



R2 + GZM2

- Interface relay **PIR2** consists of: electromagnetic relay **R2**, plug-in socket **GZM2** grey, signalling / protecting module **type M...** LED green: version **LD** (polarization N: +A1/-A2) - M41G or M42G or M43G; version **LV** - M91G or M92G or M93G, retainer / retractor clip **GZT4-0040**, white description plate **GZT4-0035**
- 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with two M3 screws
- May be linked with interconnection strip type **ZGGZ4**
- Recognitions, certifications, directives: recognitions R2, RoHS, AUCOTEAM GmbH Berlin - railway standards, **CE**

Contact data

Number and type of contacts		2 C/O
Contact material		AgNi
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage		5 V
Rated load (capacity)	AC1	12 A / 250 V AC
	AC15	3 A / 120 V 1,5 A / 240 V (B300)
	AC3	370 W (single-phase motor)
	DC1	12 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		24 A
Rated current		12 A
Max. breaking capacity	AC1	3 000 VA
Min. breaking capacity		0,3 W
Contact resistance		≤ 100 mΩ
Max. operating frequency		
• at rated load	AC1	1 200 cycles/hour
• no load		18 000 cycles/hour

Coil data

Rated voltage	50/60 Hz AC	12 ... 230 V
	DC	12 ... 110 V
Must release voltage		AC: ≥ 0,2 U _n DC: ≥ 0,1 U _n
Operating range of supply voltage		see Tables 1,2
Rated power consumption	AC	50 Hz: 1,6 VA 60 Hz: 1,3 VA
	DC	0,9 W

Insulation according to PN-EN 60664-1

Insulation rated voltage		250 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		2 500 V AC type of insulation: basic
• contact clearance		1 500 V AC type of clearance: micro-disconnection
• pole - pole		2 500 V AC type of insulation: basic
Contact - coil distance		
• clearance		≥ 2,5 mm
• creepage		≥ 4 mm

General data

Operating / release time (typical values)		AC: 10 ms / 8 ms DC: 13 ms / 3 ms
Electrical life		
• resistive AC1		> 10 ⁵ 12 A, 250 V AC
• cos φ		see Fig. 2
Mechanical life (cycles)		> 2 x 10 ⁷
Dimensions (L x W x H)		75 x 27 x 82 mm
Weight		97 g
Ambient temperature	• storage	-40...+85 °C
	• operating	AC: -40...+55 °C DC: -40...+70 °C
Cover protection category		IP 20 PN-EN 60529
Environmental protection		R2: RTI GZM2: RT0 PN-EN 116000-3
Shock resistance	(NO/NC)	10 g / 5 g
Vibration resistance		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 ($\pm 10\%$) at 20 °C Ω	Coil operating range V DC	
			min. (at 20 °C)	max. (at 55 °C)
012DC	12	160	9,6	13,2
024DC	24	640	19,2	26,4
048DC	48	2 600	38,4	52,8
110DC	110	13 600	88,0	121,0

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

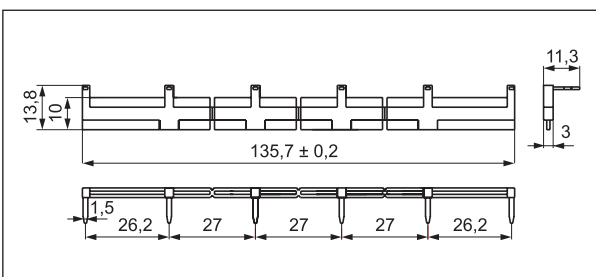
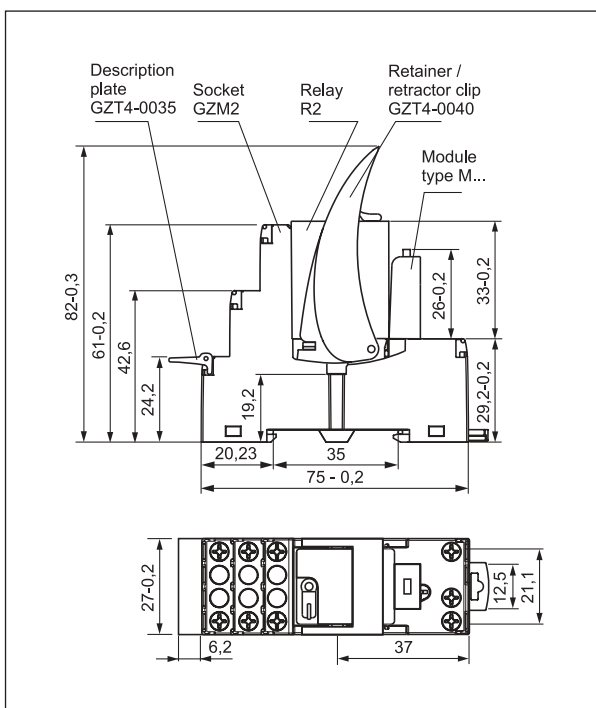
Coil data - AC 50/60 Hz voltage version

Table 2

Coil code	Rated voltage V AC	Coil resistance ($\pm 10\%$) at 20 °C Ω	Coil operating range V AC	
			min. (at 20 °C)	max. (at 55 °C)
012AC	12	39,5	9,6	13,2
024AC	24	158,0	19,2	26,4
048AC	48	640,0	38,4	52,8
120AC	120	3 770,0	96,0	132,0
230AC	230	16 100,0	184,0	253,0

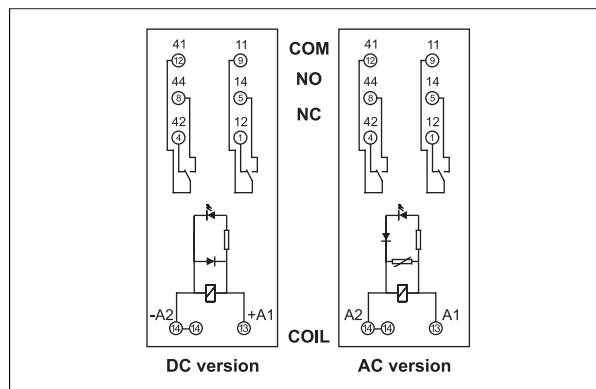
The data in bold type pertain to the standard versions of the relays.

Dimensions



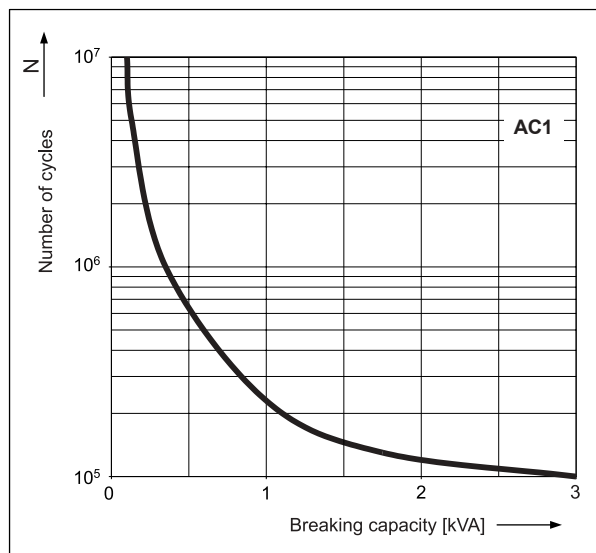
Interconnection strip type **ZGGZ4**

Connection diagrams (screw terminals side view)



Electrical life at AC resistive load. Switching frequency: 1 200 cycles/hour

Fig. 1



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

Fig. 2

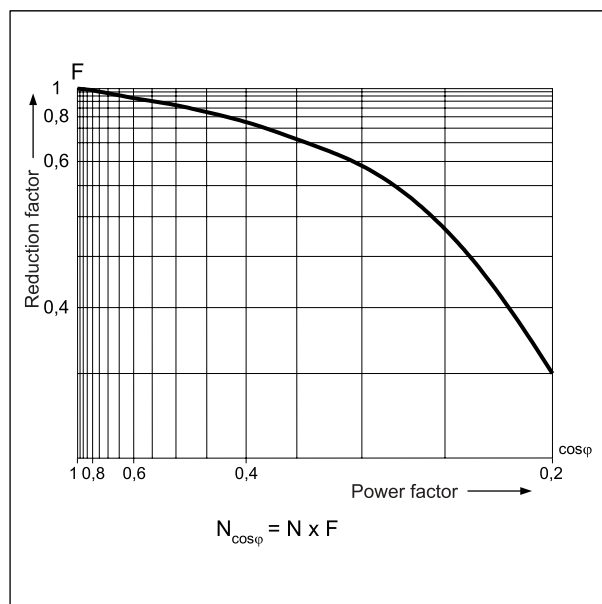
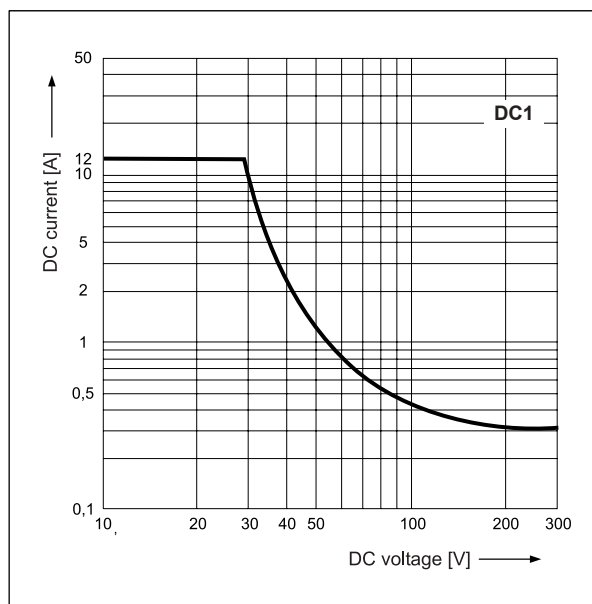

Max. DC resistive load breaking capacity

Fig. 3

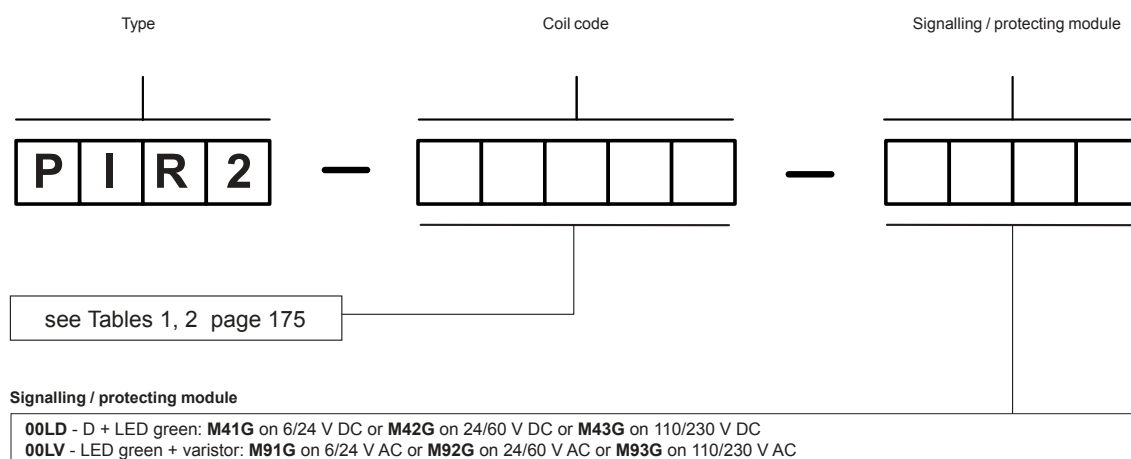


Mounting

Relays **PIR2 with socket GZM2** are designed for direct mounting on 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with two M3 screws.

Plug-in sockets **GZM2** may be linked with interconnection strip type **ZGGZ4**. Strip **ZGGZ4** bridges common input signals, maximum permissible current is 10 A / 250 V AC. Possibility of connection of 6 sockets. Colours of strips: **ZGGZ4-1** grey, **ZGGZ4-2** black (see page 262).

Ordering codes



Examples of ordering codes:

PIR2-012DC-00LD

interface relay **PIR2**, which consists of: relay **R2**, voltage version 12 V DC, plug-in socket **GZM2** grey (screw terminals), signalling / protecting module **M41G** (version **LD**, polarization N: +A1/-A2, LED green), retainer / retractor clip **GZT4-0040**, white description plate **GZT4-0035**

PIR2-230AC-00LV

interface relay **PIR2**, which consists of: relay **R2**, voltage version 230 V AC 50/60 Hz, plug-in socket **GZM2** grey (screw terminals), signalling / protecting module **M93G** (version **LV**, LED green), retainer / retractor clip **GZT4-0040**, white description plate **GZT4-0035**