

KC6 interface relays, 4 pole

For interface applications up to 4 A
Low power consumption, DC operated coils

Description

KC6 4-pole interface mini contactor relays are space optimized control products mainly used for control functions or for small loads up to 4 A.



These contactors are designed with:

- 4 poles with various contact combinations
- control circuit: DC operated, low coil consumption (1.4 ... 2.8 W at pull-in and at holding)
- hum-free coil
- no auxiliary contact block permitted for mounting
- designed for rail or wall mounting



KC6

Ordering details

Rated control circuit voltage U _c	Auxiliary contacts fitted		Catalog number, screw termination	Catalog number, quick-connect termination	Catalog number, PCB-mount termination
					
DC operation 24 V / 1.4 W	3	1	KC6-31Z-1.4	KC6-31Z-F1.4	KC6-31Z-P1.4
	4	0	KC6-40E-1.4	KC6-40E-F1.4	KC6-40E-P1.4
DC operation 17...32 V / 2.4 W	3	1	KC6-31Z-2.4	KC6-31Z-F2.4	KC6-31Z-P2.4
	4	0	KC6-40E-2.4	KC6-40E-F2.4	KC6-40E-P2.4
DC operation 24 V / 1.7 W	2	2	K6S-22Z-1.7	K6S-22Z-F1.7	K6S-22Z-P1.7
	3	1	K6S-31Z-1.7	K6S-31Z-F1.7	K6S-31Z-P1.7
	4	0	K6S-40E-1.7	K6S-40E-F1.7	K6S-40E-P1.7
DC operation 17...32 V / 2.8 W	2	2	K6S-22Z-2.8	K6S-22Z-F2.8	K6S-22Z-P2.8
	3	1	K6S-31Z-2.8	K6S-31Z-F2.8	K6S-31Z-P2.8
	4	0	K6S-40E-2.8	K6S-40E-F2.8	K6S-40E-P2.8

(1) U_c min. and U_c max. limit values, including the voltage variation tolerances (-15 % and +10 %).

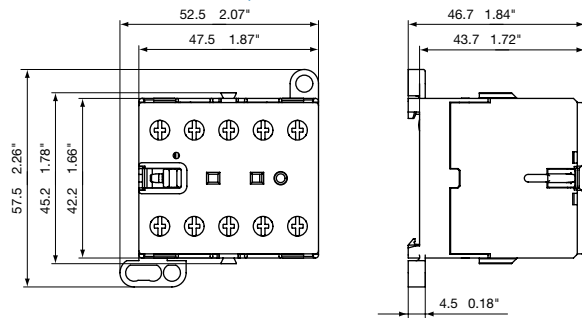


KC6...F

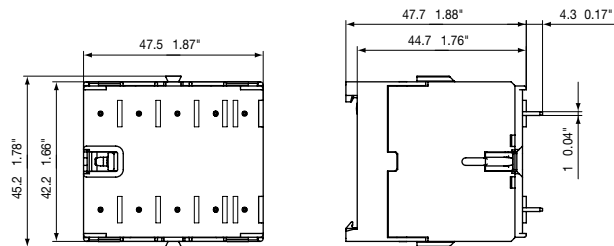


KC6...P

Main dimensions mm, inches



KC6, KC6...F



K6...P

IEC / UL / CSA technical data

K/C6, 4 pole

Utilization characteristics

Main pole – Utilization characteristics according to IEC

Contactor types	AC operated	K6
	DC operated	KC6, TKC6
Standards		IEC 60947-1 / 60947-5-1 and EN 60947-1 / 60947-5-1
Rated operational voltage $U_{e\max}$		690 V
Rated frequency (without derating)		DC or 50 / 60 Hz
Conventional free-air thermal current $I_{th} \vartheta \leq 40$ °C		6 A
I_e / Rated operational current AC-15 acc. to IEC 60947-5-1	24 V 50/60 Hz	4 A
	110-120 V 50/60 Hz	4 A
	220-230-240 V 50/60 Hz	4 A
	380-400 V 50/60 Hz	3 A
	440 V 50/60 Hz	3 A
I_e / Rated operational current DC-13 acc. to IEC 60947-5-1	480-500 V 50/60 Hz	2 A
	24 V DC	2.5 A
	110 V DC	0.7 A
	220 - 240 V DC	0.4 A
Short-circuit protection device for contactors $U_e \leq 500$ V AC, gG fuse type		6 A
Minimum switching capacity		17 V / 5 mA
Maximum electrical switching frequency	AC-15	600 cycles/h
	DC-13	600 cycles/h

Main pole – Utilization characteristics according to UL / CSA

Contactor types	AC operated	K6
	DC operated	KC6
Standards		UL 508, CSA C22.2 No14
Maximum operational voltage		600 V AC
Pilot duty		A600

General technical data

K/C6, 4 pole

Coil & operating characteristics

General technical data

Contactor relay types	AC operated	K6
	DC operated	KC6
Rated insulation voltage U_i	acc. to IEC 60947-5-1	690 V
	acc. to UL/CSA	600 V
Rated impulse withstand voltage U_{imp}		6 kV
Electromagnetic compatibility		
Ambient air temperature close to contactor relay	Operation in free air	-25 ... +55 °C
	Storage	-40 ... +80 °C
Climatic withstand		acc. to IEC 60068-2-30
Maximum operating altitude (without derating)		2000 m
Mechanical durability		10 ⁷ operating cycles
Resistance to shock		Half-sine
	acc. IEC 60068-2-27 and EN 60068-2-27	15 g / 11ms
	acc. to IEC/EN 60947-1 Annex. Q	Category E
Resistance to vibrations		Sinusoidal
	acc. IEC 60068-2-27 and EN 60068-2-27	5 g / 3 ... 150 Hz
	acc. to IEC/EN 60947-1 Annex. Q	Kategorie E

Magnet system characteristics for K6 contactor relays

Contactor relay types	AC operated	K6
Coil operating limits acc. to IEC 60947-4-1	AC supply	0.85 ... 1.1 x U_C
AC control voltage		
	Coil consumption Average pull-in value	3.5 VA / 3.5 W
	Average holding value	3.5 VA / 3.5 W
Drop-out voltage in % of U_C min.		Approx. 20 ... 75%

Magnet system characteristics for KC6, TKC6 contactor relays

Contactor relay types	DC operated	KC6	TKC6
Coil operating limits acc. to IEC 60947-5-1	DC supply	0.85 ... 1.1 x U_C	See ordering details
DC control voltage			
	Coil consumption Average pull-in value	3.5 VA / 3.5 W	5 VA / 5 W
	Average holding value	3.5 VA / 3.5 W	5 VA / 5 W
Drop-out voltage in % of U_C min.		10 ... 75 %	10 ... 75 %

General technical data

K/C6, 4 pole

Terminal & mounting characteristics

Mounting characteristics and conditions for use

Contactor types	AC operated DC operated	K6 KC6
Mounting positions		
Mounting distances	The contactors can be assembled side by side.	
Fixing	On rail acc. to IEC 60715, EN 60715 By screws (not supplied)	
	35 x 7.5 mm or 35 x 15 mm	2 x M4 screws placed diagonally

Connecting characteristics

Contactor relay types	AC operated DC operated	K6 KC6, TKC6
Main terminals ¹⁾	 Screw terminals with cable clamp	
Connection capacity		
Main conductors (poles)		
Rigid: solid	1 or 2 x	1 ... 4 mm ²
Flexible without ferrule	1 or 2 x	1 ... 2.5 mm ²
Connection capacity acc. to UL/CSA	1 or 2 x	AWG 22 ... 10
Stripping length		9 mm
Tightening torques		0.8 ... 1.1 Nm / 7 lb.in
Degree of protection acc. to IEC 60947-1 / EN 60947-1 and IEC 60529 / EN 60529	IP20	
All	(Delivered in open position, screws of unused terminals must be tightened)	
Screw terminals	M3	
All terminals	Flat Ø 5.5 / Pozidriv 1	
Screwdriver type	Flat Ø 5.5 / Pozidriv 1	

¹⁾ Soldering pin connection acc. to DIN 40801: 0.8 x 1 mm / 0.8 x 2.54 mm

Flat pin connection acc. to DIN 46248: 1 x 6.3 mm / 1 x 2.8 mm