



MOTOR PROTECTION SWITCHES, CONTACTORS, OVERLOAD RELAYS

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MOTOR PROTECTION SWITCHES UP TO 100A

MOTOR PROTECTION SWITCH



BESD0063



BES00400



BES2....



BES3....

SCHRACK-INFO

ALEA motor starter protectors are compact, current limiting motor starter protectors which are optimized for load feeders. The motor starter protectors are used for switching and protecting induction motors of up to 45 kW at 400 V AC and for other loads with rated currents of up to 100A.

TYPE	BESD / BES0 / BES2 / BES3			
APPLICATIONS				
System protection	✓ ¹⁾			
Motor protection	✓			
Motor protection with overload relay function	--			
Starter combinations	--			
Transformer protection	--			
Fuse monitoring	--			
Voltage transformer circuit breakers for distance protection	--			
SIZE	S00, S0, S2, S3			
RATED CURRENT I_n				
SIZE S00	up to 12A			
SIZE S0	up to 25A			
SIZE S2	up to 50A			
SIZE S3	up to 100A			
RATED OPERATIONAL VOLTAGE U_e ACCORDING TO IEC	690 VAC ²⁾			
RATED FREQUENCY	50/60 Hz			
TRIP CLASS	Class 10 Class 20			
THERMAL OVERLOAD RELEASE	0.11 ... 0.16A up to 80 ... 100A			
ELECTRONIC TRIP UNITS A multiple of the rated current	13 Times			
SHORT-CIRCUIT BREAKING CAPACITY I_{cu} AT 400 VAC	50/100 kA			
ACCESSORIES FOR SIZES	S00	S0	S2	S3
Auxiliary switches	✓	✓	✓	✓
Signaling switches	--	✓	✓	✓
Undervoltage releases	✓	✓	✓	✓
Shunt trip units	✓	✓	✓	✓
Insulated three-phase busbar systems	✓	✓	✓	--
Busbar adapters	✓	✓	✓	✓
Door-coupling rotary operating mechanisms	--	✓	✓	✓
Link modules	✓	✓	✓	✓
Enclosures for surface mounting	✓	✓	✓	--
Infeed terminal	✓	✓	--	--

¹⁾ For symmetrical loading of the three phases.

²⁾ 500 V AC with molded-plastic enclosure.

MOTOR PROTECTION SWITCHES UP TO 100A

MOTOR PROTECTION SWITCH, SIZE 00



BESD0063

DESCRIPTION	SIZE	ORDER NO.
ALEA MOTOR PROTECTION SWITCH SIZE 00		
Motor protection switch 0,16A, Class 10	00	BESD0016
Motor protection switch 0,20A, Class 10	00	BESD0020
Motor protection switch 0,25A, Class 10	00	BESD0025
Motor protection switch 0,32A, Class 10	00	BESD0032
Motor protection switch 0,40A, Class 10	00	BESD0040
Motor protection switch 0,50A, Class 10	00	BESD0050
Motor protection switch 0,63A, Class 10	00	BESD0063
Motor protection switch 0,80A, Class 10	00	BESD0080
Motor protection switch 1,00A, Class 10	00	BESD0100
Motor protection switch 1,25A, Class 10	00	BESD0125
Motor protection switch 1,60A, Class 10	00	BESD0160
Motor protection switch 2,00A, Class 10	00	BESD0200
Motor protection switch 2,50A, Class 10	00	BESD0250
Motor protection switch 3,20A, Class 10	00	BESD0320
Motor protection switch 4,00A, Class 10	00	BESD0400
Motor protection switch 5,00A, Class 10	00	BESD0500
Motor protection switch 6,30A, Class 10	00	BESD0630
Motor protection switch 8,00A, Class 10	00	BESD0800
Motor protection switch 10A, Class 10	00	BESD1000
Motor protection switch 12A, Class 10	00	BESD1200

MOTOR PROTECTION SWITCHES UP TO 100A

MOTOR PROTECTION SWITCH, SIZE 0



BES00400

DESCRIPTION	SIZE	ORDER NO.
ALEA MOTOR PROTECTION SWITCH SIZE 0		
Motor protection switch 0,16A, Class 10	0	BES00016
Motor protection switch 0,20A, Class 10	0	BES00020
Motor protection switch 0,25A, Class 10	0	BES00025
Motor protection switch 0,32A, Class 10	0	BES00032
Motor protection switch 0,40A, Class 10	0	BES00040
Motor protection switch 0,50A, Class 10	0	BES00050
Motor protection switch 0,63A, Class 10	0	BES00063
Motor protection switch 0,80A, Class 10	0	BES00080
Motor protection switch 1,00A, Class 10	0	BES00100
Motor protection switch 1,25A, Class 10	0	BES00125
Motor protection switch 1,60A, Class 10	0	BES00160
Motor protection switch 2,00A, Class 10	0	BES00200
Motor protection switch 2,50A, Class 10	0	BES00250
Motor protection switch 3,20A, Class 10	0	BES00320
Motor protection switch 4,00A, Class 10	0	BES00400
Motor protection switch 5,00A, Class 10	0	BES00500
Motor protection switch 6,30A, Class 10	0	BES00630
Motor protection switch 8,00A, Class 10	0	BES00800
Motor protection switch 10A, Class 10	0	BES01000
Motor protection switch 12,5A, Class 10	0	BES01200
Motor protection switch 16A, Class 10	0	BES01600
Motor protection switch 20A, Class 10	0	BES02000
Motor protection switch 22A, Class 10	0	BES02200
Motor protection switch 25A, Class 10	0	BES02500

MOTOR PROTECTION SWITCHES UP TO 100A

MOTOR PROTECTION SWITCH, SIZE 2



BES2....

DESCRIPTION	SIZE	ORDER NO.
ALEA MOTOR PROTECTION SWITCH SIZE 2		
Motor protection switch 25A, Class 10	2	BES22500
Motor protection switch 32A, Class 10	2	BES23200
Motor protection switch 40A, Class 10	2	BES24000
Motor protection switch 45A, Class 10	2	BES24500
Motor protection switch 50A, Class 10	2	BES25000

MOTOR PROTECTION SWITCH, SIZE 3



BES3....

DESCRIPTION	SIZE	ORDER NO.
ALEA MOTOR PROTECTION SWITCH SIZE 3		
Motor protection switch 63A, Class 10	3	BES36300
Motor protection switch 75A, Class 10	3	BES37500
Motor protection switch 90A, Class 10	3	BES39000
Motor protection switch 100A, Class 10	3	BES39999

MOTOR PROTECTION SWITCHES UP TO 100A

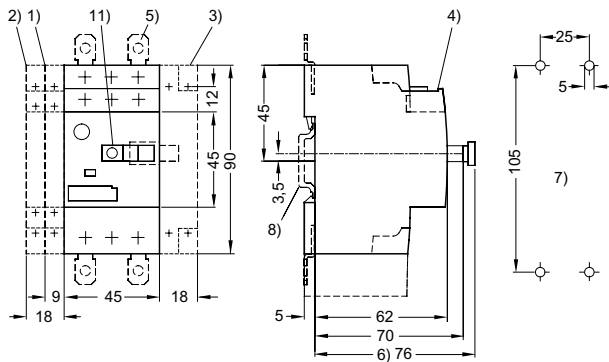
MOTOR PROTECTION ACCESSORIES

DESCRIPTION	SIZE	ORDER NO.
AUXILLIARY SWITCH		
Auxilliary switch side mounted 1 NO + 1 NC	00/0/2/3	BEZ00001
Auxilliary switch front mounted 1 NO + 1 NC	00/0/2/3	BEZ00003
Auxilliary switch side mounted 2 NO	00/0/2/3	BEZ00002
Auxilliary switch front mounted 2 NO	00/0/2/3	BEZ00004
ALARM-SWITCH		
Alarm switch 1 NO + 1 NC		BEZ00005
UNDERVOLTAGE RELEASE		
Undervoltage release side mounted AC 230V/50HZ, AC 240V/60HZ	00/0/2/3	BEZ00006
Undervoltage release side mounted AC 400V/50HZ, AC 440V/60HZ	00/0/2/3	BEZ00007
STUNT TRIP		
Stunt trip side mounted AC 20...24V, 50/60HZ, 100% ED	00/0/2/3	BEZ00008
Stunt trip side mounted AC 210...240V, 50/60HZ,100% ED	00/0/2/3	BEZ00009
HOUSINGS		
Moulded plastic housing, membran IP55	00	BEZ00012
Moulded plastic housing, emergency stop, mushroom head	00	BEZ00013
Moulded plastic housing, rotary handle IP55	0	BEZ00112
Moulded plastic housing, emergency stop IP55	0	BEZ00113
Moulded plastic housing, rotary handle IP55	2	BEZ00212
Moulded plastic housing, emergency stop IP55	2	BEZ00213
Locking plate for 3 padlocks	00	BEZ00014
BUSBARS AND COVERS FOR 3 SPARE-PLACE		
3-pole busbar for 2 motor protection switches	00/0	BEZ00017
3-pole busbar for 3 motor protection switches	00/0	BEZ00018
3-pole busbar for 4 motor protection switches	00/0	BEZ00020
3-pole busbar for 5 motor protection switches	00/0	BEZ00021
3-pole busbar for 2 motor protection switches	2	BEZ00217
3-pole busbar for 3 motor protection switches	2	BEZ00218
Cover for spare-place, blank plate	00/0	BEZ00019
Cover for spare-place, blank plate	2	BEZ00219
ACCESSORIES		
Rotary operating (door coupling)	0/2/3	BEZ00010
Rotary operating, emergency stop (door coupling)	0/2/3	BEZ00011
3 PHASE INFEED TERMINAL		
3 Phase Infeed Terminal Size 00 for 3-phase-busbar	00	BEZ00016
3 Phase Infeed Terminal Size 0 for 3-phase-busbar	0	BEZ00116
3 Phase Infeed Terminal Size 2 for 3-phase-busbar	2	BEZ00216

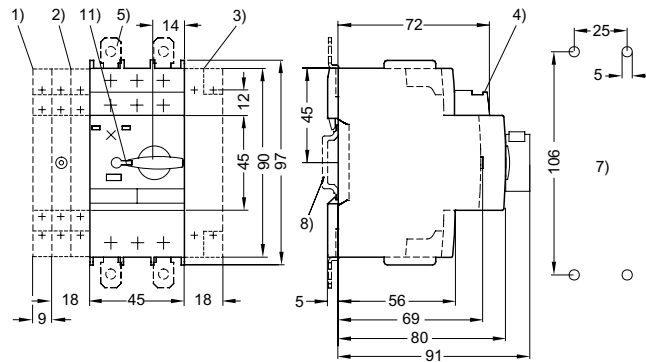
MOTOR PROTECTION SWITCHES UP TO 100A

DIMENSIONS

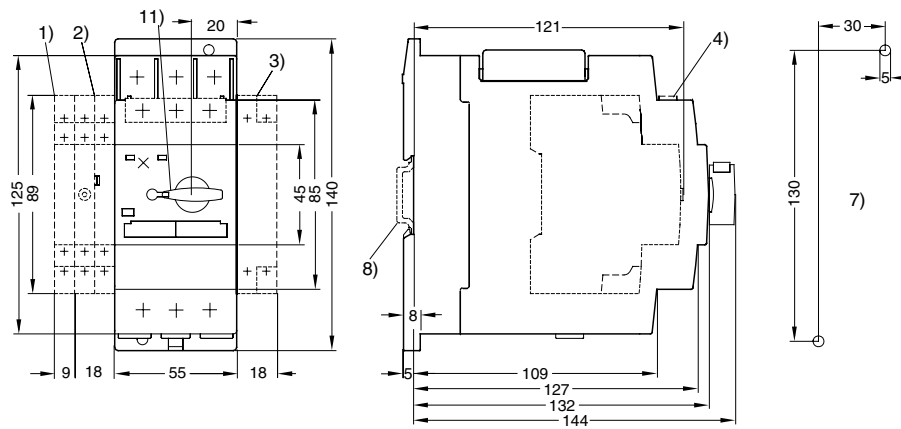
**MOTOR PROTECTION SWITCH, SIZE 00
BESD**



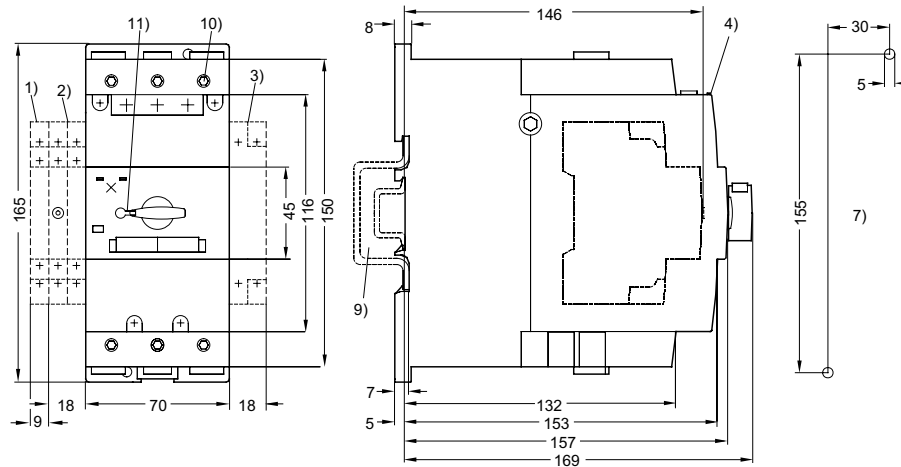
**MOTOR PROTECTION SWITCH, SIZE 0
BES0**



**MOTOR PROTECTION SWITCH, SIZE 2
BES2**







**MOTOR PROTECTION SWITCH, SIZE 3
BES3**



- 1) Side mounted auxiliary switch, 2-pole
- 2) Signaling switch (S0 ... S3) side mounted
- 3) Auxiliary trip unit
- 4) Front mounted auxiliary switch
- 5) Push-in lugs for screw mounting
- 6) With leading auxiliary switch only for undervoltage release
- 7) Drilling pattern
- 8) Standard mounting rail TH 35 according to EN 60715
- 9) For mounting according to EN 60715 on TH 35 standard mounting rail, 15 mm deep, or TH 75 standard mounting rail
- 10) Allen screw 4 mm
- 11) Lockable in neutral position with 3.5 ... 4.5 mm shackle diameter

CONTACTORS

CONTACTORS AND CONTACTOR ASSEMBLIES 3-POLE / INTRODUCTION

											
LSHD / LSHD-PLC		LSDD / LSSD-PLC			LSDD / LSSO				LSD2		
SIZE	S00	S00			S0				S2		
TYPE	LSHD	LSDD / LSSD*			LSDD / LSSO				LSD2		
CONTACTORS AND VACUUM CONTACTORS											
TYPE / AC, DC OPERATION	06	07	09	12	09	12	17	25	32	40	50
AC-3											
le/AC-3/400 V	6A	7A	9A	12A	9A	12A	17A	25A	32A	40A	50A
400 V	3A	3kW	4kW	5.5kW	4kW	5.5kW	7.5kW	11kW	15kW	18.5kW	22kW
230 V	--	2.2kW	3kW	3kW	3kW	3kW	4kW	5.5kW	7.5kW	11kW	15kW
500 V	2A	3.5kW	4.5kW	5.5kW	4.5kW	7.5kW	10kW	11kW	18.5kW	22kW	30kW
690 V	1A	4kW	5.5kW	5.5kW	5.5kW	7.5kW	11kW	11kW	18.5kW	22kW	22kW
1 000 V	--	--	--	--	--	--	--	--	--	--	--
AC-4 (FOR IA = 6 X IE)											
400 V	--	3kW	4kW	4kW	4kW	5.5kW	7.5kW	7.5kW	15kW	18.5kW	22kW
400 V (200 000 operating cycles)	--	1.15kW	2kW	2kW	2kW	2.6kW	3.5kW	4.4kW	8.2kW	9.5kW	12.6kW
AC-1 (40 °C, ≤ 690 V)											
le	10A	18A	22A	22A	40A	40A	40A	40A	50A	60A	60A
ACCESSORIES FOR CONTACTORS											
AUXILIARY SWITCH BLOCKS* front	LSZDH5..	LSZDH...			LSZOD...				LSZOD...		
lateral	--	LSZDD...			LSZOD7..				LSZOD7..		
TERMINAL COVERS	--	--			--				LSZ2D...		
SURGE SUPPRESSORS	LSZH0...	LSZD...			LSZ0...				LSZ2D...		
OVERLOAD RELAYS (PROTECTION EQUIPMENT: OVERLOAD RELAYS)											
LST, thermal, Class 10	--	LSTD... 0.1 ... 12 A LST0... 2.5 ... 12 A			LST0... 2.5 ... 25 A				LST2... 10 ... 50 A		
MOTOR STARTER PROTECTORS (PROTECTION EQUIPMENT: MOTOR STARTER PROTECTORS)											
TYPE BES	--	BESD 0.16 ... 12 A Size 00 BESD 0.16 ... 12 A Size 0			BES0 0.16 ... 25 A				BES2 25 ... 50 A		
LINK MODULES LSZ	--	LSZDD005, LSZDD006			LSZ0D002 (AC), LSZ0D004 (DC)				LSZ2D004 (AC), LSZ2D005 (DC)		
REVERSING CONTACTOR ASSEMBLIES											
COMPLETE UNITS TYPE LSW	--	LSWD07.. LSWD09.. LSWD12..			-- LSW012.. LSW017.. LSW025..				LSW232.. LSW240.. LSW250..		
400 V	--	3kW 4kW 5.5kW			-- 5.5kW 7.5kW 12kW				15kW 18.5kW 22kW		
INSTALLATION KITS/WIRING MODULES	--	LSZDW001			LSZDW001				LSZ2W001		
MECHANICAL INTERLOCKS	--	in installation kit included			LSZ0W002				LSZ0W002		
CONTACTOR ASSEMBLIES FOR WYE-DELTA STARTING											
COMPLETE UNITS TYPE LSY	--	LSYD17..			LSY032..				LSY25033		
400 V	--	7.5kW			15kW				22kW		
INSTALLATION KITS/WIRING MODULES	--	LSZDW001			LSZ0Y001				LSZ2Y003		

* no further auxiliary contacts possible (for PLC use)

CONTACTORS

CONTACTORS AND CONTACTOR ASSEMBLIES 3-POLE / INTRODUCTION

												
LSD3			LSD6			LSD6			LSDG		LSDH	
S3 LSD3			S6 LSD6			S10 LSD6			S12 LSDG		S14 LSDH	
65	80	95	11	15	19	22	26	30	41	51	63/64	82/83
65A	80A	95A	115A	150A	185A	225A	265A	300A	400A	500A	630A	820A
30kW	37kW	45kW	55kW	75kW	90kW	110kW	132kW	160kW	200kW	250kW	335kW	450kW
18.5kW	22kW	22kW	37kW	45kW	55kW	55kW	75kW	90kW	132kW	160kW	200kW	260kW
37kW	45kW	55kW	75kW	90kW	110kW	160kW	160kW	200kW	250kW	355kW	434kW	600kW
45kW	55kW	55kW	110kW	132kW	160kW	200kW	250kW	250kW	400kW	400/500kW	600kW	800kW
30kW	37kW	37kW	75kW	90kW	90kW	90/315kW	132/355kW	132/400kW	250/560kW	250/710kW	600kW	800kW
30kW	37kW	45kW	55kW	75kW	90kW	110kW	132kW	160kW	200kW	250kW	335kW	450kW
15.1kW	17.9kW	22kW	29kW	38kW	45kW	54/78kW	66/93kW	71/112kW	84/140kW	98/161kW	168kW	191kW
100A	120A	120A	160A	185A	215A	275/330A	330A	330A	430/610A	610A	700A	910A
LSZOD...			LSZOD...			LSZOD...			LSZOD...		--	
LSZOD7..., LSZ3D8..			LSZOD7..., LSZ3D8..			LSZOD7..., LSZ3D8..			LSZOD7..., LSZ3D8..		--	
LSZ3D...			LSZ6D...			LSZED...			--		--	
LSZ2....			LSZ6....			LSZ6....			LSZ6....		--	
LST3 25 ... 100 A			--			--			--		--	
BES3 63 ... 100 A			--			--			--		--	
LS3D003 (AC), LS3D004 (DC)			--			--			--		--	
LSW365..	LSW380..	LSW395..	--	--	--	--	--	--	--	--	--	--
30kW	37kW	45kW	--	--	--	--	--	--	--	--	--	--
	LSZ3W001		--	--	--	--	--	--	--	--	--	--
	LSZ0W002		--	--	--	--	--	--	--	--	--	--
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CONTACTORS

CONTACTORS AC3 – 3POLE, SIZE 00



LSSD...



LSSD...-PLC

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
SIZE 00 – TYPE LSSD			
Contactora AC3:3KW/400V, 1NO	AC24V	50HZ	LSSD0710
Contactora AC3:3KW/400V, 1NC*	AC24V	50HZ	LSSD0720
Contactora AC3:3KW/400V, 1NO	AC110V	50HZ	LSSD0712
Contactora AC3:3KW/400V, 1NC*	AC110V	50HZ	LSSD0722
Contactora AC3:3KW/400V, 1NO	AC230V	50/60HZ	LSSD0713
Contactora AC3:3KW/400V, 1NC*	AC230V	50/60HZ	LSSD0723
Contactora AC3:3KW/400V, 1NO	DC24V		LSSD0715
Contactora AC3:3KW/400V, 1NC*	DC24V		LSSD0725
Contactora AC3:4KW/400V, 1NO	AC24V	50HZ	LSSD0910
Contactora AC3:4KW/400V, 1NC*	AC24V	50HZ	LSSD0920
Contactora AC3:4KW/400V, 1NO	AC110V	50HZ	LSSD0912
Contactora AC3:4KW/400V, 1NC*	AC110V	50HZ	LSSD0922
Contactora AC3:4KW/400V, 1NO	AC230V	50/60HZ	LSSD0913
Contactora AC3:4KW/400V, 1NC*	AC230V	50/60HZ	LSSD0923
Contactora AC3:4KW/400V, 1NO	DC24V		LSSD0915
Contactora AC3:4KW/400V, 1NC*	DC24V		LSSD0925
Contactora AC3:5,5KW/400V, 1NO	AC24V	50HZ	LSSD1210
Contactora AC3:5,5KW/400V, 1NC*	AC24V	50HZ	LSSD1220
Contactora AC3:5,5KW/400V, 1NO	AC110V	50HZ	LSSD1212
Contactora AC3:5,5KW/400V, 1NC*	AC110V	50HZ	LSSD1222
Contactora AC3:5,5KW/400V, 1NO	AC230V	50/60HZ	LSSD1213
Contactora AC3:5,5KW/400V, 1NC*	AC230V	50/60HZ	LSSD1223
Contactora AC3:5,5KW/400V, 1NO	DC24V		LSSD1215
Contactora AC3:5,5KW/400V, 1NC*	DC24V		LSSD1225
SIZE 00 – TYPE LSSD FOR PLC			
Contactora AC3:3KW/400V, 1NO	DC17-30V	no further aux. contacts	LSSD071G
Contactora AC3:3KW/400V, 1NC	DC17-30V	no further aux. contacts	LSSD072G
Contactora AC3:4KW/400V, 1NO	DC17-30V	no further aux. contacts	LSSD091G
Contactora AC3:4KW/400V, 1NC	DC17-30V	no further aux. contacts	LSSD092G
Contactora AC3:5,5KW/400V, 1NO	DC17-30V	no further aux. contacts	LSSD121G
Contactora AC3:5,5KW/400V, 1NC	DC17-30V	no further aux. contacts	LSSD122G

* Only Auxiliary block type LSZDH5.. possible

CONTACTORS

CONTACTORS AC3 – 3POLE, SIZE 0



LSD0...

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
SIZE 0 – TYPE LSDO			
Contacto AC3:4KW/400V	AC24V	50HZ	LSD00930
Contacto AC3:4KW/400V	DC24V		LSD00935
Contacto AC3:4KW/400V	AC110V	50HZ	LSD00932
Contacto AC3:4KW/400V	AC230V	50/60HZ	LSD00933
Contacto AC3:5,5KW/400V	AC24V	50HZ	LSD01230
Contacto AC3:5,5KW/400V	DC24V		LSD01235
Contacto AC3:5,5KW/400V	AC110V	50HZ	LSD01232
Contacto AC3:5,5KW/400V	AC230V	50/60HZ	LSD01233
Contacto AC3:7,5KW/400V	AC24V	50HZ	LSD01730
Contacto AC3:7,5KW/400V	DC24V		LSD01735
Contacto AC3:7,5KW/400V	AC110V	50HZ	LSD01732
Contacto AC3:7,5KW/400V	AC230V	50/60HZ	LSD01733
Contacto AC3:7,5KW/400V	AC400V	50HZ	LSD01734
SIZE 0 – TYPE LSDO			
Contacto AC3:11KW/400V	AC24V	50HZ	LSD02530
Contacto AC3:11KW/400V	DC24V		LSD02535
Contacto AC3:11KW/400V	AC110V	50HZ	LSD02532
Contacto AC3:11KW/400V	AC230V	50/60HZ	LSD02533
SIZE 0 – TYPE LSSD FOR PLC			
Contacto AC3,5,5KW/400V	DC17-30V		LSS0123H
Contacto AC3:7,5KW/400V	DC17-30V		LSS0173H
Contacto AC3:11KW/400V	DC17-30V		LSS0253H

CONTACTORS

CONTACTORS AC3 – 3POLE, SIZE 2



LSD2...

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
SIZE 2 – TYPE LSD2			
Contactor AC3:15KW/400V	AC24V	50HZ	LSD23230
Contactor AC3:15KW/400V	DC24V		LSD23235
Contactor AC3:15KW/400V	AC110V	50HZ	LSD23232
Contactor AC3:15KW/400V	AC230V	50/60HZ	LSD23233
Contactor AC3:18,5KW/400V	AC24V	50HZ	LSD24030
Contactor AC3:18,5KW/400V	DC24V		LSD24035
Contactor AC3:18,5KW/400V	AC110V	50HZ	LSD24032
Contactor AC3:18,5KW/400V	AC230V	50/60HZ	LSD24033
Contactor AC3:22KW/400V	AC24V	50HZ	LSD25030
Contactor AC3:22KW/400V	DC24V		LSD25035
Contactor AC3:22KW/400V	AC110V	50HZ	LSD25032
Contactor AC3:22KW/400V	AC230V	50/60HZ	LSD25033

CONTACTORS AC3 – 3POLE, SIZE 3



LSD3...

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
SIZE 3 – TYPE LSD3			
Contactor AC3:30KW/400V	AC24V	50HZ	LSD36530
Contactor AC3:30KW/400V	DC24V		LSD36535
Contactor AC3:30KW/400V	AC110V	50HZ	LSD36532
Contactor AC3:30KW/400V	AC230V	50/60HZ	LSD36533
Contactor AC3:30KW/400V, 2NO+2NC	AC230V	50HZ	LSD36553
Contactor AC3:37KW/400V	AC24V	50HZ	LSD38030
Contactor AC3:37KW/400V	DC24V		LSD38035
Contactor AC3:37KW/400V, 2NO+2NC	AC24V	50HZ	LSD38050
Contactor AC3:37KW/400V	AC110V	50HZ	LSD38032
Contactor AC3:37KW/400V, 2NO+2NC	AC110V	50HZ	LSD38052
Contactor AC3:37KW/400V	AC230V	50/60HZ	LSD38033
Contactor AC3:45KW/400V	AC24V	50HZ	LSD39530
Contactor AC3:45KW/400V	DC24V		LSD39535
Contactor AC3:45KW/400V	AC230V	50/60HZ	LSD39533
Contactor AC3:45KW/400V, 2NO+2NC	AC230V	50/60HZ	LSD39553

CONTACTORS

CONTACTORS AC3 – 3POLE, SIZE 6/10/12/14



LSD6....



LSDE... / LSDG....



LSDH....

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
SIZE 6 – TYPE LSD6			
Contactora AC3:55KW/400V, 2NO+2NC	UC220-240V	40-60HZ	LSD6115F
Contactora AC3:75KW/400V, 2NO+2NC	UC220-240V	40-60HZ	LSD6155F
Contactora AC3:90KW/400V, 2NO+2NC	UC220-240V	40-60HZ	LSD6195F
SIZE 10 – TYPE LSDE			
Contactora AC3:110KW/400V, 2NO+2NC	UC220-240V	40-60HZ	LSDE225F
Contactora AC3:132KW/400V, 2NO+2NC	UC220-240V	40-60HZ	LSDE265F
Contactora AC3:160KW/400V, 2NO+2NC	UC220-240V	40-60HZ	LSDE305F
SIZE 12 – TYPE LSDG			
Contactora AC3:200KW/400V, 2NO+2NC	UC220-240V	40-60HZ	LSDG415F
Contactora AC3:250KW/400V, 2NO+2NC	UC220-240V	40-60HZ	LSDG515F
SIZE 14 – TYPE LSDH			
Contactora AC3:335KW/400V, 4NO+4NC	UC200-240V	50HZ	LSDH63G3
Contactora AC3:335KW/1000V, 4NO+4NC	UC200-240V	50HZ	LSDH64G3
Contactora AC3:450KW/400V, 4NO+4NC	UC200-240V	50HZ	LSDH82G3
Contactora AC3:450KW/1000V, 4NO+4NC	UC200-240V	50HZ	LSDH83G3

CONTACTORS AC1 – 4POLE, SIZE 00/0



LSRD....

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
SIZE 00 – TYPE LSRD			
Contactora AC1:18A/690V	AC24V	50/60HZ	LSRD1840
Contactora AC1:18A/690V	DC24V		LSRD1845
Contactora AC1:18A/690V	AC230V	50/60HZ	LSRD1843
Contactora AC1:22A/690V	AC24V	50/60HZ	LSRD2240
Contactora AC1:22A/690V	DC24V		LSRD2245
Contactora AC1:22A/690V	AC230V	50/60HZ	LSRD2243
SIZE 0 – TYPE LSR0			
Contactora AC1:35A/690V	AC24V	50HZ	LSR03540
Contactora AC1:35A/690V	DC24V		LSR03545
Contactora AC1:35A/690V	AC230V	50/60HZ	LSR03543
Contactora AC1:40A/690V	AC24V	50HZ	LSR04040
Contactora AC1:40A/690V	DC24V		LSR04045
Contactora AC1:40A/690V	AC230V	50/60HZ	LSR04043

CONTACTORS

CONTACTORS AC1 – 4POLE, SIZE 2/3



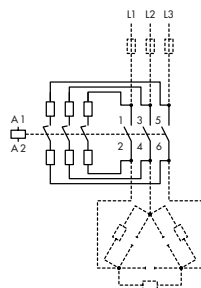
LSR3....

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
SIZE 2 – TYPE LSR2			
Contactora AC1:60A/690V	AC24V	50HZ	LSR26040
Contactora AC1:60A/690V	DC24V		LSR26045
Contactora AC1:60A/690V	AC230V	50/60HZ	LSR26043
SIZE 3 – TYPE LSR3			
Contactora AC1:110A/690V	AC24V	50HZ	LSR31140
Contactora AC1:110A/690V	DC24V		LSR31145
Contactora AC1:110A/690V	AC230V	50/60HZ	LSR31143
Contactora AC1:140A/690V	AC24V	50HZ	LSR31440
Contactora AC1:140A/690V	DC24V		LSR31445
Contactora AC1:140A/690V	AC230V	50/60HZ	LSR31443

CAPACATY SWITCHING CONTACTORS



LA3K181



SCHRACK-INFO

- For use in detuned or non-detuned capacitor units.
- Technical data according to EN 60 947-4-1; EN 60 947-5-1; VDE 0660

TECHNICAL DATA

Specification: The capacitor switching contactors K3-..K are suitable for switching low-inductive and lowloss capacitors in capacitor banks (IEC70 & 831, VDE 0560) with and without reactors. Capacitor switching contactors are fitted with early make contacts and damping resistors to reduce the value of the make current to <math><70 \times I_e</math>.

Operating conditions: Capacitor switching contactors are protected against contact welding for a prospective make current of $200 \times I_e$. Fuse rating approx. $1,6$ to $2,5 \times I_e$, type gL gG9.

CAPACITOR RATING 400V/AUXILLARY CONTACTS	DIM. (WxHxD) mm	ORDER NO.
12,5 kVAr/1 N/O	45x59x98	LA3K1813
12,5 kVAr/1 N/C	45x59x98	LA3K1823
20 kVAr/ 0	45x74x117,5	LA3K2433
25 kVAr/ 0	45x74x117,5	LA3K3233
33,3 kVAr/ 0	60x110x128,5	LA3K5033
50 kVAr/ 0	60x110x128,5	LA3K6233
75 kVAr/ 0	60x110x128,5	LA3K7433

CONTACTORS

AUXILIARY CONTACTORS AC15 – 4POLE, SIZE 00



LSHD....



LSHD....-PLC

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
SIZE 00 – TYPE LSHD			
Contact AC15: 6A/230V, 4NO	AC24V	50HZ	LSHD0670
Contact AC15: 6A/230V, 4NO	DC24V		LSHD0675
Contact AC15: 6A/230V, 4NO	AC230V	50/60HZ	LSHD0673
Contact AC15: 6A/230V, 3NO+1NC	AC24V	50HZ	LSHD0680
Contact AC15: 6A/230V, 3NO+1NC	DC24V		LSHD0685
Contact AC15: 6A/230V, 3NO+1NC	AC230V	50/60HZ	LSHD0683
Contact AC15: 6A/230V, 2NO+2NC	AC24V	50HZ	LSHD0690
Contact AC15: 6A/230V, 2NO+2NC	DC24V		LSHD0695
Contact AC15: 6A/230V, 2NO+2NC	AC230V	50/60HZ	LSHD0693
SIZE 00 – TYPE LSHD FOR PLC			
Contact, plug for RC, AC15: 6A/230V, 4NO	DC17-30V	no further aux. contacts	LSHD067N
Contact with diode assembly, AC15: 6A/230V, 4NO	DC17-30V	no further aux. contacts	LSHD067G
Contact, plug for RC, AC15: 6A/230V, 3NO+1NC	DC17-30V	no further aux. contacts	LSHD068N
Contact with diode assembly, AC15: 6A/230V, 3NO+1NC	DC17-30V	no further aux. contacts	LSHD068G
Contact, plug for RC, AC15: 6A/230V, 2NO+2NC	DC17-30V	no further aux. contacts	LSHD069N
Contact with diode assembly, AC15: 6A/230V, 2NO+2NC	DC17-30V	no further aux. contacts	LSHD069G

ACCESSORIES FOR CONTACTORS, SIZE 00

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
ACCESSORIES FOR SIZE 00 – TYPE LSDD			
Auxiliary Contact Block for size 00, 1NC*			LSZDD201
Auxiliary Contact Block for size 00, 1NO+2NC*			LSZDD212
Auxiliary Contact Block for size 00, 1NO+3NC*			LSZDD213
Auxiliary Contact Block for size 00, 2NO+2NC*			LSZDD222
Parallel connector, 25mm ² for size 00, 3pol.+terminal			LSZDD003
Parallel connector, 25mm ² for size 00, 4pol.+terminal			LSZDD004
Reversing contactor assemblies for size 00, mech.interlock, connection clips, wiring set			LSZDW001
Wye-Delta starting assemblies for size 00, mech.interlock, connection clips, wiring set			LSZDY001
YD-timer, 0,5-20s for size 00, timedelay -20s			LSZD0101
YD-timer, 60s heavy duty for size 00, timedelay -60s			LSZD0102
Connection link for motor protection switch BESD, size 00, and contactor size 00	AC-DC operated		LSZDD005
Connection link for motor protection switch BES0, size 00, and contactor size 00	AC-DC operated		LSZDD006
Solder pin connection for size 00			LSZDD002
Varistor for size 00	AC24-48V; DC24-70V		LSZD0001
Varistor for size 00	AC127-240V; DC150-250V		LSZD0002
Surge suppressor for size 00	AC127-240V; DC150-250V		LSZD0003
Surge suppressor diode for size 00	DC12-250V		LSZD0004

* Auxiliary contact blocks only for use with contactors type LSDD.... with one NO included

CONTACTORS

ACCESSORIES FOR CONTACTORS, SIZE 00

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
ACCESSORIES FOR SIZE 00 – TYPE LSHD			
Auxiliary Contact Block for size 00, 4NO			LSZDH540
Auxiliary Contact Block for size 00, 3NO+1NC			LSZDH531
Auxiliary Contact Block for size 00, 2NO+2NC			LSZDH522
Auxiliary Contact Block for size 00, 1NO+3NC			LSZDH513
Auxiliary Contact Block for size 00, 4NC			LSZDH504

ACCESSORIES FOR CONTACTORS, SIZE 0-12

DESCRIPTION		ORDER NO.
ACCESSORIES FOR SIZE 0 – 12		
Auxiliary Contact for size 0-12, 1NC		LSZ0D001
Auxiliary Contact for size 0-12, 1NO		LSZ0D010
Auxiliary Contact for size 0-12, 1NC-delayed		LSZ0D901
Auxiliary Contact for size 0-12, 1NO-early make		LSZ0D910
Auxiliary Contact, sidemounted for size 0-12, 1NO+1NC, fist position		LSZ0D711
Auxiliary Contact, sidemounted for size 3-12, 1NO+1NC, second position		LSZ3D811
Auxiliary Contact Block for size 0-12, 1NO+3NC		LSZ0D113
Auxiliary Contact Block for size 0-12, 2NO+2NC		LSZ0D122
Auxiliary Contact Block for size 0-12, 3NO+1NC		LSZ0D131
Parallel connector, 35mm ² for size 0, 3pol.+terminal		LSZ0D003
Parallel connector; 95mm ² for size 2, 3pol.+terminal		LSZ2D003
Reversing contactor assemblies for size 0, connection clips, wiring set		LSZ0W001
Reversing contactor assemblies for size 2, wiring set		LSZ2W001
Reversing contactor assemblies for size 3, wiring set		LSZ3W001
Reversing contactor assemblies for size 6, wiring set		LSZ6W002
Reversing contactor assemblies for size 10, wiring set		LSZEW001
Reversing contactor assemblies for size 12, wiring set		LSZGW001
Mechanical interlock for size 0-3		LSZ0W002
Mechanical interlock for size 6-12		LSZ6W001
YD starting assemblies for size 0, mech.interlock, connection clips, wiring set		LSZ0Y001
Parallel connector, star link for size 0, 3pol.		LSZ0Y002
YD starting assemblies for size 2-2-0, wiring set		LSZ2Y004
YD starting assemblies for size 2-2-2, wiring set		LSZ2Y003
YD-timer, 0,5-20s for size 0-12, timedelay -20s		LSZD0101
YD-timer, 60s heavy duty for size 0-12, timedelay -60s		LSZD0102
YD-connection clips for size 2-3		LSZ2D001
Feed terminal, 1phase for size 3		LSZ3D001
YD-Mountingplate for size S2-S2-S0		LSZ2Y001
YD-Mountingplate for size S2-S2-S2		LSZ2Y002
Connection link for motor protection switch BES0, size 0, and contactor size 0	AC-operating	LSZ0D002
Connection link for motor protection switch BES0, size 0, and contactor size 0	DC-operating	LSZ0D004
Surge supressor, diode assemblies for size 0, top mounted	DC24V, DC-operating	LSZD0005
Surge supressor, diode assemblies for size 0, bottom mounted	DC24V, DC-operating	LSZD0006
Varistor for size 0	AC24-48V; DC24-70V	LSZ00001
Varistor for size 0	AC127-240V; DC150-250V	LSZ00002
Surge supressor, RC for size 0	AC127-240V; DC150-250V	LSZ00003
Surge supressor, RC for size 2-3	AC127-240V; DC150-250V	LSZ20001
Surge supressor, RC for size 6-12	AC127-240V; DC150-250V	LSZ60001

CONTACTORS

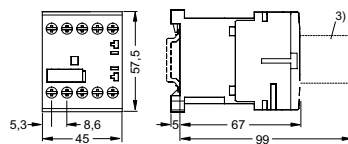
ACCESSORIES FOR CONTACTORS, SIZE 0-12 – continued

DESCRIPTION	COIL VOLTAGE	FREQU/REMARK	ORDER NO.
ACCESSORIES FOR SIZE 0 – 12			
Connection link for motor protection switch BES2, size 2, and contactor size 2	for AC-use		LSZ2D004
Connection link for motor protection switch BES2, size 2, and contactor size 2	for DC-use		LSZ2D005
Connection link for motor protection switch BES3, size 3, and contactor size 3	for DC-use		LSZ3D003
Connection link for motor protection switch BES3, size 3, and contactor size 3	for AC-use		LSZ3D004
Connection link, 4pole for size 2 to S2			LSZ2W002
Connection link, 4pole for size 3 to S3			LSZ3W002
Connection link, 3pole for size 2/3/6 to 2/3/6			LSZ2W003
Mechanical latching block for size 0-2, remains "ON" if voltage fails	24VACDC		LSZ00113
Terminal Cover for size 2*			LSZ2D002
Terminal Cover for size 3*			LSZ3D002
Terminal Cover for size 6*			LSZ6D001
Terminal Cover - short version for size 6*			LSZ6D002
Terminal Cover for size 10*			LSZED001
Terminal Cover - short version for size 10*			LSZED002

* Order 2 pcs. for one complete contactor, order 1 pc. just for one side (up side or bottom side) of contactor

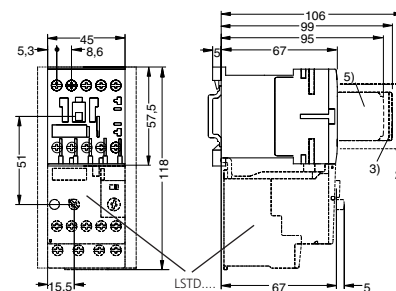
DIMENSIONS

LSHD.... size S00, LSSD.... size S00



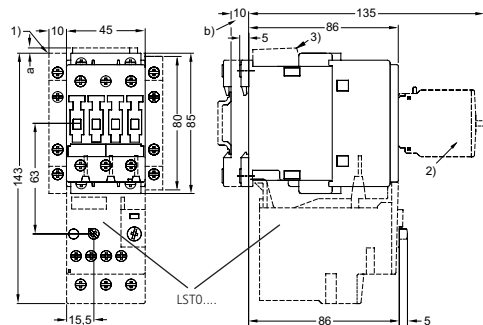
3) Surge suppressor

LSDD.... size S00



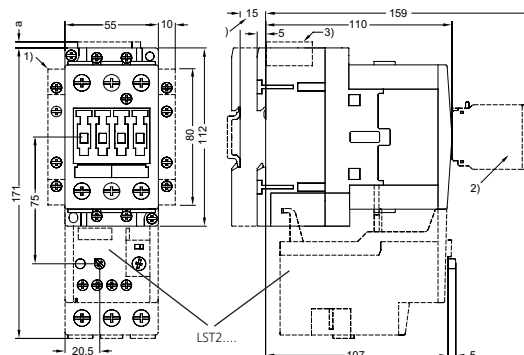
- 2) Auxiliary switch block (LSZDD2...)
- 3) Surge suppressor (LSZD000, additional load module)
- 5) Auxiliary switch block 1-pole

LSD0.... size S0



- a = 3 mm at < 240 V, a = 7 mm at > 240 V, b = DC 10 mm deeper than AC
- 1) Auxiliary switch block, laterally mountable
- 2) Auxiliary switch block, mountable on the front, LSZ0D... solid-state compatible version
- 3) Surge suppressor

LSD2.... size S2

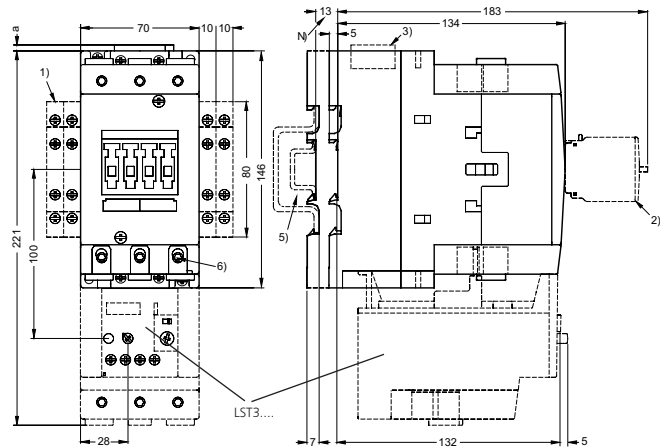


- a = 0 mm with varistor < 240 V, diode assembly
- a = 3.5 mm with varistor > 240 V
- a = 17 mm with RC element
- b = DC 15 mm deeper than AC
- 1) Auxiliary switch block, laterally mountable
- 2) Auxiliary switch block, mountable on the front, LSZ0D...
- 3) Surge suppressor

CONTACTORS

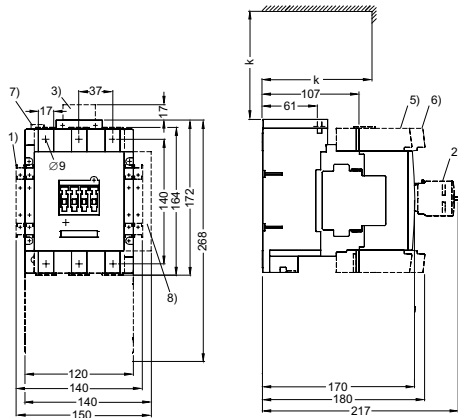
DIMENSIONS

LSD3... size S3



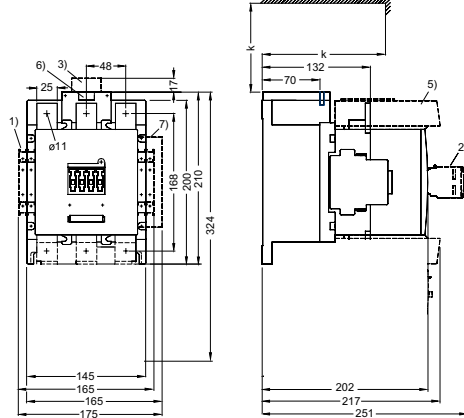
- a = 0 mm with varistor, diode assembly and < 240 V, a = 3.5 mm with varistor and > 240 V, a = 17 mm with RC element,
 b = DC 13 mm deeper than AC
 1) Auxiliary switch block, laterally mountable
 2) Auxiliary switch block, mountable on the front (1-, 2- and 4-pole), LSZ0D7.., LSZ3D8.., LSZ0D9..
 3) Surge suppressor
 4) For mounting on TH 35 or TH 75 standard mounting rail according to EN 60715 (15 mm deep)
 5) Allen screw 4 mm

LSD6... size S6



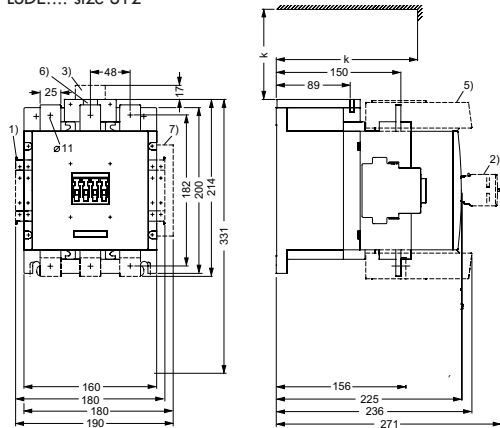
- k = 120 mm (minimum clearance for removing the withdrawable coil)
 1) 2nd auxiliary switch block, lateral LSZ3D8..
 2) Auxiliary switch block, mountable on the front LSZ0D..
 3) RC element

LSDE... size S10



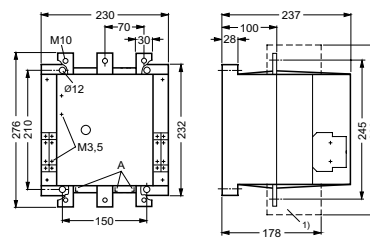
- k = 150 mm (minimum clearance for removing the withdrawable coil)
 1) 2nd auxiliary switch block, lateral LSZ3D8..
 2) Auxiliary switch block, mountable on the front LSZ0D..
 3) RC element

LSDE... size S12

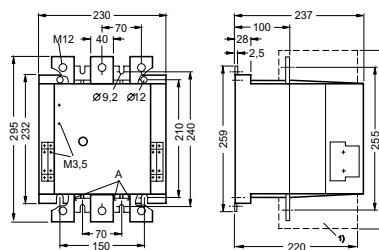


- k = 150 mm (minimum clearance for removing the withdrawable coil)
 1) 2nd auxiliary switch block, lateral LSZ3D8..
 2) Auxiliary switch block, mountable on the front LSZ0D..
 3) RC element

LSDH6... size S14



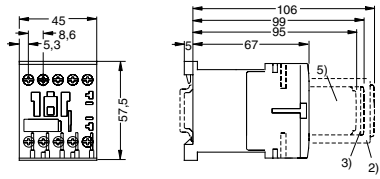
LSDH8... size S14



CONTACTORS

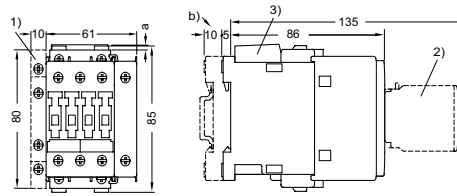
DIMENSIONS

LSRD... size S00



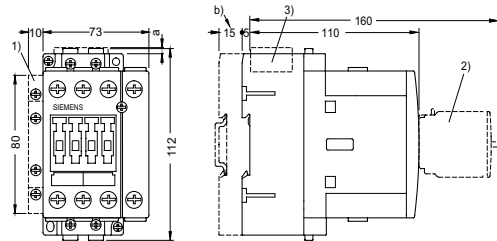
- 2) Auxiliary switch block
- 3) Surge suppressor
- 5) Auxiliary switch block 1-pole

LSRO... size S0



- a = 3 mm at < 250 V and mounting of surge suppressor, a = 7 mm at > 250 V and mounting of surge suppressor, b = DC 10 mm deeper than AC
- 1) Auxiliary switch block, laterally mountable (left)
- 2) Auxiliary switch block, mountable on the front
- 3) Surge suppressor

LSR2... size S2

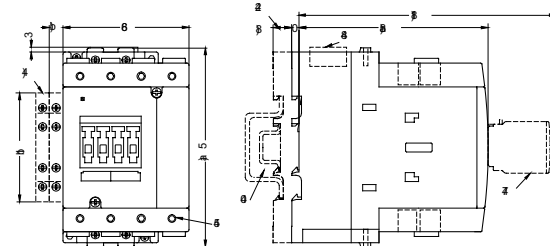


For sizes S2 and S3:

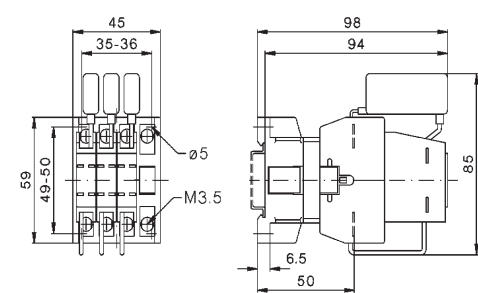
a = 0 mm with varistor < 240 V, a = 3.5 mm with varistor > 240 V, a = 17 mm with RC element and diode assembly, b = S2: DC 15 mm deeper than AC, S3: DC 13 mm deeper than AC

- 1) Auxiliary switch block, laterally mountable (right or left)
- 2) Auxiliary switch block, mountable on the front, (1-, 2- and 4-pole, also 3RH19 21-1FE22 solid-state compatible version)
- 3) Surge suppressor
- 4) Drilling pattern
- 5) For mounting on TH 35 standard mounting rail according to EN 60715 (15 mm deep) or for size S3 also to TH 75 standard mounting rail according to EN 60715
- 6) Allen screw 4 mm

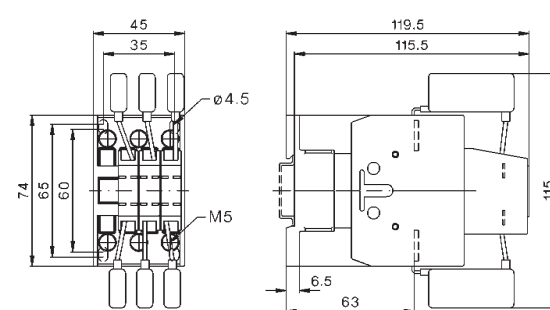
LSR3... size S3



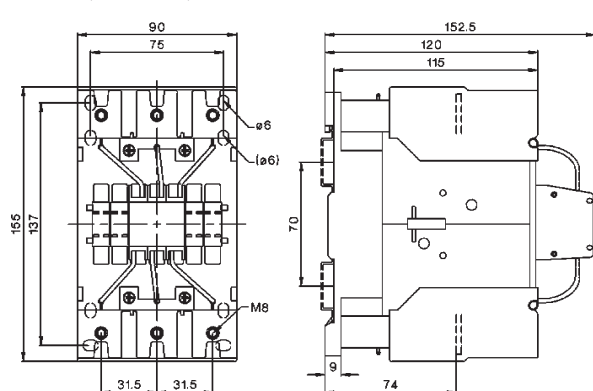
LA3K18..



LA3K24.. / LA3K32..



LA3K05.. / LA3K62.. / LA3K74..



OVERLOAD RELAYS

OVERLOAD RELAYS



LSTD



LST0

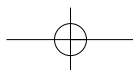


LST2



LST3

FEATURES	BENEFITS	LST
GENERAL DATA		
SIZES	<ul style="list-style-type: none"> • Are coordinated with the dimensions, connections and technical characteristics of the other devices in the ALEA modular system • Permit the mounting of slim and compact load feeders in widths of 45 mm (S00), 45 mm (S0), 55 mm (S2), 70 mm (S3), 120 mm (S6) and 145 mm (S10/S12) • Simplify configuration 	S00 ... S3
SEAMLESS CURRENT RANGE	<ul style="list-style-type: none"> • Allows easy and consistent configuration with one series of overload relays (for small to large loads) 	0.11 ... 100 A
PROTECTION FUNCTIONS		
TRIPPING IN THE EVENT OF OVERLOAD	<ul style="list-style-type: none"> • Provides optimum inverse-time delayed protection of loads against excessive temperature rises due to overload 	✓
TRIPPING IN THE EVENT OF PHASE UNBALANCE	<ul style="list-style-type: none"> • Provides optimum inverse-time delayed protection of loads against excessive temperature rises due to phase unbalance 	✓
TRIPPING IN THE EVENT OF PHASE FAILURE	<ul style="list-style-type: none"> • Minimizes heating of induction motors during phase failure 	✓
PROTECTION OF SINGLE-PHASE LOADS	<ul style="list-style-type: none"> • Enables the protection of single-phase loads 	✓
FEATURES		
RESET FUNCTION	<ul style="list-style-type: none"> • Allows manual or automatic resetting of the relay 	✓
REMOTE RESET FUNCTION	<ul style="list-style-type: none"> • Allows the remote resetting of the relay 	✓ (by means of separate module)
TEST FUNCTION FOR AUXILIARY CONTACTS	<ul style="list-style-type: none"> • Allows easy checking of the function and wiring 	✓
STATUS DISPLAYS	<ul style="list-style-type: none"> • Displays the current operating state 	✓
LARGE CURRENT ADJUSTMENT BUTTON	<ul style="list-style-type: none"> • Makes it easier to set the relay exactly to the correct current value 	✓
INTEGRATED AUXILIARY CONTACTS (1 NO + 1 NC)	<ul style="list-style-type: none"> • Allows the load to be switched off if necessary • Can be used to signal output 	✓
DESIGN OF LOAD FEEDERS		
SHORT-CIRCUIT STRENGTH UP TO 100 KA AT 690 V (in conjunction with the corresponding fuses or the corresponding motor starter protector)	<ul style="list-style-type: none"> • Provides optimum protection of the loads and operating personnel in the event of short-circuits due to insulation faults or faulty switching operations 	✓
ELECTRICAL AND MECHANICAL MATCHING TO CONTACTORS LSSD, LSDD, LSDO, LSD2, LSD3	<ul style="list-style-type: none"> • Simplifies configuration • Reduces wiring outlay and costs • Enables stand-alone installation as well as space-saving direct mounting 	✓
OTHER FEATURES		
TEMPERATURE COMPENSATION	<ul style="list-style-type: none"> • Allows the use of the relays at high temperatures without derating • Prevents premature tripping • Allows compact installation of the control cabinet without distance between the devices/load feeders • Simplifies configuration • Enables space to be saved in the control cabinet 	✓
VERY HIGH LONG-TERM STABILITY	<ul style="list-style-type: none"> • Provides safe protection for the loads even after years of use in severe operating conditions 	✓
WIDE SETTING RANGES	<ul style="list-style-type: none"> • Reduce the number of variants • Minimize the engineering outlay and costs 	✓
TRIP CLASS CLASS 5	<ul style="list-style-type: none"> • Reduce storage overhead, storage costs, tied-up capital • Enables solutions for very fast starting motors requiring special protection (e.g. Ex motors) 	--



OVERLOAD RELAYS

THERMAL OVERLOAD RELAY, SIZE 00



LSTD....

DESCRIPTION	ORDER NO.
THERMAL OVERLOAD RELAY SIZE 00	
Thermal overload relay 0,11...0,16 A	LSTD0016
Thermal overload relay 0,14...0,2 A	LSTD0020
Thermal overload relay 0,18...0,25 A	LSTD0025
Thermal overload relay 0,22...0,32 A	LSTD0032
Thermal overload relay 0,28...0,4 A	LSTD0040
Thermal overload relay 0,35...0,5 A	LSTD0050
Thermal overload relay 0,45...0,63 A	LSTD0063
Thermal overload relay 0,55...0,8 A	LSTD0080
Thermal overload relay 0,7...1 A	LSTD0100
Thermal overload relay 0,9...1,25 A	LSTD0125
Thermal overload relay 1,1...1,6 A	LSTD0160
Thermal overload relay 1,4...2 A	LSTD0200
Thermal overload relay 1,8...2,5 A	LSTD0250
Thermal overload relay 2,2...3,2 A	LSTD0320
Thermal overload relay 2,8...4 A	LSTD0400
Thermal overload relay 3,5...5 A	LSTD0500
Thermal overload relay 4,5...6,3 A	LSTD0630
Thermal overload relay 5,5...8 A	LSTD0800
Thermal overload relay 7...10 A	LSTD1000
Thermal overload relay 9...12 A	LSTD1200

THERMAL OVERLOAD RELAY, SIZE 0



LST0....

DESCRIPTION	ORDER NO.
THERMAL OVERLOAD RELAY SIZE 0	
Thermal overload relay 1,8...2,5 A	LST00250
Thermal overload relay 2,2...3,2 A	LST00320
Thermal overload relay 2,8...4 A	LST00040
Thermal overload relay 3,5...5 A	LST00050
Thermal overload relay 4,5...6,3 A	LST00630
Thermal overload relay 5,5...8 A	LST00800
Thermal overload relay 7...10 A	LST01000
Thermal overload relay 9...12,5 A	LST01250
Thermal overload relay 11...16 A	LST01600
Thermal overload relay 14...20 A	LST02000
Thermal overload relay 17...22 A	LST02200
Thermal overload relay 20...25 A	LST02500

OVERLOAD RELAYS

■ THERMAL OVERLOAD RELAY, SIZE 2



LST2....

DESCRIPTION	ORDER NO.
THERMAL OVERLOAD RELAY SIZE 2	
Thermal overload relay 5,5...8 A	LST20800
Thermal overload relay 7...10 A	LST21000
Thermal overload relay 9...12,5 A	LST21250
Thermal overload relay 11...16 A	LST21600
Thermal overload relay 14...20 A	LST22000
Thermal overload relay 18...25 A	LST22500
Thermal overload relay 22...32 A	LST23200
Thermal overload relay 28...40 A	LST24000
Thermal overload relay 36...45 A	LST24500
Thermal overload relay 40...50 A	LST25000

■ THERMAL OVERLOAD RELAY, SIZE 3



LST3....

DESCRIPTION	ORDER NO.
THERMAL OVERLOAD RELAY SIZE 3	
Overload relay thermal 18...25 A	LST32500
Overload relay thermal 22...32 A	LST33200
Overload relay thermal 28...40 A	LST34000
Overload relay thermal 36...50 A	LST35000
Overload relay thermal 45...63 A	LST36300
Overload relay thermal 57...75 A	LST37500
Overload relay thermal 70...90 A	LST39000
Overload relay thermal 80...100 A	LST39999

■ HOLDER



LSZ....

DESCRIPTION	SIZE	ORDER NO.
Holder for stand-alone install	00	LSZDTE01
Holder for stand-alone install	0	LSZ0TE01
Holder for stand-alone install	2	LSZ2TE01
Holder for stand-alone install	3	LSZ3TE01

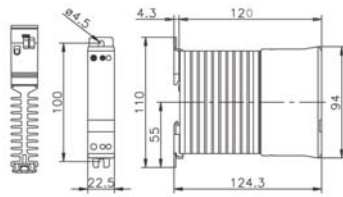
SEMICONDUCTOR CONTACTORS

SINGLE-PHASE/ TWO-PHASE/ THREE-PHASE

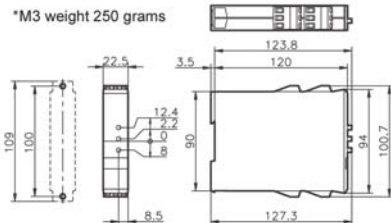


SEMICONDUCTOR CONTACTORS SINGLE-, TWO-, THREE-PHASE

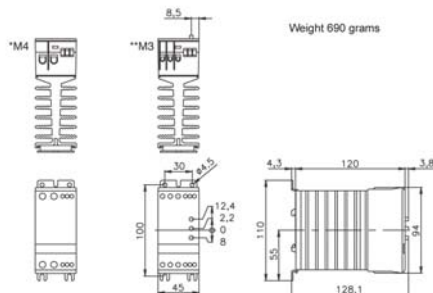
Dimensions for the 22.5 mm module (LAS1 10 A/15 A und LAK3,5 A)



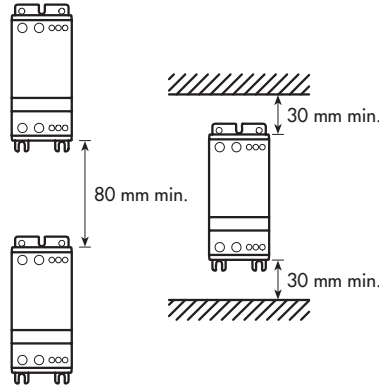
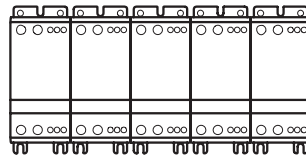
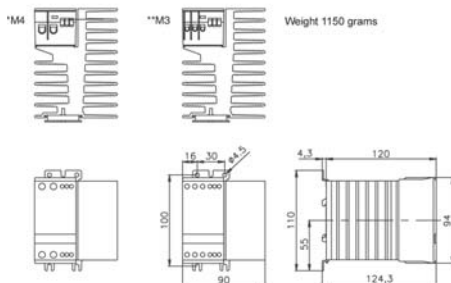
*M3 weight 250 grams



Dimensions for the 45 mm module (LAS1/LAW/LAK15A/LAD/LAA 30A)



Dimensions for the 90 mm module (LAS2 50A/63A /LAA 50A)



SCHRACK-INFO

- Rated operating voltage up to 600V AC, 50/60 Hz
- Control voltage 5-24 V DC or 24-230 V AC/DC
- Meets requirements of EN 60947-4-3
- Modular design with an overall width of 45 mm on DIN rails
- LED operating status indicator
- IP 20 degree of protection
- AC and DC control voltage
- Built-in varistor protection

RANGE OF APPLICATION

Heater controls:

- Soldering machines
- Plastic processing industry
- Galvanic industry
- Photo/film developers
- Film packaging
- Rubber industry

Lighting:

- Traffic lights
- Streetlights
- Floodlights in stadiums
- Outside factory lighting

TECHNICAL DATA, SINGLE-PHASE:

- Rated operating current up to 63 A AC-1

TECHNICAL DATA, TWO-PHASE:

- Rated operating current up to 50 A AC-1/2x15 A AC-3
- 2 autonomous 1-pole contactors in a single housing

TECHNICAL DATA, THREE-PHASE:

- Rated operating current up to 3x20 A AC-1/ 10 A AC-3

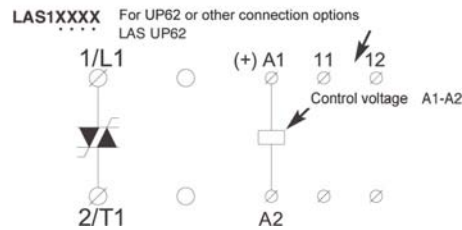
SEMICONDUCTOR CONTACTORS

SINGLE-PHASE



LAS12301

Connection diagram single phase



SCHRACK-INFO

- Rated operating current up to 63 A AC-1
- Rated operating voltage up to 600 V AC, 50/60 Hz
- Control voltage 5-24 V DC or 24-230 V AC/DC
- Meets requirements of EN 60947-4-3
- Modular design with following widths 22.5 mm, 45 mm and 90 mm on DIN rail
- LED operating status indicator
- IP 20 degree of protection
- AC and DC control voltage
- Integrated varistor protection

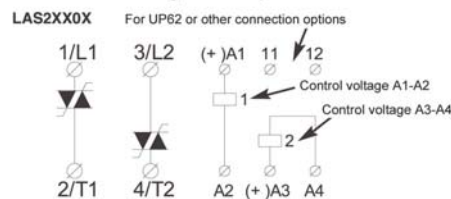
RATED CURRENT	RATED VOLTAGE	CONTROL VOLTAGE	DIM. (WxHxD) mm	ORDER NO.
15 A	24-480 V AC 50/60 Hz	24-230 V AC/DC	22,5x110x124,3	LAS14152
30 A	12-240 V AC 50/60 Hz	5-24 V DC	45x110x124,3	LAS12301
30 A	12-240 V AC 50/60 Hz	24-230 V AC/DC	45x110x124,3	LAS12302
30 A	24-480 V AC 50/60 Hz	5-24 V DC	45x110x124,3	LAS14301
30 A	24-480 V AC 50/60 Hz	24-230 V AC/DC	45x110x124,3	LAS14302
50 A	12-240 V AC 50/60 Hz	5-24 V DC	90x110x124,3	LAS12501
50 A	12-240 V AC 50/60 Hz	24-230 V AC/DC	90x110x124,3	LAS12502
50 A	24-480 V AC 50/60 Hz	5-24 V DC	90x110x124,3	LAS14501
50 A	24-480 V AC 50/60 Hz	24-230 V AC/DC	90x110x124,3	LAS14502

TWO-PHASE



LAS22302

Connection diagram two-phase



SCHRACK-INFO

- 2 autonomous 1-pole contactors in a single housing
- Rated operating current up to 50 A AC-1/2x15 A AC-3

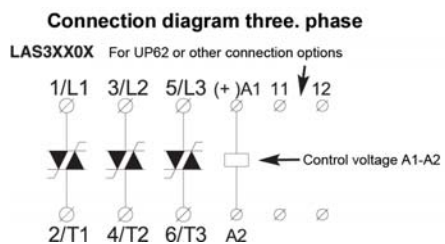
RATED CURRENT	RATED VOLTAGE	CONTROL VOLTAGE	DIM. (WxHxD) mm	ORDER NO.
30 A	12-240 V AC 50/60 Hz	5-24 V DC	45x110x124,3	LAS22301
30 A	12-240 V AC 50/60 Hz	24-230 V AC/DC	45x110x124,3	LAS22302
30 A	24-480 V AC 50/60 Hz	5-24 V DC	45x110x124,3	LAS24301
30 A	24-480 V AC 50/60 Hz	24-230 V AC/DC	45x110x124,3	LAS24302
50 A	24-480 V AC 50/60 Hz	5-24 V DC	90x110x124,3	LAS24501
50 A	24-480 V AC 50/60 Hz	24-230 V AC/DC	90x110x124,3	LAS24502

SEMICONDUCTOR CONTACTORS

THREE-PHASE



LAS32102



SCHRACK-INFO

- Rated operating current up to 3x20 A
 AC-1/ 10 A AC-3

RATED CURRENT	RATED VOLTAGE	CONTROL VOLTAGE	DIM. (WxHxD) mm	ORDER NO.
10 A	12-240 V AC 50/60 Hz	5-24 V DC	45x110x124,3	LAS32101
10 A	12-240 V AC 50/60 Hz	24-230 V AC/DC	45x110x124,3	LAS32102
10 A	24-480 V AC 50/60 Hz	5-24 V DC	45x110x124,3	LAS34101
10 A	24-480 V AC 50/60 Hz	24-230 V AC/DC	45x110x124,3	LAS34102
20 A	12-240 V AC 50/60 Hz	5-24 V DC	90x110x124,3	LAS32201
20 A	12-240 V AC 50/60 Hz	24-230 V AC/DC	90x110x124,3	LAS32202
20 A	24-480 V AC 50/60 Hz	5-24 V DC	90x110x124,3	LAS34201
20 A	24-480 V AC 50/60 Hz	24-230 V AC/DC	90x110x124,3	LAS34202

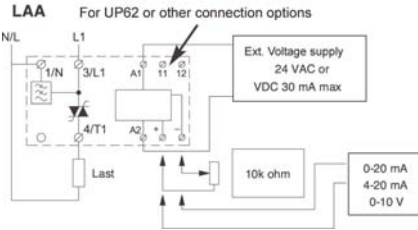
ELECTRONIC CONTROLLER / MOTOR CONTACTOR

1-PHASE ELECTRONIC ANALOGUE CONTROLLER



LAA14306

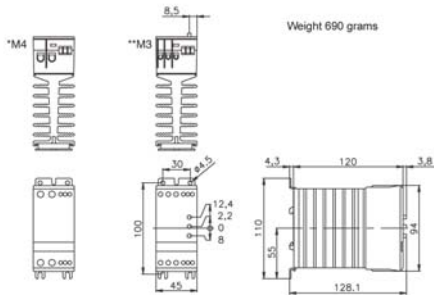
Connection diagram analogue controller



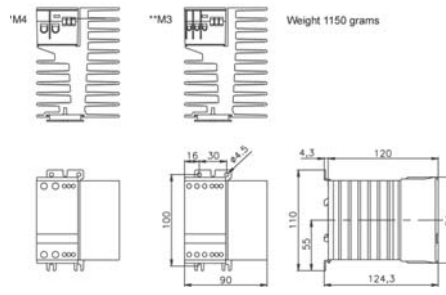
SCHRACK-INFO

- Analogue controller for accurate process temperature control
- Heating element control with phase angle or burst firing control
- Current loop control: 0-20 mA, 4-20 mA
- Voltage control: 0-10 V DC
- Manual control 10 kΩ potentiometer
- Reverse action possible
- Rated voltage: 230 or 400 V AC
- Rated current: up to 30 or 50 A AC-51 (AC 1)
- Integrated EMC filter

Dimensions for the 45 mm module (LAS1/LAW/LAK15A/LAD/LAA 30A)



Dimensions for the 90 mm module (LAS2 50A/63A /LAA 50A)

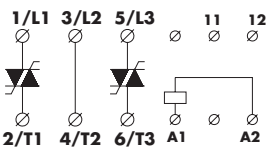


DESCRIPTION	DIM. (WxHxD) mm	ORDER NO.
Analogue controller 30 A/380-480 V	45x110x128,1	LAA14306
Analogue controller 50 A/380-480 V	90x110x128,1	LAA14506

MOTOR CONTACTORS



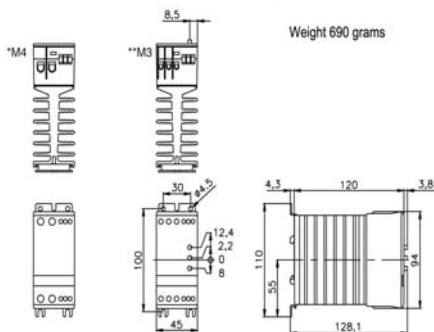
LAK32154



SCHRACK-INFO

- Designed for direct start-up of 3-phase motors
- Rated operating current: 15 A AC-3 (10 HP at 400 V 3 Phase)
- Operating voltage range: from 24 to 600 V AC 50 or 60 Hz
- Control voltage range: from 24 to 480 V AC or 24-60 V DC
- LED operating status indicator
- Degree of protection IP 20
- Compact modular design, 45 mm installation width on DIN rail
- Meets requirements of standard EN 6047-4-2
- Genuine contact-free motor contactor for extremely long service life
- Unlimited number of start/stop cycles possible per hour

Dimensions for the 45 mm module (LAM)



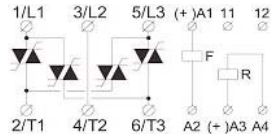
RATED CURRENT	RATED VOLTAGE	CONTROL VOLTAGE	DIM. (WxHxD) mm	ORDER NO.
15 A	208-240 VAC 50/60 Hz	24-480 V AC 24-60 V DC	45x110x124,3	LAM32154
15 A	400-480 VAC 50/60 Hz	24-480 V AC 24-60 V DC	45x110x124,3	LAM34154
15 A	550-600 VAC 50/60 Hz	24-480 V AC 24-60 V DC	45x110x124,3	LAM36154

3-PHASE ELECTRONIC MOTOR CONTACTOR

REVERSING CONTACTOR



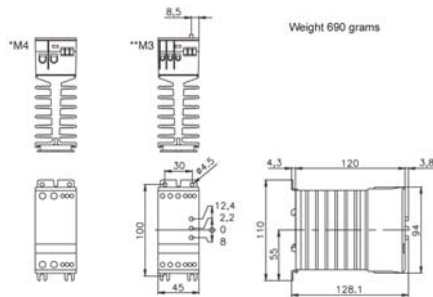
LAW34101



SCHRACK-INFO

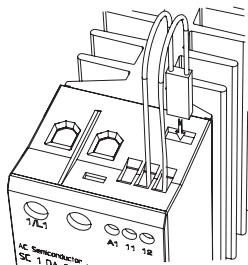
- Electronic contactor for reverse motor control
- Rated operating current up to 10 A AC-3/8 A AC-4
- Rated operating voltage up to 480V AC
- Control voltage 5-24 V DC or 24-230 V AC
- 2 separate potential-free control voltage inputs
- Meets requirements of EN 60947-4-2
- Modular design with an overall width of 45 mm on DIN rail
- LED operating status indicator
- IP 20 shock protection
- AC and DC control voltage
- Integrated interlock circuit

Dimensions for the 45 mm module (LAS1/LAW/LAK15A/LAD/LAA 30A)



RATED CURRENT	RATED VOLTAGE	CONTROL VOLTAGE	DIM. (WxHxD) mm	ORDER NO.
10 A	24-480 V AC 50/60 Hz	5-24 V DC	45x110x124,3	LAW34101
10 A	24-480 V AC 50/60 HZ	24-230 V AC/DC	45x110x124,3	LAW34102

ELECTRONIC/MOTOR CONTACTOR ACCESSORIES



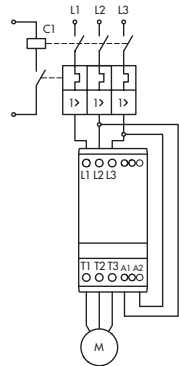
DESCRIPTION	ORDER NO.
Thermal overload protection	LASUP62

SOFT STARTERS

MOTOR CONTROLLER



lak2755



RANGE OF APPLICATION

Motor drive:

- Packaging industry
- Printing presses
- Valve control in power stations
- Bell controls

In general:

- Compressor systems
- Machine tools
- Conveyor systems
- Looms
- Fans and ventilation systems
- Woodworking machines

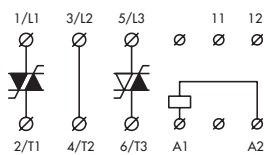
SUPPLEMENTAL TECHNICAL DATA

- Soft starter, three controlled phases
- Soft starter, two controlled phases
- Soft starters with break system
- Initial torque limiting system, 1 or 3 controlled phases

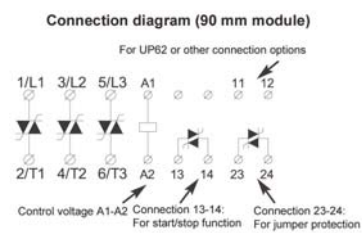
Benefits:

- Easy, rapid mounting
- Immediately ready for use
- Very easy to adjust
- Contact-protected
- More compact than standard soft starters
- Standardized module widths

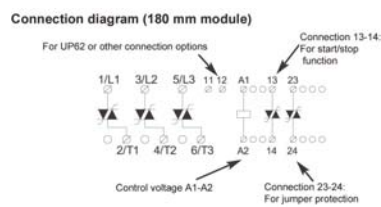
2 controlled phases, LAK



3 controlled phases, LAT



3 controlled phases, LAT B/D



APPLICATIONS

Used to delay the start and stop of 3-phase motors:

- Compressor systems
- Machine tools
- Conveyor systems
- Looms
- Fans and ventilation systems
- Woodworking machines
- Can be used instead of Star/Delta starters
- Packaging industry
- Printing presses

SOFT STARTERS

MOTOR CONTROLLER WITH BY-PASS

WITHOUT BY-PASS	WITH BY-PASS	RATED VOLTAGE	DIM. (WxHxD) mm	ORDER NO.
25 A AC-53a	30 A AC-53b	400-480 V	90x110x128,1	LAKB4255
35 A AC-53a	50 A AC-53b	400-480 V	180x145x144,8	LATB4355
60 A AC-53a	86 A AC-53b	400-480 V	180x145x144,8	LATD4605

SOFT STARTER WITH DYNAMIC BREAK

WITHOUT BY-PASS	WITH BY-PASS	RATED VOLTAGE	DIM. (WxHxD) mm	ORDER NO.
25 A AC-53a	30 A AC-53b	400-480 V	90x110x128,1	LAB34255

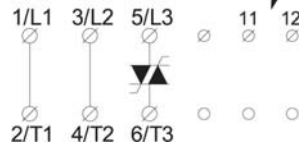
TORQUE LIMITER



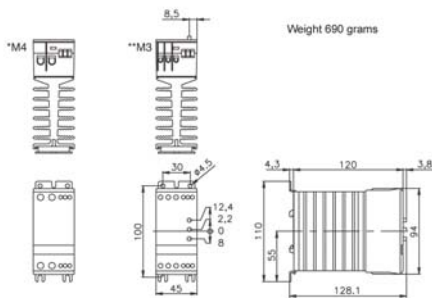
LAD34150

Connection diagram

LAD3X150/250 For UP62 or other connection options



Dimensions for the 45 mm module (LAS1/LAW/LAK15A/LAD/LAA 30A)



SCHRACK-INFO

- Unit used to soft start three-phase and single-phase motors with rated operating voltages of 230 to 600 V, 50 or 60 Hz
- Rated operating current up to 25 A AC-3 (11 kW 400 V 3 phases)
- Operating voltage range: 230 to 600 V AC, 50 or 60 Hz
- Adjustable ramp-up time 0.5 s to 5 s
- Initial torque can be set to between 0% - 85% of nominal torque.
- LED operating status indicator
- Degree of protection IP 20
- Compact modular structure, 45 mm installation width on DIN rail
- Genuine contact-free motor contactor for extremely long service life
- Unlimited number of start/stop operations per hour.

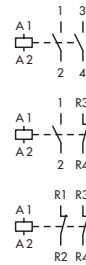
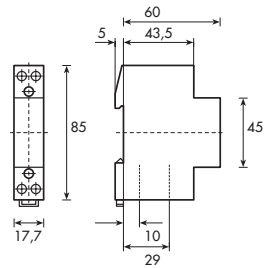
RATED CURRENT	RATED VOLTAGE	DIM. (WxHxD) mm	ORDER NO.
15 A	208-480 V AC	45x110x128,1	LAD34150
25 A	208-480 V AC	45x110x128,1	LAD34250
25 A	550-600 V AC	45x110x128,1	LAD36250

MODULAR CONTACTORS

1/2-POLE



BZ326437



SCHRACK-INFO

- Modular 1 module wide
- Technical data according to EN 60 947-4-1; EN 60 947-5-1; VDE 0660
- Terminal labels according to EN 50011
- Degree of protection IP 20
- AC1/230 V: 4,6 kW (20 A)
- Low-hum (ultra-quiet)

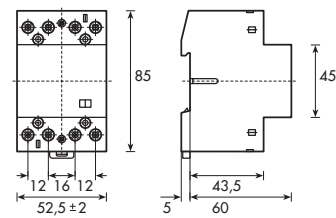
DESCRIPTION	DIM. (WxHxD) mm	ORDER NO.
1 NO / 230 V	17,7x85x65	BZ326471
2 NO / 24 V	17,7x85x65	BZ326453
2 NO / 230 V	17,7x85x65	BZ326437
1 NO + 1 NC / 24 V	17,7x85x65	BZ326421
1 NO + 1 NC / 230 V	17,7x85x65	BZ326438
2 NC / 230 V	17,7x85x65	BZ326439

4-POLE

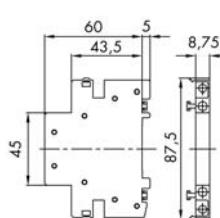


BZ326442

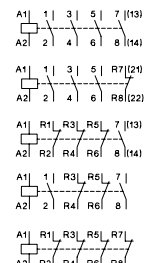
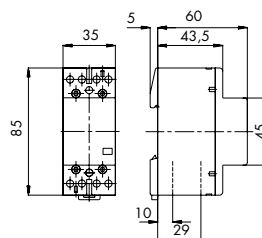
R40-.., R63-..



Auxiliary contact RH11



R25-..



SCHRACK-INFO

- Rated current: 25/40/63 A
- Technical data according to EN 60 947-4-1; EN 60 947-5-1; VDE 0660
- Terminal labels according to EN 50011
- Degree of protection IP 20
- AC1/230 V: 5,7 (25 A) / 9 (40 A) / 14,3 (63 A) kW
- AC1/400 V: 17 (25 A) / 27.5 (40 A) / 43 (63 A) kW
- Low-hum (ultra-quiet)

RATED CURRENT/DESCRIPTION	DIM. (WxHxD) mm	ORDER NO.
25 A,4 NO / 24 V	35x60,5x64	BZ326460
25 A,4 NO / 230 V	35x60,5x64	BZ326461
25 A,3 NO + 1 NC / 24 V	35x60,5x64	BZ326462
25 A,3 NO + 1 NC / 230 V	35x60,5x64	BZ326463
25 A,1 NO + 3 NC / 24 V	35x60,5x64	BZ326464
25 A,1 NO + 3 NC / 230 V	35x60,5x64	BZ326465
40 A,2 NC + 2 NO / 230 V	52,5x85x65	BZ326466
25 A,4 NC / 230 V	35x60,5x64	BZ326467
40 A,3 NO / 230 V	52,5x85x65	BZ326468
63 A,4 NC / 230 V	52,5x85x65	BZ326469
40 A,4 NO / 24 V	52,5x85x65	BZ326443
40 A,4 NO / 230 V	52,5x85x65	BZ326442
63 A,4 NO / 24 V	52,5x85x65	BZ326445
63 A,4 NO / 230 V	52,5x85x65	BZ326444
63 A,3 NO + 1 NC / 230 V	52,5x85x65	BZ326452
Auxiliary contact block 10 A	8,75x85x65	BZ326470

RELAYS

TOP-TECHNIC



MINIATURE RELAYS, TYPE PT

TOP-TECHNIC



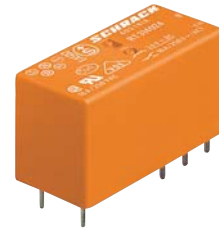
MULTIMODE RELAYS, TYPE MT

TOP-TECHNIC



POWER RELAYS, TYPE RM

TOP-TECHNIC



POWER PCB RELAYS, TYPE RT

TOP-TECHNIC



SLIM PCB RELAYS, TYPE SNR