

## Contactors - Series K3-10ND.. to K3-22ND..

Type	Wiring Diagrams	Dimensions in mm
<b>AC-operated</b>		
K3-10ND10..		
K3-14ND10..		
K3-18ND10..		
K3-22ND10..		
K3-10ND01..		
K3-14ND01..		
K3-18ND01..		
K3-22ND01..		
<b>DC-operated</b>		
K3-10ND10=..		
K3-14ND10=..		
K3-18ND10=..		
K3-22ND10=..		
K3-10ND01=..		
K3-14ND01=..		
K3-18ND01=..		
K3-22ND01=..		



### Technical Data acc. to IEC / EN 60947-4-1

#### Main contacts

Type	AC1 $I_e (=I_{th})$ open at 40°C	AC2, AC3 380-440V	AC2, AC3 500-690V	Fuse „Type1“ gL (gG)
Type	A	kW	kW	A max.
K3-10ND..	25	4	5.5	63
K3-14ND..	25	5.5	7.5	63
K3-18ND..	32	7.5	10	63
K3-22ND..	32	11	10	63

#### Aux. contacts HN10, HN01

Typ / Type	AC1 $I_e (=I_{th})$ open at 40°C	AC15 220-240V	AC15 380-440V	Fuse „Type1“ gL (gG)
Typ / Type	A	A	A	A max.
K3-10ND.. + HN..	10	3	2	20
K3-14ND.. + HN..	10	3	2	20
K3-18ND.. + HN..	10	3	2	20
K3-22ND.. + HN..	10	3	2	20

#### Approvals

North America



Switzerland



Europe



Russia



China



## Cable cross-sections

	solid	flexible	solid	flexible	Cables per clamp	Terminal screws	Screw driver	Tightening torque
	mm <sup>2</sup>	mm <sup>2</sup>	AWG	AWG				
Contacts	0.75-6	1-4	18-10	18-10	1	M3.5	Pozidriv Pz2	0.8-1.4 Nm 7-12 lb. inch
Coil	0.75-2.5	0.5-2.5	14-12	18-12	2	M3.5	Pozidriv Pz2	0.8-1.4 Nm 7-12 lb. inch

## Coil

	AC-operated	DC-operated
Operation range	0.85-1.1	0.8-1.1
inrush	33-45VA	75W
sealed	7-10VA	2W

## Maximum Ambient Temperature

Main Contacts					
Type	Operation		with Thermal Overload Relay	Enclosed	Storage
	open °C	enclosed °C	open °C	°C	°C
<b>K3-10ND..</b>	-40 to +60 (+90) <sup>1)</sup>	-40 to +40	-25 to +60	-25 to +40	-50 to +90
<b>K3-14ND..</b>					
<b>K3-18ND..</b>					
<b>K3-22ND..</b>					

<sup>1)</sup> With reduced control voltage range 0.9 up to 1.0 x Us and with reduced rated current I<sub>e</sub> /AC1 according to I<sub>e</sub> /AC3

## Frequency of operations z

Contactors without thermal overload relay

Type	Switching without load	AC3, I <sub>e</sub>	AC4, I <sub>e</sub>	DC3, I <sub>e</sub>
	1/h	1/h	1/h	1/h
<b>K3-10ND..</b>	10,000	600	120	600
<b>K3-14ND..</b>	10,000	600	120	600
<b>K3-18ND..</b>	10,000	600	120	600
<b>K3-22ND..</b>	10,000	600	120	600

## Switching time at control voltage Us ±10%<sup>2)3)</sup>

Type	AC operated			DC operated		
	make time ms	release time ms	arc duration ms	make time ms	release time ms	arc duration ms
<b>K3-10ND..</b>	8-16	5-13	10-15	8-12	8-13	10-15
<b>K3-14ND..</b>						
<b>K3-18ND..</b>						
<b>K3-22ND..</b>						

<sup>2)</sup> Total breaking time = release time + arc duration

<sup>3)</sup> Values for delay of the release time of the make contact and the make time of the break contact will be increased, if magnet coils are protected against voltage peaks (varistor, RC-unit, diode-unit)

<sup>4)</sup> with integrated suppressor

## Main Contacts

Type	Rated insulation Voltage $U_i$ <sup>1)</sup> V~	Making capacity $I_{eff}$ at $U_e = 690V\sim$ A	Breaking capacity $I_{eff}$ 400V~ A	K3-10ND .. to K3-22ND .. $\cos\phi = 0,65$ 500V~ A
				A
K3-10ND..	690	200	180	150
K3-14ND..	690	200	180	150
K3-18ND..	690	200	200	180
K3-22ND..	690	200	200	180

<sup>1)</sup> Suitable at 690V for earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard industry):  $U_{imp} = 8$  kV. Data for other conditions on request.

## Mechanical life

Type	AC operated	DC operated with economy resistor
	S x 10 <sup>6</sup>	S x 10 <sup>6</sup>
K3-10ND..	10	10
K3-14ND..	10	10
K3-18ND..	10	10
K3-22ND..	10	10

## Current heat losses

Type	Power loss per pole bei $I_n/AC3$ 400V W	Contact resistance per pole mOhm
	W	mOhm
K3-10ND..	0.21	2.1
K3-14ND..	0.35	1.8
K3-18ND..	0.5	1.5
K3-22ND..	0.75	1.5

## Resistance to shock acc. to IEC 68-2-27

Shock time 20ms sine-wave

Type	NO	NC
	g	g
K3-10ND..	10	6
K3-14ND..	10	6
K3-18ND..	10	6
K3-22ND..	10	6

## Resistance to climatic conditions acc. to IEC60068

Open-type devices are climate-resistant in the constant climate according to IEC60068-2-78 (this is a climate with an ambient temperature of 40°C and an atmospheric humidity of 90 to 95%). Enclosed devices are climate-resistant in an alternating climate according to IEC 68-2-30 (this is a moist alternating climate with a 24-hour cycle between climates with an ambient temperature of 25°C, and an atmospheric humidity of 95 to 100% and an ambient temperature of 40°C, and an atmospheric humidity of 90 to 96% in the presence of condensation during rises in temperature).

## Maximum operating altitude

Data are valid up to an altitude of 2000m above sea level.



Main Contacts (cULus)		Type	K(G)3-10	K(G)3-14	K(G)3-18	K(G)3-22	K(G)3-24	K(G)3-32	K(G)3-40	K3-50	K3-62	K3-74
Rated operational current "General Use"		A	25	25	30	30	50	65	80	110	120	130
<b>Motor DOL 3-phase at 60Hz</b>												
Rated operational power	110-120V	hp	1½	2	2	3	5	5	7½	10	10	10
	200V	hp	3	3	5	5	7½	10	10	15	20	25
	220-240V	hp	3	3	7½	7½	10	10	15	20	25	30
	277V	hp	3	5	7½	7½	7½	10	15	20	25	30
	380-415V	hp	5	5	10	10	10	15	20	25	30	40
	440-480V	hp	5	7½	10	15	15	20	25	30	40	50
	550-600V	hp	7½	10	15	20	20	25	30	40	50	50
<b>Motor DOL 1-phase at 60Hz</b>												
Rated operational power of AC motors at 60Hz (1ph)	110-120V	hp	½	¾	1	1½	1½	2	3	3	5	7½
	200V	hp	1	1,5	2	3	3	5	7½	7½	10	15
	220-240V	hp	1½	2	3	3	5	5	7½	10	15	15
	277V	hp	2	3	3	5	5	7½	10	10	15	15
	380-415V	hp	3	3	5	5	5	7½	10	15	20	20
	440-480V	hp	3	5	5	7½	7½	10	15	20	25	25
	550-600V	hp	3	5	7½	10	10	15	20	25	30	30
<b>Motor DOL 3-phase according to ASME A17.5</b>												
Rated operational current 600V		A	-	-	-	-	15	22	-	27	37	-
Rated operational power of 3-phase motors for elevators (500.000 operations)	110-120V	hp	-	-	-	-	2	3	-	3	5	-
	200V	hp	-	-	-	-	3	5	-	7½	10	-
	220-240V	hp	-	-	-	-	5	7½	-	7½	10	-
	440-480V	hp	-	-	-	-	10	15	-	20	25	-
	550-600V	hp	-	-	-	-	10	20	-	25	30	-
Rated current 2 series contacts 600V		A	-	-	-	-	22	27	-	44	52	66
Fuse Class RK5 / Short-circuit current		A/kA	50/5	50/5	70/5	90/5	90/5	125/5	175/5	200/5	250/5	300/5
Fuse Class T / Short-circuit current		A/kA	45/100	50/100	70/100	90/100	110/100	150/100	150/100	175/100	175/100	175/100
Rated voltage		V	600	600	600	600	600	600	600	600	600	600
<b>Auxiliary Contacts (cULus)</b>			A600	A600	A600	A600	-	-	-	-	-	-