

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						
Mechanical endurance									
AC - operation	Operations	Mil	15	15	15	15	15	15	15
DC - operation	Operations	Mil	15	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	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_e up to 690 V	Amps	90	110	110	140		140		
Minimum wire cross-section under rated load I_e	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_e 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_e 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	
I_e	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 μ 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_e			3 contacts connected in series (all DC-motors $L/R \leq 15$ ms)						
DC-1 (resistive load)	24 ... 220 V I_e	A	90	110	110	140		140	
DC-3 / DC-5	24 ... 110 V I_e	A	60	70	70	95		95	
Admissible switching frequency (DC-1 ... DC-5)		opsh	50	50	50	50		50	
Short Circuit protection of main contacts¹⁾			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_s						
Operating range 0,8 ... 1,1 U_s	Pick-up P_{as}	VA	191	191	191	191		191	
	cos \emptyset		0,54	0,54	0,54	0,54		0,54	
Holding P_{HS}	VA	17	17	17	17		17		
	cos \emptyset		0,26	0,26	0,26		0,26		
Operating coil for DC-operation			Standard coil, power consumption at 1,0 U_s						
Operating range 0,8 ... 1,1 U_s	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_s						
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_s						
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.

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		
Rated impulse voltage U_{imp}			kV							
		8	8		8	8		8		
Mechanical endurance										
AC - operation	Operations	Mil	10	10	10	10		10		
	Operations	Per/H	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
	3~400V	kW	155	155	214	196	196	263	310	329
	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_e up to 690V		Amps	250	250	325	315	315	400	450	500
Minimum wire cross-section under rated load I_e		mm ²	120	120	185	185	185	2X(25X5)	2X(30X5)	2X(30X5)
Admissible practical operation frequency		ops/h	600	600	600	600	600	600	600	600
Rated current at 1000 ops/h		A	200	200	260	252	252	320	382	425
Utilization category AC-3			Rated power values of AC induction type motors							
Rated power value P_N	3~230V	kW	45	55	65		75		90	
	3~400V	kW	75	90	110		132		160	
	3~415/440V	kW	80	100	125		132		185	
	3~500V	kW	100	110	132		160		200	
	3~690V	kW	100	132	155		200		250	
	3~1000V	kW	65	100	110		150		200	
Rated current I_e up to 440V		Amps	150	185	205		250		309	
Admiss. switching freq. at P_N and cont. cycling		ops/h	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_e with practical electrical endurance up to	3~690V	Amps	65	75	90		110		125	
		Ops/h	150	150	150		150		150	
Admissible switching frequency	3~400V	kW	75	90	110		132		160	
Maximum permissible load P_N	3~400V	A	150	185	205		250		309	
Utilization category AC-6b			Rated power values of AC capacitors (minimum inductance between parallel connected capacitors 6 μ H)							
Single / Parallel operation	3~230V	kvar	54	63	72		85		94	
	3~400V	kvar	100	112	135		148		171	
DC-switching Rated current I_e			3 contacts connected in series (all DC-motors $L/R \leq 15$ ms)							
DC-1 (resistive load)	24 ... 220 V / I_e	A	250	250	315		315		500	
DC-3 / DC-5	24 ... 110 V / I_e	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 contacts¹⁾			Maximum permissible fuse (operating category gL)							
Coordination type »2«			250	250	400		315		500	500
no welding			160	200			250		315	500
Operating coil for AC-operation			Standard coil, power consumption at 50 Hz 1,0 U_s							
Operating range 0,8 ... 1,1 U_s	Pick-up P_{AS}	VA	400	400		830	425	750	425	750
	cos \emptyset		0,6	0,6	-	0,6	-	-	-	-
	Holding P_{HS}	VA	32	32		60	20	25	20	25
	cos \emptyset		0,4	0,4	-	0,37	-	-	-	-
Operating coil for DC-operation			Standard coil, power consumption at 1,0 U_s							
Operating range 0,8 ... 1,1 U_s	Pick-up P_A	W	135	135	650	350	350	650	350	650
	Holding P_H	W	3	3,5	4,5	3,5	3,5	4,5	3,5	4,5
Switching items at AC-operation			Standard coil, power consumption at 1,0 U_s							
Making delay		ms	20 ... 25	20...25	70...80	36 ... 40	60...70	70...80	60...70	70...80
Drop-out delay		ms	10 ... 13	10...13	70...80	10 ... 15	13...17	70...80	60...70	70...80
Switching items at DC-operation			Standard coil, power consumption at 1,0 U_s							
Making delay		ms	60 ... 70	60...70	70...80	60 ... 70	60...70	70...80	60...70	70...80
Drop-out delay		ms	13 ... 17	13...17	70...80	13 ... 17	13...17	70...80	60...70	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.

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	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		3	
	Operations	Per/H		1200		1200		900	
Utilization category AC-1									
				Rated power values at resistive load					
Rated power value P_N	3~230V	kW		228		266		381	
	3~400V	kW		395		460		658	
	3~500V	kW		519		606		866	
	3~690V	kW		686		800		1143	
	3~1000V	kW		1039		1212		1732	
Rated current I_e up to 690V		Amps		600		700		1000	
Minimum wire cross-section under rated load I_e		mm ²		2X(30X8)		2X(30X10) 2X(40X10)			
Admissible practical operation frequency		opsh		300		300		300	
Rated current at 1000 opsh		A		510		546		736	
Utilization category AC-3									
				Rated power values of AC induction type motors					
Rated power value P_N	3~230V	kW		125		160		220	
	3~400V	kW		220		280		375	
	3~415/440V	kW		230		315		400	
	3~500V	kW		300		400		480	
	3~690V	kW		375		450		500	
	3~1000V	kW		300		375		450	
Rated current I_e up to 440V		Amps		420		550		700	
Admiss. switching freq. at P_N and cont. cycling		opsh		300		300		300	
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	
	3~400V	kW		80		90		132	
	3~500V	kW		100		110		225	
	3~690V	kW		132		150		250	
	3~1000V	kW		150		165		250	
Rated current I_e with practical element endurance up to		Amps		150		165		250	
Admissible switching frequency	3~400V	kW		220		280		375	
Maximum permissible load P_N	3~400V	A		420		550		700	
Utilization category AC-6b									
				Rated values of AC capacitors (minimum inductance between parallel connected capacitors 6 μ H)					
Single / Parallel operation	3~230V	kvar		121		171		225	
	3~400V	kvar		234		292		360	
DC-switching Rated current I_e									
				3 contacts connected in series (all DC-motors $L/R \leq 15$ ms)					
DC-1 (resistive load)	24 ... 220 V / I_e	A		600		700		1000	
DC-3 / DC-5	24 ... 110 V / I_e	A		420/250		550/300		700/400	
Admissible switching frequency (DC-1 ... DC-5)		opsh		50		50		50	
Short Circuit protection of main contacts¹⁾									
				Maximum permissible fuse (operating category gL)					
Coordination type »2«		A		630		800		1000	
no welding		A		400		500		630	
Operating coil for AC-operation									
				Standard coil, power consumption at 50 Hz 1,0 U_s					
Operating range 0,8 ... 1,1 U_s	Pick-up P_{As}	VA		680		680		750	
		cos \emptyset		-		-		-	
	Holding P_{Hs}	VA		23		23		25	
		cos \emptyset		-		-		-	
Operating coil for DC-operation									
				Standard coil, power consumption at 1,0 U_s					
Operating range 0,8 ... 1,1 U_s	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_s					
Making delay		ms		80 ... 90		80 ... 90		70 ... 80	
Drop-out delay		ms		40 ... 50		40 ... 50		70 ... 80	
Switching items at DC-operation									
				Standard coil, power consumption at 1,0 U_s					
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	
LS 75 ... LS 450K with .22	Height mm	220		220		270		265	
	Depth mm	228		228		262		304	
								464 581	
								380	
								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.

Approvals

IEC/EN 60947-1
 IEC/EN 60947-5-1
 File # E76233 VDE 0660

Technical Data

LS7K-04,- 4,-22, 00

30 Amp Ballast (600vac)
20 Amp Tungsten (277vac)

LS11K - 4,-22

30 Amp Tungsten (480vac)
30 Amp Ballast (277vac)

LS22K-3-

90 Amp Ballast (480vac)
60 Amp Tungsten (277vac)

Ambient Temperature

(Operational) -13°F - 131°F (-25°C / +55°C)

Torque / Wire size

LS7K-4-(15lbs. 14-10AWG)
LS11K-4-(16lbs. 14-8 AWG)
LS22K-3-(40lbs. 14-1/0 AWG)

Coil Consumption	Inrush	Holding
LS7K-4,-22 (AC)	45VA	6VA
LS7K-4,-22 (DC)	5.5W	5.5W
LS11K-4-(AC)	45VA	6VA
LS22-3-(AC)	191VA	17VA
LS11K-4-(DC)	5.5W	5.5W
LS22K-3-(DC)	125W	2.5W



3 Pole / 4 Pole / 30 Amp Ballast, 20 Amp Tungsten

Pole	Catalog #	Poles N.O N.C	AC Coil	DC Coil	Enclosed NEMA 1 (metal) M1 Add
4 Pole	LS7K-04-*	0 4	\$100	NA	+\$69
4 Pole	LS7K-4-*	4 0	\$94	\$122	+\$69
4 Pole	LS7K-22-*	2 2	\$100	\$128	+\$69
3 Pole	LS7K.00-*	3 0	\$88	\$116	+\$69

4 Pole	30 Amp Tungsten / 30 Amp Ballast				
4 Pole	LS11K-4-*	4 0	\$110	\$138	+\$69
4 Pole	LS11K-22-*	2 2	\$110	\$138	+\$69

3 Pole	60 Amp Tungsten / 90 Amp Ballast				
3 Pole	LS22K-3-*	3 0	\$160	\$205	+\$69

To Order:

Replace Asterisk * in part number with coil voltage suffix in chart.

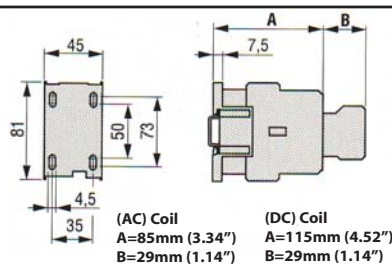
Example: LS11K - 4 - A=(120 VAC Coil)

Mounting Details Aprox.

LS7K-04

Mounting Options

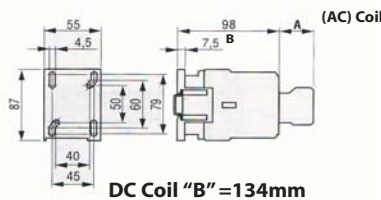
35mm or screw mount
(90° Intervals 360°)



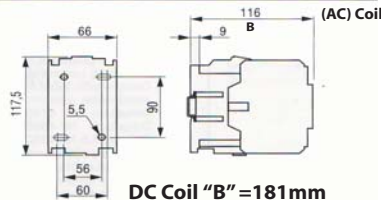
Dimensions Approximate

A=Top Mount
Auxiliary Adder

LS11K-4-4 Pole



LS22K-3-3 Pole



Part Number

LK-HS7K.01/10 - (Top Mount) Add
1.10" Depth
LK - HS8K.20 or .11 (side mount) Add
.44" width

For Accessories & Enclosures see p.60, 61

* Coil Voltage Chart

* AC	60Hz	50Hz	Voltage
-G	24	24	
-A	120	120	
-B	200	200	
-C	220	220	
-H	277	230	
-E	480	380	
-F	600	500	
*DC Voltage			
-MSW		12 VDC	
-NSW		24 VDC	
-OSW		48 VDC	
-PSW		110 VDC	
-RSW		220 VDC	



Mini Reversing Contactor
Type RLS7K-



Mini Reversing Starter
Type RXLS05
(NEMA SIZE 0)

REVERSING STARTERS and CONTACTORS

Complete line of open type and enclosed controls

- NEMA Type 1 (metal)
- NEMA 3R (metal)
- NEMA 12 (metal)
- NEMA 4X (fiberglass)
- X-Proof (contact factory)

- 3 pole electrical and mechanically interlocked starters.
- UL and NEMA rated contactors and starters

Applications

- Gear motors
- Milling machines
- Overhead garage doors
- Presses

Conformity to Standards

IEC 947-
VDE 0660
BS 5424



REVERSING STARTERS and CONTACTORS

ELECTRICAL & ELECTRONIC
CONTROLS, INC.
3881 DANBURY ROAD
BREWSTER, NY 10509
845-278-5777 FAX 845-278-5444
E-MAIL: info@eecontrols.com

EE CONTROLS, LTD
17 STEWART COURT
ORANGEVILLE, ONTARIO
CANADA L9W 3Z9
519-941-6845 FAX 519-940-0514
E-Mail: infoeecontrols@on.aibn.com



TYPE RXLSK AC REVERSING STARTERS 3 PHASE FULL VOLTAGE



All Starters Supplied with BUILT-IN HEATERS

Size 00-2



NEMA RATED

AC-1 AMPS	AC-3 AMPS	Horse Power (UL) Ratings 3 Phase Motor Max UL HP	OPEN	ENCLOSED					Comparable NEMA HP NEMA Size
				NEMA 1 General Purpose	NEMA 4X Outdoor (non-metal)	NEMA 4 (metal)	NEMA 3R (metal)	NEMA 12 Dust Tight (metal)	
20A	9A	200V 3 HP	RXLS05 -★0-★★ \$171	RXLS05 -★1-★★ \$243	RXLS05 -★4x-★★ \$296	RXLS05 -★4-★★ \$316	RXLS05 -★3R-★★ \$277	RXLS05 -★12-★★ \$306	
		230V 3 HP							
		460V 5 HP	RXLS4K -★0-★★ \$238	RXLS4K -★1-★★ \$328	RXLS4K -★4x-★★ \$394	RXLS4K -★4-★★ \$437	RXLS4K -★3R-★★ \$375	RXLS4K -★12-★★ \$427	
		600V 5 HP							
25A	9A	200V 3 HP	RXLS5K -★0-★★ \$262	RXLS5K -★1-★★ \$352	RXLS5K -★4x-★★ \$418	RXLS5K -★4-★★ \$451	RXLS5K -★3R-★★ \$398	RXLS5K -★12-★★ \$441	200V 1.5 HP 230V 1.5 HP 460V 2 HP 600V 2 HP NEMA 00
		230V 3 HP							
		460V 5 HP	RXLS7K -★0-★★ \$268	RXLS7K -★1-★★ \$358	RXLS7K -★4x-★★ \$424	RXLS7K -★4-★★ \$465	RXLS7K -★3R-★★ \$412	RXLS7K -★12-★★ \$455	
		600V 7.5 HP							
32A	18A	200V 5 HP	RXLS11K -★0-★★ \$298	RXLS11K -★1-★★ \$388	RXLS11K -★4x-★★ \$454	RXLS11K -★4-★★ \$499	RXLS11K -★3R-★★ \$424	RXLS11K -★12-★★ \$489	200V 3 HP 230V 3 HP 460V 5 HP 600V 5 HP NEMA 0
		460V 10 HP							
		600V 15 HP	RXLS15K -★0-★★ \$388	RXLS15K -★1-★★ \$478	RXLS15K -★4x-★★ \$544	RXLS15K -★4-★★ \$608	RXLS15K -★3R-★★ \$568	RXLS15K -★12-★★ \$598	
		LIST							
45A	25A	200V 5 HP	RXLS18K -★0-★★ \$408	RXLS18K -★1-★★ \$498	RXLS18K -★4x-★★ \$564	RXLS18K -★4-★★ \$750	RXLS18K -★3R-★★ \$705	RXLS18K -★12-★★ \$740	200V 7.5 HP 230V 7.5 HP 460V 10 HP 600V 10 HP NEMA 1
		230V 7.5 HP							
		460V 15 HP	RXLS22K -★0-★★ \$438	RXLS22K -★1-★★ \$633	RXLS22K -★4x-★★ \$713	RXLS22K -★4-★★ \$985	RXLS22K -★3R-★★ \$784	RXLS22K -★12-★★ \$975	
		600V 15 HP							
60A	32A	200V 10 HP	RXLS30K -★0-★★ \$609	RXLS30K -★1-★★ \$804	RXLS30K -★4x-★★ \$884	RXLS30K -★4-★★ \$1,170	RXLS30K -★3R-★★ \$897	RXLS30K -★12-★★ \$1,160	
		230V 10 HP							
		460V 20 HP	RXLS37K -★0-★★ \$709	RXLS37K -★1-★★ \$904	RXLS37K -★4x-★★ \$984	RXLS37K -★4-★★ \$1,255	RXLS37K -★3R-★★ \$982	RXLS37K -★12-★★ \$1,245	200V 10 HP 230V 15 HP 460V 25 HP 600V 25 HP NEMA 2
		600V 25 HP							
60A	40A	200V 10 HP	RXLS22K -★0-★★ \$438	RXLS22K -★1-★★ \$633	RXLS22K -★4x-★★ \$713	RXLS22K -★4-★★ \$985	RXLS22K -★3R-★★ \$784	RXLS22K -★12-★★ \$975	
		230V 10 HP							
		460V 25 HP	RXLS30K -★0-★★ \$609	RXLS30K -★1-★★ \$804	RXLS30K -★4x-★★ \$884	RXLS30K -★4-★★ \$1,170	RXLS30K -★3R-★★ \$897	RXLS30K -★12-★★ \$1,160	
		600V 25 HP							
90A	50A	200V 15 HP	RXLS37K -★0-★★ \$709	RXLS37K -★1-★★ \$904	RXLS37K -★4x-★★ \$984	RXLS37K -★4-★★ \$1,255	RXLS37K -★3R-★★ \$982	RXLS37K -★12-★★ \$1,245	
		230V 15 HP							
		460V 30 HP	RXLS22K -★0-★★ \$438	RXLS22K -★1-★★ \$633	RXLS22K -★4x-★★ \$713	RXLS22K -★4-★★ \$985	RXLS22K -★3R-★★ \$784	RXLS22K -★12-★★ \$975	
		600V 40 HP							
110A	65A	200V 20 HP	RXLS30K -★0-★★ \$609	RXLS30K -★1-★★ \$804	RXLS30K -★4x-★★ \$884	RXLS30K -★4-★★ \$1,170	RXLS30K -★3R-★★ \$897	RXLS30K -★12-★★ \$1,160	
		230V 20 HP							
		460V 40 HP	RXLS37K -★0-★★ \$709	RXLS37K -★1-★★ \$904	RXLS37K -★4x-★★ \$984	RXLS37K -★4-★★ \$1,255	RXLS37K -★3R-★★ \$982	RXLS37K -★12-★★ \$1,245	
		600V 50 HP							
110A	80A	200V 20 HP	RXLS37K -★0-★★ \$709	RXLS37K -★1-★★ \$904	RXLS37K -★4x-★★ \$984	RXLS37K -★4-★★ \$1,255	RXLS37K -★3R-★★ \$982	RXLS37K -★12-★★ \$1,245	
		230V 25 HP							
		460V 50 HP	RXLS22K -★0-★★ \$438	RXLS22K -★1-★★ \$633	RXLS22K -★4x-★★ \$713	RXLS22K -★4-★★ \$985	RXLS22K -★3R-★★ \$784	RXLS22K -★12-★★ \$975	
		600V 60 HP							
		LIST	RXLS30K -★0-★★ \$609	RXLS30K -★1-★★ \$804	RXLS30K -★4x-★★ \$884	RXLS30K -★4-★★ \$1,170	RXLS30K -★3R-★★ \$897	RXLS30K -★12-★★ \$1,160	

Steps To Order Motor Starter:

Step 1-Size Choose from the UL HP and Voltage list per your application.
For example: 5 HP 230V 3 phase part # RXLS7K.

Step 2 - Coil* From the coil suffix chart on the next page choose the suffix for your control circuit voltage requirement.(Example: 24VAC = G-) (Part # RXLS7K-G)

Step 3 -Enclosure specify "open" or "enclosed" requirements.
For example if NEMA 12 (part #RXLS7K-G12-).

Step 4 -Overload Amps** This step requires a suffix for your overload protection, refer to "OVERLOAD RELAY SUFFIX TABLE" (next page)
(Example: 5HP @ 230V 3 Phase, if 13 Full Load Amps = suffix "N".)
Example: RXLS7K- G12 - N

RXLSK Series Starters

- (what's included?)
- AEG 3 Phase Reversing Starters.
- (Ambient compensated Bi metallic windings).
- -25°C - +60°C (-11.20°F - +140°F).
- Overload Class 10 (adjustable heaters).
- Electrical & Mechanical interlocks as standard.
- Thru door reset. Enclosed units only).

Modifications and accessories are listed on pages 60, 61

For Operators, Transformers & Accessories see page 60



TYPE RXLSK AC STARTERS

3 Phase Full Voltage-Across the Line



All Starters Supplied with BUILT-IN HEATERS

Size 3-5

NEMA RATED

AC-1 AMPS	AC-3 AMPS	Horse Power Ratings 3 Phase Motor Max UL HP		OPEN	ENCLOSED					NEMA HP
					NEMA 1 General Purpose (metal)	NEMA 4X ▶ Outdoor Dust Tight (non metal)	NEMA 4 ▶ (metal)	NEMA3R Rain Tight (metal)	NEMA12 Dust Tight (metal)	
140A	95A	200V	25 HP	RXLS45K	RXLS45K	RXLS45K	RXLS45K	RXLS45K	RXLS45K	
		230V	30 HP	-*0-**	-*1-**	-*4x-**	-*4-**	-*3R-**	-*12-**	
		460V	60 HP	\$910	\$1,151	\$1,263	\$1,450	\$1,199	\$1,440	
		600V	75 HP	LIST						
140A	105A	200V	30 HP	RXLS55K	RXLS55K	RXLS55K	RXLS55K	RXLS55K	RXLS55K	200V 25 HP 230V 30 HP 460V 50 HP 600V 50 HP NEMA 3
		230V	40 HP	-*0-**	-*1-**	-*4x-**	-*4-**	-*3R-**	-*12-**	
		460V	75 HP	\$1,090	\$1,331	\$1,443	\$1,850	\$1,395	\$1,840	
		600V	75 HP	LIST						
250A	150A	200V	40 HP	RXLS75K	RXLS75K	RXLS75K	RXLS75K	RXLS75K	RXLS75K	
		230V	50 HP	-*0-**	-*1-**	-*4x-**	-*4-**	-*3R-**	-*12-**	
		460V	100 HP	\$1,855	\$2,100	\$2,505	\$2,675	\$2,464	\$2,665	
		600V	125 HP	LIST						
250A	185A	200V	50 HP	RXLS90K	RXLS90K	RXLS90K	RXLS90K	RXLS90K	RXLS90K	200V 40 HP 230V 50 HP 460V 100 HP 600V 100 HP NEMA 4
		230V	60 HP	-*0-**	-*1-**	-*4x-**	-*4-**	-*3R-**	-*12-**	
		460V	125 HP	\$2,355	\$2,600	\$3,005	\$3,425	\$2,884	\$3,415	
		600V	150 HP	LIST						
315A	205A	200V	60 HP	RXLS110K	RXLS110K	RXLS110K	RXLS110K	RXLS110K	RXLS110K	
		230V	75 HP	-*0-**	-*1-**	-*4x-**	-*4-**	-*3R-**	-*12-**	
		460V	150 HP	\$2,583	\$3,308	\$4,143	\$4,413	\$4,090	\$4,403	
		600V	150 HP	LIST						
315A	250A	200V	60 HP	RXLS132K	RXLS132K	RXLS132K	RXLS132K	RXLS132K	RXLS132K	
		230V	75 HP	-*0-**	-*1-**	-*4x-**	-*4-**	-*3R-**	-*12-**	
		460V	150 HP	\$2,860	\$3,585	\$4,420	\$4,680	\$4,162	\$4,670	
		600V	150 HP	LIST						
450A	309A	200V	100 HP	RXLS160K	RXLS160K	RXLS160K	RXLS160K	RXLS160K	RXLS160K	200V 75 HP 230V 100 HP 460V 200 HP 600V 200 HP NEMA 5
		230V	100 HP	-*0-**	-*1-**	-*4x-**	-*4-**	-*3R-**	-*12-**	
		460V	250 HP	\$2,948	\$3,673	\$4,508	\$4,830	\$4,250	\$4,820	
		600V	300 HP	LIST						
600A	420A	200V	125 HP	RXLS220K	RXLS220K	RXLS220K	RXLS220K	RXLS220K	RXLS220K	
		230V	150 HP	-*0-**	-*1-**	-*4x-**	-*4-**	-*3R-**	-*12-**	
		460V	300 HP	\$4,050	\$5,350	\$5,750	\$6,673	\$6,599	\$6,663	
		600V	400 HP	LIST						
700A	550A	200V	150 HP	RXLS280K	RXLS280K	RXLS280K	RXLS280K	RXLS280K	RXLS280K	
		230V	200 HP	-*0-**	-*1-**	-*4x-**	-*4-**	-*3R-**	-*12-**	
		460V	400 HP	\$6,150	\$7,450	\$7,850	\$8,673	\$8,488	\$8,663	
		600V	500 HP	LIST						

* Coil
Suffix

For LS4K-LS18K (3 pole)			
AC	60Hz	50HZ	
-G	24	24	24
-A	120	120	120
-B	200	200	200
-C	220	220	220
-H	277	230	230
-E	480	380	380
-F	600	500	500
DC add \$60 to list			
-MSW	12 VDC		
-NSW	24VDC		
-OSW	48 VDC		
-PSW	110 VDC		
-RSW	220 VDC		

For LS22K-LS55K (3 pole)			
AC	60Hz	50HZ	
-G	24	24	24
-A	120	120	120
-B	200	200	200
-C	220	220	220
-H	277	230	230
-E	480	380	380
-F	600	500	500
DC add \$90 to list			
-NSW	24-28 VDC		
-OSW	42-48 VDC		
-PSW	110-127 VDC		
-RSW	220-250 VDC		

For LS75K-LS375K (3 Pole)	
AC/DC	50/60 Hz + DC
-N	24-28V
-AP	110-127V
-CR	220-250V
-EX	440-500V

No Addition for DC above.

Part # Example: XLS45K:
XLS45K= Size LS45K Contactor
A= 120 VAC Coil
1= NEMA 1 Enclosure
Q= 30-43 Amps

Complete Part Number:
XLS45K-AI-Q

** Overload Relay Suffix			
O.L. Relay Setting Range		O.L. Relay Setting Range	
Suffix	(Amps)	Suffix	(Amps)
-B	0.16-0.26	-ON	21-26
-C	0.25-0.41	-P	25-32
-D	0.4-0.65	-Q	30-43
-E	0.65-1.1	-QN	42-55
-F	1.1.5	-RN	54-65
-G	1.3-1.9	-SN	64-82
-H	1.8-2.7	-TM	78-97
-I	2.5-4	-TN	90-110
-K	4-6.3	-TT	110-140
-L	5.5-8.5	-U	140-190
-M	8-12	-V	175-280
-N	10-16	-W	200-310
-O	14.5-18	-WT	250-400
-OM	17.5-22	-X	315-500

Discount Schedule ST

Modification & Accessories
See Page 60, 61

For Technical Details on Reversing
Starters See Page 50,53,68,69

Single Phase Reversing Starter Controls (Included)

- A) All RSXLSK Series Reversing Starters are cUL Approved.
- B) All Reversing Starters Include Thru Door Reset as Standard.
- C) Type RSXLSK Starters Have Precision Ambient Compensated heaters. (25°C - +60°C) - 11°F - +140°F

Steps To Order Motor Starter:	
Step 1 - Size	Choose from the UL HP and Voltage list per your application. For example: 5 HP 230V Single Phase Reversing Starter (Example: RSXLS15K-)
Step 2 - Coil*	From the coil suffix chart below. Choose your control circuit voltage requirement. (Example: 24VAC = G-) RSXLS15K-G
Step 3 - Enclosure	specify "open" or "enclosed" requirements. For example if NEMA 12 (part # RSXLS15K-G12-)
Step 4 - Overload Amps**	This step requires a suffix for your overload protection, refer to "OVERLOAD RELAY SUFFIX TABLE" (Example: 5HP @ 230V Single Phase, if 28 Full Load Amps = suffix "P"). Example: RSXLS15K-G12-P For additional options see page ?

Size	NEMA Horse Power Ratings 1 Phase Motors 115V HP 230V HP		OPEN	NEMA 1 General Purpose (metal)	NEMA 4X Outdoor Dust Tight (non metal)	NEMA 4 (metal)	NEMA 3R Raintight (metal)	NEMA 12 Dust Tight (metal)
MINI LIST	1/2	1	RSXLS05 -*0-*** \$171	RSXLS05 -*1-*** \$243	RSXLS05 -*4X-*** \$296	RSXLS05 -*4-*** \$316	RSXLS05 -*3R-*** \$277	RSXLS05 -*12-*** \$306
00 LIST	3/4	2	RSXLS5K -*0-*** \$262	RSXLS5K -*1-*** \$352	RSXLS5K -*4X-*** \$418	RSXLS5K -*4-*** \$451	RSXLS5K -*3R-*** \$398	RSXLS5K -*12-*** \$441
LIST	1	3	RSXLS7K -*0-*** \$268	RSXLS7K -*1-*** \$358	RSXLS7K -*4X-*** \$424	RSXLS7K -*4-*** \$465	RSXLS7K -*3R-*** \$412	RSXLS7K -*12-*** \$455
0 LIST	1 1/2	3	RSXLS11K -*0-*** \$298	RSXLS11K -*1-*** \$388	RSXLS11K -*4X-*** \$454	RSXLS11K -*4-*** \$499	RSXLS11K -*3R-*** \$424	RSXLS11K -*12-*** \$489
LIST	2	5	RSXLS15K -*0-*** \$388	RSXLS15K -*1-*** \$478	RSXLS15K -*4X-*** \$544	RSXLS15K -*4-*** \$608	RSXLS15K -*3R-*** \$568	RSXLS15K -*12-*** \$598
1 LIST	3	5	RSXLS18K -*0-*** \$408	RSXLS18K -*1-*** \$495	RSXLS18K -*4X-*** \$564	RSXLS18K -*4-*** \$750	RSXLS18K -*3R-*** \$705	RSXLS18K -*12-*** \$740
LIST	3	7 1/2	RSXLS22K -*0-*** \$438	RSXLS22K -*1-*** \$633	RSXLS22K -*4X-*** \$713	RSXLS22K -*4-*** \$985	RSXLS22K -*3R-*** \$784	RSXLS22K -*12-*** \$975
LIST	5	10	RSXLS30K -*0-*** \$609	RSXLS30K -*1-*** \$804	RSXLS30K -*4X-*** \$884	RSXLS30K -*4-*** \$1,170	RSXLS30K -*3R-*** \$897	RSXLS30K -*12-*** \$1,160
2 LIST	5	15	RSXLS37K -*0-*** \$709	RSXLS37K -*1-*** \$904	RSXLS37K -*4X-*** \$984	RSXLS37K -*4-*** \$1,255	RSXLS37K -*3R-*** \$982	RSXLS37K -*12-*** \$1,245

* Coil Suffix Chart

For LS4K-LS18K (3 pole)		
AC	60Hz	50Hz
-G	24	24
-A	120	120
-B	200	200
-C	220	220
-H	277	230
-E	480	380
-F	600	500

DC add \$60 to list		
-MSW	12 VDC	
-NSW	24VDC	
-OSW	48 VDC	
-PSW	110 VDC	
-RSW	220 VDC	

For LS22K-LS55K (3 pole)		
AC	60Hz	50Hz
-G	24	24
-A	120	120
-B	200	200
-C	220	220
-H	277	230
-E	480	380
-F	600	500

DC add \$90 to list		
-NSW	24-28 VDC	
-OSW	42-48 VDC	
-PSW	110-127 VDC	
-RSW	220-250 VDC	

For LS75K-LS375K (3 Pole)	
AC/DC	50/60 Hz + DC
-N	24-28V
-AP	110-127V
-CR	220-250V
-EX	440-500V

** Overload Relay Suffix			
O.L. Relay Setting Range		O.L.R relay Setting Range	
Suffix	(Amps)	Suffix	(Amps)
-B	0.16-0.26	-ON	21-26
-C	0.25-0.41	-P	25-32
-D	0.4-0.65	-Q	30-43
-E	0.65-1.1	-QN	42-55
-F	1.1-1.5	-RN	54-65
-G	1.3-1.9	-SN	64-82
-H	1.8-2.7	-TM	78-97
-I	2.5-4	-TN	90-110
-K	4-6.3	-TT	110-140
-L	5.5-8.5	-U	140-190
-M	8-12	-V	175-280
-N	10-16	-W	200-310
-O	14.5-18	-WT	250-400
-OM	17.5-22	-X	315-500

No Addition for DC above.
Coil Tolerance for AC/DC coils are less 20% - +10% of nominal Voltage.
= If unsure of overload Suffix & only know HP and voltage see chart on the back inside cover.

Reversing Contactors (3 Phase)

AC - 1 Amps	AC - 3 Amps	Horse Power Rating 3 Phase		OPEN	NEMA 1 (METAL) Enclosed	NEMA 4X (NON-METAL) Enclosed -4X
		Volts	HP			
25A	9A	200V	3HP	RLS4K -*0	RLS4K -*1	RLS4K -*4X
		230V	3HP			
		460V	5HP			
		600V	7.5HP			
		LIST				
25A	12A	200V	3HP	RLS5K -*0	RLS5K -*1	RLS5K -*4X
		230V	3HP			
		460V	7.5HP			
		600V	10HP			
		LIST				
32A	18A	200V	5HP	RLS7K -*0	RLS7K -*1	RLS7K -*4X
		230V	5HP			
		460V	10HP			
		600V	15HP			
		LIST				
45A	25A	200V	5HP	RLS11K -*0	RLS11K -*1	RLS11K -*4X
		230V	7.5HP			
		460V	15HP			
		600V	15HP			
		LIST				
60A	32A	200V	10HP	RLS15K -*0	RLS15K -*1	RLS15K -*4X
		230V	10HP			
		460V	20HP			
		600V	25HP			
		LIST				
60A	40A	200V	10HP	RLS18K -*0	RLS18K -*1	RLS18K -*4X
		230V	10HP			
		460V	25HP			
		600V	25HP			
		LIST				
90A	50A	200V	15HP	RLS22K -*0	RLS22K -*1	RLS22K -*4X
		230V	15HP			
		460V	30HP			
		600V	40HP			
		LIST				
110A	65A	200V	20HP	RLS30K -*0	RLS30K -*1	RLS30K -*4X
		230V	20HP			
		460V	40HP			
		600V	50HP			
		LIST				
110A	80A	200V	20HP	RLS37K -*0	RLS37K -*1	RLS37K -*4X
		230V	25HP			
		460V	50HP			
		600V	60HP			
		LIST				

OPEN & ENCLOSED



RoHS
Compliant

AEG

AC - 1 Amps	AC - 3 Amps	Horse Power Rating 3 Phase		OPEN	NEMA 1 (METAL) Enclosed	NEMA 4X (NON-METAL) Enclosed -4X
		Volts	HP			
140A	95A	200V	25HP	RLS45K -*0	RLS45K -*1	RLS45K -*4X
		230V	30HP			
		460V	60HP			
		600V	75HP			
		LIST				
140A	105A	200V	30HP	RLS55K -*0	RLS55K -*1	RLS55K -*4X
		230V	40HP			
		460V	75HP			
		600V	75HP			
		LIST				
250A	150A	200V	40HP	RLS75K -*0	RLS75K -*1	RLS75K -*4X
		230V	50HP			
		460V	100HP			
		600V	125HP			
		LIST				
250A	185A	200V	50HP	RLS90K -*0	RLS90K -*1	RLS90K -*4X
		230V	60HP			
		460V	125HP			
		600V	150HP			
		LIST				
315A	205A	200V	60HP	RLS110K -*0	RLS110K -*1	RLS110K -*4X
		230V	75HP			
		460V	150HP			
		600V	150HP			
		LIST				
315A	250A	200V	60HP	RLS132K -*0	RLS132K -*1	RLS132K -*4X
		230V	75HP			
		460V	150HP			
		600V	150HP			
		LIST				
450A	309A	200V	100HP	RLS160K -*0	RLS160K -*1	RLS160K -*4X
		230V	100HP			
		460V	250HP			
		600V	300HP			
		LIST				
600A	420A	200V	125HP	RLS220K -*0	RLS220K -*1	RLS220K -*4X
		230V	150HP			
		460V	300HP			
		600V	400HP			
		LIST				
700A	550A	200V	150HP	RLS280K -*0	RLS280K -*1	RLS280K -*4X
		230V	200HP			
		460V	400HP			
		600V	500HP			
		LIST				

*Coil Suffix Chart

FOR LS4K - LS18K FOR LS22K - LS55K

*AC 60Hz	50Hz	*AC 60Hz	50Hz	FOR LS75K - LS375K (3 Pole)
-G 24	24	-G 24	24	AC/DC 50/60 Hz + DC
-A 120	120	-A 120	120	-N 24-28V
-B 200	200	-B 200	200	-AP 110-127V
-C 220	220	-C 220	220	-CR 220-250V
-H 277	230	-H 277	230	-EX 440-500V
-E 480	380	-E 480	380	No additional Charge
-F 600	500	-F 600	500	for DC LS75K - LS375K
DC		DC		For Accessories
-MSW 12VDC		-NSW 24-28VDC		See Page 60,61
-NSW 24VDC		-OSW 42-48VDC		
-OSW 48VDC		-PSW 110-127VDC		
-PSW 110VDC		-RSW 220-250VDC		
-RSW 220VDC				
Add \$60 for DC		Add \$90 for DC		

Reversing Contactors are supplied wired. For units desired less wire Add **Suffix - LW** Contact Factory for deduction of price.

Enclosure Description

Nema 1 - General Purpose (indoor)
Nema 4X- Non - Metal (outdoor)
Dust tight / water tight.

Open Type

No Enclosure

To Order Reversing Contactor

Example: 5 HP 460V Reversing
Contactor 120VAC Coil

Part # RLS4K-AO

List = \$183.00

Discount Schedule ST

Modifications & accessories see page 60,61



Standard Modifications & Field Kits for ALL Contactors & Starters

Standard Modifications & Field Kits				Add to Part #	For Custom Assemblies Contact Factory	
Standard Modifications	Meets NEMA	Field Kit Part #	LIST	Factory Installed Suffix No.	LIST	Auxiliary Suffixes
Start - Stop Pushbuttons	1	KSS-2	\$ 25	-KSS-2	\$ 35	2N.O. / 2N.C. For Contactors and starters that require TOP MOUNT Auxiliaries Please indicate by placing a "T" after auxiliary designation. Example : LS11K.22T-A T= Top mount
Start - Stop Pushbuttons	3, 4, 12,4X	KSS-3	\$ 35	-KSS-3	\$ 90	
Hand - Off - Auto	1	KSL-1	\$ 35	-KSL-1	\$ 35	
Hand - Off - Auto	3, 4, 12,4X	KSL-3	\$ 35	-KSL-3	\$ 90	
Extra Pushbuttons	1, 4, 12,4X		\$ 35		\$ 70	
Red Pilot Light	1, 4, 12,4X	KRPL	\$ 55	-RPL-	\$ 60	
Foward Off Reverse	1, 4, 12,4X	KFOR	\$ 35	-FOR	\$ 90	
Control Circuit Transformer Size		Add Suffix to Part #				
For Contactors	VA Size	See Transformer Page 63				
LS4K-18K	50VA		- FT	\$ 135		
LS22K-55K	100VA		- FT	\$ 280		
LS75K-90K	150VA		- FT	\$ 340		
LS110K-160K	200VA		- FT	\$ 380		
LS220-280K	250VA		- FT	\$ NC		
Transformer Prices include primary & secondary fuses. To Add to control simply place the PRIMARY VOLTAGE or Incoming VOLTAGE AFTER the FT. Example: FT460 Example: Complete Part # : XLS5K-A1-L-FT460						

Discount Schedule for **ABOVE** modifications apply for AEG (ST) & EEC/ECX (EC)

Item Description to be Enclosed Amp Max (General Purpose) HP Max (At 460 Volt)	AEG/EEC Part Numbers	NEMA 1 METAL (UL) "WR" = WITH RESET		LIST	NEMA 4X UL DUST /WATER TIGHT (NON-METAL)	LIST
		■ = Hinged Enclosures	Part Number			
Contactors 55 Amp Max	SH05,SH5,LS05,LS07 LS4K,5K,7K,11K,15K,18K		M01-070405H ■	\$ 69	S4X-AM864	\$ 92
Mini starters	XLS05, XLS07, XLS4K-18K		M01-070405H WR(hinge) ■	\$ 72	S4X-AM864-WR	\$ 95
Starters 25 HP Max	XLS4K,5K,7K,11K,15K,18K		M01-100706-WR (no hinge)	\$ 72	S4X-AM1008-WR	\$ 125
Contactors 110 Amps Max	LS22K,30K,37K		M01-100706-(no hinge)	\$ 69	S4X-AM1008-	\$ 122
Contactors 140 Amps Max	LS45K,55K		M01-121006 ■	\$ 87	S4X-AM1210	\$ 153
Reversing Contactors,55amp max	RLS4K,5K,7K,11K,15K,18K		M01-121006-WR ■	\$ 90	S4X-AM1210-WR	\$ 156
Starters 50 HP Max	XLS22K,30K,37K, RXLS4K,5K,7K,11K,15K,18K		M01-140806-WR ■	\$ 85	S4X-AM1412-WR	\$ 200
Reversing Starter (25HP Max)			M01-161208-WR ■	\$ 195	S4X-AM1614-WR	\$ 275
Starters 75 Amp Max	XLS45K,55K		M01-201608 ■	\$ 238	S4X-AM2016	\$ 350
Reversing Starters 50 HP Max	RXLS22K,30K,37K		M01-201608-WR ■	\$ 241	S4X-AM2016-WR	\$ 353
Contactors 125 HP Max	LS75K,LS90K		M01-242008-WR ■	\$ 245	S4X-AM2420-WR	\$ 650
Reversing Starters 75 HP Max	RXLS45K, 55K		M01-242008 ■	\$ 257	S4X-AM2420	\$ 647
Starters 125 Amps Max	XLS75K,90K		M01-302410 ■	\$ 595	S4X-AM3024	\$ 790
Reversing Starters 125 HP Max	RXLS75K,90K					
Reversing Contactor 125 HP Max	RLS75K,RLS90K		M01-362412-WR ■	\$ 725	S4X-AM3630-WR	\$ 1,560
Contactors 250 HP Max	LS110K,132K,160K		M01-362412 ■	\$ 722	S4X-AM3630	\$ 1,557
Reversing Contactors 250 HP Max	RLS110K,132K,160K					
Starters 250 HP Max	XLS110K,132K,160K		M01-423612-WR ■	\$ 1,300	S4X-AM483612-WR	\$ 1,700
Reversing Starters 250 HP Max	RXLS110K,132K,160K					
Reversing Contactors	RLS220K,RLS280K,LS220K					
Starter 400 HP Max	XLS220K,280K					
Reversing Starters 400 HP Max	RXLS220K,280K					





Enclosure Part # Provides dimensions, **Example:** M01-070405, 7" Height, 4" Width, 5"Depth.
 ■ = Hinged Enclosures (Others are LIFT OFF Cover). (4X) All Hinged Enclosures.



Discount Schedule for Enclosures Only (RP)



Accessories For LS-K Contactors



Auxiliaries		Catalog #	List Each	Remarks	Catalog #	List Each
Top Mount - Can be mounted on contactors Sized LS4K - LS55K and relays SH5.		Top Mount		Overvoltage suppressor	RC - Units	
 Description .10 N.O. Auxiliary .01 N.C. Auxiliary A600 10Amp lth Max.	1N.O. Aux	LK-HS7K.10	\$12.00	For direct connection to the coil terminals A1/A2 adaptable without cable.		
	1N.C. Aux	LK-HS7K.01	\$12.00	For AC - operated Contactors 24 - 48V 50 - 127V 130 - 250V	LK-LR 2K-G LK-LR 2K-A LK-LR 2K-C	\$28.00 \$28.00 \$28.00
Maximum Auxiliaies LS4K - LS11K - 4 Max. LS18K - LS55K - 6 Max.	Early Make N.O. Aux Early Break N.C. Aux	LK-HS7V.10 LK-HS7V.01	\$17.00 \$17.00	For AC - operated Contactors 24V 50 - 127V 130 - 250V	LK-LR 3K-G LK-LR 3K-A LK-LR 3K-C	\$28.00 \$28.00 \$28.00
Side Mount Auxiliary (one per side)		Side Mount		For AC - operated Contactors 24V 48 - 260V 80 - 415V	LK-LR 5K-G LK-LR 5K-A LK-LR 5K-D	\$28.00 \$28.00 \$28.00
For Contactors LS4K - LS450K		Aux. Contacts 1N.O./1N.C.Aux 2N.O. Aux	LK-HS8K.11 LK-HS8K.20	For DC - operated Contactors 12 - 600V	Diode LK-LDK-R	\$28.00
 Description .11 = 1 N.O./ 1N.C Auxiliary .20 = .2N.O. Auxiliaries A600 10Amp lth Max.			\$22.00 \$22.00	For AC or DC operated Contactors 24 - 48V 50 - 127V 130 - 250V	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. For LS4K & LS55K.			LK - WBK-*	Interface Module For LS4K - LS55K directly parrallel to the terminals A1/A2 adaptable without cable. * Allows coils from 24-240 VAC to be operated using either 24 or 48 VDC with low current.	With Relay 24v LK-IM (RD) 48v LK-IM(RME) Operational by relay or directly. 24v LK-IM 2K(RDM) 48v LK-IM 2K(RME) via semi - conductor 24v LK-IM 3K(SD)
	AC Volt	DC Volt				
	-G 24 - 32 -X 48 - 60 -A 110 - 127 -C 208 - 277 -E 380 - 480 -F 600	-N 24 - 36 -O 42 - 48 -P 110 - 125 -R 220 - 250				
Timer Pneumatic			On - delay			
 For LS4K - LS55K pneumatic, contacts, Pneumatically delayed auxiliary switches. * this unit requires mounting to LS 4-LS55K contactors to operate time sequence.	0.1 - 30s		LK-TMD 30	\$85.00		
	1 - 60s		LK-TMD 60	\$85.00		
			Off delay			
	0.1 - 30s		LK-TMI 30	\$85.00		
	1 - 60s		LK-TMI 60	\$85.00		
Electronic Timer			On Delay			List Each
For LS 4K - LS 55K Directly Parallel to the coil terminals A1/A2 adaptable without cable.			0.1 - 2 seconds 1.5 - 30 seconds		LK-TED2 LK-TED 30	\$120.00 \$115.00
			Off Delay		LK-TEI2 LK-TEI 30	\$120.00 \$ 115.00
Mechanical Interlock - Used to Mechanically Interlock two contactors to eliminate both contactors pulling at the same time.			For Contacts		LK-LUV18K LK-LUV55K	\$33.00 \$33.00
For side Mounting for :			LS 4K - LS 18K LS22K - LS 55K			
Mechanical / Electrical Interlocks Have a N.C. Aux Contact for each contactor built in. No need for additional Aux. contacts for electrical interlocks.			LS 4K - LS 18K - 2N.C. contacts LS22K - LS 55K - 2 N.C. contacts		Mechanical / Electrical LK-LUV 18E LK-LUV 55E	\$48.00 \$48.00
LS75K - LS375K LS220K - LS280K (Horizontal mount) LS220K - LS375K (Vertical Mount) LS450K (Vertical Mount Only)			LS75K - LS375K LS220K -LS375K LS450K (only as vertical)		Mechanical, Interlock mounting horizontally LK-LUV 375H Mechanical, mounting vertically LK-LUV 375V LK-LUV 450V	\$70.00 \$145.00 \$145.00
Mounting Plate Use when replacing LS-contactors. Mounting aid for individual rail mounting of LS -K contactors.		For :	To :		With mounting rail contour to DIN EN 50 022	
		LS4 - LS17 , LS27, LS37 LS47 LS107	LS4K - LS18K LS22K - LS45K LS55K		LK-AD18 LK-AD45 LK-AD55	\$15.00 \$16.00 \$26.00

SPARE PARTS		AC COILS				DC COILS			
Replacement Coils Contactor Type		Catalog Number	List Each	Coil Pick-up VA	Volt-Amp Holding VA	Catalog Number	List Each	Pick-up Watt	Holding Watt
LS05 		LK-C 130-*	\$20.00	26	4	LK-C 133- (at 24V)	\$25.00	2.4 (1.2w)	2.4 (1.2w)
LS 4K LS 5K LS 7K LS 11K	3 + 4 pole 3 + 4 pole 3 + 4 pole 3 pole	LK-C 650-*	\$23.00	45	6	LK-C 660-*	\$50.00	5.5	5.5
LS 11K LS 15K LS 18K	4 pole 3 + 4 pole 3 pole	LK-C 652-*	\$28.00	88	9	LK-C 662-*	\$73.00	7.5	7.5
LS 18K LS 22K LS 30K-45K LS 55K	4 pole 3 pole 3 + 4 pole 3 pole	LK-C 653-*	\$52.00	191	17	LK-C 663-*	\$112.00	197 TW - Two winding	2.6
LS 75K LS 90K	3 pole 3 pole	LK-C 654-*	\$90.00	REPLACEMENT CONTACTS Kit includes 2 stationary & 1 movable contact for each pole with spring. 					
LS 55K LS 110K	4 pole 3 pole	LK-C 655-*	\$90.00						
LS 90K	4 pole	LK-C 656-*	\$90.00						
AC/DC CONTACTOR COILS				3 Pole Kits		4 Pole Kits (-22 or -4)			
Replacement Coils Contactor Type		Catalog Number	List Each	Contactor Type	Catalog Number	List Each	Contactor Type (-22 or -40)	Catalog Number	List Each
LS 75K LS 90K	3 pole 3 pole	LK-C 665-*	\$90.00	LS 4K	LK-CS 4-3P	\$29.00	LS 5K-22 or 40	LK-CS 5C-*	\$40.00
		Power Pack LK-CM 672-*	\$445.00	LS 5K	LK-CS 5-3P	30.00	LS 7K-22 or 40	LK-CS 7C-*	53.00
				LS 7K	LK-CS 7-3P	40.00	LS 11K-22 or 40	LK-CS 11C-*	65.00
LS 110K LS 160K LS 375K LS 55K	3 pole 3 pole 3 pole 4 pole	LK-C 667-*	\$90.00	LS 11K	LK-CS 11-3P	43.00	LS15K-22 or 40	LK-CS 15C-*	90.00
		Power Pack LK-CM 671-*	\$445.00	LS 15K	LK-CS 15-3P	62.00	LS18K-22 or 40	LK-CS 18C-*	108.00
				LS 18K	LK-CS 18-3P	72.00	LS30K-22 or 40	LK-CS 30C-*	165.00
LS 90K LS 132K LS 160K LS 375K	4 pole 4 pole 4 pole 4 pole	LK-C 670-*	\$238.00	LS 22K	LK-CS 22-3P	100.00	LS37K-22 or 40	LK-CS 37C-*	260.00
		Power Pack LK-CM 670-*	\$445.00	LS 30K	LK-CS 30-3P	108.00			
Coil with Power Pack				LS37K	LK-CS 37-3P	136.00			
LS 220K LS 280K	3 + 4 pole 3 + 4 pole	LK-C 669-*	\$576.00	LS 45K	LK-CS 45-3P	172.00			
				LS 55K	LK-CS 55-3P	208.00			
LS 450K *	3 + 4 pole	LK-C 668-*	\$238.00	LS 75K	LK-CS 75-3P	229.00			
	* AC ONLY			LS 90K	LK-CS 90-3P	287.00			
				LS 110K	LK-CS 110-3P	363.00			
				LS 132K	LK-CS 132-3P	433.00			
				LS 160K	LK-CS 160-3P	543.00			
				LS 220K	LK-CS 220-3P	860.00			
				LS 280K	LK-CS 280-3P	1240.00			
				LS 375K	LK-CS 375-3P	1475.00			
				LS 450K	LK-CS 450-3P	2675.00			

* COIL VOLTAGE SUFFIX
SEE PAGE 57.

* DC OPERATED same dimensions, except with
DC coil switching auxiliary, and 11 mm (0.43")

LSK CONTACTOR DIMENSIONS, Approximate mm (inches)							AC OPERATED	
Contactor Part Number	LS 4K, 5K LS 7K, 11K 11K = 3Pole (3 + 4 pole)	LS 11K-4 LS 15K-4 LS 15K LS 18K	LS 22K LS 30K LS 37K (3 pole)	LS 45K LS 55K	LS 18K-4 LS 30K-4 LS 37K-4 (4 pole)	LS 45K-4 (4 pole)		
Height	81 (3.2")	87 (3.4")	117 (4.6")	117 (4.6")	117 (4.6")	117 (4.6")		
Width	45 (1.8")	55 (2.2")	66 (2.6")	75 (3")	87 (3.4")*	96 (3.8")*		
Depth	83 (3.3")	98 (3.9")	116 (4.6")	126 (5.0")	118 (4.6")	126 (5.0")		
	Add for top auxiliaries	+ 29 (1.2")	+ 29 (1.1")					

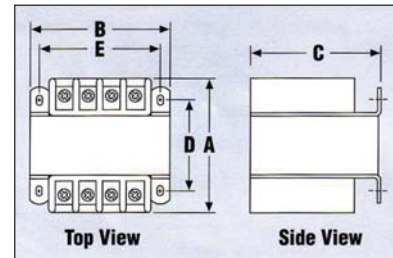
Micron Transformers

Built and designed to address today's highest reliability and performance demands. Micron's Industrial Control Circuit Transformers meet and exceed all NEMA, ANSI, UL and CSA standards. Powerful electronics built with heavy duty construction assure reliable operation of electromagnetic devices with trouble free performance. We carry the most versatile design transformers from Micron Transformers in stock. The part numbers below are designed as a triple tap in 208V/230V/460V and a 120V/24V secondary tap. All part numbers below include a primary and secondary fuse holder as standard. Fuses may also be ordered as a separate item below.

Standards and Approvals


IEC


Dimension Dialog



C dimensions include primary fuse block mounted on top

Control Transformers ▲



50/60HZ

Primary Volts	Secondary Volts	Continuous VA	Catalog Part number	List Price	Contactors to use with	A* height	B* width	C* depth
208V, 230V, 460V	115V 24V	50VA	B050MBT713RK	\$48	LS07,4,7,17,27,37 LS05,4K,7K,11K,18K	3.25" (83mm)	3." (76mm)	3.93" (100mm)
208V, 230V, 460V	115V 24V	100VA	B100MBT713RK	\$64	LS47,57,77,87,107 LS22K,30K,37K,45K, LS55K	3.62" (92mm)	3.75" (95mm)	4.55" (76mm)
208V, 230V, 460V	115V 24V	150VA	B150MBT713RK	\$76	LS177, LS75K LS90K(3P)	4.37" (111mm)	3.75" (95mm)	4.55" (76mm)
208V, 230V, 460V	115V 24V	200VA	B200MBT713RK	\$96	LS247 LS110K, 132K, 160K	4.5" (114mm)	4.5" (114mm)	5.18" (132mm)
208V, 230V, 460V	115V 24V	250VA	B250MBT713RK	\$106	LS220K, 280K, 375K	5.25" (133mm)	4.5" (113mm)	5.18" (133mm)
208V, 230V, 460V	115V 24V	300VA	B300MBT713RK	\$116	LS450K	5.12" (130mm)	5.25" (133mm)	6.12" (155mm)
208V, 230V, 460V	115V 24V	350VA	B350MBT713RK	\$132		5.37" (137mm)	5.25" (133mm)	6.12" (155mm)

Fuses for above transformers

▲ other type transformers are available (contact factory).

Primary Fuses are "Rejection Feature Type" and require a *Rejection Feature Fuse*. This fuse type is identified with R designation (example: ATQR - 1/2). Fuse supplier is Ferraz Shawmut (fuses shown are time delay).

Primary	Fuse Part Numbers	
Amps	PIN	List Each
1/2 Amp	ATQR - 1/2A	\$10
1 Amp	ATQR - 1A	\$10
1.5 Amp	ATQR - 1.5A	\$10
2 Amp	ATQR - 2A	\$10

Secondary	Fuse Part Numbers	
Amps	PIN	List Each
1/2 Amp	ATQ - 1/2A	\$10
1 Amp	ATQ - 1A	\$10
1.5 Amp	ATQ - 1.5A	\$10
2 Amp	ATQ - 2A	\$10

*All dimensions are approximate.

Overload Relays Type B



Type

B18K

B55K

B90K

B160K

B375 K

Relay Settings

Low Range from / to A	0.16 - 0.26	18.5 - 25	110 - 140A	175 - 280A	175 - 280
High Range from / to A	30 - 40	90 - 110	140 - 190	200 - 310	430 - 700

Attachable to Contactors

Plug in	LS 4K - LS 18K	LS 22K - LS 55K	LS 75K - LS 90K		
Bus Connection				LS 110K - LS 160K	LS 220K - LS 375K



TYPE B 18K

Plug on Mount
(LS 4K, 5K, 7K, 11K, 15K, 18K)

Catalog #	Adjustable Amp Settings	List Price
B 18K - B	0.16 - 0.26	\$ 55.00
B 18K - C	0.25 - 0.41	\$ 55.00
B 18K - D	0.4 - 0.65	\$ 55.00
B 18K - E	0.65 - 1.1	\$ 55.00
B 18K - F	1 - 1.5	\$ 55.00
B 18K - G	1.3 - 1.9	\$ 55.00
B 18K - H	1.8 - 2.7	\$ 55.00
B 18K - I	2.5 - 4	\$ 55.00
B 18K - K	4 - 6.3	\$ 55.00
B 18K - L	5.5 - 8.5	\$ 55.00
B 18K - M	8 - 12	\$ 55.00
B 18K - N	10 - 16	\$ 55.00
B 18K - O	14.5 - 18	\$ 55.00
B 18K - OM	17.5 - 22	\$ 65.00
B 18K - ON	21 - 26	\$ 65.00
B 18K - P	25 - 32	\$ 75.00
B 18K - Q	30 - 40	\$ 85.00

For separate mount add "S" to above part #'s. Add \$12 to List
Example: B 18K - LS



TYPE B 55K

Plug on Mount
(LS 22K, 30K, 37K, 45K, 55K)

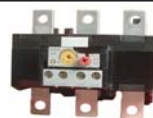
Catalog #	Adjustable Amp Settings	List Price
B 55K - 25A	18.5 - 25	\$ 92.00
B 55K - 32A	24 - 32	\$ 92.00
B 55K - 43A	30 - 43	\$ 96.00
B 55K - 55A	42 - 55	\$ 96.00
B 55K - 65A	54 - 65	\$ 96.00
B 55K - 82A	64 - 82	\$ 117.00
B 55K - 97A	78 - 97	\$ 117.00
B 55K - 110A	90 - 110	\$ 117.00

For separate mount add "S" to above part #'s. Add \$ 20 to List Price

Example: B 55K - 43AS

Seperate Mount Kit :

Catalog # B 55K - AD \$ 20 List



TYPE B 90K

Plug on Mount
(LS 75K, 90K)

Catalog #	Adjustable Amp Settings	List Price
B 90K - 140A	110 - 140	\$ 185.00
B 90K - 190A	140 - 190	\$ 185.00

Technical Data

Ambient Compensation Temperature
-25 °c - + 60 °c
(-11.2 °F - +140 °F)

N.O. /N.C.
Isolated Contacts

Single Phase Sensitive

Plug On / Bolt On
Design up to B90K

Consistent Operation with
Bi - Metallic Heater Elements
Precise & Factory
CALIBRATED

Trip Test
Button Built In

Shipped in Manual Reset
Mode.
Includes Automatic Reset
Option

Class 10 Tripping Class

Separate Mount Kit : Catalog # - B 18K - AD \$ 12 List



TYPE B 160K
SEPARATE MOUNT
(LS 110K, 132K, 160K.)

Catalog No.	Amp Setting	List
B 160K-280A	175 - 280	\$ 390.00
B 160K-310A	200 - 310	\$ 420.00

In order to plug B160K overload into the contactor bus links are required.

DESCRIPTION	PART #	LIST
Bus link LS 110 K - 160 K	BL160	\$ 65.00

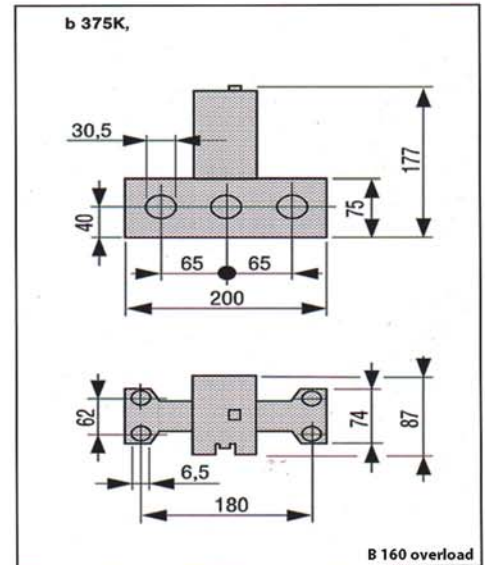
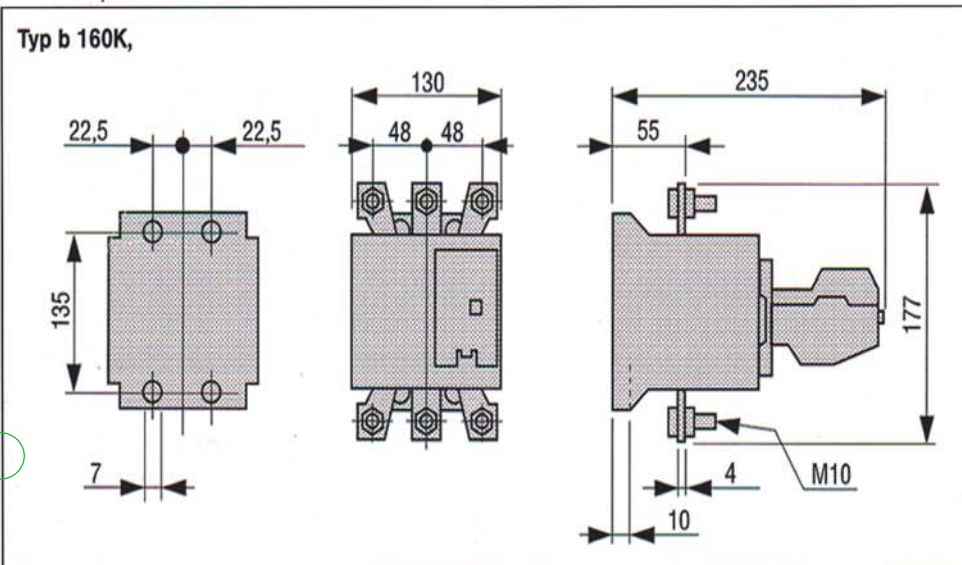
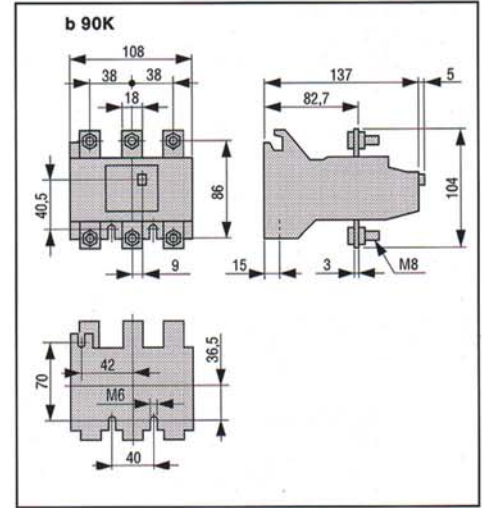
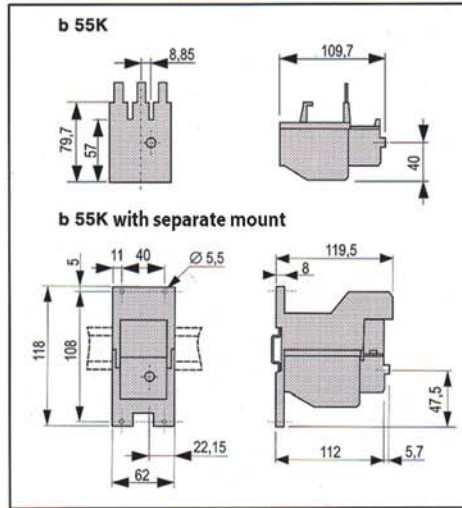
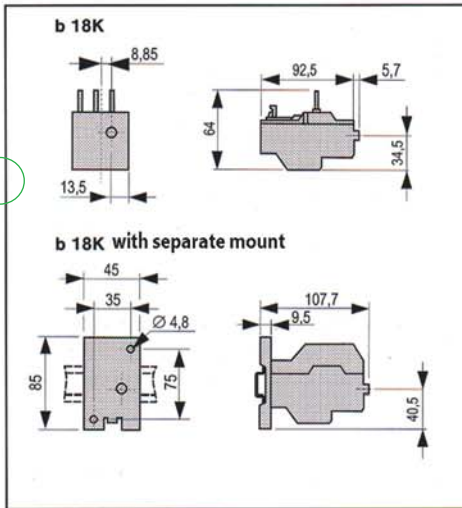


TYPE B 375K
SEPARATE MOUNT
(LS 220K, 280K, 375K.)

Catalog No.	Amp Setting	List
B 375K-280A	175 - 280	\$ 420.00
B 375K-400A	250 - 400	\$ 540.00
B 375K-500A	315 - 500	\$ 540.00
B 375K-700A	430 - 700	\$ 540.00

In order to plug B 375K overload into the contactor bus links are required.

DESCRIPTION	PART #	LIST
Bus link LS 220K - 280K	BL280	\$ 65.00
Bus link LS 375K	BL375	\$ 65.00

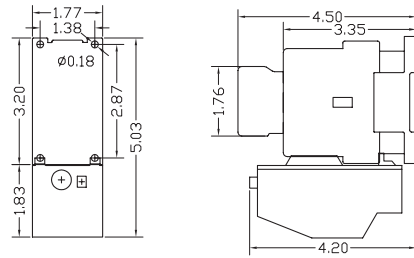


B 160 overload

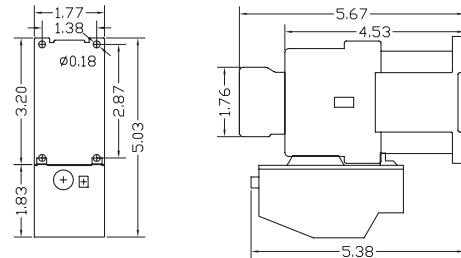
AC Operated *

DC Operated *

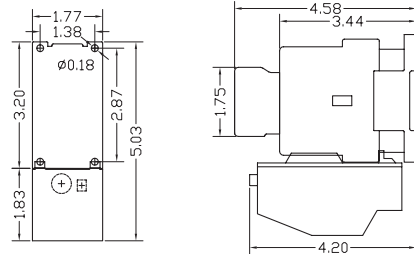
XLS4K, XLS5K, XLS7K



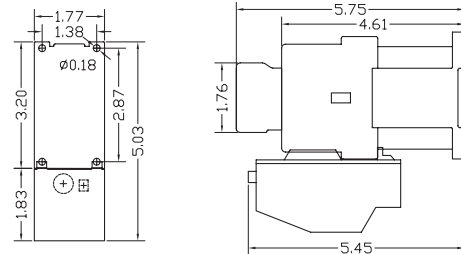
XLS4K, XLS5K, XLS7K



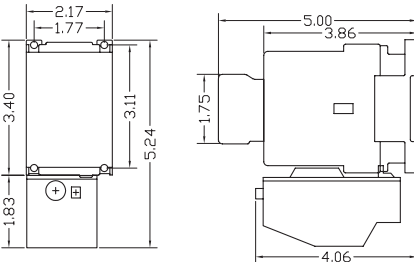
XLS11K



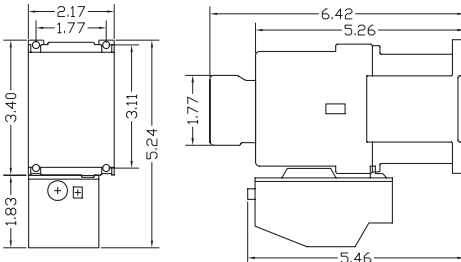
XLS11K



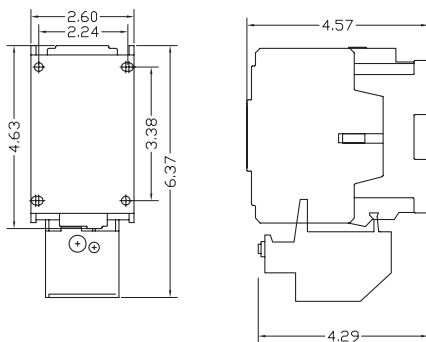
XLS15K, 18K



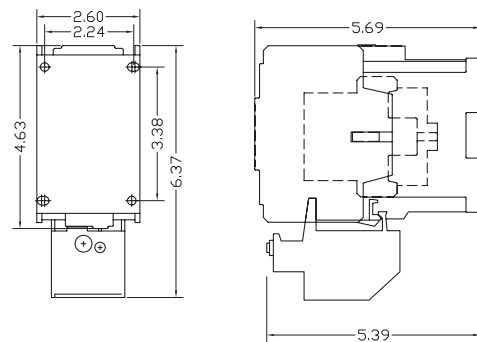
XLS15K, 18K



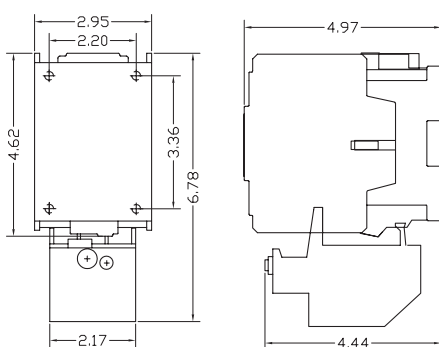
XLS22K, 30K, 37K



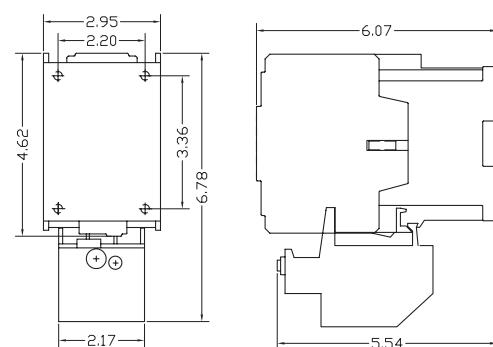
XLS22K, 30K, 37K



XLS45K, 55K



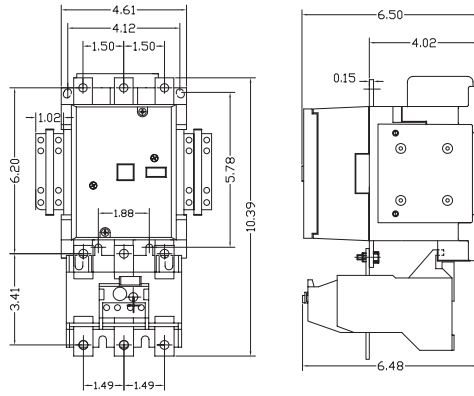
XLS45K, 55K



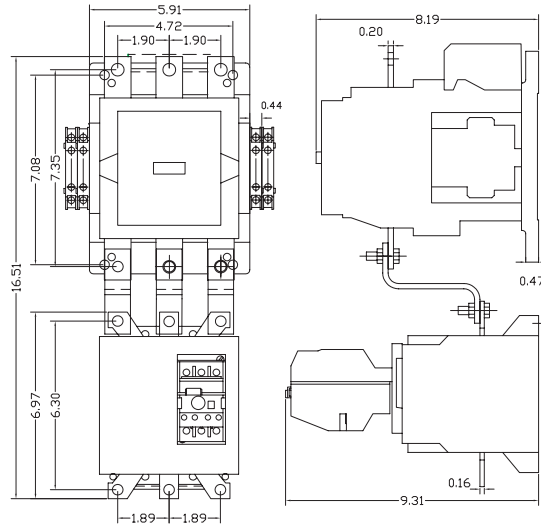
XLS Starter Drawings

XLS STARTERS Dimension Drawings (in.)

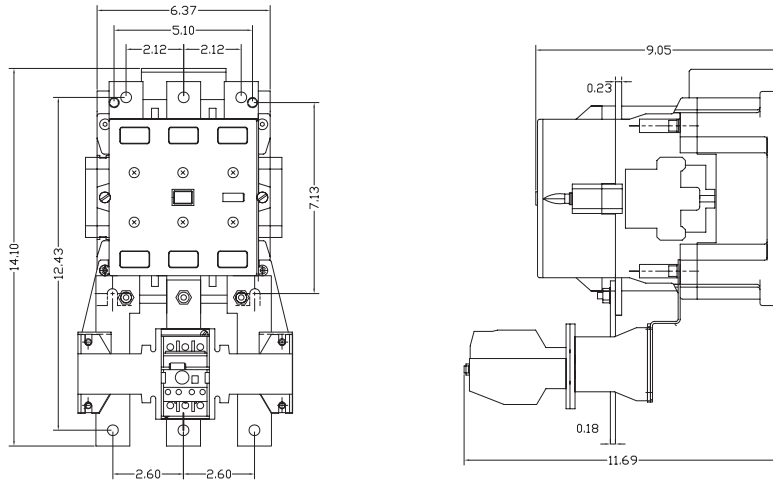
XLS75K, 90K AC/DC Operated



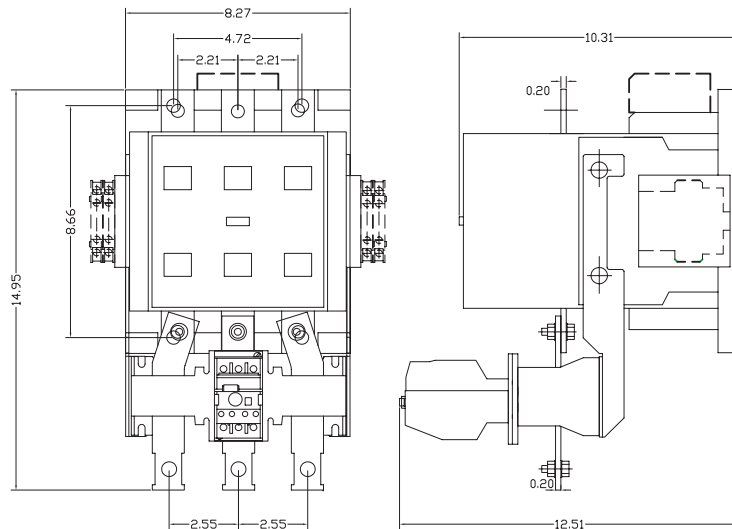
XLS110K, 132K, 160K AC/DC Operated



XLS220K, 280K,
AC/DC Operated

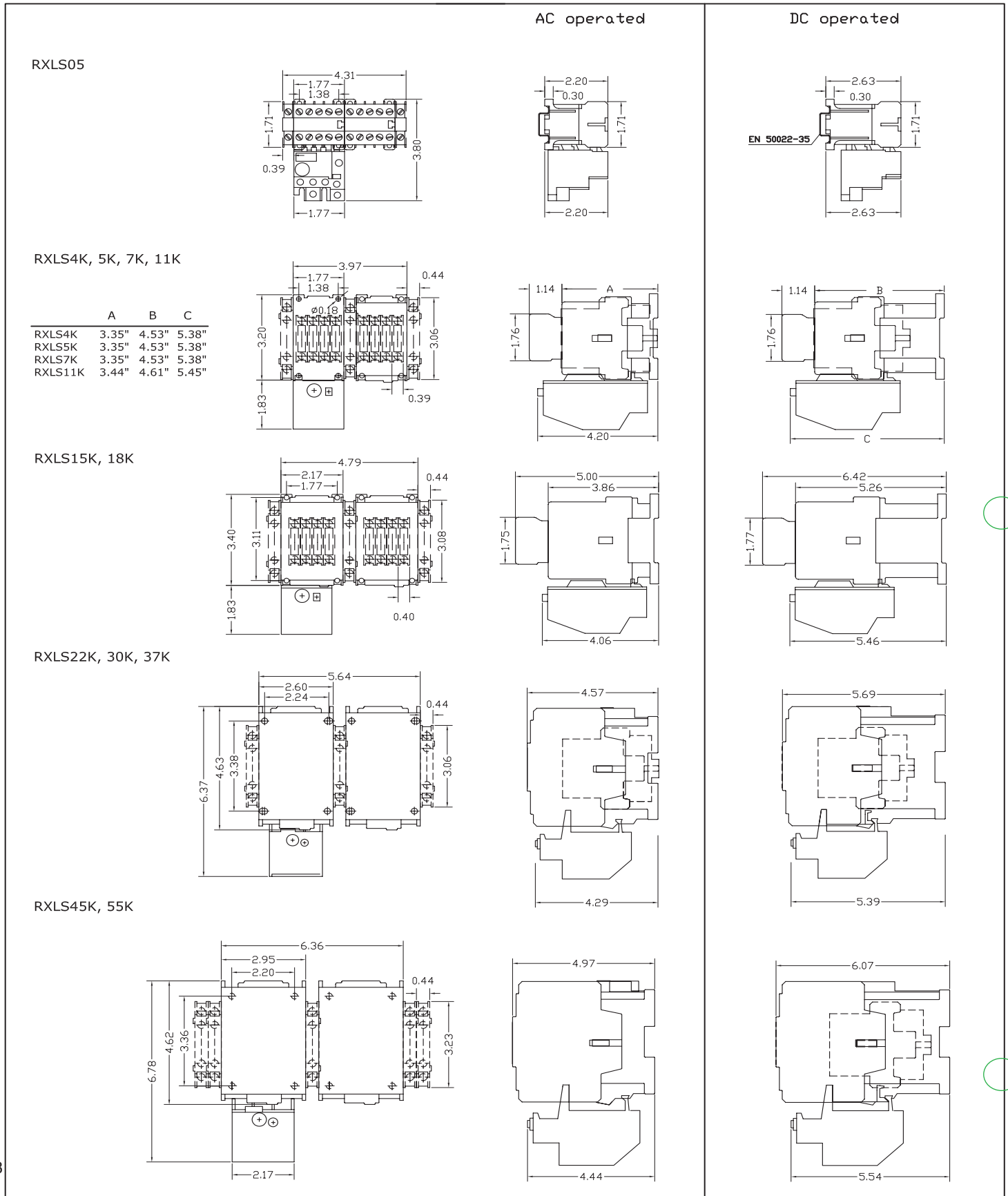


XLS375K AC/DC
Operated



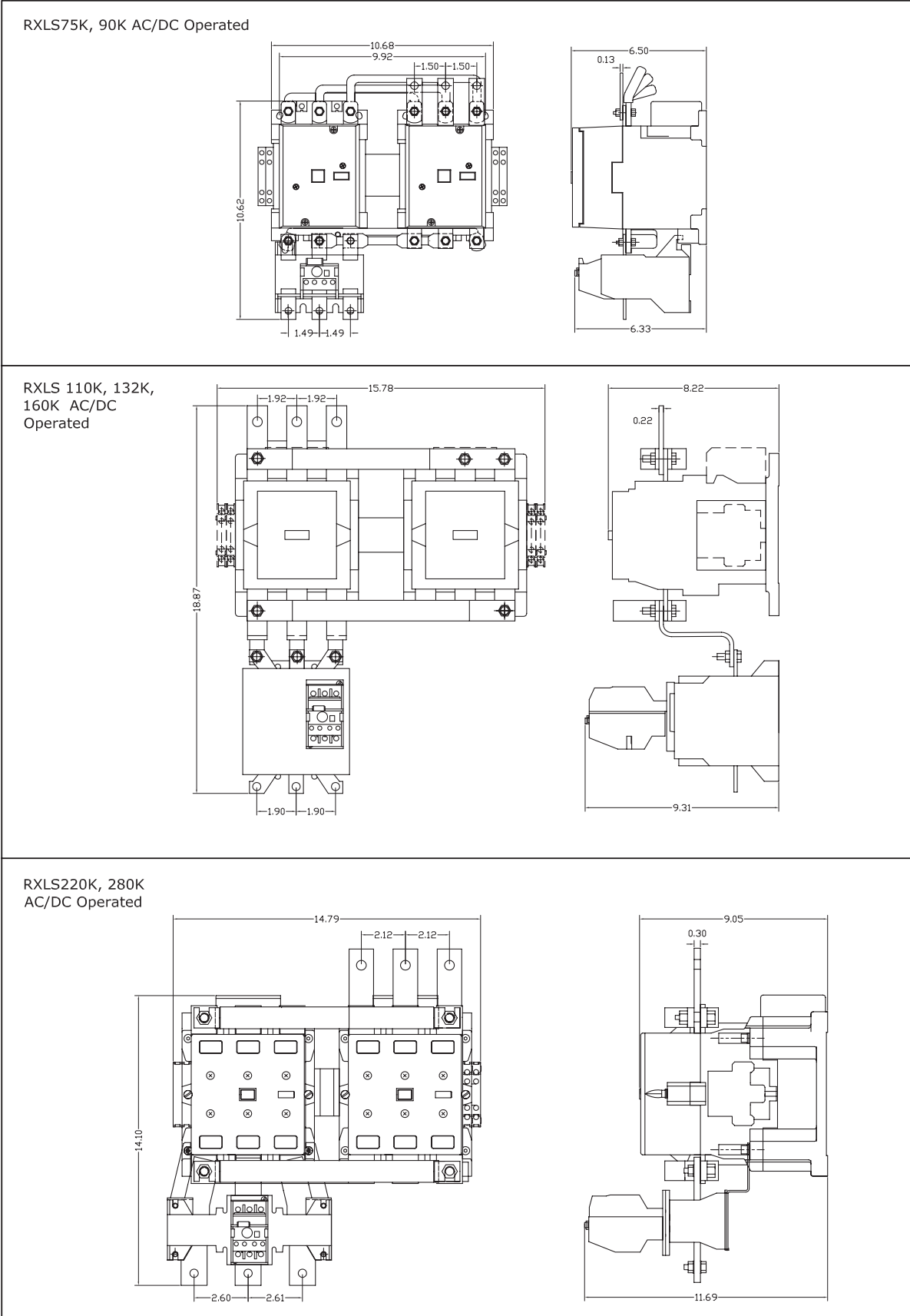
RXLS STARTERS

Dimension Drawings (in.)



RXLS Starter Drawings

RXLS STARTERS Dimension Drawings (in.)



20 AMP GENERAL PURPOSE



Type XLS05 STARTER
with Auxiliary Contacts

INTERNATIONAL RATINGS

Technical Values

Type	LS05
	SH05
Permissible ambient temperature	+60 C
Rated insulation voltage	660V
Mechanical lifespan	10,000,000
General Purpose Amps	20A
Permissible switching frequency	1200 ops/hr

Short-circuit protection(Class gL)

Highest rated fuse (without welding of contacts)	20A
Auxiliary switchHS05	220V 6A
AC-11-Duty Rated current (a.c.)	500V 2,5A
	600V 1,5A
	24V 5A

DC-11-Duty Rated current (d.c.)	110V 1,2A
	220V 0,6A

Operating coil (Standard -20% - +10%)	24V 5A
	Closing 26VA
	VA 4VA

Power consumption Holding Phs	VA 4VA
Switching times at 1, 0 U _s (standard coil)	closing delay 7-12 MS
	opening delay 6-13 MS

LS05 CONTACTOR
SH05 RELAY
B05 OVERLOAD RELAY

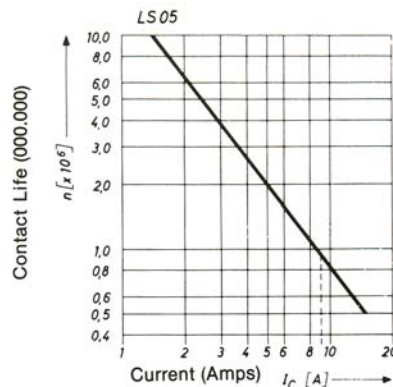
A stylish, and compact family of control relays, type SH05, contactors, type LS05, and overload relays, type B05. Complete with a comprehensive range of accessories, they provide the flexible solution for control systems.

A maximum 10 pole control relay, type SH05, with 6 auxiliary switches, is also available as a contactor, type LS05 with up to 6 auxiliary switches. Rated at 5 HP 480V, it has a high switching performance within its compact dimensions. Panel or DIN mountable.

Front mounting snap on auxiliary switch block, with up to 4 contacts in standard base module.



Type LS05 CONTACTOR



Contact life of the main contacts

The above diagram shows details of the contact life in relation to the breaking current, when switching resistive and inductive a.c. loads. The above does not relate to synchronising of phase position during switching.
 $n = \text{Contact Lifespan}$
 $I_C = \text{Breaking current}$

Contactor/Relay Accessories

A single pole auxiliary switch (1 N.O. or 1 N.C.) is available as an accessory, for side mounting, thus avoiding any increase in the high dimension.

Special auxiliary contacts for increased contact reliability at low voltages.

Front or side mounting time delay module 0.5 to 60 seconds.

Coil, overvoltage suppression module.

Mechanical interlock kit.



Type B05 OVERLOAD RELAY

Thermal Overload Relay Type B05

for direct mounting onto contactors type LS05, and LS07, also available with adaptor for separate mounting. Style and dimensions compatible with contactors.

DIN rail mounting uses an adaptor plate.

The lower coil, and auxiliary switch connection of the contactor is brought to a more accessible terminal.

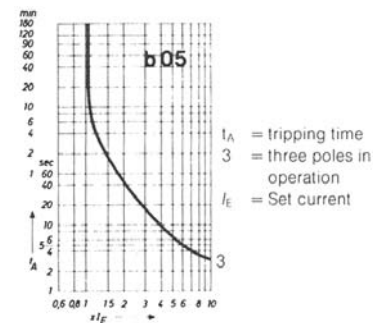
Ambient temperature compensation.

Single phase sensitivity is achieved by a differential tripping action.

Convertible Hand or Automatic reset feature. (Reset button: blue).

Separate red *Stop* button.

One N.C. auxiliary trip switch built in, with an additional *Snap* 1 N.O. auxiliary trip switch available if required.



Type B05 Overload Relay Tripping Characteristic(Example)

Curves show trip characteristic from cold condition. From warm condition, the tripping time can be reduced to approx. 25%. (Average values for all current range)

* See page 73 for Dimensions.