

Technical specifications

Standards		DIN VDE 0660, IEC 60947										
Switches		Type	3LD2 0	3LD2 1	3LD2 2	3LD2 5	3LD2 7	3LD2 8	3LD2 3	3LD2 4		
Rated insulation voltage U_i		V	690									
Rated operational voltage U_e		V AC	690									
Rated frequency		Hz	50 ... 60									
Rated impulse withstand voltage U_{imp}		kV	6	6	6	6	6	6	6	6		
Rated short-time withstand current (1 s current, rms value)		A	340	640	640	1260	2000	2000	4000	4000		
Short-circuit protection, max. back-up fuse (gL)		A	20	25	40	63	100	125	160	250		
Rated conditional short-circuit current with upstream fuses at AC 50/60 Hz, 690 V		kA ² s	50	50	50	50	50	20	50	50		
Maximum permissible let-through I^2t value		kA ² s	2.5	4	9	21	64	104	185	557		
Permissible let-through current of the fuse		kA	3	3.5	4.5	6	10	10	15	15		
Rated uninterrupted current I_u		A	16	25	32	63	100	125	160	250		
AC-21A load-break switch	Rated operational current I_e	A	16	25	32	63	100	125	160	250		
AC-3 motor load switches	Rating											
In-service switching	At 220 ... 240 V	kW	3.0	4.0	5.5	11.0	18.5	22.0	35.0	55.0		
of individual motors	At 380 ... 440 V	kW	5.5	7.5	9.5	18.5	30.0	37.0	50.0	110.0		
	At 660/690 V	kW	5.5	7.5	9.5	15.0	22.0	30.0	37.0	45.0		
AC-23A main control switch	Rating											
Repair switch	At 220 ... 240 V	kW	4.0	5.0	6.0	11.0	18.5	22.0	45.0	75.0		
frequent, but not in-service switching	At 380 ... 440 V	kW	7.5	9.5	11.5	22.0	37.0	45.0	75.0	132.0		
	At 660/690 V	kW	7.5	9.5	11.5	18.5	30.0	37.0	45.0	55.0		
Power loss per conducting path at I_e		W	0.5	1.1	1.8	4.5	7.5	12.0	36.0	36.0		
Endurance mechanical	Operating cycles		100 000									
Switching frequency		1/h	50									
Permissible ambient temperature		°C	-25 ... +55									
Isolating features		Up to max.	V	690								
Conductor cross-sections for main conductors ¹⁾												
Solid or stranded		mm ²	1 ... 6	1.5 ... 16	1.5 ... 16	2.5 ... 35	4 ... 50	4 ... 50	16 ... 185	16 ... 185		
Finely stranded with end sleeve (max.)		mm ²	4	10	10	16	35	35	150	150		
Conductor cross-sections	Copper cable	AWG	18 ... 10	14 ... 8	14 ... 8	14 ... 6	12 ... 1	12 ... 1				
Torque for terminal		Nm	1.5 ... 2	2 ... 2.5	2 ... 2.5	2.5 ... 3	2.5 ... 3	2.5 ... 3	9.5 ... 10	9.5 ... 10		
Touch protection according to EN 50274			Yes									
Auxiliary switches												
Rated insulation voltage U_i		V	500									
Rated operational voltage U_e		V AC	500									
Rated uninterrupted current I_u		A	10									
Rated operational current I_e , AC-15	At 120 V	A	6									
	At 220 ... 240 V	A	3									
	At 380 ... 415 V	A	1.8									
	At 500 V	A	1.4									
Short-circuit protection, auxiliary switch, max. back-up fuse (gL/gG) A		A	10									
Conductor cross-sections for auxiliary conductors												
Connection type			Terminals									
Solid or stranded		mm ²	2 × (0.75 ... 2.5), 1 × 4									
Finely stranded with end sleeve		mm ²	2 × (0.75 ... 1.5) 1 × 2.5									
Torque for terminal		Nm	0.8									

3LD main and EMERGENCY-STOP switches for UL/CSA

Standards		UL/CSA								
Switches		Type	3LD2 0	3LD2 1	3LD2 2	3LD2 5	3LD2 7	3LD2 8	3LD2 3	3LD2 4
Rated operational voltage U_b		V AC	600	600	600	600	600	600	600	600
Rated uninterrupted current I_u		A	10	20	30	60	100	125	160	250
Current rating Pilot duty		A 600		A 600	A 600	--	--	--	--	--
		P 600		P 600	P 600	--	--	--	--	--
Conventional thermal current I_{th}		A	16	25	32	63	100	125	160	250
Maximum rated power (AC-3)		HP	1	3	3	5	10	15	--	--
Alternating current motors 40 ... 60 Hz		HP	3	7.5	10 (7.5) ⁽²⁾	15	30	40	40	50
		HP	7.5	10	20 (15) ⁽²⁾	40	60	75	75	100
		HP	10	15	30 (20) ⁽²⁾	50	75	100	75	75
		HP	0.5	2	2	3	--	--	--	--
1 ~ 120 V		HP	1.5	3	3	10	--	--	--	--
		HP								
Conductor cross-sections		AWG	18 ... 10	14 ... 8	14 ... 8	14 ... 6	12 ... 1	12 ... 1	1 ... MCM	400
Torque		Nm	1.5 ... 2	2 ... 2.5	2 ... 2.5	2.5 ... 3	2.5 ... 3	2.5 ... 3	10	10

¹⁾ Depending on the cable infeed, only small cross-sections are possible with devices in molded-plastic enclosures

²⁾ Values in brackets apply to devices in molded-plastic enclosure

Switch Disconnectors

3LD Main Control and EMERGENCY-STOP Switches up to 250 A

Front mounting

Selection and ordering data

Number and version of the contacts		Rated data at 50 ... 60 Hz, 380 ... 440 V			DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx.
Main contact elements	Aux. contact elements	P/AC-3	P/AC-23A	I _N / AC-21A							
		kW	kW	A							kg

Main and EMERGENCY-STOP switches with rotary operating mechanism/knob-operated mechanism

- Lockable in 0 position with up to 3 padlocks
- Degree of protection at front side IP65
- All versions with rotary operating mechanism
Exception: 3LD2 3 and 3LD2 4 with knob-operated mechanism
- Including terminal cover for the infeed side
- Front plate:
 - 3LD2 0, 3LD2 1, 3LD2 2: 67 mm × 67 mm
 - 3LD2 5 to 3LD2 8: 90 mm × 90 mm
 - 3LD2 3 to 3LD2 4: 96 mm × 96 mm

Four-hole mounting

 3LD2 203-0TK51	3	--	5.5	7.5	16	▶	3LD2 003-0TK5□	1	1 unit	103	0.204
			7.5	9.5	25	▶	3LD2 103-0TK5□	1	1 unit	103	0.203
			9.5	11.5	32	▶	3LD2 203-0TK5□	1	1 unit	103	0.203
			18.5	22.0	63	▶	3LD2 504-0TK5□	1	1 unit	103	0.423
			30	37.0	100	▶	3LD2 704-0TK5□	1	1 unit	103	0.493
			37	45.0	125		3LD2 804-0TK5□	1	1 unit	103	0.490
			50	75.0	160		3LD2 305-0TK1□	1	1 unit	103	2.085
			110	132.0	250		3LD2 405-0TK1□	1	1 unit	103	2.090
	3 + N	--	5.5	7.5	16	▶	3LD2 003-1TL5□	1	1 unit	103	0.213
			7.5	9.5	25		3LD2 103-1TL5□	1	1 unit	103	0.243
 3LD2 704-0TK53			9.5	11.5	32		3LD2 203-1TL5□	1	1 unit	103	0.239
			18.5	22.0	63		3LD2 504-1TL5□	1	1 unit	103	0.424
			30.0	37.0	100	▶	3LD2 704-0TK5□ +1)	1	1 unit	103	0.493
						▶	3LD9 280-0B	1	1 unit	103	0.099
			37.0	45.0	125		3LD2 804-0TK5□ +1)	1	1 unit	103	0.490
						▶	3LD9 280-0B	1	1 unit	103	0.099
			50	75.0	160		3LD2 305-1TL1□	1	1 unit	103	2.580
			110	132.0	250		3LD2 405-1TL1□	1	1 unit	103	2.592
	3	1 NO + 1 NC	5.5	7.5	16		3LD2 003-1TP5□	1	1 unit	103	0.224
			7.5	9.5	25		3LD2 103-1TP5□	1	1 unit	103	0.221
			9.5	11.5	32		3LD2 203-1TP5□	1	1 unit	103	0.223
			18.5	22.0	63		3LD2 504-1TP5□	1	1 unit	103	0.424
			30.0	37.0	100		3LD2 704-1TP5□	1	1 unit	103	0.513
			37	45.0	125		3LD2 804-1TP5□	1	1 unit	103	0.513
			50.0	75.0	160		3LD2 305-0TK1□ +2)	1	1 unit	103	2.085
						▶	3LD9 200-5B	1	1 unit	103	0.024
			110.0	132.0	250		3LD2 405-0TK1□ +2)	1	1 unit	103	2.090
						▶	3LD9 200-5B	1	1 unit	103	0.024
	3 + N	1 NO + 1 NC	5.5	7.5	16		3LD2 003-2EP5□	1	1 unit	103	0.234
			7.5	9.5	25		3LD2 103-2EP5□	1	1 unit	103	0.255
			9.5	11.5	32		3LD2 203-1TL5□ +2)	1	1 unit	103	0.239
						▶	3LD9 200-5B	1	1 unit	103	0.024
			18.5	22.0	63		3LD2 504-1TP5□ +1)	1	1 unit	103	0.424
						▶	3LD9 250-0BA	1	1 unit	103	0.077
			30.0	37.0	100	▶	3LD2 704-0TK5□ +1)	1	1 unit	103	0.493
						▶	3LD9 280-0B +2)	1	1 unit	103	0.099
						▶	3LD9 200-5B	1	1 unit	103	0.024
			37.0	45.0	125		3LD2 804-0TK5□ +1)	1	1 unit	103	0.490
						▶	3LD9 280-0B +2)	1	1 unit	103	0.099
						▶	3LD9 200-5B	1	1 unit	103	0.024
			50.0	75.0	160		3LD2 305-1TL1□ +2)	1	1 unit	103	2.580
						▶	3LD9 200-5B	1	1 unit	103	0.024
			110.0	132.0	250		3LD2 405-1TL1□ +2)	1	1 unit	103	2.592
						▶	3LD9 200-5B	1	1 unit	103	0.024

Actuator color

Black

Red/yellow (EMERGENCY-STOP)

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¹⁾ 4th Contact element as N conductor to be ordered separately, see "Accessories".

²⁾ Auxiliary switches 1 NO + 1 NC to be ordered separately, see "Accessories".