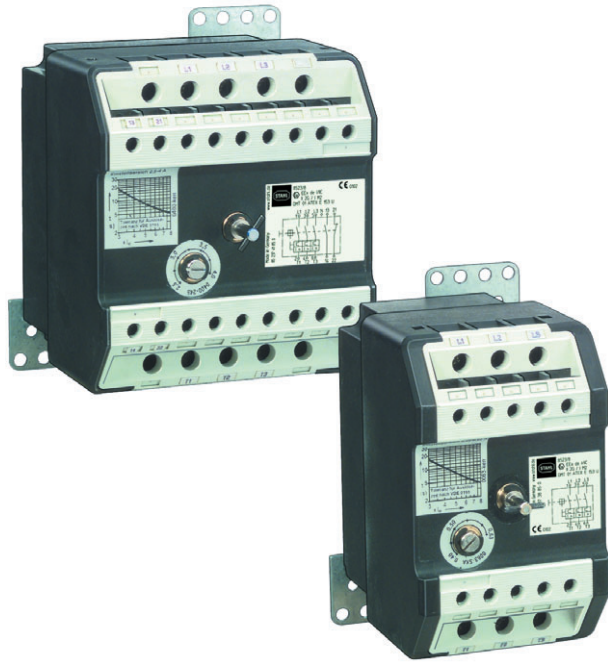


# Circuit-Breakers for Motor Protection

## Series 8523/8



- > Additional equipment
  - Auxiliary contacts:
    - 1 NC contact + 1 NO contact ,
    - 2 NC contacts + 2 NO contacts
    - or 1 signal contact,
    - 1 NC contact + 1 NO contact
  - Undervoltage release
  - Shunt trip
- > Switch operation with knob
- > Secure switching
- > Clear switch setting indicator
- > Different current setting ranges



03150E00

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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					
Zone	0	1	2	20	21	22
For use in		x	x			

# Circuit-Breakers for Motor Protection

## Series 8523/8

### Series 8523/8 moulded case circuit breaker for motor protection



08875E00

- Suitable for protecting motors of types of protection Ex e up to 12.5 kW (400 V, AC-3)
- Configured short circuit quick release
- Adjustable thermal release

Adjustment range 0.1 to 22.5 A

Rated operational voltage 690 V AC

Additional devices Auxiliary contacts:  
1 NO contact + 1 NC contact, 2 NO contacts + 2 NC contacts or  
1 signal contact, 1 NC contact + 1 NO contact

Undervoltage release or shunt trip

### Selection Table

Version	Current adjustment range	Order number
Circuit-breaker, enclosure size 1	0.1 to 0.16 A	8523/81-01-...
	0.16 to 0.25 A	8523/81-02-...
	0.25 to 0.4 A	8523/81-03-...
	0.4 to 0.63 A	8523/81-04-...
	0.63 to 1.0 A	8523/81-05-...
	1.0 to 1.6 A	8523/81-06-...
	1.6 to 2.5 A	8523/81-07-...
	2.5 to 4.0 A	8523/81-08-...
	4.0 to 6.3 A	8523/81-09-...
	6.3 to 9.0 A	8523/81-10-...
	9.0 to 12.5 A	8523/81-11-...
	12.5 to 16.0 A	8523/81-12-...
	16.0 to 20.0 A	8523/81-13-...
	20.0 to 22.5 A	8523/81-14-...

### Order Number Supplement

Auxiliary facilities	1 auxiliary circuit switch 1NC+1NO	8523/8-...-2.
	2 auxiliary circuit switches 2NC+2NO	8523/8-...-4.
Release / release voltage and frequency	110 V AC, 50 Hz undervoltage release	8523/8-...-1.5
	230 V AC, 50 Hz undervoltage release	8523/8-...-1.6
	400 V AC, 50 Hz undervoltage release	8523/8-...-1.7
	415 V AC, 50 Hz undervoltage release	8523/8-...-1.8
	500 V AC, 50 Hz undervoltage release	8523/8-...-1.9
	24 to 60 V AC / DC shunt trip	8523/8-...-2.1
	110 to 240 V AC / DC shunt trip	8523/8-...-2.2

# Circuit-Breakers for Motor Protection

## Series 8523/8



### Selection Table

Version	Current adjustment range	Order number
Circuit-breaker, enclosure size 2	0.1 to 0.16 A	8523/82-01-...
	0.16 to 0.25 A	8523/82-02-...
	0.25 to 0.4 A	8523/82-03-...
	0.4 to 0.63 A	8523/82-04-...
	0.63 to 1.0 A	8523/82-05-...
	1.0 to 1.6 A	8523/82-06-...
	1.6 to 2.5 A	8523/82-07-...
	2.5 to 4.0 A	8523/82-08-...
	4.0 to 6.3 A	8523/82-09-...
	6.3 to 9.0 A	8523/82-10-...
	9.0 to 12.5 A	8523/82-11-...
	12.5 to 16.0 A	8523/82-12-...
	16.0 to 20.0 A	8523/82-13-...
	20.0 to 22.5 A	8523/82-14-...

### Order Number Supplement

Auxiliary facilities	1 auxiliary circuit switch 1NC+1NO	8523/8-...-2.
	2 auxiliary circuit switches 2NC+2NO	8523/8-...-4.
	1 fault signal contact, 1 NC contact + 1 NO contact	8523/82-...-060
Release / release voltage and frequency	110 V AC, 50 Hz undervoltage release	8523/8-...-1.5
	230 V AC, 50 Hz undervoltage release	8523/8-...-1.6
	400 V AC, 50 Hz undervoltage release	8523/8-...-1.7
	415 V AC, 50 Hz undervoltage release	8523/8-...-1.8
	500 V AC, 50 Hz undervoltage release	8523/8-...-1.9
	24 to 60 V AC / DC shunt trip	8523/8-...-2.1
	110 to 240 V AC / DC shunt trip	8523/8-...-2.2

### Explosion Protection

<b>Global (IECEX)</b>		
Gas and dust	IECEX BVS 08.0039U Ex db eb IIC Gb Ex db eb I Mb	
<b>Europe (ATEX)</b>		
Gas and dust	DMT 01 ATEX E 153 U Ⓢ II 2 G Ex db eb IIC Gb Ⓢ I M2 Ex db eb I Mb	
<b>Certifications and certificates</b>		
Certificates	ATEX, IECEX, Canada (FM), USA (FM), Brazil	

E9

# 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 to 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 <sup>5</sup> operations								
Main contacts	3-pole								
Short-circuit protection	Adjustment range up to								
	Highest rated current of the short circuit fuse if $I_{CC} > I_{CS}$								
	230 V AC		400 V AC		500 V AC		690 V AC		
	$I_{CS}$	gG, aM	$I_{CS}$	gG, aM	$I_{CS}$	gG, aM	$I_{CS}$	gG, aM	
	kA	A	kA	A	kA	A	kA	A	
	0.16 A								
	0.25 A								
	0.40 A								
	0.63 A								
	1.00 A								
	1.60 A								
	2.50 A						40	10	
	4.00 A				60	16	10	16	
	6.30 A		75	25	40	25	3	25	
	9.00 A		65	32	30	32	3	32	
	12.50 A	75	40	55	40	25	40	3	40
	16.00 A	65	50	40	50	20	50	2	50
	20.00 A	55	63	25	63	15	63	2	50
	22.50 A	50	63	15	63	15	63	2	50
	$I_{CS}$ = rated short-circuit breaking capacity								
	$I_{CC}$ = projected short-circuit current at mounting location								
	Selection of pre-fuses for use with 8523/8 components.								
	Areas without specifications can be operated at up to 100 kA without a pre-fuse.								
Thermal overcurrent release	Adjustable at switch; dependent on adjustment range								
Electromagnetic quick release	Adjustment range		Threshold values set at factory						
	0.16 A to 0.63 A		7.5 to 12.0 $I_n$						
	0.63 A to 2.5 A		9.0 to 14.0 $I_n$						
	2.5 A to 6.3 A		10.0 to 15.0 $I_n$						
	6.3 A to 22.5 A		12.5 to 17.5 $I_n$						
Auxiliary contacts									
Device version									
Auxiliary contacts	Optional: without; 1 NC contact + 1 NO contact, 2 NC contacts + 2 NO contacts, 1 signal contact, 1 NC contact + 1 NO contact (signal contact only possible for enclosure size 2)								
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 to +40 °C

# Circuit-Breakers for Motor Protection

## Series 8523/8



### Technical Data

#### Mechanical data

Enclosure material	Epoxy resin or polyester resin	
Switching handle	on request	
Weight	8523/81 1.4 kg 8523/82 1.8 kg	
Connection	Main contacts	1.5 to 6 mm <sup>2</sup> finely stranded 1.5 to 10 mm <sup>2</sup> solid
	Auxiliary contacts	0.75 to 1.5 mm <sup>2</sup> finely stranded 0.75 to 2.5 mm <sup>2</sup> solid

#### Undervoltage release

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: 110 V, 230 V, 400 V, 415 V, 500 V Operating (pull-in) value range 0.85 to $x U_c$ Dropout value range 0.7 to 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 to 60 V, 110 to 240 VV

#### Note

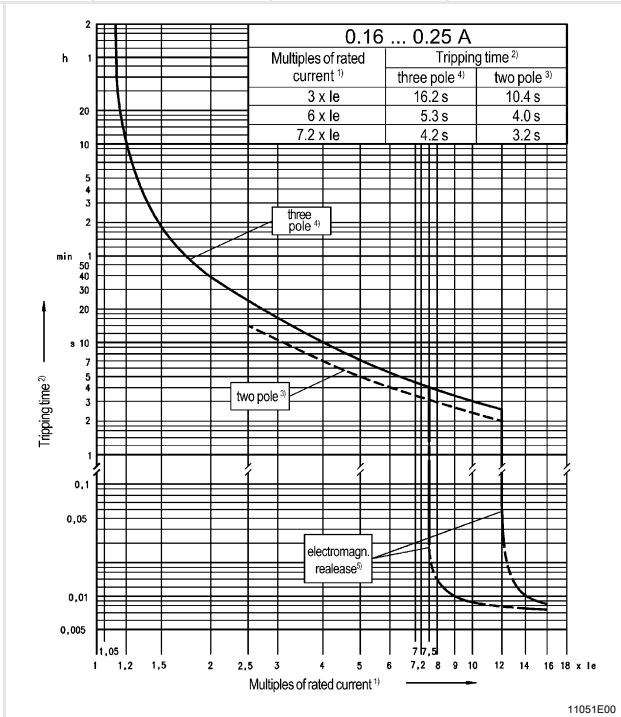
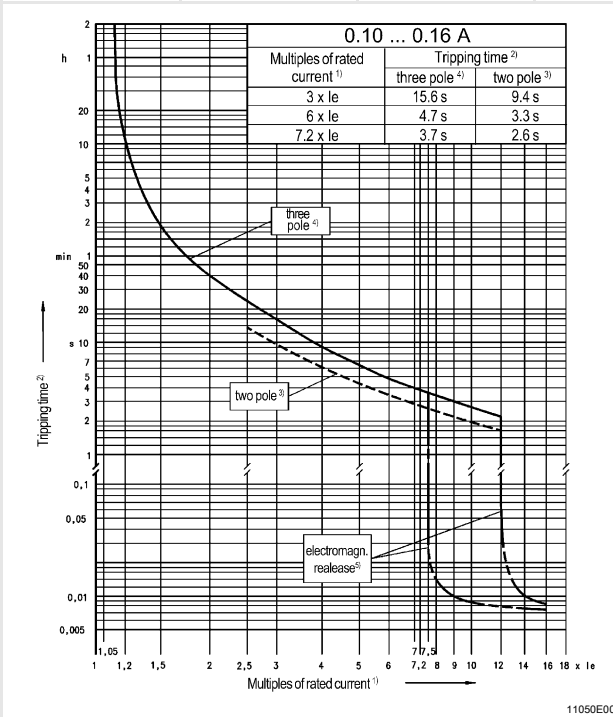
Other features	Switches are suitable for protection of "increased" safety motors; Switch operated by rotary actuator; clearly visible position indication; Phase failure sensitivity. Due to shortened switch grip, release is ensured even if mechanism is locked. Breaking parameter: can be used as MAIN or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

## Series 8523/8

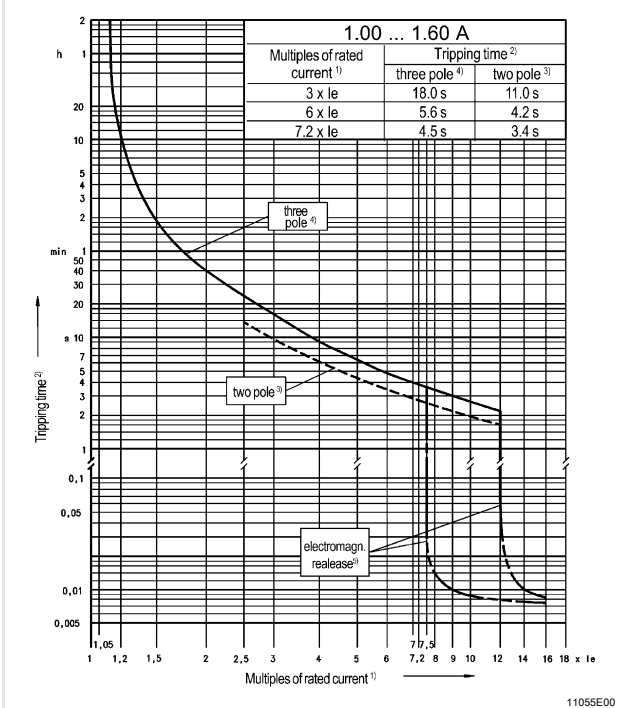
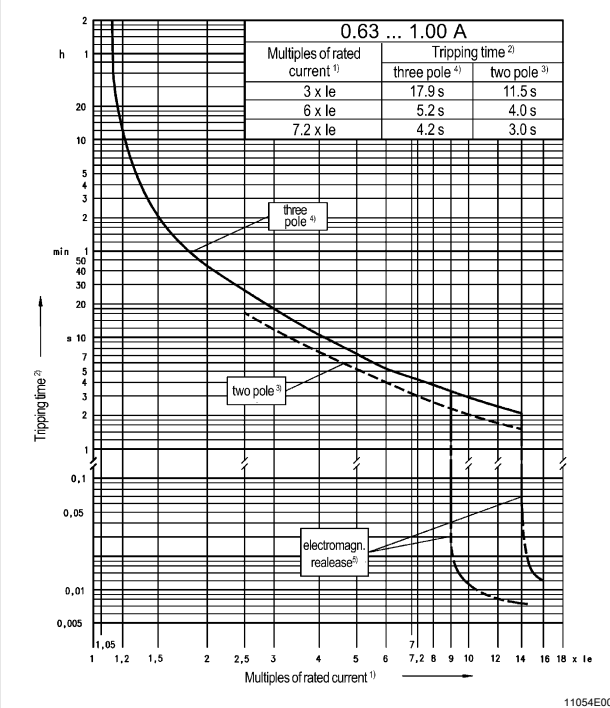
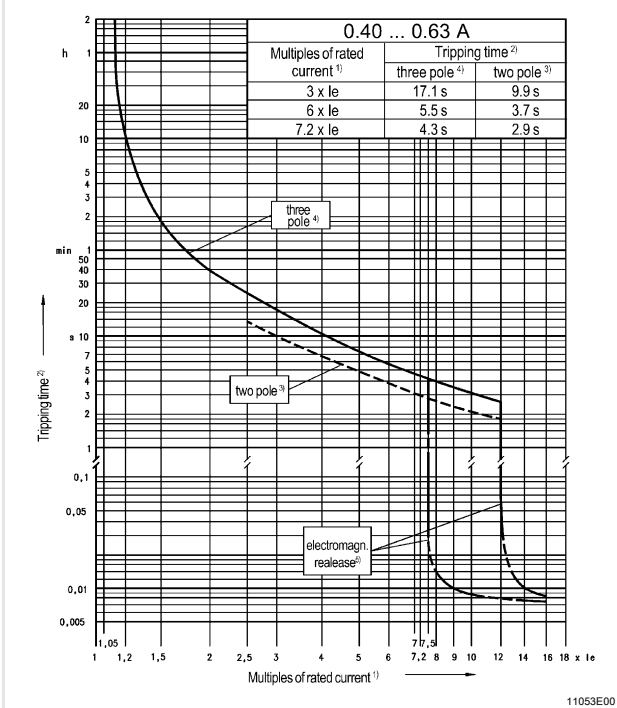
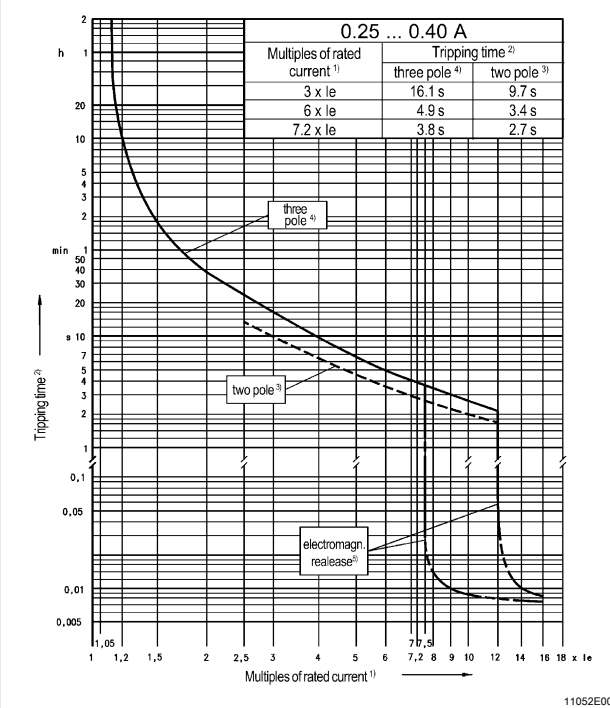
### Trip Response

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 to A	s	s	s	s	s	s
0.1 to 0.16	15.0	9.0	6.5	4.8	3.7	3.2
0.16 to 0.25	16.0	10.0	6.8	5.2	4.0	3.6
0.25 to 0.4	16.0	9.7	6.5	5.0	3.8	3.3
0.4 to 0.63	17.0	10.2	7.3	5.7	4.4	3.9
0.63 to 1.0	17.5	10.2	7.2	5.5	4.2	3.8
1.0 to 1.6	17.0	10.0	7.1	5.6	4.4	4.0
1.6 to 2.5	18.0	10.3	7.5	5.9	4.7	4.2
2.5 to 4.0	18.4	11.5	8.1	6.4	5.0	4.6
4.0 to 6.3	19.0	12.0	8.5	6.7	5.3	4.9
6.3 to 9.0	18.2	11.5	7.9	6.0	4.5	3.8
9.0 to 12.5	19.0	11.5	8.0	6.0	4.6	4.0
12.5 to 16.0	19.5	11.5	7.5	5.4	4.0	3.3
16.0 to 20.0	20.0	11.5	7.8	5.7	4.2	3.5
20.0 to 22.5	20.0	10.4	7.0	5.0	3.7	3.2



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

### Trip Response

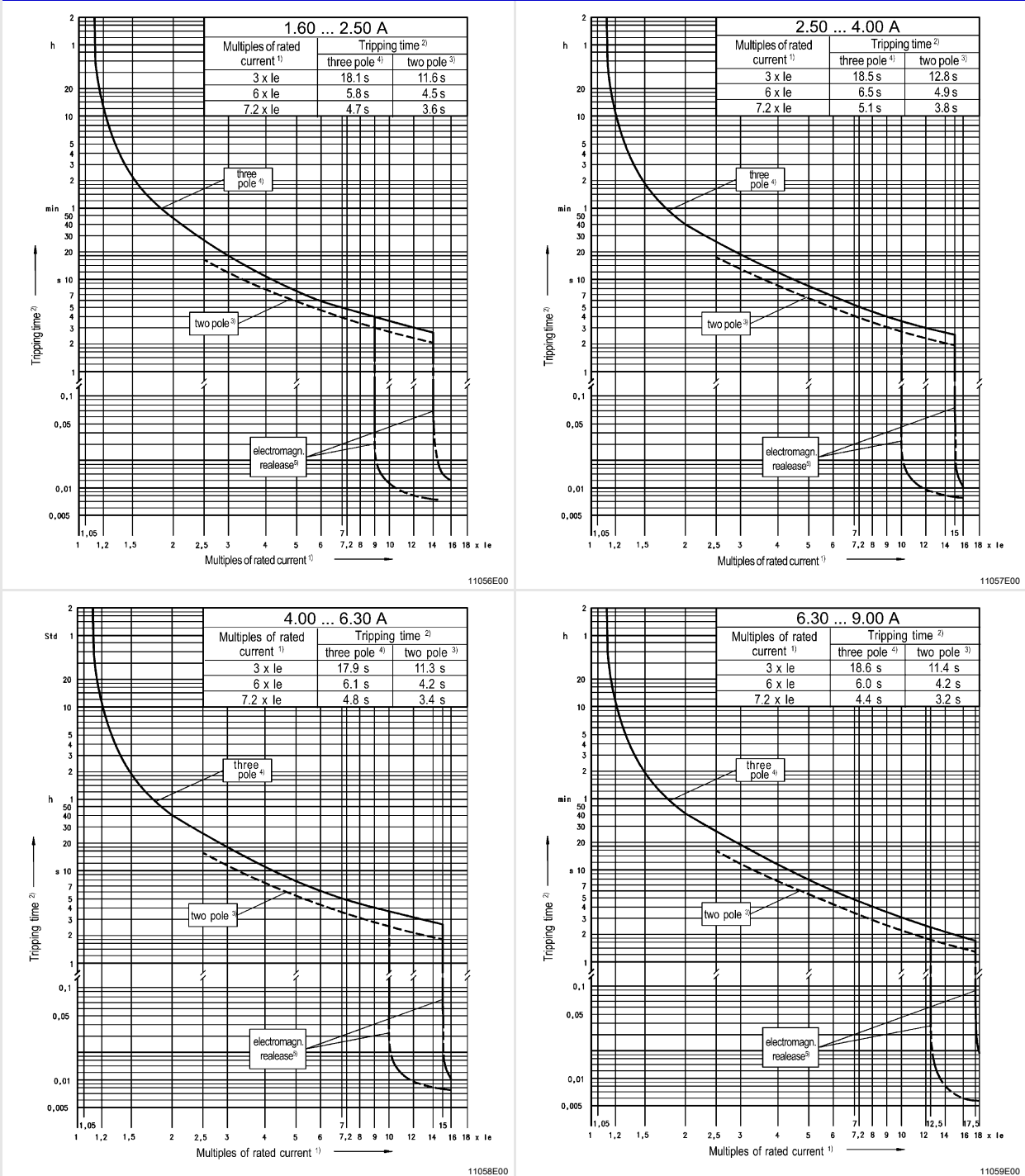


- <sup>1)</sup> Multiples of the nominal current
- <sup>2)</sup> Tripping time
- <sup>3)</sup> 2-pole
- <sup>4)</sup> 3-pole
- <sup>5)</sup> Electromagnetic release

# Circuit-Breakers for Motor Protection

## Series 8523/8

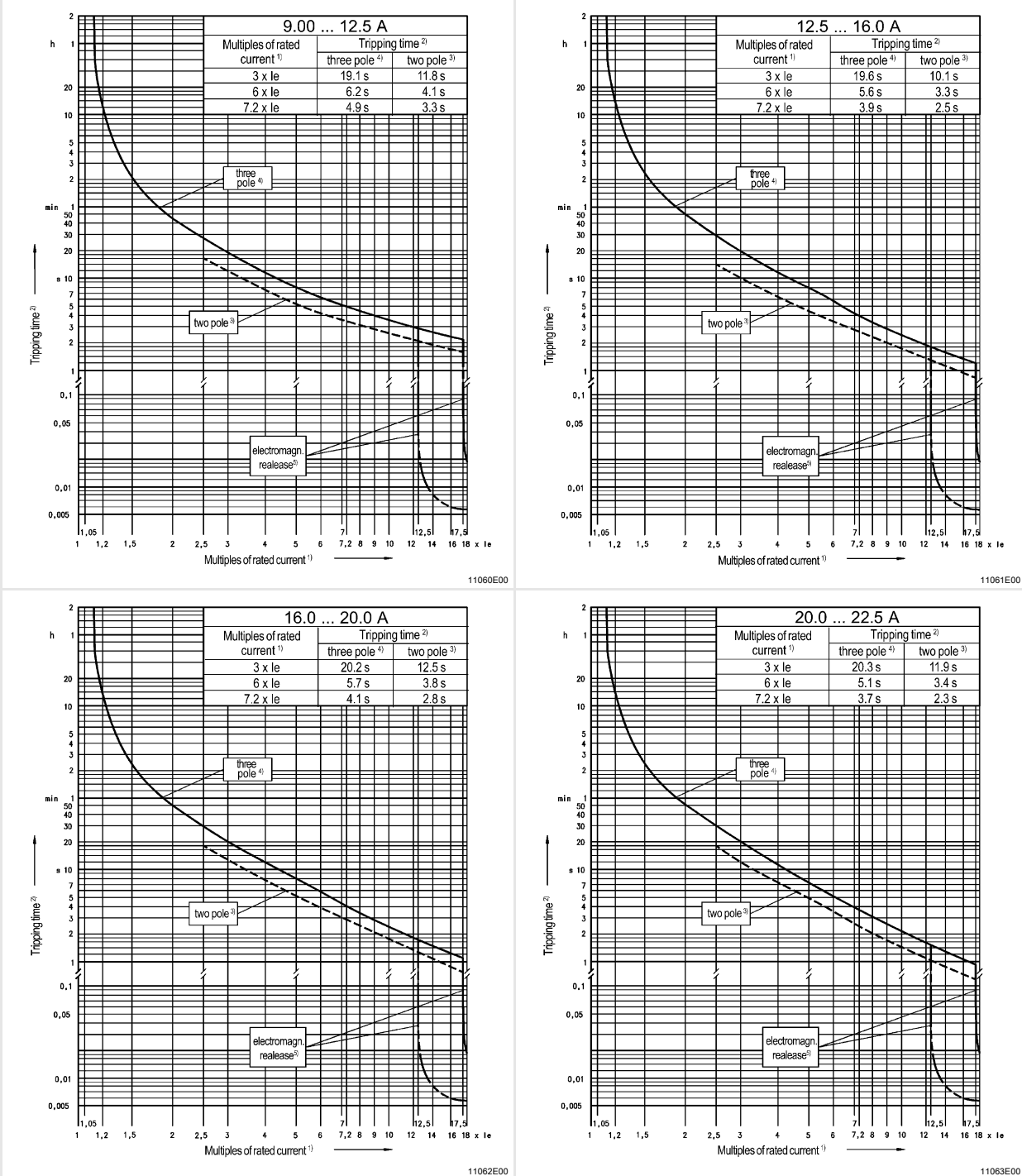
### Trip Response



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



### Trip Response




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

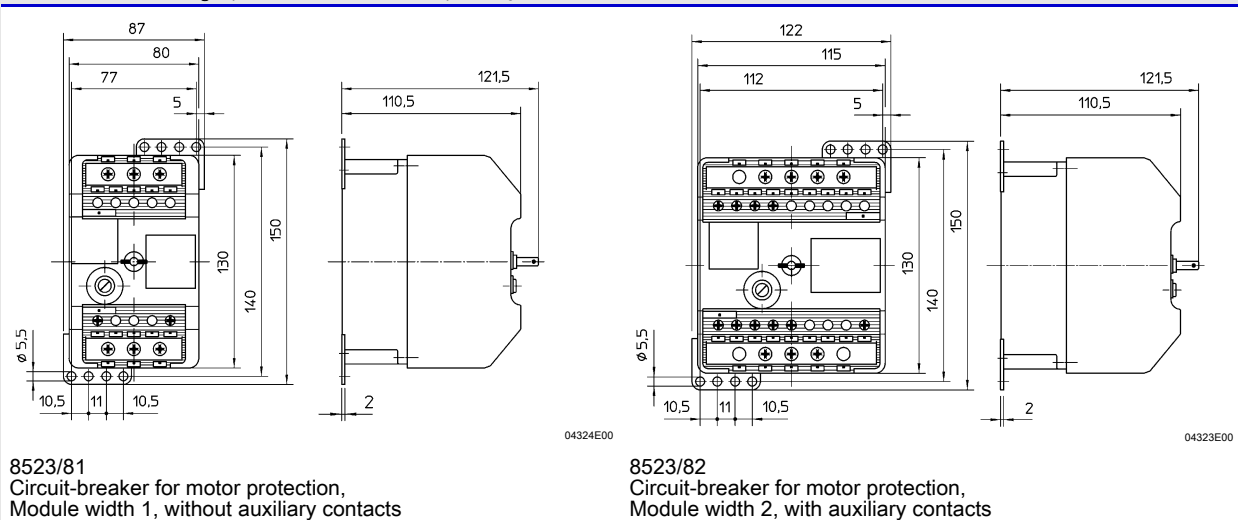
# Circuit-Breakers for Motor Protection

## Series 8523/8

### Accessories and Spare Parts

Designation	Figure	Description	Art. no.	Weight kg
Jumper		for undervoltage trip, length: 300 mm (two jumpers required)	<b>147121</b>	0.019

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



We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.