






- General purpose relays
- High resistance to inrush current
- For plug-in sockets, 35 mm DIN rail mount, EN 50022 or on panel mounting - standard
- For PCB
- Flat insert connectors - faston 4,8 x 0,5 mm
- Version with contact gap ≥ 3 mm available
- Recognitions, certificates, directives: RoHS,   

Contacts

Contact number & arrangement		2C/O, 3C/O, 2NO, 3NO
Contact material		AgNi, AgCdO
Max. switching voltage	AC/DC	without socket DUC11: 400 V / 400 V with socket DUC11: 250 V / 250 V ^①
Min. switching voltage		5 V AgNi, 10 V AgCdO
Rated load	AC1	without socket DUC11: 16 A / 250 V AC or 10 A / 380 V AC / 4 000 VA with socket DUC11: 16 A / 250 V AC
	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
Resistance		≤ 100 m Ω
Max. operating frequency	AC1	• at rated load
		• no load
		1 200 cycles/hour 12 000 cycles/hour

Coil

Rated voltage	50/60 Hz AC	without socket DUC11: 6...380 V	with socket DUC11: 6...240 V
	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	
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

Insulation category		without socket DUC11: C400	with socket DUC11: C250
Insulation rated voltage		400 V AC	
Dielectric strength	• coil - contact	2 500 V AC	
	• contact - contact	1 500 V AC	2 500 V AC with contact gap ≥ 3 mm
	• pole - pole	2 500 V AC	
Contact - coil distance	• clearance	≥ 6 mm	
	• creepage	≥ 8 mm	

General data

Operating time (typical value)	AC: 12 ms	DC: 12 ms
Release time (typical value)	AC: 10 ms	DC: 7 ms
Electrical life	• resistive AC1	$\geq 10^5$ 16 A, 250 V AC
	• $\cos\phi$	see Fig. 2
Mechanical life (cycles)	$\geq 10^7$	
Motor load - UL	2C/O: 1/3 KM 120 V AC, single-phase motor 1/2 KM 240 V AC, single-phase motor 3C/O: 1/3 KM 120 V AC, single-phase motor 1/2 KM 240 V AC, single-phase motor 3C/O: 1/2 KM 240 V AC, three-phase motor	
Dimensions (L x W x H)	38,6 x 36,1 x 45,5 mm	
Weight	85 g	
Ambient temperature	• storage	-40...+85 °C
	• operating	-40...+70 °C I= 10 A -40...+55 °C I= 16 A
Cover protection category	IP 40	
Shock resistance	10 g	
Vibration resistance	5 g 10...150 Hz	
Solder bath temperature	max. 270 °C	
Soldering time	max. 5 s	

① DUC11 limits max. switching voltage up to 250 V AC/DC and coil rated voltage up to 240 V AC.

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
W012 *	12	85	9,6	13,2
1024	24	430	19,2	26,4
W024 *	24	345	19,2	26,4
1042	42	1 340	33,6	46,2
1048	48	1 750	38,4	52,8
W048 *	48	1 370	38,4	52,8
1060	60	2 700	48,0	66,0
1110	110	9 200	88,0	121,0
W110 *	110	7 300	88,0	121,0
1120	120	11 000	96,0	132,0
1220	220	37 000	176,0	242,0
W220 *	220	30 000	176,0	242,0

Standard coil rated voltages marked with bold type.

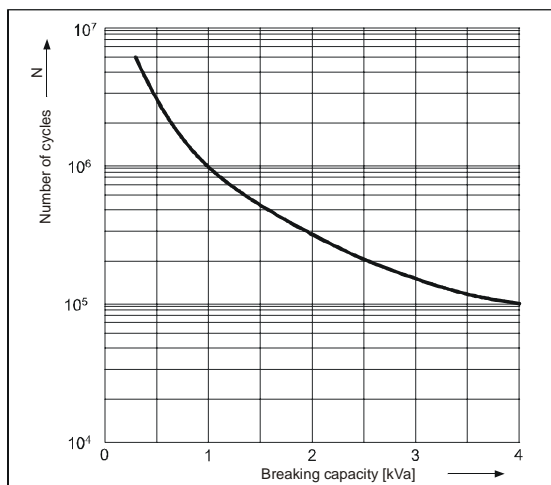
* - for relay with contact gap 3 mm

Coil data - AC 50/60 Hz voltage version

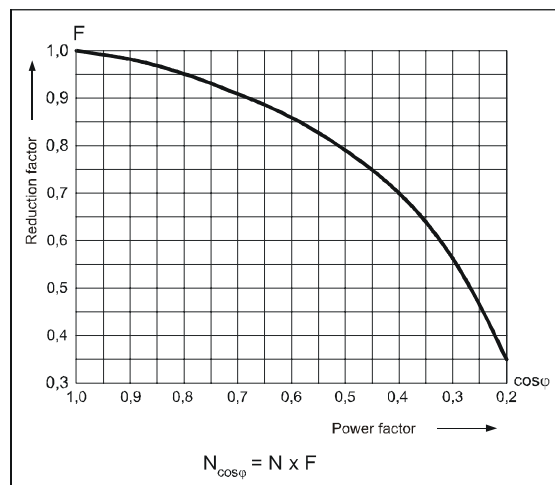
Table 2

Coil code	Rated voltage V AC	Coil resistance ±10% at 20 °C Ω	Coil operating range 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
5110	110	1 700	88,0	121,0
5120	120	1 910	96,0	132,0
5220	220	6 980	176,0	242,0
5230	230	7 080	184,0	253,0
5240	240	7 760	192,0	264,0
5380	380	19 100	304,0	418,0

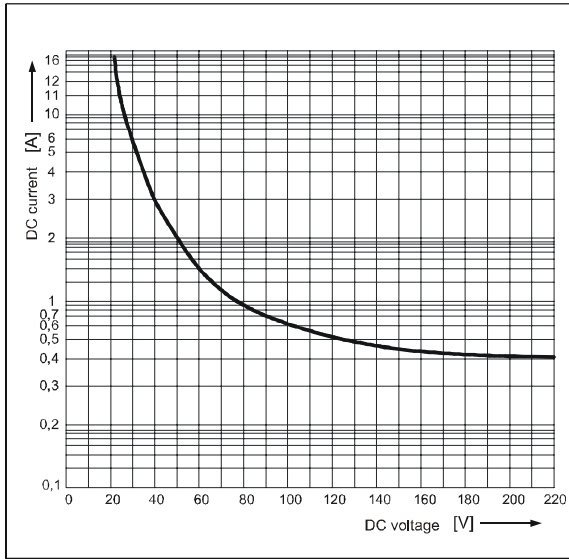
**Electrical life at AC resistive load.
Maximum switching frequency at rated load** Fig. 1



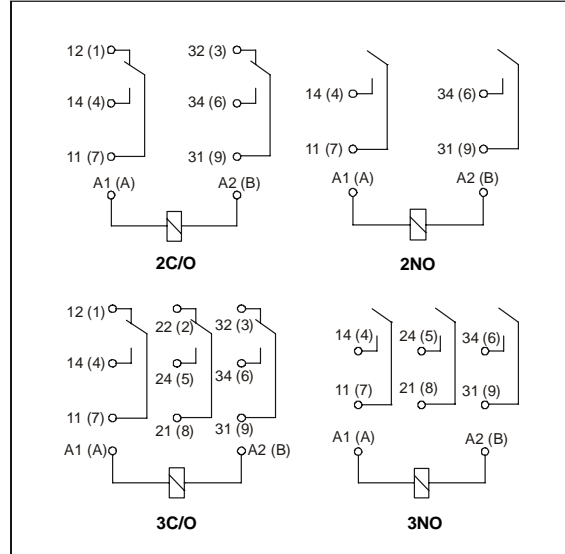
*Electrical life reduction factor
at AC inductive load* Fig. 2



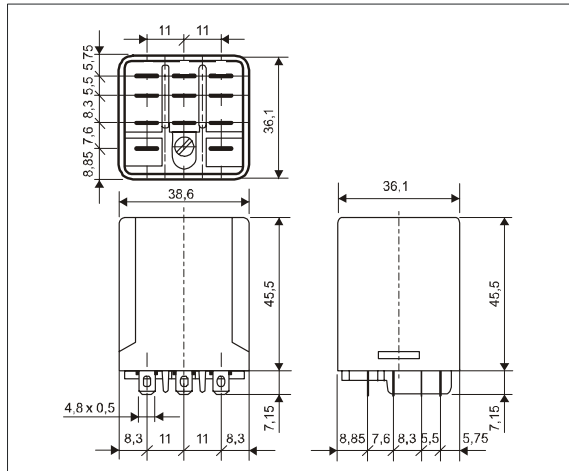
Max. DC resistive load breaking capacity Fig. 3



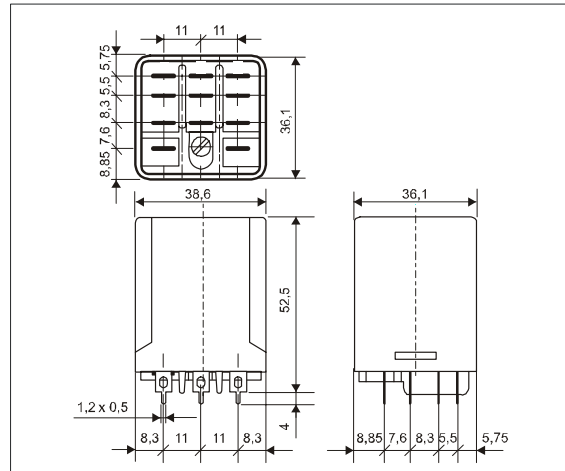
Connections diagram (pin side view)



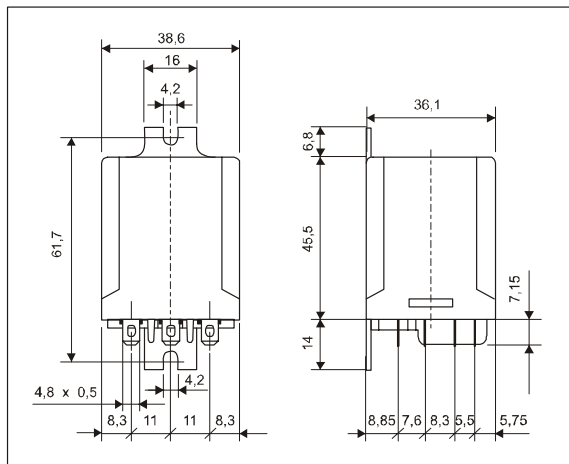
Dimensions - plug-in version (standard)



Dimensions - PCB version



Dimensions - version with mounting flange in the upper wall of the cover

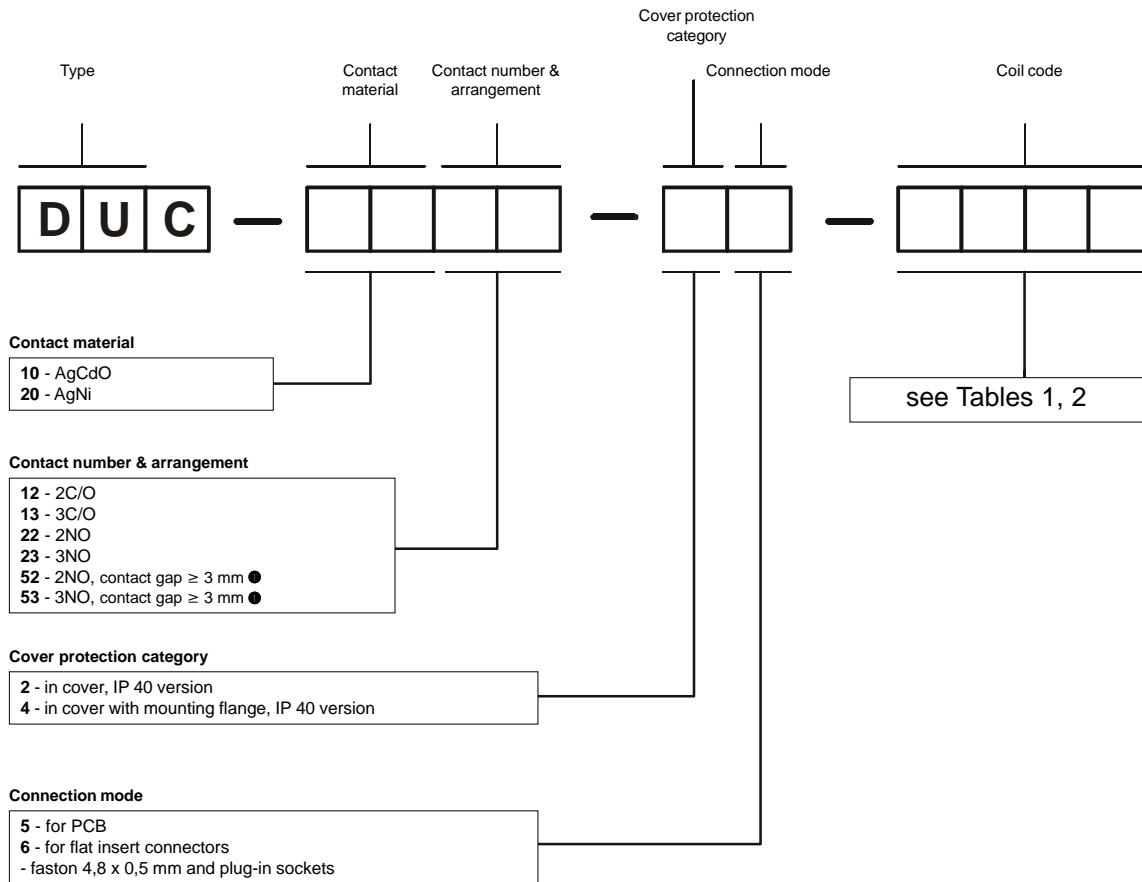


Mounting

Relays **DUC** are designed for: • screw terminals plug-in sockets **DUC11** with clip **DBA**, 35 mm DIN rail mount, EN 50022 or on panel mounting • for flat insert connectors - faston 4,8 x 0,5 mm • direct PCB mounting.

Note: **DUC11** limits max. switching voltage up to 250 V AC/DC and coil rated voltage up to 240 V AC.

Ordering codes



❶ For versions with coils DC: W012, W024, W110, W220 and with coils AC

Examples of ordering codes:

DUC-2022-25-5024 relay **DUC**, contact material AgNi, with two normally open contacts, in cover IP 40, for PCB, voltage version 24 V AC 50/60 Hz

DUC-2053-26-W024 relay **DUC**, contact material AgNi, with three normally open contacts, with contact gap ≥ 3 mm, in cover IP 40, for flat insert connectors - faston 4,8 x 0,5 mm and plug-in sockets, voltage version 24 V DC