

Data Sheet for Article: LTD31732--

Contactor 90kW/400V/170A, coil 110VAC

Size type 3, Product category Power contactor, Rated current 170A, Coil voltage 110V



Technical Data

Size type	3
Product category	Power contactor
Coil voltage	110V
Rated current (A)	170
Standard	IEC EN 60947-4-1 IEC EN 60947-5-1 UL 508
Lifespan, mechanical AC operated	10000000 Operations
Operating frequency, mechanical AC operated	5000 Operations/h
Climatic proofing	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature Open (°C)	-25 / +60
Ambient temperature Enclosed (°C)	-25 / + 40
Ambient temperature Storage (°C)	-40 / +80
Mech. shock resistance Half-sinusoidal shock 10ms	-
Main contacts NO contact (g)	10
Auxiliary contacts NO contact (g)	7
Auxiliary contacts NC contact (g)	5
Mech. shock resist. Half-sinusoidal shock horizon.	-

Technical Data - continued

Main contacts N/O contact (g)	10
Auxiliary contacts N/O contact (g)	7
Auxiliary contacts N/C contact (g)	5
IP Rating	IP00
When actuated from front (EN 50274)	Finger and back-of-hand proof
Weight (kg)	-
AC-operated	2,25
Terminal cross-section main contact (mm ²)	-
Solid [main cable] (mm ²)	1 x (0,75 - 16) 2 x (0,75 - 10)
Flexible with ferrule [main cable] (mm ²)	1 x (10 - 95) 2 x (10 - 70)
Stranded [main cable] (mm ²)	1 x (16 - 95) 2 x (16 - 70)
Solid or stranded [main cable] (AWG)	single 8...3/0, double 8...2/0
Band [lamella x width x thickness] (mm)	2 x (6 x 16 x 0.8)
Stripping length [main cable] (mm)	24
Terminal screw [main cable]	M10
Tightening torque [main contact] (Nm)	14
Tools [main cable]	-
Philips/Pozidriv screwdriver [main cable]	PZ 2
Standard screwdriver [main cable] (mm)	0,8 x 5,5 1 x 6
Allen wrench [main cable] (mm)	5
Terminal capacity auxiliary contact (mm ²)	-
Solid [auxiliary cables] (mm ²)	1 x (0,75 - 4) 2 x (0,75 - 2,5)
Flexible with ferrule [auxiliary cables] (mm ²)	1 x (0,75 - 2,5) 2 x (0,75 - 2,5)
Solid or stranded [auxiliary cables] (AWG)	18 - 14
Stripping length [auxiliary cables] (mm)	10
Terminal screw [auxiliary cables]	M3,5
Tightening torque [auxiliary contact] (Nm)	1,20
Tools [auxiliary cables]	-
Philips/Pozidriv screwdriver [auxiliary cables]	PZ 2
Standard screwdriver [auxiliary cables]	0,8 x 5,5 1 x 6
Rated impulse withstand voltage [Uimp] (V)	8000
Overvoltage category/pollution degree	III/3
Rated insulation voltage [Ui] (V)	690
Rated operational voltage (V)	690
Safe isolation to EN 61140	-
Between coil and contacts (VAC)	690
Between the contacts (VAC)	690
Making capacity p.f. to IEC/EN 60947 up to 690 V (A)	2100
Breaking capacity	-
220 V 230 V (A)	1500
380 V 400 V (A)	1500

Technical Data - continued

500 V (A)	1500
660 V 690 V (A)	1320
Short circuit withstand	-
Short-circuit protection maximum fuse	-
Type „2“ coordination 400 V [gG/gL 500 V] (A)	250
Type „2“ coordination 690 V [gG/gL 690 V] (A)	250
Type „1“ coordination 400 V [gG/gL 500 V] (A)	250
Type „1“ coordination 690 V [gG/gL 690 V] (A)	250
AC-1	-
AC-1 Rated operational current	-
Conventional free air therm. current 3pole 50-60Hz	-
Open at 40 °C [I _{th} =I _e] (A)	225
Open at 50 °C [I _{th} =I _e] (A)	200
Open at 55 °C [I _{th} =I _e] (A)	190
Open at 60 °C [I _{th} =I _e] (A)	185
Enclosed [I _{th}] (A)	166
Convent. free air thermal cur. 1 pole Open[I _{th}] (A)	460
Convent. free air thermal cur. 1 pole Enclosed[I _{th}] (A)	415
AC-3	-
AC-3 Rated operational current	-
AC-3 Open, 3-pole: 50 – 60 Hz 220 V 230 V [I _e] (A)	170
AC-3 Open, 3-pole: 50 – 60 Hz 240 V [I _e] (A)	170
AC-3 Open, 3-pole: 50 – 60 Hz 380 V 400 V [I _e] (A)	170
AC-3 Open, 3-pole: 50 – 60 Hz 415 V [I _e] (A)	170
AC-3 Open, 3-pole: 50 – 60 Hz 440 V [I _e] (A)	170
AC-3 Open, 3-pole: 50 – 60 Hz 500 V [I _e] (A)	170
AC-3 Open, 3-pole: 50 – 60 Hz 660 V 690 V [I _e] (A)	100
AC-3 Motor rating	-
AC-3 220 V 230 V [P] (kW)	52
AC-3 240V [P] (kW)	57
AC-3 380 V 400 V [P] (kW)	90
AC-3 415 V [P] (kW)	100
AC-3 440 V [P] (kW)	105
AC-3 500 V [P] (kW)	120
AC-3 660 V 690 V [P] (kW)	96
AC-4	-
AC-4 Rated operational current	-
AC-4 Open, 3-pole, 50 – 60 Hz 220 V 230 V [I _e] (A)	65
AC-4 Open, 3-pole, 50 – 60 Hz 240 V [I _e] (A)	65
AC-4 Open, 3-pole, 50 – 60 Hz 380 V 400 V [I _e] (A)	65
AC-4 Open, 3-pole, 50 – 60 Hz 415 V [I _e] (A)	65
AC-4 Open, 3-pole, 50 – 60 Hz 440 V [I _e] (A)	65
AC-4 Open, 3-pole, 50 – 60 Hz 500 V [I _e] (A)	65

Technical Data - continued

AC-4 Open, 3-pole, 50 – 60 Hz 660 V 690 V [I _e] (A)	50
AC-4 Motor rating	-
AC-4 220 V 230 V [P] (kW)	20
AC-4 240 V [P] (kW)	22
AC-4 380 V 400 V [P] (kW)	33
AC-4 415 V [P] (kW)	39
AC-4 440 V [P] (kW)	41
AC-4 500 V [P] (kW)	47
AC-4 660 V 690 V [P] (kW)	48
DC-1	-
DC-1 Rated operational current	-
DC-1 Open	-
60 V [I _e] (A)	160
110 V [I _e] (A)	160
220 V [I _e] (A)	90
Current heat loss	-
3-polig, bei I _{th} [60°] (W)	48,7
Bei I _e nach AC-3/400 V (W)	41,1
Impedance per pole (mΩ)	0,6
Magnet systems	-
Voltage tolerance AC operated [Pick-up] (x U _c)	0,8 - 1,15
Voltage tolerance AC operated [Drop-out] (x U _c)	0,25 - 0,6
50 Hz [Pick-up] (VA)	180
50 Hz [Sealing] (VA)	3,1
50 Hz [Sealing] (W)	2,3
60 Hz [Pick-up] (VA)	170
60 Hz [Sealing] (VA)	3,1
60 Hz [Sealing] (W)	2,3
Duty factor (% DF)	100
Changeover time at 100 % U _s (Recommended value)	-
Main contacts	-
AC operated closing delay	28 - 33
AC operated opening delay	35 - 41
Arcing time (ms)	15
EMC Emitted interference	according to EN 60947-1
EMC Interference immunity	according to EN 60947-1
Rating data for approved types	-
Rated breaking capacity (kA)	-
Maximum motor rating Three-phase	-
Three-phase 200 V 208 V (HP)	50
Three-phase 230 V 240 V (HP)	60
Three-phase 460 V 480 V (HP)	125
Three-phase 575 V 600 V (HP)	125

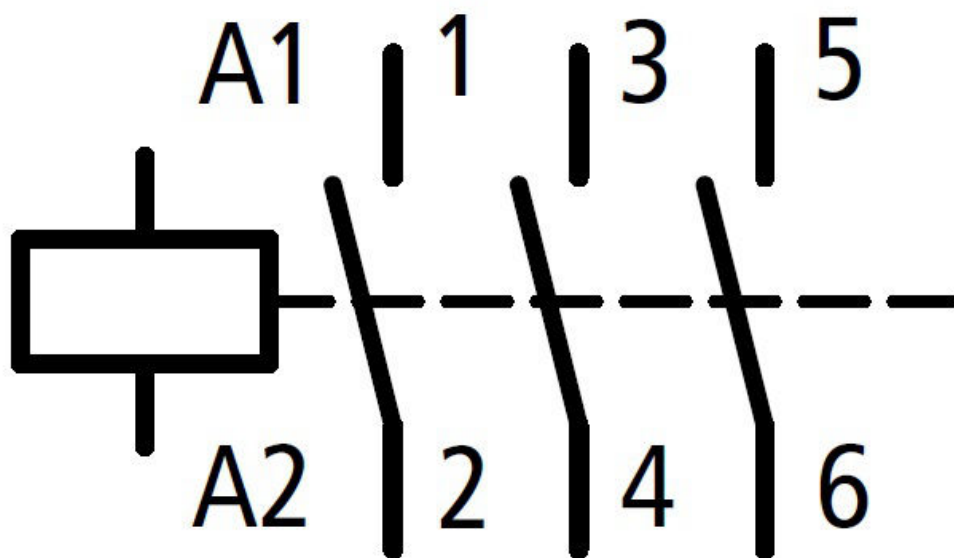
Technical Data - continued

Maximum motor rating Single-phase	-
Single-phase 115 V 120 V (HP)	10
Single-phase 230 V 240 V (HP)	30
Maximum motor rating General use (A)	225
Auxiliary contacts	-
Pilot Duty AC operated	A600
Pilot Duty DC operated	P300
General Use AC (V)	600
General Use AC (A)	10
General Use DC (V)	250
General Use DC (A)	1
Short Circuit Current Rating	-
Basic Rating SCCR (kA)	10
Basic Rating max. Fuse (A)	600
Basic Rating max. CB (A)	600
480 V High Fault SCCR (fuse) (kA)	30/100
480 V High Fault max. Fuse (A)	300/300 Class J
480 V High Fault SCCR (CB) (kA)	65
480 V High Fault max. CB (A)	250
600 V High Fault SCCR (fuse) (kA)	30/100
600 V High Fault max. Fuse (A)	300/600 Class J
600 V High Fault SCCR (CB) (kA)	30
600 V High Fault max. CB (A)	350
Special Purpose Ratings	-
Elec. Discharge Lamps (Ballast) 480V 60Hz 3phase (A)	160
Elec. Discharge Lamps (Ballast) 277V 60Hz 1phase (A)	160
Elec. Discharge Lamps (Ballast) 600V 60Hz 3phase (A)	160
Elec. Discharge Lamps (Ballast) 347V 60Hz 1phase (A)	160
Incandescent Lamps (Tungsten) 480V 60Hz 3phase (A)	160
Incandescent Lamps (Tungsten) 277V 60Hz 1phase (A)	160
Incandescent Lamps (Tungsten) 600V 60Hz 3phase (A)	160
Incandescent Lamps (Tungsten) 347V 60Hz 1phase (A)	160
Resistance Air Heating 480V 60Hz 3phase (A)	160
Resistance Air Heating 277V 60Hz 1phase (A)	160
Resistance Air Heating 600V 60Hz 3phase (A)	160
Resistance Air Heating 347V 60Hz 1phase (A)	160
Refrig. Control (CSA only) LRA 480V 60Hz 3phase (A)	540
Refrig. Control (CSA only) FLA 480V 60Hz 3phase (A)	90
Refrig. Control (CSA only) LRA 600V 60Hz 3phase (A)	540
Refrig. Control (CSA only) FLA 600V 60Hz 3phase (A)	90
Def. Purpose Ratings(100,000 cycles acc.to UL1995)	-
LRA 480V 60Hz 3phase (A)	1020
FLA 480V 60Hz 3phase (A)	170

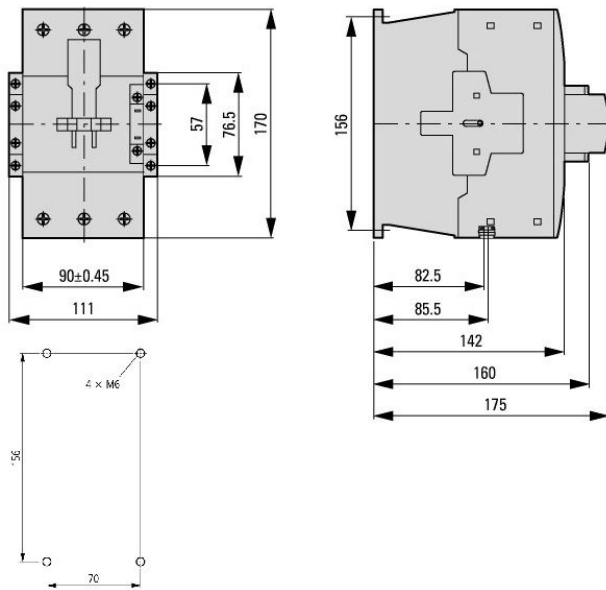
Technical Data - continued

Elevator Control 200V 60Hz 3phase (HP)	30
Elevator Control 200V 60Hz 3phase (A)	92
Elevator Control 240V 60Hz 3phase (HP)	40
Elevator Control 240V 60Hz 3phase (A)	104
Elevator Control 480V 60Hz 3phase (HP)	75
Elevator Control 480V 60Hz 3phase (A)	96
Elevator Control 600V 60Hz 3phase (HP)	100
Elevator Control 600V 60Hz 3phase (A)	99

Circuit diagram: Contactor 90kW/400V/170A, coil 110VAC



Dimensioned drawing: Contactor 90kW/400V/170A, coil 110VAC



Dimensioned drawing: Contactor 90kW/400V/170A, coil 110VAC

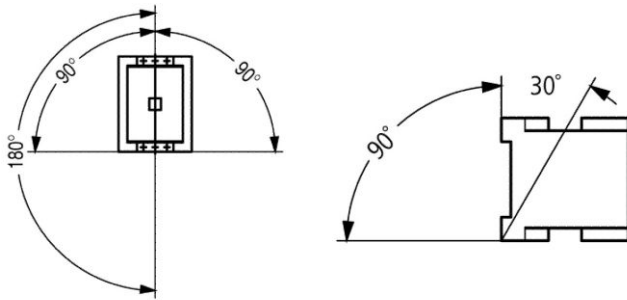


Diagram: Contactor 90kW/400V/170A, coil 110VAC

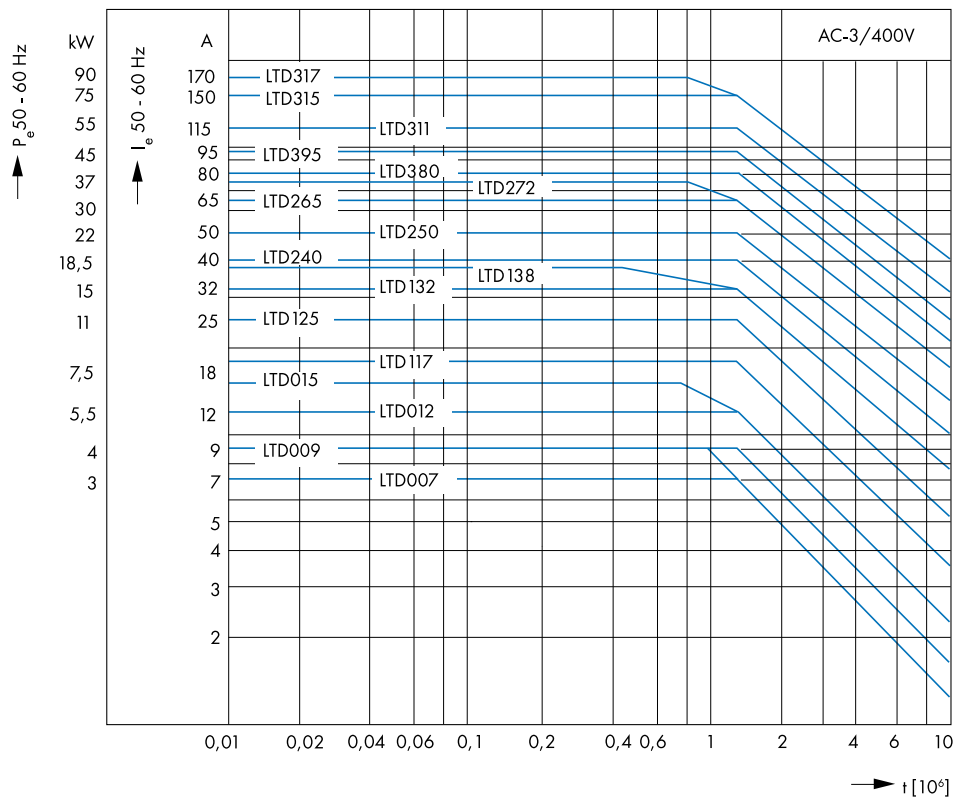


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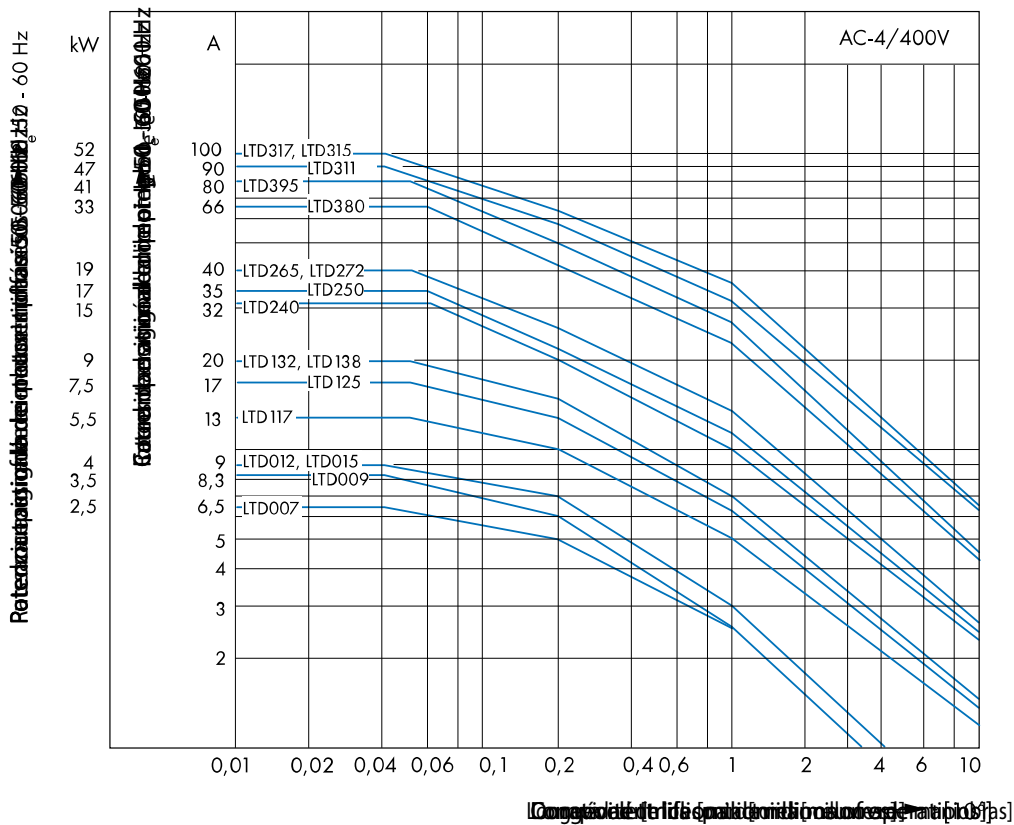


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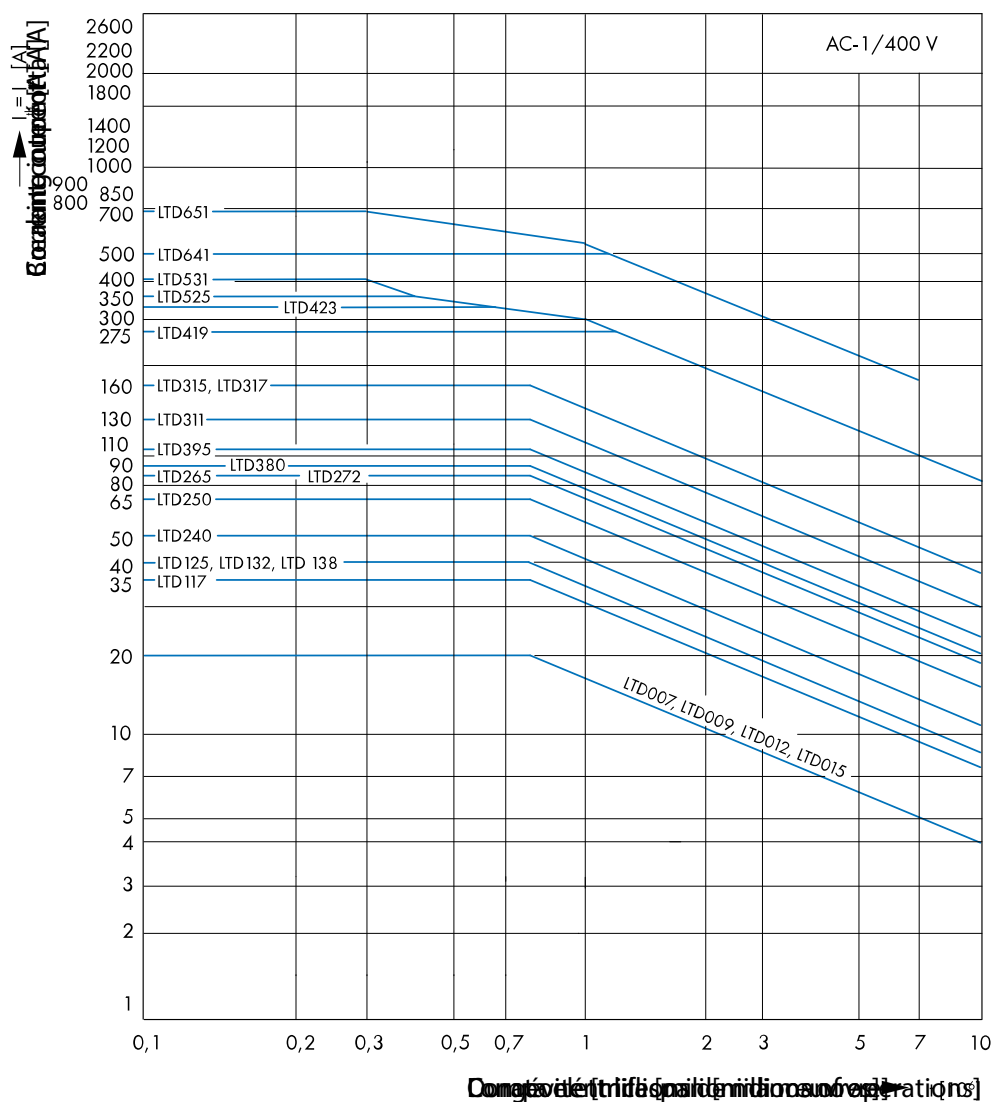
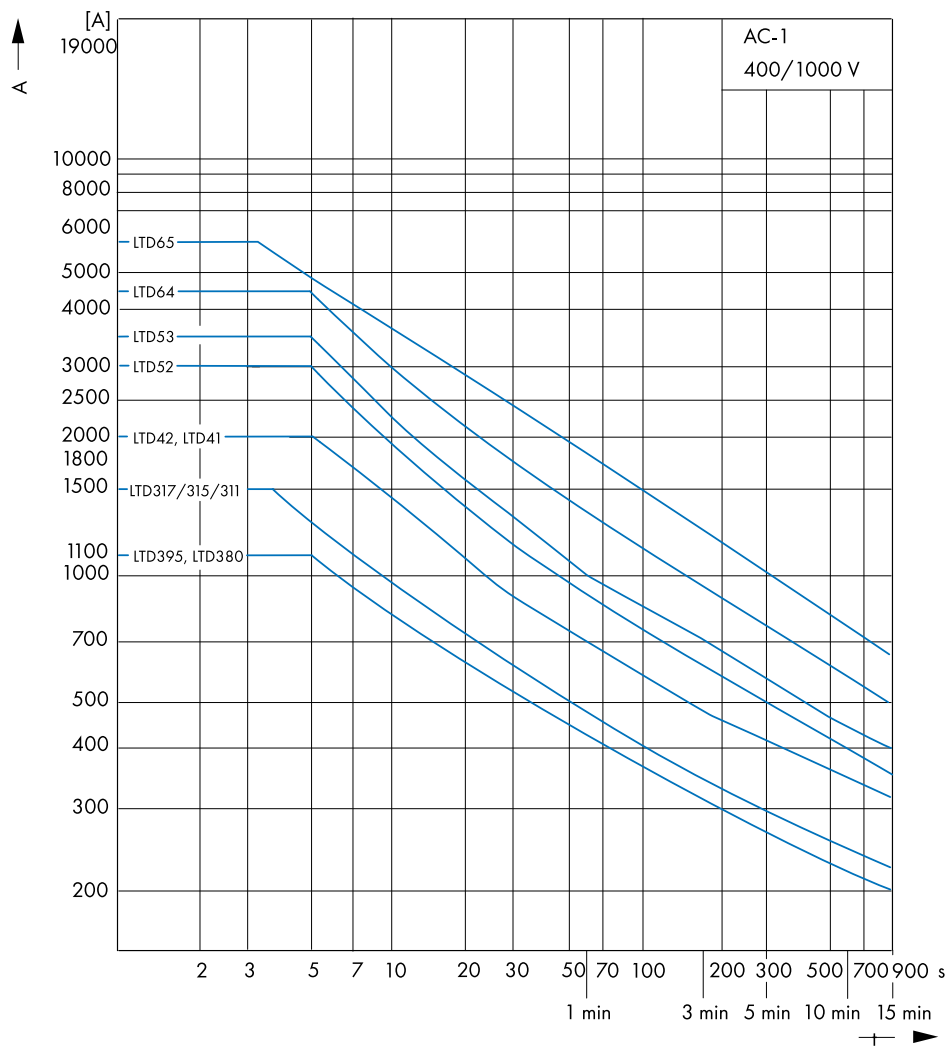


Diagram: Contactor 90kW/400V/170A, coil 110VAC



Article Table

DESCRIPTION	Order No.
Contactor 90kW/400V/170A, coil 110VAC	
Size type 3, Product category Power contactor, Rated current 170A, Coil voltage 110V	LTD31732
Optional Accessories	
Auxiliary contact for contactor size 2-3, 2 NO	
Size type 3, Accessories Auxiliary contacts	LTZ3D420
Auxiliary contact for contactor size 2-3, 1 NO 1 NC	
Size type 3, Accessories Auxiliary contacts	LTZ3D411
Auxiliary contact for contactor size 2-3, 2 NC	
Size type 3, Accessories Auxiliary contacts	LTZ3D402

Article Table

DESCRIPTION	Order No.
Optional Accessories	
Auxiliary contact for contactor size 2-3, 4 NO Size type 3, Accessories Auxiliary contacts	LTZ3D140
Auxiliary contact for contactor size 2-3, 3 NO 1 NC Size type 3, Accessories Auxiliary contacts	LTZ3D131
Auxiliary contact for contactor size 2-3, 2 NO 2 NC Size type 3, Accessories Auxiliary contacts	LTZ3D122
Auxiliary contact for contactor size 2-3, 1 NO 3 NC Size type 3, Accessories Auxiliary contacts	LTZ3D113
Auxiliary contact for contactor size 2-3, 4 NC Size type 3, Accessories Auxiliary contacts	LTZ3D104
Aux contact for contactor S 2-4, 1 NO 1 NC, lateral 1. level Size type 4, Accessories Auxiliary contacts	LTZ3D711
Aux contact for contactor S 2-4, 1 NO 1 NC, lateral 2. level Size type 4, Accessories Auxiliary contacts	LTZ3D811
Connector for contactors size 3 Size type 3, Accessories Connection link	LTZ30005