

Circuit-Breakers for Motor Protection Series 8523/8

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03150E00

- > Accessories
 - Auxiliary contacts
1 NC + 1 NO or 2 NC + 2 NO
 - Undervoltage trip
 - Shunt release
- > 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.

	ATEX / IECEx / GOST					
Zone	0	1	2	20	21	22
For use in		x	x			

WebCode 8523A

E9

Circuit-Breakers for Motor Protection

Series 8523/8

Circuit-breaker for Motor Protection Series 8523/8



08875E00

- suitable for protection of „increased“ safety motors up to 12.5 kW (400 V, AC-3)
- permanently set short-circuit fast-trip
- adjustable thermal overcurrent trip

Setting range	0.1 ... 22.5 A
Rated voltage	690 V AC
Optional equipment	1 NO + 1 NC or 2 NO + 2 NC
	Under voltage trip or shunt trip

Selection Table

Version	Current adjustment range	Auxiliary contacts	Additional device	Order number
Circuit-breaker, enclosure size 1	0.1 A ... 0.16 A	without	without	8523/81-01-000
	0.16 A ... 0.25 A	without	without	8523/81-02-000
	0.25 A ... 0.4 A	without	without	8523/81-03-000
	0.4 ... 0.63 A	without	without	8523/81-04-000
	0.63 ... 1.0 A	without	without	8523/81-05-000
	1.0 ... 1.6 A	without	without	8523/81-06-000
	1.6 ... 2.5 A	without	without	8523/81-07-000
	2.5 ... 4.0 A	without	without	8523/81-08-000
	4.0 ... 6.3 A	without	without	8523/81-09-000
	6.3 ... 9.0 A	without	without	8523/81-10-000
	9.0 ... 12.5 A	without	without	8523/81-11-000
	12.5 ... 16.0 A	without	without	8523/81-12-000
	16.0 ... 20.0 A	without	without	8523/81-13-000
	20.0 ... 22.5 A	without	without	8523/81-14-000

Order Number Supplement

Trip	Undervoltage trip	8523/8.-.-.-1..
	Shunt release	8523/8.-.-.-2..
Auxiliary facilities	1 auxiliary circuit switch 1NC+1NO	8523/8.-.-.-2.
	2 auxiliary circuit switch 2NC+2NO	8523/8.-.-.-4.
Voltage and frequency for trip	48 V AC, 50 Hz	8523/8.-.-.-1.3
	60 V AC, 50 Hz	8523/8.-.-.-1.4
	110 V AC, 50 Hz	8523/8.-.-.-1.5
	230 V AC, 50 Hz	8523/8.-.-.-1.6
	400 V AC, 50 Hz	8523/8.-.-.-1.7
	415 V AC, 50 Hz	8523/8.-.-.-1.8
	500 V AC, 50 Hz	8523/8.-.-.-1.9
	24 ... 60 V AC / DC	8523/8.-.-.-2.1
	110 ... 240 V AC / DC	8523/8.-.-.-2.2

Circuit-Breakers for Motor Protection

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Selection Table

Version	Release	Auxiliary contacts	Order number
Circuit-breaker, enclosure size 2	without	1 NC + 1 NO	8523/82-...-020
		2 NC + 2 NO	8523/82-...-040
	Undervoltage trip	1 NC + 1 NO	8523/82-...-12.
		2 NC + 2 NO	8523/82-...-14.
	Shunt release	1 NC + 1 NO	8523/82-...-22.
		2 NC + 2 NO	8523/82-...-24.

Order Number Supplement

Current adjustment range	0.1 ... 0.16 A	8523/8.-01-...
	0.16 ... 0.25 A	8523/8.-02-...
	0.25 ... 0.4 A	8523/8.-03-...
	0.4 ... 0.63 A	8523/8.-04-...
	0.63 ... 1.0 A	8523/8.-05-...
	1.0 ... 1.6 A	8523/8.-06-...
	1.6 ... 2.5 A	8523/8.-07-...
	2.5 ... 4.0 A	8523/8.-08-...
	4.0 ... 6.3 A	8523/8.-09-...
	6.3 ... 9.0 A	8523/8.-10-...
	9.0 ... 12.5 A	8523/8.-11-...
	12.5 ... 16.0 A	8523/8.-12-...
	16.0 ... 20.0 A	8523/8.-13-...
	20.0 ... 22.5 A	8523/8.-14-...
Voltage and frequency for trip	48 V AC, 50 Hz	8523/8.-...-1.3
	60 V AC, 50 Hz	8523/8.-...-1.4
	110 V AC, 50 Hz	8523/8.-...-1.5
	230 V AC, 50 Hz	8523/8.-...-1.6
	400 V AC, 50 Hz	8523/8.-...-1.7
	415 V AC, 50 Hz	8523/8.-...-1.8
	500 V AC, 50 Hz	8523/8.-...-1.9
	24 ... 60 V AC / DC	8523/8.-...-2.1
110 ... 240 V AC / DC	8523/8.-...-2.2	

Explosion Protection

Global (IECEX)	
Gas and dust	IECEX BVS 08.0039 U Ex de IIC Ex de I
Europe (ATEX)	
Gas and dust	DMT 01 ATEX E 153 U ⊕ II 2 G Ex de IIC ⊕ I M 2 Ex de I
Certificates and approvals	
Certificates	ATEX, IECEX, Canada (CSA), Belarus (GOST-B)

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Circuit-Breakers for Motor Protection

Series 8523/8

Technical Data

Electrical data

Rated operational voltage	max. 690 V AC, 50 / 60 Hz			
Rated working current	0.1 ... 22.5 A dependent on adjustment range			
Switching capacity	dependent on adjustment range (AC)			
	230 V	400 V	500 V	690 V
	7.0 kW	12.4 kW	16.0 kW	22.0 kW
Mechanical life	10 ⁵ operations			
Main contacts	3-pole			
Short circuit protection	fuse			
	U _e (~V)	AC-3 (kW)	gG (A)	I _k (A)
	220 / 230	7.0	20	≥ 300
	380 / 400	12.5	25	≥ 400
	500	16.0	35	≥ 650
	690	22.0		
Thermal overcurrent trip	Adjustable at switch; dependent on adjustment range			
Electromagnetic fast trip	Adjustment range		Threshold values set at factory	
	0.16	... 0.63 A	7.5	... 12.0 I _n
	1.0	... 2.5 A	9.0	... 14.0 I _n
	4.0	... 6.0 A	10.0	... 15.0 I _n
	9.0	... 22.5 A	12.0	... 17.5 I _n
Power dissipation	max. 6.75 W			
Auxiliary contacts				
Device version				
Auxiliary contacts	Options: none; 1 NC + 1 NO; 2 NC + 2 NO			
Rated voltage	max. 500 V AC			
Rated current	AC-15	230 V	400 V	
		2 A	1 A	
	DC-13	60 V	110 V	220 V
		2.5 A	0.6 A	0.25 A

Ambient conditions

Ambient temperature	-20 ... +40 °C
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Circuit-Breakers for Motor Protection

Series 8523/8



Technical Data

Mechanical data

Enclosure material	Epoxy resin or polyester resin	
Operating handle	on request	
Weight	8523/81 1.4 kg 8523/82 1.8 kg	
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

Undervoltage trip

Function	When power is lost, circuit-breaker trips; this prevents unwanted restarting, e.g. of a motor
Electrical data	
Voltages	possible rated actuating voltage U_c 50 Hz: 48; 60; 110; 230; 400; 415; 500 V Pick-up $0.85 \dots x U_c$ Drop-out $0.7 \dots 0.35 x U_c$

Shunt release

Function	for remote tripping of circuit-breakers by applying actuating voltage
Electrical data	
Voltages	possible rated actuating voltage U_c AC / DC: 24 ... 60 V, 110 ... 240 V

Note

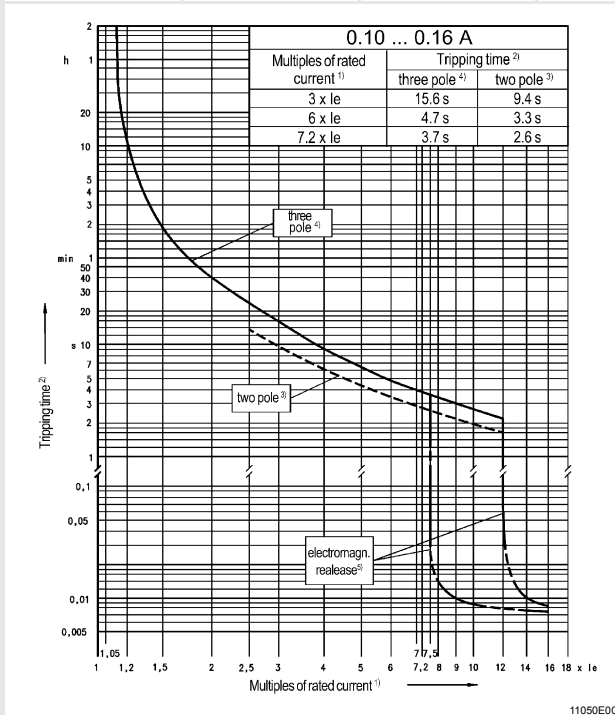
Other features	Switches are suitable for protection of "increased" safety motors; Switch operated by rotary actuator; clearly visible position indication; Phase failure sensitivity. Due to shortened switch grip, release is ensured even if mechanism is locked. Breaking parameter: can be used as MAIN or EMERGENCY OFF switch. If necessary accessories are fitted.
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Circuit-Breakers for Motor Protection

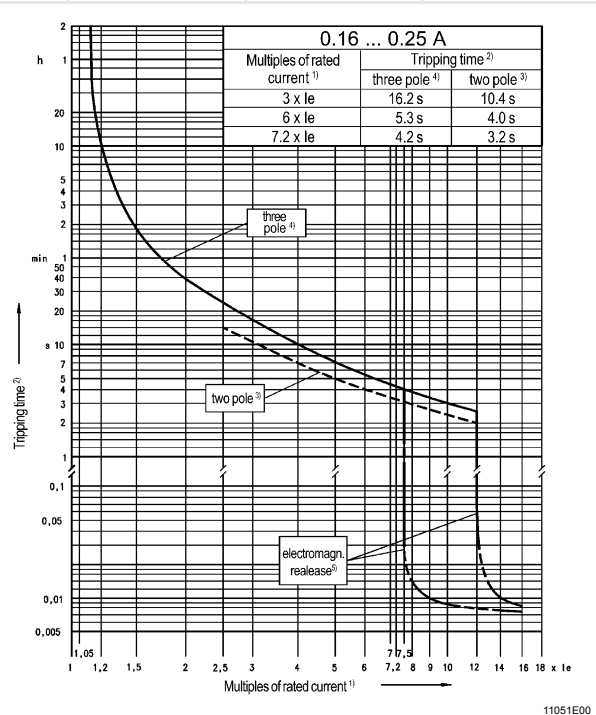
Series 8523/8

Trip Response

Adjustment range of motor protection switch	Trip time of motor protection switch at					
	3	4	5	6	7.2	8
	times the setting current, 3-pin, from cold state.					
A ... A	s	s	s	s	s	s
0.1 ... 0.16	15.0	9.0	6.5	4.8	3.7	3.2
0.16 ... 0.25	16.0	10.0	6.8	5.2	4.0	3.6
0.25 ... 0.4	16.0	9.7	6.5	5.0	3.8	3.3
0.4 ... 0.63	17.0	10.2	7.3	5.7	4.4	3.9
0.63 ... 1.0	17.5	10.2	7.2	5.5	4.2	3.8
1.0 ... 1.6	17.0	10.0	7.1	5.6	4.4	4.0
1.6 ... 2.5	18.0	10.3	7.5	5.9	4.7	4.2
2.5 ... 4.0	18.4	11.5	8.1	6.4	5.0	4.6
4.0 ... 6.3	19.0	12.0	8.5	6.7	5.3	4.9
6.3 ... 9.0	18.2	11.5	7.9	6.0	4.5	3.8
9.0 ... 12.5	19.0	11.5	8.0	6.0	4.6	4.0
12.5 ... 16.0	19.5	11.5	7.5	5.4	4.0	3.3
16.0 ... 20.0	20.0	11.5	7.8	5.7	4.2	3.5
20.0 ... 22.5	20.0	10.4	7.0	5.0	3.7	3.2



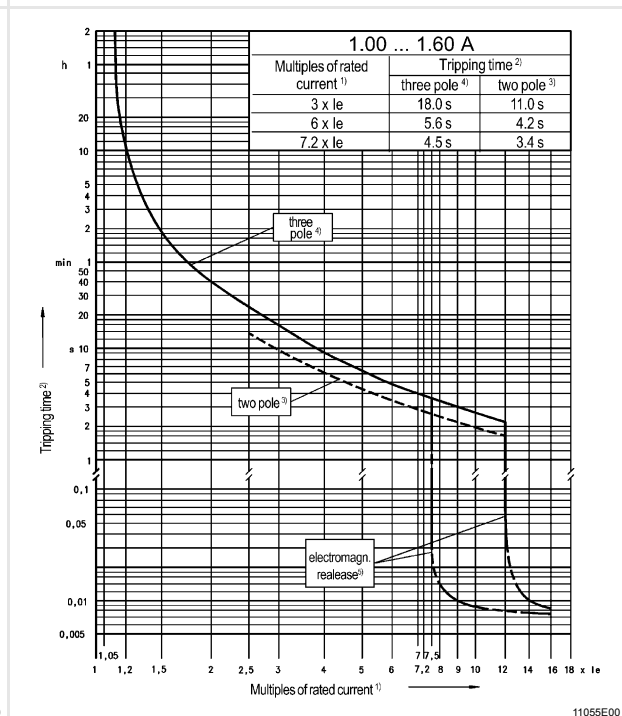
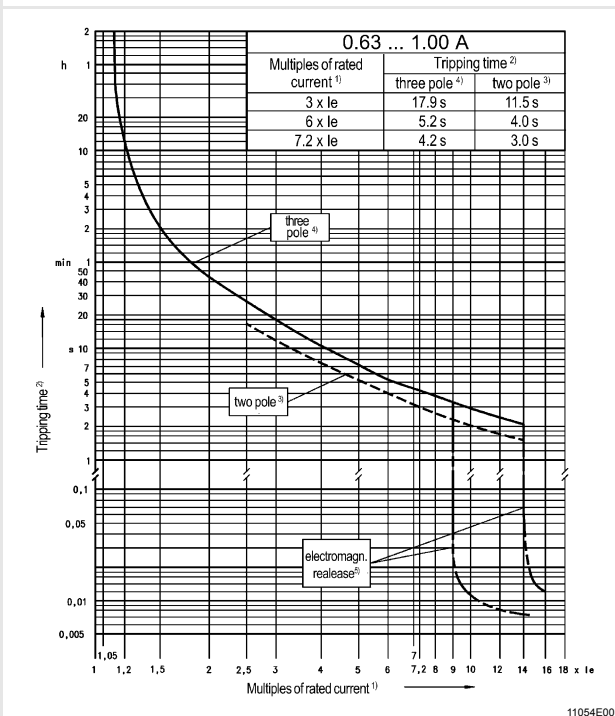
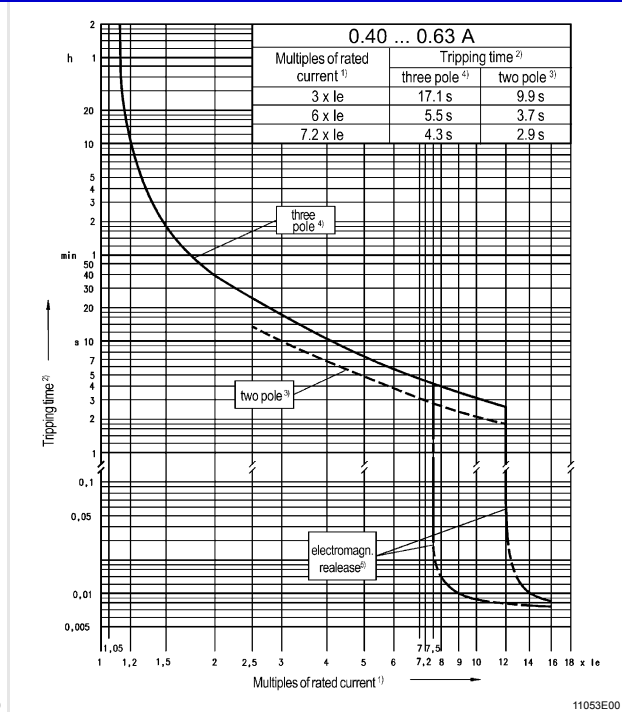
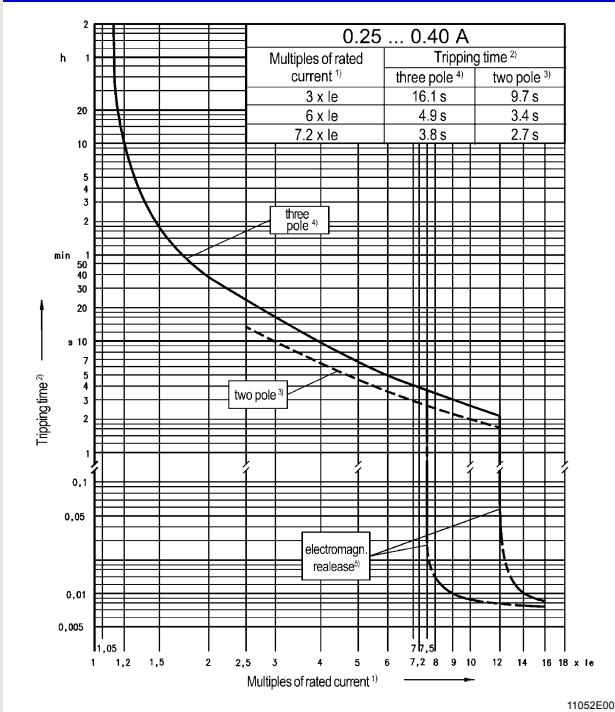
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- 1) Multiples of the nominal current
- 2) Tripping time
- 3) 2-pole
- 4) 3-pole
- 5) Electromagnetic release

Trip Response

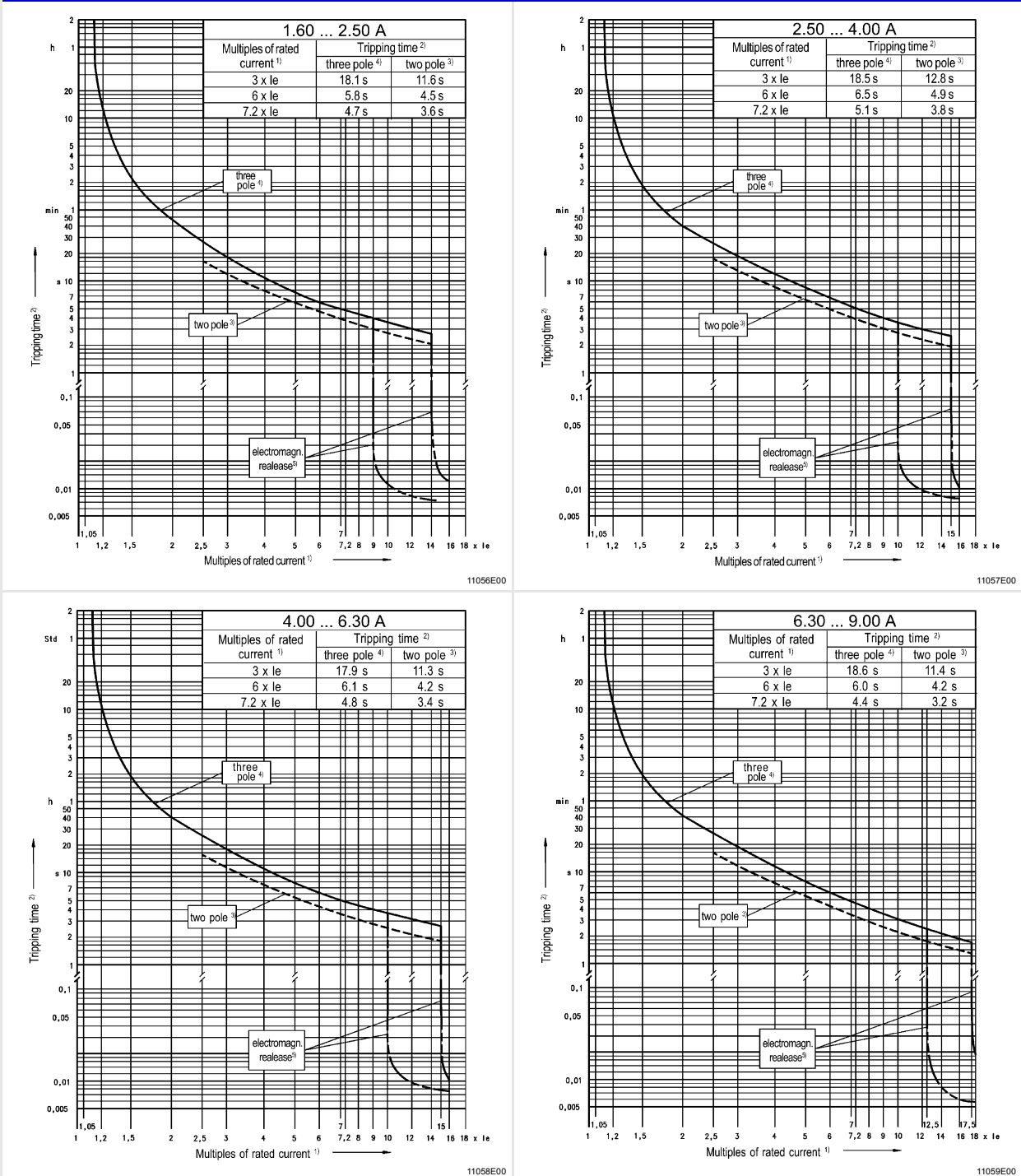


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- 2) Tripping time
- 3) 2-pole
- 4) 3-pole
- 5) Electromagnetic release

Circuit-Breakers for Motor Protection

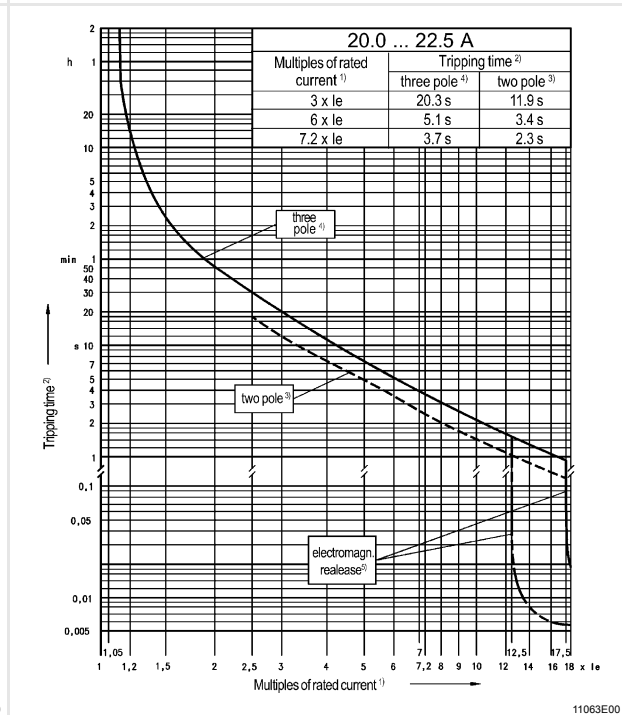
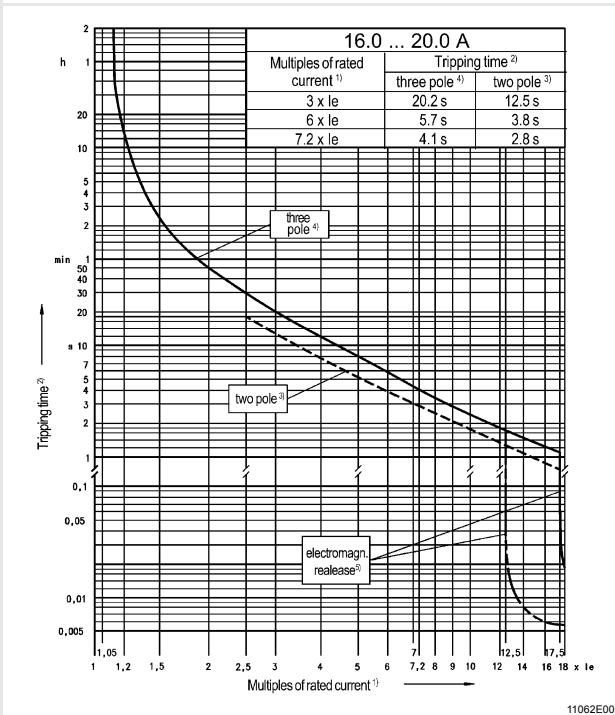
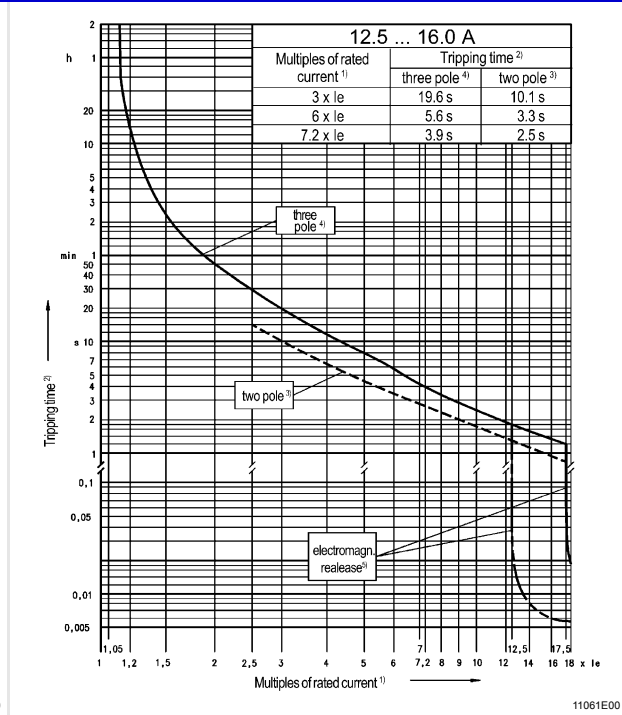
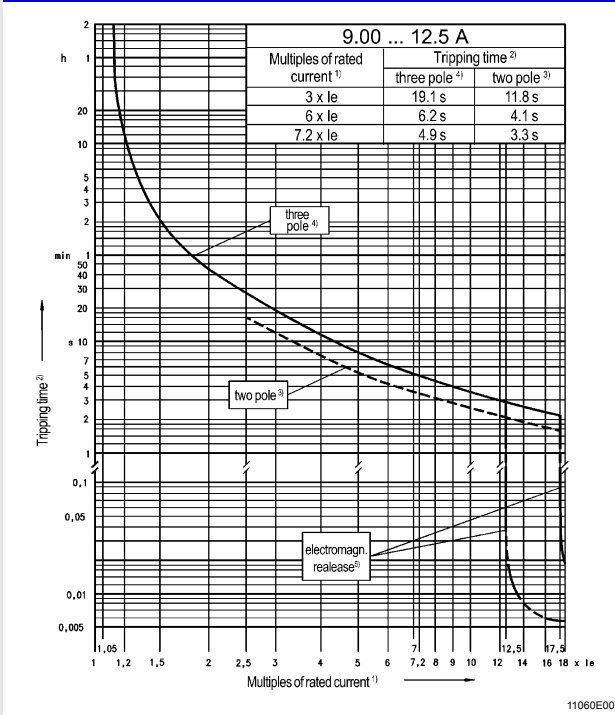
Series 8523/8

Trip Response



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Trip Response




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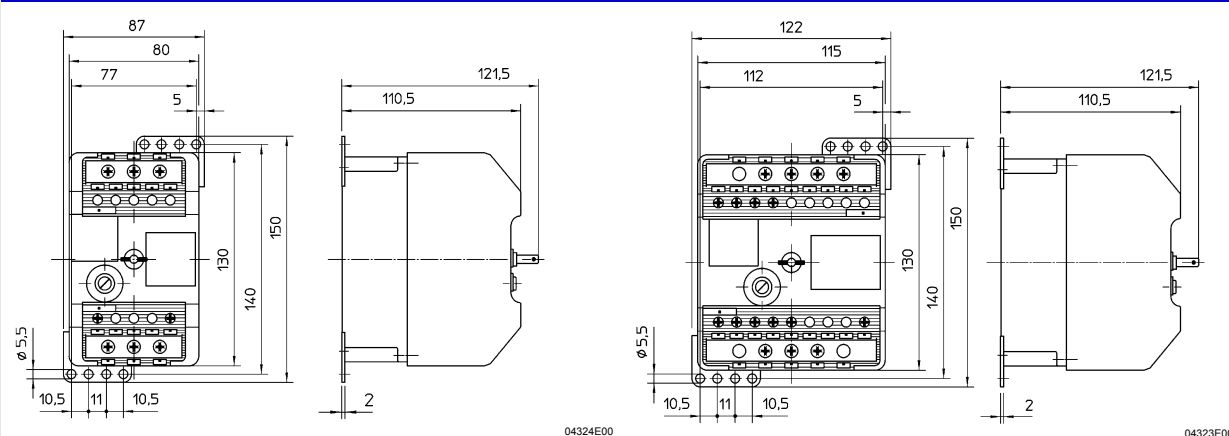
Circuit-Breakers for Motor Protection

Series 8523/8

Accessories and Spare Parts

Designation	Illustration	Description	Art. no.	Weight kg
Jumper		for undervoltage release, length 400 mm (two bridges required)	147121	0.019

Dimensional Drawings (All Dimensions in mm) - Subject to Alterations



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

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