Safety Relay K-ROS



General
- 4 contacts
- Forced guided contact set
- According to EN 50205, application type A
- Ambient temperature – 15 ... + 70 °C
- Soldering heat resistance 260 °C/5s
- RoHS compliance

Connections
- Soldering pins for PCB, pre-soldered with Sn100

Drive
- Direct current, neutral monostable

Approvals
- cULus • TÜV

Standards
- EN 50205 • IEC 61810-1 • UL 508

Technical Data
mechanical

Dimensions L x W x H (in mm)	42 x 16 x 32,2
Shock resistance NO-contact/NC-contact	30/30 g, 11 ms half sinus
Vibration resistance NO-contact/NC-contact	5/5 g, 10 – 55 Hz
Operating time NC-contact, contact opens	typical 9 ms
Operating time NO-contact, contact closes	typical 12 ms
Releasing time NO-contact, contact opens	typical 5 ms
Releasing time NC-contact, contact closes	typical 8 ms
Electrical service life (without load)	$>10^7$ cycles
Weight	35 g

Technical Data
electrical

Max. switching capacity		AC 1.840 VA, DC *W
Max. switching voltage		AC 230/240 V, DC *V
Max. switching current		8 A
Constant current I_{th}		8 A
Constant current I_{th2} at the same time over 2 contacts		5,6 A
Constant current I_{th2} at the same time over 3 contacts		4,6 A
Switching capacity	AC-15 230/240 V	Ie = 4 A
	DC-13 24 V	Ie = 1,2 A
Electrical service life (with nominal load)		$>10^5$ cycles
Short-circuit capacity 1.000 A/AC 230 V		10 A gL/gG-fuse

* see DC switching capacity

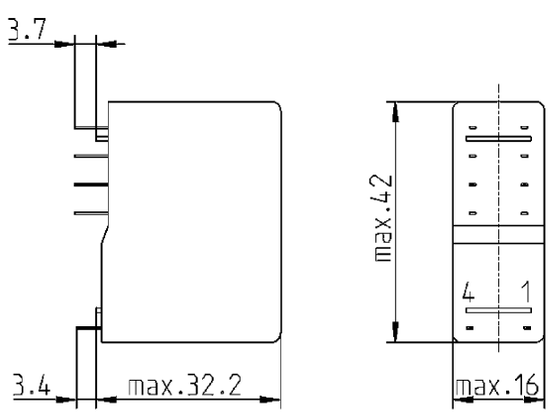
Insulation

Over voltage category (Ü) III
Degree of pollution (V) 2
Insulating material group II

B-I = Basic insulation
V-I = Re-inforced (double) insulation

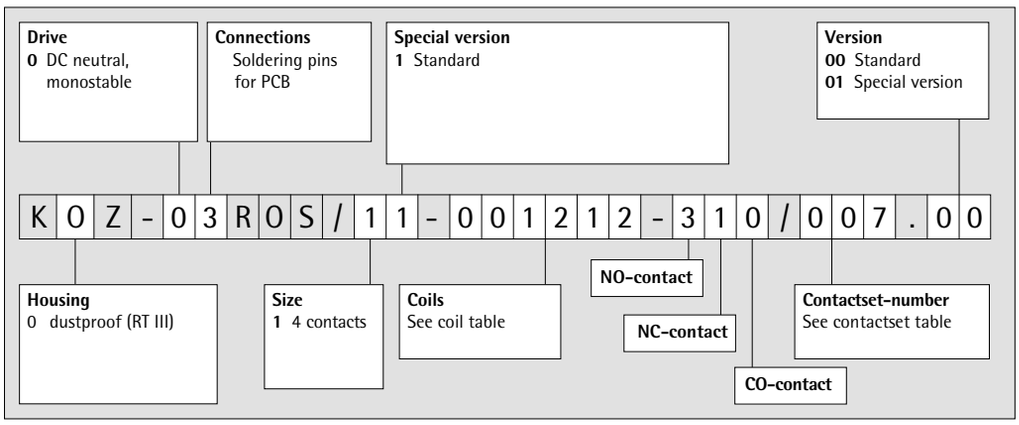
Insulation between	Nominal voltage network system		Air-/ creeping distance	Test voltage 50 Hz/60s
	AC 120/240 V	AC 230/400 V		
Contact – Contact	V-I	B-I	> 3 mm	AC 2.500 V
Contactset – Drive	V-I	B-I	> 3 mm	AC 2.500 V

Dimensions



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Type key



Contactset table

Number of contacts NO/NC/CO-contacts	AgCdO	AgNi * +0,2 µm Au	AgNi * +10 µm Au	$AgSnO_2$ +0,2 µm Au	$AgSnO_2$ +2 µm A	Contact material
220	001	002	003	004	009	Contactset
310	005	006	007	008	01	Number

* For new projects on request

Coil table

All values at ambient temperature Tu = 20 °C

Coil-No.	Resistance R/Ω	Resistance-tolerance ±	U_1/V	U_2/V	U_3/V	$U_{rück}$/V	Printing U_{nom}/V
1124	25	5%	3,4	7,7	8	0,2	6
1016	155	8%	8,7	18,9	19	0,5	12
1212	625	7%	17,5	38,2	39	1,0	24
1208	2.100	7%	31,5	69,8	70	1,7	48
1306	4.000	9%	45,6	95,9	98	2,5	60
1204	11.000	11%	73,7	157,9	156	3,9	110
1096	66.000	16%	197,0	379,1	382	9,5	250

U_1: Minimum operating voltage with consideration of coil self heating
U_2: Thermal restricted maximum coil voltage
U_3: Maximum admissible coil voltage to realize a contact gap of > 0.5 mm also at a contact fault
$U_{rück}$: Releasing voltage

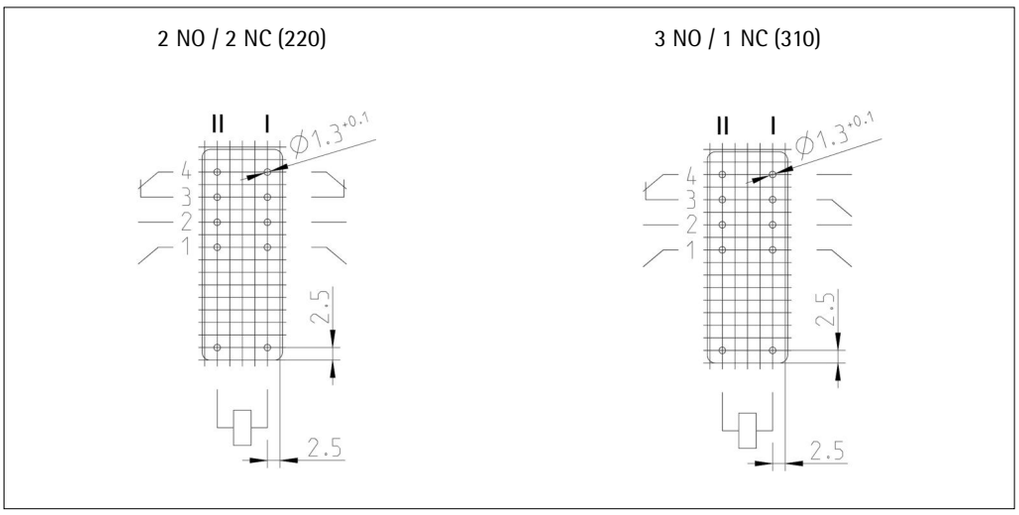
Further coils are possible and available

Running types

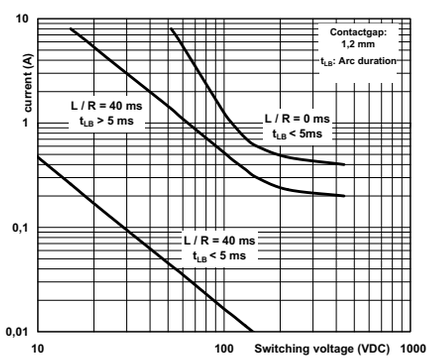
Article-No.	Type key	Printing U_{nom}	U_1/V	U_2/V	U_3/V	$U_{rück}$/V
ROS-2500	KOZ-03ROS/11-001212-220/002.00	DC 24 V	17,5	38,2	39	1,0
ROS-2502	KOZ-03ROS/11-001212-310/006.00	DC 24 V	17,5	38,2	39	1,0
ROS-2503	KOZ-03ROS/11-001212-310/005.00	DC 24 V	17,5	38,2	39	1,0
ROS-2504	KOZ-03ROS/11-001016-220/002.00	DC 12 V	8,7	18,9	19	0,5
ROS-2505	KOZ-03ROS/11-001212-220/003.00	DC 24 V	17,5	38,2	39	1,0
ROS-2506	KOZ-03ROS/11-001212-220/004.00	DC 24 V	17,5	38,2	39	1,0
ROS-2508	KOZ-03ROS/11-001212-310/008.00	DC 24 V	17,5	38,2	39	1,0
ROS-2517	KOZ-03ROS/11-001016-310/006.00	DC 12 V	8,7	18,9	19	0,5
ROS-2526	KOZ-03ROS/11-001212-310/010.00	DC 24 V	17,5	38,2	39	1,0
ROS-2542	KOZ-03ROS/11-001204-310/005.00	DC 110 V	73,7	157,9	156	3,9
ROS-2543	KOZ-03ROS/11-001212-220/009.00	DC 24 V	17,5	38,2	39	1,0
ROS-2551	KOZ-03ROS/11-001016-220/009.00	DC 12 V	8,7	18,9	19	0,5
ROS-2553	KOZ-03ROS/11-001208-220/004.00	DC 48 V	31,5	69,8	70	1,7
ROS-2554	KOZ-03ROS/11-001016-220/004.00	DC 12 V	8,7	18,9	19	0,5
ROS-2555	KOZ-03ROS/11-001016-310/008.00	DC 12 V	8,7	18,9	19	0,5
ROS-2558	KOZ-03ROS/11-001208-310/008.00	DC 48 V	31,5	69,8	70	1,7

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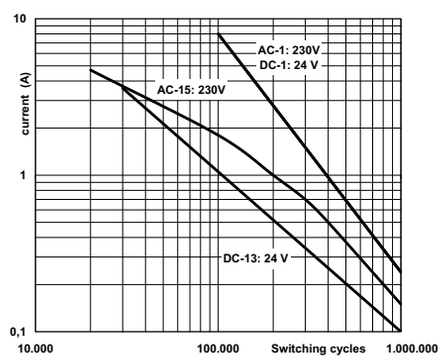
Connection grid
View on soldering side



Diagram



DC-switching capacity



Electrical service life