

*Automation is our passion*

# Catalogue

relays: signal • miniature • industrial • interface • high power • for railroad industry  
programmable • installation • bistable - impulse • time • monitoring • solid state



# 60 years of experience in production of highest-quality relays



1958 Relay Division of REFA Świebodzice founded in Żary



1982 Independent enterprise of Zakład Przekazników established



1991 Zakład Przekazników transformed into Relpol S.A. in Żary



1996 Relpol S.A. IPO at the Warsaw Stock Exchange



2021 Relpol's presence in markets worldwide



# Applications, certifications

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Innovative features of our technological solutions and reliability of our products are confirmed by numerous recognitions and certifications: VDE, UL, CSA, EAC, UKCA, LR, IK and by prizes and awards.



Installation relays RPI  
 Bistable - impulse relays RPB  
 Time relays RPC  
 Monitoring relays RPN  
 Signal lamps RLK



## Selection table

Electrical terminals						Coil / input		Type	Number and type of contacts / outputs	Rated current					
for PCB	SMT	for sockets	connectors	screw terminals	spring terminals	AC	DC			AC/DC	bistable DC	[A]	5	10	15
<b>Relays for electronics</b>															
									RSM850	2 CO	2 A				
									RSM850B	2 CO	2 A				
									RSM822N	2 CO		3 A / 2 A (NO/NC)			
									RSM954N	1 CO	3 A				
									RSM957N	1 CO	1 A				
									RM12	1 CO, 1 NO		8 A			
									RM12N	1 CO, 1 NO		1 CO: 8 A, 1 NO: 10 A			
									RM32N	1 CO, 1 NO		1 CO: 5 A / 5 A (NO/NC)	1 NO: 5 A, 10 A ②		
									RM40	1 CO, 1 NO		1 CO: 5 A, 1 NO: 8 A			
									RM45N	1 CO, 1 NO		1 CO: 5 A / 5 A (NO/NC)	1 NO: 5 A, 10 A ②		
									RM50N	1 CO, 1 NO		6 A, 12 A ②			
									RM51	1 CO, 1 NO		1 CO: 10 A / 7 A (NO/NC), 20 A ②, 1 NO: 10 A, 20 A ②			
									RM84	2 CO, 2 NO		8 A			
									RM85	1 CO, 1 NO			16 A		
									RM85 ①	1 NO			16 A		
									RM85 inrush	1 NO			16 A		
									RM85 105 °C sensitive	1 NO			16 A		
									RM85 faston	1 NO				20 A	
									RM87	1 CO, 1 NO		12 A			
									RM87 sensitive	1 NO		10 A			
									RM96	1 CO, 1 NO, 1 NC		8 A			
									RM699B	1 CO, 1 NO	AgSnO <sub>2</sub> , AgNi: 6 A				
									RM83	1 CO, 1 NO, 1 NC			16 A		
									RMP84	2 CO		8 A			
									RMP85	1 CO			16 A		
									RA2 ②	1 CO, 1 NO, 2 NO		1 CO: 20 A / 12 A (NO/NC), 1 NO: 20 A			
<b>Relays for industry</b>															
									R2N	2 CO			12 A		
									R3N	3 CO			10 A		
									R4N	4 CO		7 A			
									R2M	2 CO	5 A				
									R15 - 2 CO	2 CO			10 A		
									R15 - 3 CO	3 CO			10 A		
									R15 - 4 CO	4 CO			10 A		

① RM85 for switching higher voltages ② RA2 - automotive relays (2 NO: 2 x 12,5 A) ③ At lowered voltage

**How to use the table:** select the number and type of contacts, please; then, select a relay depending on its rated current, type of terminals and coil voltage.

The ordering code structure provides for formulation of **numerous variants**. Not all of them are defined as standard ones and, thus, not all of them are included in the product line. However, **deliveries of special versions according to the customer's specification are possible**. Please, contact with Relpol S.A. or our local representatives for details. The data of the devices may be changed with no prior notice.

## Selection table

Electrical terminals						Coil / input				Type	Number and type of contacts / outputs	Rated current					
for PCB	for sockets	connectors	screw terminals	Push-in terminals	spring terminals	AC	DC	AC/DC	bistable DC			[A]	5	10	20	40	60
<b>Relays for industry</b>																	
										RG25	2 NO	25 A					
										RUC	2 CO, 3 CO, 2 NO, 3 NO	16 A					
										RUC-M	1 NO, 2 NO	16 A					
										R20	1 NO, 2 NO	2 NO: 25 A, 1 NO: 30 A					
										R30N	1 CO, 1 NO	1 CO: 30 A / 20 A (NO/NC), 1 NO: 30 A					
										R40N	1 CO, 1 NO	1 CO: 40 A / 30 A (NO/NC), 1 NO: 40 A					
										PI84 with socket GZT80	2 CO	8 A					
										PI84 with socket GZM80	2 CO	8 A					
										PI84 with socket GZP80	2 CO	8 A					
										PI85 with socket GZT80	1 CO	12 A, 16 A ④					
										PI85 with socket GZM80	1 CO	12 A, 16 A ④					
										PI85 with socket GZP80	1 CO	12 A, 16 A ④					
										PI85 inrush with socket GZT80	1 NO	12 A, 16 A ④					
										PI84P with socket GZP80	2 CO	8 A					
										PI85P with socket GZP80	1 CO	12 A, 16 A ④					
										PIR2 with socket GZM2	2 CO	12 A					
										PIR2 with socket GZP4	2 CO	12 A					
										PIR3 with socket GZM3	3 CO	10 A					
										PIR4 with socket GZM4	4 CO	7 A					
										PIR4 with socket GZP4	4 CO	7 A					
										PI6-1P	1 CO	AgSnO <sub>2</sub> : 6 A					
										PI6-1T	1 NO	1,2 A					
										PIR6W-1P-...	1 CO	AgSnO <sub>2</sub> : 6 A					
										PIR6W-1PS-... ⑤	1 CO, 1 NO	R (AgSnO <sub>2</sub> ): 6 A, T, C: 1 A, O: 2 A					
										PIR6WB-1PS-... ⑤	1 CO, 1 NO	R (AgSnO <sub>2</sub> ): 6 A, T, C: 1 A, O: 2 A					
										SIR6W-... ⑤	1 CO, 1 NO	R (AgSnO <sub>2</sub> ): 6 A, T, C: 1 A, O: 2 A					
										SIR6WB-... ⑤	1 CO, 1 NO	R (AgSnO <sub>2</sub> ): 6 A, T, C: 1 A, O: 2 A					
<b>Relays for photovoltaic systems</b>																	
										RS35	2 NO	35 A					
										RS50	1 NO, 2 NO	50 A					
										RS80	1 NO	80 A					
										RG25	2 NO	25 A					
										RUC	2 CO, 3 CO, 2 NO, 3 NO	16 A					
										RUC-M	1 NO, 2 NO	16 A					

④ See [www.repol.com.pl](http://www.repol.com.pl) ⑤ Operational relay - electromagnetic **RM699BV** or solid state **RSR30**

How to use the table and the ordering code structure - see page 4.

## Selection table

Electrical terminals						Coil / input		Type	Number and type of contacts / outputs	Rated current					
for PCB	for sockets	connectors	screw terminals	Push-in terminals	spring terminals	AC	DC			AC/DC	bistable DC	[A]	5	10	15
<b>Relays for railroad industry</b>															
									RM84	2 CO, 2 NO		8 A			
									RM85	1 CO, 1 NO				16 A	
									R2T	2 CO			12 A		
									R3T	3 CO			10 A		
									R4T	4 CO		7 A			
									R15T - 2 CO	2 CO			10 A		
									R15T - 3 CO	3 CO			10 A		
									RUCT	3 CO, 3 NO				16 A	
									RUCT-M	1 NO, 2 NO				16 A	
									PI84T with socket GZT80-V0	2 CO		8 A			
									PI85T with socket GZT80-V0	1 CO				16 A	④
									PIR2T with socket GZT2-V0	2 CO			12 A		
									PIR3T with socket GZT3-V0	3 CO			10 A		
									PIR4T with socket GZT4-V0	4 CO		7 A			
									PIR152T with socket PZ8-V0	2 CO			10 A		
									PIR153T with socket PZ11-V0	3 CO			10 A		
									PRUCT with socket GUC11S-V0	3 CO, 3 NO				16 A	
									PRUCT-M with socket GUC11S-V0	1 NO, 2 NO				16 A	
									MT-W...M	1 CO			10 A		
<b>Programmable relays</b>															
									NEED-...-08-4R-	4 NO			10 A		
									NEED-...-08-4T-	4 NO	0,5 A				
									NEED-...-16-8R-	8 NO			10 A		
									NEED-...-16-8T-	8 NO	0,5 A				
									NEED-MODBUS						
<b>Installation relays</b>															
									RPI-.P-...	1 CO, 2 CO			2 CO: 8 A, 1 CO: 16 A		
									RPI-.Z-...	1 NO, 2 NO			2 NO: 8 A, 1 NO: 16 A		
									RPI-1ZI-D12	1 NO			16 A		
									RPI-1ZI-U24A	1 NO			16 A		
									RPI-.P-UNI	1 CO, 2 CO, 3 CO			2 CO, 3 CO: 8 A, 1 CO: 16 A		
									RPI-.Z-UNI	1 NO, 2 NO, 3 NO			2 NO, 3 NO: 8 A, 1 NO: 16 A		
<b>Bistable - impulse relays</b>															
									RPB-1P-...	1 CO			16 A		
									RPB-1PM-...	1 CO			16 A		
									RPB-2Z-...	2 NO	8 A				
									RPB-1ZI-...	1 NO			16 A		
									RPB-1PM-UNI	1 CO			16 A		
									RPB-1ZMI-UNI	1 NO			16 A		
									RPB-2PSM-UNI	2 x 1 CO			16 A		
									RPB-2ZSMI-UNI	2 x 1 NO			16 A		

④ See [www.repol.com.pl](http://www.repol.com.pl)

How to use the table and the ordering code structure - see page 4.

## Selection table

Electrical terminals					Coil / input		Type	Number and type of contacts / outputs	Rated current						
for PCB	for sockets	connectors	screw terminals	Push-in terminals	spring terminals	AC			DC	AC/DC	bistable DC	[A]	5	10	15
<b>Time relays</b>															
								MT-W...M	1 CO			10 A			
								RPC-.MA-...	1 CO, 2 CO			2 CO: 8 A, 1 CO: 16 A			
								RPC-.MB-...	1 CO, 2 CO			2 CO: 8 A, 1 CO: 16 A			
								RPC-2A-UNI	2 CO			8 A			
								RPC-1MC-UNI	1 CO				16 A		
								RPC-.MD-UNI	1 CO, 3 CO			3 CO: 8 A, 1 CO: 16 A			
								RPC-1ER-...	1 CO				16 A		
								RPC-1EA-...	1 CO				16 A		
								RPC-1ES-...	1 CO				16 A		
								RPC-1EU-...	1 CO				16 A		
								RPC-1IP-...	1 CO				16 A		
								RPC-1SA-...	1 CO				16 A		
								RPC-1WT-...	1 CO				16 A		
								RPC-.E-...	1 CO, 2 CO			2 CO: 8 A, 1 CO: 16 A			
								RPC-.WU-...	1 CO, 2 CO			2 CO: 8 A, 1 CO: 16 A			
								RPC-.BP-...	1 CO, 2 CO			2 CO: 8 A, 1 CO: 16 A			
								RPC-2SD-UNI	2 CO			8 A			
								RPC-1AS-A230	1 NO				16 A		
								TR4N 1 CO	1 CO				16 A		
								TR4N 2 CO	2 CO			8 A			
								TR4N 4 CO	4 CO			6 A			
								T-R4	4 CO			6 A			
								PIR15...T with time module COM3	2 CO, 3 CO			10 A			
								COM3							
<b>Monitoring relays</b>															
								RPN-1VF-A400	1 CO				12 A		
								RPN-1VFS-A400	1 CO				12 A		
								RPN-1VFR-A400	1 CO				12 A		
								RPN-1VFT-A400	1 CO				12 A		
								RPN-1A...A230	1 CO				12 A		
								RPN-1TMP-A230	1 CO				12 A		
								RPN-1AT-A230	1 CO				12 A		
								MR-EU1W1P	1 CO			5 A			
								MR-EU31UW1P	1 CO			5 A			
								MR-EU3M1P	1 CO			5 A			
								MR-EI1W1P	1 CO			5 A			
								MR-ET1P	1 CO			5 A			

## Selection table

Electrical terminals						Coil / input				Type	Number and type of contacts / outputs	Rated current					
for PCB	for sockets	connectors	screw terminals	Push-in terminals	spring terminals	AC	DC	AC/DC	bistable DC			[A]	5	10	20	40	60
<b>Monitoring relays</b>																	
										MR-GU32P-TR2	2 CO	3 A / 5 A ③					
										MR-GU3M2P-TR2	2 CO	3 A / 5 A ③					
										MR-GU3M2P	2 CO	3 A / 5 A ③					
										MR-GI1M2P-TR2	2 CO	3 A / 5 A ③					
										MR-GT2P-TR2	2 CO	3 A / 5 A ③					
<b>Signal lamps</b>																	
										RLK-1.							
										RLK-3.							
<b>Solid state relays</b>																	
										RSR30		1 A, 2 A, 2.5 A, 4 A					
										RSR32		2 A					
										RSR35		0,1 A, 3 A, 4 A					
										RSR52						10, 25, 40, 60, 80 A	
										RSR62						25, 40, 60, 80 A	
										RSR72						10, 20, 30, 40, 75 A	
<b>Installation contactors</b>																	
										RIK20	2 NO, 1 NO + 1 NC, 2 NC					20 A	
										RIK25	4 NO, 3 NO + 1 NC, 2 NO + 2 NC					25 A	
										RIK40	4 NO, 3 NO + 1 NC, 2 NO + 2 NC, 4 NC					40 A	
										RIK63	4 NO, 3 NO + 1 NC, 2 NO + 2 NC						63 A
										RIKN	2 NO, 1 NO + 1 NC					6 A	
										RIK21	3 NO + 1 NO, 3 NO + 1 NC					20 A	
<b>Power supplies</b>																	
										RZI10-12-M		0,83 A					
										RZI10-24-M		0,42 A					
										RZI30-12-M		2,1 A					
										RZI30-24-M		1,25 A					
										RZI60-12-M		4,5 A					
										RZI60-24-M		2,5 A					
										RZI100-24-M		3,8 A					
										RZI60-24-P		2,5 A					
										RZI120-24-P		5 A					
										RZI240-24-P						10 A	
										RZI480-24-P						20 A	
										RZI-20R						20 A	
										RZI-40R						40 A	
										RZI-20B						20 A	
										RZI-40B						40 A	
										RZI-40UPS						40 A	

③ 3 A - if the distance between the relays mounted side by side is less than 5 mm; 5 A - if the distance between the relays mounted side by side is greater than 5 mm.  
How to use the table and the ordering code structure - see page 4.



## Mounting options

Type	Method of mounting			
	For PCB mounting	On panel mounting	35 mm rail mount (EN 60715)	Flat insert - faston (connectors)
<b>Relays for electronics</b>				
RSM850	direct	–	–	–
RSM850B	direct	–	–	–
RSM822N	direct	–	–	–
RSM954N	direct	–	–	–
RSM957N	direct	–	–	–
RM12	direct	–	–	–
RM12N	direct	–	–	–
RM32N	direct	–	–	–
RM40	direct	–	–	–
RM45N	direct	–	–	–
RM50N	direct	–	–	–
RM51	direct	–	–	–
RM84	direct, with socket	with socket	with socket	–
RM85	direct, with socket	with socket	with socket	–
RM85 Ⓢ	direct	–	–	–
RM85 inrush	direct, with socket	with socket	with socket	–
RM85 105 °C sensitive	direct, with socket	with socket	with socket	–
RM85 faston	direct	–	–	6,3 x 0,8 mm
RM87	direct, with socket	with socket	with socket	–
RM87 sensitive	direct, with socket	with socket	with socket	–
RM96 1 CO	direct	with socket	with socket	–
RM96 1 NO, 1 NC	direct	–	–	–
RM699BV	direct, with socket	–	with socket	–
RM699BH	direct	–	–	–
RM83	direct, with socket	–	–	–
RMP84	with socket	with socket	with socket	–
RMP85	with socket	with socket	with socket	–
RA2 Ⓢ	direct	–	–	–

Ⓢ RM85 for switching higher voltages Ⓢ RA2 - automotive relays

## Mounting options

Type	Method of mounting				
	For PCB mounting	On panel mounting	35 mm rail mount (EN 60715)	Cover with mounting flange - on panel mounting	Flat insert - faston (connectors)
<b>Relays for industry</b>					
R2N	with socket	with socket	with socket	–	–
R3N	–	with socket	with socket	–	–
R4N	direct, with socket	with socket	with socket	–	–
R2M	direct, with socket	with socket	with socket	–	–
R15 - 2 CO	direct	with socket	with socket	–	–
R15 - 3 CO	direct	with socket	with socket	–	–
R15 - 4 CO	–	with socket ④	with socket	–	–
RG25	–	–	direct	–	–
RUC faston 4,8x0,5	direct	with socket ④ direct	with socket ④ direct ⑤	on request	4,8 x 0,5 mm
RUC faston 6,3x0,8	–	direct	direct ⑤	on request	6,3 x 0,8 mm
RUC-M	direct	with socket ④ direct	with socket ④ direct ⑤	on request	4,8 x 0,5 mm
R20	–	direct	–	standard	6,3 x 0,8 mm
R30N	direct	–	–	–	–
R40N	direct	–	–	–	–
PI84 with socket GZT80	–	direct	direct	–	–
PI84 with socket GZM80	–	direct	direct	–	–
PI84 with socket GZP80	–	direct	direct	–	–
PI85 with socket GZT80	–	direct	direct	–	–
PI85 with socket GZM80	–	direct	direct	–	–
PI85 with socket GZP80	–	direct	direct	–	–
PI85 inrush with socket GZT80	–	direct	direct	–	–
PI84P with socket GZP80	–	direct	direct	–	–
PI85P with socket GZP80	–	direct	direct	–	–
PIR2 with socket GZM2	–	direct	direct	–	–
PIR2 with socket GZP4	–	direct	direct	–	–
PIR3 with socket GZM3	–	direct	direct	–	–
PIR4 with socket GZM4	–	direct	direct	–	–
PIR4 with socket GZP4	–	direct	direct	–	–
PI6-1P	–	–	direct	–	–
PI6-1T	–	–	direct	–	–
PIR6W-1P-...	–	–	direct	–	–
PIR6W-1PS-...	–	–	direct	–	–
PIR6WB-1PS-...	–	–	direct	–	–
SIR6W-...	–	–	direct	–	–
SIR6WB-...	–	–	direct	–	–

④ Available sockets for connection behind panel mounting - GZ14Z, GZ14P ⑤ For RUC faston 4,8 x 0,5 and RUC-M, with GUC11S-V0 socket, max. switching voltages and coil voltages of relays are limited to 250 V AC / DC ⑥ Version with adaptor (V) or (H) ⑦ Relay integrated with heatsink

## Mounting options

Type	Method of mounting				
	For PCB mounting	On panel mounting	35 mm rail mount (EN 60715)	Cover with mounting flange - on panel mounting	Flat insert - faston (connectors)
<b>Relays for photovoltaic systems</b>					
RS35	direct	–	–	–	–
RS50	direct	–	–	–	–
RS80	direct	–	–	–	–
RG25	–	–	direct	–	–
RUC faston 4,8x0,5	direct	with socket ④ direct	with socket ④ direct ⑤	on request	4,8 x 0,5 mm
RUC faston 6,3x0,8	–	direct	direct ⑤	on request	6,3 x 0,8 mm
RUC-M	direct	with socket ④ direct	with socket ④ direct ⑤	on request	4,8 x 0,5 mm
<b>Relays for railroad industry</b>					
RM84	–	with socket	with socket	–	–
RM85	–	with socket	with socket	–	–
R2T	–	with socket	with socket	–	–
R3T	–	with socket	with socket	–	–
R4T	–	with socket	with socket	–	–
R15T - 2 CO	–	with socket	with socket	–	–
R15T - 3 CO	–	with socket	with socket	–	–
RUCT	–	–	with socket	–	–
RUCT-M	–	–	with socket	–	–
PI84T with socket GZT80-V0	–	direct	direct	–	–
PI85T with socket GZT80-V0	–	direct	direct	–	–
PIR2T with socket GZT2-V0	–	direct	direct	–	–
PIR3T with socket GZT3-V0	–	direct	direct	–	–
PIR4T with socket GZT4-V0	–	direct	direct	–	–
PIR152T with socket PZ8-V0	–	direct	direct	–	–
PIR153T with socket PZ11-V0	–	direct	direct	–	–
PRUCT with socket GUC11S-V0	–	–	direct	–	–
PRUCT-M with socket GUC11S-V0	–	–	direct	–	–
MT-W...M	–	–	direct	–	–
<b>Programmable relays</b>					
NEED-...-08-4...	–	direct	direct	–	–
NEED-...-16-8...	–	direct	direct	–	–
NEED-MODBUS	–	–	direct	–	–
<b>Solid state relays</b>					
RSR30	direct, with socket	–	with socket	–	–
RSR32	direct	–	–	–	–
RSR35	direct	–	–	–	–
RSR52	–	with heatsink direct	with heatsink	–	–
RSR62	–	with heatsink	with heatsink	–	–
RSR72	–	–	direct ⑥	–	–

## Mounting options

Type	Method of mounting	
	35 mm rail mount (EN 60715)	
<b>Installation relays</b>		
RPI-P-...	direct	
RPI-Z-...	direct	
RPI-1ZI-D12	direct	
RPI-1ZI-U24A	direct	
RPI-P-UNI	direct	
RPI-Z-UNI	direct	
<b>Bistable - impulse relays</b>		
RPB-1P-...	direct	
RPB-1PM-...	direct	
RPB-2Z-...	direct	
RPB-1ZI-...	direct	
RPB-1PM-UNI	direct	
RPB-1ZMI-UNI	direct	
RPB-2PSM-UNI	direct	
RPB-2ZSMI-UNI	direct	
<b>Monitoring relays</b>		
RPN-1VF-A400	direct	
RPN-1VFS-A400	direct	
RPN-1VFR-A400	direct	
RPN-1VFT-A400	direct	
RPN-1A..-A230	direct	
RPN-1TMP-A230	direct	
RPN-1AT-A230	direct	
MR-EU1W1P	direct	
MR-EU31UW1P	direct	
MR-EU3M1P	direct	
MR-EI1W1P	direct	
MR-ET1P	direct	
MR-GU32P-TR2	direct	
MR-GU3M2P-TR2	direct	
MR-GU3M2P	direct	
MR-GI1M2P-TR2	direct	
MR-GT2P-TR2	direct	
<b>Signal lamps</b>		
RLK-1.	direct	
RLK-3.	direct	
<b>Installation contactors</b>		
RIK20	direct	
RIK25	direct	
RIK40	direct	
RIK63	direct	
RIKN	direct	
RIK21	direct	

Type	Method of mounting	
	On panel mounting	35 mm rail mount (EN 60715)
<b>Time relays</b>		
MT-W...M	–	direct
RPC-.MA-...	–	direct
RPC-.MB-...	–	direct
RPC-2A-UNI	–	direct
RPC-1MC-UNI	–	direct
RPC-.MD-UNI	–	direct
RPC-1ER-...	–	direct
RPC-1EA-...	–	direct
RPC-1ES-...	–	direct
RPC-1EU-...	–	direct
RPC-1IP-...	–	direct
RPC-1SA-...	–	direct
RPC-1WT-...	–	direct
RPC-.E-...	–	direct
RPC-.WU-...	–	direct
RPC-.BP-...	–	direct
RPC-2SD-UNI	–	direct
RPC-1AS-A230	–	direct
TR4N 1 CO	–	direct
TR4N 2 CO	–	direct
TR4N 4 CO	–	direct
T-R4	with socket	with socket
PIR15...T with time module COM3	direct	direct
COM3	with socket	with socket
<b>Power supplies</b>		
RZI10...-M	–	direct
RZI30...-M	direct	direct
RZI60...-M	direct	direct
RZI100-24-M	direct	direct
RZI60-24-P	–	direct
RZI120-24-P	–	direct
RZI240-24-P	–	direct
RZI480-24-P	–	direct
RZI-.R	–	direct
RZI-.B	–	direct
RZI-40UPS	–	direct

# Relays for electronics

## Subminiature - signal relays

- $I_n$  currents of contacts: 0,5 ... 3 A.
- Methods of mounting: THT, SMT  
- depending on the type of relay.

### Applications:

- telecommunication equipment,
- office equipment,
- measurement equipment and devices,
- medical apparatus and medical monitoring equipment,
- audiovisual equipment,
- driving simulators, flight simulators,
- slot machines,
- protection, monitoring and alarm equipment,
- industrial and consumer electronic goods.



RSM850 .....	15
RSM850B .....	15
RSM822N .....	16
RSM954N .....	16
RSM957N .....	16



## Miniature relays

- $I_n$  currents of contacts: 5 ... 20 A.
- Methods of mounting: THT, in plug-in sockets  
- depending on the type of relay.

### Applications:

- general control of electrical equipment,
- equipment for air-conditioning, refrigeration products, heating, ventilation, lighting,
- protection, monitoring and alarm equipment,
- control systems and devices for household equipment,
- time relays and time switches,
- monitoring relays,
- temperature controllers,
- PLCs,
- electrical automation systems - industrial and power-engineering automation,
- equipment for smart buildings and equipment for automation of buildings,
- other.



## Bistable relays - subminiature

- $I_n$  currents of contacts: 0,5 A.
- Method of mounting: THT.

### Applications:

- for energy-saving control of electrical devices which are switched on and off with a change of the state of bistable relays via short supply of their coils,
- in electrical systems of battery-powered equipment,
- applications specified in description of subminiature relays.

RM12 .....	17
RM12N .....	17
RM32N .....	17
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RM45N .....	17
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RM85 faston .....	19
RM87 .....	20
RM87 sensitive .....	20
RM96 .....	20
RM699B .....	20
RM83 .....	21
RMP84 .....	21
RMP85 .....	21
RA2 .....	21



# Relays for electronics

## subminiature - signal relays

Type	RSM850 version THT	RSM850 version SMT	RSM850B bistable, 1 coil
Image			
Number and type of contacts	2 CO	2 CO	2 CO
Contact material	AgPd/Au ①	AgPd/Au ①	AgPd/Au ①
Rated / max. switching voltage AC	125 V / 250 V	125 V / 250 V	125 V / 250 V
Rated load AC1 DC1	0,5 A / 125 V AC 2 A / 30 V DC	0,5 A / 125 V AC 2 A / 30 V DC	0,5 A / 125 V AC 2 A / 30 V DC
Rated voltage DC	3, 5, 6, 9, 12, 24 V	3, 5, 6, 9, 12, 24 V	3, 5, 6, 9, 12, 24 V
Dielectric strength • coil - contacts • contact clearance	1 000 V AC ③ 1 000 V AC ⑤	1 000 V AC ③ 1 000 V AC ⑤	1 000 V AC ③ 1 000 V AC ⑤
Dimensions mm	14,3 x 9,3 x 5,4	14,3 x 9,3 x 6,6	14,3 x 9,3 x 5,4
Pinout (solder side view)			
Connection diagrams (pin side view)			
Recognitions, certifications, directives			

① Flash gold plating




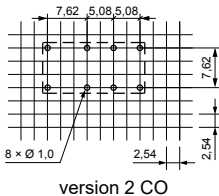
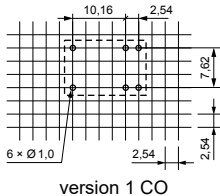
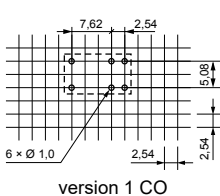
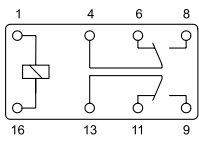
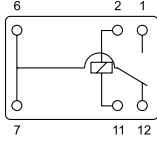
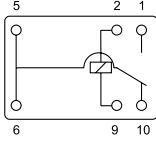



③ Type of insulation: basic

⑤ Type of clearance: micro-disconnection



# Relays for electronics

## subminiature - signal relays

Type	RSM822N	RSM954N	RSM957N
	sensitive coil 		sensitive coil 
Contact data			
Number and type of contacts	2 CO	1 CO	1 CO
Contact material	AgNi/Au ①	Ag/Au ①	Ag/Au ①
Rated / max. AC switching voltage	125 V / 250 V	125 V / 220 V	125 V / 220 V
Rated load	AC1 0,6 A / 125 V AC DC1 3 A / 30 V DC DC1 2 A (NO/NC) / 30 V DC	3 A / 125 V AC 3 A / 30 V DC	0,5 A / 125 V AC 1 A / 30 V DC
Coil data			
Rated voltage DC	3, 5, 6, 9, 12, 24 V (48 V standard)	3, 5, 6, 9, 12, 24 V	3, 5, 6, 9, 12, 24 V
Insulation			
Insulation rated voltage			
Dielectric strength			
• coil - contacts	1 000 V AC ③	1 000 V AC ③	1 000 V AC ③
• contact clearance	1 000 V AC ④	500 V AC ⑤	400 V AC ⑤
General data			
Dimensions mm	20,5 x 10,2 x 12,5	15,5 x 11 x 11,5	12,5 x 7,5 x 10
Pinout (solder side view)	 version 2 CO	 version 1 CO	 version 1 CO
Connection diagrams (pin side view)	 version 2 CO	 version 1 CO	 version 1 CO
Recognitions, certifications, directives			

① Flash gold plating  
② Hard gold plating

③ Type of insulation: basic  
④ Type of insulation: reinforced






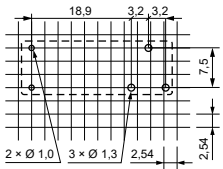
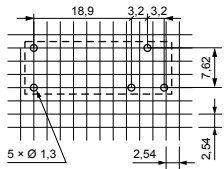
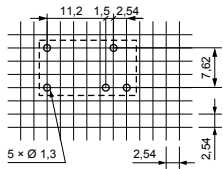
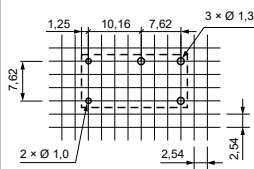
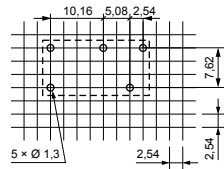
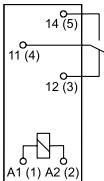
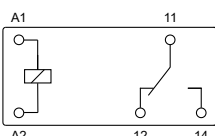
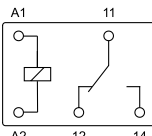
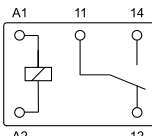
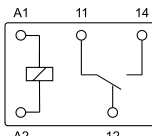





⑤ Type of clearance: micro-disconnection





# Relays for electronics



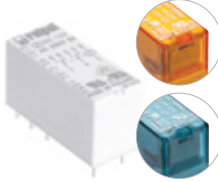
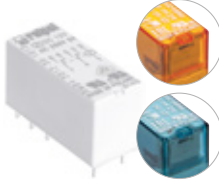
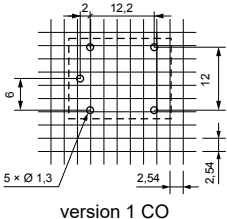
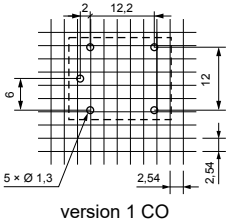
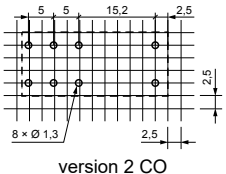
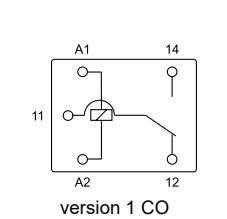
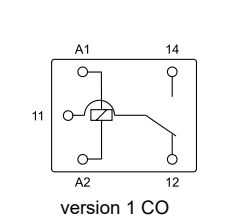
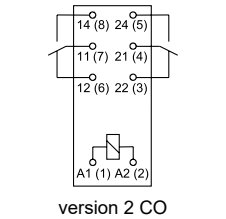

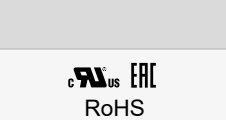
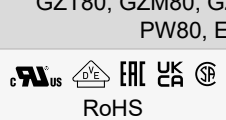




## miniature relays

RM12	RM12N	RM32N	RM40	RM45N
				
1 CO, 1 NO	1 CO, 1 NO	1 CO, 1 NO	1 CO, 1 NO	1 CO, 1 NO
AgNi, AgNi/Au Ⓣ, AgSnO <sub>2</sub> , AgSnO <sub>2</sub> /Au Ⓣ	AgNi, AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	1 CO: AgNi, AgNi/Au Ⓣ 1 NO: AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
250 V / 400 V	250 V / 440 V	250 V / 277 V	1 CO: 250 V / 380 V 1 NO: 250 V / 440 V	250 V / 277 V
8 A / 250 V AC 8 A / 24 V DC	1 NO: 10 A / 250 V AC 1 NO: 10 A / 30 V DC	1 NO: 5 A / 250 V AC 1 NO: 5 A / 28 V DC	1 NO: 8 A / 250 V AC 1 NO: 8 A / 30 V DC	1 NO: 5 A / 250 V AC 1 NO: 5 A / 28 V DC
5, 6, 9, 12, 18, 24, 48, 60 V	5, 9, 12, 18, 24, 48 V	5, 9, 12, 18, 24 V	3, 5, 6, 9, 12, 24, 48 V	5, 9, 12, 24 V
400 V AC				
5 000 V AC Ⓣ 1 000 V AC Ⓣ	5 000 V AC Ⓣ 1 000 V AC Ⓣ	2 500 V AC Ⓣ 1 000 V AC Ⓣ	4 000 V AC Ⓣ 1 000 V AC Ⓣ	4 000 V AC Ⓣ 1 000 V AC Ⓣ
28,5 x 10,1 x 12,5	28,7 x 10,3 x 12,7	18,8 x 10,6 x 15,3	20 x 10 x 10,5	20,5 x 10,6 x 15,6
				
version 1 CO	version 1 CO	version 1 CO	version 1 CO	version 1 CO
				
version 1 CO	version 1 CO	version 1 CO	version 1 CO	version 1 CO
				



# Relays for electronics

## miniature relays

Type	RM50N	RM51	RM84	RM85
				
<b>Contact data</b>				
Number and type of contacts	1 CO, 1 NO	1 CO, 1 NO	2 CO, 2 NO ②	1 CO, 1 NO ②
Contact material	AgSnO <sub>2</sub> , AgCdO ①	AgSnO <sub>2</sub>	AgNi, AgNi/Au ②, AgSnO <sub>2</sub>	AgNi, AgNi/Au ②, AgSnO <sub>2</sub>
Rated / max. AC switching voltage	250 V / 277 V	250 V / 277 V	250 V / 400 V	250 V / 400 V
Rated load (capacity)	AC1 AC15 DC1 DC13	AC1 DC1	AC1 DC1	AC1 DC1
	6 A / 250 V AC 12 A / 28 V DC	1 NO: 10 A / 250 V AC 1 NO: 10 A / 30 V DC	8 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 8 A / 24 V DC ③ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	16 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 16 A / 24 V DC ③ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)
Motor load		1 NO: 0,75 kW ④	0,37 kW ④	0,5 kW ④
<b>Coil data</b>				
Rated voltage	AC		12, 24, 48, 60, 110, 115, 120, 220, 230, 240 V	12, 24, 48, 60, 110, 115, 120, 220, 230, 240 V
	DC	5, 9, 12, 24, 48 V	5, 9, 12, 24, 48 V	3, 5, 6, 9, 12, 18, 24, 36, 48, 60, 110 V
<b>Insulation</b>				
Insulation rated voltage			400 V AC	400 V AC
Dielectric strength				
• coil - contacts	1 500 V AC ⑤	2 500 V AC ⑤	5 000 V AC ⑤	5 000 V AC ⑤
• contact clearance	750 V AC ⑥	1 000 V AC ⑥	1 000 ⑤, 2 000 ② V AC	1 000 ⑤, 2 000 ② V AC
<b>General data</b>				
Dimensions	mm	19,5 x 15,6 x 15,3	19,5 x 16 x 17,1	29 x 12,7 x 15,7
Pinout (solder side view)				
		version 1 CO	version 1 CO	version 2 CO
Pinout (pin side view)				
		version 1 CO	version 1 CO	version 2 CO
Connection diagrams (pin side view)				
		version 1 CO	version 1 CO	version 2 CO
Plug-in sockets for relays			GZT80, GZM80, GZS80, GZF80, GZP80, PW80, EC 50, GD50	
Recognitions, certifications, directives				

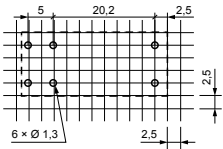
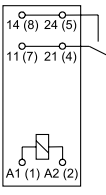
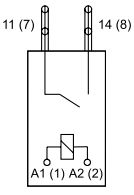

① Hard gold plating  
 ② Type of insulation: basic  
 ③ Type of clearance: micro-disconnection  
 ④ AC3 according to IEC 60947-4-1, 1-phase motor

⑤ Type of insulation: reinforced  
 ⑥ Type of clearance: full-disconnection  
 ⑦ Diagram: www.relpol.com.pl



# Relays for electronics

## miniature relays





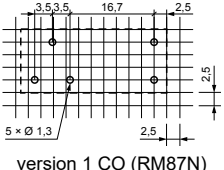
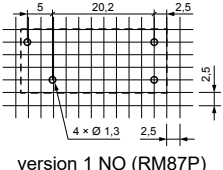
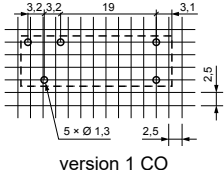
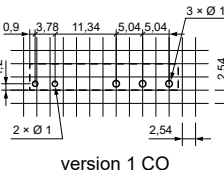
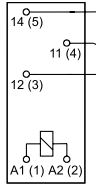
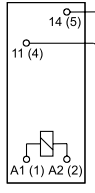
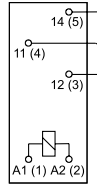
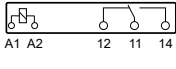




RM85 - special	RM85 inrush	RM85 105°C sensitive	RM85 faston
for switching higher voltages	80 A / 20 ms	sensitive coil	vertical version (V)
			
1 NO	1 NO	1 NO	1 NO
AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgNi, AgNi/Au ②, AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
250 V / 480 V	250 V / 400 V	250 V / 400 V	250 V / 400 V
5 A / 480 V AC 16 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 16 A / 24 V DC 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	16 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 16 A / 24 V DC ③ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	16 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 16 A / 24 V DC ③ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	20 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 20 A / 24 V DC 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)
0,5 kW ④	0,75 kW ④	0,5 kW ④	0,5 kW ④
3, 5, 6, 9, 12, 18, 24, 36, 48, 60, 110 V	3, 5, 6, 9, 12, 18, 24, 36, 48, 60, 110 V	5, 6, 9, 10, 12, 18, 24, 48 V	5, 6, 9, 10, 12, 18, 24, 48 V
480 V AC	400 V AC	400 V AC	400 V AC
5 000 V AC ⑤ 2 000 V AC ⑥	5 000 V AC ⑤ 1 000 V AC ⑥	5 000 V AC ⑤ 1 000 V AC ⑥	5 000 V AC ⑤ 1 000 V AC ⑥
29 x 12,7 x 15,7	29 x 12,7 x 15,7	29 x 12,7 x 15,7	40,5 x 12,7 x 15,7
			
version 1 NO	version 1 NO	version 1 NO	version 1 NO
			
version 1 NO	version 1 NO	version 1 NO	version 1 NO
GZT80, GZM80, GZS80, GZF80, GZP80, PW80, EC 50, GD50			
			
RoHS	RoHS	RoHS	RoHS



① Relpol S.A. is not responsible for usage relays with AgCdO contact material in categories of EEE where it is prohibited by the directive RoHS2 2011/65/EU. ② Available special versions - relays with the increased dielectric strength of the contact clearance (only with NO contacts and DC coils) ③ ④ RM85 faston: horizontal version (H) - see [www.relpol.com.pl](http://www.relpol.com.pl)

# Relays for electronics

## miniature relays





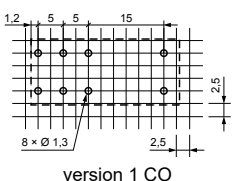
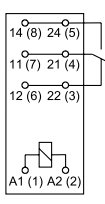
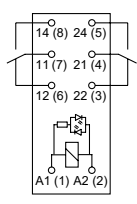
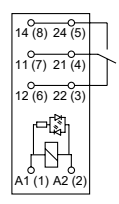
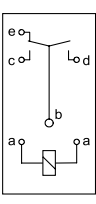



Type	RM87	RM87 sensitive	RM96	RM699B
				
<b>Contact data</b>		sensitive coil		vertical version (V)
Number and type of contacts	1 CO, 1 NO <sup>②</sup>	1 NO	1 CO, 1 NO, 1 NC	1 CO, 1 NO
Contact material	AgNi, AgNi/Au <sup>④</sup> , AgSnO <sub>2</sub>	AgNi, AgNi/Au <sup>④</sup> , AgSnO <sub>2</sub>	AgSnO <sub>2</sub> , AgSnO <sub>2</sub> /Au <sup>④</sup>	AgSnO <sub>2</sub> , AgSnO <sub>2</sub> /Au <sup>④</sup> , AgNi, AgNi/Au <sup>④</sup>
Rated / max. AC switching voltage	250 V / 400 V	250 V / 400 V	250 V / 400 V	250 V / 400 V <sup>⑦</sup>
Rated load (capacity)	AC1 12 A / 250 V AC AC15 3 A / 120 V (B300) AC15 1,5 A / 240 V (B300) DC1 12 A / 24 V DC <sup>⑤</sup> DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC <sup>⑤</sup> 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	8 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 8 A / 24 V DC <sup>⑤</sup> 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	6 A / 250 V AC <sup>⑦</sup>    6 A / 30 V DC <sup>⑦</sup>
Motor load	0,5 kW <sup>⑦</sup>	0,5 kW <sup>⑦</sup>	0,37 kW <sup>⑦</sup>	1 NO: 0,186 kW <sup>⑦ ⑦</sup>
<b>Coil data</b>				
Rated voltage AC	12, <b>24</b> , 48, 60, 110, 115, 120, 220, <b>230</b> , 240 V			
Rated voltage DC	3, 5, 6, 9, <b>12</b> , 18, <b>24</b> , 36, 48, 60, 110 V	5, 6, 9, 10, 12, 18, 24, 48 V	5, 6, 9, <b>12</b> , 18, <b>24</b> , 48 V	5, 6, 9, 12, 24, 48, 60 V
<b>Insulation</b>				
Insulation rated voltage	400 V AC	400 V AC	400 V AC	250 V AC
Dielectric strength				
• coil - contacts	5 000 V AC <sup>①</sup>	5 000 V AC <sup>①</sup>	4 000 V AC <sup>①</sup>	4 000 V AC <sup>①</sup>
• contact clearance	1 000 <sup>③</sup> , 2 000 <sup>②</sup> V AC	1 000 V AC <sup>③</sup>	1 000 V AC <sup>③</sup>	1 000 V AC <sup>③</sup>
<b>General data</b>				
Dimensions mm	29 x 12,7 x 15,7	29 x 12,7 x 15,7	1 CO: 30 x 10 x 16,2	28 x 5 x 15
Pinout (solder side view)	 version 1 CO (RM87L)	 version 1 NO (RM87P)	 version 1 CO	 version 1 CO
Connection diagrams (pin side view)	 version 1 CO (RM87L)	 version 1 NO (RM87P)	 version 1 CO	 version 1 CO
Plug-in sockets for relays	<sup>④</sup> GZT92, GZM92, GZS92, EC 35, GD35 <sup>⑤</sup> GZT80, GZM80, GZS80, GZF80, GZP80, PW80, EC 50, GD50		ES 32	PI6W, PI6WB, 6W, 6WB, GD699
Recognitions, certifications, directives	 RoHS	 RoHS	 RoHS	 RoHS

<sup>②</sup> Hard gold plating    <sup>①</sup> Type of insulation: reinforced    <sup>⑤</sup> Type of clearance: micro-disconnection  
<sup>⑦</sup> AC3 according to IEC 60947-4-1, 1-phase motor    <sup>③</sup> Diagram: [www.repol.com.pl](http://www.repol.com.pl)



# Relays for electronics




























## miniature relays

RM83	RMP84	RMP85	RA2
			automotive relays 
1 CO, 1 NO, 1 NC	2 CO	1 CO	1 CO, 1 NO, 2 NO
AgSnO <sub>2</sub>	AgNi	AgNi	AgSnO <sub>2</sub>
250 V / 400 V	250 V / 440 V	250 V / 440 V	DC: 50 V / 50 V
16 A / 250 V AC 6 A / 120 V (B300) 3 A / 240 V (B300) 16 A / 24 V DC Ⓢ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	8 A / 250 V AC	16 A / 250 V AC	1 CO: 20 A / 12 A (NO/NC)
0,65 kW Ⓢ			
	<b>24, 115, 230 V</b>	<b>24, 115, 230 V</b>	
5, 6, 9, 12, 18, 24, 36, 48, 60, 110 V	<b>12, 24, 48, 110 V</b>	<b>12, 24, 48, 110 V</b>	5, 6, 9, 12, 15, 18, 24, 48 V
400 V AC	440 V AC	440 V AC	50 V AC
4 000 V AC Ⓢ 1 000 V AC Ⓢ	5 000 V AC Ⓢ 1 000 V AC Ⓢ	5 000 V AC Ⓢ 1 000 V AC Ⓢ	500 V AC 500 V AC
IP 40: 29,2 x 13,1 x 25,1	29 x 13 x 25,5	29 x 13 x 25,5	IP 00: 18,6 x 13 x 18,5
 version 1 CO			
 version 1 CO	 version 2 CO	 version 1 CO	 version 1 CO left + 1 NO
PW80, EC 50, GD50	GZF80, GZP80, EC 50, GD50	GZF80, GZP80, EC 50, GD50	
 RoHS	 RoHS	 RoHS	RoHS



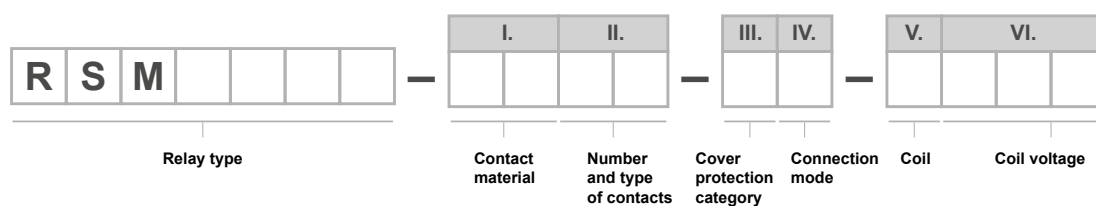
- Ⓢ Available special versions - relays with the increased dielectric strength of the contact clearance (only with NO contacts and DC coils) Ⓢ Ⓢ Available in version: RM87N (3,5 mm pinout) Ⓢ Available in versions: RM87L, RM87P (5 mm pinout)  
Ⓢ RM699B: horizontal version (H) - see [www.relpol.com.pl](http://www.relpol.com.pl) Ⓢ Only for contacts AgSnO<sub>2</sub>, AgNi

## Plug-in sockets for relays

<p><b>GZT80 (852612)</b> For RM84, RM85, RM87L/P</p> 	<p><b>GZT92 (852580)</b> For RM87N</p>  <p>GZT80-0040 GZM80-0041 GZT80-0035 M...</p>	<p><b>GZM80 (857408)</b> For RM84, RM85, RM87L/P</p>  <p>ZGGZ80</p>	<p><b>GZM92 (857410)</b> For RM87N</p> 	
<p><b>GZP80 (864325)</b></p>				
<p>For RM84, RM85, RM87L/P, RMP84, RMP85</p>				
 <p>GZP80-040</p>	 <p>GZT80-0040</p>	 <p>GZM80-0041</p>	 <p>GZ80-1001</p>	 <p>MP15</p>
 <p>M...</p>	 <p>ZGZP80-2</p>	 <p>ZGZP-2</p>	 <p>ZGGZ80</p>	
<p><b>GZF80 (2615352)</b> For RM84, RM85, RM87L/P, RMP84, RMP85</p>  <p>GZM80-0041 GZ80-1001</p>	<p><b>GZS80 (2613503)</b> For RM84, RM85, RM87L/P</p>  <p>GZS-0040 GZM80-0041</p>	<p><b>GZS92 (2613502)</b> For RM87N</p>  <p>TR M... ZGGZ80</p>	<p><b>ES 32</b> For RM96 1 CO</p> 	
<p><b>PW80 (592066)</b> For RM84, RM85, RM87L/P, RM83</p>  <p>MH16-2 MH25-2</p>	<p><b>EC 50 (2000532)</b> For RM84, RM85, RM87L/P, RM83, RMP84, RMP85</p>  <p>MH16-2 MH25-2</p>	<p><b>EC 35 (2000531)</b> For RM87N</p>  <p>MP16-2 MP25-2</p>	<p><b>GD50 (2613510)</b> For RM84, RM85, RM87L/P, RM83, RMP84, RMP85</p>  <p>GD-0016 MH16-2 MH25-2</p>	<p><b>GD35 (2613509)</b> For RM87N</p>  <p>MP16-2 MP25-2</p>
<p><b>PI6W</b> For RM699BV, RSR30</p>  <p>ZG20 PI6W-1246</p>	<p><b>PI6WB</b> For RM699BV, RSR30</p> 	<p><b>6W</b> For RM699BV, RSR30</p>  <p>6W-SEP JB20</p>	<p><b>6WB</b> For RM699BV, RSR30</p>  <p>MP6-C</p>	<p><b>GD699 (2615832)</b> For RM699BV, RSR30</p>  <p>MP6-C</p>



# Relays for electronics



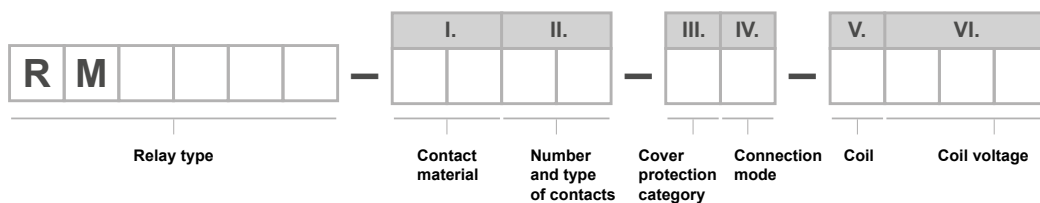
	Relay type				
	RSM850 versions THT, SMT	RSM850B bistable	RSM822N	RSM954N	RSM957N
<b>I. Contact material</b>					
01 - Ag/Au flash gold plating				•	•
21 - AgNi/Au flash gold plating			•		
61 - AgPd/Au flash gold plating	•	•			
<b>II. Number and type of contacts</b>					
11 - 1 CO				•	•
12 - 2 CO	•	•	•		
<b>III. Cover protection category</b>					
8 - IP 67	•	•	•	•	•
<b>IV. Connection mode</b>					
5 - for PCB	•	•	•	•	•
M - SMT	•				
<b>V. Coil</b>					
1 - DC	•	•	•	•	
S - DC sensitive (low power)				•	•
<b>VI. Coil voltage</b>	DC	DC	DC	DC sensitive	DC sensitive
005 - 5 V	•	•		•	•
012 - 12 V	•	•		•	•
024 - 24 V	•	•		•	•
048 - 48 V			•		

... - other voltages: see data tables (pages 15, 16) or product catalog (full edition) [www.repol.pl/en/Download/Product-Catalogs](http://www.repol.pl/en/Download/Product-Catalogs)

## EXAMPLE ORDERING CODES

Index	Code	Description
2611705	RSM850-6112-85-1005	two changeover contacts 2 A (AgPd/Au), coil voltage 5 V DC
2611708	RSM850-6112-85-1012	two changeover contacts 2 A (AgPd/Au), coil voltage 12 V DC
2611709	RSM850-6112-85-1024	two changeover contacts 2 A (AgPd/Au), coil voltage 24 V DC
2611711	RSM850B-6112-85-1005	two changeover contacts 2 A (AgPd/Au), coil voltage 5 V DC
2611714	RSM850B-6112-85-1012	two changeover contacts 2 A (AgPd/Au), coil voltage 12 V DC
2611715	RSM850B-6112-85-1024	two changeover contacts 2 A (AgPd/Au), coil voltage 24 V DC
2614638	RSM822N-2112-85-S005	two changeover contacts 3 A (AgNi/Au), coil voltage 5 V DC (sensitive)
2614641	RSM822N-2112-85-S012	two changeover contacts 3 A (AgNi/Au), coil voltage 12 V DC (sensitive)
2614642	RSM822N-2112-85-S024	two changeover contacts 3 A (AgNi/Au), coil voltage 24 V DC (sensitive)
2614624	RSM954N-0111-85-1005	one changeover contact 3 A (Ag/Au), coil voltage 5 V DC
2614627	RSM954N-0111-85-1012	one changeover contact 3 A (Ag/Au), coil voltage 12 V DC
2614628	RSM954N-0111-85-1024	one changeover contact 3 A (Ag/Au), coil voltage 24 V DC
2614631	RSM957N-0111-85-S005	one changeover contact 1 A (Ag/Au), coil voltage 5 V DC (sensitive)
2614634	RSM957N-0111-85-S012	one changeover contact 1 A (Ag/Au), coil voltage 12 V DC (sensitive)
2614635	RSM957N-0111-85-S024	one changeover contact 1 A (Ag/Au), coil voltage 24 V DC (sensitive)

# Relays for electronics



	Relay type												
	RM12	RM12N	RM32N	RM40	RM45N	RM50	RM50N	RM51	RM96	RM699B	RM83		
											versions V, H		
<b>I. Contact material</b>													
10 - AgCdO							•						
20 - AgNi	•	•				• 1 CO					•		
22 - AgNi/Au hard gold plating	•					• 1 CO					•		
30 - AgSnO <sub>2</sub>	•	•	•			• 1 NO	•	•	•	•	•		•
32 - AgSnO <sub>2</sub> /Au hard gold plating	•									•	•		
<b>II. Number and type of contacts</b>													
11 - 1 CO	•	•	•	•	•	•	•	•	•	•	•		•
21 - 1 NO	•	•	•	•	•	•	•	•	•	•	•		•
31 - 1 NC										•			•
<b>III. Cover protection category</b>													
2 - IP 40	•	•								•			•
3 - IP 67	•	•								•			•
8 - IP 67			•	•	•	•	•	•			•		
<b>IV. Connection mode</b>													
5 - for PCB	•	•	•	•	•	•	•	•					
5 - for PCB and sockets									•	•			•
<b>V. Coil</b>													
1 - DC	•	•	•	•	•	•	•	•	•	•	•		•
S - DC sensitive													•
<b>VI. Coil voltage</b>													
005 - 5 V	•	•	•	•	•	•	•	•	•	•	•	•	
012 - 12 V	•	•	•	•	•	•	•	•	•	•	•	•	
024 - 24 V	•	•	•	•	•	•	•	•	•	•	•	•	
110 - 110 V												•	•

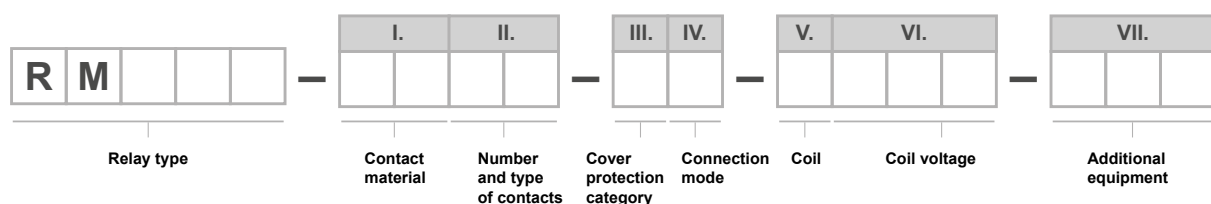
... - other voltages: see data tables (pages 17, 18, 20, 21) or product catalog (full edition) [www.relpol.pl/en/Download/Product-Catalogs](http://www.relpol.pl/en/Download/Product-Catalogs)

## EXAMPLE ORDERING CODES

Index	Code	Description
861980	RM12-2011-35-1012	one changeover contact 8 A (AgNi), coil voltage 12 V DC
862000	RM12-2021-35-1024	one normally open contact 8 A (AgNi), coil voltage 24 V DC
2614997	RM12N-2011-25-1012	one changeover contact 8 A (AgNi), coil voltage 12 V DC
2614939	RM12N-3021-35-1024	one normally open contact 10 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
2615029	RM32N-3011-85-1012	one changeover contact 5 A (AgSnO <sub>2</sub> ), coil voltage 12 V DC
2615024	RM32N-3021-85-1024	one normally open contact 5 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
2611695	RM40-2011-85-1024	one changeover contact 5 A (AgNi), coil voltage 24 V DC
2614936	RM45N-3011-85-1012	one changeover contact 5 A (AgSnO <sub>2</sub> ), coil voltage 12 V DC
2614955	RM45N-3021-85-1024	one normally open contact 5 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
2611657	RM50-3011-85-1024	one changeover contact 12 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
2614648	RM50N-3011-85-1012	one changeover contact 12 A (AgSnO <sub>2</sub> ), coil voltage 12 V DC
2614660	RM50N-3021-85-1024	one normally open contact 12 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
2614699	RM51-3011-85-1012	one changeover contact 10 A (AgSnO <sub>2</sub> ), coil voltage 12 V DC
2614710	RM51-3021-85-1024	one normally open contact 10 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
852845	RM96-3011-35-1024	one changeover contact 8 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
852859	RM96-3021-35-1024	one normally open contact 8 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
2613696	RM699BV-3011-85-1012	one changeover contact 6 A (AgSnO <sub>2</sub> ), coil voltage 12 V DC, vertical version
2613700	RM699BH-3011-85-1024	one changeover contact 6 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC, horizontal version
855151	RM83-3011-25-1024	one changeover contact 16 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
440665	RM83-3021-25-S110	one normally open contact 16 A (AgSnO <sub>2</sub> ), coil voltage 110 V DC (sensitive)



# Relays for electronics



	Relay type															
	RM84		RM85		RM85 special		RM85 inrush		RM85 105 °C		RM85 faston V, H		RM87 sensitive		RMP84 RMP85	
<b>I. Contact material</b>																
20 - AgNi	•	•						•		•	•	•	•			•
23 - AgNi/Au hard gold plating	•	•						•		•	•	•	•			
30 - AgSnO <sub>2</sub>	•	•	•					•		•	•	•	•			
50 - AgSnO <sub>2</sub> solid contacts							•									
<b>II. Number and type of contacts</b>																
11 - 1 CO			•								•	•				•
12 - 2 CO	•														•	
21 - 1 NO			•				•	•	•	•	•	•				
22 - 2 NO	•															
51 - 1 NO gap 0,6 mm						•										
<b>III. Cover protection category</b>																
2 - IP 40	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
3 - IP 67	•	•									•	•				
<b>IV. Connection mode</b>																
5 - for PCB						•										
5 - for PCB and sockets	•	•				•	•				•	•				
5 - for sockets															•	•
0 - for PCB and faston 250											•					
<b>V. Coil</b>																
1 - DC	•	•	•	•	•	•	•				•	•			•	•
S - DC sensitive								•	•			•				
5 - AC	•	•									•	•			•	•
<b>VI. Coil voltage</b>	AC	DC	AC	DC	DC	DC	DC sensitive	DC sensitive	AC	DC	DC sensitive	AC	DC	AC	DC	
005 - 5 V		•		•	•	•	•	•	•	•	•					
012 - 12 V	•	•	•	•	•	•	•	•	•	•	•					
024 - 24 V	•	•	•	•	•	•	•	•	•	•	•	•		•	•	
110 - 110 V	•	•	•	•	•	•				•	•				•	
115 - 115 V	•		•							•					•	
230 - 230 V	•		•							•					•	
... - other voltages: see data tables (pages 19, 20, 21) or product catalog (full edition) <a href="http://www.repol.pl/en/Download/Product-Catalogs">www.repol.pl/en/Download/Product-Catalogs</a>																
<b>VII. Additional equipment</b>																
W - mechanical indicator															•	•
T - test button															•	•
L - LED															•	•

## EXAMPLE ORDERING CODES

Index	Code	Description
600336	RM84-2012-35-1024	two changeover contacts 8 A (AgNi), coil voltage 24 V DC
604622	RM84-2012-35-5230	two changeover contacts 8 A (AgNi), coil voltage 230 V AC
600468	RM84-2022-35-1024	two normally open contacts 8 A (AgNi), coil voltage 24 V DC
600021	RM85-2011-35-1024	one changeover contact 16 A (AgNi), coil voltage 24 V DC
604658	RM85-2011-35-5230	one changeover contact 16 A (AgNi), coil voltage 230 V AC
600104	RM85-2021-35-1024	one normally open contact 16 A (AgNi), coil voltage 24 V DC
855381	RM85V7-3021-20-S048	one normally open contact 20 A (AgSnO <sub>2</sub> ), coil voltage 48 V DC (sensitive), horizontal faston
600181	RM87N-2011-35-1024	one changeover contact 12 A (AgNi, 3,5 mm pinout), coil voltage 24 V DC
600801	RM87L-2011-35-1012	one changeover contact 12 A (AgNi, 5 mm pinout), coil voltage 12 V DC
600673	RM87N-2021-35-1024	one normally open contact 12 A (AgNi, 3,5 mm pinout), coil voltage 24 V DC
2615182	RMP84-2012-25-1024-WTL	two changeover contacts 8 A (AgNi), coil voltage 24 V DC
2615191	RMP84-2012-25-5230-WTL	two changeover contacts 8 A (AgNi), coil voltage 230 V AC
2615178	RMP85-2011-25-1024-WTL	one changeover contact 16 A (AgNi), coil voltage 24 V DC
2615188	RMP85-2011-25-5230-WTL	one changeover contact 16 A (AgNi), coil voltage 230 V AC




































# Signalling / protecting module

## ORDERING CODES

Index	Code	Description
854834	M21P	module D (diode D) - surge suppression, grey colour, operating voltage 6...230 V DC, polarization P: -A1 / +A2
854776	M21P	module D (diode D) - surge suppression, black colour, operating voltage 6...230 V DC, polarization P: -A1 / +A2
854833	M21N	module D (diode D) - surge suppression, grey colour, operating voltage 6...230 V DC, polarization N: +A1 / -A2
854777	M21N	module D (diode D) - surge suppression, black colour, operating voltage 6...230 V DC, polarization N: +A1 / -A2
854836	M31R	module LD (diode LED red + diode D) - signalling and surge suppression, grey colour, operating voltage 6...24 V DC, polarization P: -A1 / +A2
854835	M31G	module LD (diode LED green + diode D) - signalling and surge suppression, grey colour, operating voltage 6...24 V DC, polarization P: -A1 / +A2
854838	M32R	module LD (diode LED red + diode D) - signalling and surge suppression, grey colour, operating voltage 24...60 V DC, polarization P: -A1 / +A2
854837	M32G	module LD (diode LED green + diode D) - signalling and surge suppression, grey colour, operating voltage 24...60 V DC, polarization P: -A1 / +A2
854842	M41R	module LD (diode LED red + diode D) - signalling and surge suppression, grey colour, operating voltage 6...24 V DC, polarization N: +A1 / -A2
854841	M41G	module LD (diode LED green + diode D) - signalling and surge suppression, grey colour, operating voltage 6...24 V DC, polarization N: +A1 / -A2
854844	M42R	module LD (diode LED red + diode D) - signalling and surge suppression, grey colour, operating voltage 24...60 V DC, polarization N: +A1 / -A2
854843	M42G	module LD (diode LED green + diode D) - signalling and surge suppression, grey colour, operating voltage 24...60 V DC, polarization N: +A1 / -A2
854846	M43R	module LD (diode LED red + diode D) - signalling and surge suppression, grey colour, operating voltage 110...230 V DC, polarization N: +A1 / -A2
854845	M43G	module LD (diode LED green + diode D) - signalling and surge suppression, grey colour, operating voltage 110...230 V DC, polarization N: +A1 / -A2
854847	M51	module RC (resistor R + capacitor C) - limits inductive disturbance, grey colour, operating voltage 6...24 V AC, connection: A1 / A2
854848	M52	module RC (resistor R + capacitor C) - limits inductive disturbance, grey colour, operating voltage 24...60 V AC, connection: A1 / A2
854849	M53	module RC (resistor R + capacitor C) - limits inductive disturbance, grey colour, operating voltage 110...240 V AC, connection: A1 / A2
854851	M61R	module L (diode LED red) - signalling, grey colour, operating voltage 6...24 V AC/DC, polarization: (+)A1 / (-)A2
854850	M61G	module L (diode LED green) - signalling, grey colour, operating voltage 6...24 V AC/DC, polarization: (+)A1 / (-)A2
854853	M62R	module L (diode LED red) - signalling, grey colour, operating voltage 24...60 V AC/DC, polarization: (+)A1 / (-)A2
854852	M62G	module L (diode LED green) - signalling, grey colour, operating voltage 24...60 V AC/DC, polarization: (+)A1 / (-)A2
854855	M63R	module L (diode LED red) - signalling, grey colour, operating voltage 110...230 V AC/DC, polarization: (+)A1 / (-)A2
854854	M63G	module L (diode LED green) - signalling, grey colour, operating voltage 110...230 V AC/DC, polarization: (+)A1 / (-)A2
854857	M91R	module LV (diode LED red + varistor V) - signalling and surge suppression, grey colour, operating voltage 6...24 V AC/DC, polarization: (+)A1 / (-)A2
854856	M91G	module LV (diode LED green + varistor V) - signalling and surge suppression, grey colour, operating voltage 6...24 V AC/DC, polarization: (+)A1 / (-)A2
854859	M92R	module LV (diode LED red + varistor V) - signalling and surge suppression, grey colour, operating voltage 24...60 V AC/DC, polarization: (+)A1 / (-)A2
854858	M92G	module LV (diode LED green + varistor V) - signalling and surge suppression, grey colour, operating voltage 24...60 V AC/DC, polarization: (+)A1 / (-)A2
854861	M93R	module LV (diode LED red + varistor V) - signalling and surge suppression, grey colour, operating voltage 110...230 V AC/DC, polarization: (+)A1 / (-)A2
854860	M93G	module LV (diode LED green + varistor V) - signalling and surge suppression, grey colour, operating voltage 110...230 V AC/DC, polarization: (+)A1 / (-)A2
854862	M71	module V (varistor V) - surge suppression, grey colour, operating voltage 24 V AC, connection: A1 / A2
854863	M72	module V (varistor V) - surge suppression, grey colour, operating voltage 130 V AC, connection: A1 / A2
854864	M73	module V (varistor V) - surge suppression, grey colour, operating voltage 230 V AC, connection: A1 / A2
2002616	Module 21	module D (diode D) - surge suppression, black colour, operating voltage 6...230 V DC, polarization N: +A1 / -A2
2611805	Module 41	module LD (diode LED red + diode D) - signalling and surge suppression, black colour, operating voltage 6...24 V DC, polarization N: +A1 / -A2

# Interconnection strips

## ORDERING CODES

Index	Code	Description
858826	ZGGZ80-1	 strip 8-poles, bridges common input or output signals, for GZT80, GZM80, GZS80, GZT92, GZM92, GZS92, ES 32, PI84, PI85
858827	ZGGZ80-2	
858829	ZGGZ4-1	 strip 6-poles, bridges common input or output signals, for GZT2, GZM2, GZT3, GZM3, GZT4, GZM4, PIR2, PIR3, PIR4
858830	ZGGZ4-2	
2616314	ZGZP-2 GY	 jumper 2-poles, bridges the neighboring poles of single socket, for GZP80, GZP4, PI84, PI85, PI84P, PI85P, PIR2, PIR4
2616315	ZGZP-2 BK	
2616316	ZGZP-2 RD	
2616317	ZGZP-2 BE	 
2616318	ZGZP80-8 GY	 strip 8-poles, bridges common input signals (A1, A2 or A1 and A2 together), for GZP80, PI84, PI85, PI84P, PI85P
2616319	ZGZP80-8 BK	
2616320	ZGZP80-8 RD	
2616321	ZGZP80-8 BE	 
2616326	ZGZP80-2 GY	 strip 2-poles, bridges common input signals (A1, A2 or A1 and A2 together) or output signals, for GZP80, PI84, PI85, PI84P, PI85P
2616327	ZGZP80-2 BK	
2616328	ZGZP80-2 RD	
2616329	ZGZP80-2 BE	 
2616322	ZGZP4-8 GY	 strip 8-poles, bridges common input signals (A1, A2 or A1 and A2 together), for GZP4, PIR2, PIR4
2616323	ZGZP4-8 BK	
2616324	ZGZP4-8 RD	
2616325	ZGZP4-8 BE	 
2616330	ZGZP4-2 GY	 strip 2-poles, bridges common input signals (A1, A2 or A1 and A2 together) or output signals for GZP4, PIR2, PIR4
2616331	ZGZP4-2 BK	
2616332	ZGZP4-2 RD	
2616333	ZGZP4-2 BE	 
2608954	ZG20-1	
2608955	ZG20-2	
2608956	ZG20-3	
2615831	JB20-1	
2615830	JB20-2	
2615829	JB20-3	 strip 20-poles, bridges common input or output signals, for 6W, 6WB, SIR6W, SIR6WB

# Relays for industry

## Miniature industrial relays

- $I_n$  currents of contacts: 5 ... 12 A.
- Methods of mounting:  
in plug-in sockets,  
direct on panel mounting, THT  
- depending on the type of relay.



R2N .....	30
R3N .....	30
R4N .....	30
R2M .....	30

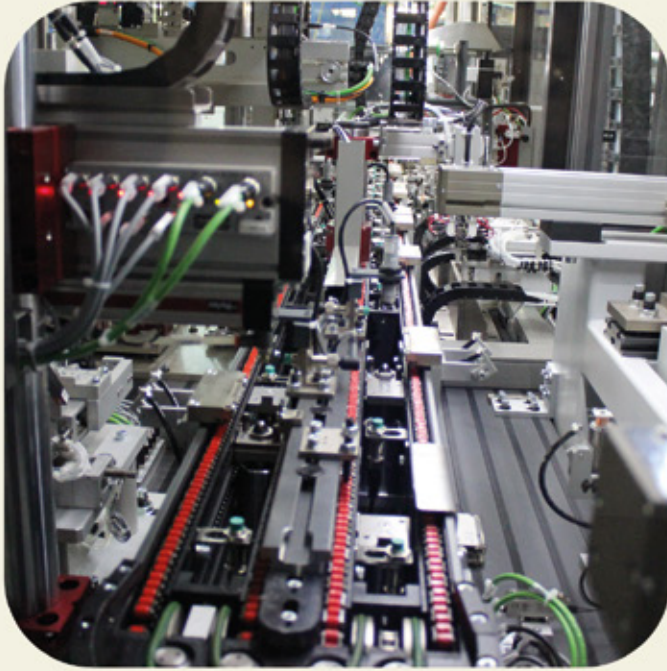
## Industrial relays of small dimensions

- $I_n$  currents of contacts: 10 ... 40 A.
- Methods of mounting:  
in plug-in sockets,  
direct on 35 mm rail mount,  
direct on panel mounting, THT  
- depending on the type of relay.

## Applications:

- general control of electrical equipment,
- industrial control systems,
- equipment for air-conditioning, refrigeration products, heating, ventilation, lighting,
- protection, monitoring and alarm equipment,
- control systems and devices for household equipment,
- electrical automation systems - industrial and power-engineering automation,
- building automation equipment (BMS),
- other.

R15 - 2 CO .....	31
R15 - 3 CO .....	31
R15 - 4 CO .....	31
RUC .....	32
RUC-M .....	32
RG25 .....	32
R20 .....	33
R30N .....	33
R40N .....	33



### Interface relays (relay coupling modules)

- $I_n$  currents of contacts: 1 ... 16 A.
- Connections of wiring: screw terminals, spring terminals - depending on the type of relay.
- Methods of mounting:
  - PI84, PI85, PIR2, PIR3, PIR4: on 35 mm rail mount or on panel mounting,
  - PI84P, PI85P, PI6, PIR6W, PIR6WB, SIR6W, SIR6WB: on 35 mm rail mount.





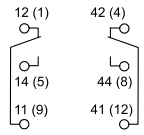
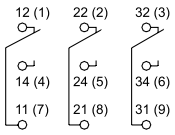
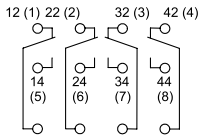
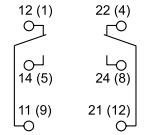
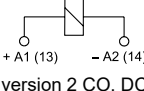
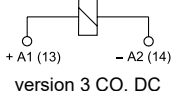
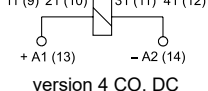





### Applications:

- in applications with PLCs as input / output [I/O] separators,
- in industrial automation applications for isolation of input signals from output circuits,
- in electrical applications as universal interfaces between control and load, for medium load switching,
- applications specified in descriptions of relays - miniature industrial and industrial of small dimensions.

PI84 - GZT80 .....	38
PI84 - GZM80 .....	38
PI84 - GZP80 .....	38
PI85 - GZT80 .....	38
PI85 - GZM80 .....	39
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PI85 inrush - GZT80 .....	39
PI84P - GZP80 .....	39
PI85P - GZP80 .....	39
PIR2 - GZM2 .....	40
PIR2 - GZP4 .....	40
PIR3 - GZM3 .....	40
PIR4 - GZM4 .....	40
PIR4 - GZP4 .....	41
PI6-1P .....	41
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PIR6WB-1PS-... .....	42
SIR6W-... .....	43
SIR6WB-... .....	43

# Relays for industry

## miniature industrial relays




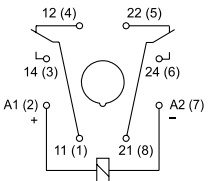
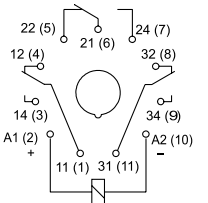
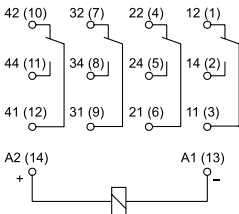



Type		R2N	R3N	R4N	R2M
					
<b>Contact data</b>					
Number and type of contacts		2 CO	3 CO	4 CO	2 CO
Contact material		AgNi, AgNi/Au ❶	AgNi, AgNi/Au ❶	AgNi, AgNi/Au ❶, AgNi/Au ❷	AgNi, AgNi/Au ❶, AgSnO <sub>2</sub>
Rated / max. AC switching voltage	AC	250 V / 440 V	250 V / 440 V	250 V / 250 V	250 V / 250 V
Rated load (capacity)	AC1	12 A / 250 V AC	10 A / 250 V AC	7 A / 230 V AC (VDE)	5 A / 250 V AC
	AC1			6 A / 250 V AC	
	AC15	3 A / 120 V (B300)	3 A / 120 V (B300)	1,5 A / 120 V (C300)	
	AC15	1,5 A / 240 V (B300)	1,5 A / 240 V (B300)	0,75 A / 240 V (C300)	5 A / 24 V DC
	DC1	12 A / 24 V DC ❸	10 A / 24 V DC ❸	6 A / 24 V DC ❸	
	DC13	0,22 A / 120 V (R300)	0,22 A / 120 V (R300)	0,22 A / 120 V (R300)	
DC13	0,1 A / 250 V (R300)	0,1 A / 250 V (R300)	0,1 A / 250 V (R300)		
Motor load		0,37 kW ❹	0,37 kW ❹	0,125 kW ❹	
<b>Coil data</b>					
Rated voltage	AC	6, 12, <b>24</b> , 42, 48, 60, 80, 110, 115, 120, 127, 220, <b>230</b> , 240 V	6, 12, <b>24</b> , 42, 48, 60, 80, 110, 115, 120, 127, 220, <b>230</b> , 240 V	6, 12, <b>24</b> , 42, 48, 60, 80, 110, 115, 120, 127, 220, <b>230</b> , 240 V	6, 12, <b>24</b> , 50, 100, 110, 115, 120, 220, <b>230</b> , 240 V
	DC	5, 6, <b>12</b> , <b>24</b> , 48, 60, 80, 110, 125, <b>220</b> V	5, 6, <b>12</b> , <b>24</b> , 48, 60, 80, 110, 125, <b>220</b> V	5, 6, <b>12</b> , <b>24</b> , 48, 60, 80, 110, 125, <b>220</b> V	6, <b>12</b> , <b>24</b> , 48, 60, 80, 110 V
<b>Insulation</b>					
Insulation rated voltage		250 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength	• coil - contacts	2 500 V AC ❺	2 500 V AC ❺	2 500 V AC ❺	2 000 V AC ❺
	• contact clearance	1 500 V AC ❻	1 500 V AC ❻	1 500 V AC ❻	1 000 V AC ❻
<b>General data</b>					
Dimensions	mm	27,4 x 21 x 35,5	27,4 x 21 x 35,5	27,4 x 21 x 35,5	27,5 x 14 x 32,9
Connection diagrams (pin side view)					
Note: polarity of the supply of the relays with DC coils - see www.repol.com.pl					
Plug-in sockets for relays		GZT2, GZM2, GZP4, SU4/2D, SU4/2L, G4/2	GZT3, GZM3	GZT4, GZM4, GZ4, GS4, GZP4, SU4D, SU4L, G4	GZ2, S2M, G2M
Recognitions, certifications, directives					

- ❶ Flash gold plating
- ❷ Hard gold plating
- ❸ AC3 according to IEC 60947-4-1, 1-phase motor
- ❹ Type of insulation: basic
- ❺ Type of clearance: micro-disconnection
- ❻ Diagram: www.repol.com.pl



# Relays for industry



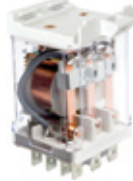

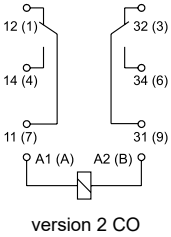
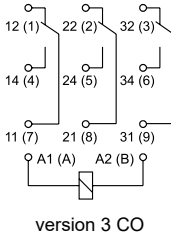
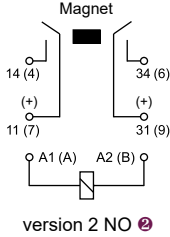
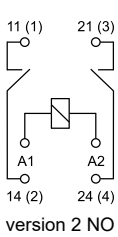




## industrial relays of small dimensions

R15 - 2 CO	R15 - 3 CO	R15 - 4 CO
		
2 CO	3 CO	4 CO
AgNi, AgNi/Au ①, AgNi/Au ②	AgNi, AgNi/Au ①, AgNi/Au ②	AgSnO <sub>2</sub> , AgNi, AgNi/Au ①, AgNi/Au ②
250 V / 440 V	250 V / 440 V	250 V / 440 V
10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC ③	10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC ③	10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC ③
0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	0,22 A / 120 V (R300) 0,1 A / 250 V (R300)
0,37 kW ④	0,37 kW ④	0,37 kW ④
6, 12, 24, 48, 60, 115, 120, 220, 230, 240 V	6, 12, 24, 48, 60, 115, 120, 220, 230, 240 V	6, 12, 24, 48, 60, 110, 115, 120, 220, 230, 240, 400 V
6, 12, 24, 40, 48, 60, 110, 120, 220 V	6, 12, 24, 40, 48, 60, 110, 120, 220 V	6, 12, 24, 48, 60, 110, 120, 220 V
250 V AC	250 V AC	250 V AC
2 500 V AC ⑤ 1 500 V AC ⑥	2 500 V AC ⑤ 1 500 V AC ⑥	2 500 V AC ⑤ 1 500 V AC ⑥
35 x 35 x 54,4	35 x 35 x 54,4	35 x 42,5 x 54,5
		
version 2 CO, DC	version 3 CO, DC	version 4 CO, DC
PZ8, GZU8, GZ8, GZP8, GOP8	PZ11, GZU11, GZ11, GZP11, GOP11	GZ14U, GZ14, GZ14Z, GZ14P, GOP14
		



# Relays for industry

## industrial relays of small dimensions

Type		RUC	RUC	RUC-M	RG25
		faston 4,8 x 0,5	faston 6,3 x 0,8	for DC loads	
					
Contact data					
Number and type of contacts		2 CO, 3 CO, 2 NO, 3 NO	2 CO, 3 CO, 2 NO, 3 NO	1 NO, 2 NO	2 NO
Contact material		AgNi, AgSnO <sub>2</sub>	AgNi, AgSnO <sub>2</sub>	AgNi, AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Rated / max. AC switching voltage	AC	250 V / 440 V	250 V / 440 V	250 V / 440 V	400 V / 440 V
Rated load (capacity)	AC1	16 A / 250 V AC	16 A / 250 V AC	16 A / 250 V AC	25 A / 400 V AC
	AC1				
	DC1	16 A / 24 V DC ⑤	16 A / 24 V DC ⑤	1 NO: 12 A / 220 V DC ⑤ 2 NO: 4,5 A / 220 V DC ④	25 A / 24 V DC ⑤
	DC13				0,3 A / 120 V (R300) 0,15 A / 250 V (R300)
Coil data					
Rated voltage	AC	6, 12, 24, 115, 120, 220, 230, 240, 400 V	6, 12, 24, 115, 120, 220, 230, 240, 400 V	12, 24, 48, 115, 120, 230, 240 V	12, 24, 110, 230, 400 V
	DC	6, 12, 24, 42, 48, 60, 110, 120, 220 V	6, 12, 24, 42, 48, 60, 110, 120, 220 V	12, 24, 48, 110, 220 V	12, 24, 48, 110, 220 V
		12, 24, 48, 110, 220 V (reinforced)	12, 24, 48, 110, 220 V (reinforced)	12, 24, 48, 110, 220 V (reinforced)	
Insulation					
Insulation rated voltage		400 V AC	400 V AC	400 V AC	400 V AC
Dielectric strength	• coil - contacts	2 500 V AC ⑥	2 500 V AC ⑥	2 500 V AC ⑥	5 000 V AC ④
	• contact clearance	1 500 ⑥, 2 500 ⑥ V AC	1 500 ⑥, 2 500 ⑥ V AC	1 NO: 4 000 V AC ⑥	1 500 V AC ⑥
General data					
Dimensions	mm	36,1 x 38,6 x 52,65 ⑥	46,8 x 38,6 x 66,1 ⑥	36,1 x 38,6 x 52,65 ⑥	26 x 53,7 x 75,5
Connection diagrams (pin side view)					
Note: polarity of the supply of the relays with DC coils - see www.relpol.com.pl					
version 2 CO					
version 3 CO					
version 2 NO ②					
version 2 NO					
Plug-in sockets for relays		GUC11S-V0 ⑦		GUC11S-V0 ⑦	
Recognitions, certifications, directives					

② Type of insulation: basic

③ Type of clearance: micro-disconnection

④ Diagram: www.relpol.com.pl

④ Type of insulation: reinforced




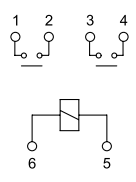
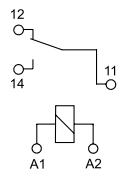
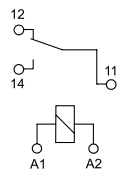



⑤ Type of clearance: full-disconnection





# Relays for industry
























## industrial relays of small dimensions

R20	R30N	R40N
		
1 NO, 2 NO	1 CO, 1 NO	1 CO, 1 NO
AgSnO <sub>2</sub>	AgSnO <sub>2</sub> , AgCdO ③	AgSnO <sub>2</sub> , AgCdO ③
250 V / 440 V	240 V / 300 V	240 V / 300 V
1 NO: 30 A / 250 V AC 2 NO: 25 A / 250 V AC	1 NO: 30 A / 240 V AC ④ 1 NO: 30 A / 14 V DC ⑤	1 NO: 40 A / 240 V AC ④ 1 NO: 40 A / 30 V DC ⑤
24, 48, 115, 230 V		12, 24, 110, 120, 220 V
12, 24, 110 V	5, 12, 24, 48, 110 V	5, 12, 24, 48, 110 V
250 V AC	500 V AC	500 V AC
4 000 V AC ⑥ 2 000 V AC ⑦	2 500 V AC ⑧ 1 500 V AC ⑨	4 000 V AC ⑥ 1 500 V AC ⑦
67 x 33 x 35	32,5 x 27,6 x 20,5	32,5 x 27,6 x 20,5
 version 2 NO	 version 1 CO	 version 1 CO
 RoHS	 RoHS	 RoHS

① RUC, RUC-M: relays available in versions: for plug-in sockets; with adaptors for direct mounting on 35 mm rail mount; with cover with flange for mounting on panel; for PCB mounting  
 ② RUC-M: relays with permanent magnet whose magnetic field blows the electric arc between the contacts; for high DC loads  
 ③ RUC-M contact 1 NO: DC1 - 16 A / 24 V DC, 14 A / 110 V DC ④ RUC-M contacts 2 NO: DC1 - 16 A / 24 V DC, 10,5 A / 110 V DC  
 ⑤ RUC, RUC-M: for plug-in sockets ⑥ RUC: with horizontal adaptor (H) ⑦ GUC11S-V0: insulation rated voltage 250 V AC ⑧ Relpol S.A. is not responsible for usage relays with AgCdO contact material in categories of EEE where it is prohibited by the directive RoHS2 2011/65/EU. ⑨ R30N 1 CO: 30 A / 20 A (NO/NC) / 240 V AC, 14 V DC; R40N 1 CO: 40 A / 30 A (NO/NC) / 240 V AC, 30 V DC






























## Plug-in sockets for relays

<p><b>GZT2</b> (856048) For R2N</p> 	<p><b>GZT3</b> (856049) For R3N</p> 	<p><b>GZT4</b> (856050) For R4N</p> 	<p><b>GZP4</b> (864324) For R2N, R4N</p> 
<p><b>GZM2</b> (857440) For R2N</p> 	<p><b>GZM3</b> (857412) For R3N</p> 	<p><b>GZM4</b> (857436) For R4N</p> 	 <p>GZP4-0400 GZT4-0040 G4 1052 MP15 M... ZGZP4-2 ZGZP-2 ZGZP4-8</p>
<p><b>GZ4</b> (2000538) For R4N</p>   <p>G4 1052</p>	<p><b>GS4</b> (2613504) For R4N</p>    <p>GS4-0036 GS4-0035</p>	<p><b>GZ2</b> (2000553) For R2M</p>   <p>GZ2 1060</p>	
<p><b>SU4/2D</b> (592051) For R2N</p>   <p>G4 1053</p>	<p><b>SU4D</b> (592049) For R4N</p> 	<p><b>SU4/2L</b> (592050) For R2N</p>   <p>G4 1053</p>	<p><b>SU4L</b> (592048) For R4N</p>   <p>G4 1040</p>
<p><b>G4/2</b> (592057) For R2N</p>   <p>G4 1053</p>	<p><b>G4</b> (592056) For R4N</p> 	<p><b>S2M</b> (592065) For R2M</p>   <p>G4 1050</p>	<p><b>G2M</b> (592064) For R2M</p>    <p>G4 1050 G2M 1020</p>

**ORDERING CODES:**  
 Signalling / protecting module - see page 26.  
 Interconnection strips - see page 27.

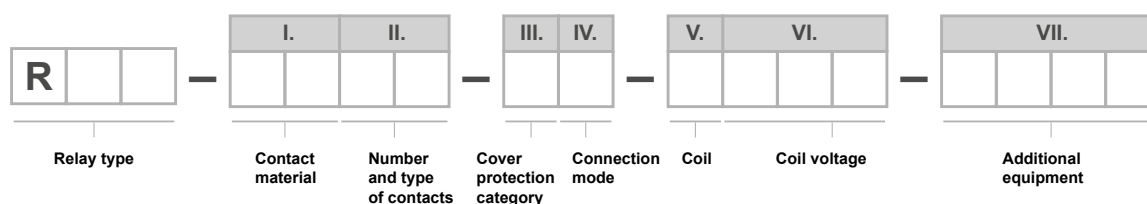


## Plug-in sockets for relays

<p><b>PZ8 (592005)</b> For R15 - 2 CO</p>   <p>PZ11 0031</p>	<p><b>PZ11 (592001)</b> For R15 - 3 CO</p> 	<p><b>GZU8 (592031)</b> For R15 - 2 CO</p>   <p>GZU 1052</p>	<p><b>GZU11 (592035)</b> For R15 - 3 CO</p> 
<p><b>GZ8 (592012)</b> For R15 - 2 CO</p>   <p>GZ 1050</p>	<p><b>GZ11 (592017)</b> For R15 - 3 CO</p> 	<p><b>GZP8 (2613505)</b> For R15 - 2 CO</p>    <p>GZP-0054 GZP-0035</p>	<p><b>GZP11 (2613506)</b> For R15 - 3 CO</p>    <p>21, 41 COM3</p>
<p><b>GZ14U (592027)</b> For R15 - 4 CO</p> 	<p><b>GZ14 (592022)</b> For R15 - 4 CO</p>   <p>GZ14 0737</p>	<p><b>GZ14Z (858866)</b> For R15 - 4 CO</p> 	<p><b>GZ14P (864515)</b> For R15 - 4 CO</p> 
<p><b>GOP8 (592067)</b> For R15 - 2 CO</p>   <p>R159 1051</p>	<p><b>GOP11 (592069)</b> For R15 - 3 CO</p> 	<p><b>GOP14 (592071)</b> For R15 - 4 CO</p>    <p>R15 0736 R15 5922</p>	<p><b>GUC11S-VO (862593)</b> For RUC, RUC-M</p>   <p>MBA</p>



# Relays for industry

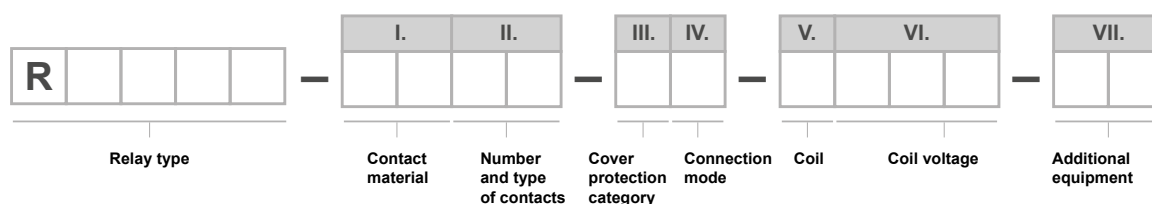


	Relay type															
	R2N		R3N		R4N		R2M		R15 version 2 CO		R15 version 3 CO		R15 version 4 CO			
<b>I. Contact material</b>																
20 - AgNi	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
21 - AgNi/Au flash gold plating	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
23 - AgNi/Au hard gold plating			•	•	•	•	•	•	•	•	•	•	•	•	•	
30 - AgSnO <sub>2</sub>							•	•	•	•	•	•	•	•	•	
<b>II. Number and type of contacts</b>																
12 - 2 CO	•							•		•						
13 - 3 CO			•									•				
14 - 4 CO						•									•	
<b>III. Cover protection category</b>																
2 - IP 40	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
<b>IV. Connection mode</b>																
3 - for sockets	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
5 - for PCB					•	•	•	•	•	•	•	•	•	•	•	
<b>V. Coil</b>																
1 - DC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
3 - AC															•	
5 - AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
<b>VI. Coil voltage</b>	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC
012 - 12 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
024 - 24 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
110 - 110 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
220 - 220 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
230 - 230 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
... - other voltages: see data tables (pages 30, 31) or product catalog (full edition) <a href="http://www.relpol.pl/en/Download/Product-Catalogs">www.relpol.pl/en/Download/Product-Catalogs</a>																
<b>VII. Additional equipment</b>	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC
W - mechanical indicator	•		•		•		•		•		•		•		•	
T - test button	•		•		•		•		•		•		•		•	
K - test button															•	
L - LED indicator	•		•		•		•		•		•		•		•	
D - diode		•		•		•		•		•		•		•		•
V - varistor										•		•		•		•

## EXAMPLE ORDERING CODES

Index	Code	Description
860398	R2N-2012-23-1024-WTL	two changeover contacts 12 A (AgNi), coil voltage 24 V DC
860401	R2N-2012-23-5230-WTL	two changeover contacts 12 A (AgNi), coil voltage 230 V AC
860404	R3N-2013-23-1024-WTL	three changeover contacts 10 A (AgNi), coil voltage 24 V DC
860408	R3N-2013-23-5230-WTL	three changeover contacts 10 A (AgNi), coil voltage 230 V AC
860411	R4N-2014-23-1024-WTL	four changeover contacts 6 A (AgNi), coil voltage 24 V DC
860414	R4N-2014-23-5230-WTL	four changeover contacts 6 A (AgNi), coil voltage 230 V AC
617171	R2M-2012-23-1024	two changeover contacts 5 A (AgNi), coil voltage 24 V DC
802541	R2M-2012-23-5230	two changeover contacts 5 A (AgNi), coil voltage 230 V AC
802882	R15-2012-23-1024-WT	two changeover contacts 10 A (AgNi), coil voltage 24 V DC
804299	R15-2012-23-5230-WT	two changeover contacts 10 A (AgNi), coil voltage 230 V AC
802846	R15-2013-23-1024-WT	three changeover contacts 10 A (AgNi), coil voltage 24 V DC
802874	R15-2013-23-5230-WT	three changeover contacts 10 A (AgNi), coil voltage 230 V AC
863812	R15-2014-23-1024	four changeover contacts 10 A (AgNi), coil voltage 24 V DC
863820	R15-2014-23-3230-K	four changeover contacts 10 A (AgNi), coil voltage 230 V AC

# Relays for industry







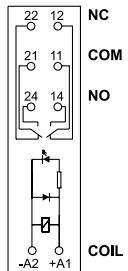
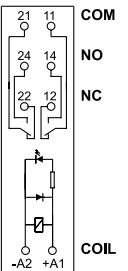
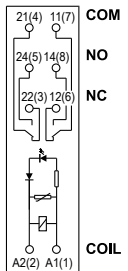
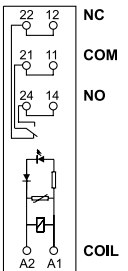
	Relay type												
	RUC		RUC-M		RG25		R20		R30N		R40N		
<b>I. Contact material</b>													
10 - AgCdO										•		•	
20 - AgNi	•		•										
30 - AgSnO <sub>2</sub>	•		•		•		•		•			•	
<b>II. Number and type of contacts</b>													
11 - 1 CO										•		•	
12 - 2 CO	•												
13 - 3 CO	•												
21 - 1 NO							•		•			•	
22 - 2 NO	•				•		•						
23 - 3 NO	•												
51 - 1 NO gap 6 mm			•										
52 - 2 NO gap 3 mm	•		•										
53 - 3 NO gap 3 mm	•												
<b>III. Cover protection category</b>													
2 - IP 00	•		•										
2 - IP 20					•								
2 - IP 64									•			•	
4 - IP 00 mounting flange	•		•										
V - IP 00 adaptor	•		•										
H - IP 00 adaptor	•		•										
8 - IP 67									•			•	
9 - IP 50 mounting flange							•						
<b>IV. Connection mode</b>													
5 - for PCB	•		•						•			•	
6 - faston 187 and for sockets	•		•										
6 - faston 250								•					
A - faston 250	•												
8 - screw terminals					•								
<b>V. Coil</b>													
1 - DC	•				•		•		•		•	•	
W - DC reinforced	•		•										
3 - AC	•				•								
5 - AC	•		•				•					•	
<b>VI. Coil voltage</b>													
	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	DC	AC	DC
012 - 12 V	•	•	•	•	•	•	•	•	•	•	•	•	•
024 - 24 V	•	•	•	•	•	•	•	•	•	•	•	•	•
110 - 110 V		•		•		•		•		•		•	•
220 - 220 V	•	•		•		•		•				•	
230 - 230 V	•		•		•		•						
... - other voltages: see data tables (pages 32, 33) or product catalog (full edition) <a href="http://www.relpol.pl/en/Download/Product-Catalogs">www.relpol.pl/en/Download/Product-Catalogs</a>													
<b>VII. Additional equipment</b>													
K - test button	•												
L - LED indicator	•		•										

## EXAMPLE ORDERING CODES

Index	Code	Description
862682	RUC-3013-26-1024	three changeover contacts 16 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
864119	RUC-3022-26-5230	two normally open contacts 16 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
864152	RUC-M-3051-26-5230	one normally open contact 16 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
862685	RUC-M-3052-26-W024	two normally open contacts 16 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC (reinforced)
862722	RG25-3022-28-3230	two normally open contacts 25 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
2611749	R20-3021-96-1024	one normally open contact 30 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
2611761	R20-3022-96-5230	two normally open contacts 25 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
2614729	R30N-3011-85-1024	one changeover contact 30 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
2614823	R40N-3021-85-1024	one normally open contact 40 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC

# Relays for industry

## interface relays - sets

Type	PI84 - GZT80	PI84 - GZM80	PI84 - GZP80	PI85 - GZT80
<b>Contact data</b>				
Number and type of contacts	2 CO	2 CO	2 CO	1 CO
Contact material	AgNi, AgNi/Au ②, AgSnO <sub>2</sub>	AgNi, AgNi/Au ②, AgSnO <sub>2</sub>	AgNi, AgNi/Au ②	AgNi, AgNi/Au ②, AgSnO <sub>2</sub>
Rated / max. AC switching voltage	250 V / 300 V	250 V / 300 V	250 V / 300 V	250 V / 300 V
Rated load (capacity)	AC1 8 A / 250 V AC AC15 3 A / 120 V (B300) AC15 1,5 A / 240 V (B300) DC1 8 A / 24 V DC ③ DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	AC1 8 A / 250 V AC AC15 3 A / 120 V (B300) AC15 1,5 A / 240 V (B300) DC1 8 A / 24 V DC ③ DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	AC1 8 A / 250 V AC AC15 3 A / 120 V (B300) AC15 1,5 A / 240 V (B300) DC1 8 A / 24 V DC ③ DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	AC1 16 A / 250 V AC ④ AC15 3 A / 120 V (B300) AC15 1,5 A / 240 V (B300) DC1 16 A / 24 V DC ③ DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)
Motor load	0,37 kW ⑦	0,37 kW ⑦	0,37 kW ⑦	0,5 kW ⑦
<b>Coil data</b>				
Rated voltage AC	12, 24, 48, 120, 230, 240 V	12, 24, 120, 230, 240 V	12, 24, 48, 120, 230 V	12, 24, 48, 120, 230, 240 V
Rated voltage DC	12, 24, 48, 110 V	12, 24, 48, 60, 110 V	12, 24, 48, 110 V	12, 24, 48, 110 V
<b>Insulation</b>				
Insulation rated voltage	250 V AC	300 V AC	250 V AC	250 V AC
Dielectric strength				
• coil - contacts	5 000 V AC ⑤	5 000 V AC ⑤	5 000 V AC ⑤	5 000 V AC ⑤
• contact clearance	1 000 V AC ⑥	1 000 V AC ⑥	1 000 V AC ⑥	1 000 V AC ⑥
<b>General data</b>				
Dimensions mm	80 x 15,6 x 67	81,6 x 15,9 x 67	97 x 15,9 x 75,8	80 x 15,6 x 67
Connection diagrams (terminals side view)	 version 2 CO, DC	 version 2 CO, DC	 version 2 CO, AC	 version 1 CO, AC
Operational relays	RM84	RM84	RM84	RM85
Plug-in sockets	GZT80	GZM80	GZP80	GZT80 ⑧
Indicator	module type M...	module type M...	module type M...	module type M...
Recognitions, certifications, directives	CE EAC RoHS	CE EAC RoHS	CE EAC RoHS	CE EAC RoHS


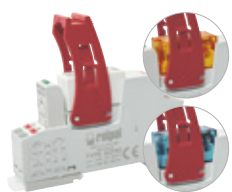



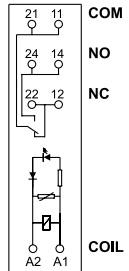
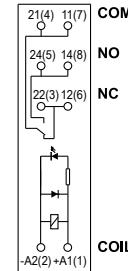
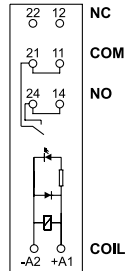
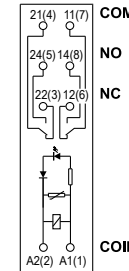
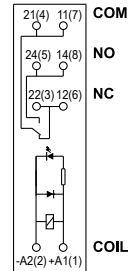
② Hard gold plating      ④ Type of insulation: reinforced  
⑦ AC3 according to IEC 60947-4-1, 1-phase motor

⑤ Type of clearance: micro-disconnection  
⑧ Diagram: [www.repol.com.pl](http://www.repol.com.pl)



# Relays for industry

## interface relays - sets





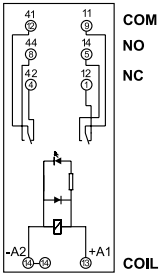
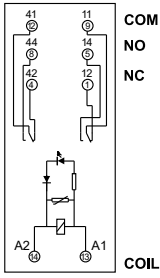
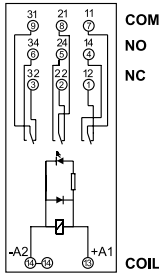
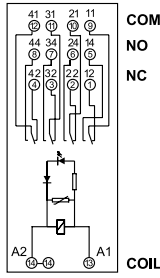




PI85 - GZM80	PI85 - GZP80	PI85 inrush - GZT80	PI84P - GZP80	PI85P - GZP80
				
1 CO	1 CO	1 NO	2 CO	1 CO
AgNi, AgNi/Au Ⓣ, AgSnO <sub>2</sub>	AgNi, AgNi/Au Ⓣ	AgSnO <sub>2</sub>	AgNi	AgNi
250 V / 300 V	250 V / 300 V	250 V / 300 V	250 V / 300 V	250 V / 300 V
16 A / 250 V AC Ⓢ 3 A / 120 V (B300) 1,5 A / 240 V (B300) 16 A / 24 V DC Ⓣ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	16 A / 250 V AC Ⓢ 3 A / 120 V (B300) 1,5 A / 240 V (B300) 16 A / 24 V DC Ⓣ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	16 A / 250 V AC Ⓢ 3 A / 120 V (B300) 1,5 A / 240 V (B300) 16 A / 24 V DC Ⓣ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	8 A / 250 V AC	16 A / 250 V AC Ⓢ
0,5 kW Ⓣ	0,5 kW Ⓣ	0,75 kW Ⓣ		
12, 24, 120, 230, 240 V	12, 24, 48, 120, 230 V		24, 115, 230 V	24, 115, 230 V
12, 24, 48, 60, 110 V	12, 24, 48, 110 V	12, 24, 110 V	12, 24, 48, 110 V	12, 24, 48, 110 V
300 V AC	250 V AC	250 V AC	300 V AC	300 V AC
5 000 V AC Ⓢ 1 000 V AC Ⓣ	5 000 V AC Ⓢ 1 000 V AC Ⓣ	5 000 V AC Ⓢ 1 000 V AC Ⓣ	5 000 V AC Ⓢ 1 000 V AC Ⓣ	5 000 V AC Ⓢ 1 000 V AC Ⓣ
81,6 x 15,9 x 67	97 x 15,9 x 75,8	80 x 15,6 x 67	97 x 15,9 x 75,8	97 x 15,9 x 75,8
 version 1 CO, AC	 version 1 CO, DC	 version 1 NO, DC	 version 2 CO, AC	 version 1 CO, DC
RM85 GZM80 Ⓢ module type M...	RM85 GZP80 Ⓢ module type M...	RM85 inrush GZT80 Ⓢ module type M...	RMP84 GZP80 module type M...	RMP85 GZP80 Ⓢ module type M...
CE EAC RoHS	CE c US EAC RoHS	CE EAC RoHS	CE c US EAC RoHS	CE RoHS

Ⓢ Loads above 12 A require bridging pairs of terminals: 11 with 21, 12 with 22, 14 with 24 - see [www.repol.com.pl](http://www.repol.com.pl)



# Relays for industry

## interface relays - sets

Type	PIR2 - GZM2	PIR2 - GZP4	PIR3 - GZM3	PIR4 - GZM4
				
<b>Contact data</b>				
Number and type of contacts	2 CO	2 CO	3 CO	4 CO
Contact material	AgNi	AgNi	AgNi	AgNi
Rated / max. AC switching voltage	250 V / 300 V	250 V / 300 V	250 V / 300 V	250 V / 300 V
Rated load (capacity)	AC1 12 A / 250 V AC AC15 3 A / 120 V (B300) AC15 1,5 A / 240 V (B300) DC1 12 A / 24 V DC ⑤ DC1 DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	AC1 12 A / 250 V AC AC15 3 A / 120 V (B300) AC15 1,5 A / 240 V (B300) DC1 12 A / 24 V DC ⑤ DC1 DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	AC1 10 A / 250 V AC AC15 3 A / 120 V (B300) AC15 1,5 A / 240 V (B300) DC1 10 A / 24 V DC ⑤ DC1 DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	AC1 7 A / 230 V AC (VDE) AC1 6 A / 250 V AC AC15 1,5 A / 120 V (B300) AC15 0,75 A / 240 V (B300) DC1 6 A / 24 V DC ⑤ DC1 DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)
Motor load	0,37 kW ⑦	0,37 kW ⑦	0,37 kW ⑦	0,125 kW ⑦
<b>Input circuit</b>				
Rated voltage AC	12, 24, 48, 120, 230 V	12, 24, 48, 120, 230 V	12, 24, 48, 120, 230 V	12, 24, 48, 120, 230 V
Rated voltage DC	12, 24, 48, 110 V	12, 24, 48, 110 V	12, 24, 48, 110 V	12, 24, 48, 110 V
Rated voltage AC/DC				
<b>Insulation</b>				
Insulation rated voltage	300 V AC	300 V AC	300 V AC	300 V AC
Dielectric strength				
• coil - contacts	2 500 V AC ⑧	2 500 V AC ⑧	2 500 V AC ⑧	2 500 V AC ⑧
• contact clearance	1 500 V AC ⑧	1 500 V AC ⑧	1 500 V AC ⑧	1 500 V AC ⑧
<b>General data</b>				
Dimensions mm	75 x 27 x 82	97 x 31 x 75,8	75 x 27 x 82	75 x 27 x 82
Connection diagrams (PI85P, PIR2, PIR3, PIR4: terminals side view)	 <p>version 2 CO, DC</p>	 <p>version 2 CO, AC</p>	 <p>version 3 CO, DC</p>	 <p>version 4 CO, AC</p>
Operational relays	R2N	R2N	R3N	R4N
Plug-in sockets	GZM2	GZP4	GZM3	GZM4
Indicator	module type M...	module type M...	module type M...	module type M...
Recognitions, certifications, directives				

⑧ Hard gold plating

⑨ Type of clearance: micro-disconnection

⑦ AC3 according to IEC 60947-4-1, 1-phase motor

⑧ Type of insulation: basic

⑨ Type of insulation: reinforced

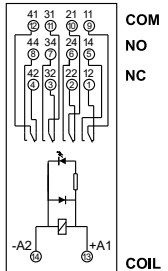

⑩ Diagram: www.repol.com.pl





# Relays for industry





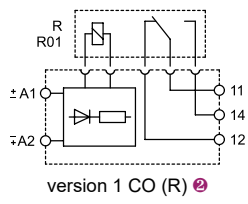
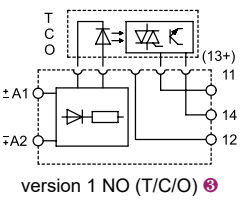
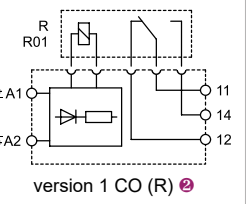
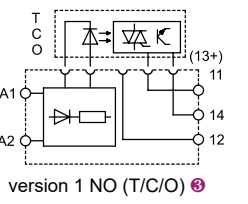




## interface relays - narrow profile

PIR4 - GZP4	PI6-1P	PI6-1T	PIR6W-1P-...
			
4 CO	1 CO	1 NO (triac)	1 CO
AgNi, AgNi/Au Ⓣ	AgSnO <sub>2</sub> , AgSnO <sub>2</sub> /Au Ⓣ		AgSnO <sub>2</sub> , AgSnO <sub>2</sub> /Au Ⓣ
250 V / 300 V	AgSnO <sub>2</sub> : 250 V / 400 V	400 V / 440 V	AgSnO <sub>2</sub> : 250 V / 400 V
7 A / 230 V AC (VDE) 6 A / 250 V AC 1,5 A / 120 V (B300) 0,75 A / 240 V (B300) 6 A / 24 V DC Ⓣ	AgSnO <sub>2</sub> : 6 A / 250 V AC  AgSnO <sub>2</sub> : 6 A / 24 V DC AgSnO <sub>2</sub> : 0,15 A / 250 V DC	1,2 A / 400 V AC	AgSnO <sub>2</sub> : 6 A / 250 V AC  AgSnO <sub>2</sub> : 6 A / 24 V DC AgSnO <sub>2</sub> : 0,15 A / 250 V DC
0,22 A / 120 V (R300) 0,1 A / 250 V (R300) 0,125 kW Ⓣ			
12, <b>24</b> , 48, 120, <b>230</b> V			230 V
12, <b>24</b> , 48, 110 V	12, <b>24</b> , 36 V	5...32 V	12, <b>24</b> , 36 V
	24, 42, 115, <b>230</b> V	24, 230 V	24, 42, 115, <b>230</b> V
300 V AC	400 V AC	600 V AC	250 V AC
2 500 V AC Ⓣ 1 500 V AC Ⓣ	4 000 V AC Ⓣ 1 000 V AC Ⓣ	4 000 V AC Ⓣ	4 000 V AC Ⓣ 1 000 V AC Ⓣ
97 x 31 x 75,8	93,8 x 6,2 x 80	93,8 x 6,2 x 80	98,5 x 6,2 x 85,5
 version 4 CO, DC	 version 1 CO, DC	 version 1 NO, DC	 version 1 CO, DC
R4N GZP4 module type M...	LED green	LED green	RM699BV PI6W-1P-... LED green
			



# Relays for industry

## interface relays - narrow profile

Type	PIR6W-1PS-...	PIR6W-1PS-...	PIR6WB-1PS-...	PIR6WB-1PS-...
	contacts 	triac, transistor 	contacts 	triac, transistor 
Output circuit				
Number and type of outputs	1 CO (R) ②	1 NO (T/C/O) ③	1 CO (R) ②	1 NO (T/C/O) ③
Contact material	AgSnO <sub>2</sub> (R) ②, AgSnO <sub>2</sub> /Au ②		AgSnO <sub>2</sub> (R) ②, AgSnO <sub>2</sub> /Au ②	
Max. voltage AC / DC	400 V / 250 V (R) ②	240 V (T) / 48 V (C), 24 V (O) ③	400 V / 250 V (R) ②	240 V (T) / 48 V (C), 24 V (O) ③
Rated load (capacity)	AC1 AC15 AC15 DC1 DC1 DC13 DC13	6 A / 250 V AC (R) ②  1 A / 240 V AC (T)	6 A / 250 V AC (R) ②  6 A / 24 V DC (R) 0,15 A / 250 V DC (R)	1 A / 240 V AC (T)  1 A / 48 V DC (C) 2 A / 24 V DC (O) ③
Motor load				
Input circuit				
Rated voltage AC	230 V	230 V	230 V	230 V
DC	6, 12, 24, 36, 48, 60 V	6, 12, 24, 36, 48, 60 V	6, 12, 24, 36, 48, 60 V	6, 12, 24, 36, 48, 60 V
AC/DC	24, 42, 115, 230 V	24, 42, 115, 230 V	24, 42, 115, 230 V	24, 42, 115, 230 V
Insulation				
Insulation rated voltage	250 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength • input - output • contact clearance	4 000 V AC ④ 1 000 V AC ⑤ (R) ②	4 000 V AC	4 000 V AC ④ 1 000 V AC ⑤ (R) ②	4 000 V AC
General data				
Dimensions mm	98,5 x 6,2 x 85,5	98,5 x 6,2 x 85,5	98,3 x 6,2 x 84,6	98,3 x 6,2 x 84,6
Connection diagrams	 version 1 CO (R) ②	 version 1 NO (T/C/O) ③	 version 1 CO (R) ②	 version 1 NO (T/C/O) ③
Operational relays	RM699BV ②	RSR30 ③	RM699BV ②	RSR30 ③
Plug-in sockets	PI6W-1PS-...	PI6W-1PS-...	PI6WB-1PS-...	PI6WB-1PS-...
Indicator	LED green	LED green	LED green	LED green
Recognitions, certifications, directives	 RoHS	 RoHS	 RoHS	 RoHS

② Hard gold plating

④ Type of insulation: reinforced

⑤ Type of clearance: micro-disconnection

⑦ AC3 according to IEC 60947-4-1, 1-phase motor



# Relays for industry

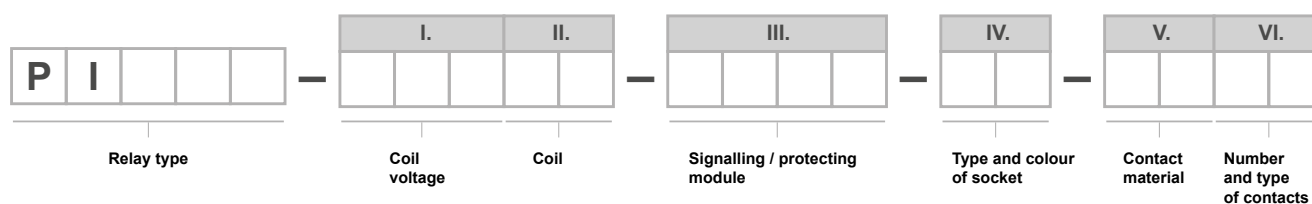
## interface relays - narrow profile

SIR6W-...	SIR6W-...	SIR6WB-...	SIR6WB-...
contacts	triac, transistor	contacts	triac, transistor
			
1 CO (R) ②	1 NO (T/C/O) ③	1 CO (R) ②	1 NO (T/C/O) ③
AgSnO <sub>2</sub> (R) ②, AgSnO <sub>2</sub> /Au ②		AgSnO <sub>2</sub> (R) ②, AgSnO <sub>2</sub> /Au ②	
400 V / 250 V (R) ②	240 V (T) / 48 V (C), 24 V (O) ③	400 V / 250 V (R) ②	240 V (T) / 48 V (C), 24 V (O) ③
6 A / 250 V AC (R) ② 3 A / 120 V (B300) 1,5 A / 240 V (B300) 6 A / 30 V DC (R) 0,15 A / 250 V DC (R) 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	1 A / 240 V AC (T)  1 A / 48 V DC (C) 2 A / 24 V DC (O) ③	6 A / 250 V AC (R) ② 3 A / 120 V (B300) 1,5 A / 240 V (B300) 6 A / 30 V DC (R) 0,15 A / 250 V DC (R) 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	1 A / 240 V AC (T)  1 A / 48 V DC (C) 2 A / 24 V DC (O) ③
0,186 kW ④		0,186 kW ④	
6, 12, 24 V ④	6, 12, 24 V ④	6, 12, 24 V ④	6, 12, 24 V ④
12, 24, 48, 60, 110...125, 220...240 V	12, 24, 48, 60, 110...125, 220...240 V	12, 24, 48, 60, 110...125, 220...240 V	12, 24, 48, 60, 110...125, 220...240 V
250 V AC	250 V AC	250 V AC	250 V AC
4 000 V AC ④ 1 000 V AC ③ (R) ②	4 000 V AC	4 000 V AC ④ 1 000 V AC ③ (R) ②	4 000 V AC
88,6 x 6,2 x 76	88,6 x 6,2 x 76	95 x 6,2 x 76,6	95 x 6,2 x 76,6
			
version 1 CO (R) ②	version 1 NO (T/C/O) ③	version 1 CO (R) ②	version 1 NO (T/C/O) ③
RM699BV ② 6W-... LED green	RSR30 ③ 6W-... LED green	RM699BV ② 6WB-... LED green	RSR30 ③ 6WB-... LED green
			

- ② Version (R) - operational electromagnetic relay
- ③ Versions (T/C/O) - operational solid state relays
- ④ Fixed polarization of input voltage (+A1, -A2)



# Relays for industry



	Relay type													
	PI84		PI85		PI85 inrush		PI84P		PI85P		PIR2		PIR4	
I. Coil voltage	AC	DC	AC	DC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC
012 - 12 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•
024 - 24 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•
110 - 110 V		•		•	•		•		•		•		•	•
230 - 230 V	•		•			•		•		•				•
... - other voltages: see data tables (pages 38, 39, 40, 41) or product catalog (full edition) <a href="http://www.relpol.pl/en/Download/Product-Catalogs">www.relpol.pl/en/Download/Product-Catalogs</a>														
II. Coil														
DC - DC	•		•		•	•		•		•		•		•
AC - AC	•		•			•		•		•		•		•
III. Signalling / protecting module														
M41G - 6/24 V DC (LED + diode D)	•		•		•	•		•		•		•		•
M43G - 110/230 V DC (LED + diode D)	•		•		•	•		•		•		•		•
M91G - 6/24 V AC/DC (LED + varistor)	•		•		•	•		•		•		•		•
M93G - 110/240 V AC/DC (LED + varistor)	•		•		•	•		•		•		•		•
IV. Type and colour of socket														
TS - GZT80 grey	•		•		•									
MS - GZM80 grey	•		•											
PS - GZP80 grey	•						•		•					
PS - GZP4 grey											•			•
V. Contact material														
20 - AgNi	•		•			•		•		•		•		•
23 - AgNi/Au hard gold plating	•		•											•
30 - AgSnO <sub>2</sub>	• GZT80, GZM80		• GZT80, GZM80		•									
VI. Number and type of contacts														
11 - 1 CO			•						•					
21 - 1 NO					•									
12 - 2 CO	•						•				•			
14 - 4 CO														•

## EXAMPLE ORDERING CODES

Index	Code	Description
862104	PI84-024DC-M41G-TS-2012	two changeover contacts 8 A (AgNi), coil voltage 24 V DC
862126	PI84-230AC-M93G-TS-3012	two changeover contacts 8 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
862190	PI84-024DC-M41G-MS-2012	two changeover contacts 8 A (AgNi), coil voltage 24 V DC
862197	PI84-230AC-M93G-MS-3012	two changeover contacts 8 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
864833	PI84-024DC-M41G-PS-2012	two changeover contacts 8 A (AgNi), coil voltage 24 V DC
864835	PI84-230AC-M93G-PS-2012	two changeover contacts 8 A (AgNi), coil voltage 230 V AC
862110	PI85-024DC-M41G-TS-2011	one changeover contact 16 A (AgNi), coil voltage 24 V DC
862148	PI85-230AC-M93G-TS-3011	one changeover contact 16 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
862205	PI85-024DC-M41G-MS-2011	one changeover contact 16 A (AgNi), coil voltage 24 V DC
862212	PI85-230AC-M93G-MS-3011	one changeover contact 16 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
864836	PI85-024DC-M41G-PS-2011	one changeover contact 16 A (AgNi), coil voltage 24 V DC
864838	PI85-230AC-M93G-PS-2011	one changeover contact 16 A (AgNi), coil voltage 230 V AC
864845	PI84P-024DC-M41G-PS-2012	two changeover contacts 8 A (AgNi), coil voltage 24 V DC
864847	PI84P-230AC-M93G-PS-2012	two changeover contacts 8 A (AgNi), coil voltage 230 V AC
864848	PI85P-024DC-M41G-PS-2011	one changeover contact 16 A (AgNi), coil voltage 24 V DC
864850	PI85P-230AC-M93G-PS-2011	one changeover contact 16 A (AgNi), coil voltage 230 V AC
864839	PIR2-024DC-M41G-PS-2012	two changeover contacts 12 A (AgNi), coil voltage 24 V DC
864841	PIR2-230AC-M93G-PS-2012	two changeover contacts 12 A (AgNi), coil voltage 230 V AC
864842	PIR4-024DC-M41G-PS-2014	four changeover contacts 6 A (AgNi), coil voltage 24 V DC
864844	PIR4-230AC-M93G-PS-2014	four changeover contacts 6 A (AgNi), coil voltage 230 V AC

## Relays for industry

	Relay type					
	PIR2		PIR3		PIR4	
	socket for GZM2 grey		socket for GZM3 grey		socket for GZM4 grey	
Coil voltage	AC	DC	AC	DC	AC	AC
024 - 24 V	•	•	•	•	•	•
230 - 230 V	•		•		•	
... - other voltages: see data tables (pages 38, 39, 40, 41) or product catalog (full edition) <a href="http://www.repol.pl/en/Download/Product-Catalogs">www.repol.pl/en/Download/Product-Catalogs</a>						
Coil						
DC - DC		•		•		•
AC - AC		•		•		•
Signalling / protecting module						
00LD - LED + diode		•		•		•
00LV - LED + varistor		•		•		•

### EXAMPLE ORDERING CODES

Index	Code	Description
854795	PIR2-024DC-00LD	two changeover contacts 12 A (AgNi), coil voltage 24 V DC
854800	PIR2-230AC-00LV	two changeover contacts 12 A (AgNi), coil voltage 230 V AC
854788	PIR3-024DC-00LD	three changeover contacts 10 A (AgNi), coil voltage 24 V DC
854793	PIR3-230AC-00LV	three changeover contacts 10 A (AgNi), coil voltage 230 V AC
854770	PIR4-024DC-00LD	four changeover contacts 6 A (AgNi), coil voltage 24 V DC
854786	PIR4-230AC-00LV	four changeover contacts 6 A (AgNi), coil voltage 24 V AC

	Relay type											
	PI6-1P		PI6-1T		PIR6W-1P			PIR6W-1PS, PIR6WB-1PS			SIR6W, SIR6WB	
	DC	AC/DC	DC	AC/DC	AC	DC	AC/DC	AC	DC	AC/DC	DC	AC/DC
24 V - 24 V	•	•		•		•	•		•	•	•	•
5...32V - 5...32 V			•									
230V - 230 V		•		•	•		•	•		•		
220-240V - 220...240 V												•
... - other voltages: see data tables (pages 41, 42, 43) or product catalog (full edition) <a href="http://www.repol.pl/en/Download/Product-Catalogs">www.repol.pl/en/Download/Product-Catalogs</a>												
Input												
DC - DC		•		•		•			•			•
AC - AC						•			•			
AC/DC - AC/DC		•		•		•			•			•
Output												
R - contacts AgSnO <sub>2</sub>		•				•			•			•
R01 - contacts AgSnO <sub>2</sub> /Au hard gold plating		•				•			•			•
T - triac				•					•			•
C - transistor 1 A									•			•
O - transistor 2 A									•			•
For control lines 300 m												
230V...-10 - 230 V with filter		•			•		•	• PIR6WB		• PIR6WB		

### EXAMPLE ORDERING CODES

Index	Code	Description
858550	PI6-1P-24VDC	one changeover contact 6 A (AgSnO <sub>2</sub> ), input voltage 24 V DC
858559	PI6-1P-230VAC/DC	one changeover contact 6 A (AgSnO <sub>2</sub> ), input voltage 230 V AC/DC
854603	PI6-1T-5...32VDC	one solid state output 1,2 A (triac), input voltage 5...32 V DC
858604	PIR6W-1P-24VDC	one changeover contact 6 A (AgSnO <sub>2</sub> ), input voltage 24 V DC
856070	PIR6W-1P-230VAC/DC-10	one changeover contact 6 A (AgSnO <sub>2</sub> ), input voltage 230 V AC/DC (with filter)
858620	PIR6W-1PS-24VDC-R	one changeover contact 6 A (AgSnO <sub>2</sub> ), input voltage 24 V DC
857186	PIR6W-1PS-24VDC-T	one solid state output 1 A (triac), input voltage 24 V DC
857485	PIR6WB-1PS-24VDC-R	one changeover contact 6 A (AgSnO <sub>2</sub> ), input voltage 24 V DC
857522	PIR6WB-1PS-230VAC/DC-C	one solid state output 1 A (transistor), input voltage 230 V AC/DC
863758	SIR6W-24VDC-R	one changeover contact 6 A (AgSnO <sub>2</sub> ), input voltage 24 V DC
863764	SIR6W-24VAC/DC-O	one solid state output 2 A (transistor), input voltage 24 V AC/DC
863775	SIR6WB-24VDC-R	one changeover contact 6 A (AgSnO <sub>2</sub> ), input voltage 24 V DC
863772	SIR6WB-220-240VAC/DC-R	one changeover contact 6 A (AgSnO <sub>2</sub> ), input voltage 220...240 V AC/DC

# Relays for photovoltaic systems



- $I_n$  currents of contacts:  
16 ... 80 A.
- Methods of mounting:  
THT, direct on 35 mm rail  
mount, in plug-in sockets,  
direct on panel mounting  
- depending on the type  
of relay.

RS35 .....	47
RS50 .....	47
RS80 .....	47
RG25 .....	47
RUC .....	48
RUC-M .....	48





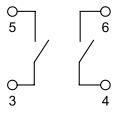
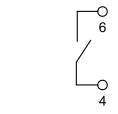
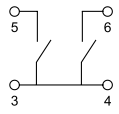
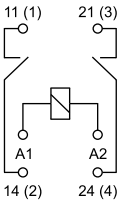




## Applications:

- there are two major applications of electromagnetic relays in solar systems, i.e. at the DC side they connect/disconnect the DC voltage generated by photovoltaic cells; at the AC side they connect/disconnect the entire system to/from power network,
- delivery of power to a public network is subject to special requirements as for the relays applied - the major ones are: contact clearance of min. 1,5 mm and resistance of the contact clearance to surge voltage of 2 500 V; all the requirements are set out by the Standard DIN VDE 0126-1-1,
- for safety reasons solar systems must be equipped with an automatic system to disconnect the generator section from the AC network; the protection system is usually built in the DC/AC inverter and double-break disconnected - thus, these must be relays of the 2 NO contact configuration (each contact disconnects one line - one the phase line and the other the neutral line); two contacts connected in series are required for each line - thus, the circuit separation is performed by two two-contact electromagnetic relays,
- the RUC-M relays are designed for connecting high DC currents.



# Relays for photovoltaic systems

## industrial relays of small dimensions

Type	RS35	RS50	RS80	RG25	
	35 A 	50 A 	80 A, gap $\geq 4,1$ mm 		
<b>Contact data</b>					
Number and type of contacts	2 NO	1 NO, 2 NO	1 NO	2 NO	
Contact material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	
Rated / max. AC switching voltage	250 V / 440 V	250 V / 440 V	250 V / 440 V	400 V / 440 V	
Rated load (capacity)	AC1 DC1 DC13 DC13	35 A / 250 V AC 35 A / 24 V DC	50 A / 250 V AC 50 A / 24 V DC	80 A / 250 V AC 80 A / 24 V DC	25 A / 400 V AC 25 A / 24 V DC ④ 0,3 A / 120 V (R300) 0,15 A / 250 V (R300)
<b>Coil data</b>					
Rated voltage AC				12, <b>24</b> , 110, <b>230</b> , 400 V	
DC	5, 9, 12, 18, 24, 110 V	5, 9, 12, 18, 24, 110 V	12, 24 V	12, <b>24</b> , 48, 110, 220 V	
<b>Insulation</b>					
Insulation rated voltage	250 V AC	250 V AC	250 V AC	400 V AC	
Dielectric strength					
• coil - contacts	5 000 V AC ④	5 000 V AC ④	5 000 V AC ④	5 000 V AC ④	
• contact clearance	2 500 V AC ⑤	2 500 V AC ⑤	2 500 V AC ⑤	1 500 V AC ⑤	
<b>General data</b>					
Dimensions mm	40 x 25 x 49,2	40 x 25 x 49,2	40 x 25 x 49,2	26 x 53,7 x 75,5	
Connection diagrams (pin side view)	 version 2 NO	 version 1 NO	 version 1 NO	 version 2 NO	
Recognitions, certifications, directives	 RoHS	 RoHS	 RoHS	 RoHS	




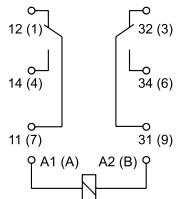
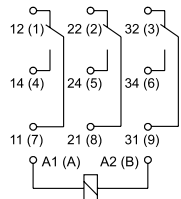
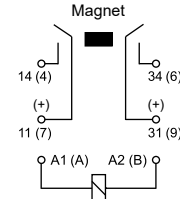
④ Type of insulation: reinforced  
⑤ Diagram: www.repol.com.pl

④ Type of clearance: micro-disconnection  
⑤ Type of clearance: full-disconnection



# Relays for photovoltaic systems

## industrial relays of small dimensions

Type	RUC	RUC	RUC-M
	faston 4,8 x 0,5 	faston 6,3 x 0,8 	for DC loads 
<b>Contact data</b>			
Number and type of contacts	2 CO, 3 CO, 2 NO, 3 NO	2 CO, 3 CO, 2 NO, 3 NO	1 NO, 2 NO
Contact material	AgNi, AgSnO <sub>2</sub>	AgNi, AgSnO <sub>2</sub>	AgNi, AgSnO <sub>2</sub>
Rated / max. AC switching voltage	250 V / 440 V	250 V / 440 V	250 V / 440 V
Rated load	AC1 AC1 DC1 DC1	16 A / 250 V AC  16 A / 24 V DC ⑤	16 A / 250 V AC  1 NO: 12 A / 220 V DC ⑤ 2 NO: 4,5 A / 220 V DC ④
<b>Coil data</b>			
Rated voltage	AC DC	6, 12, 24, 115, 120, 220, 230, 240, 400 V 6, 12, 24, 42, 48, 60, 110, 120, 220 V	12, 24, 48, 115, 120, 230, 240 V 12, 24, 48, 110, 220 V
		12, 24, 48, 110, 220 V (reinforced)	12, 24, 48, 110, 220 V (reinforced)
<b>Insulation</b>			
Insulation rated voltage	400 V AC	400 V AC	400 V AC
Dielectric strength			
• coil - contacts	2 500 V AC ⑥	2 500 V AC ⑥	2 500 V AC ⑥
• contact clearance	1 500 ⑥, 2 500 ⑥ V AC	1 500 ⑥, 2 500 ⑥ V AC	1 NO: 4 000 V AC ⑥
<b>General data</b>			
Dimensions	mm	36,1 x 38,6 x 52,65 ⑤	46,8 x 38,6 x 66,1 ⑤
Connection diagrams			
(pin side view)			
	version 2 CO	version 3 CO	version 2 NO ②
Plug-in sockets for relays	GUC11S-V0 ⑦		GUC11S-V0 ⑦
Recognitions, certifications, directives	CE cRoHS ENEC RoHS	CE cRoHS ENEC RoHS	CE cRoHS ENEC RoHS

① Type of insulation: basic  
② Diagram: www.repol.com.pl

③ Type of clearance: micro-disconnection  
④ Type of clearance: full-disconnection

① RUC, RUC-M: relays available in versions: for plug-in sockets; with adaptors for direct mounting on 35 mm rail mount; with cover with flange for mounting on panel; for PCB mounting  
② RUC-M: relays with permanent magnet whose magnetic field blows the electric arc between the contacts; for high DC loads  
③ RUC-M contact 1 NO: DC1 - 16 A / 24 V DC, 14 A / 110 V DC  
④ RUC-M contacts 2 NO: DC1 - 16 A / 24 V DC, 10,5 A / 110 V DC  
⑤ RUC, RUC-M: for plug-in sockets ⑥ RUC: with horizontal adaptor (H) ⑦ GUC11S-V0: insulation rated voltage 250 V AC

### Plug-in sockets for relays

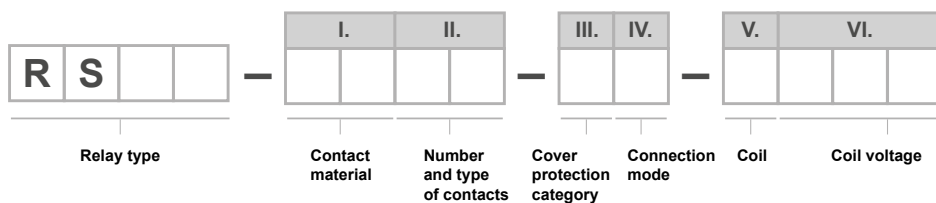
**GUC11S-V0 (862593)**

For RUC, RUC-M





# Relays for photovoltaic systems



	Relay type		
	RS35	RS50	RS80
<b>I. Contact material</b>			
30 - AgSnO <sub>2</sub>	•	•	•
<b>II. Number and type of contacts</b>			
21 - 1 NO gap 1,8 mm		•	
21 - 1 NO gap 4,1 mm			•
22 - 2 NO gap 2,2 mm	•		
22 - 2 NO gap 1,8 mm		•	
<b>III. Cover protection category</b>			
2 - IP 40	•	•	•
<b>IV. Connection mode</b>			
5 - for PCB	•	•	•
<b>V. Coil</b>			
1 - DC	•	•	•
<b>VI. Coil voltage</b>	DC	DC	DC
012 - 12 V	•	•	•
024 - 24 V	•	•	•
110 - 110 V	•	•	
... - other voltages: see data tables (page 47) or product catalog (full edition) <a href="http://www.relpol.pl/en/Download/Product-Catalogs">www.relpol.pl/en/Download/Product-Catalogs</a>			

## ORDERING CODES

Index	Code	Description
859166	RS35-3022-25-1005	two normally open contacts 35 A (AgSnO <sub>2</sub> ), coil voltage 5 V DC
859167	RS35-3022-25-1009	two normally open contacts 35 A (AgSnO <sub>2</sub> ), coil voltage 9 V DC
859168	RS35-3022-25-1012	two normally open contacts 35 A (AgSnO <sub>2</sub> ), coil voltage 12 V DC
859169	RS35-3022-25-1018	two normally open contacts 35 A (AgSnO <sub>2</sub> ), coil voltage 18 V DC
859170	RS35-3022-25-1024	two normally open contacts 35 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
859438	RS35-3022-25-1110	two normally open contacts 35 A (AgSnO <sub>2</sub> ), coil voltage 110 V DC
859171	RS50-3022-25-1005	two normally open contacts 50 A (AgSnO <sub>2</sub> ), coil voltage 5 V DC
859172	RS50-3022-25-1009	two normally open contacts 50 A (AgSnO <sub>2</sub> ), coil voltage 9 V DC
859173	RS50-3022-25-1012	two normally open contacts 50 A (AgSnO <sub>2</sub> ), coil voltage 12 V DC
859174	RS50-3022-25-1018	two normally open contacts 50 A (AgSnO <sub>2</sub> ), coil voltage 18 V DC
859175	RS50-3022-25-1024	two normally open contacts 50 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
859439	RS50-3022-25-1110	two normally open contacts 50 A (AgSnO <sub>2</sub> ), coil voltage 110 V DC
864637	RS80-3021-25-1012	one normally open contact 80 A (AgSnO <sub>2</sub> ), coil voltage 12 V DC
864632	RS80-3021-25-1024	one normally open contact 80 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC

## EXAMPLE ORDERING CODES

Index	Code	Description
862724	RG25-3022-28-1024	two normally open contacts 25 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
862722	RG25-3022-28-3230	two normally open contacts 25 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
862681	RUC-3012-26-1024	two changeover contacts 16 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC
864130	RUC-3023-26-5230	three normally open contacts 16 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC
862684	RUC-M-3051-26-W024	one normally open contact 16 A (AgSnO <sub>2</sub> ), coil voltage 24 V DC (reinforced)
864171	RUC-M-3052-26-5230	two normally open contacts 16 A (AgSnO <sub>2</sub> ), coil voltage 230 V AC

**CODING TABLE:** RG25, RUC, RUC-M - see page 37.

# Relays for railroad industry

- In currents of contacts: 6 ... 16 A.
- Available relays:
  - miniature: RM84, RM85,
  - industrial: R2T/3T/4T, R15T, RUCT/RUCT-M,
  - interface: PI84T/85T, PIR2T/3T/4T, PIR152T/153T, PRUCT/PRUCT-M,
  - time: MT-W...M.
- Compliance with standards: EN 45545-2 (category EL10 ①, requirement R26 ① - flammability class V-0 acc. to EN 60695-11-10); EN 61373 category 1, class B (mechanical shock and vibration resistance); EN 50155; EN 60077-1; EN 61810-1.
- Methods of mounting: in plug-in sockets, on 35 mm rail mount, on panel mounting - depending on the type of relay.

① MT-W...M: category EL5, requirement set R23

RM84 .....	51
RM85 .....	51
R2T .....	51
R3T .....	51
R4T .....	52
R15T - 2 CO .....	52
R15T - 3 CO .....	52
RUCT .....	52
RUCT-M .....	53
PI84T - GZT80-VO .....	53
PI85T - GZT80-VO .....	53
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PIR152T - PZ8-VO .....	54
PIR153T - PZ11-VO .....	54
PRUCT - GUC11S-VO .....	54
PRUCT-M - GUC11S-VO .....	55
MT-W...M .....	55



## Applications:





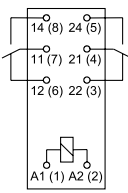
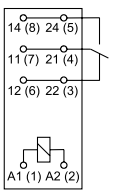
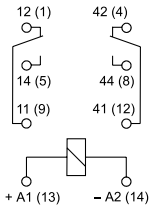
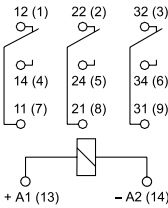




- control switchboard,
- operator's panel and cabin systems,
- supply, monitoring, wagon lighting circuits,
- air conditioning, ventilation, heating,
- doors control,
- passenger information devices,
- mobile device chargers.

 **relpol**® S.A.

# Relays for railroad industry

## miniature relays

## industrial relays

Type	RM84	RM85	R2T	R3T
				
<b>Contact data</b>				
Number and type of contacts	2 CO, 2 NO	1 CO, 1 NO	2 CO	3 CO
Contact material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgNi	AgNi
Rated / max. AC switching voltage	250 V / 400 V	250 V / 400 V	250 V / 440 V	250 V / 440 V
Rated load (capacity)	AC1 8 A / 250 V AC AC15 3 A / 120 V (B300) AC15 1,5 A / 240 V (B300) DC1 8 A / 24 V DC ④ DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	16 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 16 A / 24 V DC ④ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	12 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 12 A / 24 V DC ④ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC ④ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)
Motor load	0,37 kW ⑦	0,5 kW ⑦	0,37 kW ⑦	0,37 kW ⑦
<b>Coil data</b>				
Rated voltage DC	24, 110 V ①	24, 110 V ①	24, 110 V ①	24, 110 V ①
<b>Insulation</b>				
Insulation rated voltage	400 V AC	400 V AC	250 V AC	250 V AC
Dielectric strength				
• coil - contacts	5 000 V AC ②	5 000 V AC ②	2 500 V AC ③	2 500 V AC ③
• contact clearance	1 000 V AC ⑤	1 000 V AC ⑤	1 500 V AC ⑤	1 500 V AC ⑤
<b>General data</b>				
Dimensions mm	29 x 12,7 x 15,7	29 x 12,7 x 15,7	27,4 x 21 x 35,5	27,4 x 21 x 35,5
Connection diagrams (pin side view)	 version 2 CO	 version 1 CO	 version 2 CO	 version 3 CO
Plug-in sockets for relays	GZT80-V0	GZT80-V0	GZT2-V0	GZT3-V0
Recognitions, certifications, directives				

② Type of insulation: basic

④ Type of insulation: reinforced

⑤ Type of clearance: micro-disconnection

⑦ AC3 according to IEC 60947-4-1, 1-phase motor

⑧ Diagram: [www.relpol.com.pl](http://www.relpol.com.pl)





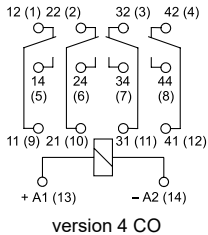
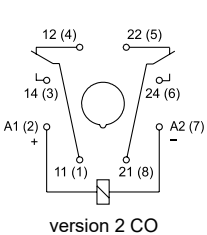
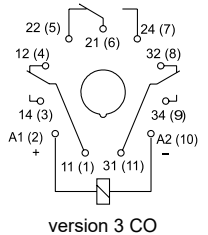
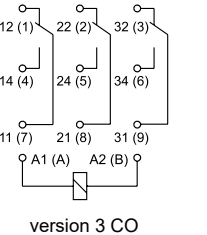




① For other voltages, please contact Relpol S.A.

② Certification IK for interface set (industrial relay with socket)



# Relays for railroad industry

## industrial relays

Type	R4T	R15T - 2 CO	R15T - 3 CO	RUCT
				<b>faston 4,8 x 0,5</b> 
<b>Contact data</b>				
Number and type of contacts	4 CO	2 CO	3 CO	3 CO, 3 NO
Contact material	AgNi	AgNi	AgNi	AgNi
Rated / max. AC switching voltage	250 V / 250 V	250 V / 440 V	250 V / 440 V	230 V / 250 V
Rated load (capacity)	AC1 7 A / 230 V AC (VDE) AC1 6 A / 250 V AC AC15 1,5 A / 120 V (B300) AC15 0,75 A / 240 V (B300) DC1 6 A / 24 V DC ⑤ DC1 DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC ⑤ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC ⑤ 0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	16 A / 250 V AC 16 A / 24 V DC ⑤
Motor load	0,125 kW ⑦	0,37 kW ⑦	0,37 kW ⑦	
<b>Coil data</b>				
Rated voltage DC	24, 110 V ①	24, 110 V ①	24, 110 V ①	24, 110 V ①
<b>Insulation</b>				
Insulation rated voltage	250 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength				
• coil - contacts	2 500 V AC ②	2 500 V AC ②	2 500 V AC ②	2 500 V AC ②
• contact clearance	1 500 V AC ③	1 500 V AC ③	1 500 V AC ③	1 500 V AC ③
<b>General data</b>				
Dimensions mm	27,4 x 21 x 35,5	35 x 35 x 54,4	35 x 35 x 54,4	36,1 x 38,6 x 52,65
<b>Connection diagrams</b> (industrial: pin side view) (interface: terminals side view)	 version 4 CO	 version 2 CO	 version 3 CO	 version 3 CO
<b>Operational relays</b> Plug-in sockets Indicator	GZT4-V0	PZ8-V0	PZ11-V0	GUC11S-V0
Recognitions, certifications, directives				

① Type of insulation: basic

② Type of insulation: reinforced

⑦ AC3 according to IEC 60947-4-1, 1-phase motor

⑤ Type of clearance: micro-disconnection






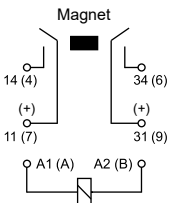
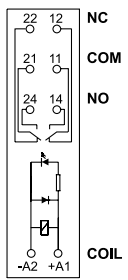
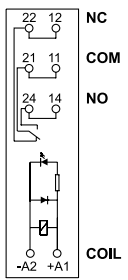
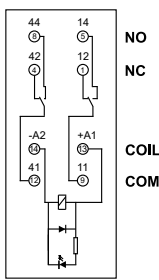
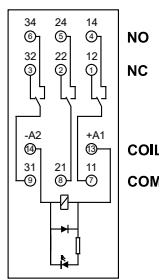





③ Type of clearance: full-disconnection

⑥ Diagram: [www.repol.com.pl](http://www.repol.com.pl)



# Relays for railroad industry

## interface relays - sets





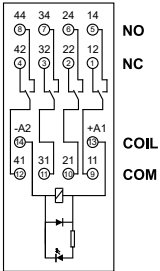
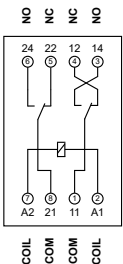
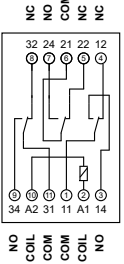
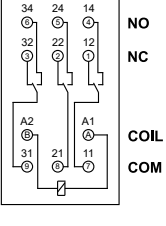
RUCT-M	PI84T - GZT80-V0	PI85T - GZT80-V0	PIR2T - GZT2-V0	PIR3T - GZT3-V0
for DC loads				
				
1 NO, 2 NO	2 CO	1 CO	2 CO	3 CO
AgNi	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgNi	AgNi
250 V / 250 V	250 V / 300 V	250 V / 300 V	250 V / 300 V	250 V / 300 V
16 A / 250 V AC	8 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 8 A / 24 V DC ⑤	16 A ⑥ / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 16 A / 24 V DC ⑤	12 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 12 A / 24 V DC ⑤	10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC ⑤
1 NO: 10 A / 220 V DC ④ 2 NO: 3,8 A / 220 V DC ⑤	0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	0,22 A / 120 V (R300) 0,1 A / 250 V (R300)	0,22 A / 120 V (R300) 0,1 A / 250 V (R300)
	0,37 kW ⑦	0,5 kW ⑦	0,37 kW ⑦	0,37 kW ⑦
24, 110 V ①	24, 110 V ①	24, 110 V ①	24, 110 V ①	24, 110 V ①
250 V AC	250 V AC	250 V AC	300 V AC	300 V AC
2 500 V AC ⑧ 1 NO: 4 000 V AC ⑨ 2 NO: 2 000 V AC ⑨	5 000 V AC ⑧ 1 000 V AC ⑨	5 000 V AC ⑧ 1 000 V AC ⑨	2 500 V AC ⑧ 1 500 V AC ⑨	2 500 V AC ⑧ 1 500 V AC ⑨
36,1 x 38,6 x 52,65 ⑥	80 x 15,6 x 61	80 x 15,6 x 61	76,3 x 27 x 65	76,3 x 27 x 65
 version 2 NO ③	 version 2 CO	 version 1 CO	 version 2 CO	 version 3 CO
RUCT-M GUC11S-V0	RM84 GZT80-V0 module type M...-V0	RM85 GZT80-V0 ⑥ module type M...-V0	R2T GZT2-V0 module type M...-V0	R3T GZT3-V0 module type M...-V0
				

- ① For other voltages, please contact Relpol S.A. ② Certification IK for interface set (industrial relay with socket)  
 ③ RUCT-M, PRUCT-M: relays with permanent magnet whose magnetic field blows the electric arc between the contacts; for high DC load ④ RUCT-M, PRUCT-M contact 1 NO: DC1 - 16 A / 24 V DC, 13 A / 110 V DC  
 ⑤ RUCT-M, PRUCT-M contacts 2 NO: DC1 - 16 A / 24 V DC, 9 A / 110 V DC ⑥ Loads above 12 A require bridging pairs of terminals: 11 with 21, 12 with 22, 14 with 24 - see www.relpol.com.pl



# Relays for railroad industry

## interface relays - sets

Type	PIR4T - GZT4-V0	PIR152T - PZ8-V0	PIR153T - PZ11-V0	PRUCT - GUC11S-V0
				
<b>Contact data</b>				
Number and type of contacts	4 CO	2 CO	3 CO	3 CO, 3 NO
Contact material	AgNi	AgNi	AgNi	AgNi
Rated / max. AC switching voltage	250 V / 300 V	250 V / –	250 V / –	230 V / 250 V
Rated load (capacity)	AC1 7 A / 230 V AC (VDE) AC1 6 A / 250 V AC AC15 1,5 A / 120 V (B300) AC15 0,75 A / 240 V (B300) DC1 6 A / 24 V DC ⑤ DC1 DC13 0,22 A / 120 V (R300) DC13 0,1 A / 250 V (R300)	10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC ⑤	10 A / 250 V AC 3 A / 120 V (B300) 1,5 A / 240 V (B300) 10 A / 24 V DC ⑤	16 A / 250 V AC 16 A / 24 V DC ⑤
Motor load	0,125 kW ⑦	0,37 kW ⑦	0,37 kW ⑦	
<b>Coil data</b>				
Rated voltage DC	24, 110 V ①	24, 110 V ①	24, 110 V ①	24, 110 V ①
AC/DC				
<b>Insulation</b>				
Insulation rated voltage	300 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength				
• coil - contacts	2 500 V AC ⑥	2 500 V AC ⑥	2 500 V AC ⑥	2 500 V AC ⑥
• contact clearance	1 500 V AC ⑥	1 500 V AC ⑥	1 500 V AC ⑥	1 500 V AC ⑥
<b>General data</b>				
Dimensions mm	76,3 x 27 x 65	68,2 x 38 x 82	68,2 x 38 x 82	84,5 x 41,5 x 77,3
Connection diagrams (interface: terminals side view)	 version 4 CO	 version 2 CO	 version 3 CO	 version 3 CO
Operational relays	R4T	R15T - 2 CO	R15T - 3 CO	RUCT
Plug-in sockets	GZT4-V0	PZ8-V0	PZ11-V0	GUC11S-V0
Indicator	module type M...-V0			
Recognitions, certifications, directives	CE ENEC TIK RoHS	CE ENEC TIK RoHS	CE ENEC TIK RoHS	CE TIK RoHS

① Type of insulation: basic

⑤ Type of clearance: micro-disconnection

⑥ Type of clearance: full-disconnection











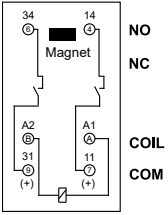

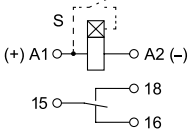






⑦ AC3 according to IEC 60947-4-1, 1-phase motor

⑧ Diagram: www.repol.com.pl



# Relays for railroad industry

time

PRUCT-M - GUC11S-V0	MT-W...M
	adjustment T1, T2, T3 
1 NO, 2 NO	1 CO
AgNi	AgSnO <sub>2</sub>
250 V / 250 V	300 V
16 A / 250 V AC	10 A / 250 V AC
1 NO: 10 A / 220 V DC  2 NO: 3,8 A / 220 V DC 	10 A / 24 V DC
<b>24, 110 V</b> 	12...240 V AC: 50/60 Hz
250 V AC	250 V AC
2 500 V AC  1 NO: 4 000 V AC  2 NO: 2 000 V AC 	2 500 V AC  1 000 V AC 
84,5 x 41,5 x 77,3	90(98,8) x 17,5 x 65,5
 version 2 NO 	 version 1 CO 
RUCT-M GUC11S-V0	
  RoHS	   RoHS



## Plug-in sockets for relays

### GZT80-VO (862573)

For RM84, RM85



GZM80-0041

GZT80-0035

M...-V0

### GZT2-VO (862557)

For R2T



### GZT3-VO (862551)

For R3T



### GZT4-VO (862554)

For R4T



G4 1052



GZT4-0035



M...-V0

### PZ8-VO (862540)

For R15T - 2 CO



### PZ11-VO (862535)

For R15T - 3 CO



PZ11 0031







### GUC11S-VO (862593)

For RUCT, RUCT-M



MBA



-  For other voltages, please contact Relpol S.A.
-  RUCT-M, PRUCT-M: relays with permanent magnet whose magnetic field blows the electric arc between the contacts; for high DC load
-  RUCT-M, PRUCT-M contact 1 NO: DC1 - 16 A / 24 V DC, 13 A / 110 V DC
-  RUCT-M, PRUCT-M contacts 2 NO: DC1 - 16 A / 24 V DC, 9 A / 110 V DC
-  MT-W...M: time module, descriptions and diagrams of time functions - see pages 69, 75-76.
-  The control terminal S (B1) is activated by connection to A1 terminal via the external control contact S.

## Relays for railroad industry

### ORDERING CODES

Index	Code	Description
862345	R2T-2012-23-1024-V0	two changeover contacts 12 A, coil voltage 24 V DC
862348	R3T-2013-23-1024-V0	three changeover contacts 10 A, coil voltage 24 V DC
862351	R4T-2014-23-1024-V0	four changeover contacts 6 A, coil voltage 24 V DC
862324	R15T-2012-23-W024-V0	two changeover contacts 10 A, coil voltage 24 V DC (reinforced)
862327	R15T-2013-23-W024-V0	three changeover contacts 10 A, coil voltage 24 V DC (reinforced)
862263	RUCT-2013-26-W024-V0	three changeover contacts 16 A, coil voltage 24 V DC (reinforced)
862262	RUCT-2023-26-W110-V0	three normally open contacts 16 A, coil voltage 110 V DC (reinforced)
862266	RUCT-M-2051-26-W024-V0	one normally open contact 16 A, coil voltage 24 V DC (reinforced)
862271	RUCT-M-2052-26-W110-V0	two normally open contacts 16 A, coil voltage 110 V DC (reinforced)

**OTHER VOLTAGES:** please contact Relpol S.A. (export@relpol.com.pl)

### ORDERING CODES

Index	Code	Description
862574	PI84T-024DC-M41G-TS-3012-V0	two changeover contacts 8 A, coil voltage 24 V DC
862576	PI85T-024DC-M41G-TS-3011-V0	one changeover contact 16 A, coil voltage 24 V DC
862558	PIR2T-024DC-M41G-V0	two changeover contacts 12 A, coil voltage 24 V DC
862560	PIR3T-024DC-M41G-V0	three changeover contacts 10 A, coil voltage 24 V DC
862562	PIR4T-024DC-M41G-V0	four changeover contacts 6 A, coil voltage 24 V DC
862541	PIR152T-024DC-V0	two changeover contacts 10 A, coil voltage 24 V DC (reinforced)
862543	PIR153T-024DC-V0	three changeover contacts 10 A, coil voltage 24 V DC (reinforced)
862278	PRUCT-2013-26-W024-V0	three changeover contacts 16 A, coil voltage 24 V DC (reinforced)
862275	PRUCT-2023-26-W024-V0	three normally open contacts 16 A, coil voltage 24 V DC (reinforced)
862281	PRUCT-M-2051-26-W024-V0	one normally open contact 16 A, coil voltage 24 V DC (reinforced)
862284	PRUCT-M-2052-26-W024-V0	two normally open contacts 16 A, coil voltage 24 V DC (reinforced)

**OTHER VOLTAGES:** please contact Relpol S.A. (export@relpol.com.pl)

### ORDERING CODES

Index	Code	Description
860470	MT-W-17S-11-9240-M	electronic with display, multifunction (25 functions, times T1, T2, T3), one changeover contact 10 A, input voltage 12...240 V AC/DC



# Programmable relays

- $I_n$  currents of outputs: 0,5 ... 10 A.
- Available versions of NEED relays:
  - with LCD display:
    - 8 inputs / 4 outputs, 16 inputs / 8 outputs,
  - without display:
    - 8 inputs / 4 outputs, 16 inputs / 8 outputs,
  - with relay outputs,
  - with transistor outputs:
    - $I_n = 0,5$  A (version 24 V DC),
  - with supply voltage:
    - 230 V AC, 12 V DC, 24 V DC, 220 V DC.
- NEED-MODBUS: communication modules  
NEED Master / ModBus RTU Slave.
- Methods of mounting:
  - NEED: on 35 mm rail mount or on panel mounting,
  - NEED-MODBUS: on 35 mm rail mount.



NEED-...-08-4...	58
NEED-...-16-8...	58
NEED-MODBUS	58





## Applications:

- in industrial automation (device and process control),
- in ARC automation
- in BMS automation,
- in production management systems,
- in water systems,
- in air-conditioning, ventilation, heating systems,
- in lighting systems,
- various other applications.

 **relpol**® S.A.



## Programmable relays

Type		NEED-...-08-4...	NEED-...-16-8...
		8 inputs / 4 outputs	16 inputs / 8 outputs
Outputs			
Number and type of outputs		4 NO ② ③	8 NO ② ③
Rated load	AC1 DC1	10 A / 250 V AC ② 0,5 A / 24 V DC ③	10 A / 250 V AC ② 0,5 A / 24 V DC ③
Supply			
Rated voltage	AC	230 V 50/60 Hz	230 V 50/60 Hz
	DC	12, 24, 220 V	12, 24, 220 V
Resources		STOP/RUN mode	
Switch		STOP/RUN mode	
Programming ①		LCD display, keyboard, 4 function buttons	
Indicator		LED three-colour (relay status), LEDs green (input status), LEDs yellow (output status)	
Physical resources		internal potentiometer, RTC clock, connection for programming (secured by stopper), (three-phase network equipment control system ④)	
Program resources ①		32 timers, 8 bidirectional counters, fast bidirectional counter / meter of frequency, 8 clocks, 16 comparators of analog values, 64 markers, 8 text markers, (marker of phase sequence ④)	
System structure		programmable relay NEED-..., cable NEED-PC-15B or -15C (RS-232 or USB), (external memory card NEED-M-4KB ①), software PC NEED, module NEED-MODBUS	
Insulation			
Insulation rated voltage		300 V AC	300 V AC
Dielectric strength			
• inputs - outputs		2 000 V AC ④	2 000 V AC ④
• contact clearance		1 000 V AC ⑤ ②	1 000 V AC ⑤ ②
General data			
Dimensions	mm	90 x 72 x 55	90 x 132 x 55
Recognitions, certifications, directives		CE EAC RoHS	CE EAC RoHS

① Type of insulation: reinforced      ⑤ Type of clearance: micro-disconnection

① Only for version with LCD display (NEED-...-22-...-D). For version without display (NEED-...-11-...) - see [www.repol.com.pl](http://www.repol.com.pl)

② Versions with unprotected relay outputs      ③ Version 24 V DC with protected transistor outputs      ④ Only for version NEED-230AC-...-16-8R-



### NEED-MODBUS

### Communication modules

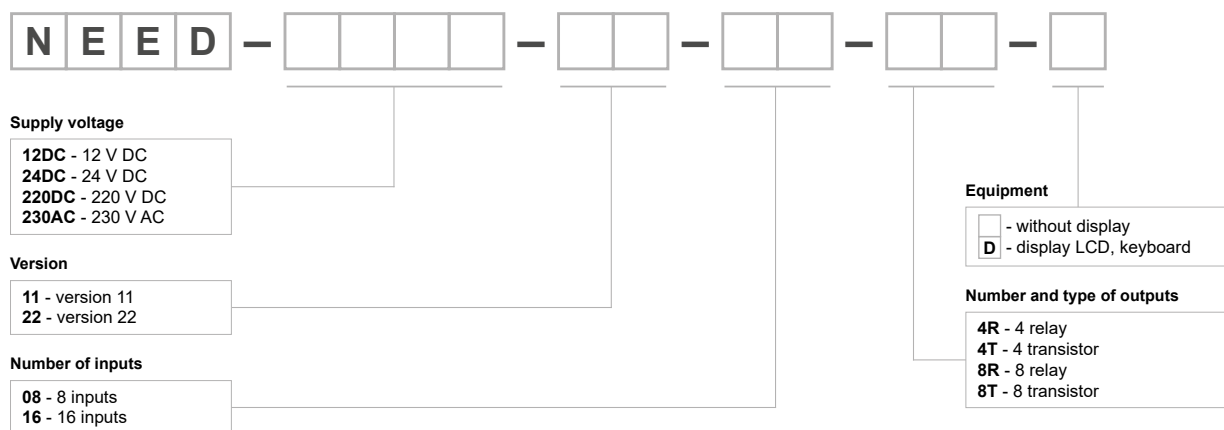


Appropriation: data reading from NEED relays and availability of the data values with the ModBus RTU protocol; transmission of control commands to NEED; modification of the real time RTC clock setting; operation from COM1 side as NEED Master and from COM2 side as a device of ModBus RTU Slave type

Supply: 7...26 V AC 50/60 Hz, 7...35 V DC / Dimensions: 108 x 53 x 58 mm

Data transmission: ModBus RTU Slave (9600 bits/s, 1 bit start, 8 bits of data, 1 bit stop, without parity control), RS-232 (EIA/TIA-574, max. 15 m), RS-485 (EIA/TIA-485, max. 1200 m)

# Programmable relays



## ORDERING CODES

Index	Code	Description
857735	NEED-12DC-11-08-4R	4 relay outputs 10 A, 8 inputs - supply voltage 12 V DC
857365	NEED-12DC-11-16-8R	8 relay outputs 10 A, 16 inputs - supply voltage 12 V DC
859358	NEED-12DC-22-08-4R-D	4 relay outputs 10 A, 8 inputs - supply voltage 12 V DC, display LCD, keyboard
859361	NEED-12DC-22-16-8R-D	8 relay outputs 10 A, 16 inputs - supply voltage 12 V DC, display LCD, keyboard
857736	NEED-24DC-11-08-4R	4 relay outputs 10 A, 8 inputs - supply voltage 24 V DC
857366	NEED-24DC-11-16-8R	8 relay outputs 10 A, 16 inputs - supply voltage 24 V DC
859359	NEED-24DC-22-08-4R-D	4 relay outputs 10 A, 8 inputs - supply voltage 24 V DC, display LCD, keyboard
859362	NEED-24DC-22-16-8R-D	8 relay outputs 10 A, 16 inputs - supply voltage 24 V DC, display LCD, keyboard
858158	NEED-220DC-11-08-4R	4 relay outputs, 8 inputs - supply voltage 220 V DC
858159	NEED-220DC-11-16-8R	8 relay outputs 10 A, 16 inputs - supply voltage 220 V DC
857737	NEED-230AC-11-08-4R	4 relay outputs 10 A, 8 inputs - supply voltage 230 V AC
857367	NEED-230AC-11-16-8R	8 relay outputs 10 A, 16 inputs - supply voltage 230 V AC
859360	NEED-230AC-22-08-4R-D	4 relay outputs 10 A, 8 inputs - supply voltage 230 V AC, display LCD, keyboard
859363	NEED-230AC-22-16-8R-D	8 relay outputs 10 A, 16 inputs - supply voltage 230 V AC, display LCD, keyboard

## ORDERING CODES: accessories

Index	Code	Description
2614884	NEED-Modbus	communication module NEED Master / ModBus RTU Slave
857734	NEED-PC-15B	cable for programming and diagnostics (computer PC, port RS-232), for version 11
858743	NEED-PC-15C	cable for programming and diagnostics (computer PC, port USB), for version 11, 22
857733	NEED-M-1KB	external memory card (1 kB), for version 11
859472	NEED-M-4KB	external memory card (4 kB), for version 22

# Installation relays

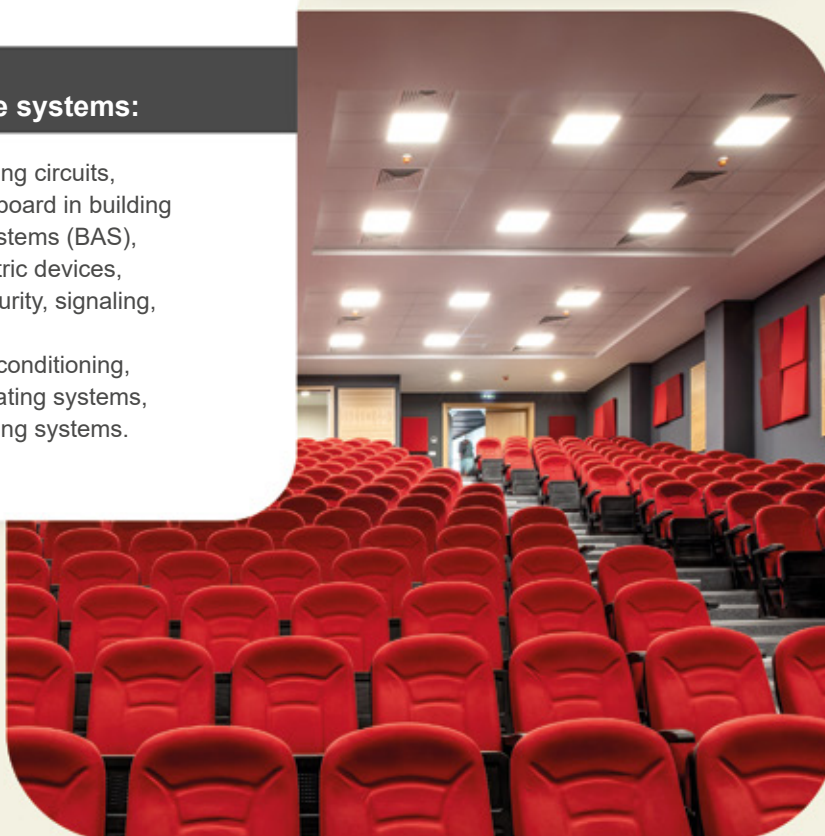


RPI-P-...	61
RPI-Z-...	61
RPI-1ZI-D12	61
RPI-1ZI-U24A	61
RPI-P-UNI	62
RPI-Z-UNI	62





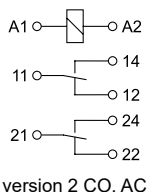
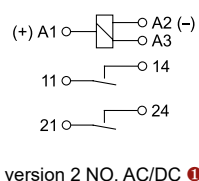
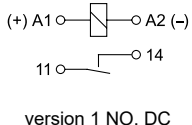
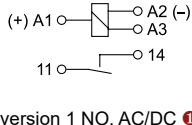




- $I_n$  currents of outputs: 8 A or 16 A.
- Available versions:
  - in modular covers: RPI series.
- Method of mounting:  
on 35 mm rail mount.

## Applications in low voltage systems:

- control of lighting circuits,
- electric switchboard in building automation systems (BAS),
- control of electric devices,
- devices of security, signaling, alarm system,
- devices of air-conditioning, ventilation, heating systems,
- industrial heating systems.



# Installation relays

Type		RPI-P-...	RPI-Z-...	RPI-1ZI-D12	RPI-1ZI-U24A
					
Output circuit				120 A / 20 ms	120 A / 20 ms
Number and type of contacts		1 CO, 2 CO	1 NO, 2 NO	1 NO	1 NO
Contact material		AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Max. voltage AC		300 V	300 V	300 V	300 V
Rated load	AC1	1 CO: 16 A / 250 V AC	1 NO: 16 A / 250 V AC	16 A / 250 V AC	16 A / 250 V AC
	AC1	2 CO: 8 A / 250 V AC	2 NO: 8 A / 250 V AC		
	DC1	1 CO: 16 A / 24 V DC	1 NO: 16 A / 24 V DC	16 A / 24 V DC	16 A / 24 V DC
	DC1	2 CO: 8 A / 24 V DC	2 NO: 8 A / 24 V DC		
Input circuit					
Rated voltage	AC	24, 115, 230 V 50/60 Hz	230 V ① 50 Hz		230 V ① 50 Hz
	DC	12, 24, 48 V		12 V	
	AC/DC		12, 24 ①, 48, 115 V AC: 50 Hz		24 V ① AC: 50 Hz
Insulation					
Insulation rated voltage		250 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength					
• input - output		4 000 V AC ⑥	4 000 V AC ⑥	4 000 V AC ⑥	4 000 V AC ⑥
• contact clearance		1 000 V AC ⑥	1 000 V AC ⑥	1 000 V AC ⑥	1 000 V AC ⑥
Overvoltage category		III	III	III	III
General data					
Dimensions mm		90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Mechanical life		10 <sup>7</sup> (cycles)	10 <sup>7</sup> (cycles)	10 <sup>7</sup> (cycles)	10 <sup>7</sup> (cycles)
Protection category		IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Connection diagrams		 version 2 CO, AC	 version 2 NO, AC/DC ①	 version 1 NO, DC	 version 1 NO, AC/DC ①
Indicator		LED green	LED green	LED green	LED green
Recognitions, certifications, directives					



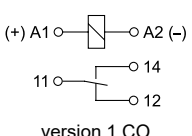
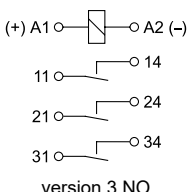


⑥ Type of insulation: basic

⑥ Type of clearance: micro-disconnection

① Terminal A3 occurs only in versions RPI-Z.-U24A. Selection of relays supply voltage: 24 V AC/DC - wires connection to the terminals A1-A2; 230 V AC - to the terminals A1-A3.



## Installation relays

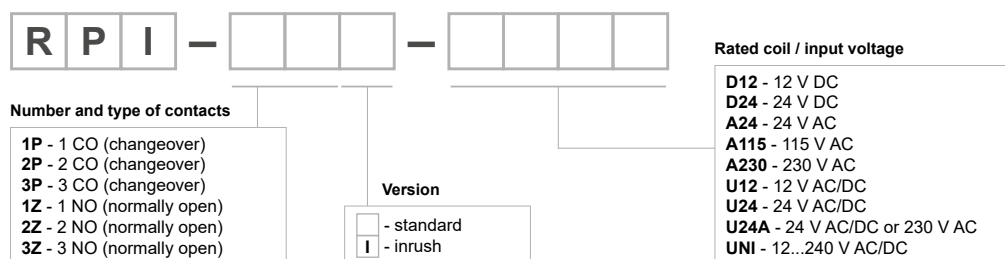
Type		RPI-P-UNI	RPI-Z-UNI
			
<b>Output circuit</b>			
Number and type of contacts		1 CO, 2 CO, 3 CO	1 NO, 2 NO, 3 NO
Contact material		AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Max. voltage	AC	300 V	300 V
Rated load	AC1	1 CO: 16 A / 250 V AC	1 NO: 16 A / 250 V AC
	AC1	2 CO: 8 A / 250 V AC	2 NO: 8 A / 250 V AC
	DC1	1 CO: 16 A / 24 V DC	1 NO: 16 A / 24 V DC
	DC1	2 CO, 3 CO: 8 A / 24 V DC	2 NO, 3 NO: 8 A / 24 V DC
<b>Input circuit</b>			
Rated voltage	AC/DC	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz
<b>Insulation</b>			
Insulation rated voltage		250 V AC	250 V AC
Dielectric strength			
• input - output		4 000 V AC Ⓢ	4 000 V AC Ⓢ
• contact clearance		1 000 V AC Ⓢ	1 000 V AC Ⓢ
Overvoltage category		III	III
<b>General data</b>			
Dimensions	mm	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Mechanical life		> 10 <sup>7</sup> (cycles)	> 10 <sup>7</sup> (cycles)
Protection category		IP 20 (EN 60529)	IP 20 (EN 60529)
<b>Connection diagrams</b>			
			
		version 1 CO	version 3 NO
Indicator		LED green	LED green
Recognitions, certifications, directives			

Ⓢ Type of insulation: basic

Ⓢ Type of clearance: micro-disconnection



# Installation relays



## ORDERING CODES

Index	Code	Description
863355	RPI-1P-D12	one changeover contact 16 A, coil voltage 12 V DC
863356	RPI-1P-D24	one changeover contact 16 A, coil voltage 24 V DC
863358	RPI-1P-A24	one changeover contact 16 A, coil voltage 24 V AC
863360	RPI-1P-A230	one changeover contact 16 A, coil voltage 230 V AC
863361	RPI-2P-D12	two changeover contacts 8 A, coil voltage 12 V DC
863362	RPI-2P-D24	two changeover contacts 8 A, coil voltage 24 V DC
863364	RPI-2P-A24	two changeover contacts 8 A, coil voltage 24 V AC
863365	RPI-2P-A115	two changeover contacts 8 A, coil voltage 115 V AC
863366	RPI-2P-A230	two changeover contacts 8 A, coil voltage 24 V AC
863367	RPI-1Z-U12	one normally open contact 16 A, coil voltage 12 V AC/DC
863368	RPI-1Z-U24	one normally open contact 16 A, coil voltage 24 V AC/DC
863371	RPI-1Z-U24A	one normally open contact 16 A, coil voltage 24 V AC/DC (terminals A1-A2) or 230 V AC (terminals A1-A3)
863372	RPI-2Z-U12	two normally open contacts 8 A, coil voltage 12 V AC/DC
863373	RPI-2Z-U24	two normally open contacts 8 A, coil voltage 24 V AC/DC
863376	RPI-2Z-U24A	two normally open contacts 8 A, coil voltage 24 V AC/DC (terminals A1-A2) or 230 V AC (terminals A1-A3)
864920	RPI-1ZI-D12	inrush version (resistance to inrush current 120 A), one normally open contact 16 A, coil voltage 12 V DC
863377	RPI-1ZI-U24A	inrush version (resistance to inrush current 120 A), one normally open contact 16 A, coil voltage 24 V AC/DC (terminals A1-A2) or 230 V AC (terminals A1-A3)
863378	RPI-1P-UNI	one changeover contact 16 A, input voltage 12...240 V AC/DC
863379	RPI-2P-UNI	two changeover contacts 8 A, input voltage 12...240 V AC/DC
863514	RPI-3P-UNI	three changeover contacts 8 A, input voltage 12...240 V AC/DC
863380	RPI-1Z-UNI	one changeover contact 16 A, input voltage 12...240 V AC/DC
863381	RPI-2Z-UNI	two changeover contacts 8 A, input voltage 12...240 V AC/DC
863515	RPI-3Z-UNI	three changeover contacts 8 A, input voltage 12...240 V AC/DC

# Bistable - impulse relays

- $I_n$  currents of outputs: 8 A or 16 A.
- Available versions:
  - in modular covers: RPB series.
- Method of mounting:  
on 35 mm rail mount.

## Applications in low voltage systems:

- control of lighting circuits,
- electric switchboard in building automation systems (BAS),
- control of electric devices,
- control of devices of air-conditioning, ventilation, heating systems,
- control of devices of security, signaling, alarm system.
































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RPB-1P-...	65
RPB-1PM-...	65
RPB-2Z-...	65
RPB-1ZI-...	65
RPB-1PM-UNI	66
RPB-1ZMI-UNI	66
RPB-2PSM-UNI	66
RPB-2ZSMI-UNI	66







## Bistable - impulse relays

Type	RPB-1P-...	RPB-1PM-...	RPB-2Z-...	RPB-1ZI-...
				 120 A / 20 ms
Output circuit				
Number and type of contacts	1 CO	1 CO	2 NO	1 NO
Contact material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Max. voltage AC	300 V	300 V	300 V	300 V
Rated load AC1 DC1	16 A / 250 V AC 16 A / 24 V DC	16 A / 250 V AC 16 A / 24 V DC	8 A / 250 V AC 8 A / 24 V DC	16 A / 250 V AC 16 A / 24 V DC
Input circuit				
Rated voltage AC	230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz
AC/DC	24 V AC: 50/60 Hz	24 V AC: 50/60 Hz	24 V AC: 50/60 Hz	24 V AC: 50/60 Hz
Control contact S	yes 	yes 	yes 	yes 
Function data				
Functions number	single-functions	single-functions with memory	single-functions	single-functions
Functions 	RESET	NORMAL	RESET	RESET
Indicator	LED green and yellow	LED green and yellow	LED green and yellow	LED green and yellow
Insulation				
Insulation rated voltage	250 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength				
• input - output	4 000 V AC 	4 000 V AC 	4 000 V AC 	4 000 V AC 
• contact clearance	1 000 V AC 	1 000 V AC 	1 000 V AC 	1 000 V AC 
Overvoltage category	III	III	III	III
General data				
Dimensions mm	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Mechanical life	10 <sup>7</sup> (cycles)	10 <sup>7</sup> (cycles)	10 <sup>7</sup> (cycles)	10 <sup>7</sup> (cycles)
Protection category	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Recognitions, certifications, directives	   RoHS	   RoHS	   RoHS	   RoHS









 Type of insulation: basic

 Type of clearance: micro-disconnection

 Connection diagrams, descriptions and diagrams of functions - see [www.repol.com.pl](http://www.repol.com.pl)  Control contact S provides control of switching ON/OFF of receivers (lighting or other devices) from a few different points, with the use of connected in parallel: illuminated momentary bell switches or control buttons.



## Bistable - impulse relays

Type	RPB-1PM-UNI	RPB-1ZMI-UNI	RPB-2PSM-UNI	RPB-2ZSMI-UNI
		80 A / 20 ms 		80 A / 20 ms 
Output circuit				
Number and type of contacts	1 CO	1 NO	2 x 1 CO	2 x 1 NO
Contact material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Max. voltage AC	300 V	300 V	300 V	300 V
Rated load AC1 DC1	16 A / 250 V AC 16 A / 24 V DC	16 A / 250 V AC 16 A / 24 V DC	16 A / 250 V AC 16 A / 24 V DC	16 A / 250 V AC 16 A / 24 V DC
Input circuit				
Rated voltage AC/DC	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz
Control contact S	yes ⑤	yes ⑤	yes ⑤	yes ⑤
Function data				
Functions number	multifunctions with memory	multifunctions with memory	multifunctions sequential with memory	multifunctions sequential with memory
Functions ①	NORMAL, RESET	NORMAL, RESET	BOTH, RESET BOTH, RESET SEQ, SEQ	BOTH, RESET BOTH, RESET SEQ, SEQ
Indicator	LED green and yellow	LED green and yellow	LED green and yellow	LED green and yellow
Insulation				
Insulation rated voltage	250 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength • input - output • contact clearance	4 000 V AC ⑥ 1 000 V AC ⑥	4 000 V AC ⑥ 1 000 V AC ⑥	4 000 V AC ⑥ 1 000 V AC ⑥	4 000 V AC ⑥ 1 000 V AC ⑥
Overvoltage category	III	III	III	III
General data				
Dimensions mm	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Mechanical life	10 <sup>7</sup> (cycles)	10 <sup>7</sup> (cycles)	10 <sup>7</sup> (cycles)	10 <sup>7</sup> (cycles)
Protection category	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Recognitions, certifications, directives				

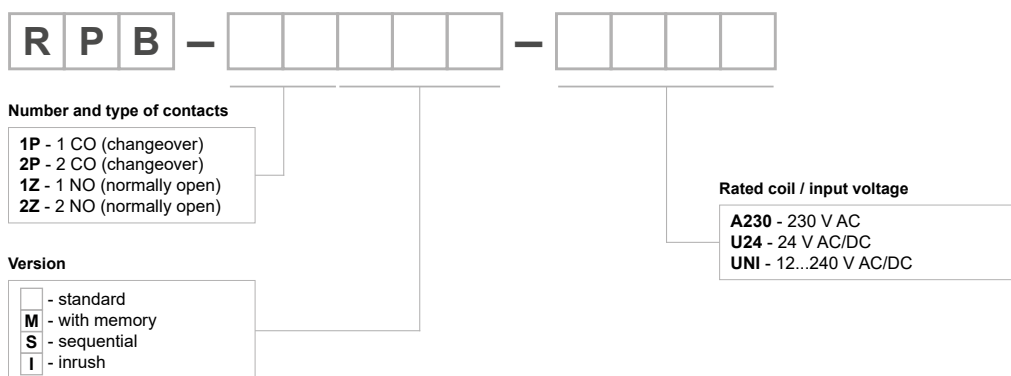
⑥ Type of insulation: basic

⑥ Type of clearance: micro-disconnection

① Connection diagrams, descriptions and diagrams of functions - see [www.relpol.com.pl](http://www.relpol.com.pl) ⑤ Control contact S provides control of switching ON/OFF of receivers (lighting or other devices) from a few different points, with the use of connected in parallel: momentary bell switches or control buttons; the relays cannot operate with illuminated switches.



## Bistable - impulse relays



### ORDERING CODES

Index	Code	Description
864384	RPB-1P-A230	single-function, cooperating with illuminated momentary bell switches or control buttons, one changeover contact 16 A, input voltage 230 V AC
864383	RPB-1P-U24	single-function, cooperating with illuminated momentary bell switches or control buttons, one changeover contact 16 A, input voltage 24 V AC/DC
864390	RPB-1PM-A230	single-function (with memory), cooperating with illuminated momentary bell switches or control buttons, one changeover contact 16 A, input voltage 230 V AC
864389	RPB-1PM-U24	single-function (with memory), cooperating with illuminated momentary bell switches or control buttons, one changeover contact 16 A, input voltage 24 V AC/DC
864386	RPB-2Z-A230	single-function, cooperating with illuminated momentary bell switches or control buttons, two normally open contacts 8 A, input voltage 230 V AC
864385	RPB-2Z-U24	single-function, cooperating with illuminated momentary bell switches or control buttons, two normally open contacts 8 A, input voltage 24 V AC/DC
864388	RPB-1ZI-A230	single-function, inrush version (resistance to inrush current 120 A), cooperating with illuminated momentary bell switches or control buttons, one normally open contact 16 A, input voltage 230 V AC
864387	RPB-1ZI-U24	single-function, inrush version (resistance to inrush current 120 A), cooperating with illuminated momentary bell switches or control buttons, one normally open contact 16 A, input voltage 24 V AC/DC
864391	RPB-1PM-UNI	multifunction (with memory), cooperating with momentary bell switches or control buttons, one changeover contact 16 A, input voltage 12...240 V AC/DC
864393	RPB-1ZMI-UNI	multifunction (with memory), inrush version (resistance to inrush current 80 A), cooperating with momentary bell switches or control buttons, one normally open contact 16 A, input voltage 12...240 V AC/DC
864392	RPB-2PSM-UNI	multifunction (sequential with memory), cooperating with momentary bell switches or control buttons, two changeover contacts 16 A, input voltage 12...240 V AC/DC
864394	RPB-2ZSMI-UNI	multifunction (sequential with memory), inrush version (resistance to inrush current 80 A), cooperating with momentary bell switches or control buttons, two normally open contacts 16 A, input voltage 12...240 V AC/DC

# Time relays

MT-W...M .....	69
RPC-.MA-... .....	69
RPC-.MB-... .....	69
RPC-2A-UNI .....	69
RPC-1MC-UNI .....	70
RPC-.MD-UNI .....	70
RPC-1ER-... .....	70
RPC-1EA-... .....	70
RPC-1ES-... .....	71
RPC-1EU-... .....	71
RPC-1IP-... .....	71
RPC-1SA-... .....	71
RPC-1WT-... .....	71
RPC-.E-... .....	72
RPC-.WU-... .....	72
RPC-.BP-... .....	72
RPC-2SD-UNI .....	72
RPC-1AS-A230 .....	73



TR4N 1 CO .....	73
TR4N 2 CO .....	73
TR4N 4 CO .....	73
T-R4 - GZM4 .....	74
PIR15...T .....	74
COM3 .....	74

- $I_n$  currents of outputs: 6 ... 16 A.
- Available versions:
  - in modular covers:
    - MT-W...M (with LED display), RPC series,
  - in industrial covers:
    - TR4N series, T-R4, PIR15...T.
- Design features:
  - multifunctions,
  - single-functions,
  - with settings of T interval,
  - with independent settings of T1 and T2 intervals,
  - with independent settings of T1, T2 and T3 intervals (MT-W...M),
  - contacts / outputs: 1 CO, 2 CO, 3 CO, 4 CO
    - depending on the type of relay,
  - supply: universal AC/DC; specified voltage
    - depending on the type of relay.
- Methods of mounting: on 35 mm rail mount, on panel mounting, in plug-in sockets
  - depending on the type of relay.

## Applications in low voltage systems:

- in industrial automation,
- in BMS automation,
- in air-conditioning, ventilation, heating systems,
- in protection, signalling, alarm systems,
- in lighting systems,
- various other applications.



# Time relays

Type	MT-W...M	RPC-MA...	RPC-MB...	RPC-2A-UNI
	adjustment T1, T2, T3			
Output circuit				
Number and type of contacts	1 CO	1 CO, 2 CO	1 CO, 2 CO	2 CO
Contact material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Max. voltage AC	300 V	300 V	300 V	300 V
Rated load AC1 DC1	10 A / 250 V AC 10 A / 24 V DC	1 CO: 16 A / 250 V AC, 2 CO: 8 A / 250 V AC 1 CO: 16 A / 24 V DC, 2 CO: 8 A / 24 V DC	1 CO: 16 A / 250 V AC, 2 CO: 8 A / 250 V AC 1 CO: 16 A / 24 V DC, 2 CO: 8 A / 24 V DC	8 A / 250 V AC 8 A / 24 V DC
Input circuit				
Rated voltage AC		230 V 50/60 Hz	230 V 50/60 Hz	
AC/DC	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz
Control contact S	yes	yes	yes	no
Time module				
Functions number	multifunctions	multifunctions	multifunctions	multifunctions
Functions	Es, E, E(S), E(r), R, Wu, Wu(S), Wu(r), Ws, Wa, B, Wi, ER, EWs, EWa, EWu, WsWa, EWf, Wt, Pi, Pi(S), Pp, Pp(S), Est, Esp, ON, OFF	E, Wu, Bp, Bi, R, Ws, Wa, Esa, B, T	E, Wu, Bp, Bi, Ra, Wst, Wi, Esf, Esp, Est	E, A, nWa, nWu, nWuWa, nWs
Time ranges	0,1 s ... 99 h 59 min. 59,9 s	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	1 s; 10 s; 20 s; 30 s; 1 min.; 1,5 min.; 2 min.; 3 min.; 5 min.; 10 min.
Indicator	LED green and yellow	LED green and yellow	LED green and yellow	LED green and yellow
Insulation				
Insulation rated voltage	250 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength • input - output • contact clearance	2 500 V AC 1 000 V AC	4 000 V AC 1 000 V AC	4 000 V AC 1 000 V AC	4 000 V AC 1 000 V AC
Overvoltage category	II	III	III	III
General data				
Dimensions mm	90(98,8) x 17,5 x 65,5	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Mechanical life	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)
Protection category	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Connection diagrams	 version 1 CO	 version 1 CO, AC/DC	 version 1 CO, AC/DC	 version 2 CO
Recognitions, certifications, directives				

Type of insulation: basic





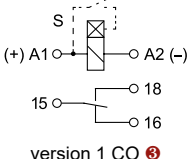
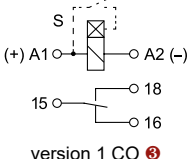
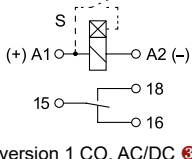
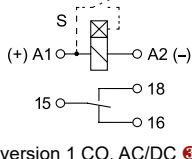

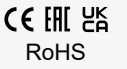


Type of clearance: micro-disconnection

Descriptions and diagrams of time functions - see pages 75-76. Two digit LED display, programming with two buttons only.

The control terminal S (B1) is activated by connection to A1 terminal via the external control contact S.



## Time relays





Type	RPC-1MC-UNI	RPC-.MD-UNI	RPC-1ER...	RPC-1EA...
			adjustment T1, T2 	adjustment T1, T2 
Output circuit				
Number and type of contacts	1 CO	1 CO, 3 CO	1 CO	1 CO
Contact material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Max. voltage AC	300 V	300 V	300 V	300 V
Rated load AC1	16 A / 250 V AC	1 CO: 16 A / 250 V AC	16 A / 250 V AC	16 A / 250 V AC
Rated load AC1		3 CO: 8 A / 250 V AC		
Rated load DC1	16 A / 24 V DC	1 CO: 16 A / 24 V DC	16 A / 24 V DC	16 A / 24 V DC
Rated load DC1		3 CO: 8 A / 24 V DC		
Input circuit				
Rated voltage AC			230 V 50/60 Hz	230 V 50/60 Hz
Rated voltage AC/DC	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz
Control contact S	yes ⑥	yes ⑥	yes ⑥	yes ⑥
Time module				
Functions number	multifunctions	multifunctions	single-functions	single-functions
Functions ①	E, E(S), Wu, Wu(S), Bp, Bp(S), Bi, Bi(S), R, Ws, Wa, Esa(R), E(R), Wu(R)	E, Wu, Bp, Bi, R, Ws, Wa, Esa, B, T	ER	EWa
Time ranges	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d
Indicator	LED green and yellow	LED green and yellow	LED green and yellow	LED green and yellow
Insulation				
Insulation rated voltage	250 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength • input - output	4 000 V AC ⑥	4 000 V AC ⑥	4 000 V AC ⑥	4 000 V AC ⑥
Dielectric strength • contact clearance	1 000 V AC ⑥	1 000 V AC ⑥	1 000 V AC ⑥	1 000 V AC ⑥
Overvoltage category	III	III	III	III
General data				
Dimensions mm	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Mechanical life	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)
Protection category	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Connection diagrams	 version 1 CO ⑥	 version 1 CO ⑥	 version 1 CO, AC/DC ⑥	 version 1 CO, AC/DC ⑥
Recognitions, certifications, directives				




⑥ Type of insulation: basic

⑥ Type of clearance: micro-disconnection

















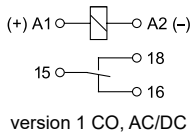
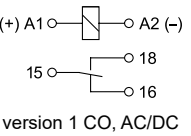
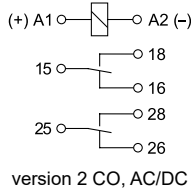
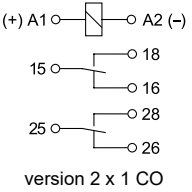




## Time relays


RPC-1ES...	RPC-1EU...	RPC-1IP...	RPC-1SA...	RPC-1WT...
adjustment T1, T2	adjustment T1, T2	adjustment T1, T2	adjustment T1, T2	adjustment T1, T2
				
1 CO	1 CO	1 CO	1 CO	1 CO
AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
300 V	300 V	300 V	300 V	300 V
16 A / 250 V AC	16 A / 250 V AC	16 A / 250 V AC	16 A / 250 V AC	16 A / 250 V AC
16 A / 24 V DC	16 A / 24 V DC	16 A / 24 V DC	16 A / 24 V DC	16 A / 24 V DC
230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz
12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz
yes 	yes 	yes 	yes 	yes 
single-functions	single-functions	single-functions	single-functions	single-functions
EWs	EWu + NWu 	li + Ip 	WsWa	Wt
OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d
LED green and yellow	LED green and yellow	LED green and yellow	LED green and yellow	LED green and yellow
250 V AC	250 V AC	250 V AC	250 V AC	250 V AC
4 000 V AC  1 000 V AC 	4 000 V AC  1 000 V AC 	4 000 V AC  1 000 V AC 	4 000 V AC  1 000 V AC 	4 000 V AC  1 000 V AC 
III	III	III	III	III
90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)
IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
 version 1 CO, AC/DC 	 version 1 CO, AC/DC 	 version 1 CO, AC/DC 	 version 1 CO, AC/DC 	 version 1 CO, AC/DC 
   RoHS	   RoHS	   RoHS	   RoHS	   RoHS


 Descriptions and diagrams of time functions - see pages 75-76.  The control terminal S (B1) is activated by connection to A1 terminal via the external control contact S.  Start by function: EWu, Ip - terminals A1-S are not connected / bridged; start by function: NWu, li - terminals A1-S are connected / bridged.



## Time relays

Type	RPC-.E-...	RPC-.WU-...	RPC-.BP-...	RPC-2SD-UNI
				adjustment T1, T2 
Output circuit				
Number and type of contacts	1 CO, 2 CO	1 CO, 2 CO	1 CO, 2 CO	2 x 1 CO
Contact material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Max. voltage AC	300 V	300 V	300 V	300 V
Rated load	AC1 DC1	AC1 DC1	AC1 DC1	
	1 CO: 16 A / 250 V AC 2 CO: 8 A / 250 V AC 1 CO: 16 A / 24 V DC 2 CO: 8 A / 24 V DC	1 CO: 16 A / 250 V AC 2 CO: 8 A / 250 V AC 1 CO: 16 A / 24 V DC 2 CO: 8 A / 24 V DC	1 CO: 16 A / 250 V AC 2 CO: 8 A / 250 V AC 1 CO: 16 A / 24 V DC 2 CO: 8 A / 24 V DC	8 A / 250 V AC 8 A / 24 V DC
Input circuit				
Rated voltage AC	230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz
AC/DC	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz	12...240 V AC: 50/60 Hz
Control contact S	no	no	no	no
Time module				
Functions number	single-functions	single-functions	single-functions	Star-Delta
Functions 	E	Wu	Bp	SD
Time ranges	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	OFF; ON; 1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	1 s; 10 s; 30 s; 1 min.; 1,5 min.; 3 min.; 5 min.; 10 min.; 30 min.; 1 h 
Indicator	LED green and yellow	LED green and yellow	LED green and yellow	LED green and yellow
Insulation				
Insulation rated voltage	250 V AC	250 V AC	250 V AC	250 V AC
Dielectric strength				
• input - output	4 000 V AC 	4 000 V AC 	4 000 V AC 	4 000 V AC 
• contact clearance	1 000 V AC 	1 000 V AC 	1 000 V AC 	1 000 V AC 
Overvoltage category	III	III	III	III
General data				
Dimensions mm	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Mechanical life	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)
Protection category	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Connection diagrams				
Recognitions, certifications, directives				

 Type of insulation: basic

 Type of clearance: micro-disconnection





## Time relays

RPC-1AS-A230	TR4N 1 CO	TR4N 2 CO	TR4N 4 CO
120 A, 20 ms 			
1 NO	1 CO	2 CO	4 CO
AgSnO <sub>2</sub>	AgNi	AgNi	AgNi
300 V	300 V	300 V	250 V
16 A / 250 V AC	16 A / 250 V AC 16 A / 24 V DC	8 A / 250 V AC 8 A / 24 V DC	6 A / 250 V AC 6 A / 24 V DC
230 V 50/60 Hz	115, 230 V 50/60 Hz 12, 24 V AC: 50/60 Hz	115, 230 V 50/60 Hz 12, 24 V AC: 50/60 Hz	115, 230 V 50/60 Hz 12, 24 V AC: 50/60 Hz
yes ③	yes ③	yes ③	yes ③
<b>multifunctions</b>	<b>multifunctions</b>	<b>multifunctions</b>	<b>multifunctions</b>
ON, OFF, AUTO, R, Wi, Extra Time	E, Wu, Bp, Bi, PWM, R, Ws, Wa, Esa, B, ON / OFF	E, Wu, Bp, Bi, PWM, R, Ws, Wa, Esa, B, ON / OFF	E, Wu, Bp, Bi, PWM, R, Ws, Wa, Esa, B, ON / OFF
1 s; 10 s; 20 s; 30 s; 1 min.; 1,5 min.; 2 min.; 3 min.; 5 min.; 10 min.	1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d
LED green and yellow	LED green and yellow	LED green and yellow	LED green and yellow
250 V AC	250 V AC	250 V AC	250 V AC
4 000 V AC ③ 1 000 V AC ③	2 000 V AC ③ 1 000 V AC ③	2 000 V AC ③ 1 000 V AC ③	2 500 V AC ③ 1 500 V AC ③
III	III	III	II
90(98,8) x 17,5 x 64,6	90 x 17,6 x 55	90 x 17,6 x 55	90 x 36 x 55
> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)
IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
 version 1 NO ③	 version 1 CO, AC ③	 version 2 CO, AC ③	 version 4 CO, AC ③
			

① Descriptions and diagrams of time functions - see pages 75-76. ③ The control terminal S (B1) is activated by connection to A1 terminal via the external control contact S. ⑤ Time ranges T1 (start-up for the star); transit time T2: 0,05...0,9 s.









# Time relays

Type	T-R4 - GZM4	PIR15...T	COM3
Output circuit		with time module COM3 	universal time modules 
Number and type of contacts	4 CO	2 CO, 3 CO 	
Contact material	AgNi	AgNi	
Max. voltage AC	250 V	440 V	
Rated load AC1 DC1	6 A / 230 V AC	10 A / 250 V AC 10 A / 24 V DC	
Input circuit			
Rated voltage AC	24, 115, 230 V 50/60 Hz	24, 48, 60, 110, 120, 230, 240 V 50/60 Hz	
DC	12, 24 V	24, 48, 60, 110, 120, 220 V	
AC/DC			24...240 V AC: 50/60 Hz
Control contact S	no	yes 	yes 
Time module			
Functions number	single-functions	multifunctions	multifunctions
Functions 	E (T-R4E) / Wu (T-R4Wu) Bp (T-R4Bp) / Bi (T-R4Bi)	E, Wu, Bp, Bi, R, Ws, Wa, Es	E, Wu, Bp, Bi, R, Ws, Wa, Es
Time ranges	1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 100 h	1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d	1 s; 10 s; 1 min.; 10 min.; 1 h; 10 h; 1 d; 10 d
Indicator	LED green and yellow	LED green	LED green
Insulation			
Insulation rated voltage	250 V AC	250 V AC	
Dielectric strength • input - output • contact clearance	2 500 V AC  1 500 V AC 	2 500 V AC  1 500 V AC 	
Overtoltage category	III	III	
General data			
Dimensions mm	75 x 27 x 91,5 	73 x 38,2 x 85,4	26,5 x 35 x 47
Mechanical life	> 2 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)	
Protection category	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 40 (EN 60529)
Connection diagrams			
Recognitions, certifications, directives			

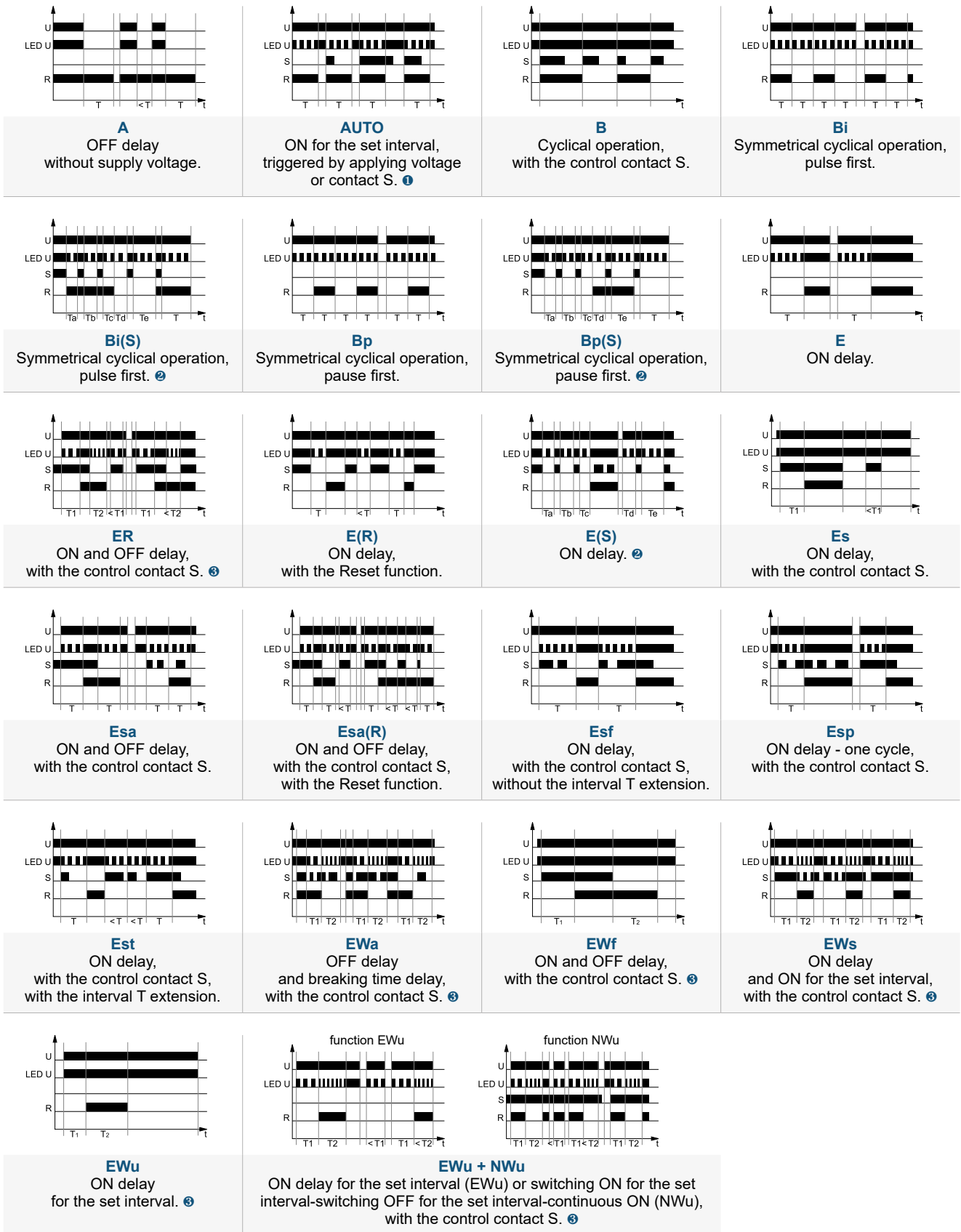


 Type of insulation: basic

 Type of clearance: micro-disconnection

 Descriptions and diagrams of time functions - see pages 75-76.  The control terminal S (B1) is activated by connection to A1 terminal via the external control contact S.  T-R4: mounted in plug-in socket GZM4.  PIR15 - 3 CO (standard) - set: R15 - 3 CO + GZP11; PIR15 - 2 CO - set: R15 - 2 CO + GZP8.  According to relays R15 - 3 CO (2 CO).

# Functions time



① Staircase switches - mode "Extra Time"    ② Time T measuring stop by contact S    ③ Independently adjustment times T1 and T2

U - supply voltage; R - output state of the relay; S - control contact state; T, T1, T2, T3 - measured times; t - time axis

**NOTE:** the diagrams are of general information, and detailed performance descriptions are specified in catalog cards of time relays - see [www.repol.com.pl](http://www.repol.com.pl)

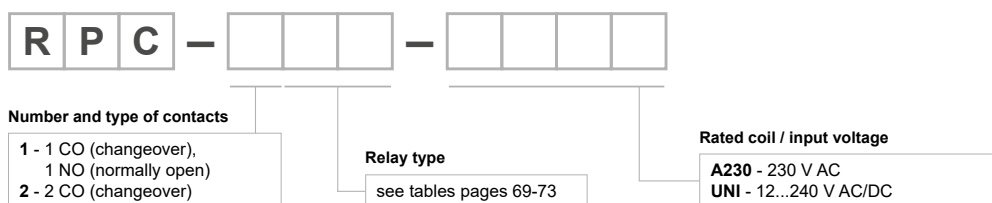
# Functions time



**OFF** Stable OFF.      **ON** Stable ON.      **ON / OFF** Stable ON / OFF.

① Staircase switches - mode "Extra Time"    ② Time T measuring stop by contact S    ③ Independently adjustment times T1 and T2  
 ④ Turning on or omitting T3 time    ⑤ Tz - value of the set interval    ⑥ Function of switching off the relay R prior the interval T  
 U - supply voltage; R - output state of the relay; S - control contact state; T, T1, T2, T3 - measured times; t - time axis

## Time relays



### ORDERING CODES

Index	Code	Description
863199 863181	RPC-1MA-A230 RPC-1MA-UNI	multifunction (10 functions, 8 ranges), one changeover contact 16 A
863201 863183	RPC-2MA-A230 RPC-2MA-UNI	multifunction (10 functions, 8 ranges), two changeover contacts 8 A
863200 863182	RPC-1MB-A230 RPC-1MB-UNI	multifunction (10 functions, 8 ranges), one changeover contact 16 A
863202 863184	RPC-2MB-A230 RPC-2MB-UNI	multifunction (10 functions, 8 ranges), two changeover contacts 8 A
863217	RPC-2A-UNI	multifunction (6 functions, 10 ranges), operation after the power supply is switched off, two changeover contacts 8 A
863216	RPC-1MC-UNI	multifunction (14 functions, 8 ranges), immediate activation of the function, one changeover contact 16 A
863218	RPC-1MD-UNI	multifunction (10 functions, 8 ranges), immediate activation of the function, one changeover contact 16 A
863219	RPC-3MD-UNI	multifunction (10 functions, 8 ranges), immediate activation of the function, three changeover contacts 8 A
863203 863185	RPC-1ER-A230 RPC-1ER-UNI	single-function (function ER, 8 ranges - times T1, T2), one changeover contact 16 A
863204 863204	RPC-1EA-A230 RPC-1EA-A230	single-function (function EWa, 8 ranges - times T1, T2), one changeover contact 16 A
863205 863187	RPC-1ES-A230 RPC-1ES-UNI	single-function (function EWs, 8 ranges - times T1, T2), one changeover contact 16 A
863206 863188	RPC-1EU-A230 RPC-1EU-UNI	single-function (function EWu + NWu, 8 ranges - times T1, T2), one changeover contact 16 A
863207 863189	RPC-1IP-A230 RPC-1IP-UNI	single-function (function li + lp, 8 ranges - times T1, T2), one changeover contact 16 A
863208 863190	RPC-1SA-A230 RPC-1SA-UNI	single-function (function WsWa, 8 ranges - times T1, T2), one changeover contact 16 A
863209 863191	RPC-1WT-A230 RPC-1WT-UNI	single-function (function Wt, 8 ranges - times T1, T2), one changeover contact 16 A
863210 863193	RPC-1E-A230 RPC-1E-UNI	single-function (function E, 8 ranges), one changeover contact 16 A
863213 863196	RPC-2E-A230 RPC-2E-UNI	single-function (function E, 8 ranges), two changeover contacts 8 A
863211 863194	RPC-1WU-A230 RPC-1WU-UNI	single-function (function Wu, 8 ranges), one changeover contact 16 A
863214 863197	RPC-2WU-A230 RPC-2WU-UNI	single-function (function Wu, 8 ranges), two changeover contacts 8 A
863212 863195	RPC-1BP-A230 RPC-1BP-UNI	single-function (function Bp, 8 ranges), one changeover contact 16 A
863215 863198	RPC-2BP-A230 RPC-2BP-UNI	single-function (function Bp, 8 ranges), two changeover contacts 8 A
863192	RPC-2SD-UNI	Star-Delta start-up (10 ranges - times T1, T2), two changeover contacts 8 A
863220	RPC-1AS-A230	staircase switch (5 functions, 10 ranges), one normally open contact 16 A
860470	MT-W-17S-11-9240-M	electronic with display, multifunction (25 functions, times T1, T2, T3), one changeover contact 10 A, input voltage 12...240 V AC/DC

## Time relays

### ORDERING CODES

Index	Code	Description	
854941	T-R4E-2014-23-1024	single-function (function E, 7 ranges), four changeover contacts 6 A	input voltage 24 V DC
854942	T-R4E-2014-23-5024		input voltage 24 V AC
854016	T-R4E-2014-23-5230		input voltage 230 V AC
854945	T-R4Wu-2014-23-1024	single-function (function Wu, 7 ranges), four changeover contacts 6 A	input voltage 24 V DC
854946	T-R4Wu-2014-23-5024		input voltage 24 V AC
854017	T-R4Wu-2014-23-5230		input voltage 230 V AC
854936	T-R4Bp-2014-23-1024	single-function (function Bp, 7 ranges), four changeover contacts 6 A	input voltage 24 V DC
854937	T-R4Bp-2014-23-5024		input voltage 24 V AC
854939	T-R4Bp-2014-23-5230		input voltage 230 V AC
854936	T-R4Bp-2014-23-1024	single-function (function Bi, 7 ranges), four changeover contacts 6 A	input voltage 24 V DC
854937	T-R4Bp-2014-23-5024		input voltage 24 V AC
854939	T-R4Bp-2014-23-5230		input voltage 230 V AC
854931	T-R4Bi-2014-23-1024	single-function (function Bi, 7 ranges), four changeover contacts 6 A	input voltage 24 V DC
854932	T-R4Bi-2014-23-5024		input voltage 24 V AC
854934	T-R4Bi-2014-23-5230		input voltage 230 V AC
855538	PIR152-024DC-00T	multifunction (8 functions, 8 ranges), two changeover contacts 10 A	input voltage 24 V DC
855618	PIR152-220DC-00T		input voltage 220 V DC
855539	PIR152-024AC-00T		input voltage 24 V AC
855540	PIR152-230AC-00T		input voltage 230 V AC
855535	PIR153-024DC-00T	multifunction (8 functions, 8 ranges), three changeover contacts 10 A	input voltage 24 V DC
855608	PIR153-220DC-00T		input voltage 220 V DC
855536	PIR153-024AC-00T		input voltage 24 V AC
855537	PIR153-230AC-00T		input voltage 230 V AC
856580	TR4N-230AC-11-M	multifunction (10 functions, 8 ranges), one changeover contact 16 A	input voltage 230 V AC
856578	TR4N-24AC/DC-11-M		input voltage 24 V AC/DC
856584	TR4N-230AC-12-M	multifunction (10 functions, 8 ranges), two changeover contacts 8 A	input voltage 230 V AC
856582	TR4N-24AC/DC-12-M		input voltage 24 V AC/DC
856104	TR4N-230AC-14-M	multifunction (10 functions, 8 ranges), four changeover contacts 6 A	input voltage 230 V AC
856101	TR4N-24AC/DC-14-M		input voltage 24 V AC/DC

# Monitoring relays

- $I_n$  currents of outputs: 5 A or 12 A.
- Available versions:
  - in modular covers: RPN series, MR-E series,
  - in industrial covers: MR-G series.
- Method of mounting: on 35 mm rail mount.




















RPN-1VF-A400 .....	80
RPN-1VFS-A400 .....	80
RPN-1VFR-A400 .....	80
RPN-1VFT-A400 .....	80
RPN-1A..-A230 .....	81
RPN-1TMP-A230 .....	81
RPN-1AT-A230 .....	81
MR-EU1W1P .....	81
MR-EU31UW1P .....	81
MR-EU3M1P .....	82
MR-EI1W1P .....	82
MR-ET1P .....	82
MR-GU32P-TR2 .....	82
MR-GU3M2P-TR2 .....	83
MR-GU3M2P .....	83
MR-GI1M2P-TR2 .....	83
MR-GT2P-TR2 .....	83


## Applications in low voltage systems:

- DC voltage monitoring,
- AC voltage monitoring in 1- and 3-phase network,
- DC current monitoring,
- AC current monitoring in 1-phase network,
- motor temperature monitoring.



## Monitoring relays






Type	RPN-1VF-A400	RPN-1VFS-A400	RPN-1VFR-A400	RPN-1VFT-A400
				
<b>Output circuit</b>				
Number and type of contacts	1 CO	1 CO	1 CO	1 CO
Contact material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Max. voltage AC	300 V	300 V	300 V	300 V
Rated load AC1 DC1	12 A / 250 V AC 12 A / 24 V DC	12 A / 250 V AC 12 A / 24 V DC	12 A / 250 V AC 12 A / 24 V DC	12 A / 250 V AC 12 A / 24 V DC
<b>Input circuit</b>				
Supply voltage	= monitoring voltage	= monitoring voltage	= monitoring voltage	= monitoring voltage
Rated voltage	AC: 3(N)~ 400/230 V	AC: 3(N)~ 400/230 V	AC: 3(N)~ 400/230 V	AC: 3(N)~ 400/230 V
Range of supply voltage / frequency	0,7...1,15 U <sub>n</sub> / AC: 48...63 Hz	0,7...1,15 U <sub>n</sub> / AC: 48...63 Hz	0,7...1,15 U <sub>n</sub> / AC: 48...63 Hz	0,7...1,15 U <sub>n</sub> / AC: 48...63 Hz
Working cycle				
<b>Measuring circuit</b>				
Functions number	multifunctions	multifunctions	multifunctions	multifunctions
Functions 	AC voltage monitoring in 3-phase network 3(N)~ 400/230 V, monitoring of phase failure, asymmetry	AC voltage monitoring in 3-phase network 3(N)~ 400/230 V, monitoring of phase failure, asymmetry, phase sequence	AC voltage monitoring in 3-phase network 3(N)~ 400/230 V, monitoring of phase failure, asymmetry, phase sequence	AC voltage monitoring in 3-phase network 3(N)~ 400/230 V, monitoring of phase failure, asymmetry, phase sequence, tripping delay
Measured value	3(N)~, sinus, 48...63 Hz	3(N)~, sinus, 48...63 Hz	3(N)~, sinus, 48...63 Hz	3(N)~, sinus, 48...63 Hz
Measuring inputs	= supply voltage AC: 3(N)~ 400/230 V	= supply voltage AC: 3(N)~ 400/230 V	= supply voltage AC: 3(N)~ 400/230 V	= supply voltage AC: 3(N)~ 400/230 V
Overload capacity	≥ 1,2 U <sub>n</sub>	≥ 1,2 U <sub>n</sub>	≥ 1,2 U <sub>n</sub>	≥ 1,2 U <sub>n</sub>
Switching thresholds	PHASE: 175 V AC ASYMMETRY: 55 V AC	PHASE: 175 V AC ASYMMETRY: 55 V AC	PHASE: 175 V AC ASYMMETRY (adjustment): 5...80 V AC	PHASE: 175 V AC ASYMMETRY (adjustment): 5...80 V AC
Indicator	LED green/red	LED green/red and yellow	LED green/red and yellow	LED green/red and yellow
<b>Insulation</b>				
Insulation rated voltage	400 V AC	400 V AC	400 V AC	400 V AC
Rated surge voltage	4 000 V	4 000 V	4 000 V	4 000 V
Overvoltage category	III	III	III	III
<b>General data</b>				
Dimensions mm	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Mechanical life	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)
Protection category	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Recognitions, certifications, directives	   RoHS	   RoHS	   RoHS	   RoHS

 Connection diagrams, descriptions and diagrams of functions nadzorczych - see [www.relpol.com.pl](http://www.relpol.com.pl)









## Monitoring relays

RPN-1A..A230	RPN-1TMP-A230	RPN-1AT-A230	MR-EU1W1P	MR-EU31UW1P
				
1 CO	1 CO	1 CO	1 CO	1 CO
AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>		
300 V	300 V	300 V		
12 A / 250 V AC 12 A / 24 V DC	12 A / 250 V AC 12 A / 24 V DC	12 A / 250 V AC 12 A / 24 V DC	5 A / 250 V AC	5 A / 250 V AC
AC: 230 V	AC: 230 V	AC: 230 V	= monitoring voltage	= monitoring voltage
AC: 230 V	AC: 230 V	AC: 230 V	AC: 24, 230 V DC: 24 V	AC: 230 V AC: 3(N)~ 400/230 V
0,85...1,15 U <sub>n</sub> / AC: 48...63 Hz	0,85...1,15 U <sub>n</sub> / AC: 48...63 Hz	0,85...1,15 U <sub>n</sub> / AC: 48...63 Hz	0,75...1,2 U <sub>n</sub> / AC: 48...63 Hz	0,7...1,3 U <sub>n</sub> / AC: 48...63 Hz
			100%	100%
multifunctions	single-functions	single-functions	multifunctions	multifunctions
AC current monitoring in 1-phase network, MIN and MAX value monitoring, fault latch mode, tripping delay	motor temperature monitoring, button TEST/RESET	motor temperature monitoring, self-RESET	DC and AC voltage monitoring in 1-phase network, MIN value monitoring, hysteresis mode	AC voltage monitoring in 1-phase network and 3-phase 3(N)~ 400/230 V, monitoring of phase failure, phase sequence
AC sinus, 48...63 Hz			DC or AC sinus, 48...63 Hz	3(N)~, sinus, 48...63 Hz
AC: 0,5 ... 16 A <sup>Ⓜ</sup> / 230 V AC			= supply voltage AC: 24, 230 V DC: 24 V	= supply voltage AC: 230 V AC: 3(N)~ 400/230 V
2 ... 20 A <sup>Ⓜ</sup>	SHORT-CIRCUIT: ≤ 10 Ω	SHORT-CIRCUIT: ≤ 10 Ω	≥ 1,2 U <sub>n</sub>	<sup>Ⓜ</sup>
MIN: 0,05...0,95 I <sub>n</sub> MAX: 0,1...1,0 I <sub>n</sub>	MIN: 1,65 kΩ WARNING: 3,3 kΩ MAX: 3,6 kΩ	MIN: 1,65 kΩ WARNING: 3,3 kΩ MAX: 3,6 kΩ	MIN: 0,75...1,15 U <sub>n</sub> MAX: 0,8...1,2 U <sub>n</sub>	MIN: 0,7...1,2 U <sub>n</sub> MAX: 0,8...1,3 U <sub>n</sub>
LED green, yellow and red	LED green, yellow and red	LED green, yellow and red	LED green, yellow and red	LED yellow and red
250 V AC	250 V AC	250 V AC		
4 000 V	4 000 V	4 000 V	4 000 V	4 000 V
III	III	III	III	III
90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	87 x 17,5 x 65	87 x 17,5 x 65
> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 3 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)
IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
 RoHS	 RoHS	 RoHS	 RoHS	 RoHS

<sup>Ⓜ</sup> Depending on relay version (RPN-1A05/1/2/5/8/16) - see [www.relpol.com.pl](http://www.relpol.com.pl)  
<sup>Ⓜ</sup> Determined by the tolerance specified for supply voltage







## Monitoring relays

Type	MR-EU3M1P	MR-EI1W1P	MR-ET1P	MR-GU32P-TR2	
					
<b>Output circuit</b>					
Number and type of contacts	1 CO	1 CO	1 CO	2 CO	
Rated load	AC1 AC1	5 A / 250 V AC	5 A / 250 V AC	5 A / 250 V AC 3 A / 250 V AC	
<b>Input circuit</b>					
Supply voltage	= monitoring voltage	AC: 230 V	AC: 230 V	AC: 12, 24, 42, 48, 110, 127, 230, 400 V	
Rated voltage	AC: 3(N)~ 400/230 V	AC: 230 V	AC: 230 V		
Range of supply voltage / frequency	0,7...1,3 U <sub>n</sub> / AC: 48...63 Hz	0,85...1,15 U <sub>n</sub> / AC: 48...63 Hz	0,85...1,1 U <sub>n</sub> / AC: 48...63 Hz		
Working cycle	100%	100%	100%	100%	
<b>Measuring circuit</b>					
Functions	number	multifunctions	multifunctions	single-functions	multifunctions
Functions	1	AC voltage monitoring in 3-phase network 3(N)~ 400/230 V, monitoring of phase failure, asymmetry, phase sequence	AC current monitoring in 1-phase network, MIN and MAX value monitoring, hysteresis mode	motor temperature monitoring, button TEST/RESET	AC voltages monitoring in phases - 230 V, 3-phase network, MIN and MAX value monitoring, fault latch mode
Measured value		3(N)~, sinus, 48...63 Hz	AC sinus, 48...63 Hz		AC sinus, 48...63 Hz
Measuring inputs		= supply voltage AC: 3(N)~ 400/230 V	AC: 10 A / 230 V AC		AC: 230 V
Overload capacity			13 A		440 V AC
Switching thresholds			MIN: 0,05...0,95 I <sub>n</sub> MAX: 0,1...1,0 I <sub>n</sub>	relay OFF: ≥ 3,6 kΩ relay ON: ≤ 1,65 kΩ	MIN: 0,7...1,2 U <sub>n</sub> MAX: 0,8...1,3 U <sub>n</sub>
Indicator		LED green and yellow	LED green, yellow and red	LED green and red	LED green, yellow and red
<b>Insulation</b>					
Rated surge voltage		4 000 V	4 000 V	6 000 V	4 000 V
Overvoltage category		III	III	III	III
<b>General data</b>					
Dimensions	mm	87 x 17,5 x 65	87 x 17,5 x 65	87 x 35 x 65	90 x 22,5 x 108
Mechanical life		> 2 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)
Protection category		IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Recognitions, certifications, directives		CE RoHS	CE RoHS	CE RoHS	CE RoHS

1 Connection diagrams, descriptions and diagrams of monitoring functions - see [www.relpol.com.pl](http://www.relpol.com.pl)



## Monitoring relays

MR-GU3M2P-TR2	MR-GU3M2P	MR-GI1M2P-TR2	MR-GT2P-TR2
			
2 CO	2 CO	2 CO	2 CO
3 A / 250 V AC ④ 5 A / 250 V AC ④	3 A / 250 V AC ④ 5 A / 250 V AC ④	3 A / 250 V AC ④ 5 A / 250 V AC ④	3 A / 250 V AC ④ 5 A / 250 V AC ④
AC: 12, 24, 42, 48, 110, 127, 230, 400 V ⑤	= monitoring voltage	AC: 12, 24, 42, 48, 110, 127, 230, 400 V ⑤	AC: 12, 24, 42, 48, 110, 127, 230, 400 V ⑤
⑤	3(N)~ 342...457 V / AC: 48...63 Hz	⑤	⑤
100%	100%	100%	100%
multifunctions	multifunctions	multifunctions	single-functions
AC voltage monitoring in 3-phase network, MIN and MAX value monitoring, monitoring of phase failure, asymmetry, phase sequence	AC voltage monitoring in 3-phase network, monitoring of phase failure, asymmetry, phase sequence	DC and AC current monitoring in 1-phase network, MIN and MAX value monitoring, fault latch mode	motor temperature monitoring, button TEST/RESET
AC sinus, 48...63 Hz	AC sinus, 48...63 Hz	DC or AC sinus, 16,6...400 Hz	
AC: 3(N)~ 400/230 V	AC: 3(N)~ 400/230 V	AC/DC: 0,1 A AC/DC: 1 A AC/DC: 10 A	
3(N)~ 600/346 V	3(N)~ 457/264 V	0,1 A AC/DC: 0,8 A 1 A AC/DC: 3 A 10 A AC/DC: 12 A	
MIN: 0,7...1,2 U <sub>n</sub> MAX: 0,8...1,3 U <sub>n</sub>		MIN: 0,05...0,95 I <sub>n</sub> MAX: 0,1...1,0 I <sub>n</sub>	relay OFF: ≥ 3,6 kΩ relay ON: ≤ 1,8 kΩ
LED yellow and red	LED green and yellow	LED green, yellow and red	LED green and red
4 000 V	4 000 V	4 000 V	4 000 V
III	III	III	III
90 x 22,5 x 108	90 x 22,5 x 108	90 x 22,5 x 108	90 x 22,5 x 108
> 2 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)	> 2 x 10 <sup>7</sup> (cycles)
IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
CE RoHS	CE RoHS	CE RoHS	CE RoHS

④ 3 A - if the distance between the relays mounted side by side is less than 5 mm;

5 A - if the distance between the relays mounted side by side is greater than 5 mm

⑤ Depending on the supply TR2 transformer which shall be ordered as a separate product - see [www.repol.com.pl](http://www.repol.com.pl)



## Monitoring relays

### ORDERING CODES

Index	Code	Description
864371	RPN-1VF-A400	AC voltage monitoring in 3-phase network (supply voltage = monitoring), multifunction (2 functions, fixed asymmetry), one changeover contact 12 A, input voltage 3(N)~ 400/230 V AC
864372	RPN-1VFS-A400	AC voltage monitoring in 3-phase network (supply voltage = monitoring), multifunction (3 functions, fixed asymmetry, fixed tripping delay), one changeover contact 12 A, input voltage 3(N)~ 400/230 V AC
864373	RPN-1VFR-A400	AC voltage monitoring in 3-phase network (supply voltage = monitoring), multifunction (3 functions, adjustment asymmetry, fixed tripping delay), one changeover contact 12 A, input voltage 3(N)~ 400/230 V AC
864374	RPN-1VFT-A400	AC voltage monitoring in 3-phase network (supply voltage = monitoring), multifunction (3 functions, adjustment asymmetry, adjustment tripping delay), one changeover contact 12 A, input voltage 3(N)~ 400/230 V AC
864364	RPN-1A05-A230	AC current monitoring in 1-phase network, multifunction (6 functions, measuring input 0,5 A, adjustment tripping delay), one changeover contact 12 A, input voltage 230 AC
864365	RPN-1A1-A230	AC current monitoring in 1-phase network, multifunction (6 functions, measuring input 1 A, adjustment tripping delay), one changeover contact 12 A, input voltage 230 AC
864366	RPN-1A2-A230	AC current monitoring in 1-phase network, multifunction (6 functions, measuring input 2 A, adjustment tripping delay), one changeover contact 12 A, input voltage 230 AC
864367	RPN-1A5-A230	AC current monitoring in 1-phase network, multifunction (6 functions, measuring input 5 A, adjustment tripping delay), one changeover contact 12 A, input voltage 230 AC
864368	RPN-1A8-A230	AC current monitoring in 1-phase network, multifunction (6 functions, measuring input 8 A, adjustment tripping delay), one changeover contact 12 A, input voltage 230 AC
864369	RPN-1A16-A230	AC current monitoring in 1-phase network, multifunction (6 functions, measuring input 16 A, adjustment tripping delay), one changeover contact 12 A, input voltage 230 AC
864370	RPN-1TMP-A230	motor temperature monitoring (short circuit of the thermistor line, button TEST/RESET), one changeover contact 12 A, input voltage 230 AC
865143	RPN-1AT-A230	motor temperature monitoring (short circuit of the thermistor line, self- RESET), one changeover contact 12 A, input voltage 230 AC

### ORDERING CODES

Index	Code	Description
2613071	MR-EU1W1P	DC and AC voltage monitoring in 1-phase network (supply voltage = monitoring), one changeover contact 5 A, input voltage 24, 230 AC, 24 V DC
2613069	MR-EU31UW1P	AC voltage monitoring in 1-phase network and 3-phase (supply voltage = monitoring), one changeover contact 5 A, input voltage 230 AC, 3(N)~ 400/230 V AC
2612868	MR-EU3M1P	AC voltage monitoring in 3-phase network (supply voltage = monitoring), one changeover contact 5 A, input voltage 3(N)~ 400/230 V AC
2613070	MR-EI1W1P	AC current monitoring in 1-phase network, one changeover contact 5 A, input voltage 230 AC
2613068	MR-ET1P	motor temperature monitoring (short circuit of the thermistor line or thermal contact, button TEST/RESET), one changeover contact 5 A, input voltage 230 AC

### ORDERING CODES

Index	Code	Description
2613062	MR-GU32P-TR2	AC voltages monitoring in phases, 3-phase network (monitoring voltage 230 V AC), one changeover contact 5 A, input voltage 12 ... 400 V (transformer TR2)
2613064	MR-GU3M2P-TR2	AC voltage monitoring in 3-phase network (monitoring voltage 3(N)~ 400/230 V), one changeover contact 5 A, input voltage 12 ... 400 V (transformer TR2)
2613065	MR-GU3M2P	AC voltage monitoring in 3-phase network (supply voltage = monitoring), one changeover contact 5 A, input voltage 3(N)~ 400/230 V AC
2613061	MR-GI1M2P-TR2	DC and AC current monitoring in 1-phase network, one changeover contact 5 A, input voltage 12 ... 400 V (transformer TR2)
2613067	MR-GT2P-TR2	motor temperature monitoring (short circuit of the thermistor line, button TEST/RESET), one changeover contact 5 A, input voltage 12 ... 400 V (transformer TR2)

# Signal lamps



- Available versions:
  - in modular covers: RLK series.
- Method of mounting:
  - on 35 mm rail mount.




## Applications in low voltage systems:

- optic signaling of AC/DC voltage presence in 1-phase network,
- optic signaling of AC voltage presence in 3-phase network.

RLK-1G .....	86
RLK-1R .....	86
RLK-1Y .....	86
RLK-3G .....	87
RLK-3R .....	87
RLK-3K .....	87









## Signal lamps

Type	RLK-1G	RLK-1R	RLK-1Y
			
<b>Input circuit</b>			
Supply voltage AC/DC	130...260 V AC: 50/60 Hz	130...260 V AC: 50/60 Hz	130...260 V AC: 50/60 Hz
Range of supply voltage / frequency	0,85...1,1 U <sub>n</sub> / AC: 48...63 Hz	0,85...1,1 U <sub>n</sub> / AC: 48...63 Hz	0,85...1,1 U <sub>n</sub> / AC: 48...63 Hz
Rated power consumption	DC: ≤ 0,7 W	DC: ≤ 0,7 W	DC: ≤ 0,7 W
<b>Control circuit</b>			
Functions	self-operating	self-operating	self-operating
Functions	optic signaling of AC/DC voltage presence in 1-phase network	optic signaling of AC/DC voltage presence in 1-phase network	optic signaling of AC/DC voltage presence in 1-phase network
Indicator	LED green	LED red	LED yellow
<b>Insulation</b>			
Insulation rated voltage	250 V AC	250 V AC	250 V AC
Rated surge voltage	4 000 V	4 000 V	4 000 V
Overvoltage category	II	II	II
<b>General data</b>			
Dimensions mm	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Protection category	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Recognitions, certifications, directives	CE ENEC UK RoHS	CE ENEC UK RoHS	CE ENEC UK RoHS



## Signal lamps

Type		RLK-3G	RLK-3R	RLK-3K
				
<b>Input circuit</b>				
Supply voltage	AC	3(N)~ 400/230 V 50/60 Hz	3(N)~ 400/230 V 50/60 Hz	3(N)~ 400/230 V 50/60 Hz
Range of supply voltage / frequency		0,85...1,1 U <sub>n</sub> / AC: 48...63 Hz	0,85...1,1 U <sub>n</sub> / AC: 48...63 Hz	0,85...1,1 U <sub>n</sub> / AC: 48...63 Hz
Rated power consumption		DC: ≤ 1,1 W	DC: ≤ 1,1 W	DC: ≤ 1,1 W
<b>Control circuit</b>				
Functions		self-operating	self-operating	self-operating
Functions		optic signaling of AC voltage presence in 3-phase network 3(N)~ 400/230 V	optic signaling of AC voltage presence in 3-phase network 3(N)~ 400/230 V	optic signaling of AC voltage presence in 3-phase network 3(N)~ 400/230 V
Indicator		LED green	LED red	LED red, yellow and green
<b>Insulation</b>				
Insulation rated voltage		250 V AC	250 V AC	250 V AC
Rated surge voltage		4 000 V	4 000 V	4 000 V
Overtoltage category		II	II	II
<b>General data</b>				
Dimensions	mm	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6	90(98,8) x 17,5 x 64,6
Protection category		IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Recognitions, certifications, directives				



### ORDERING CODES

Index	Code	Description
863027	RLK-1G	signaling of AC/DC voltage in 1-phase network (1x LED green), supply voltage 130...260 V AC/DC
863026	RLK-1R	signaling of AC/DC voltage in 1-phase network (1x LED red), supply voltage 130...260 V AC/DC
863025	RLK-1Y	signaling of AC/DC voltage in 1-phase network (1x LED yellow), supply voltage 130...260 V AC/DC
863030	RLK-3G	signaling of AC voltage in 3-phase network (3x LED green), supply voltage 3(N)~ 400/230 V AC
863029	RLK-3R	signaling of AC voltage in 3-phase network (3x LED red), supply voltage 3(N)~ 400/230 V AC
863028	RLK-3K	signaling of AC voltage in 3-phase network (3x LED red, yellow, green), supply voltage 3(N)~ 400/230 V AC

# Solid state relays

- $I_n$  currents of outputs: 0,1 ... 80 A.
- Available versions:
  - miniature,
  - single-phase industrial,
  - three-phase industrial,
  - single-phase with heatsinks.
- Methods of mounting:  
THT, on panel mounting,  
on heatsinks, on 35 mm rail mount  
- depending on the type of relay.



RSR30 .....	89
RSR32 .....	89
RSR35 .....	89
RSR52 .....	89
RSR62 .....	90
RSR72...10I20I30 .....	90
RSR72...40 .....	90
RSR72...75 .....	90

## Applications:

- suitable for PCB mounted,
- temperature chamber,  
food processing machinery,  
injection molding machine,  
packaging machine,  
incubator, oiling machines,  
HVAC, lighting, fountain controller,
- three phase motor control,  
temperature control, large oven.





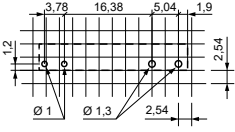
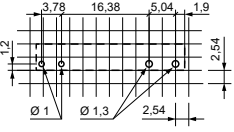
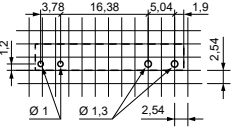








# Solid state relays

## miniature relays









## industrial

Type	RSR30	RSR32	RSR35	RSR52
Output circuit				
Type of outputs	TTL and CMOS drive compatible	TTL drive compatible	transistor or MOSFET	SCR (thyristors)
Load voltage	AC DC	240 V	240 V	240, 480, 600 V
Load current	AC1 DC1	2 A 1, 2, 5, 4 A	2 A	10, 25, 40, 60, 80 A
Input circuit				
Switching mode		DC control (zero-crossing or random-on)		AC control DC control (zero-crossing or random-on)
Control voltage	AC DC	5, 12, 24, 48 V	5, 12, 24 V	5, 12, 24, 48, 60 V
Insulation				
Dielectric strength • input - output	2 500 ... 4 000 V	2 500 V	2 500 V	4 000 V
General data				
Dimensions	mm	28 x 5 x 15	28 x 5,2 x 15	28 x 5,2 x 15
Protection category				IP 20 (EN 60529)
Pinout (solder side view)				
Protections Indicator Heatsinks Thermal pads				MOV (varistor) LED red RH RTP-10
Recognitions, certifications, directives				



# Solid state relays

## industrial relays

Type		RSR62	RSR72...10 20 30	RSR72...40	RSR72...75
					
<b>Output circuit</b>					
Type of outputs		SCR (thyristors)	SCR (thyristors)	SCR (thyristors)	SCR (thyristors)
Load voltage	AC	480, 600 V	240, 480, 600 V	240, 480, 600 V	240, 480, 600 V
Load current	AC1 AC3	25, 40, 60, 80 A	10, 20, 30 A	40 A	75 A
<b>Input circuit</b>					
Switching mode		AC control	AC control	AC control	AC control
		DC control (zero-crossing or random-on)	DC control (zero-crossing or random-on)	DC control (zero-crossing or random-on)	DC control (zero-crossing or random-on)
Control voltage	AC DC	90...280 V 50 Hz 4...32 V	90...280 V 50 Hz 4...32 V	90...280 V 50 Hz 4...32 V	90...280 V 50 Hz 4...32 V
<b>Insulation</b>					
Dielectric strength • input - output		4 000 V	4 000 V	4 000 V	4 000 V
<b>General data</b>					
Dimensions	mm	105 x 78 x 38	100 x 30,5 x 112,5	122 x 50,5 x 110	153 x 105 x 122
Protection category		IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Protections		RC/MOV (resistor, capacitor, varistor)	RC/MOV (resistor, capacitor, varistor)	RC/MOV (resistor, capacitor, varistor)	RC/MOV (resistor, capacitor, varistor)
Indicator		LED red	LED red	LED red	LED red
Heatsinks		RH	integrated	integrated	integrated
Thermal pads		RTP-30A			
Recognitions, certifications, directives		 RoHS, REACH	 RoHS, REACH	 RoHS, REACH	 RoHS, REACH





# Solid state relays

## Heatsinks

<b>RH21 (2616040)</b> For RSR52 	<b>RH19A (2616041)</b> For RSR52 	<b>RH19B (2616042)</b> For RSR52 	<b>RH17A (2616043)</b> For RSR52 	<b>RH17B (2616046)</b> For RSR52 
<b>RH06B (2616051)</b> For RSR52 	<b>RH16 (2616049)</b> For RSR52 	<b>RH16-F (2616050)</b> For RSR52 	<b>RH11 (2616052)</b> For RSR52, RSR62 	<b>RH09 (2616044)</b> For RSR52, RSR62 
<b>RH04A-F (2616045)</b> For RSR52, RSR62 	<b>RH08 (2616047)</b> For RSR52, RSR62 	<b>RH08-F (2616048)</b> For RSR52, RSR62 	<b>RH04B (2616053)</b> For RSR52, RSR62 	<b>RH04B-F (2616054)</b> For RSR52, RSR62 

## Thermal pads

<b>RTP-10 (2616058)</b> For RSR52 	<b>RTP-30A (2616060)</b> For RSR62 
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## Solid state relays

### ORDERING CODES

Index	Code	Description
2611995	RSR30-D05-D1-02-040-1	input 5 V DC, output 4 A / 24 V DC
2611996	RSR30-D12-D1-02-040-1	input 12 V DC, output 4 A / 24 V DC
2611997	RSR30-D24-D1-02-040-1	input 24 V DC, output 4 A / 24 V DC
2611998	RSR30-D48-D1-02-040-1	input 48 V DC, output 4 A / 24 V DC
2611991	RSR30-D05-D1-04-025-1	input 5 V DC, output 2,5 A / 48 V DC
2611992	RSR30-D12-D1-04-025-1	input 12 V DC, output 2,5 A / 48 V DC
2611993	RSR30-D24-D1-04-025-1	input 24 V DC, output 2,5 A / 48 V DC
2611994	RSR30-D48-D1-04-025-1	input 48 V DC, output 2,5 A / 48 V DC
2611999	RSR30-D05-D1-24-010-1	input 5 V DC, output 1 A / 100 V DC
2612000	RSR30-D12-D1-24-010-1	input 12 V DC, output 1 A / 100 V DC
2612001	RSR30-D24-D1-24-010-1	input 24 V DC, output 1 A / 100 V DC
2612002	RSR30-D48-D1-24-010-1	input 48 V DC, output 1 A / 100 V DC
2611988	RSR30-D05-A1-24-020-1	input 5 V DC, output 2 A / 240 V AC (single-phase)
2611989	RSR30-D12-A1-24-020-1	input 12 V DC, output 2 A / 240 V AC (single-phase)
2611990	RSR30-D24-A1-24-020-1	input 24 V DC, output 2 A / 240 V AC (single-phase)
2616016	RSR32-24D2-5M	input 5 V DC, output 2 A / 240 V AC (single-phase)
2616017	RSR32-24D2-12M	input 12 V DC, output 2 A / 240 V AC (single-phase)
2616018	RSR32-24D2-24M	input 24 V DC, output 2 A / 240 V AC (single-phase)
2616019	RSR32-24D2R-5M	input 5 V DC, output 2 A / 240 V AC (single-phase)
2616020	RSR32-24D2R-12M	input 12 V DC, output 2 A / 240 V AC (single-phase)
2616021	RSR32-24D2R-24M	input 24 V DC, output 2 A / 240 V AC (single-phase)
2616022	RSR35-48D3-5M	input 5 V DC, output 3 A / 48 V DC
2616023	RSR35-48D3-12M	input 12 V DC, output 3 A / 48 V DC
2616024	RSR35-48D3-24M	input 24 V DC, output 3 A / 48 V DC
2616025	RSR35-48D3-48M	input 48 V DC, output 3 A / 48 V DC
2616026	RSR35-48D3-60M	input 60 V DC, output 3 A / 48 V DC
2616027	RSR35-24D4-5M	input 5 V DC, output 4 A / 24 V DC
2616028	RSR35-24D4-12M	input 12 V DC, output 4 A / 24 V DC
2616029	RSR35-24D4-24M	input 24 V DC, output 4 A / 24 V DC
2616030	RSR35-24D4-48M	input 48 V DC, output 4 A / 24 V DC
2616031	RSR35-24D4-60M	input 60 V DC, output 4 A / 24 V DC
2616032	RSR35-48D01-5M	input 5 V DC, output 0,1 A / 48 V DC
2616033	RSR35-48D01-12M	input 12 V DC, output 0,1 A / 48 V DC
2616034	RSR35-48D01-24M	input 24 V DC, output 0,1 A / 48 V DC
2616035	RSR35-48D01-48M	input 48 V DC, output 0,1 A / 48 V DC
2616036	RSR35-48D01-60M	input 60 V DC, output 0,1 A / 48 V DC

### ORDERING CODES

Index	Code	Description
2615922	RSR52-24A10	input 90...280 V AC, output 10 A / 240 V AC (single-phase)
2615924	RSR52-24A25	input 90...280 V AC, output 25 A / 240 V AC (single-phase)
2615925	RSR52-24A40	input 90...280 V AC, output 40 A / 240 V AC (single-phase)
2615926	RSR52-24A60	input 90...280 V AC, output 60 A / 240 V AC (single-phase)
2615927	RSR52-24A80	input 90...280 V AC, output 80 A / 240 V AC (single-phase)

## Solid state relays

### ORDERING CODES

Index	Code	Description
2615928	RSR52-24D10	input 4...32 V DC, output 10 A / 240 V AC (single-phase)
2615929	RSR52-24D25	input 4...32 V DC, output 25 A / 240 V AC (single-phase)
2615930	RSR52-24D40	input 4...32 V DC, output 40 A / 240 V AC (single-phase)
2615931	RSR52-24D60	input 4...32 V DC, output 60 A / 240 V AC (single-phase)
2615932	RSR52-24D80	input 4...32 V DC, output 80 A / 240 V AC (single-phase)
2615933	RSR52-48A10	input 90...280 V AC, output 10 A / 480 V AC (single-phase)
2615934	RSR52-48A25	input 90...280 V AC, output 25 A / 480 V AC (single-phase)
2615935	RSR52-48A40	input 90...280 V AC, output 40 A / 480 V AC (single-phase)
2615936	RSR52-48A60	input 90...280 V AC, output 60 A / 480 V AC (single-phase)
2615937	RSR52-48A80	input 90...280 V AC, output 80 A / 480 V AC (single-phase)
2615938	RSR52-48D10	input 4...32 V DC, output 10 A / 480 V AC (single-phase)
2615939	RSR52-48D25	input 4...32 V DC, output 25 A / 480 V AC (single-phase)
2615940	RSR52-48D40	input 4...32 V DC, output 40 A / 480 V AC (single-phase)
2615941	RSR52-48D60	input 4...32 V DC, output 60 A / 480 V AC (single-phase)
2615942	RSR52-48D80	input 4...32 V DC, output 80 A / 480 V AC (single-phase)
2615943	RSR52-60A25	input 90...280 V AC, output 25 A / 600 V AC (single-phase)
2615944	RSR52-60A40	input 90...280 V AC, output 40 A / 600 V AC (single-phase)
2615945	RSR52-60A60	input 90...280 V AC, output 60 A / 600 V AC (single-phase)
2615946	RSR52-60D25	input 4...32 V DC, output 25 A / 600 V AC (single-phase)
2615947	RSR52-60D40	input 4...32 V DC, output 40 A / 600 V AC (single-phase)
2615948	RSR52-60D60	input 4...32 V DC, output 60 A / 600 V AC (single-phase)
2615949	RSR52-24D25-R	input 4...32 V DC, output 25 A / 240 V AC (single-phase)
2615950	RSR52-24D60-R	input 4...32 V DC, output 60 A / 240 V AC (single-phase)
2615951	RSR52-24D80-R	input 4...32 V DC, output 80 A / 240 V AC (single-phase)
2615952	RSR52-48D25-R	input 4...32 V DC, output 25 A / 480 V AC (single-phase)
2615953	RSR52-48D60-R	input 4...32 V DC, output 60 A / 480 V AC (single-phase)
2615954	RSR52-48D80-R	input 4...32 V DC, output 80 A / 480 V AC (single-phase)
2615955	RSR52-60D25-R	input 4...32 V DC, output 25 A / 600 V AC (single-phase)
2615956	RSR52-60D60-R	input 4...32 V DC, output 60 A / 600 V AC (single-phase)
2615957	RSR62-48D25	input 4...32 V DC, output 25 A / 480 V AC (three-phase)
2615959	RSR62-48A25	input 90...280 V AC, output 25 A / 480 V AC (three-phase)
2615960	RSR62-60D25	input 4...32 V DC, output 25 A / 600 V AC (three-phase)
2615961	RSR62-60A25	input 90...280 V AC, output 25 A / 600 V AC (three-phase)
2615962	RSR62-48D40	input 4...32 V DC, output 40 A / 480 V AC (three-phase)
2615963	RSR62-48A40	input 90...280 V AC, output 40 A / 480 V AC (three-phase)
2615964	RSR62-60D40	input 4...32 V DC, output 40 A / 600 V AC (three-phase)
2615966	RSR62-60A40	input 90...280 V AC, output 40 A / 600 V AC (three-phase)
2615967	RSR62-48D60	input 4...32 V DC, output 60 A / 480 V AC (three-phase)
2615968	RSR62-48A60	input 90...280 V AC, output 60 A / 480 V AC (three-phase)
2615969	RSR62-60D60	input 4...32 V DC, output 60 A / 600 V AC (three-phase)
2615970	RSR62-60A60	input 90...280 V AC, output 60 A / 600 V AC (three-phase)
2615971	RSR62-48D80	input 4...32 V DC, output 80 A / 480 V AC (three-phase)
2615972	RSR62-48A80	input 90...280 V AC, output 80 A / 480 V AC (three-phase)
2615973	RSR62-60D80	input 4...32 V DC, output 80 A / 600 V AC (three-phase)
2615974	RSR62-60A80	input 90...280 V AC, output 80 A / 600 V AC (three-phase)

## Solid state relays

### ORDERING CODES

Index	Code	Description
2615975	RSR62-60D25-R	input 4...32 V DC, output 25 A / 600 V AC (three-phase)
2615976	RSR62-60D40-R	input 4...32 V DC, output 40 A / 600 V AC (three-phase)
2615977	RSR62-60D60-R	input 4...32 V DC, output 60 A / 600 V AC (three-phase)
2615978	RSR62-60D80-R	input 4...32 V DC, output 80 A / 600 V AC (three-phase)
2615979	RSR72-24D10-H	input 4...32 V DC, output 10 A / 240 V AC (single-phase)
2615985	RSR72-24D20-H	input 4...32 V DC, output 20 A / 240 V AC (single-phase)
2615986	RSR72-24D30-H	input 4...32 V DC, output 30 A / 240 V AC (single-phase)
2615987	RSR72-24D40-H	input 4...32 V DC, output 40 A / 240 V AC (single-phase)
2615988	RSR72-24D75-H	input 4...32 V DC, output 75 A / 240 V AC (single-phase)
2615989	RSR72-48D10-H	input 4...32 V DC, output 10 A / 480 V AC (single-phase)
2615990	RSR72-48D20-H	input 4...32 V DC, output 20 A / 480 V AC (single-phase)
2615991	RSR72-48D30-H	input 4...32 V DC, output 30 A / 480 V AC (single-phase)
2615992	RSR72-48D40-H	input 4...32 V DC, output 40 A / 480 V AC (single-phase)
2615993	RSR72-48D75-H	input 4...32 V DC, output 75 A / 480 V AC (single-phase)
2615994	RSR72-28A10-H	input 90...280 V AC, output 10 A / 240 V AC (single-phase)
2615995	RSR72-28A20-H	input 90...280 V AC, output 20 A / 240 V AC (single-phase)
2615996	RSR72-28A30-H	input 90...280 V AC, output 30 A / 240 V AC (single-phase)
2615997	RSR72-28A40-H	input 90...280 V AC, output 40 A / 240 V AC (single-phase)
2615998	RSR72-28A75-H	input 90...280 V AC, output 75 A / 240 V AC (single-phase)
2615999	RSR72-48A10-H	input 90...280 V AC, output 10 A / 480 V AC (single-phase)
2616000	RSR72-48A20-H	input 90...280 V AC, output 20 A / 480 V AC (single-phase)
2616001	RSR72-48A30-H	input 90...280 V AC, output 30 A / 480 V AC (single-phase)
2616002	RSR72-48A40-H	input 90...280 V AC, output 40 A / 480 V AC (single-phase)
2616003	RSR72-48A75-H	input 90...280 V AC, output 75 A / 480 V AC (single-phase)
2616004	RSR72-48D10-RH	input 4...32 V DC, output 10 A / 480 V AC (single-phase)
2616005	RSR72-48D20-RH	input 4...32 V DC, output 20 A / 480 V AC (single-phase)
2616006	RSR72-48D30-RH	input 4...32 V DC, output 30 A / 480 V AC (single-phase)
2616007	RSR72-48D40-RH	input 4...32 V DC, output 40 A / 480 V AC (single-phase)
2616008	RSR72-60D20-H	input 4...32 V DC, output 20 A / 600 V AC (single-phase)
2616009	RSR72-60D30-H	input 4...32 V DC, output 30 A / 600 V AC (single-phase)
2616010	RSR72-60D40-H	input 4...32 V DC, output 40 A / 600 V AC (single-phase)
2616011	RSR72-60D75-H	input 4...32 V DC, output 75 A / 600 V AC (single-phase)
2616012	RSR72-60D20-RH	input 4...32 V DC, output 20 A / 600 V AC (single-phase)
2616013	RSR72-60D30-RH	input 4...32 V DC, output 30 A / 600 V AC (single-phase)
2616014	RSR72-60D40-RH	input 4...32 V DC, output 40 A / 600 V AC (single-phase)
2616015	RSR72-60D75-RH	input 4...32 V DC, output 75 A / 600 V AC (single-phase)

# Installation contactors

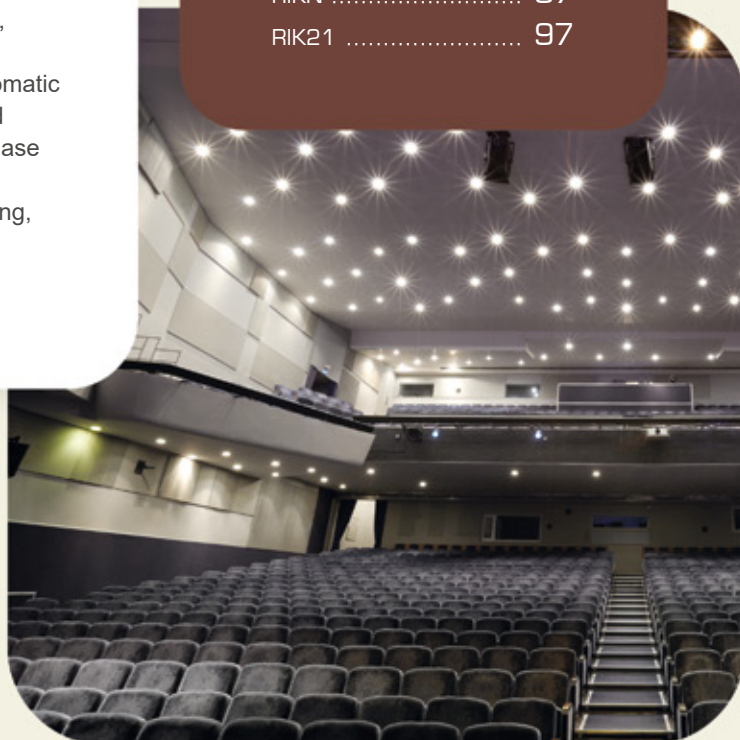


- $I_n$  currents of outputs: 20 ... 63 A.
- Available versions:
  - in industrial covers: RIK21,
  - in modular covers: RIK20/25/40/63.
- Method of mounting: on 35 mm rail mount.





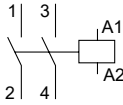
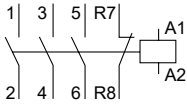
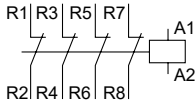
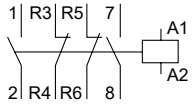
## Applications in low voltage systems:

- are built in consumer devices operating in dwellings, business premises, hotels, hospitals, shopping centres, sport centres, production halls, warehouses, public places,
- for remote switching and automatic control of electric devices and equipment: 1-phase and 3-phase motors, different pumps, air-conditioning, electric heating, lighting.

RIK20 .....	96
RIK25 .....	96
RIK40 .....	96
RIK63 .....	96
RIKN .....	97
RIK21 .....	97





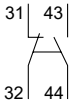
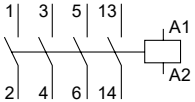


## Installation contactors

Type	RIK20	RIK25	RIK40	RIK63
				
<b>Output circuit</b>				
Number and type of contacts	2 NO, 1 NO + 1 NC, 2 NC	4 NO, 3 NO + 1 NC, 2 NO + 2 NC	4 NO, 3 NO + 1 NC, 2 NO + 2 NC, 4 NC	4 NO, 3 NO + 1 NC, 2 NO + 2 NC
Rated voltage AC	230 V	400 V	400 V	400 V
Rated thermal current	20 A	25 A	40 A	63 A
Rated load AC1 / AC7a	20 A	25 A	40 A	63 A
Rated load AC3 / AC7b	9 A / 6 A (NO/NC)	8,5 A	22 A	30 A
DC1	20 A / 24 V DC	25 A / 24 V DC	40 A / 24 V DC	63 A / 24 V DC
DC1	0,6 A / 220 V DC	0,6 A / 220 V DC	1,2 A / 220 V DC	1,2 A / 220 V DC
DC3	10 A / 24 V DC	15 A / 24 V DC	22 A / 24 V DC	25 A / 24 V DC
DC3	0,1 A / 220 V DC	0,2 A / 220 V DC	0,3 A / 220 V DC	0,3 A / 220 V DC
DC5	10 A / 24 V DC	15 A / 24 V DC	20 A / 24 V DC	25 A / 24 V DC
DC5	0,06 A / 220 V DC	0,1 A / 220 V DC	0,2 A / 220 V DC	0,2 A / 220 V DC
Motor load AC1 / AC7a	20 A	25 A	40 A	63 A
Motor load AC3 / AC7b	1-phase, 230 V: 1,3 kW 1-phase, 230 V: 0,75 kW (NO/NC)	1-phase, 230 V: 1,3 kW Ⓣ 3-phase, 230 V: 2,2 kW 3-phase, 400 V: 4 kW	1-phase, 230 V: 3,7 kW Ⓣ 3-phase, 230 V: 5,5 kW 3-phase, 400 V: 11 kW	1-phase, 230 V: 5 kW Ⓣ 3-phase, 230 V: 8,5 kW 3-phase, 400 V: 15 kW
Switching of capacitors AC6b	30 µF	36 µF	220 µF	330 µF
<b>Input circuit</b>				
Control voltage AC / DC	24, 230 V Ⓣ	24, 230 V Ⓣ	24, 230 V Ⓣ	24, 230 V Ⓣ
Range of voltage / rated frequency	0,85...1,1 U <sub>c</sub> / AC: 50/60 Hz Ⓣ	0,85...1,1 U <sub>c</sub> / AC: 50/60 Hz Ⓣ	0,85...1,1 U <sub>c</sub> / AC: 50/60 Hz	0,85...1,1 U <sub>c</sub> / AC: 50/60 Hz
<b>Insulation</b>				
Insulation rated voltage	230 V AC	440 V AC	440 V AC	440 V AC
Rated surge voltage	4 000 V	4 000 V	4 000 V	4 000 V
<b>General data</b>				
Dimensions mm	85 x 17,5 x 65	85 x 35 x 65	84 x 53,5 x 65,5	84 x 53,5 x 65,5
Protection category	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Connection diagrams	 version 2 NO	 version 3 NO + 1 NC	 version 4 NC	 version 2 NO + 2 NC
Indicator	LED	LED	LED	LED
Recognitions, certifications, directives	CE RoHS	CE RoHS	CE RoHS	CE RoHS





# Installation contactors

RIKN	RIK21
auxiliary contacts ⑥	
	
2 NO, 1 NO + 1 NC	3 NO + 1 NO (auxiliary), 3 NO + 1 NC (auxiliary)
230, 400 V	400 V
6 A	20 A
	20 A 5 A 20 A / 24 V DC 0,5 A / 220 V DC 10 A / 24 V DC 0,1 A / 220 V DC 10 A / 24 V DC 0,06 A / 220 V DC
	20 A
	1-phase, 230 V: 0,37 kW 3-phase, 230 V: 1,1 kW 3-phase, 400 V: 2,2 kW
	36 μF
	24, 230 V
	0,85...1,1 U <sub>c</sub> / AC: 50/60 Hz
500 V AC	415 V AC
4 000 V	4 000 V
84 x 9 x 60	59,5 x 35 x 57
IP 20 (EN 60529)	IP 20 (EN 60529)
	
version 1 NO + 1 NC	version 3 NO + 1 NO
	
RoHS	RoHS

- ① The data for 1 pole; data for 2,3,4 poles connected in series - see [www.relpol.com.pl](http://www.relpol.com.pl) ② The data for 1-phase power are valid for contactors RIK...-22 (2 NO + 2 NC) ③ RIK20, RIK25, RIK40, RIK63: contactors with a varistor for overvoltage protection and a rectifier enable DC and AC voltage control ④ RIK20, RIK25: contactors can be controlled by AC voltage with frequency 40...400 Hz ⑤ RIKN: additional auxiliary contacts for RIK25, RIK40, RIK63 (increase by 9 mm the width of contactors)



## Installation contactors

### ORDERING CODES

Index	Code	Description
2608178	RIK20-20-24	2-pole (contacts 2 NO, 20 A), coil voltage 24 V AC/DC
2611893	RIK20-20-230	2-pole (contacts 2 NO, 20 A), coil voltage 230 V AC/DC
2608196	RIK20-11-24	2-pole (contacts 1 NO + 1 NC, 20 A), coil voltage 24 V AC/DC
2608212	RIK20-11-230	2-pole (contacts 1 NO + 1 NC, 20 A), coil voltage 230 V AC/DC
2608179	RIK20-02-24	2-pole (contacts 2 NC, 20 A), coil voltage 24 V AC/DC
2614062	RIK20-02-230	2-pole (contacts 2 NC, 20 A), coil voltage 230 V AC/DC
2608197	RIK25-40-24	4-pole (contacts 4 NO, 25 A), coil voltage 24 V AC/DC
2608213	RIK25-40-230	4-pole (contacts 4 NO, 25 A), coil voltage 230 V AC/DC
2608198	RIK25-31-24	4-pole (contacts 3 NO + 1 NC, 25 A), coil voltage 24 V AC/DC
2613932	RIK25-31-230	4-pole (contacts 3 NO + 1 NC, 25 A), coil voltage 230 V AC/DC
2608199	RIK25-22-24	4-pole (contacts 2 NO + 2 NC, 25 A), coil voltage 24 V AC/DC
2611892	RIK25-22-230	4-pole (contacts 2 NO + 2 NC, 25 A), coil voltage 230 V AC/DC
2608202	RIK40-40-24	4-pole (contacts 4 NO, 40 A), coil voltage 24 V AC/DC
2608217	RIK40-40-230	4-pole (contacts 4 NO, 40 A), coil voltage 230 V AC/DC
2608203	RIK40-31-24	4-pole (contacts 3 NO + 1 NC, 40 A), coil voltage 24 V AC/DC
2608218	RIK40-31-230	4-pole (contacts 3 NO + 1 NC, 40 A), coil voltage 230 V AC/DC
2608863	RIK40-22-24	4-pole (contacts 2 NO + 2 NC, 40 A), coil voltage 24 V AC/DC
2608866	RIK40-22-230	4-pole (contacts 2 NO + 2 NC, 40 A), coil voltage 230 V AC/DC
2608864	RIK40-04-24	4-pole (contacts 4 NC, 40 A), coil voltage 24 V AC/DC
2608867	RIK40-04-230	4-pole (contacts 4 NC, 40 A), coil voltage 230 V AC/DC
2608204	RIK63-40-24	4-pole (contacts 4 NO, 63 A), coil voltage 24 V AC/DC
2608219	RIK63-40-230	4-pole (contacts 4 NO, 63 A), coil voltage 230 V AC/DC
2608205	RIK63-31-24	4-pole (contacts 3 NO + 1 NC, 63 A), coil voltage 24 V AC/DC
2608220	RIK63-31-230	4-pole (contacts 3 NO + 1 NC, 63 A), coil voltage 230 V AC/DC
2608865	RIK63-22-24	4-pole (contacts 2 NO + 2 NC, 63 A), coil voltage 24 V AC/DC
2608868	RIK63-22-230	4-pole (contacts 2 NO + 2 NC, 63 A), coil voltage 230 V AC/DC
2614895	RIKN20	auxiliary contact (contacts 2 NO, 6 A)
2614896	RIKN11	auxiliary contact (contacts 1 NO + 1 NC, 6 A)

### ORDERING CODES

Index	Code	Description
2608186	RIK21-10-24	3-pole (contacts 3 NO + 1 NO, 20 A), coil voltage 24 V AC
2608208	RIK21-10-230	3-pole (contacts 3 NO + 1 NO, 20 A), coil voltage 230 V AC
2608177	RIK21-01-24	3-pole (contacts 3 NO + 1 NC, 20 A), coil voltage 24 V AC
2608209	RIK21-01-230	3-pole (contacts 3 NO + 1 NC, 20 A), coil voltage 230 V AC

# Power supplies

RZI10-12-M .....	100
RZI10-24-M .....	100
RZI30-12-M .....	100
RZI30-24-M .....	100
RZI60-12-M .....	101
RZI60-24-M .....	101
RZI100-24-M .....	101
RZI60-24-P .....	101
RZI120-24-P .....	101
RZI240-24-P .....	102
RZI480-24-P .....	102
RZI-20R .....	102
RZI-40R .....	102
RZI-20B .....	103
RZI-40B .....	103
RZI-40UPS .....	103



- $I_n$  currents of outputs: 0,42 ... 40 A.
- Available versions:
  - in modular covers: RZI...M series,
  - in industrial covers: RZI...P series, RZI...R series, RZI...B series, RZI...UPS.
- Methods of mounting:
  - on 35 mm rail mount,
  - on panel mounting - depending on the type of power supply.





## Applications:

- power supplies in modular covers RZI...M: in industrial automation, for supplying household appliances and building automation,
- professional power supplies for industry RZI...P: in industrial automation, for supplying packing machines, construction machinery, weaving machines, etc.,
- redundancy modules RZI...R: for parallel connection of power supplies RZI...P in order to increase power, reliable supply in high efficiency areas, in process engineering and power engineering,
- buffer modules RZI...B: cooperation with power supplies RZI...P in industrial automation, to maintain voltage at momentary supply failures,
- UPS modules RZI...UPS: for control cabinets, adopted to operation in power systems up to 960 W, entire monitoring of the system (three relay outputs).

 **relpol**® S.A.



## Power supplies

Type		RZI10-12-M	RZI10-24-M	RZI30-12-M	RZI30-24-M
					
Output circuit					
Rated output power		10 W	10 W	25 W	30 W
Rated voltage	DC	12 V	24 V	12 V	24 V
Output current		0,83 A	0,42 A	2,1 A	1,25 A
Input circuit					
Rated voltage	AC	100...240 V	100...240 V	100...240 V	100...240 V
	DC	125...375 V	125...375 V	125...375 V	125...375 V
Protections					
Overvoltage		< 17,4 V ❶	< 34,8 V ❶	< 17,4 V ❶	< 34,8 V ❶
Overload / overcurrent		> 105% I <sub>n</sub> ❷	> 102...108% I <sub>n</sub> ❸ > 120% I <sub>n</sub> ❷	> 130% I <sub>n</sub> ❸	> 130% I <sub>n</sub> ❷
Short circuit		❷	❷	❷	❷
Over temperature		> 75 °C ❶	> 75 °C ❶	> 75 °C ❶	> 75 °C ❶
Against shock ❹		Class II	Class II	Class II	Class II
Protection category		IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
EMC immunity					
EMC (emissions) ❺		Class B	Class B	Class A	Class A
Electrostatic discharge (EN 61000-4-2) ❻		level 3, criteria A air: 8 kV contact: 4 kV	level 3, criteria A air: 8 kV contact: 4 kV	level 3, criteria A air: 8 kV contact: 4 kV	level 3, criteria A air: 8 kV contact: 4 kV
Radiated field (EN 61000-4-3) ❻		level 2, criteria A 80 MHz...1 GHz intensity: 3 V/M	level 2, criteria A 80 MHz...1 GHz intensity: 3 V/M	level 2, criteria A 80 MHz...1 GHz intensity: 3 V/M	level 2, criteria A 80 MHz...1 GHz intensity: 3 V/M
Fast transient / burst (EN 61000-4-4) ❻		level 3, criteria A 1 kV	level 3, criteria A 1 kV	level 3, criteria A 1 kV	level 3, criteria A 1 kV
Surge (EN 61000-4-5) ❻ ❼		level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV
Conducted (EN 61000-4-6) ❻		level 2, criteria A 150 kHz...80 MHz 3 Vrms	level 2, criteria A 150 kHz...80 MHz 3 Vrms	level 2, criteria A 150 kHz...80 MHz 3 Vrms	level 2, criteria A 150 kHz...80 MHz 3 Vrms
Magnetic fields (EN 61000-4-8) ❻		criteria A 1 A/m	criteria A 1 A/m	criteria A 1 A/m	criteria A 1 A/m
Voltage dips (EN 61000-4-11)		> 95% 0,5 cycle (10 ms)	> 95% 0,5 cycle (10 ms)	> 95% 0,5 cycle (10 ms)	> 95% 0,5 cycle (10 ms)
General data					
Dimensions	mm	91 x 18 x 55,6	91 x 18 x 55,6	91 x 53 x 55,6	91 x 53 x 55,6
Indicator		LED green	LED green	LED green	LED green
Recognitions, certifications, directives		<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage

❶ Latch-off mode: disconnecting the output voltage, restore correct operation after restarting, auto-recovery when the fault is removed. ❷ Fold Forward mode: current rises, voltage drops. Class I: connection of PE protective wire is not required.

❸ Hiccup mode: non-latching,  
❹ Class II (double insulation),



## Power supplies





RZI60-12-M	RZI60-24-M	RZI100-24-M	RZI60-24-P	RZI120-24-P
				
54 W	60 W	91,2 W	60 W	120 W
12 V	24 V	24 V	24 V	24 V
4,5 A	2,5 A	3,8 A	2,5 A	5 A
100...240 V	100...240 V	100...240 V	100...240 V	100...240 V
125...375 V	125...375 V	125...375 V	125...250 V	125...250 V
< 17,4 V ①	< 34,8 V ①	< 34,8 V ①	< 32 V ±10% ②	< 32 V ±10% ②
< 8 A ③	> 110% I <sub>n</sub> ④	> 102...108% I <sub>n</sub> ④	> 150% I <sub>n</sub> ④	> 150% I <sub>n</sub> ④
②	②	②	②	②
> 75 °C ①	> 75 °C ①	> 75 °C ①	< 80 °C ②	< 80 °C ②
Class II	Class II	Class II	Class I	Class I
IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Class A	Class A	Class A	Class B	Class B
level 3, criteria A air: 8 kV contact: 4 kV	level 3, criteria A air: 8 kV contact: 4 kV	level 3, criteria A air: 8 kV contact: 4 kV	level 4, criteria A air: 15 kV contact: 8 kV	level 4, criteria A air: 15 kV contact: 8 kV
level 2, criteria A 80 MHz...1 GHz intensity: 3 V/M	level 3, criteria A 80 MHz...1 GHz intensity: 3 V/M	level 2, criteria A 80 MHz...1 GHz intensity: 3 V/M	level 3, criteria A 80 MHz...1 GHz intensity: 10 V/M	level 3, criteria A 80 MHz...1 GHz intensity: 10 V/M
level 3, criteria A 1 kV	level 3, criteria A 2 kV	level 3, criteria A 1 kV	level 3, criteria A 2 kV	level 3, criteria A 2 kV
level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV
level 2, criteria A 150 kHz...80 MHz 3 Vrms	level 3, criteria A 150 kHz...80 MHz 3 Vrms	level 2, criteria A 150 kHz...80 MHz 3 Vrms	level 3, criteria A 150 kHz...80 MHz 10 Vrms	level 3, criteria A 150 kHz...80 MHz 10 Vrms
criteria A 1 A/m	criteria A 1 A/m	criteria A 1 A/m	level 3, criteria A 3 A/m	level 3, criteria A 30 A/m
> 95% 0,5 cycle (10 ms)	> 95% 0,5 cycle (10 ms)	> 95% 0,5 cycle (10 ms)	level 3, criteria A 100% 1 cycle (20 ms)	level 3, criteria A 100% 1 cycle (20 ms)
91 x 71 x 55,6	91 x 71 x 55,6	91 x 89,9 x 55,6	121 x 32 x 125	121 x 50 x 123,1
LED green	LED green	LED green	LED green	LED green
<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage

⑥ CISPR 32, EN 55032, EN 55011, FCC Title 47 - Class B: product meets a regulations about the limits of EMC interferences in a residential environment; Class A: product is not intended to be installed in a residential environment.

⑦ Criteria A: normal performance within the specification limits. ⑧ Common mode: asymmetrical (line to earth); differential mode: symmetrical (line to line).






## Power supplies

Type		RZI240-24-P	RZI480-24-P	RZI-20R	RZI-40R
					
<b>Output circuit</b>					
Rated output power		240 W	480 W		
Rated voltage	DC	24 V	24 V	$V_{in} - 0,65 V$	$V_{in} - 0,65 V$
Output current		10 A	20 A	20 A (25 A Ⓢ)	40 A (50 A Ⓢ)
<b>Input circuit</b>					
Rated voltage	AC	100...240 V	100...240 V		
	DC	125...250 V	125...250 V	22...60 V	22...60 V
<b>Protections</b>					
Overvoltage		$< 32 V \pm 10\% \text{ Ⓢ}$	$< 32 V \pm 10\% \text{ Ⓢ}$		
Overload / overcurrent		$> 150\% I_n \text{ Ⓢ}$	$> 200\% I_n \text{ Ⓢ}$	$< 25 A$	$< 50 A$
Short circuit		Ⓢ	Ⓢ	$< 25 A$	$< 50 A$
Over temperature		$< 80 \text{ }^\circ\text{C} \text{ Ⓢ}$	$< 80 \text{ }^\circ\text{C} \text{ Ⓢ}$		
Against shock Ⓢ		Class I	Class I		
Protection category		IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
<b>EMC immunity</b>					
EMC (emissions) Ⓢ		Class B	Class B	Class B	Class B
Electrostatic discharge (EN 61000-4-2) Ⓢ		level 4, criteria A air: 15 kV contact: 8 kV	level 4, criteria A air: 15 kV contact: 8 kV	level 4, criteria A air: 15 kV contact: 8 kV	level 4, criteria A air: 15 kV contact: 8 kV
Radiated field (EN 61000-4-3) Ⓢ		level 3, criteria A 80 MHz...1 GHz intensity: 10 V/M	level 3, criteria A 80 MHz...1 GHz intensity: 10 V/M	level 3, criteria A 80 MHz...1 GHz intensity: 10 V/M	level 3, criteria A 80 MHz...1 GHz intensity: 10 V/M
Fast transient / burst (EN 61000-4-4) Ⓢ		level 3, criteria A 2 kV	level 3, criteria A 2 kV	level 3, criteria A 2 kV	level 3, criteria A 2 kV
Surge (EN 61000-4-5) Ⓢ Ⓢ		level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV	level 3, criteria A common: 2 kV differential: 1 kV
Conducted (EN 61000-4-6) Ⓢ		level 3, criteria A 150 kHz...80 MHz 10 Vrms	level 3, criteria A 150 kHz...80 MHz 10 Vrms	level 3, criteria A 150 kHz...80 MHz 10 Vrms	level 3, criteria A 150 kHz...80 MHz 10 Vrms
Magnetic fields (EN 61000-4-8) Ⓢ		level 3, criteria A 30 A/m	level 3, criteria A 30 A/m	criteria A 10 A/m	criteria A 10 A/m
Voltage dips (EN 61000-4-11)		level 3, criteria A 100% 1 cycle (20 ms)	level 3, criteria A 100% 1 cycle (20 ms)	level 3, criteria A 100% 1 cycle (20 ms)	level 3, criteria A 100% 1 cycle (20 ms)
<b>General data</b>					
Dimensions	mm	121 x 85 x 124,1	121 x 144 x 118,6	121 x 50 x 122,1	121 x 50 x 122,1
Indicator		LED green	LED green	LED green	LED green
Recognitions, certifications, directives		<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage	<b>CE EAC</b> RoHS, Low Voltage



## Power supplies

RZI-20B	RZI-40B	RZI-40UPS
		
24 V ①	24 V ①	24 V ①
20 A	40 A	40 A
22,8...28,8 V	22,8...28,8 V	24...28 V
32 V ±10%	max. 35 V	
max. 30 A	> 120% I <sub>n</sub> ①	42...52 A ①
①	①	①
		< 90 °C ①
Class I	Class I	Class III
IP 20 (EN 60529)	IP 20 (EN 60529)	IP 20 (EN 60529)
Class B	Class B	Class B
level 4, criteria A air: 15 kV contact: 8 kV	level 4, criteria A air: 15 kV contact: 8 kV	level 4, criteria A air: 15 kV contact: 8 kV
level 3, criteria A 80 MHz...1 GHz intensity: 10 V/M	level 3, criteria A 80 MHz...1 GHz intensity: 10 V/M	level 3, criteria A 80 MHz...1 GHz intensity: 10 V/M
level 3, criteria A 2 kV		level 3, criteria A 2 kV ⑩
level 3, criteria A common: 2 kV differential: 1 kV		level 3, criteria A 0,5 kV ⑩
level 3, criteria A 150 kHz...80 MHz 10 Vrms	level 3, criteria A 150 kHz...80 MHz 10 Vrms	level 3, criteria A 150 kHz...80 MHz 10 Vrms
criteria A 10 A/m	criteria A 30 A/m	criteria A 10 A/m
level 3, criteria A 100% 1 cycle (20 ms)		
121 x 70 x 120,1	121 x 70 x 120,1	121 x 50 x 117,3
LED green	LED green	LED three-colour
CE ENEC RoHS, Low Voltage	CE ENEC RoHS, Low Voltage	CE ENEC RoHS, Low Voltage

① Latch-off mode: disconnecting the output voltage, restore correct operation after restarting. ② Hiccup mode: non-latching, auto-recovery when the fault is removed. ③ Fold Forward mode: current rises, voltage drops. ④ Class II (double insulation), Class I: connection of PE protective wire is not required. ⑤ CISPR 32, EN 55032, EN 55011, FCC Title 47 - Class B: product meets a regulations about the limits of EMC interferences in a residential environment; Class A: product is not intended to be installed in a residential environment. ⑥ Criteria A: normal performance within the specification limits. ⑦ Common mode: asymmetrical (line to earth); differential mode: symmetrical (line to line). ⑧ Maximum current value (max. output current should be limited by power supplies working in parallel). ⑨ Depends on the input voltage. ⑩ Input terminals.



# Power supplies

## ORDERING CODES

Index	Code	Description
2615392	RZI10-12-M	power 10 W, output 0,83 A / 12 V DC, universal supply voltage 90...264 V AC or 125...375 V DC
2615393	RZI10-24-M	power 10 W, output 0,42 A / 24 V DC, universal supply voltage 90...264 V AC or 125...375 V DC
2615394	RZI30-12-M	power 30 W, output 2,1 A / 12 V DC, universal supply voltage 90...264 V AC or 125...375 V DC
2615395	RZI30-24-M	power 30 W, output 1,25 A / 24 V DC, universal supply voltage 90...264 V AC or 125...375 V DC
2615398	RZI60-12-M	power 54 W, output 4,5 A / 12 V DC, universal supply voltage 90...264 V AC or 125...375 V DC
2615399	RZI60-24-M	power 60 W, output 2,5 A / 24 V DC, universal supply voltage 90...264 V AC or 125...375 V DC
2615400	RZI100-24-M	power 91,2 W, output 3,8 A / 24 V DC, universal supply voltage 90...264 V AC or 125...375 V DC

## ORDERING CODES

Index	Code	Description
2615401	RZI60-24-P	power 60 W, output 2,5 A / 24 V DC, universal supply voltage 85...264 V AC or 120...375 V DC
2615402	RZI120-24-P	power 120 W, output 5 A / 24 V DC, universal supply voltage 85...264 V AC or 120...375 V DC
2615403	RZI240-24-P	power 240 W, output 10 A / 24 V DC, universal supply voltage 85...264 V AC or 120...375 V DC
2615404	RZI480-24-P	power 480 W, output 20 A / 24 V DC, universal supply voltage 85...264 V AC or 120...375 V DC
2615616	RZI-20R	redundancy module, output 20 A / 0,65 V, supply voltage 22...60 V DC
2615617	RZI-40R	redundancy module, output 40 A / 0,65 V, supply voltage 22...60 V DC
2615614	RZI-20B	buffer module, output 20 A / 24 V, supply voltage 22,8...28,8 V DC
2615615	RZI-40B	buffer module, output 40 A / 24 V, supply voltage 22,8...28,8 V DC
2615618	RZI-40UPS	UPS module, output 40 A / 24 V, supply voltage 24...28 V DC

### 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.

You have not found the relay you wanted? The catalog does not show the information about the switching capacity for the type of load you are looking for? Detailed contact data is presented on the last page of the catalog and at [www.repol.com.pl](http://www.repol.com.pl)



# Declaration of conformity RoHS

RoHS  
RoHS

Relpol S.A. hereby confirms that relays and plug-in sockets for relays supplied by our company meet the requirements laid down in **Directive 2011/65/EU** of the European Parliament and of the Council of 8 June 2011 on the restriction of use of certain hazardous substances in electrical and electronic equipment and **Commission Delegated Directive (EU) 2015/863** of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances.

Date: 07.05.2019



Quality and Environmental Management  
Department Director  
Sylwia Sochoń-Miezio





## The offer of Relpol S.A. includes the following products:

### subminiature - signal relays

rated switching capacity: from 0,5 A to 3 A, coil voltage range: from 3 V to 48 V DC

### miniature relays

rated switching capacity: from 5 A to 20 A

### industrial relays

rated switching capacity: from 5 A to 80 A, mounting: to plug-in sockets on 35 mm rail mount acc. to EN 60715 or on panel mounting, for PCB

### interface relays

rated switching capacity: from 0,05 A to 16 A, number of contacts: 1, 2, 3, 4

### relays for railroad industry

for rail-vehicles and railroad tractions,

rated switching capacity: from 6 A to 16 A, number of contacts: 1, 2, 3, 4

### plug-in sockets for relays

for PCB, for 35 mm rail mount acc. to EN 60715 or on panel mounting

### programmable relays

versions: 8 inputs / 4 outputs, 16 inputs / 8 outputs, with LCD display, without display, supply voltages: 12, 24, 220 V DC, 230 V AC, programming: LAD, STL, LED indicators of the relay and input / output status

### installation relays

rated switching capacity: 8 A, 16 A, number of contacts: 1, 2, 3

### bistable - impulse relays

type "ON-OFF"; rated switching capacity: 8 A, 16 A, number of contacts: 1, 2

### time relays

single- and multifunction time relays, wide range of time adjustments

### monitoring relays

voltage, current, motor temperature monitoring

### signal lamps

single-phase 130...260 V AC/DC (one LED), three-phase 3(N)~ 400/230 V AC (three LEDs)

### solid state relays

rated load currents: from 0,1 A to 80 A, zero-crossing or random-on switching

### installation contactors

rated switching power: from 2,2 kW to 15 kW (at 400 V AC3)

### power supplies

for automation systems, output circuit: 12, 24 V DC, rated currents: from 0,42 A to 40 A

### overvoltage arresters

classes I, II and III, available with changeover signal contact

Due to the permanent development policy, Relpol S.A. reserves the right to introduce changes of data and characteristics of the products. The devices shall be operated by skilled personnel in accordance with the regulations in force pertaining to electrical systems. The technical data are of informational nature. Thus, Relpol S.A. does not accept any liability for inappropriate use of the presented products.

#### 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.

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