

Circuit-Breaker for Motor Protection Series 8523/8

- Explosion protection to
 - CENELEC
 - IEC
- Can be used in Zone 1 and Zone 2
- Optional equipment
 - auxiliary circuit switch
 - 1 NC + 1 NO
 - or
 - 2 NC + 2 NO
 - under voltage trip
 - shunt trip (open-circuit trip)
- Switch operation with knob
- Secure switching
- Clear switch setting indicator
- Different current setting ranges



Series 8523/8 circuit-breakers are equipped with a permanently set short-circuit fast trip and a thermal overcurrent trip adjustable at the switch.

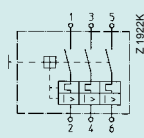
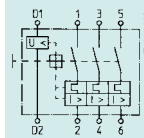
Note:

As "incomplete Ex electrical equipment" the miniature circuit-breaker must be fitted in "increased safety" standard enclosures. The installation shall be checked by a qualified expert.

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Zone 1 and Zone 2

Selection table – Circuit-breaker without ammeter

Current adjustment range	Auxiliary contacts	Ordering code		Weight [kg]
		without accessories	with undervoltage trip	
				
0,1 ... 0,16 A	without	8523/81 – 01 – 000	8523/81 – 01 – 10□	1,6
	1 NC + 1 NO	8523/82 – 01 – 020	8523/82 – 01 – 12□	2,0
	2 NC + 2 NO	8523/82 – 01 – 040	8523/82 – 01 – 14□	2,0
0,16 ... 0,25 A	without	8523/81 – 02 – 000	8523/81 – 02 – 10□	1,6
	1 NC + 1 NO	8523/82 – 02 – 020	8523/82 – 02 – 12□	2,0
	2 NC + 2 NO	8523/82 – 02 – 040	8523/82 – 02 – 14□	2,0
0,25 ... 0,4 A	without	8523/81 – 03 – 000	8523/81 – 03 – 10□	1,6
	1 NC + 1 NO	8523/82 – 03 – 020	8523/82 – 03 – 12□	2,0
	2 NC + 2 NO	8523/82 – 03 – 040	8523/82 – 03 – 14□	2,0
0,4 ... 0,63 A	without	8523/81 – 04 – 000	8523/81 – 04 – 10□	1,6
	1 NC + 1 NO	8523/82 – 04 – 020	8523/82 – 04 – 12□	2,0
	2 NC + 2 NO	8523/82 – 04 – 040	8523/82 – 04 – 14□	2,0
0,63 ... 1,0 A	without	8523/81 – 05 – 000	8523/81 – 05 – 10□	1,6
	1 NC + 1 NO	8523/82 – 05 – 020	8523/82 – 05 – 12□	2,0
	2 NC + 2 NO	8523/82 – 05 – 040	8523/82 – 05 – 14□	2,0
1,0 ... 1,6 A	without	8523/81 – 06 – 000	8523/81 – 06 – 10□	1,6
	1 NC + 1 NO	8523/82 – 06 – 020	8523/82 – 06 – 12□	2,0
	2 NC + 2 NO	8523/82 – 06 – 040	8523/82 – 06 – 14□	2,0
1,6 ... 2,5 A	without	8523/81 – 07 – 000	8523/81 – 07 – 10□	1,6
	1 NC + 1 NO	8523/82 – 07 – 020	8523/82 – 07 – 12□	2,0
	2 NC + 2 NO	8523/82 – 07 – 040	8523/82 – 07 – 14□	2,0
2,5 ... 4,0 A	without	8523/81 – 08 – 000	8523/81 – 08 – 10□	1,6
	1 NC + 1 NO	8523/82 – 08 – 020	8523/82 – 08 – 12□	2,0
	2 NC + 2 NO	8523/82 – 08 – 040	8523/82 – 08 – 14□	2,0
4,0 ... 6,3 A	without	8523/81 – 09 – 000	8523/81 – 09 – 10□	1,6
	1 NC + 1 NO	8523/82 – 09 – 020	8523/82 – 09 – 12□	2,0
	2 NC + 2 NO	8523/82 – 09 – 040	8523/82 – 09 – 14□	2,0
6,3 ... 9,0 A	without	8523/81 – 10 – 000	8523/81 – 10 – 10□	1,6
	1 NC + 1 NO	8523/82 – 10 – 020	8523/82 – 10 – 12□	2,0
	2 NC + 2 NO	8523/82 – 10 – 040	8523/82 – 10 – 14□	2,0
9,0 ... 12,5 A	without	8523/81 – 11 – 000	8523/81 – 11 – 10□	1,6
	1 NC + 1 NO	8523/82 – 11 – 020	8523/82 – 11 – 12□	2,0
	2 NC + 2 NO	8523/82 – 11 – 040	8523/82 – 11 – 14□	2,0
12,5 ... 16,0 A	without	8523/81 – 12 – 000	8523/81 – 12 – 10□	1,6
	1 NC + 1 NO	8523/82 – 12 – 020	8523/82 – 12 – 12□	2,0
	2 NC + 2 NO	8523/82 – 12 – 040	8523/82 – 12 – 14□	2,0
16,0 ... 20,0 A	without	8523/81 – 13 – 000	8523/81 – 13 – 10□	1,6
	1 NC + 1 NO	8523/82 – 13 – 020	8523/82 – 13 – 12□	2,0
	2 NC + 2 NO	8523/82 – 13 – 040	8523/82 – 13 – 14□	2,0
20,0 ... 22,5 A	without	8523/81 – 14 – 000	8523/81 – 14 – 10□	1,6
	1 NC + 1 NO	8523/82 – 14 – 020	8523/82 – 14 – 12□	2,0
	2 NC + 2 NO	8523/82 – 14 – 040	8523/82 – 14 – 14□	2,0
Add. to ordering code		Rated voltage for undervoltage trip		
		48 V; 50 Hz		<input type="checkbox"/> 3
		60 V; 50 Hz		<input type="checkbox"/> 4
		110 V; 50 Hz		<input type="checkbox"/> 5
		230 V; 50 Hz		<input type="checkbox"/> 6
		400 V; 50 Hz		<input type="checkbox"/> 7
		415 V; 50 Hz		<input type="checkbox"/> 8
		500 V; 50 Hz		<input type="checkbox"/> 9

Technical data				
Explosion protection	EEx de IIC			
Test certificate	BVS 93.C2044U			
Enclosure material	Polyester resin			
Main contacts	3-pole			
Rated working voltage	max. 690 V, AC, 50/60 Hz			
Rated working current	0,1 A ... 22,5 A dependent on adjustment range, see page 11/64			
Switching capacity	AC 3			
	220/230 V	380/400 V	500 V	690 V
	7,0 kW	12,5 kW	16,0 kW	22,0 kW
Thermal overcurrent release	Adjustable at switch; dependent on adjustment range, see table of current adjustment range page 11/64			
Electromagnetic short trip	Fixed at 12 times max. value of thermal overcurrent trip			
Back-up fuse	20 A gL, $I_k \geq 300$ A 25 A gL, $I_k \geq 400$ A 35 A gL, $I_k \geq 650$ A			
Mechanical life	10^5 operations			
Ambient temperature	– 20° C ... + 40° C			
Connection	Main contacts	1,5 ... 6 mm ² flexible 1,5 ... 10 mm ² solid		
	Auxiliary contacts	0,75 ... 1,5 mm ² flexible 0,75 ... 2,5 mm ² solid		
Power dissipation	5 W ... 6,75 W (dependent on adjustment range)			
Other features	Switches are suitable for protection of "increased" safety motors; Switch operated by rotary actuator; clearly visible position indication; Phase failure sensitivity. Due to shortened switch grip, release is ensured even if mechanism is locked. Breaking parameter: can be used as MAIN or EMERGENCY OFF switch. If necessary accessories are fitted.			
Switch grip	Labelling: 0-I; 0-position can be padlocked in 3 positions; Colour: Standard: grip and collar black; Special: red grip and yellow collar (EM-STOP function)			
Accessories	Options: none; 1 NC + 1 NO; 2 NC + 2 NO			
Auxiliary contacts	max. 500 V; AC			
Rated voltage	AC 15	230 V	400 V	
		2 A	0,5 A	
Rated current	DC 13	60 V	220 V	
		2,5 A	0,25 A	
Undervoltage trip	When power is lost, circuit-breaker trips; this prevents unwanted restarting, e.g. of a motor			
Voltages	Available operating voltage U_c 50 Hz: 48 V; 60 V; 110 V; 230 V; 400 V; 415 V; 500 V			
Pick-up	$0,8 \dots x U_c$			
Drop-out	$0,75 \dots 0,35 x U_c$			
Shunt trip module	For remote tripping of circuit-breaker; remote tripping by applying actuating voltage			
Voltages	available operating voltages U_c AC/DC: 24 ... 60 V; 110 ... 240 V			



Accessories

Designation	Description	Ordering code	Weight [kg]
Actuator	Colour	black	0,06
		red/yellow	

Note: Specify label text in order

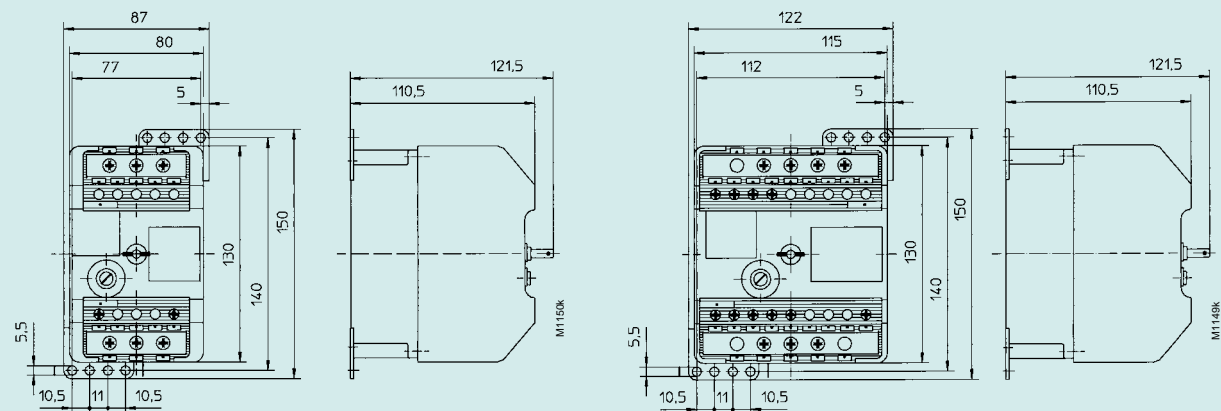
Current adjustment range

Tripping characteristics (Tripping time related to multiple of actual-to-set current I_N/I_B)

Tripping characteristics (Tripping time related to multiple of actual-to-set current I_N/I_B)					Adjustment range	Ident no. for ordering code
0,1 – 0,16 A	0,16 – 0,25 A	0,25 – 0,4 A	0,4 – 0,63 A	0,63 – 1,0 A	0,1 – 0,16 A	.. – 01 – ..
					0,16 – 0,25 A	.. – 02 – ..
Z2681k	Z2682k	Z2683k	Z2684k	Z2685k	0,25 – 0,4 A	.. – 03 – ..
					0,4 – 0,63 A	.. – 04 – ..
					0,63 – 1,0 A	.. – 05 – ..
1,0 – 1,6 A	1,6 – 2,5 A	2,5 – 4,0 A	4,0 – 6,3 A	6,3 – 9,0 A	1,0 – 1,6 A	.. – 06 – ..
					1,6 – 2,5 A	.. – 07 – ..
Z2686k	Z2687k	Z2688k	Z2689k	Z2690k	2,5 – 4,0 A	.. – 08 – ..
					4,0 – 6,3 A	.. – 09 – ..
					6,3 – 9,0 A	.. – 10 – ..
9,0 – 12,5 A	12,5 – 16,0 A	16,0 – 20,0 A	20,0 – 22,5 A		9,0 – 12,5 A	.. – 11 – ..
					12,5 – 16,0 A	.. – 12 – ..
Z2691k	Z2692k	Z2693k	Z2694k		16,0 – 20,0 A	.. – 13 – ..
					20,0 – 22,5 A	.. – 14 – ..

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Dimensions, all dimensions in mm – subject to alteration



8523/81
Circuit-breaker for motor protection
Module width 1, without auxiliary contacts

8523/82
Circuit-breaker for motor protection
Module width 2, with auxiliary contacts