C V AC - 50 Hz	
			min.	max.
012AC	12	100	9,6	13,2
024AC	24	400	19,2	26,4
120AC	120	10 200	96,0	144,0
230AC	230	38 500	184,0	253,0

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

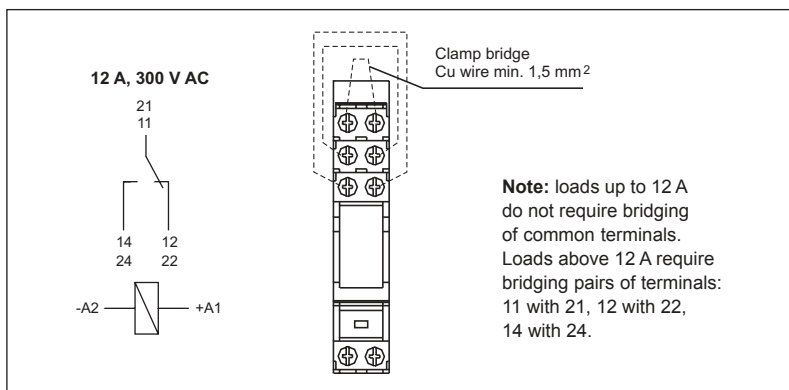
Dimensions



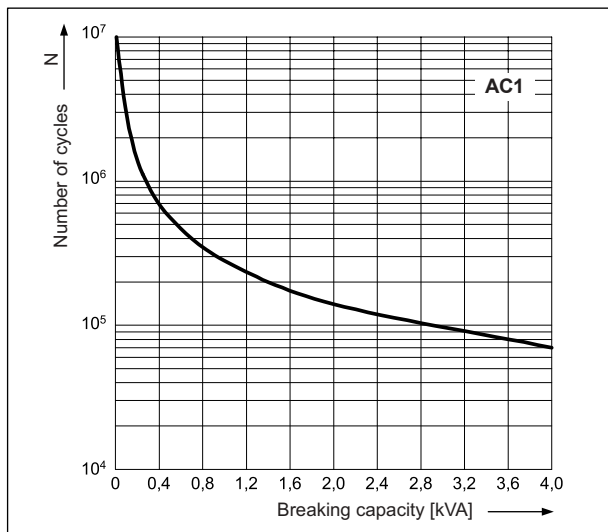
Connection diagrams
(screw terminals side view)



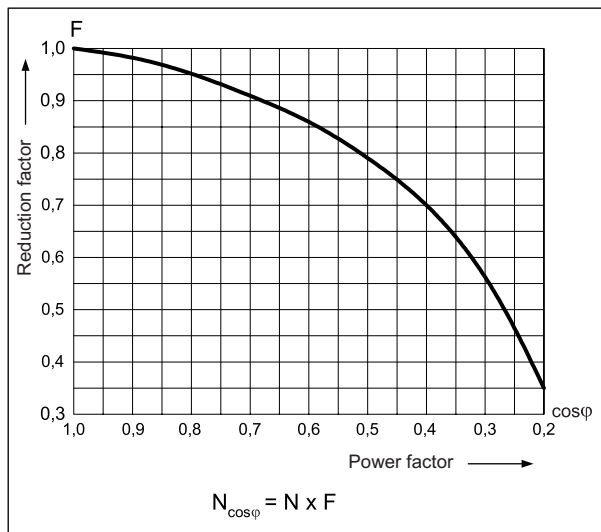
Connection of GZM80



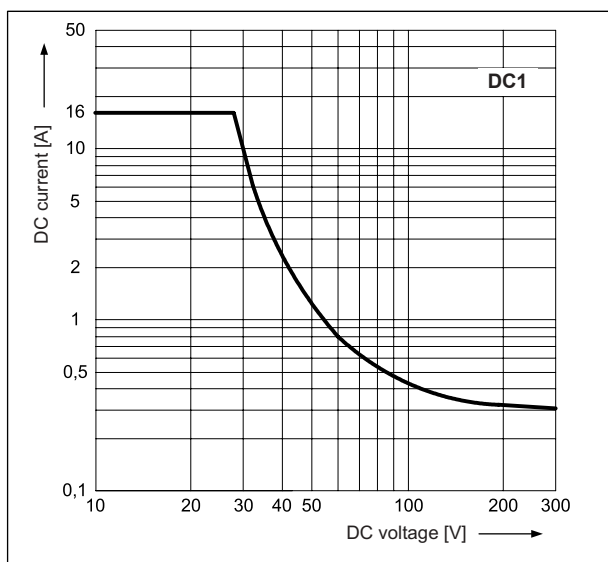
Electrical life at AC resistive load.
Maximum switching frequency at rated load Fig. 1



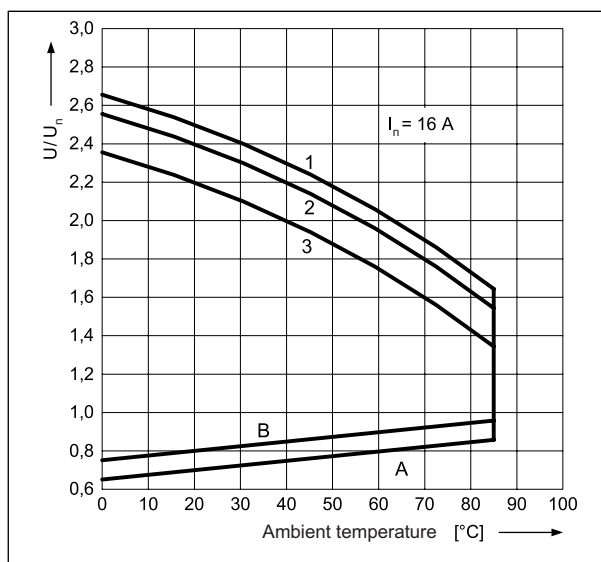
Electrical life reduction factor at AC inductive load Fig. 2



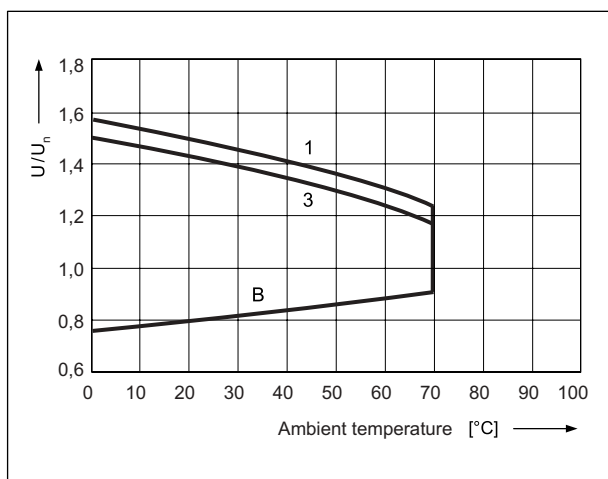
Max. DC resistive load breaking capacity Fig. 3



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:

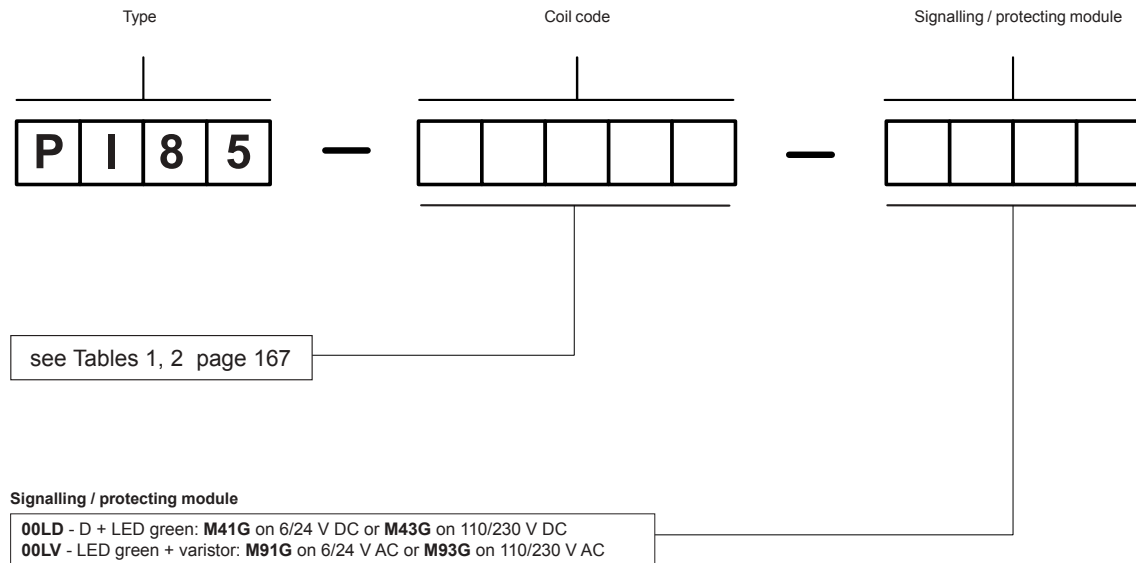
- 1 - no load
- 2 - 50% of rated load
- 3 - rated load

Mounting

Relays **PI85 with socket GZM80** ❶ are designed for direct mounting on 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with one M3 screw.

❶ Plug-in sockets **GZM80** may be linked with interconnection strip type **ZGGZ80** (see page 251).

Ordering codes



Examples of ordering codes:

- PI85-012DC-00LD** interface relay **PI85**, which consists of: relay **RM85**, voltage version 12 V DC, plug-in socket **GZM80** grey (screw terminals), signalling / protecting module **M41G** (version **LD**, polarization N: +A1/-A2, LED green), retainer / retractor clip **GZT80-0040**, white description plate **GZT80-0035**
- PI85-230AC-00LV** interface relay **PI85**, which consists of: relay **RM85**, voltage version 230 V AC 50/60 Hz, plug-in socket **GZM80** grey (screw terminals), signalling / protecting module **M93G** (version **LV**, LED green), retainer / retractor clip **GZT80-0040**, white description plate **GZT80-0035**