

PIR4 with socket GZM4 interface relays



R4N + GZM4

- Interface relay **PIR4 with socket GZM4** consists of:
electromagnetic relay **R4N**, grey plug-in socket **GZM4**, signalling / protecting module: version **LD** - M41G or M42G or M43G (L - LED green, D - diode, polarization N: +A1/-A2); version **LV** - M91G or M92G or M93G (L - LED green, V - varistor), retainer / retractor clip **GZT4-0040** (plastic), 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 R4N, RoHS, **CE ENEC**

Contact data

Number and type of contacts		4 CO
Contact material		AgNi
Rated / max. switching voltage	AC	250 V / 250 V
Min. switching voltage		5 V
Rated load (capacity)	AC1 AC15 AC3 DC1 DC13	6 A / 250 V AC 1,5 A / 120 V 0,75 A / 240 V (C300) 125 W (single-phase motor) 6 A / 24 V DC (see Fig. 3) 0,22 A / 120 V 0,1 A / 250 V (R300)
Min. switching current		5 mA
Max. inrush current		12 A
Rated current		6 A
Max. breaking capacity	AC1	1 500 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 DC	12 ... 230 V 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 DC	50 Hz: 1,6 VA 60 Hz: 1,3 VA 0,9 W

Insulation according to PN-EN 60664-1

Insulation rated voltage		250 V AC
Rated surge voltage		2 500 V 1,2 / 50 μs
Overvoltage category		II
Insulation pollution degree		2
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		2 000 V AC type of insulation: basic
Contact - coil distance		
• clearance		≥ 1,6 mm
• creepage		≥ 3,2 mm

General data

Operating / release time (typical values)		AC: 10 ms / 8 ms DC: 13 ms / 3 ms
Electrical life		
• resistive AC1		> 10 ⁵ 6 A, 250 V AC
• cosφ		see Fig. 2
Mechanical life (cycles)		> 2 x 10 ⁷
Dimensions (L x W x H)		75 x 27 x 82 mm
Weight		108 g
Ambient temperature	• storage • operating	-40...+85 °C AC: -40...+55 °C DC: -40...+70 °C
Cover protection category		IP 20 PN-EN 60529
Environmental protection		R4: RTI GZM4: 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.

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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 70 °C)
012DC	12	160	$\pm 10\%$	9,6	13,2
024DC	24	640	$\pm 10\%$	19,2	26,4
048DC	48	2 600	$\pm 10\%$	38,4	52,8
110DC	110	13 600	$\pm 10\%$	88,0	121,0

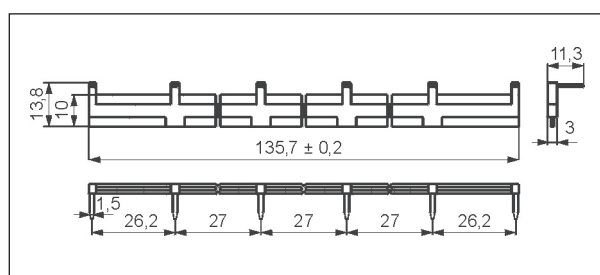
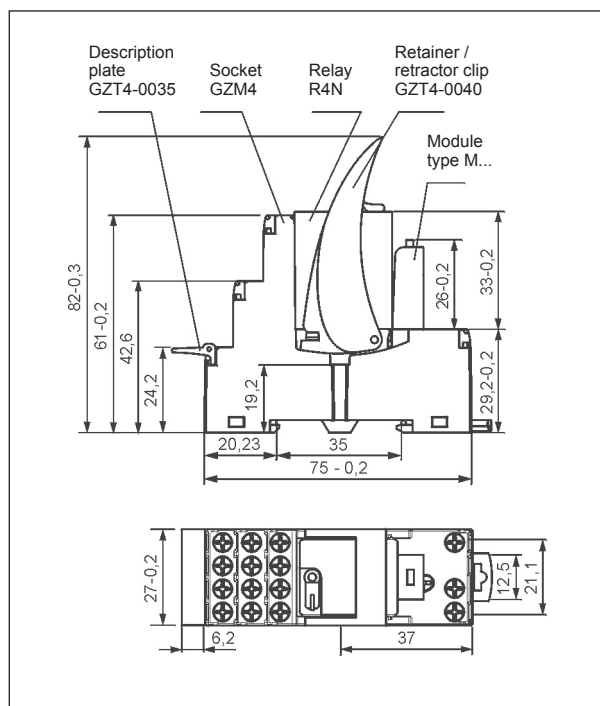
The data in bold type pertain to the standard versions of the relays.

Coil data - AC 50/60 Hz voltage version
Table 2

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

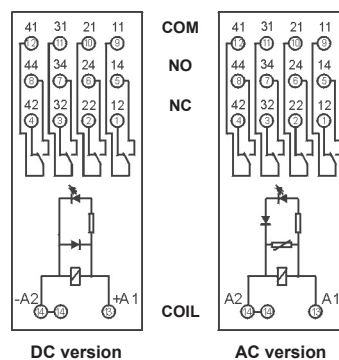
The data in bold type pertain to the standard versions of the relays.

Dimensions


Interconnection strip type ZGGZ4

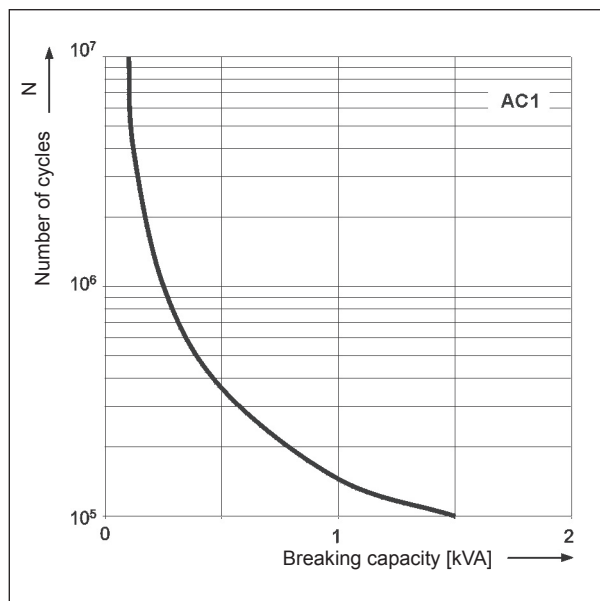
Connection diagrams

(screw terminals side view)



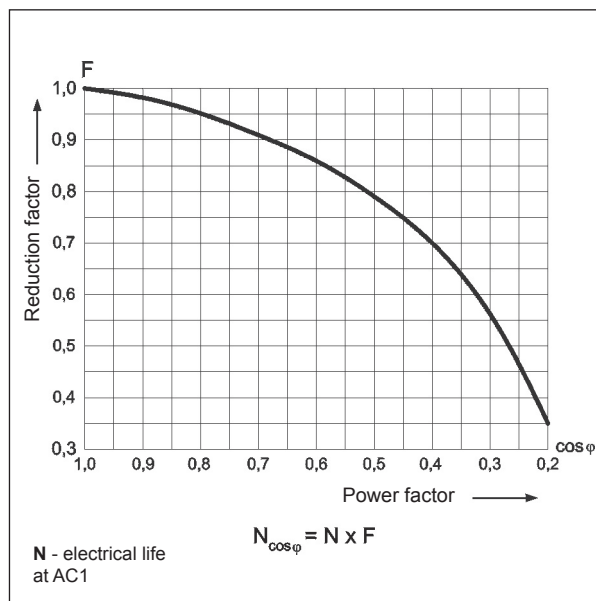
Electrical life at AC resistive load.
Switching frequency: 1 200 cycles/hour

Fig. 1



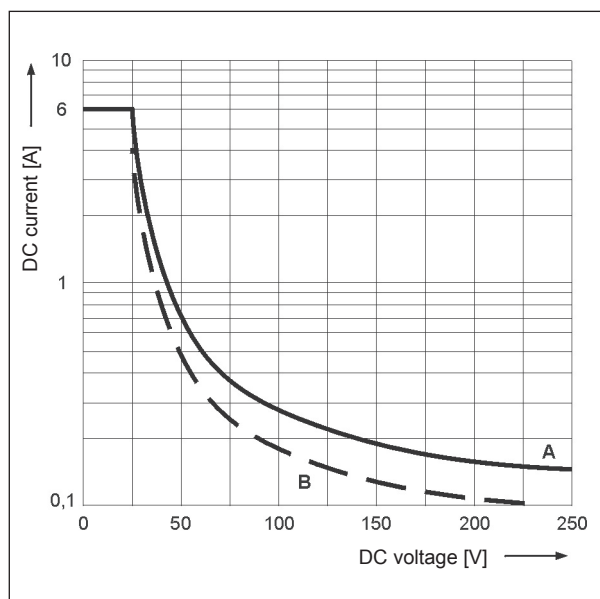
Electrical life reduction factor at AC inductive load

Fig. 2



Max. DC breaking capacity
A - resistive load DC1
B - inductive load L/R = 40 ms

Fig. 3

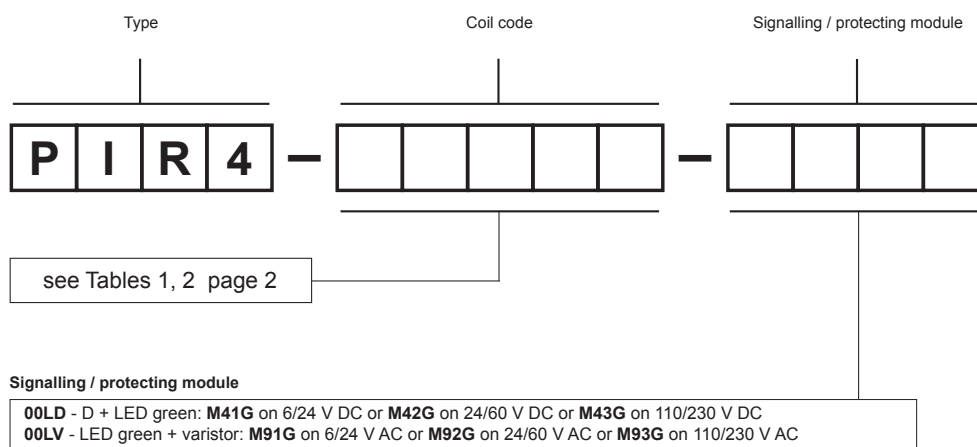


Mounting

Relays **PIR4 with socket GZM4** ① are designed for direct mounting on 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with two M3 screws. **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.

① Plug-in sockets **GZM4** 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 5).

Ordering codes



Examples of ordering codes:

- PIR4-012DC-00LD** interface relay **PIR4**, which consists of: relay **R4N** with coil 12 V DC, grey plug-in socket **GZM4** (screw terminals), signalling / protecting module **M41G** (version **LD**: L - LED green, D - diode, polarization N: +A1/-A2), retainer / retractor clip **GZT4-0040** (plastic), white description plate **GZT4-0035**
- PIR4-230AC-00LV** interface relay **PIR4**, which consists of: relay **R4N** with coil 230 V AC 50/60 Hz, grey plug-in socket **GZM4** (screw terminals), signalling / protecting module **M93G** (version **LV**: L - LED green, V - varistor), retainer / retractor clip **GZT4-0040** (plastic), white description plate **GZT4-0035**

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 ZGGZ4



PIR2-...-00L.
(R2N + GZM2)

ZGGZ4

■ ZGGZ4 for:

Plug-in sockets	Relays for plug-in sockets	Interface relays ①
GZT2	R2N	PIR2-...-00L. (R2N + GZM2)
GZM2		PIR3-...-00L. (R3N + GZM3)
GZT3	R3N	PIR4-...-00L. (R4N + GZM4)
GZM3		
GZT4	R4N	
GZM4		

① Interface relay **PIR2 (PIR3, PIR4)** is offered as a **set**: plug-in socket **GZM2 (GZM3, GZM4)** + miniature industrial relay **R2N (R3N, R4N)** + signalling / protecting module **type M...** + retainer / retractor clip **GZT4-0040** + description plate **GZT4-0035**.

■ Interconnection strip ZGGZ4

- designed for the co-operation with plug-in sockets of miniature industrial relays and with interface relays PIR2, PIR3 and PIR4, 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 6 sockets or relays,
- colours of strips: **ZGGZ4-1** grey, **ZGGZ4-2** black.

