

KC6 4-pole mini contactor relays – with screw terminals DC operated



2CDC21101R0011

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KC6-22Z

Description

KC6 4-pole 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:

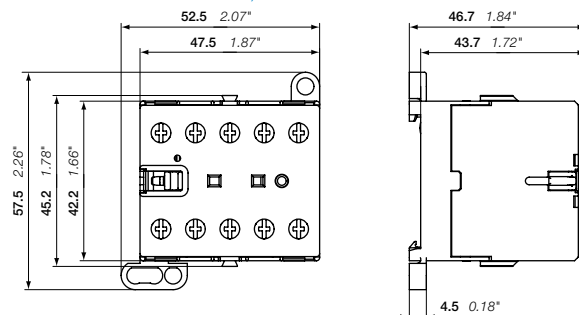
- 4-poles with various contact combinations
- control circuit: DC operated
 - low coil consumption (3.5 W at pull-in and at holding).
 - hum-free coil
- add-on auxiliary contact blocks for front or side mounting
- designed for rail or wall mounting.

Ordering details

Rated control circuit voltage U_c	Type	Order code	Pkg qty	Weight (1 pce) kg
V DC				
KC6 4-pole mini contactor relays				
12	KC6-22Z-07	GJH1213001R0227	10	0.175
24	KC6-22Z-01	GJH1213001R0221	10	0.175
48	KC6-22Z-16	GJH1213001R1226	10	0.175
60	KC6-22Z-13	GJH1213001R1223	10	0.175
110 ... 125	KC6-22Z-04	GJH1213001R0224	10	0.175
220 ... 240	KC6-22Z-05	GJH1213001R0225	10	0.175
12	KC6-31Z-07	GJH1213001R0317	10	0.175
24	KC6-31Z-01	GJH1213001R0311	10	0.175
48	KC6-31Z-16	GJH1213001R1316	10	0.175
60	KC6-31Z-13	GJH1213001R1313	10	0.175
110 ... 125	KC6-31Z-04	GJH1213001R0314	10	0.175
220 ... 240	KC6-31Z-05	GJH1213001R0315	10	0.175
12	KC6-40E-07	GJH1213001R0407	10	0.175
24	KC6-40E-01	GJH1213001R0401	10	0.175
48	KC6-40E-16	GJH1213001R1406	10	0.175
60	KC6-40E-13	GJH1213001R1403	10	0.175
110 ... 125	KC6-40E-04	GJH1213001R0404	10	0.175
220 ... 240	KC6-40E-05	GJH1213001R0405	10	0.175

Other types on request.

Main dimensions mm, inches



KC6

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K6, KC6, TKC6 4-pole mini contactor relays

Technical data

Main pole – Utilization characteristics according to IEC

Contactor types	AC operated	K6
	DC operated	KC6, TKC6
Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1	
Rated operational voltage U_{max}	690 V	
Rated frequency (without derating)	DC or 50 / 60 Hz	
Conventional free-air thermal current I_{th} , $\theta \leq 40$ °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
	480-500 V 50/60 Hz	2 A
I_{e} / Rated operational current DC-13 acc. to IEC 60947-5-1	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 $U_{\text{e}} \leq 500$ 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/NEMA/CSA

Contactor types	AC operated	K6
	DC operated	KC6, TKC6
Standards	UL 508, CSA C22.2 No14	
Maximum operational voltage	600 V AC	
Pilot duty	A600	

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Technical data

General technical data

Contactor relay types	AC operated	K6
	DC operated	KC6, TKC6
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	Category E

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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%

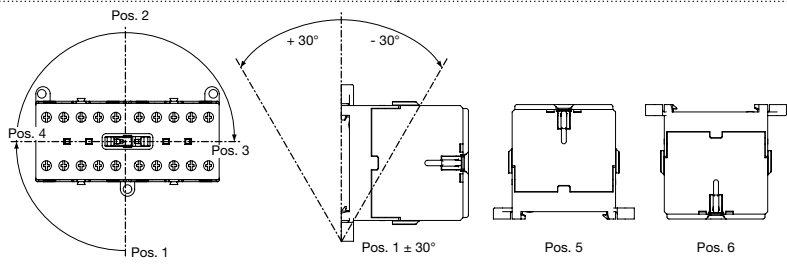
Magnet system characteristics for KC6, TKC6 contactor relays

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 %




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Technical data

Mounting characteristics and conditions for use

Contactor types	AC operated	K6
	DC operated	KC6, TKC6
Mounting positions	 <p>Any position possible</p>	
Mounting distances	The contactors can be assembled side by side	
Fixing	<p>On rail acc. to IEC 60715, EN 60715</p> <p>By screws (not supplied)</p>	
	<p>35 x 7.5 mm or 35 x 15 mm</p> <p>2 x M4 screws placed diagonally</p>	

Connecting characteristics

Contactor relay types	AC operated	K6
	DC operated	KC6, TKC6
Main terminals ¹⁾	 <p>Screw terminals with cable clamp</p>	
Connection capacity	<p>Main conductors (poles)</p> <p> Rigid: solid 1 or 2 x 1 ... 4 mm²</p> <p> Flexible without ferrule 1 or 2 x 1 ... 2.5 mm²</p> <p>Connection capacity acc. to UL/CSA 1 or 2 x AWG 22 ... 10</p> <p>Stripping length 9 mm</p> <p>Tightening torques 0.8 ... 1.1 Nm / 7 lb.in</p>	
Degree of protection	IP20	
acc. to IEC 60947-1 / EN 60947-1 and IEC 60529 / EN 60529		
All		
Screw terminals	(Delivered in open position, screws of unused terminals must be tightened)	
All terminals	M3	
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