

NEW product

with adaptor (V)

with adaptor (H)

• Power relays of general application • AC and DC coils • Mounting: in sockets; 35 mm rail mount acc. to PN-EN 60715; on panel; PCB • Versions: faston 187 (4,8 x 0,5 mm); faston 250 (6,3 x 0,8 mm) • 3 mm contact gap (option - only in versions with normally open contacts) • Additional features: K - test button; L - light indicator (LED) • Applications: control of electromagnets; systems of heating, cooling, ventilation, air conditioning; control with single-phase and three-phase motors; catering industry machines and equipment; automation systems; etc.

• Recognitions, certifications, directives: RoHS,

Contact data

Number and type of contacts		2 C/O, 3 C/O, 2 NO, 3 NO	2 NO, 3 NO	with contact gap ≥ 3 mm
Contact material		AgCdO , AgNi		
Rated / max. switching voltage	AC	400 V / 440 V	230 V / 250 V	❶
Min. switching voltage		5 V AgNi, 10 V AgCdO		
Rated load	AC1	16 A / 250 V AC or 10 A / 400 V AC	16 A / 250 V AC	❶
	DC1	16 A / 24 V DC		
Min. switching current		5 mA AgNi, 10 mA AgCdO		
Max. inrush current		40 A		
Rated current		16 A		
Max. breaking capacity	AC1	4 000 VA		
Min. breaking capacity		0,3 W AgNi, 1 W AgCdO		
Contact resistance		≤ 100 m Ω		
Max. operating frequency				
• at rated load	AC1	1 200 cycles/hour		
• no load		12 000 cycles/hour		

Coil data

Rated voltage	AC	6 ... 240 V 50/60 Hz	400 V 50 Hz	❶
	DC	6 ... 220 V		
Must release voltage		AC: $\geq 0,15 U_n$	DC: $\geq 0,1 U_n$	
Operating range of supply voltage		see Tables 1, 2, 3, 4		
Rated power consumption	AC	2,8 VA 50 Hz	2,5 VA 60 Hz	
	DC	1,5 W	1,7 W	with contact gap ≥ 3 mm

Insulation according to PN-EN 60664-1

Insulation rated voltage		400 V AC		
Rated surge voltage		4 000 V	1,2 / 50 μ s	
Overvoltage category		III		
Insulation pollution degree		3		
Dielectric strength	• between coil and contacts • contact clearance	2 500 V AC	type of insulation: basic	
		1 500 V AC	type of clearance: micro-disconnection	
		2 500 V AC	with contact gap ≥ 3 mm, type of clearance: full-disconnection	
	• pole - pole	2 500 V AC	type of insulation: basic	
Contact - coil distance	• clearance	≥ 5 mm		
	• creepage	≥ 8 mm		

General data

Operating / release time (typical values)		20 ms / 15 ms	
Electrical life	• resistive AC1 • $\cos\phi$	$\geq 10^5$ 16 A, 250 V AC	$\geq 10^5$ 10 A, 400 V AC
		see Fig. 2	
Mechanical life (cycles)		$\geq 10^7$	
Motor load according to UL 508		2 C/O: 1/3 HP 120 V AC, single-phase motor 1/2 HP 240 V AC, single-phase motor 3 C/O: 1/3 HP 120 V AC, single-phase motor 1/2 HP 240 V AC, single-phase motor 3 C/O: 1/2 HP 240 V AC, three-phase motor	
Dimensions (L x W x H)		RUC faston 4,8 x 0,5 ❷ RUC faston 6,3 x 0,8 ❸	
Weight		80 g ❹ 85 g ❺	
Ambient temperature	• storage • operating	-40...+85 °C AC: -40...+55 °C 3 C/O, 3 NO / 16 A (+70 °C 2 C/O, 2 NO / 16 A) DC: -40...+55 °C 3 C/O, 3 NO / 16 A (+70 °C 3 C/O, 3 NO / 10 A; 2 C/O, 2 NO / 16 A)	
Cover protection category		IP 00 PN-EN 60529	
Shock / vibration resistance		10 g / 5 g 10...150 Hz	
Solder bath temperature		max. 270 °C	
Soldering time		max. 5 s	

The data in bold type pertain to the standard versions of the relays. ❶ For RUC faston 4,8 x 0,5 with GUC11 socket, max. switching voltages and coil voltages of relays are limited to 250 V AC/DC. ❷ For plug-in sockets version: 36,1 x 38,6 x 45,5 mm. For version: with (V) adaptor: 58,75 x 38,6 x 45,9 mm; with (H) adaptor: 46,8 x 38,6 x 62,45 mm. For version with mounting flange: 66,3 x 38,6 x 36,1 mm. For PCB version: 36,1 x 38,6 x 52,5 mm. ❸ For version: with (V) adaptor: 62,4 x 38,6 x 45,9 mm; with (H) adaptor: 46,8 x 38,6 x 66,1 mm. For version with mounting flange: 66,3 x 38,6 x 36,1 mm. ❹ Weight of plug-in sockets version and PCB version (RUC faston 4,8 x 0,5). ❺ Weight of version with (V) or (H) adaptor, and version with mounting flange.

Coil data - DC voltage version

Table 1

Coil code	Rated voltage V DC	Coil resistance ±10% at 20°C Ω	Coil operating range V DC	
			min. (at 20°C)	max. (at 55°C)
1006	6	28	4,8	6,6
1012	12	110	9,6	13,2
1024	24	430	19,2	26,4
1042	42	1 340	33,6	46,2
1048	48	1 750	38,4	52,8
1060	60	2 700	48,0	66,0
1110	110	9 200	88,0	121,0
1120	120	11 000	96,0	132,0
1220	220	37 000	176,0	242,0

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

Coil data - DC voltage version, reinforced

Table 2

Coil code ❶	Rated voltage V DC	Coil resistance ±10% at 20°C Ω	Coil operating range V DC	
			min. (at 20°C)	max. (at 55°C)
W012	12	85	9,6	13,2
W024	24	345	19,2	26,4
W048	48	1 370	38,4	52,8
W110	110	7 300	88,0	121,0
W220	220	30 000	176,0	242,0

❶ For version with contact gap ≥ 3 mm.

Coil data - AC 50/60 Hz voltage version

Table 3

Coil code	Rated voltage V AC	Coil resistance ±10% at 20°C Ω	Coil operating range V AC	
			min. (at 20°C)	max. (at 55°C)
5006	6	4,3	4,8	6,6
5012	12	18,5	9,6	13,2
5024	24	75,0	19,2	26,4
5115	115	1 840,0	92,0	126,5
5120	120	1 910,0	96,0	132,0
5220	220	6 980,0	176,0	242,0
5230	230	7 080,0	184,0	253,0
5240	240	7 760,0	192,0	264,0

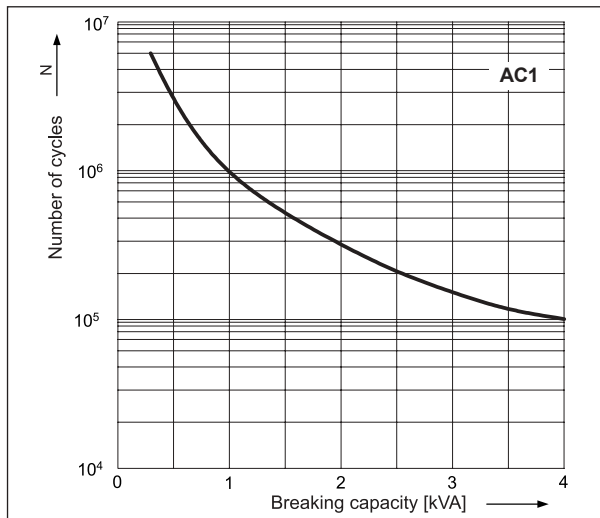
Coil data - AC 50 Hz voltage version

Table 4

Coil code	Rated voltage V AC	Coil resistance ±10% at 20°C Ω	Coil operating range V AC	
			min. (at 20°C)	max. (at 55°C)
3400	400	21 500	320,0	440,0

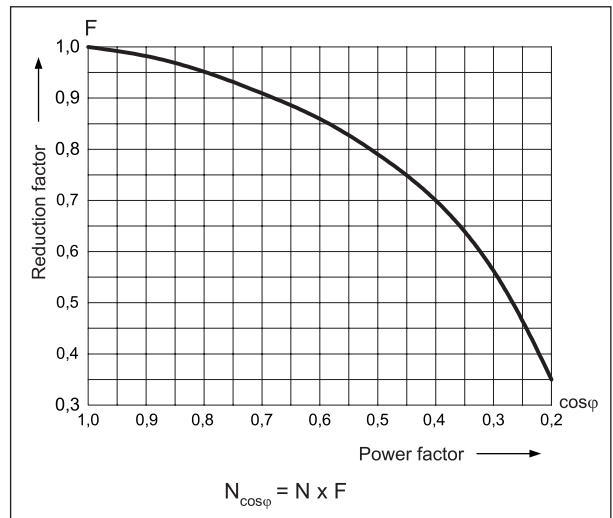
Electrical life at AC resistive load.
Switching frequency: 1 200 cycles/hour

Fig. 1



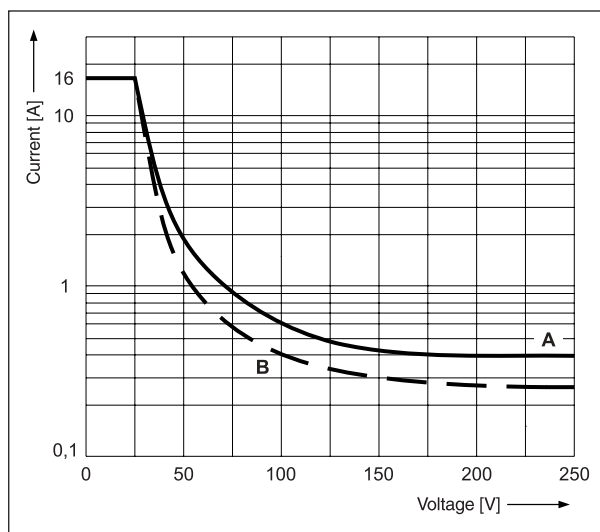
Electrical life reduction factor at AC inductive load

Fig. 2

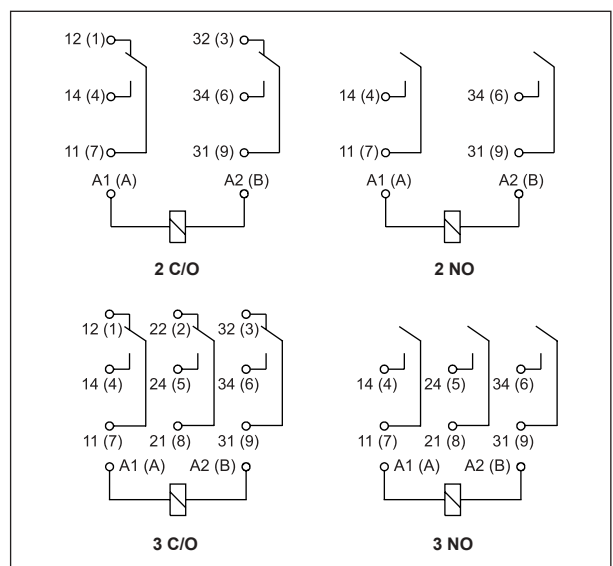


Max. DC breaking capacity
A - resistive load DC1
B - inductive load L/R = 40 ms

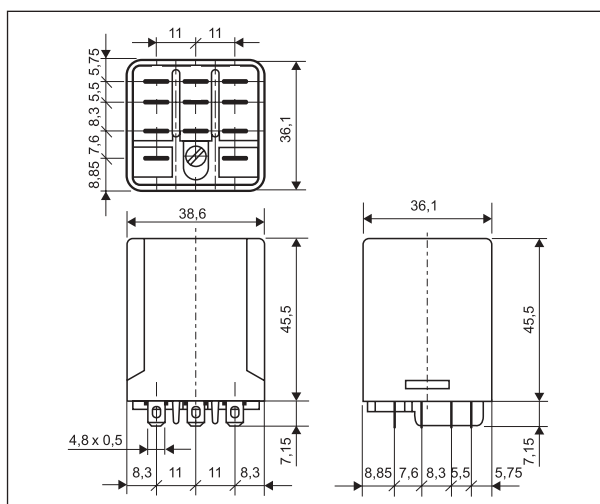
Fig. 3



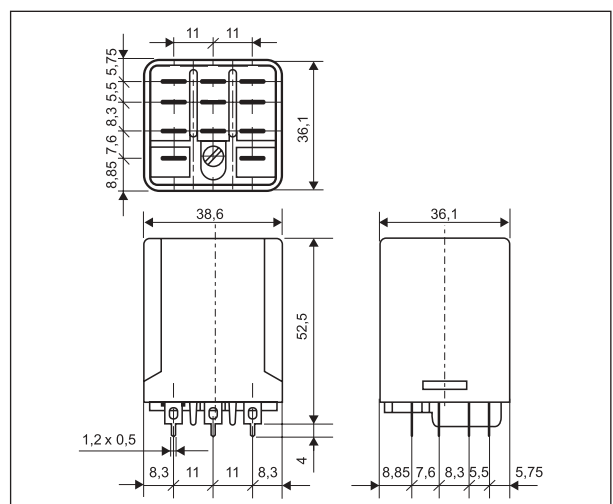
Connection diagrams (pin side view)

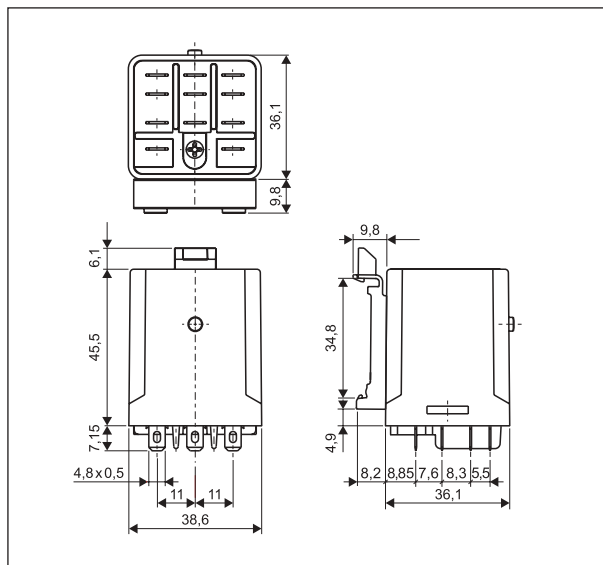
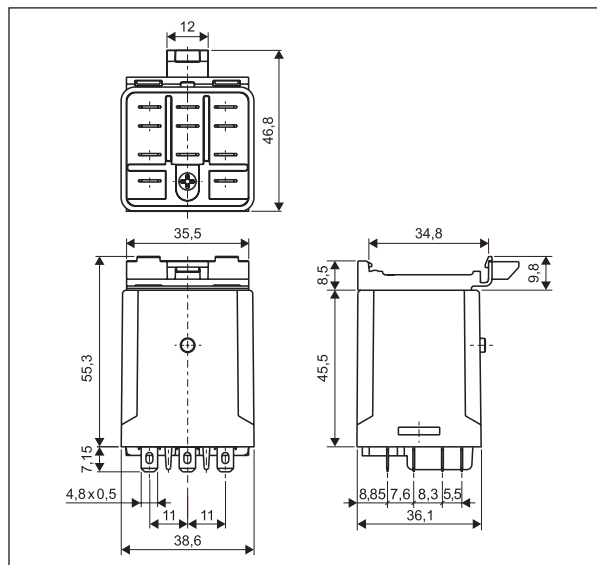
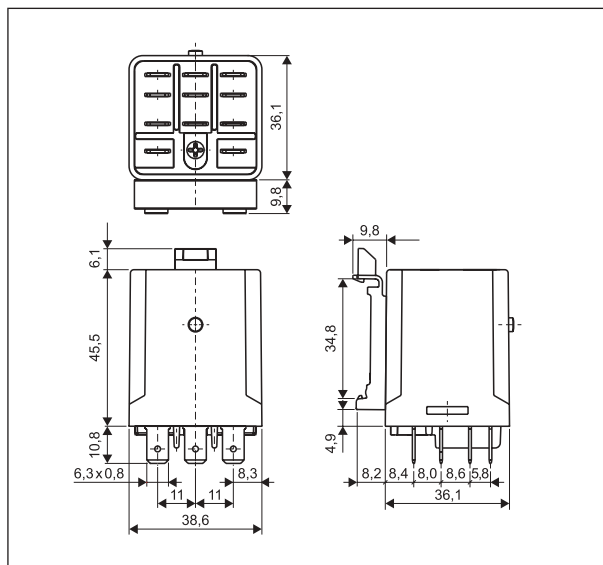
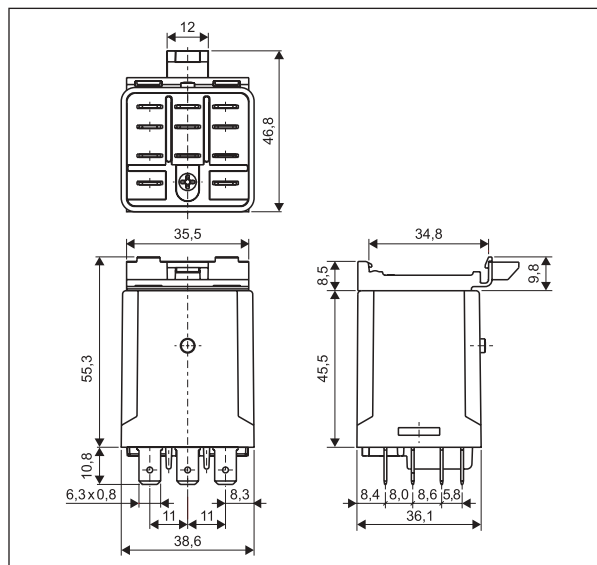
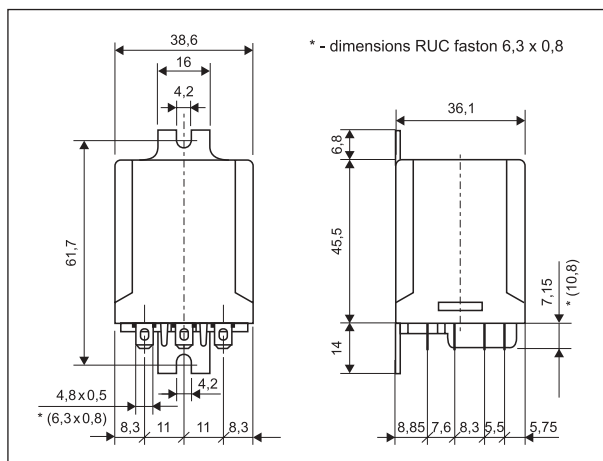


Dimensions - RUC faston 4,8 x 0,5
- plug-in version (standard)



Dimensions - RUC faston 4,8 x 0,5
- PCB version



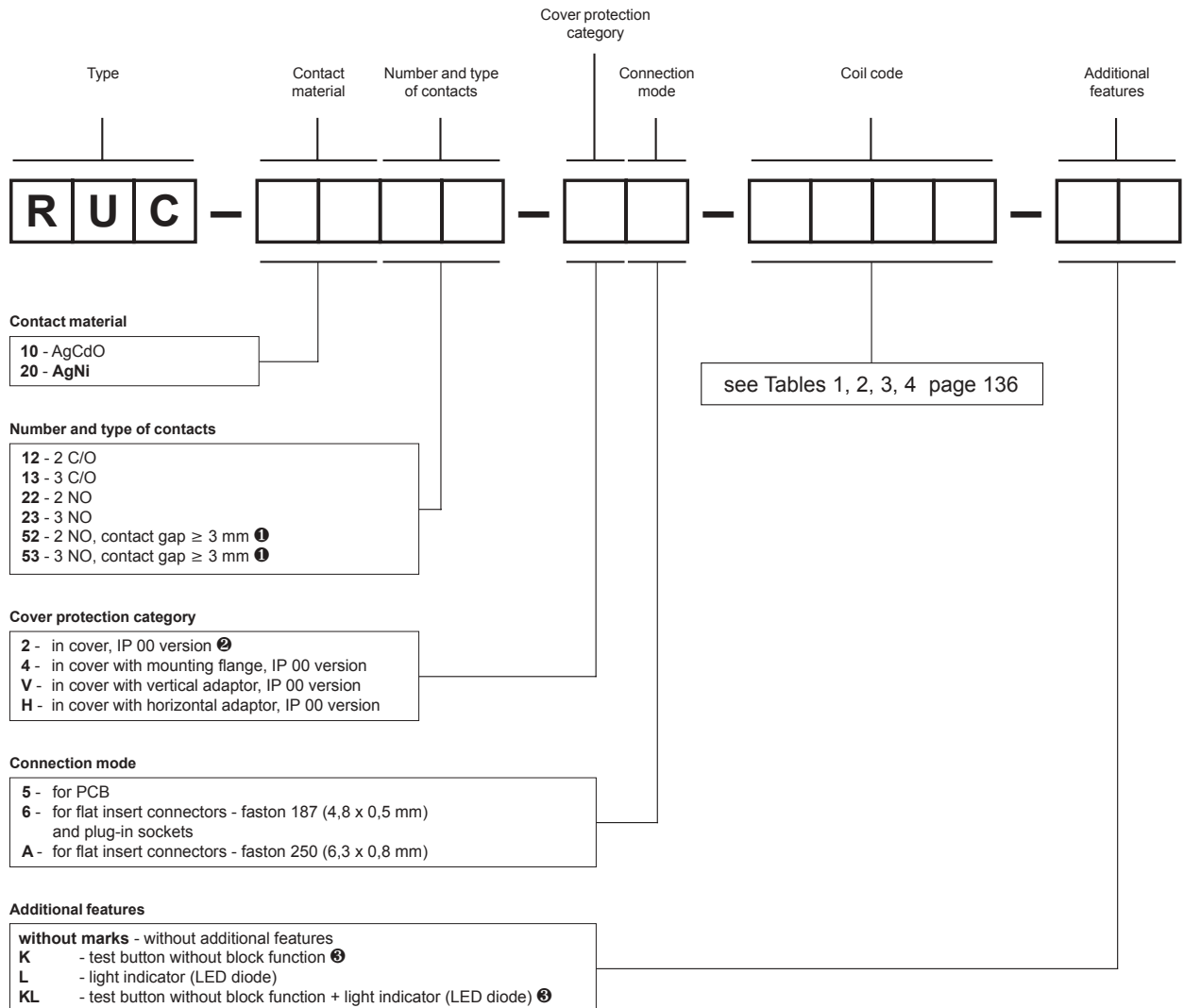
Dimensions - RUC faston 4,8 x 0,5
 - version with vertical adaptor (V)

Dimensions - RUC faston 4,8 x 0,5
 - version with horizontal adaptor (H)

Dimensions - RUC faston 6,3 x 0,8
 - version with vertical adaptor (V)

Dimensions - RUC faston 6,3 x 0,8
 - version with horizontal adaptor (H)

Dimensions - RUC faston 4,8 x 0,5 (faston 6,3 x 0,8)
 - version with mounting flange in the wall of the cover

Mounting

Relays RUC are offered in versions: • standard, for screw terminals plug-in sockets **GUC11** with clip **MBA**, 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with two M3 screws • with mounting flange in the wall of the cover, on panel mounting, flat insert connectors - faston 187 (4,8 x 0,5 mm) or faston 250 (6,3 x 0,8 mm) • with vertical (V) or horizontal (H) adaptors for direct mounting on 35 mm rail mount acc. to PN-EN 60715, flat insert connectors - faston 187 (4,8 x 0,5 mm) or faston 250 (6,3 x 0,8 mm) • for direct PCB mounting.

Ⓜ Relays are not available with (V) or (H) adaptor, and cover with mounting flange.

Ⓜ For RUC faston 4,8 x 0,5 with GUC11 socket, max. switching voltages and coil voltages of relays are limited to 250 V AC/DC.

Ordering codes



① For versions with reinforced DC coils: W012, W024, W048, W110, W220 and with AC coils.

② Only for version RUC faston 4,8 x 0,5.

③ Additional features is not available in versions of relays with contact gap ≥ 3 mm.

Examples of ordering codes:

RUC-2053-26-W024 relay **RUC**, faston 187 (4,8 x 0,5 mm), contact material AgNi, with three normally open contacts, with contact gap ≥ 3 mm, in cover IP 00, for plug-in sockets GUC11, voltage version 24 V DC - reinforced coil

RUC-2013-V6-3400-KL relay **RUC**, faston 187 (4,8 x 0,5 mm), contact material AgNi, with three changeover contacts, in cover IP 00, with vertical adaptor (V), for flat insert connectors, voltage version 400 V AC 50 Hz, with test button without block function and light indicator (LED diode)

RUC-2052-HA-W220-L relay **RUC**, faston 250 (6,3 x 0,8 mm), contact material AgNi, with two normally open contacts, with contact gap ≥ 3 mm, in cover IP 00, with horizontal adaptor (H), for flat insert connectors, voltage version 220 V DC - reinforced coil, with light indicator (LED diode)

RUC-1022-25-5024 relay **RUC**, contact material AgCdO, with two normally open contacts, in cover IP 00, for PCB, voltage version 24 V AC 50/60 Hz

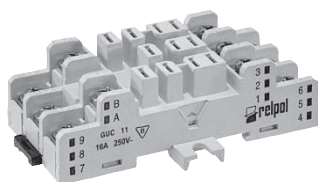
Plug-in sockets and accessories

for relays RUC, RUC-M

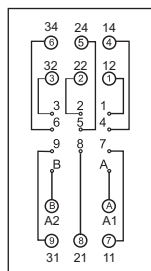
GUC11 ⑨

For RUC faston 4,8x0,5, RUC-M

Screw terminals
Maximum screw torque: 0,7 Nm
35 mm rail mount acc. to PN-EN 60715
or on panel mounting
82 x 42,2 x 26,5 mm
Three poles
16 A, 250 V AC

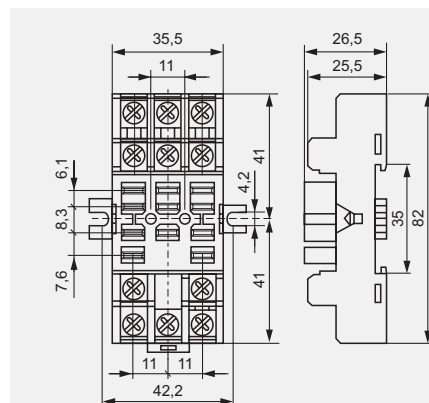


Connection diagram



Accessories

Dimensions



⑨ For RUC faston 4,8 x 0,5 and RUC-M, with GUC11 socket, max. switching voltages and coil voltages of relays are limited to 250 V AC/DC.

GUC11

Screw terminals
plug-in socket
with RUC faston 4,8 x 0,5 mm
relay.

