

## TYPE LS-K CONTACTORS TECHNICAL SPECIFICATIONS

### LS-K CONTACTORS FROM LS 4K TO LS 18K INTERNATIONAL RATINGS



Type			LS 4K	LS 5K	LS 7K	LS 11K	LS 15K	LS 18K	
Style			3 pole	3 pole   4 pole	3 pole   4 pole	3 pole   4 pole	3 pole   4 pole	3 pole   4 pole	3 pole   4 pole
<b>Rated insulation voltage <math>U_i</math></b>			Pollution degree 3						
	V		1000	1000	1000	1000	1000	1000	1000
<b>Rated impulse voltage <math>U_{imp}</math></b>			kV						
			6	6	6	6	6	6	6
<b>Mechanical endurance</b>									
AC - operation	Operations	Mil	15	15	15	15	15	15	15
DC - operation	Operations	Mil	15	15	15	15	15	15	15
<b>Utilization category AC-1</b>			Rated power values at resistive load						
Rated power value $P_N$	3-230 V	kW	9,5	9,5	12	17	22,5	22,5	30
	<b>3-400 V</b>	<b>kW</b>	<b>16,5</b>	<b>16,5</b>	<b>22</b>	<b>29</b>	<b>39,5</b>	<b>39,5</b>	<b>55</b>
	3-500 V	kW	21,5	21,5	27,5	39	52	52	69
	3-690 V	kW	28,5	28,5	38	51	68,5	68,5	95
Rated current $I_n$ up to 690 V		Amps	<b>25</b>	<b>25</b>	<b>32</b>	<b>45</b>	<b>60</b>	<b>60</b>	<b>90</b>
Minimum wire cross-section under rated load $I_n$		mm <sup>2</sup>	4	4	6	10	16	16	35
Admissible practical operation frequency		opsh	1200	1200	1200	1200	1200	1200	1200
Rated current at 1000 opsh		A	25	25	32	45	60	60	90
<b>Utilization category AC-3</b>			Rated power values of AC induction type motors						
Rated power value $P_N$	3-230 V	kW	2,2	3	4	7,5	9	11	
	<b>3-400 V</b>	<b>kW</b>	<b>4</b>	<b>5,5</b>	<b>7,5</b>	<b>11</b>	<b>15</b>	<b>18,5</b>	
	3-415 V	kW	4	5,5	7,5	11	15	22	
	3-500 V	kW	5,5	7,5	10	15	18,5	25	
	3-690 V	kW	5,5	7,5	10	15	18,5	30	
Rated current $I_n$ up to 440 V		Amps	<b>9</b>	<b>12</b>	<b>18</b>	<b>25</b>	<b>32</b>	<b>40</b>	
Admiss. switching freq. at $P_N$ and cont. cycling		opsh	1200	1200	1200	1200	1200	1200	
<b>Utilization category AC-4</b>			Rated power values of AC induction type motors						
Rated power value $P_N$	3-230 V	kW	1,1	1,5	1,8	3	3,7	4	
	<b>3-400 V</b>	<b>kW</b>	<b>2,2</b>	<b>3</b>	<b>3,7</b>	<b>5,5</b>	<b>7,5</b>	<b>9</b>	
	3-500 V	kW	3	4	5,5	7,5	10	11	
	3-690 V	kW	4	5,5	7,5	10	11	15	
Rated current $I_n$ with practical electrical endurance up to	3-440 V	Amps	<b>5</b>	<b>7</b>	<b>8</b>	<b>12</b>	<b>16</b>	<b>18,5</b>	
Admissible switching frequency		opsh	360	360	360	360	360	360	200
Maximum permissible load $P_N$	3-400 V	kW	4	5,5	7,5	11	15	18,5	
$I_n$	3-400 V	A	9	12	18	25	32	40	
<b>Utilization category AC-6b</b>			Rated power values of AC capacitors (minimum inductance between parallel connected capacitors 6 $\mu$ H)						
Single / Parallel operation	3-230 V	kvar	2,5/2,5	3/3	3/3	7/6,5	10 /10 $\blacktriangle$	12/12 $\blacktriangle$	
	<b>3-400 V</b>	<b>kvar</b>	<b>4 /4</b>	<b>5/5</b>	<b>5/5</b>	<b>13/11</b>	<b>16,7/16 <math>\blacktriangle</math></b>	<b>20/20 <math>\blacktriangle</math></b>	
	3-525 V	kvar	4 /4	6/5	6/5	17/13	20 /20 $\blacktriangle$	25/25 $\blacktriangle$	
	3-690 V	kvar	4 /4	6/5	6/5	17/12,5	19 /16,7 $\blacktriangle$	20/20 $\blacktriangle$	
<b>DC-switching Rated current <math>I_n</math></b>			3 contacts connected in series (all DC-motors $L/R \leq 15$ ms)						
DC-1 (resistive load)	24 ... 220 V $I_n$	A	25	25	25	32	50	50	90
DC-3 / DC-5	24 ... 110 V $I_n$	A	15	15	15	20	25	32	60
Admissible switching frequency (DC-1 ... DC-5)			50	50	50	50	50	50	50
<b>Short Circuit protection of main contacts<sup>1)</sup></b>			Maximum permissible fuse (operating category gL)						
Coordination type »2«			25	25	35	50	50	50	63
no welding			10	10	25	35	35	35	80
<b>Operating coil for AC-operation</b>			Standard coil, power consumption at 50 Hz 1,0 $U_n$						
Operating range 0,8 ... 1,1 $U_n$	Pick-up $P_{AS}$	VA	45	45	45	45	88	88	191
	cos $\phi$		0,82	0,82	0,82	0,82	0,76	0,76	0,54
	Holding $P_{HS}$	VA	6	6	6	6	9	9	17
	cos $\phi$		0,34	0,34	0,34	0,34	0,31	0,31	0,26
<b>Operating coil for DC-operation</b>			Standard coil, power consumption at 1,0 $U_n$						
Operating range 0,8 ... 1,1 $U_n$	Pick-up $P_A$	W	5,5	5,5	5,5	5,5	7,5	7,5	197
	Holding $P_H$	W	5,5	5,5	5,5	5,5	7,5	7,5	2,6
<b>Switching items at AC-operation</b>			Standard coil, power consumption at 1,0 $U_n$						
Making delay		ms	6 ... 25	6 ... 25	6 ... 25	6 ... 25	7 ... 25	7 ... 25	7 ... 25
Drop-out delay		ms	6 ... 13	6 ... 13	6 ... 13	6 ... 13	5 ... 25	5 ... 25	5 ... 25
<b>Switching items at DC-operation</b>			Standard coil, power consumption at 1,0 $U_n$						
Making delay		ms	35 ... 65	35 ... 65	35 ... 65	35 ... 65	35 ... 70	35 ... 70	35 ... 70
Drop-out delay		ms	30 ... 60	30 ... 60	30 ... 60	30 ... 60	40 ... 65	40 ... 65	40 ... 65

1) According to VDE 0660 part 102 / IEC 947 -4-1 coordination type permit the following damages:

»2« Slight welding of contacts that can easily be opened, is admitted but no further damages.

2) Minimum inductance between parallel connected capacitor 20  $\mu$ H



# TYPE LS-K CONTACTORS TECHNICAL SPECIFICATIONS

LS-K CONTACTORS  
FROM LS 22K TO LS 55K  
INTERNATIONAL  
RATINGS



Type	LS 22K		LS 30K		LS 37K		LS 45K		LS 55K
Style	3 pole		3 pole	4 pole	3 pole	4 pole	3 pole	4 pole	3 pole
Rated insulation voltage $U_i$			Pollution degree 3						
	V	1000	1000		1000		1000		1000
Rated impulse voltage $U_{imp}$			8		8		8		8
Mechanical endurance									
AC - operation	Operations	Mill	15	15	15	15	15	15	15
DC - operation	Operations	Mill	15	15	15	15	15	15	15
Utilization category AC-1			Rated power values at resistive load						
Rated power value $P_N$	3-230V	kW	30	42	42	53	53		
	<b>3-400V</b>	<b>kW</b>	<b>55</b>	<b>72,5</b>	<b>72,5</b>	<b>92</b>	<b>92</b>		
	3-500V	kW	69	95	95	121	121		
	3-690V	kW	95	125	125	160	160		
Rated current $I_N$ up to 690V		Amps	<b>90</b>	<b>110</b>	<b>110</b>	<b>140</b>	<b>140</b>		<b>140</b>
Minimum wire cross-section under rated load $I_N$		mm <sup>2</sup>	35	35	35	50	50		50
Admissible practical operation frequency		opsh	1200	1200	1200	1200	1200		1200
Rated current at 1000 opsh		A	90	110	110	112	112		112
Utilization category AC-3			Rated power values of AC induction type motors						
Rated power value $P_N$	3-230V	kW	15	18,5	22	25	30		
	<b>3-400V</b>	<b>kW</b>	<b>22</b>	<b>30</b>	<b>37</b>	<b>45</b>	<b>55</b>		<b>55</b>
	3-415V	kW	25	37	45	50	55		55
	3-500V	kW	30	40	45	55	65		65
	3-690V	kW	35	45	45	55	65		65
Rated current $I_N$ up to 440V		Amps	<b>50</b>	<b>65</b>	<b>80</b>	<b>95</b>	<b>105</b>		<b>105</b>
Admiss. switching freq. at $P_N$ and cont. cycling		opsh	1200	1200	1200	1200	1200		1200
Utilization category AC-4			Rated power values of AC induction type motors						
Rated power value in $P_N$	3-230V	kW	5,5	7,5	10	11	13		
	<b>3-400V</b>	<b>kW</b>	<b>11</b>	<b>15</b>	<b>18,5</b>	<b>22</b>	<b>25</b>		<b>25</b>
	3-500V	kW	15	18,5	22	25	30		30
	3-690V	kW	18,5	22	25	30	37		37
Rated current $I_N$ with practical electrical endurance up to	3-440V	Amps	<b>23</b>	<b>30</b>	<b>37</b>	<b>44</b>	<b>50</b>		<b>50</b>
Admissible switching frequency		opsh	200	200	200	200	200		200
Maximum permissible load $P_N$	3-400V	kW	22	30	37	45	55		55
$I_N$	3-400V	A	50	65	80	95	105		105
Utilization category AC-6b			Rated power values of AC capacitors (minimum inductance between parallel connected capacitors 6 µH)						
Single / Parallel operation	3-230V	kvar	17/17	21/21	24/24	28/28	30/30		
	<b>3-400V</b>	<b>kvar</b>	<b>30/30</b>	<b>38/38</b>	<b>40/40</b>	<b>50/50</b>	<b>60/50</b>		<b>60/50</b>
	3-525V	kvar	35/35	50/50	50/50	50/50	60/66		60/66
	3-690V	kvar	40/30	40/40	40/40	40/40	60/50		60/50
DC-switching Rated current $I_N$			3 contacts connected in series (all DC-motors L/R ≤ 15 ms)						
DC-1 (resistive load)	24 ... 220 V $I_N$	A	90	110	110	140	140		140
DC-3 / DC-5	24 ... 110 V $I_N$	A	60	70	70	95	95		95
Admissible switching frequency (DC-1 ... DC-5)			50	50	50	50	50		50
Short Circuit protection of main contacts <sup>1)</sup>			Maximum permissible fuse (operating category gL)						
Coordination type »2«	no welding		100	125	125	200	200		200
			80	100	100	160	160		160
Operating coil for AC-operation			Standard coil, power consumption at 50 Hz 1,0 $U_N$						
Operating range 0,8 ... 1,1 $U_N$	Pick-up $P_{AS}$	VA	191	191	191	191	191		191
		cos φ	0,54	0,54	0,54	0,54	0,54		0,54
	Holding $P_{HS}$	VA	17	17	17	17	17		17
		cos φ	0,26	0,26	0,26	0,26	0,26		0,26
Operating coil for DC-operation			Standard coil, power consumption at 1,0 $U_N$						
Operating range 0,8 ... 1,1 $U_N$	Pick-up $P_A$	W	197	197	197	197	197		197
	Holding $P_H$	W	2,6	2,6	2,6	2,6	2,6		2,6
Switching items at AC-operation			Standard coil, power consumption at 1,0 $U_N$						
Making delay	ms		9 ... 35	9 ... 35	9 ... 35	9 ... 35	9 ... 35		9 ... 35
Drop-out delay	ms		9 ... 15	9 ... 15	9 ... 15	9 ... 15	9 ... 15		9 ... 15
Switching items at DC-operation			Standard coil, power consumption at 1,0 $U_N$						
Making delay	ms		15 ... 40	15 ... 40	15 ... 40	15 ... 40	15 ... 40		15 ... 40
Drop-out delay	ms		9 ... 15	9 ... 15	9 ... 15	9 ... 15	9 ... 15		9 ... 15

1) According to VDE 0660 part 102 / IEC 947 -4-1 coordination type permit the following damages:  
»2« Slight welding of contacts that can easily be opened, is admitted but no further damages.

For technical specifications or larger K contactors through LS450K (1250A), request from factory.

## LS-K CONTACTORS FROM LS 75K TO LS 160K INTERNATIONAL RATINGS

Type	LS 75K		LS 90K		LS 110K		LS 132K		LS 160K		
Style	3 pole		3 pole   4 pole		3 pole		3 pole   4 pole		3 pole   4 pole		
Rated insulation voltage $U_i$			Pollution degree 3								
	V	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Rated impulse voltage $U_{imp}$			kV								
		8	8	8	8	8	8	8	8	8	
Mechanical endurance											
AC - operation	Operations	Mill	10	10	10	10	10	10	10	10	
	Operations	PerH	1200	1200	1200	1200	1200	1200	1200	1200	
Utilization category AC-1			Rated power values at resistive load								
Rated power value $P_N$	3-230V	kW	90	90	123	114	114	152	170	191	
	<b>3-400V</b>	<b>kW</b>	<b>155</b>	<b>155</b>	<b>214</b>	<b>196</b>	<b>196</b>	<b>263</b>	<b>310</b>	<b>329</b>	
	3-500V	kW	200	200	281	259	259	346	389	415	
	3-690V	kW	270	270	371	341	341	457	537	572	
	3-1000V	kW	400	400	562	517	517	692	780	866	
Rated current $I_n$ up to 690V		Amps	<b>250</b>	<b>250</b>	<b>325</b>	<b>315</b>	<b>315</b>	<b>400</b>	<b>450</b>	<b>500</b>	
Minimum wire cross-section under rated load $I_n$		mm <sup>2</sup>	120	120	185	185	185	2X(25X5)	2X(30X5)	2X(25X5)	
Admissible practical operation frequency		opsh	600	600	600	600	600	600	600	600	
Rated current at 1000 opsh		A	<b>200</b>	<b>200</b>	<b>260</b>	<b>252</b>	<b>252</b>	<b>320</b>	<b>382</b>	<b>425</b>	
Utilization category AC-3			Rated power values of AC induction type motors								
Rated power value $P_N$	3-230V	kW	45	55	65	75	75	90	100	110	
	<b>3-400V</b>	<b>kW</b>	<b>75</b>	<b>90</b>	<b>110</b>	<b>132</b>	<b>132</b>	<b>160</b>	<b>185</b>	<b>200</b>	
	3-415/440V	kW	80	100	125	132	132	160	200	250	
	3-500V	kW	100	110	132	155	155	200	250	309	
	3-690V	kW	100	132	155	200	200	250	309	377	
	3-1000V	kW	65	100	110	150	150	200	250	309	
Rated current $I_n$ up to 440V		Amps	<b>150</b>	<b>185</b>	<b>205</b>	<b>250</b>	<b>250</b>	<b>309</b>	<b>309</b>	<b>377</b>	
Admiss. switching freq. at $P_N$ and cont. cycling		opsh	600	600	600	600	600	600	600	600	
Utilization category AC-4			Rated power values of AC induction type motors (High Switching, Plugging)								
Rated power value in $P_N$	3-230V	kW	18,5	22	25	33	33	40	45	50	
	<b>3-400V</b>	<b>kW</b>	<b>33</b>	<b>40</b>	<b>45</b>	<b>55</b>	<b>55</b>	<b>63</b>	<b>75</b>	<b>80</b>	
	3-500V	kW	45	50	63	75	75	90	110	125	
	3-690V	kW	55	63	80	100	100	125	150	175	
	3-690V	Amps	<b>65</b>	<b>75</b>	<b>90</b>	<b>110</b>	<b>110</b>	<b>132</b>	<b>150</b>	<b>175</b>	
Rated current $I_n$ with practical electrical endurance up to		Opsh	150	150	150	150	150	150	150	150	
Admissible switching frequency		3-400V	75	90	110	132	132	160	185	200	
Maximum permissible load $P_N$		A	150	185	205	250	250	309	377	425	
Utilization category AC-6b			Rated power values of AC capacitors (minimum inductance between parallel connected capacitors 6 $\mu$ H)								
Single / Parallel operation	3-230V	kvar	54	63	72	85	85	100	110	125	
	<b>3-400V</b>	<b>kvar</b>	<b>100</b>	<b>112</b>	<b>135</b>	<b>148</b>	<b>148</b>	<b>175</b>	<b>200</b>	<b>225</b>	
DC-switching Rated current $I_n$			3 contacts connected in series (all DC-motors $L/R \leq 15$ ms)								
DC-1 (resistive load)	24 ... 220V $I_n$	A	250	250	315	315	315	315	315	500	
DC-3 / DC-5	24 ... 110V $I_n$	A	150/95	185/105	205/150	250/185	250/185	309/205	309/205	309/205	
Admissible switching frequency (DC-1 ... DC-5)			50	50	50	50	50	50	50	50	
Short Circuit protection of main contacts <sup>1)</sup>			Maximum permissible fuse (operating category gL)								
Coordination type »2« no welding			250	250	400	315	315	500	500	500	
			160	200	250	250	250	250	315	315	
Operating coil for AC-operation			Standard coil, power consumption at 50 Hz 1,0 $U_n$								
Operating range 0,8 ... 1,1 $U_n$	Pick-up $P_{AS}$	VA	400	400	830	425	750	425	750	750	
		cos $\phi$	0,6	0,6	-	0,6	-	-	-	-	
		VA	32	32	60	20	25	20	25	25	
	Holding $P_{HS}$	cos $\phi$	0,4	0,4	0,37	-	-	-	-	-	
		W	135	135	650	350	650	350	650	650	
	Holding $P_H$	W	3	3,5	4,5	3,5	4,5	3,5	4,5	4,5	
		W	135	135	650	350	650	350	650	650	
Switching items at AC-operation			Standard coil, power consumption at 1,0 $U_n$								
Making delay	ms	20 ... 25	20...25	70...80	36 ... 40	60...70	70...80	60...70	70...80	70...80	
Drop-out delay	ms	10 ... 13	10...13	70...80	10 ... 15	13...17	70...80	60...70	70...80	70...80	
Switching items at DC-operation			Standard coil, power consumption at 1,0 $U_n$								
Making delay	ms	60 ... 70	60...70	70...80	60 ... 70	60...70	70...80	60...70	70...80	70...80	
Drop-out delay	ms	13 ... 17	13...17	70...80	13 ... 17	13...17	70...80	60...70	70...80	70...80	
Dimensions											
Without auxiliary contacts	Width mm		135	135	253	173	173	253	173	253	
LS 75 ... LS 450K with 22	Height mm		178	178	270	212	212	270	212	270	
	Depth mm		165,5	165,5	246	208	208	246	208	246	

1) According to VDE 0660 part 102 / IEC 947 -4-1 coordination type permit the following damages:

»2« Slight welding of contacts that can easily be opened, is admitted but no further damages.

For technical specifications or larger K contactors through LS450K (1250A), request from factory.



# TYPE LS-K CONTACTORS TECHNICAL SPECIFICATIONS



## LS-K CONTACTORS FROM LS 220K TO LS 450K INTERNATIONAL RATINGS

Type		LS 220K		LS 280K		LS 375K		LS 450K	
Style		3 pole	4 pole	3 pole	4 pole	3 pole	4 pole	3 pole	4 pole
Rated insulation voltage $U_{imp}$		V		1000		1000		1000	
Rated impulse voltage $U_{imp}$		kV		-		-		-	
Mechanical endurance									
AC/DC	Operations	Mil	10	10	10	10	3		
	Operations	Per/H	1200	1200	900	600			
Utilization category AC-1		Rated power values at resistive load							
Rated power value $P_N$	3-230V	kW	228	266	381	476			
	<b>3-400V</b>	<b>kW</b>	<b>395</b>	<b>460</b>	<b>658</b>	<b>822</b>			
	3-500V	kW	519	606	866	1082			
	3-690V	kW	686	800	1143	1428			
	3-1000V	kW	1039	1212	1732	2165			
Rated current $I_n$ up to 690V		Amps	<b>600</b>	<b>700</b>	<b>1000</b>	<b>1250</b>			
Minimum wire cross-section under rated load $I_n$		mm <sup>2</sup>	2X(30X8)	2X(30X10)   2X(40X10)					
Admissible practical operation frequency		opsh	300	300	300	120			
Rated current at 1000 opsh		A	<b>510</b>	<b>546</b>	<b>736</b>	<b>1125</b>			
Utilization category AC-3		Rated power values of AC induction type motors							
Rated power value $P_N$	3-230V	kW	125	160	220	250			
	<b>3-400V</b>	<b>kW</b>	<b>220</b>	<b>280</b>	<b>375</b>	<b>450</b>			
	3-415/440V	kW	230	315	400	450			
	3-500V	kW	300	400	480	500			
	3-690V	kW	375	450	500	550			
	3-1000V	kW	300	375	450	500			
Rated current $I_n$ up to 440V		Amps	<b>420</b>	<b>550</b>	<b>700</b>	<b>825</b>			
Admiss. switching freq. at $P_N$ and cont. cycling		opsh	300	300	300	120			
Utilization category AC-4		Rated power values of AC induction motors (high switching, plugging duty)							
Rated power value in $P_N$	3-230V	kW	45	50	80	110			
	<b>3-400V</b>	<b>kW</b>	<b>80</b>	<b>90</b>	<b>132</b>	<b>165</b>			
	3-500V	kW	100	110	225	250			
	3-690V	kW	132	150	250	315			
	3-1000V	kW	150	165	250	350			
Rated current $I_n$ with practical element endurance up to		Amps	<b>150</b>	<b>165</b>	<b>250</b>	<b>350</b>			
Admissible switching frequency	3-400V	Opsh	150	150	120	120			
Maximum permissible load $P_N$	3-400V	kW	220	280	375	450			
	3-400V	A	420	550	700	825			
Utilization category AC-6b		Rated values of AC capacitors (minimum inductance between parallel connected capacitors 6 $\mu$ H)							
Single / Parallel operation	3-230V	kvar	121	171	225	283			
	<b>3-400V</b>	<b>kvar</b>	<b>234</b>	<b>292</b>	<b>360</b>	<b>472</b>			
DC-switching Rated current $I_n$		3 contacts connected in series (all DC-motors $L/R \leq 15$ ms)							
DC-1 (resistive load)	24 ... 220 V $I_n$	A	600	700	1000	1250			
DC-3 / DC-5	24 ... 110 V $I_n$	A	420/250	550/300	700/400	825/700			
Admissible switching frequency (DC-1 ... DC-5)			50	50	50	50			
Short Circuit protection of main contacts <sup>1)</sup>		Maximum permissible fuse (operating category gL)							
Coordination type »2« no welding			630	800	1000	1250			
			400	500	630	1000			
Operating coil for AC-operation		Standard coil, power consumption at 50 Hz 1,0 $U_n$							
Operating range 0,8 ... 1,1 $U_n$	Pick-up $P_{AS}$	VA	680	680	750	2760			
	cos $\varnothing$		-	-	-	-			
Holding $P_{HS}$	VA	23	23	25	6				
	cos $\varnothing$		-	-	-	-			
Operating coil for DC-operation		Standard coil, power consumption at 1,0 $U_n$							
Operating range 0,8 ... 1,1 $U_n$	Pick-up $P_A$	W	600	600	600				
	Holding $P_H$	W	4	4	4,5				
Switching items at AC-operation		Standard coil, power consumption at 1,0 $U_n$							
Making delay	ms		80 ... 90	80 ... 90	70 ... 80	50 ... 55			
Drop-out delay	ms		40 ... 50	40 ... 50	70 ... 80	115 ... 130			
Switching items at DC-operation		Standard coil, power consumption at 1,0 $U_n$							
Making delay	ms		80 ... 90	80 ... 90		-			
Drop-out delay	ms		40 ... 50	40 ... 50		-			
Dimensions									
Without auxiliary contacts	Width mm		160   214	160   214	253	312	464   581		
LS 75 ... LS 450K with 22	Height mm		220	220	270	265	380		
	Depth mm		228	228	262	304	327		

1) According to VDE 0660 part 102 / IEC 947-4-1 coordination type permit the following damages:  
»2« Slight welding of contacts that can easily be opened, is admitted but no further damages.

For technical specifications or larger K contactors through LS450K (1250A), request from factory.