



*3 Pole Contactor
Type LS5K with B27T
type Overload*



*4 Pole Contactor
Type LS11K-4*



*4 Pole Contactor
Type LS55K-4*

3 - 4 POLE CONTACTORS LS-K SERIES

- 25A - 1215 Amp Rated, 3 and 4 Pole Contactors
- 4 Pole with 2 NO/2NC Power Poles thru 100Amps
- 3 Pole units can be used with standard type B overloads

Modular Accessories

- Front Mount Auxiliaries
- Side Mount Auxiliaries
- Surge Suppression Modules
- Interface Modules
- Mechanical Interlock Kits
- Plug on Overloads (Type B27T, B77S, B177S)

Conformity to Standards

IEC 947-4-1
VDE 0660
EN 60947
BS 5424



(to 600VAC)

3-4 POLE CONTACTORS Type LSK

25 Amp - 1250 Amp Rated

Web: www.calcentron.com

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Cal-Centron Wholesale Co

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Stockton, CA 95205

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3 N.O. POWER POLES								600 Volt AC				
Max Horsepower						AMPS (600V)		Part Number	List Price	DIMENSIONS (MM) without aux. contacts		
(1 Phase) Voltage		(3 Phase) Voltage				I _{th}	UL/CSA Inductive			H	W	D [▲]
115	230	200	230	460	600			▲				
.75	1.5	3	3	5	7.5	25	25	LS4K.10*	\$90.00	81	45	115/114
.75	2	3	3	7.5	10	25	25	LS5K.10*	115.00	81	45	115/114
1	3	5	5	10	15	32	32	LS7K.10*	138.00	81	45	115/114
1.5	3	5	7.5	15	15	45	32	LS11K.10*	153.00	81	45	115/114
2	5	10	10	20	25	54	54	LS15K.10*	173.00	87	55	127/163
3	5	10	10	25	25	55	55	LS18K.11*	204.00	87	55	127/163
3	7.5	15	15	40	40	90	80	LS22K.11*	216.00	118	79	116/144
5	10	20	20	50	50	110	100	LS30K.11*	240.00	118	79	116/144
5	15	20	25	50	60	110	100	LS37K.11*	300.00	118	79	116/144
7.5	15	25	30	60	75	140	140	LS45K.11*	380.00	115	86	126/154
10	20	30	40	75	75	140	140	LS55K.11*	470.00	115	86	126/154
		50	50	125	125	250	156	LS75K.11*	800.00	178	124	166
		60	60	150	150	250	175	LS90K.11*	1170.00	178	124	166
		60	75	150	150	315	200	LS110K.11*	1270.00	212	150	208
		60	75	150	150	315	200	LS132.11*	1470.00	212	150	208
		100	100	250	300	400	310	LS160K.11*	1770.00	212	150	208
		125	150	300	400	600	500	LS220K.22*	2150.00	218	183	228
		150	200	400	500	700	650	LS280K.22*	3100.00	218	183	228
		200	250	500	600	1000	810	LS375K.22*	3900.00	250	230	262
		350	450	900	900	1250	1215	■ LS450K.22*	7560.00	380	441	327

Only LS450K.22 is not yet cUL approved.

*** COIL SUFFIX** (Bold type - commonly used coils)

For LS4K-LS110K (3 pole) LS5K-4 to LS90K -4 (4 pole)				For LS132 - LS375K (3 & 4 pole)		For LS450K
AC	60 HZ	50HZ	DC	AC/DC	50/60HZ/DC	50/60HZ
*			* (1)	*	(2)	* (3)
-G	24V	24V	-MSW 12VDC	-N	24-28V	-A 110-120V
-A	120V	110V	-NSW 24VDC	-AP	110-127V	-C 220-240V
-B	208V	200V	-	-	-	-
-C	220V	220V	-OSW 48VDC	-CR	220-260V	-E 360-440V
-H	277V	230V	-PSW 110VDC	-EX	440-500V	-
-E	480V	380V	-RSW 220VDC	-	-	-
-F	600V	500V	-	-	-	-

ALL LS...K Contactors have

SPECIAL RATINGS FOR LIGHTING APPLICATIONS.

Check with factory.

- All above contactors are all cUL approved except LS450K.22.

To Add Overload, Refer to Pages 26 and 27.

Accessories on page 59.

- ▲ AC Depth/DC Depth

Auxiliary Contacts		
Contactors	Standard Number Aux. / Code	Maximum Number Aux. / Code
LS4K-LS15K	1N.O. / .10	4 / .40, .22
LS18K-LS160K	1NO, 1NC / .11	4 / .40, .22
LS220K-LS450K	2NO, 2NC / .22	4NO, 4NC / .44

▲ Code = First Digit, N.O. Aux.
= Second Digit, N.C. Aux.

- FOR EXTRA SNAP ON AUXILIARY CONTACTS, SEE "K" ACCESSORY Page 59.

- (1) SW: Add for DC Power Plant, (single winding)

LS4K-LS11K.....add \$45 List
LS15K-LS22K....add \$65 List

TW: LS30-110K- Add \$65 List

- (2) AC/DC: Larger contactors LS132K-LS375K have AC/DC powerplants and are usable on 50/60HZ as well as DC coil voltage systems.

- (3) LS450K contactor is available only with AC coil.

4 N.O POWER POLES (CODE - 4) 2 N.O. & 2 N.C. POWER POLES (CODE - 22)							600 VOLT AC CE			
Max Horsepower				AMPS (600V)		Part Number	List Price	DIMENSIONS (mm) without aux. contacts		
(3 Phase) Voltage				AC-1	UL/CSA Inductive					
200	230	460	600					W	H	D*
3	3	7.5	10	25	25	LS5K-4- LS5K-22-*	\$130.00 130.00	81	45	85/115 85/115
5	5	10	15	32	32	LS7K-4- LS7K-22-*	164.00 164.00	81	45	85/115 85/115
5	7.5	15	15	45	32	LS11K-4- LS11K-22-*	183.00 183.00	87	55	98/134 98/134
10	10	20	25	60	54	LS15K-4- LS15K-22-*	233.00 233.00	87	55	98/134 98/134
10	10	25	25	90	55	LS18K-4- LS18K-22-*	284.00 284.00	118	87	119/147 119/147
20	20	50	50	110	100	LS30K-4- LS30K-22-*	419.00 419.00	118	87	119/147 119/147
20	25	50	60	110	100	LS37K-22-*	484.00	118	87	119/147
25	30	60	75	140	140	LS45K-4-*	506.00	118	96	126/154
30	40	75	75	200	140	LS55K-4-*	720.00	200	150	176
50	60	125	125	325	156	LS90K-4-*	1445.00	225	210	246
60	75	150	150	400	200	LS132K-4-*	1745.00	225	210	246
100	100	200	300	500	310	LS160K-4-*	2395.00	225	210	246
125	150	300	400	600	500	LS220K-4-*	2650.00	218	214	228
150	200	400	500	700	650	LS280K-4-*	3950.00	218	214	228
200	250	500	600	1000	810	LS375-4-*	5400.00	250	269	304
350	450	900	900	1250	1215	LS450K-4-*	9450.00	380	558	327

NOTE: Above contactors, LS5K - LS55K are supplied without auxiliaries.

* **COIL SUFFIX** - Select coil from chart on the previous page.

For accessories - see page 59.



LS37K-22-A
4 pole (2 N.O. / 2 N.C., 100 Amp.)



LS450K-4, 11-A
4 pole (N.O., 1250 Amp.)

▲ AC Depth/DC Depth

Standard Auxiliary Contacts (4-Pole Contactors)	
Contactors	Standard Auxiliary
LS4K - LS55K	Without Auxiliary
LS90K - LS450K	1N.O., 1 N.C.

Accessories on page 59.

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
Rated insulation voltage U_i			Pollution degree 3					
	V		1000	1000	1000	1000	1000	1000
Rated impulse voltage U_{imp}			kV					
	kV		6	6	6	6	6	6
Mechanical endurance								
AC - operation	Operations	Mil	15	15	15	15	15	15
DC - operation	Operations	Mil	15	15	15	15	15	15
Utilization category AC-1			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
	3-400 V	kW	16,5	16,5	22	29	39,5	39,5
	3-500 V	kW	21,5	21,5	27,5	39	52	52
	3-690 V	kW	28,5	28,5	38	51	68,5	68,5
Rated current I_N up to 690 V	Amps		25	25	32	45	60	60
Minimum wire cross-section under rated load I_N	mm ²		4	4	6	10	16	16
Admissible practical operation frequency	opsh		1200	1200	1200	1200	1200	1200
Rated current at 1000 opsh	A		25	25	32	45	60	60
Utilization category AC-3			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
	3-400 V	kW	4	5,5	7,5	11	15	18,5
	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		9	12	18	25	32	40
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 P_N	3-230 V	kW	1,1	1,5	1,8	3	3,7	4
	3-400 V	kW	2,2	3	3,7	5,5	7,5	9
	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	5	7	8	12	16	18,5
Admissible switching frequency	opsh		360	360	360	360	360	360
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
Utilization category AC-6b			Rated power values of AC capacitors (minimum inductance between parallel connected capacitors 6 H)					
Single / Parallel operation	3-230 V	kvar	2,5/2,5	3/3	3/3	7/6,5	10 /10 ▲	12/12 ▲
	3-400 V	kvar	4 /4	5/5	5/5	13/11	16,7/16 ▲	20/20 ▲
	3-525 V	kvar	4 /4	6/5	6/5	17/13	20 /20 ▲	25/25 ▲
	3-690 V	kvar	4 /4	6/5	6/5	17/12,5	19 /16,7 ▲	20/20 ▲
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	25	25	25	32	50	50
DC-3 / DC-5	24 ... 110 V I_N	A	15	15	15	20	25	32
Admissible switching frequency (DC-1 ... DC-5)			50	50	50	50	50	50
Short Circuit protection of main contacts ¹⁾			Maximum permissible fuse (operating category gL)					
Coordination type »2«			25	25	35	50	50	63
	no welding		10	10	25	35	35	35
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	45	45	45	45	88	88
	cos ϕ		0,82	0,82	0,82	0,82	0,76	0,76
	Holding P_{HS}	VA	6	6	6	6	9	9
	cos ϕ		0,34	0,34	0,34	0,34	0,31	0,31
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	5,5	5,5	5,5	5,5	7,5	7,5
	Holding P_H	W	5,5	5,5	5,5	5,5	7,5	7,5
Switching items at AC-operation			Standard coil, power consumption at 1,0 U_N					
Making delay	ms		6 ... 25	6 ... 25	6 ... 25	6 ... 25	7 ... 25	7 ... 25
Drop-out delay	ms		6 ... 13	6 ... 13	6 ... 13	6 ... 13	5 ... 25	5 ... 25
Switching items at DC-operation			Standard coil, power consumption at 1,0 U_N					
Making delay	ms		35 ... 65	35 ... 65	35 ... 65	35 ... 65	35 ... 70	35 ... 70
Drop-out delay	ms		30 ... 60	30 ... 60	30 ... 60	30 ... 60	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 H

Factory Installed Suffixes & Lists

	Additions or Special Features	Enclosure Type	Catalog Suffix Number	Factory Installed Sumner's List									
				00 LS 4 4K 5K	0 7 17 7K	1, 1 ^{1/2} 27 37	2, 2 ^{1/2} 47 57	3, 3 ^{1/2} 77 87	4, 4 ^{1/2} 107 177	5, 5 ^{1/2} 247 220K	6, 6 ^{1/2} 280K 375K	7 450K	
PILOT DEVICES IN COVER	"Start-Stop" push button..... 1		SS	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	
	"Start-Stop" push button..... 4, 12, 3R		SS-3	90	90	90	90	90	90	90	90	90	
	Extra Pushbutton..... 1		-	70	70	70	70	70	70	70	70	70	
	"Up-Down-Stop" push button..... 1, 4, 12		UDS	160	160	160	160	160	160	160	160	160	
	"Forward-Reverse-Stop" push button..... 1, 4, 12		FRS	160	160	160	160	160	160	160	160	160	
	"Fast-Slow-Stop" push button..... 1, 4, 12		FSS	160	160	160	160	160	160	160	160	160	
	"Start-Stop" push button and "Hand-Off-Auto" selector switch..... Any		SS-HOA	-	180	180	180	180	180	180	180	180	
	"Hand-Off-Auto" selector switch..... 1		HOA	35	35	35	35	35	35	35	35	35	
	"Hand-Off-Auto" selector switch..... 4, 12, 3R		HOA	90	90	90	90	90	90	90	90	90	
	"Forward-Off-Reverse" selector switch..... 3R, 4X, 12		FOR	90	90	90	90	90	90	90	90	90	
FULL VOLTAGE CONTROLS	"High-Off-Low" selector switch..... 3R, 4X, 12		HOL	90	90	90	90	90	90	90	90	90	
	Pilot Light..... 1, 4, 12		PL	60	60	60	60	60	60	60	60	60	
	"On-Off" selector switch..... 1		-	35	35	35	35	35	35	35	35	35	
	Control circuit transformer Standard capacity: With fused primary and secondary 60 Hz. or 50 Hz..... 1, 4, 12		FT — V	135	135	135	280	280	340	380	N.C.	Std.	
	Extra capacity with fused secondary: 100 watt extra 60 Hz. or 50 Hz..... 1, 4, 12		FT 100	250	250	250	320	400	460	460	460	460	
	200 watt extra 60 Hz. or 50 Hz..... 1, 4, 12		FT 250	-	340	340	340	420	550	550	550	550	
			-	-	-	-	-	-	-	-	-	-	
			-	-	-	-	-	-	-	-	-	-	
	EXTRA AUXILIARIES..... Per Pole		- —	13	13	13	35	35	35	35	22	22	
	(# of Aux. Possible)..... -		- —	4	4	4	4	8	8	8	8	8	
CONTROL CIRCUIT	(# of Aux. Standard)..... NO		- NO	1	1	2	2	2	2	2	2	-	
	NC		- NC	-	-	2	2	2	2	2	2	-	
RELAY TIMERS	Control relay (limited to one relay having maximum of 7 poles)-specify poles..... 1, 12		AR	-	204	204	204	204	320	360	360	360	
	arrangement, voltage and type required..... 4, 9		AR	-	312	312	312	312	424	472	472	472	
	Timing relay (limit of one- specify "On" or "Off" delay)..... 1, 12, 4		TR - 7	-	336	336	336	336	336	336	336	336	
	Phase Reverse Relay		TR - 24	-	336	336	336	336	336	336	336	336	
			FRR	-	330	330	330	330	300	300	300	300	
METERS AND METERING	Ammeter in cover (includes current transformer if necessary on Size 2 and up)-specify poles..... 1, 12		AM	-	204	204	204	204	320	360	360	360	
	Ammeter and switch..... 1, 12		AMSW	-	312	312	312	312	424	472	472	472	
	Elapsed time meter..... 1, 12		EM	-	336	336	336	336	336	336	336	336	
	Voltmeter..... 1, 12		VM	-	440	440	440	440	440	440	440	440	
	Voltmeter and switch..... 1, 12		VM SW	-	330	330	330	330	300	300	300	300	
DC COILS	DC Power Plants (wired)..... - with two winding coils			25	25	25	25	25 _{1/50}	50	130	130	-	

For one winding, low burden DC coils see page 24.

* Applies for ALL AEG pages.
Above are factory installed suffixes.

ACCESSORIES FOR LS-K CONTACTORS



Remarks		CATALOG NUMBER	LIST EACH	Remarks	CATALOG NUMBER	LIST EACH
Auxiliary switch For LS4K - LS55K for 1 contact front snap-on mounting. .10 NO .01 NC	 <i>Aux. max add ons: LS4K - LS11K: 4 max LS18 - LS55: 6 max</i> N.O. Aux N.C. Aux Early Make N.O. Aux Early Break N.C. Aux	NO/NC LK-HS7K.10 LK-HS7K.01 LK-HS7V.10 LK-HS7V.01	\$ 12.00 12.00 17.00 17.00	Overvoltage suppressor For direct connection to the coil terminals A1/A2 adaptable without cable.  24 - 48v 50 - 127v 130 - 250v For AC-operated contactors LS 4K - LS 18K	RC -unit LK-LR 2K-G LK-LR 2K-A LK-LR 2K-C	\$ 28.00 28.00 28.00
Auxiliary switch For LS4K - LS450K for 2 contact , for side mounting. R: For mounting of more than 4 front - or 2 side mounted auxiliary contacts .11 N.O., N.C., .20 2N.O. (Rating A600, 10 AMP) LS4K-55K: only one each side. LS90-450K: two per side		LK-HS8K.11 LK-HS8K.20 LK-HS8R.11 LK-HS8R.20	\$ 22.00 22.00 22.00 22.00	For AC-operated contactor LS 22K - LS 55K 24v 50 - 127v 130 - 250v For AC-operated contactors LS 220K - LS 450K 24v 48 - 260v 80 - 415v	LK-LR 3K-G LK-LR 3K-A LK-LR 3K-C LK-LR 5K-G LK-LR 5K-A LK-LR 5K-D	\$ 28.00 28.00 28.00 28.00 28.00 28.00
DC - auxiliary switches For LS22K - LS55K switching 2-winding DC coil. See also spare coils		LK-HS8G.10	\$ 20.00	For DC-operated contactors LS 4K - LS55K 12 - 600v For AC- or DC-operated contactors LS 4K - LS 55K 24 - 48v 50 - 127v 130 - 250v	Diode LK-LDK-R Varistor LK-LV 3K-GN LK-LV 3K-AP LK-LV 3K-CR	\$ 28.00 28.00 28.00
Mechanical Latch For 1 contact, front snap-on mounting with electric impulse or manual.  AC VOLT -G 24 - 32 -X 48 - 60 -A 110 - 127 -C 208 - 277 -E 380 - 480 -F 600 DC VOLT -N 24 - 36 -O 42 - 48 -P 110 - 125 -R 220 - 250	For LS4K - LS55K	LK-WBK-*	\$ 71.00	Interface module For LS4K - LS55K directly parallel to the coil terminals A1/A2 adaptable without cable  For LS 4K through LS 55K 24v 48v 24v 48v 24v 24 - 100v 100 - 250v	With relay LK-IM (RD) LK-IM (RME) Operation by relay or directly LK-IM 2K(RDM) LK-IM 2K(RME) Via semi-conductor LK-IM 3K(SD) Switch module and direct switching possible LK-IM 4K(MJ) LK-IM 4K(MR)	\$ 85.00 85.00 110.00 110.00 110.00 140.00 140.00
Timer For LS4K - LS55K pneumatic, contacts, pneumatically delayed auxiliary switches. (Rating A600, 10 AMP)  0,1 - 30s 1 - 60s 0,1 - 30s 1 - 60s		ON-Delay LK-TMD 30 LK-TMD 60 OFF-Delay LK-TMI 30 LK-TMI 60	\$ 115.00 120.00 115.00 120.00	* Allows coils from 24-240VAC to be operated using either 24 or 48VDC with low current.		
Electronic Timer 		For LS 4K - LS 55K directly parallel to the coil terminals A1/A2 adaptable without cable.	0,1 - 2s 1,5 - 30s 0,1 - 2s 1,5 - 30s	ON-Delay LK-TED 2 (TRLEC02) LK-TED 30 (BTLEC30) OFF-Delay LK-TEI 2 (BTLED02) LK-TEI 30 (BTLED30)		\$ 120.00 115.00 120.00 115.00
Mechanical Interlock For side mounting 	FOR:	LS 4K - LS 18K LS 22K - LS 55K LS 4K - LS 18K LS 22K - LS 55K LS75K - LS375K LS230K - LS280K (only available as horizontal mount) LS 220K - LS 375K LS 450K (only available as verticle mount)	2 N.C. contacts 2 N.C. contacts	Mechanical LK-LUV 18K LK-LUV 55K Mechanical / Electric LK-LUV 18E LK-LUV 55E Mechanical, contact mounting horizontally LK-LUV 375H Mechanical, contact mounting vertically LK-LUV 375V LK-LUV 450V		\$ 33.00 33.00 48.00 48.00 70.00 - -
Device marking parts 		For LS 4K - LS 450K for designation and marking. Label carries 10 leafs with 260 labels each		Marking system LK-SPR LK-EAT-260		\$ 19.00
Mounting Plate Use when replacing LS-contactors by LS...K -contactors -Mounting aid for individual rail mounting of LS...K -contactors	FOR:	LS 4 - LS 17 (LS 4 - LS 17), LS27, LS37 LS 47 - LS 87 LS 107	TO: LS 4K - LS 7K LS 4K - LS18K LS 22K - LS 45K LS 55K	With mounting rail contour to DIN EN 50 022 LK-AD 18 LK-AD 45 LK-AD 55		\$ 15.00 16.00 26.00

Discount Schedule RP

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		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		3~230 V	kW	228	266	381	476			
		3~400 V	kW	395	460	658	822			
		3~500 V	kW	519	606	866	1082			
		3~690 V	kW	686	800	1143	1428			
		3~1000V	kW	1039	1212	1732	2165			
Rated current I_N up to 690 V			Amps	600	700	1000	1250			
Minimum wire cross-section under rated load I_N			mm ²	2X(30X8) 2X(30X10) 2X(40X10)						
Admissible practical operation frequency			opsh	300	300	300	120			
Rated current at 1000 opsh			A	510	546	736	1125			
Utilization category AC-3				Rated power values of AC induction type motors						
Rated power value P_N		3~230 V	kW	125	160	220	250			
		3~400 V	kW	220	280	375	450			
		3~415/440 V	kW	230	315	400	450			
		3~500 V	kW	300	400	480	500			
		3~690 V	kW	375	450	500	550			
		3~1000V	kW	300	375	450	500			
Rated current I_N up to 440 V			Amps	420	550	700	825			
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		3~230 V	kW	45	50	80	110			
		3~400 V	kW	80	90	132	165			
		3~500 V	kW	100	110	225	250			
		3~690 V	kW	132	150	250	315			
Rated current I_N with practical element endurance up to		3~1000 V	Amps	150	165	250	350			
			Opsh	150	150	120	120			
Admissible switching frequency		3~400 V	kW	220	280	375	450			
Maximum permissible load P_N		3~400 V	A	420	550	700	825			
Utilization category AC-6b				Rated values of AC capacitors (minimum inductance between parallel connected capacitors 6 H)						
Single / Parallel operation		3~230 V	kvar	121	171	225	283			
		3~400 V	kvar	234	292	360	472			
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	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 ¹⁾				Maximum permissible fuse (operating category gL)						
Coordination type «2»				630	800	1000	1250			
no welding				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.

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							
	V		1000	1000	1000	1000	1000
Rated impulse voltage U_{imp}							
	kV		8	8	8	8	8
Mechanical endurance							
AC - operation	Operations	Mil	10	10	10	10	10
	Operations	PerH	1200	1200	1200	1200	1200
Utilization category AC-1							
Rated power values at resistive load							
Rated power value P_N	3-230 V	kW	90	90	123	114	152
	3-400 V	kW	155	155	214	196	263
	3-500 V	kW	200	200	281	259	346
	3-690 V	kW	270	270	371	341	457
	3-1000V	kW	400	400	562	517	692
Rated current I_N up to 690 V		Amps	250	250	325	315	400
Minimum wire cross-section under rated load I_N		mm ²	120	120	185	185	2X(25X5)
Admissible practical operation frequency		opsh	600	600	600	600	600
Rated current at 1000 opsh		A	200	200	260	252	320
Utilization category AC-3							
Rated power values of AC induction type motors							
Rated power value P_N	3-230 V	kW	45	55	65	75	90
	3-400 V	kW	75	90	110	132	160
	3-415/440 V	kW	80	100	125	132	185
	3-500 V	kW	100	110	132	160	200
	3-690 V	kW	100	132	155	200	250
	3-1000V	kW	65	100	110	150	200
Rated current I_N up to 440 V		Amps	150	185	205	250	309
Admiss. switching freq. at P_N and cont. cycling		opsh	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	37
	3-400V	kW	33	40	45	55	63
	3-500V	kW	45	50	63	75	90
	3-690V	kW	55	63	80	100	110
Rated current I_N with practical electrical endurance up to	3-690 V	Amps	65	75	90	110	125
		Opsh	150	150	150	150	150
Admissible switching frequency	3-400 V	kW	75	90	110	132	160
Maximum permissible load P_N	3-400 V	A	150	185	205	250	309
Utilization category AC-6b							
Rated power values of AC capacitors (minimum inductance between parallel connected capacitors 6 H)							
Single / Parallel operation	3-230 V	kvar	54	63	72	85	94
	3-400 V	kvar	100	112	135	148	171
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	250	250	315	315	500
DC-3 / DC-5	24 ... 110 V I_N	A	150/95	185/105	205/150	250/185	309/205
Admissible switching frequency (DC-1 ... DC-5)			50	50	50	50	50
Short Circuit protection of main contacts ¹⁾							
Maximum permissible fuse (operating category gL)							
Coordination type »2«			250	250	400	315	500
no welding			160	200	250	250	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
	cos ϕ		0,6	0,6	0,6	-	-
	Holding P_{HS}	VA	32	32	60	20	25
	cos ϕ		0,4	0,4	0,37	-	-
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	135	135	650	350	650
	Holding P_H	W	3	3,5	4,5	3,5	4,5
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
Drop-out delay	ms		10 ... 13	10...13	70...80	10 ... 15	13...17
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
Drop-out delay	ms		13 ... 17	13...17	70...80	13 ... 17	13...17
Dimensions							
Without auxiliary contacts	Width mm		135	135	253	173	253
LS 75 ... LS 450K with 22	Height mm		178	178	270	212	270
	Depth mm		165,5	165,5	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.

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	8
Mechanical endurance							
AC - operation	Operations	Mil	15	15	15	15	15
DC - operation	Operations	Mil	15	15	15	15	15
Utilization category AC-1			Rated power values at resistive load				
Rated power value P_N	3~230 V	kW	30	42	42	53	53
	3~400 V	kW	55	72,5	72,5	92	92
	3~500 V	kW	69	95	95	121	121
	3~690 V	kW	95	125	125	160	160
Rated current I_N up to 690 V	Amps		90	110	110	140	140
Minimum wire cross-section under rated load I_N	mm ²		35	35	35	50	50
Admissible practical operation frequency	opsh		1200	1200	1200	1200	1200
Rated current at 1000 opsh	A		90	110	110	112	112
Utilization category AC-3			Rated power values of AC induction type motors				
Rated power value P_N	3~230 V	kW	15	18,5	22	25	30
	3~400 V	kW	22	30	37	45	55
	3~415 V	kW	25	37	45	50	55
	3~500 V	kW	30	40	45	55	65
	3~690 V	kW	35	45	45	55	65
Rated current I_N up to 440 V	Amps		50	65	80	95	105
Admiss. switching freq. at P_N and cont. cycling	opsh		1200	1200	1200	1200	1200
Utilization category AC-4			Rated power values of AC induction type motors				
Rated power value in P_N	3~230 V	kW	5,5	7,5	10	11	13
	3~400 V	kW	11	15	18,5	22	25
	3~500 V	kW	15	18,5	22	25	30
	3~690 V	kW	18,5	22	25	30	37
Rated current I_N with practical electrical endurance up to	3~440 V	Amps	23	30	37	44	50
Admissible switching frequency	opsh		200	200	200	200	200
Maximum permissible load P_N	3~400 V	kW	22	30	37	45	55
	3~400 V	A	50	65	80	95	105
Utilization category AC-6b			Rated power values of AC capacitors (minimum inductance between parallel connected capacitors 6 H)				
Single / Parallel operation	3~230 V	kvar	17/17	21/21	24/24	28/28	30/30
	3~400 V	kvar	30/30	38/38	40/40	50/50	60/50
	3~525 V	kvar	35/35	50/50	50/50	50/50	80/66
	3~690 V	kvar	40/30	40/40	40/40	40/40	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
DC-3 / DC-5	24 ... 110 V I_N	A	60	70	70	95	95
Admissible switching frequency (DC-1 ... DC-5)			50	50	50	50	50
Short Circuit protection of main contacts ¹⁾			Maximum permissible fuse (operating category gL)				
Coordination type »2«			100	125	125	200	200
	no welding		80	100	100	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
	cos ϕ		0,54	0,54	0,54	0,54	0,54
	Holding P_{HS}	VA	17	17	17	17	17
	cos ϕ		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
	Holding P_H	W	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
Drop-out delay	ms		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
Drop-out delay	ms		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: **For technical specifications or larger K contactors through LS450K (1250A), request from factory.**

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