

K6 4-pole mini contactor relays – with screw terminals AC operated



2DCD211012F0011

K6-22Z



2DCD211004F0010

K6-31Z

Description

K6 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: AC operated
 - low coil consumption (3.5 VA 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

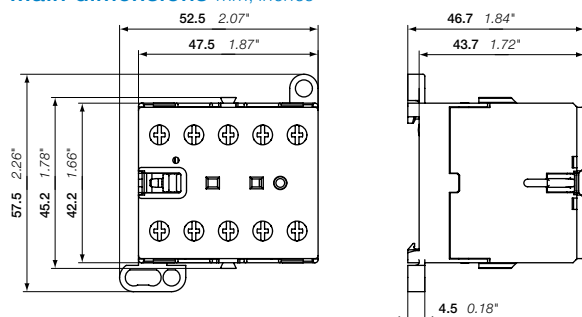
Rated control circuit voltage U_c		Type	Order code	Pkg qty	Weight (1 pce)
50 Hz	60 Hz				kg
V AC	V AC				

K6 4-pole mini contactor relays

24	24	K6-22Z-01	GJH1211001R0221	10	0.175
42	42	K6-22Z-02	GJH1211001R0222	10	0.175
48	48	K6-22Z-03	GJH1211001R0223	10	0.175
110 ...127	110 ...127	K6-22Z-84	GJH1211001R8224	10	0.175
220 ... 240	220 ... 240	K6-22Z-80	GJH1211001R8220	10	0.175
380 ... 415	380 ... 415	K6-22Z-85	GJH1211001R8225	10	0.175
24	24	K6-31Z-01	GJH1211001R0311	10	0.175
42	42	K6-31Z-02	GJH1211001R0312	10	0.175
48	48	K6-31Z-03	GJH1211001R0313	10	0.175
110 ...127	110 ...127	K6-31Z-84	GJH1211001R8314	10	0.175
220 ... 240	220 ... 240	K6-31Z-80	GJH1211001R8310	10	0.175
380 ... 415	380 ... 415	K6-31Z-85	GJH1211001R8315	10	0.175
24	24	K6-40E-01	GJH1211001R0401	10	0.175
42	42	K6-40E-02	GJH1211001R0402	10	0.175
48	48	K6-40E-03	GJH1211001R0403	10	0.175
110 ...127	110 ...127	K6-40E-84	GJH1211001R8404	10	0.175
220 ... 240	220 ... 240	K6-40E-80	GJH1211001R8400	10	0.175
380 ... 415	380 ... 415	K6-40E-85	GJH1211001R8405	10	0.175

Other types on request.

Main dimensions mm, inches



K6

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2DCD102011C0201

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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Mounting characteristics and conditions for use

Contactor types	AC operated	K6
	DC operated	KC6, TKC6
Mounting positions		
	Any position possible	
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	K6
	DC operated	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	
	All	IP20
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