

Siemens Limited

Ho Chi Minh City

Deutsches Haus, 7th Floor
33 Le Duan Street, District 1
Ho Chi Minh City, Vietnam
Tel.: + 84 (28) 3825 1900
Fax: + 84 (28) 3825 1580

Hanoi

Ocean Park Building, 9th Floor
1 Dao Duy Anh Street,
Dong Da District, Hanoi, Vietnam
Tel.: + 84 (24) 3577 6688
Fax: + 84 (24) 3577 6699

Call our Toll Free Hotline 24 hours a day

Tel.: 1800-588820

info.vn@siemens.com

www.siemens.com.vn

www.facebook.com/Siemens.Vietnam

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Có thể thay đổi và sai sót. Thông tin đưa ra trong tài liệu này chỉ chứa thông tin mô tả chung và/hoặc các tính năng thực thi mà có thể không phải lúc nào cũng phản ánh cụ thể những gì được mô tả, hoặc có thể trải qua sửa đổi trong khóa trình phát triển hơn nữa của các sản phẩm. Các tính năng thực thi được yêu cầu chỉ ràng buộc khi chúng được thỏa thuận rõ ràng trong hợp đồng đã giao kết.





Catalog
SINOVA

Edition
2023

SINOVA

Low-Voltage Electrical Products

Simply Efficient

SIEMENS

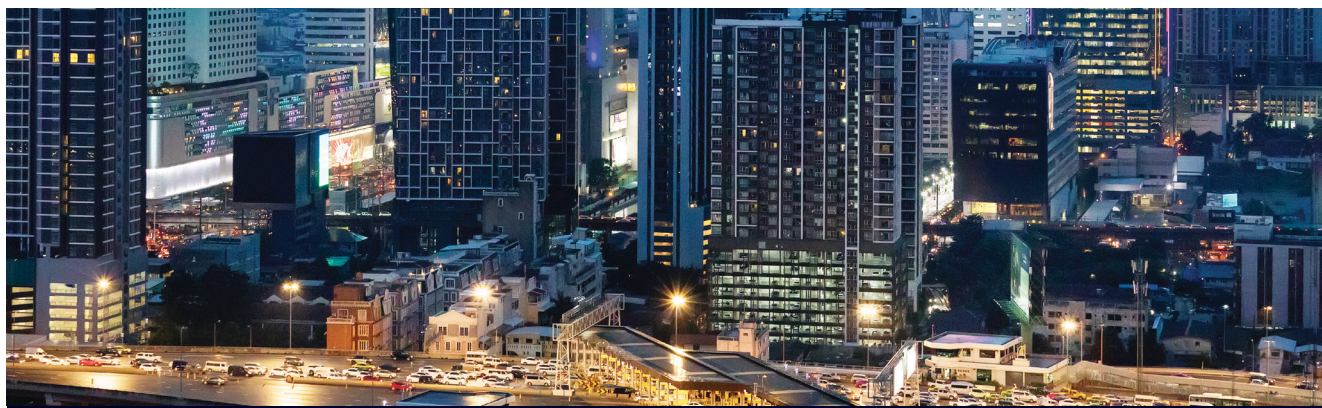


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Part 1

SINOVA

Low Voltage Power Distribution

SINOVA 3WJ

Air Circuit Breakers

Efficient. Adaptable. Reliable



Key Features



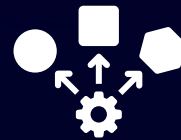
Adaptable

Common footprints for simple and quick integration.



Comprehensive

Available up to 4000A to cater to all your standard application needs.



Customizable

Complete flexibility for users to choose the right features ensuring cost-efficient performance.

Designed to address the pressing needs of all stakeholders in the project value chain

Power distribution is going through a paradigm shift as cost-efficiency is of paramount importance in today's building and industrial projects.

The fast pace of changing application requirements continues to escalate daily. This requires products and solutions that cater to the specific needs of each stakeholder in the value chain, starting from the project inception phase through to the operation and maintenance phase of projects.



Consultant

Cost-efficient solutions, delivered with shorter lead times are the top priority of consultants today.

Our range of SINOVA 3WJ Air Circuit Breakers provides cost-efficiency by offering consultants the flexibility of configuring each product to meet specific application needs.



Panel Builders

SINOVA 3WJ is a comprehensive range of air circuit breakers that caters to all standard applications up to 4000A. Designed with common footprints to existing air circuit breaker portfolios enabling simple and quick adaptation.

These features allow panel builders to deliver cost-efficient solutions to customers with short-lead times.



Contractors (EPC)

The demand for more cost-efficient, safe and adaptable solutions is ever increasing for contractors in the installations and commissioning phase of projects.

The pre-readiness to installation at the commissioning phase is a crucial time for contractors to ensure cost optimization and manage risk.

The SINOVA 3WJ Air Circuit Breakers allows time saving during installation and enables faster commissioning with:

- The availability of how-to videos and a comprehensive CAx library.
- Common footprints and complete flexibility in product selection.



End User

Designed for today's power requirements of safety, reliability and cost-efficiency that are of paramount importance for facility teams, the SINOVA 3WJ Air Circuit Breakers adheres to the latest international standards (IEC 604947-2). The common footprint feature helps to reduce OPEX by minimizing inventory and allowing for easy periodic upgrades with the availability of a wide range of accessories.

Safe

Ensuring the safety of people and plants



Plant safety

Precise protection for installations preventing from developing ground faults.
Less thermal stresses on busbar and cables.



People safety

Closer protection for installations preventing ground faults.

Plant Safety

The ground fault current is depending on the Line to Neutral Voltage and fault loop impedance. Absolute settings are required so the G settings can be adjusted to the value closest to the calculated values in respective applications.

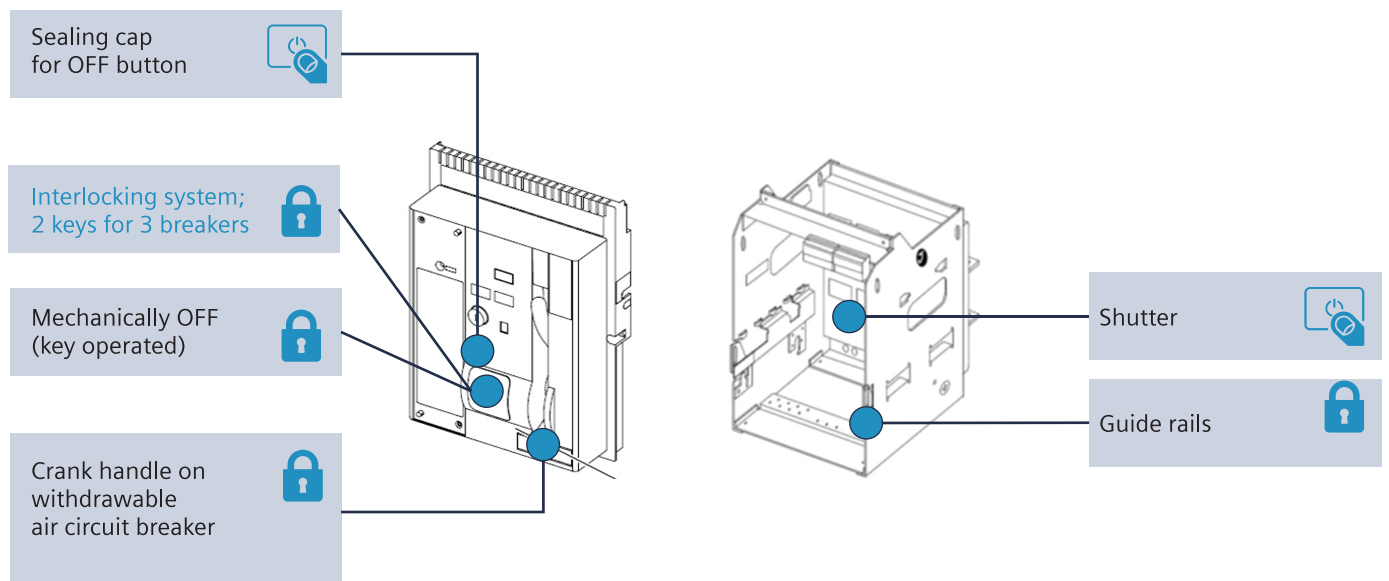
To solve this, the SINOVA 3WJ Air Circuit Breakers were designed to have settings that are available in absolute values.



People Safety



Multiple standard features and optional features for safe operation



Efficient

Increased plant efficiency with reduced down time



Mechanical Contact Erosion Indicator

Plant operators are able to easily check the health of the air circuit breakers via the contact erosion indicators at periodic intervals enabling plant maintenance to be scheduled in advance.

This reduces the frequency of unplanned shutdowns and increases operation efficiency.

Unique Ready To Close Indicator



Facilitates start-up







Safe switching on



Faster fault analysis

Product Range

	Rated currents In max (A)	Short Circuit breaking capacity I_{cu} / I_{cs} I_{cw} for 1s (kA)
 <p>Frame size II</p>	<ul style="list-style-type: none"> 4000A 3200A 2500A 2000A 	 <p>55 (55)</p>
 <p>Frame size I</p>	<ul style="list-style-type: none"> 1600A 1250A 1000A 800A 	 <p>50 (50)</p>

- ✓ 2 frame sizes
- ✓ 800A to 4000A
- ✓ Breaking capacity up to 55kA
- ✓ Suitable for Up to 440V AC
- ✓ 3-pole and 4-pole
- ✓ Fixed-mounted and withdrawable design
- ✓ Withdrawable version in various termination options e.g., H-H (as standard) / H-V / V-V / V-H

ETU variants to suit all standard applications

Type	ETU350WJ	ETU360WJ
Protective functions	L-S-I	L-S-I-N-G
LCD Display	✓	✓
Neutral conductor protection	-	✓
LEDs for fault annunciation	✓	✓
Overload (L)	✓	✓
Short time Delayed Short Circuit (S)	✓	✓
Instantaneous Short Circuit (I)	✓	✓
Ground Fault (G)	-	✓

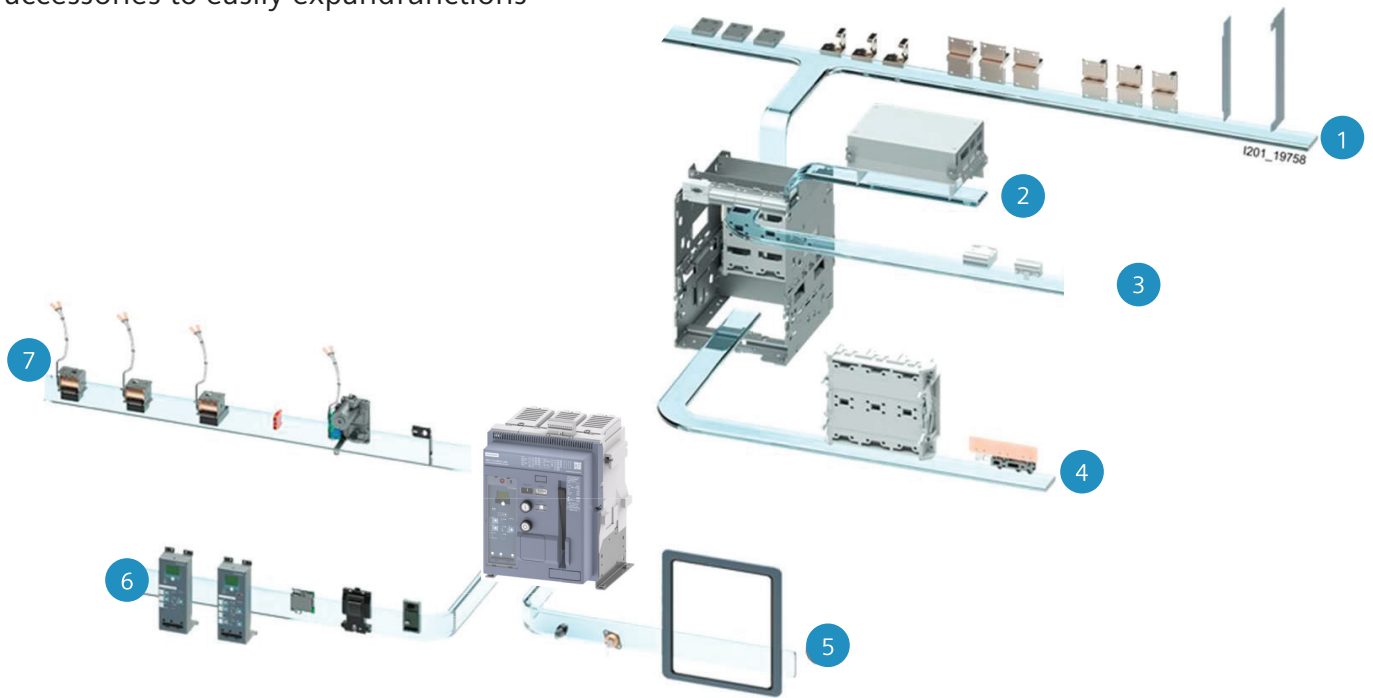
Technical specifications



Type		3WJ11				3WJ12				
Frame Size		I				II				
Basic data according to IEC 60947-2, Non-Automatic according to IEC60947-2 CBI-Y										
Rated Current In at 40°C, at 50/60 Hz										
- Main conductor	A	800	1000	1250	1600	2000	2500	3200	4000	
- Neutral conductor (only 4P)	A	100%				100%				
Type of mounting		Fixedmounted/Withdrawable				Fixedmounted/Withdrawable				
Number of poles		3/4-pole				3/4-pole				
Utilization category		B				B				
Breaking capacity										
Rated short-circuit breaking capacity (rms value)										
Icu Ics at Ue up to 440 V AC	kA	50 50				55 55				
Rated short-circuit making capacity Icm (peak value)										
Icm at Ue up to 440 V AC	kA	105				121				
Rated short-time withstand current Icw at 50/60 Hz										
Icw at Ue up to 440 V AC	kA/1s	50				55				
Voltage										
Rated operating voltage Ue at 50/60 Hz	V AC	440				440				
Rated impulse										
- Main circuits Auxiliary circuits	kV	8				8				
- Auxiliary circuits	kV	4				4				
Power loss at In										
with 3-phase symmetric load										
- Fixed-mounted	W	60	90	122	170	216	338	420	750	
- Withdrawable including Guide-frame	W	130	205	255	392	493	563	760	960	
Service life/endurance (operating cycles)										
Endurance										
- Mechanical	Operating cycle	12000				10000				
- Electrical up to 440V AC	Operating cycle	8000				4000				
Operating Frequency (Mechanical)	1/h	60				60				
Ambient conditions										
Operation	°C	-20...+70				-20...+70				
Storage	°C	-40...+80				-40...+80				
Connection										
Main conductor minimum cross-section	Copper bars, bare	Qty	1x	2x	2x	2x	2x	2x	3x	4x
		mm2	60 x 10	40 x 10	60 x 10	60 x 10	100 x 10	100 x 10	100 x 10	120 x 10
Auxiliary conductors (Cu) max no of aux conductors x cross-section	solid and finely stranded with end sleeves	Qty	1x	2x	2x	2x	2x	2x	3x	4x
		mm2	50 x 10	60 x 10	40 x 10	50 x 10	80 x 10	100 x 10	100 x 10	100 x 10
			1 x 0.5 ... 2.5mm ² ; 1 x AWG14 2 x 1.0 mm ²				1 x 0.5 ... 2.5mm ² ; 1 x AWG14 2 x 1.0 mm ²			

Accessories

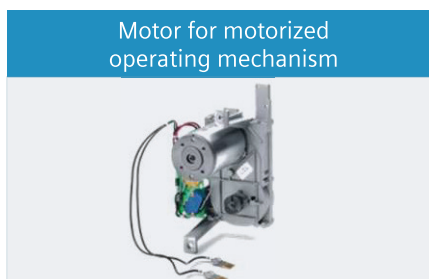
Extensive, consistent and modular accessories to easily expand functions



- 1 Main connection, phase barrier
- 2 Arc chute cover
- 3 Auxiliary conductor plug-in system
- 4 Guide frame, shutter, position indicator switch
- 5 Door sealing frame, locks
- 6 Electronic trip unit (ETU)
- 7 Closing solenoid, auxiliary trip unit

Customizable

Flexibility to select from a variety of accessories.



Subsequent retrofitting is possible at any time

Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers

				5	6	7	8	9	10	11	12	13	14	15	16	Z
				3WJ1												
Switching device																
Frame size	1			1												
	2			2												
		SZ 1	SZ 2													
Max. rated current $I_{n\ max}$	800A	■	-		0	8										
	1000A	■	-		1	0										
	1250A	■	-		1	2										
	1600A	■	-		1	6										
	2000A	-	■		2	0										
	2500A	-	■		2	5										
	3200A	-	■		3	2										
	4000A	-	■		4	0										
Breaking capacity I_{cu}/I_{cs} (kA), I_{cw} for 1s (kA) at 440V AC	Breaking capacity S	■	-	50/50kA			2									
		-	■	55/55kA			2									
AC Non-automatic circuit breakers		ETU						A	A							
Circuit breakers, Display with Current Metering																
Electronic trip unit		ETU350WJ:LSI						A	E							
		ETU360WJ:LSIG						A	F							
Number of poles	Fixed-mounted						3-pole			0						
							4-pole			1						
	Withdrawable	Without position signaling switch and without shutter					3-pole			3						
							4-pole			4						
		Without position signaling switch and with shutter					3-pole			5						
							4-pole			6						
Connection		SZ 1	SZ 2													
Type of mounting	Fixed-mounted	■	■	Vertical						1						
		■	■	Horizontal ⁽¹⁾						2						
		■	■	Vertical on top / horizontal at the bottom ⁽¹⁾						5						
		■	■	Horizontal on top / vertical at the bottom ⁽¹⁾						6						
	Withdrawable	■	■	Without guide frame						0						
		■	■	Vertical						1						
		■	■	Horizontal						2						
		■	■	Vertical on top / horizontal at the bottom						5						
		■	■	Horizontal on top / vertical at the bottom						6						
Spring charging motor (M), Auxiliary switches (AUX)																
without Spring charging motor and without auxiliary switches																0
without Spring charging motor but with auxiliary switches 2 NO, 2 NC								S1, S2,								1
Auxiliary switches 2 NO, 2 NC and Spring charging motor								S1, S2,								-
Spring charging motor				24VDC												2
Spring charging motor				110-127 VAC / 110-125 VDC												3
Spring charging motor				220-240 VAC / 220-250 VDC												4
Auxiliary switches 4 NO, 4 NC and Spring charging motor								S5, S6								5
Spring charging motor				24VDC												5
Spring charging motor				110-127 VAC / 110-125 VDC												6
Spring charging motor				220-240 VAC / 220-250 VDC												7

Note: 4000A is available for fixed-mounted vertical⁽¹⁾ and withdrawal vertical⁽¹⁾

Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers

3WJ1				14	15	16	Z
Closing coil							
without closing coil				A			
Closing coil (CC)							
Closing coil				B			
Closing coil				C			
Closing coil				D			
1st Auxiliary release							
without 1st Auxiliary release				A			
Shunt trip (ST)							
Shunt trip				B			
Shunt trip				C			
Shunt trip				D			
Undervoltage release (UVR), instantaneous (≤ 80 ms), short-delay (≤ 200 ms)							
UVR				E			
UVR				F			
UVR				G			
UVR				H			
Undervoltage release (UVR-t), can be delayed between 0.2 s and 3.2 s							
UVR-t				J			
UVR-t				K			
UVR-t				L			
2nd Auxiliary release							
without 2nd Auxiliary release						0	
Shunt trip (ST), suitable for continuous duty							
Shunt trip						1	
Shunt trip						3	
Shunt trip						4	
Z options							
Door Sealing Frame (IP41)							T40
Trip Unit Cover							F40
Position Signal Switch (1x connected, 1x test, 1x disconnected)							R15
Position Signal Switch (3x connected, 2x test, 1x disconnected)							R16
Neutral CT for 4th Pole							F23
Mutual Mechanical Interlock - Bowden for fixed breakers with 2m bowden cable							S55
Mutual Mechanical Interlock - Bowden for drawout breakers with 2m bowden cable							R55
Locking systems - Castell							S05
Door interlock - To prevent opening of the control cabinet door in ON position							S30
Door interlock - To prevent opening of the control cabinet door in Connected position							R30
5 digit operating counter							C01
Ready to Close							C22
Trip Signal Switch							K07
Special packaging							P61

Note: 4000A is available for fixed-mounted vertical⁽¹⁾ and withdrawal vertical⁽¹⁾

SINOVA 3VJ Molded Case Circuit Breakers

Simply Efficient

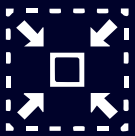
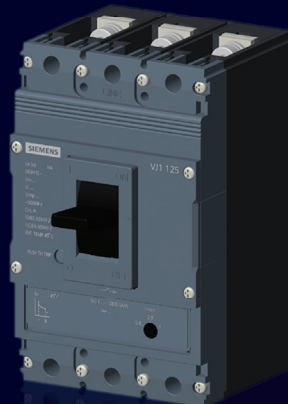
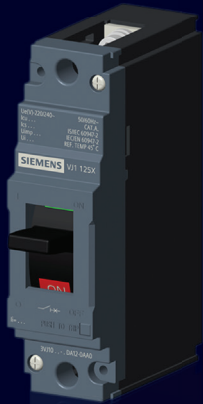


Overview

SINOVA 3VJ Molded Case Circuit Breakers with Thermal Magnetic Trip units offer the perfect solution for infrastructure, buildings, utilities and industrial applications. The SINOVA 3VJ MCCBs are the first choice for cost-efficient power distribution. It ensures reliable protection of installations with functional features that maximizes benefits for users.



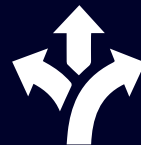
Key Features



Compact
These MCCBs save space in enclosures and switchboards, reducing the overall size of the module.



Reliable & safe
These MCCBs are designed to adhere to Siemens quality standards for optimal performance and are 100% rated neutral to operate safely in demanding applications.



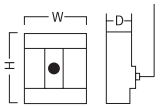
Flexible
The range comes with a wide range of accessories, common footprints from 10kA to 55kA breaking capacities and interchangeable neutral pole positioning.



Efficient
User-friendly features that provide a cost-efficient solution for your power distribution requirements.

Technical specifications

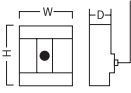


		3VJ10			3VJ11		
Electrical characteristics according to IEC 60947-2							
Number of poles		1/2/3/4-pole			2/3/4-pole		
Frame Size	A	125 X			125		
Rated operational current I_n	A	20 ... 125			25 ... 125		
at 45°C ambient temperature							
Rated operational voltage U_e 50/60 Hz AC	V	1 pole: 240 2,3,4 poles: 415			415		
Insulation voltage	V	800			1000		
Impulse voltage	kV	6			8		
Suitable for Isolation		Yes			Yes		
Utilization category, according to IEC60947-2		A			A		
Short-circuit breaking capacities I_{cu} or I_{cs}							
RMS value, according to IEC60947-2							
I_{cu} @ AC 415 V-50/60 Hz	kA	10	18	25	25	36	55
I_{cs} @ AC 415 V-50/60 Hz	kA	100% of I_{cu}	75% of I_{cu}		75% of I_{cu}		
Trip Units							
Fixed Thermal Fixed Magnetic	FTFM	■	■	■	■	■	■
Adjustable Thermal Fixed Magnetic	ATFM	■	■	■	■	■	■
Neutral Protection in 4P MCCB		100%			100%		
Service life/endurance (operating cycles)							
Mechanical		15000			15000		
Electrical 415V AC		5000			5000		
Connection Technology							
Standard Connection Technology		Screw Terminal			Screw Terminal		
Connection Technology							
Width	 mm	35 (1p)	80 (2p/3p) / 103.5(4p)		92 (2p/3p) / 122(4p)		
Depth	mm	62	62		81		
Height	mm	118	126		150		

■ Available – Not available/not present

Technical specifications



		3VJ12			3VJ13			3VJ14		
Electrical characteristics according to IEC 60947-2										
Number of poles		2/3/4-pole			3/4-pole			3/4-pole		
Frame Size	A	250			400			630		
Rated operational current I_n	A	160 ... 250			320 ... 400			500 ... 630		
at 45°C ambient temperature										
Rated operational voltage U_e 50/60 Hz AC	V	415			415			415		
Insulation voltage	V	1000			1000			1000		
Impulse voltage	kV	8			8			8		
Suitable for Isolation		Yes			Yes			Yes		
Utilization category, according to IEC60947-2		A			A			A		
Short-circuit breaking capacities I_{cu} or I_{cs}										
RMS value, according to IEC60947-2										
I_{cu} @ AC 415 V-50/60 Hz	kA	18	25	36	55	25	36	55	36	55
I_{cu} @ AC 415 V-50/60 Hz	kA	75% of I_{cu}			75% of I_{cu}			75% of I_{cu}		
Trip Units										
Fixed Thermal Fixed Magnetic	FTFM	■	■	■	■	■	■	■	■	■
Adjustable Thermal Fixed Magnetic	ATFM	■	■	■	■	■	■	■	■	■
Neutral Protection in 4P MCCB		100%			100%			100%		
Service life/endurance (operating cycles)										
Mechanical		15000			15000			10000		
Electrical 415V AC		5000			5000			4500		
Connection Technology										
Standard Connection Technology		Screw Terminal			Screw Terminal			Screw Terminal		
Connection Technology										
Width	 mm	107.5 (2p/3p) / 142.5 (4p)			150 (3p) / 198 (4p)			150 (3p) / 198 (4p)		
Depth	mm	81			104			104		
Height	mm	166			260			260		

■ Available – Not available/not present

Certifications

- EN 60947-2
- IEC 60947-2
- Pollution Degree III
- RoHS Compliant
- IEC certification by independent laboratories

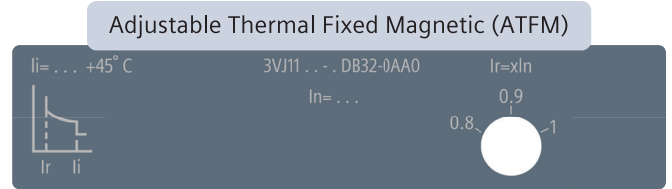
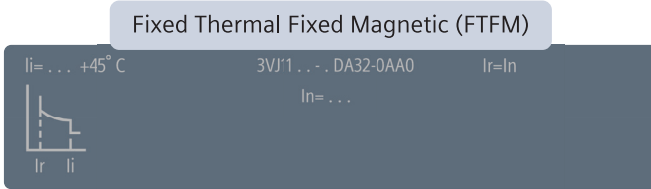
Thermal Magnetic Trip Unit

The SINOVA 3VJ MCCBs offer flexible Neutral configuration (N-RYB or RYB-N) and all 4-poles are 100% rated.



Trip Units	Thermal settings	Magnetic settings *
Fixed Thermal Fixed Magnetic (FTFM)	I_n	$10I_n^*$
Adjustable Thermal Fixed Magnetic (ATFM)	$0.8 - 1I_n$	$10I_n^*$

*For respective magnetic settings please refer to tripping characteristic curves of individual frames.



Accessories

In addition to the basic protection units of SINOVA 3VJ Molded Case Circuit Breakers we also offer accessory components to cater to your specific power distribution requirements.

Internal Accessories

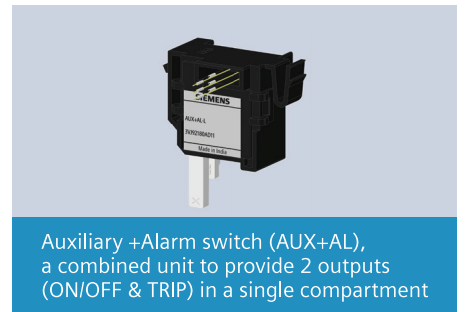
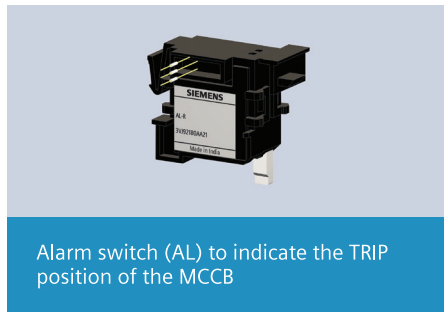
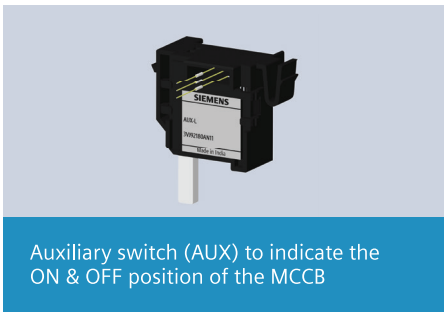
SINOVA 3VJ Molded Case Circuit Breakers offers both auxiliary switches (auxiliary, alarm, auxiliary & alarm) and auxiliary releases (UV & Shunt). All connection cables and wires are marked with a unique color code for easy identification.

Auxiliary Switches

The auxiliary and alarm switches also easily fit into the designated accessories compartments located at the front of the breaker.

The press fit installation of these switches provide a high degree of flexibility in installation.

The different types of Auxiliary switches are



Auxiliary Releases

Auxiliary releases allow remote electrical tripping of the circuit breaker.

Undervoltage Releases

Undervoltage releases trip the molded case circuit breaker in the event that the rated voltage of a monitored circuit drops below a minimum permissible limit or fails.

The undervoltage release can only be fitted into the left side compartment and are available in AC & DC voltages.

Shunt Trip Release

Shunt trips can be used to trip the molded case circuit breaker remotely. It consists of an inbuilt aux contact which cuts off the auxiliary supply to the shunt trip coil once it is tripped.

The shunt trip can only be fitted into the right side compartment and comes with standard length cables for direct connections.

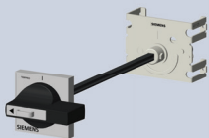
The table below shows the frame sizes of the SINOVA 3VJ Molded Case Circuit Breakers in which the internal accessories can be installed.

Accessories	Frame Sizes				
	3VJ10 125 A	3VJ11 125 A	3VJ12 250 A	3VJ13 400 A	3VJ14 630 A
Auxiliary Switch	✓		✓		✓
Alarm Switch	✓	✓	✓		✓
Auxiliary + Alarm Switch	✓	✓	✓		✓
Shunt Trip Release	✓		✓		✓
Under voltage Release	✗		✓		✓

✗ Not Available | ✓ Available

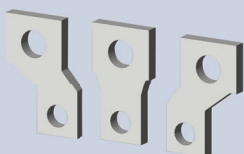
External accessories

We also offer external accessories to meet your standard power distribution application requirements.



Door mounted rotary handle

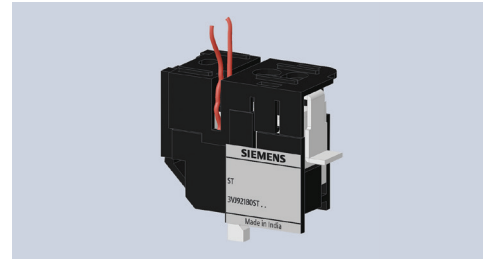
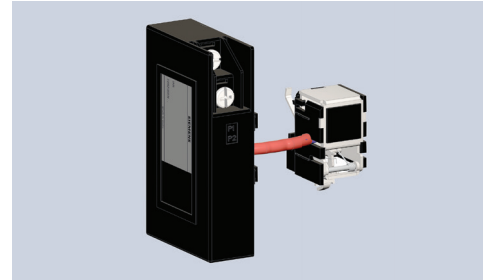
For the circuit breakers which are installed in cubicles or distribution boards, we offer door mounted rotary handles. To ensure safety during operation, this device can be padlocked in **ON** and **OFF** position.

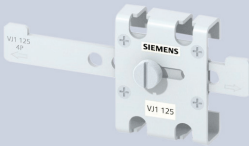


Spreader Terminals

The spreaders allows flexibility and safety in the termination of various busbar or cable connections.

Suitable spreader terminals are available across the range for the SINOVA 3VJ Molded Case Circuit Breakers.





Mechanical Interlocking

The front sliding bar allows interlocking between two molded case circuit breakers of the same size by means of a sliding bar.

With this device, the sliding bar is moved to block the handle of the interlocked molded case circuit breaker which forces the breaker into the OFF position. This then enables the released circuit breaker to be operated on safely.



Padlock device

A padlock device mounted and latched on the handle allows the molded case circuit breaker to be locked in the OFF or the ON position.



SS Enclosure

Enclosures are designed to suit standards application needs of housing the SINOVA 3VJ molded case circuit breaker with ample space for cable termination and in-built Neutral Link for TPN system. Designed for effortless installation and easy wall mounting.



Derating Charts

Temperature derations

3VJ1 molded case circuit breakers are used at ambient temperatures from -10 °C to +60 °C.

Derating (reduction in rated operational current) is required at temperatures above +50 °C. Refer to the table below for the correction factors for determining the key values:

Ambient Temperature	3VJ10	3VJ11	3VJ12	3VJ13	3VJ14
50°C	100%	100%	100%	100%	100%
55°C	97.2%	97.2%	98.0%	97.8%	97.4%
60°C	94.4%	94.4%	95.8%	95.6%	95.0%

Altitude derations

When 3VJ1 molded case circuit breakers are used at up to 2000 m above main sea level, the rated current will not change, however installation altitude above 2000 m can lead to higher temperatures at the switching devices. The lower density of air can significantly reduce heat dissipation, making it necessary to decrease rated current and short circuit breaking capacities.

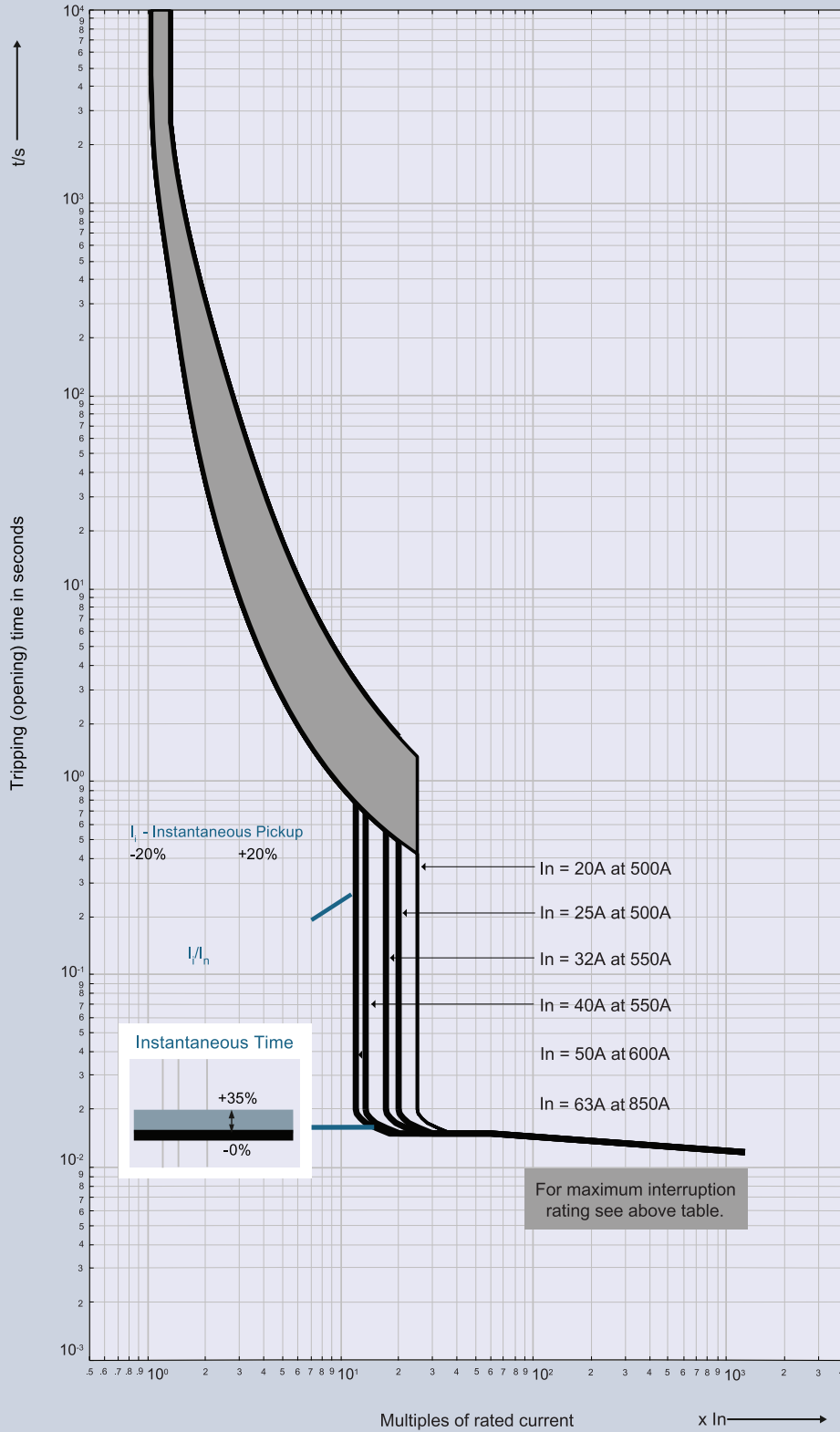
Refer to the table below for the correction factors for determining the key values:

Elevation (m)	2000	3000	4000	5000
Power Frequency withstand voltage (V)	3000	2500	2000	1800
Correction factor for Current	1	0.94	0.88	0.83
Correction factor for Icu/Ics	1	0.83	0.71	0.63



Tripping Characteristics

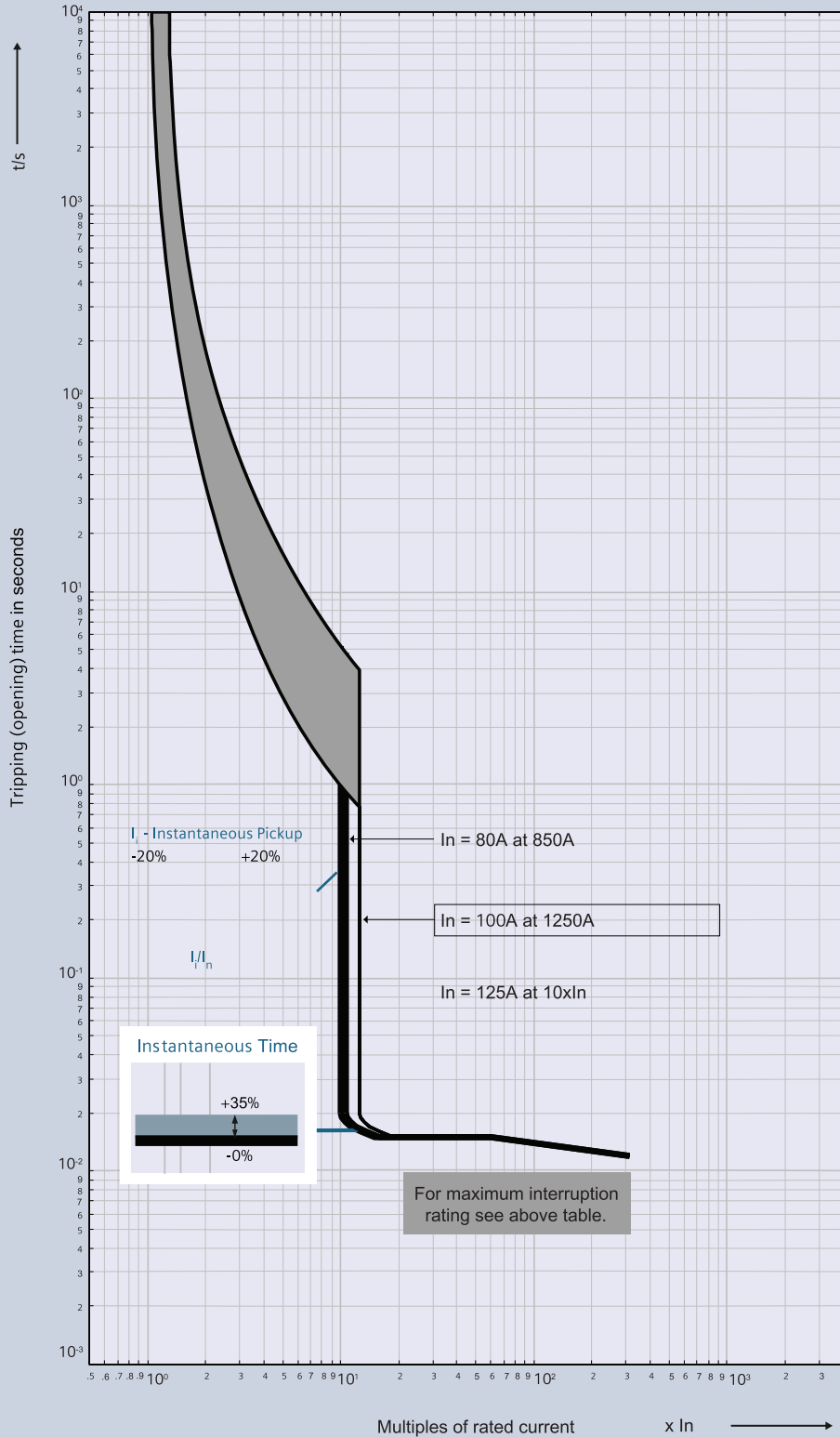
3VJ10 20A-63A FTFM trip unit



Note: 3VJ10 tripping characteristics shown above are applicable for 3VJ10 2P/3P/4P MCCBs only

Tripping Characteristics

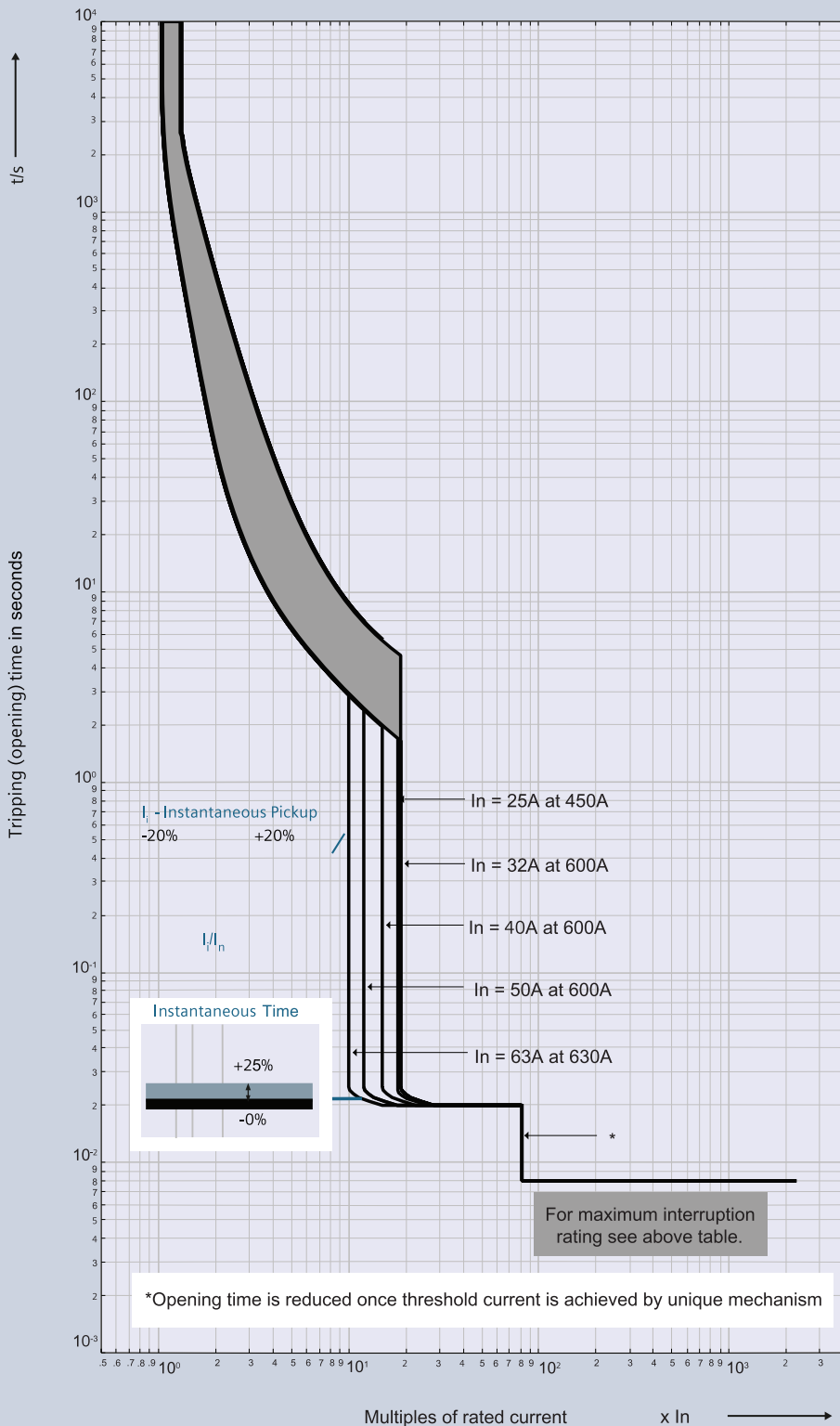
3VJ10 80A-125A FTM trip unit



Note: 3VJ10 tripping characteristics shown above are applicable for 3VJ10 2P/3P/4P MCCBs only

Tripping Characteristics

3VJ11 25A-63A FTFM trip unit



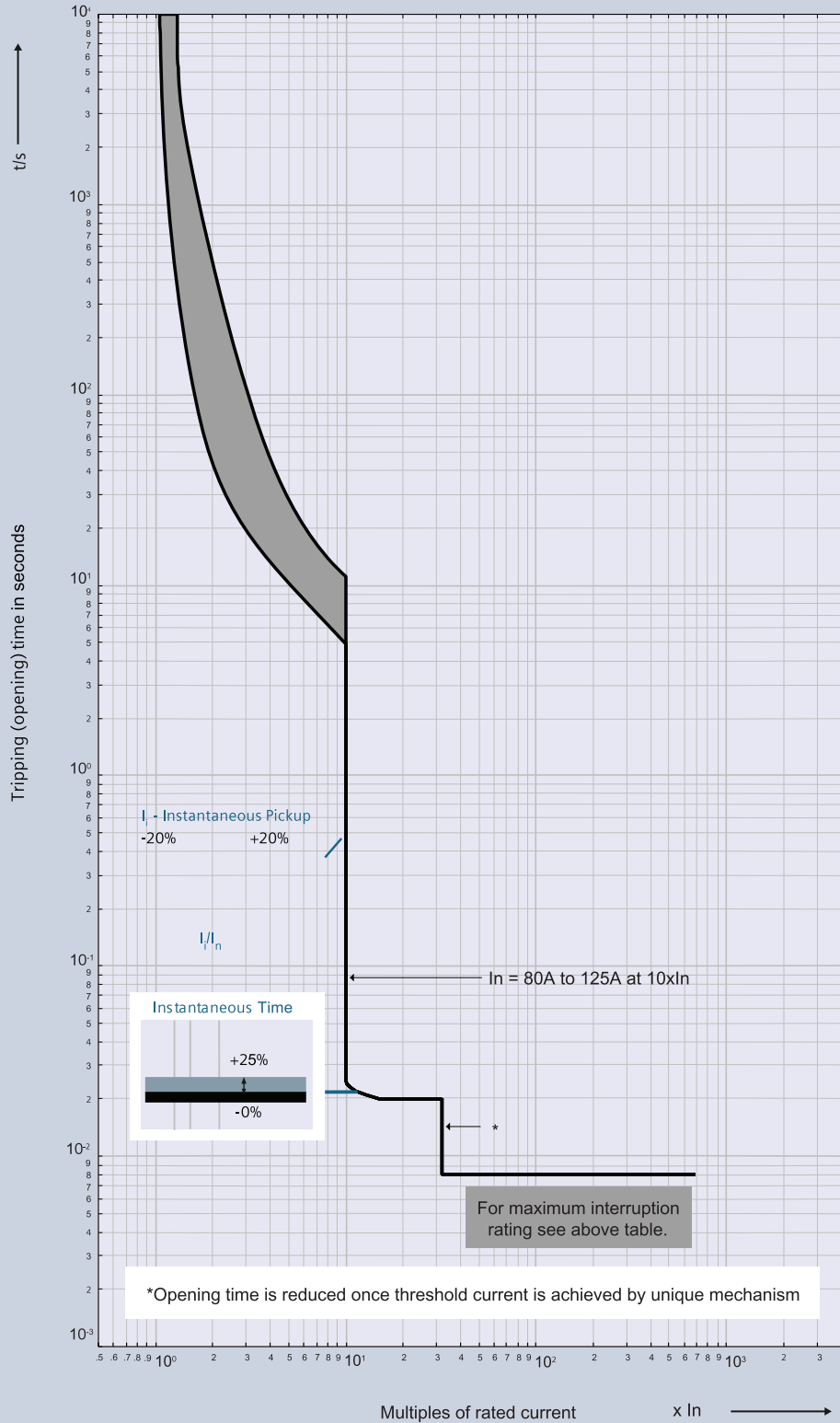
Note: 3VJ110 tripping characteristics shown above are applicable for 3VJ110 2P/3P/4P MCCBs only

*Opening time is reduced once threshold current is achieved by unique mechanism

For maximum interruption rating see above table.

Tripping Characteristics

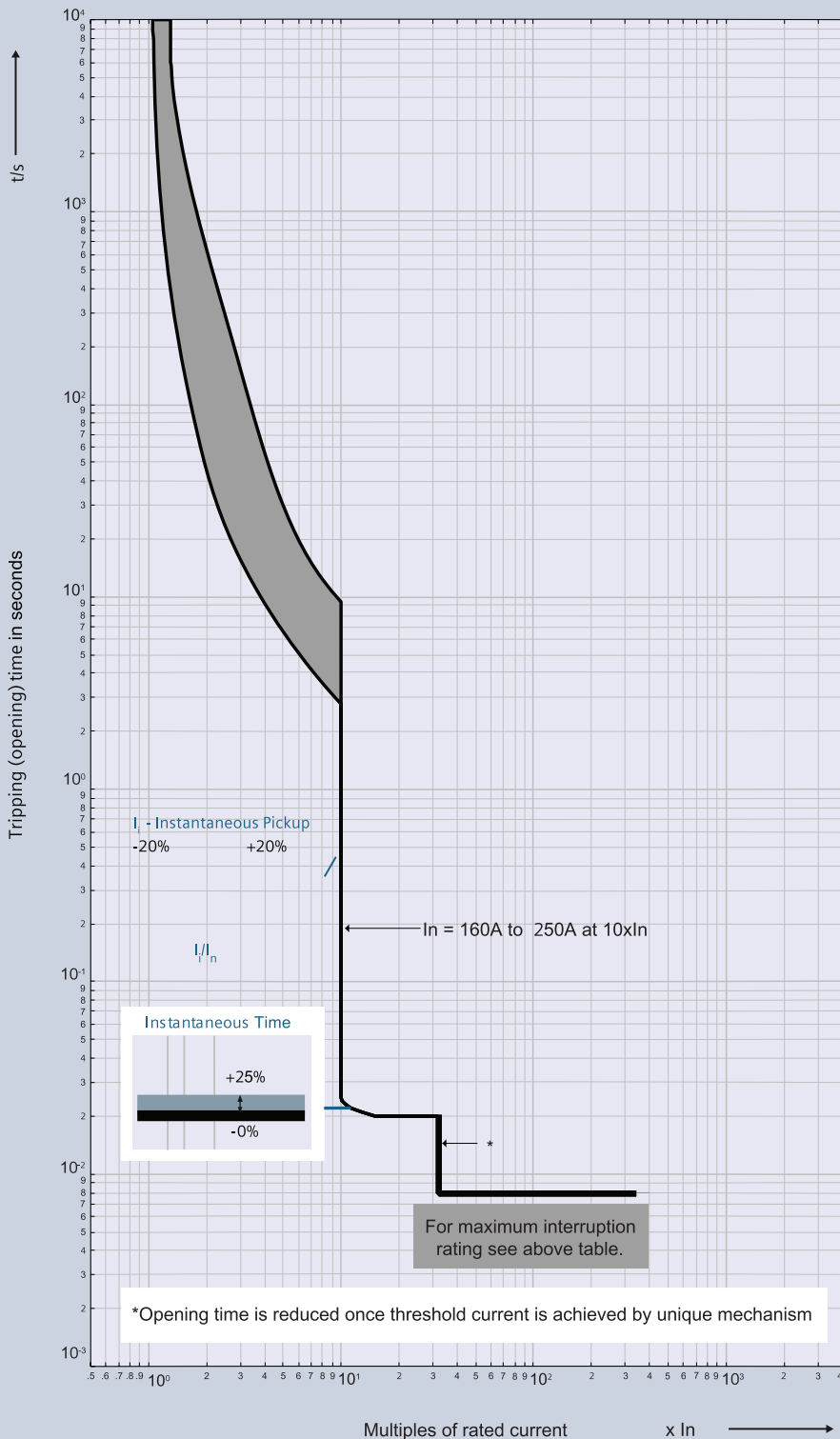
3VJ11 80A-125A FTM trip unit



Note: 3VJ10 tripping characteristics shown above are applicable for 3VJ10 2P/3P/4P MCCBs only

Tripping Characteristics

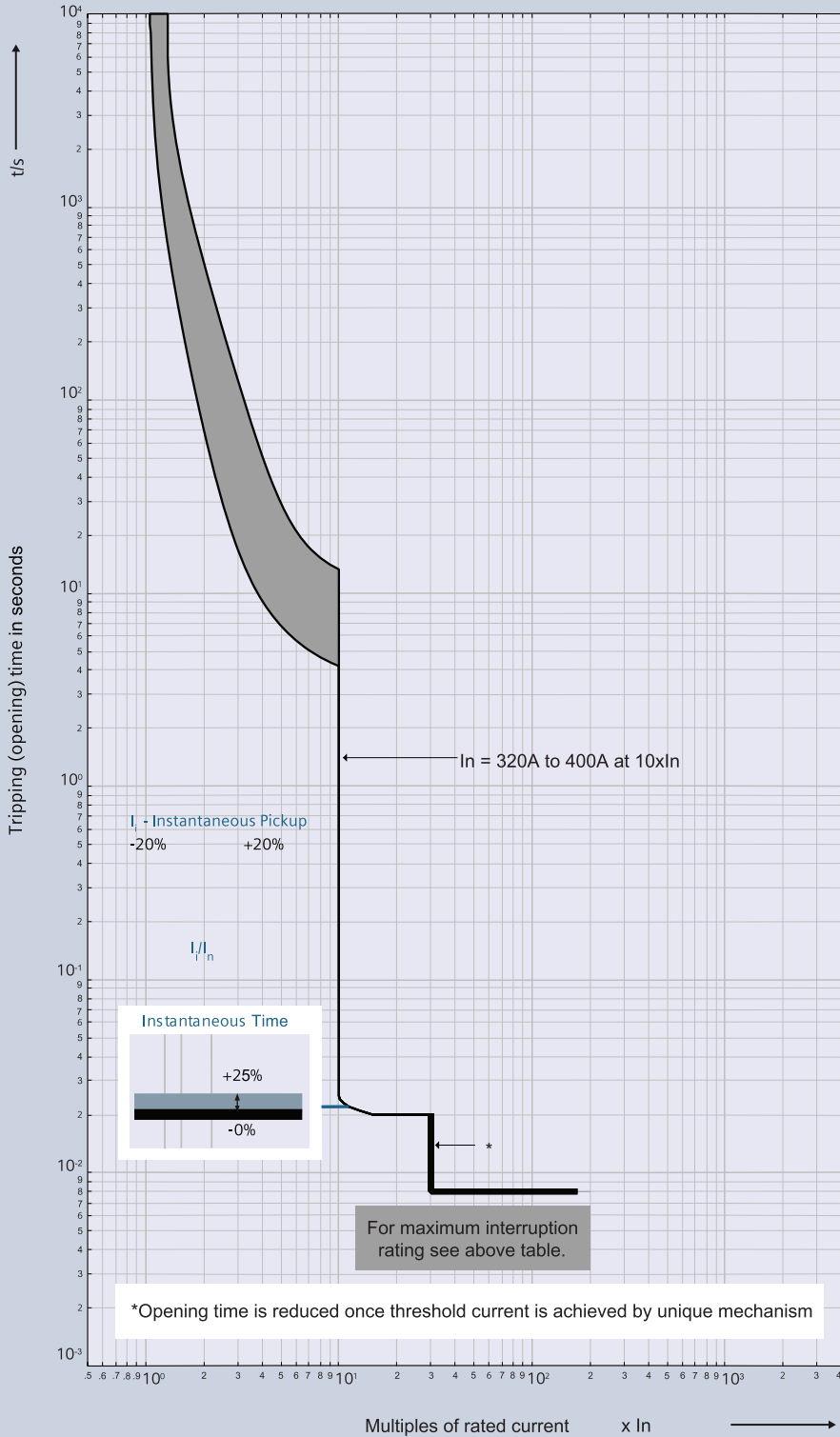
3VJ12 160A-250A FTM trip unit



Note: 3VJ10 tripping characteristics shown above are applicable for 3VJ10 2P/3P/4P MCCBs only

Tripping Characteristics

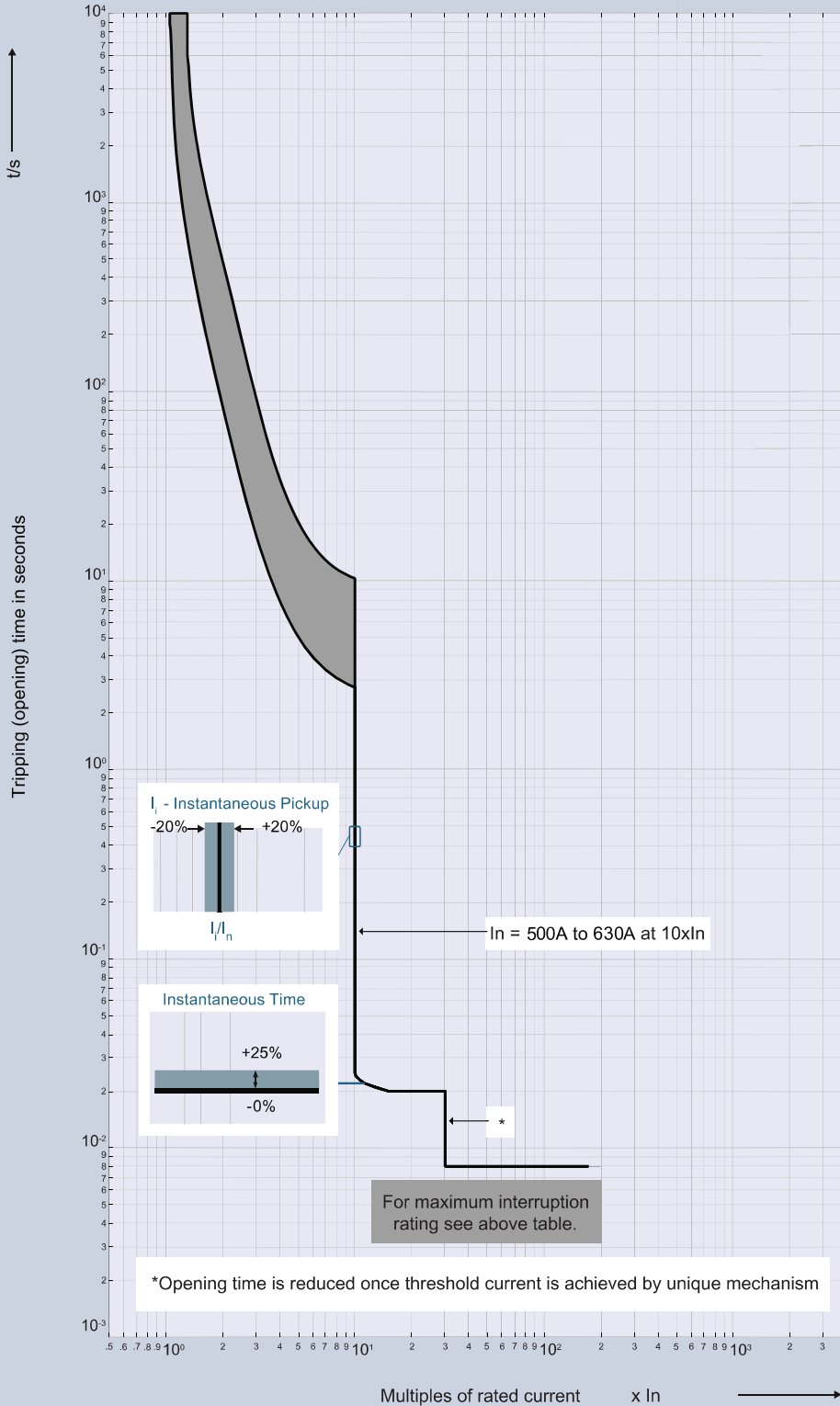
3VJ13 320A-400A FTM trip unit



Note: 3VJ10 tripping characteristics shown above are applicable for 3VJ10 2P/3P/4P MCCBs only

Tripping Characteristics

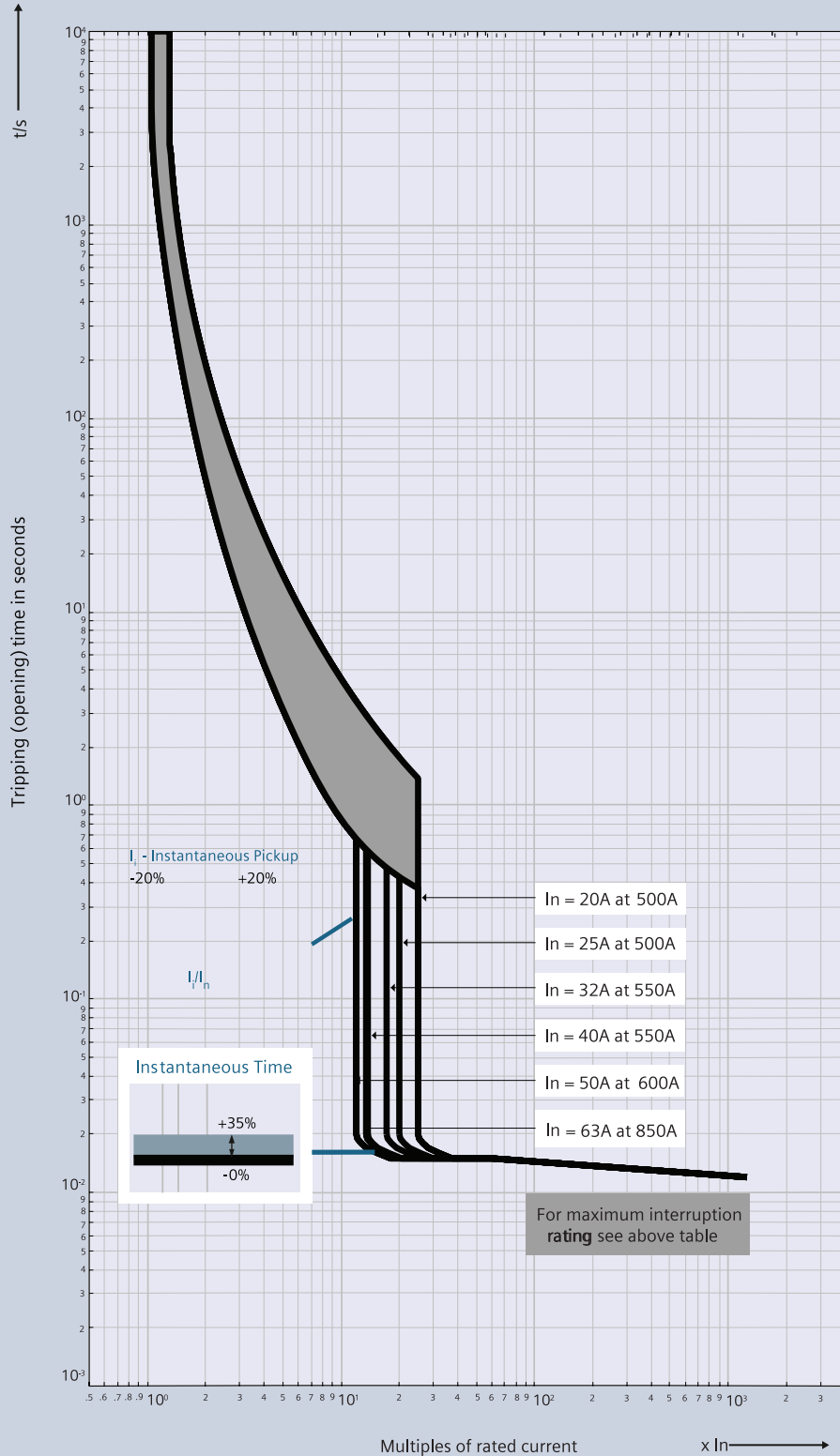
3VJ14 500A-630A FTM trip unit



Note: 3VJ10 tripping characteristics shown above are applicable for 3VJ10 2P/3P/4P MCCBs only

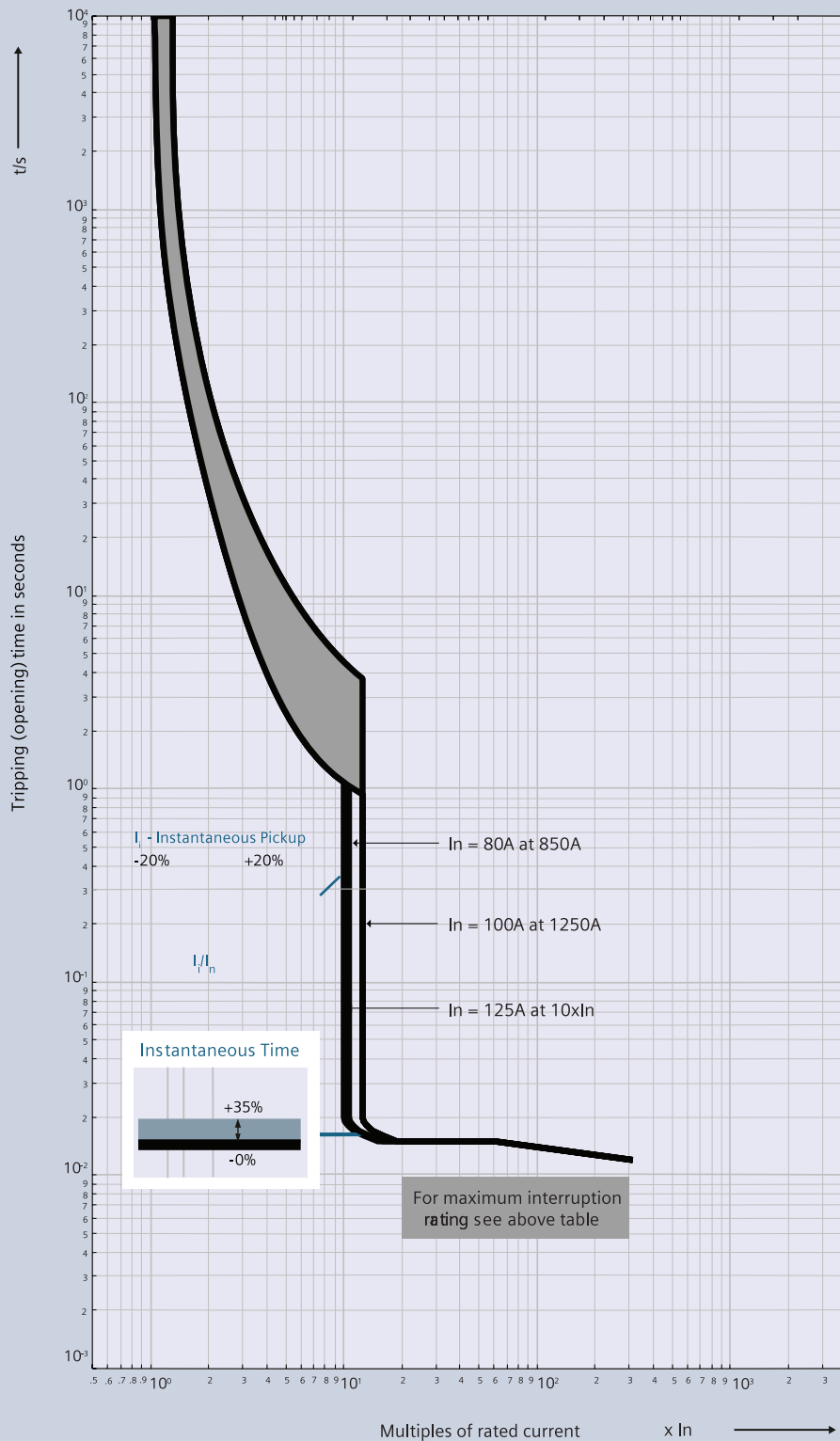
Tripping Characteristics

3VJ10 20A-63A ATFM trip unit



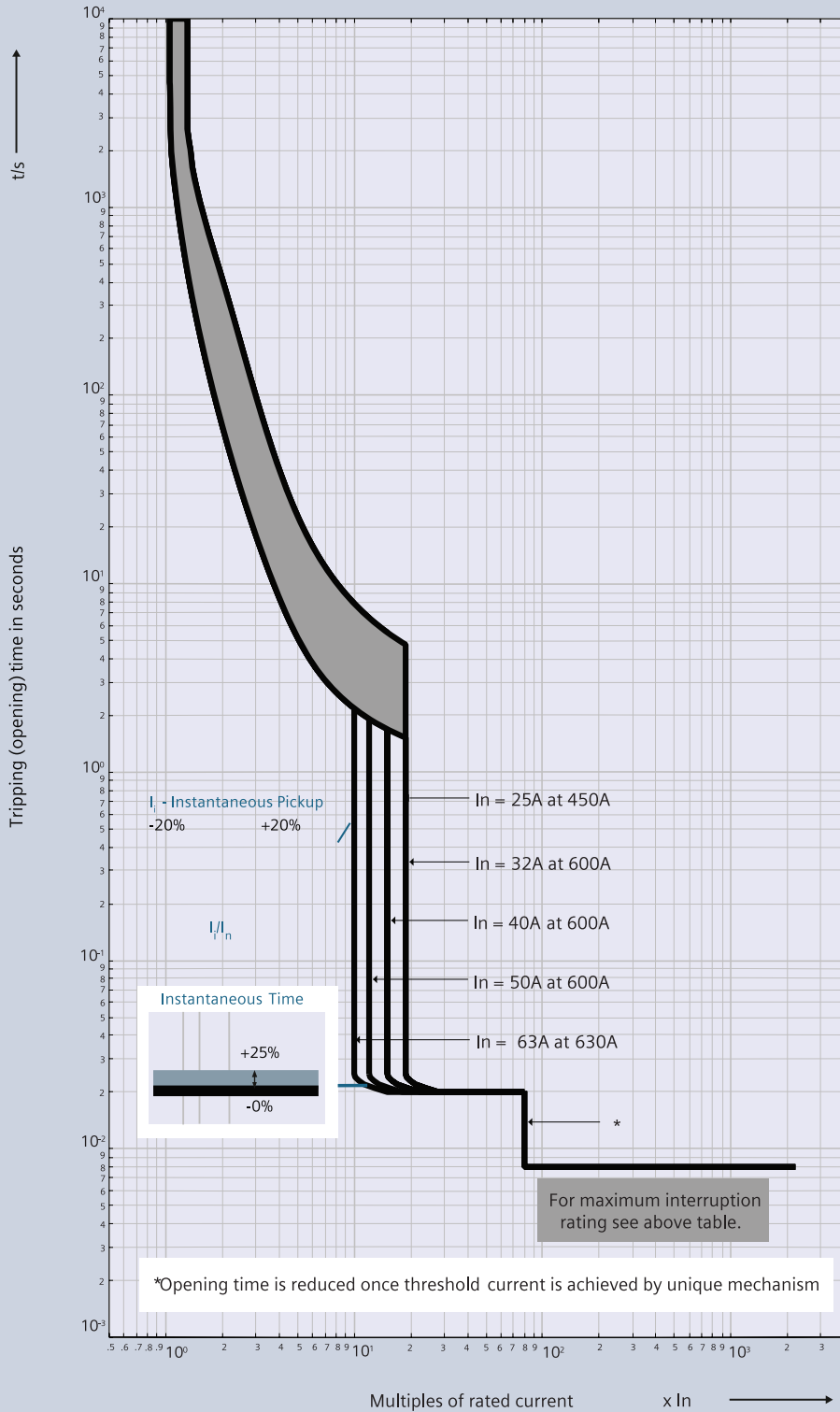
Tripping Characteristics

3VJ10 80A-125A ATFM trip unit



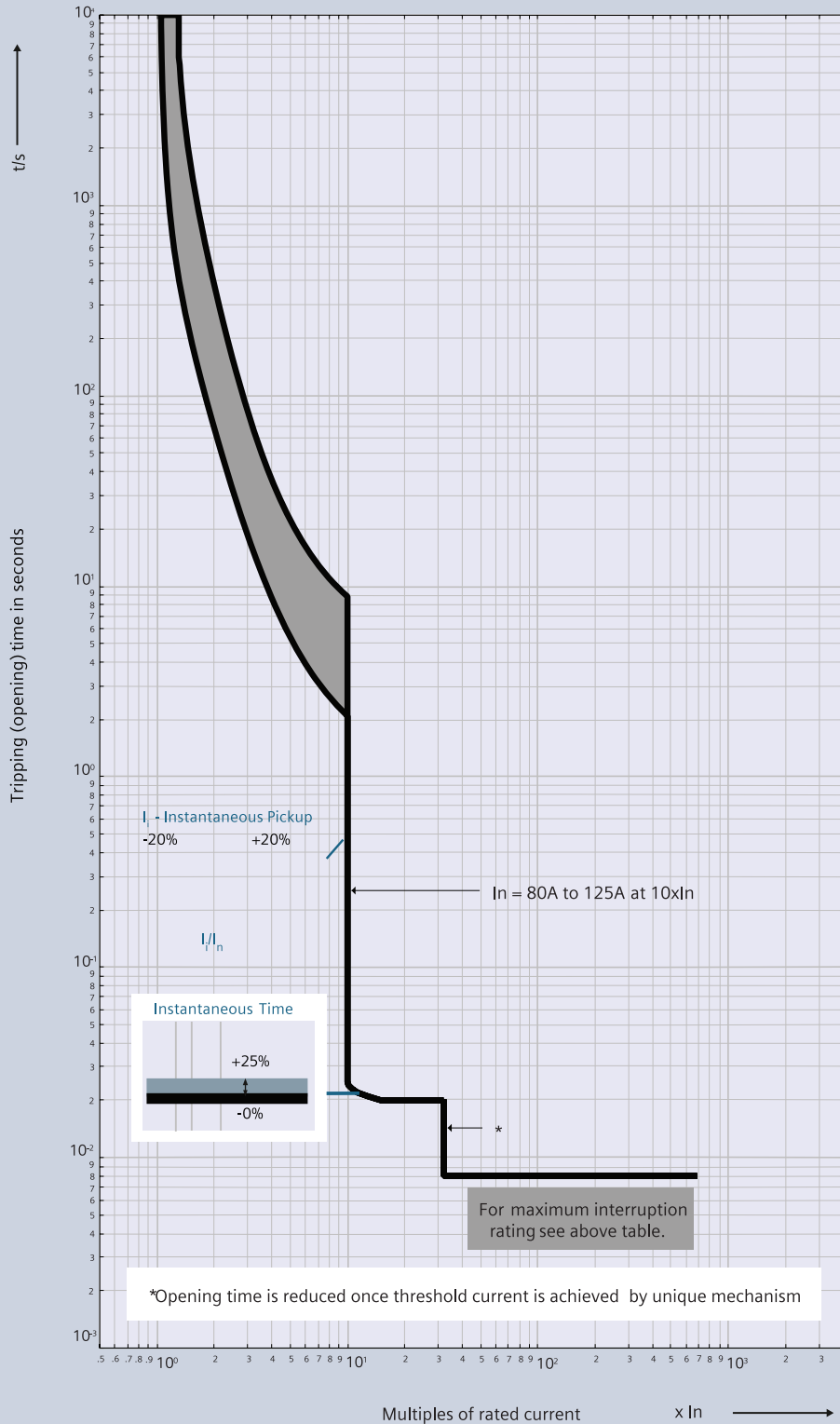
Tripping Characteristics

3VJ11 25A-63A ATFM trip unit



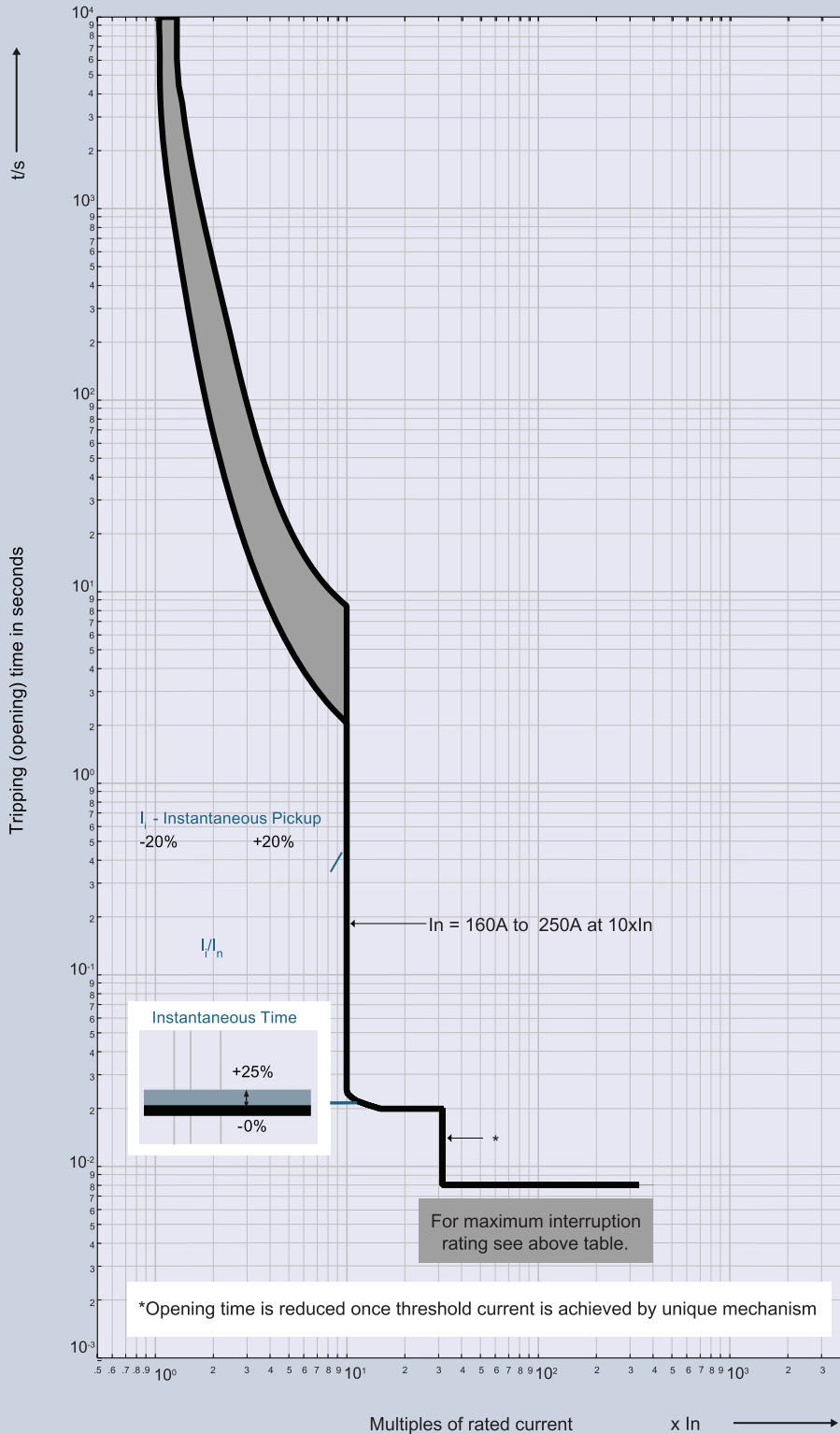
Tripping Characteristics

3VJ11 80A-125A ATFM trip unit



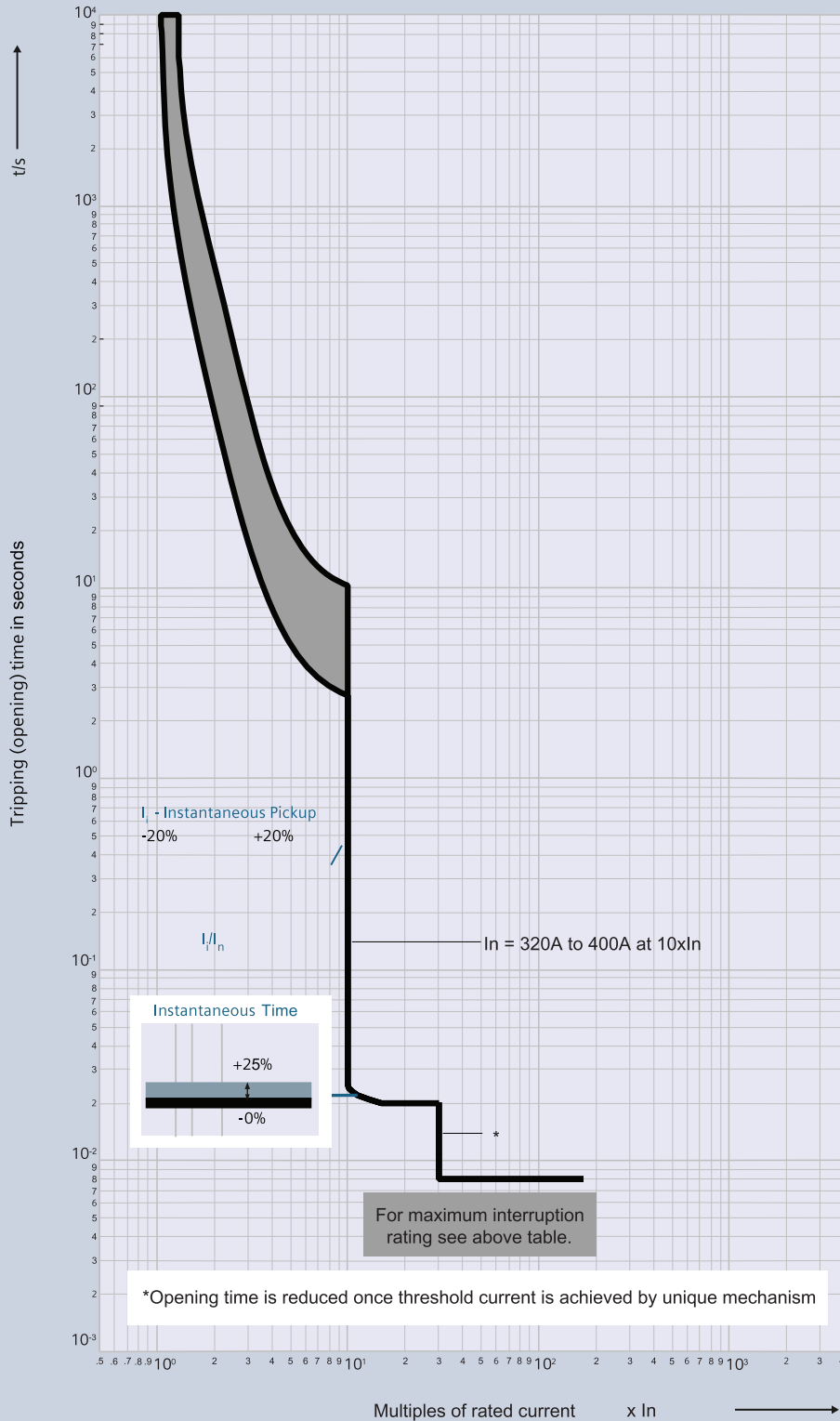
Tripping Characteristics

3VJ12 160A-250A ATFM trip unit



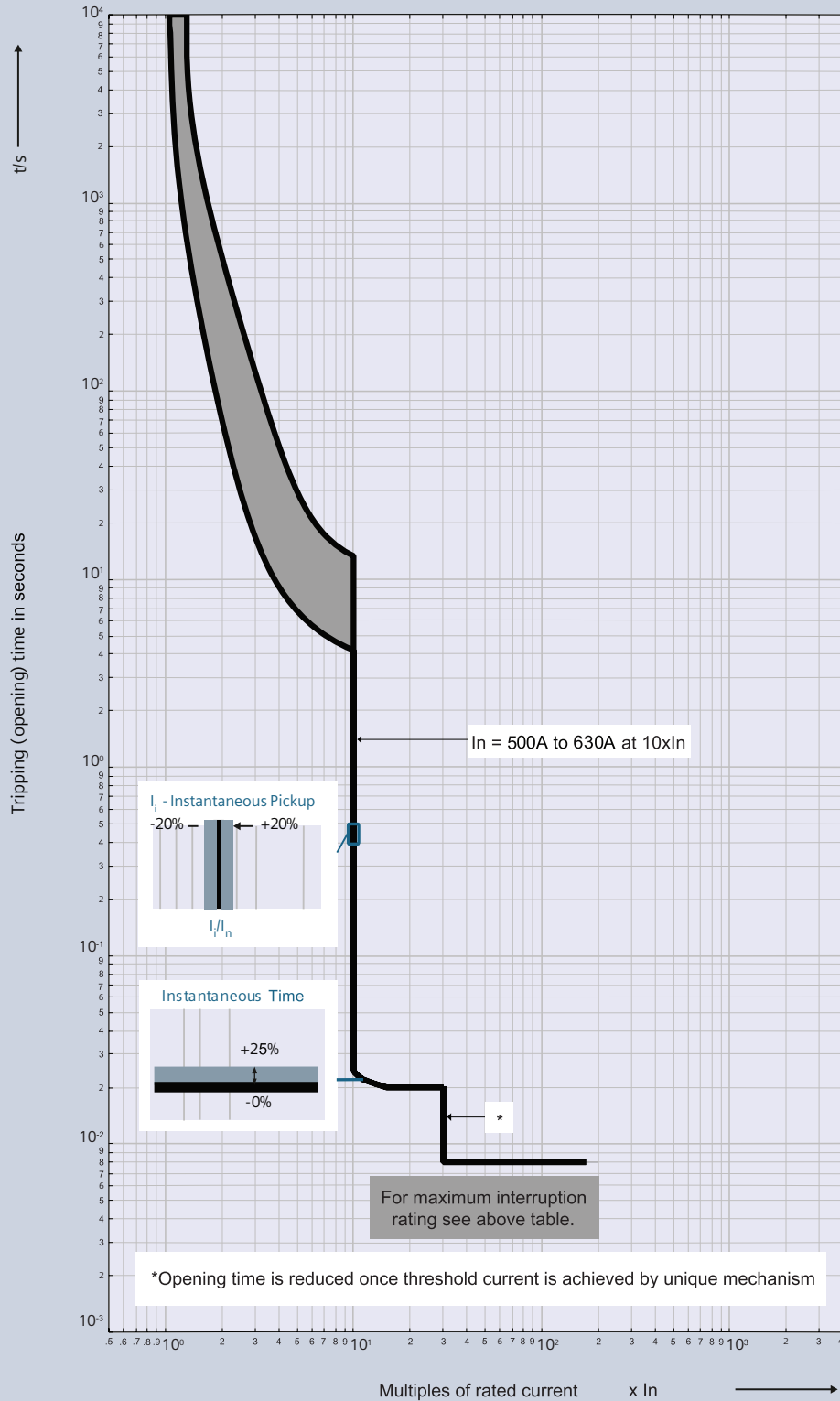
Tripping Characteristics

3VJ13 320A-400A ATFM trip unit



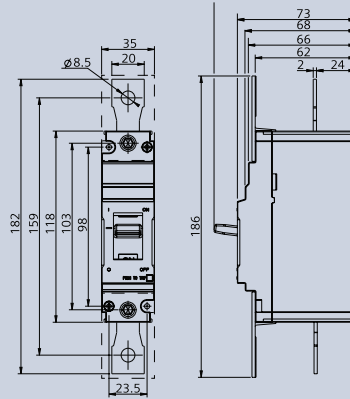
Tripping Characteristics

3VJ13 320A-400A ATFM trip unit

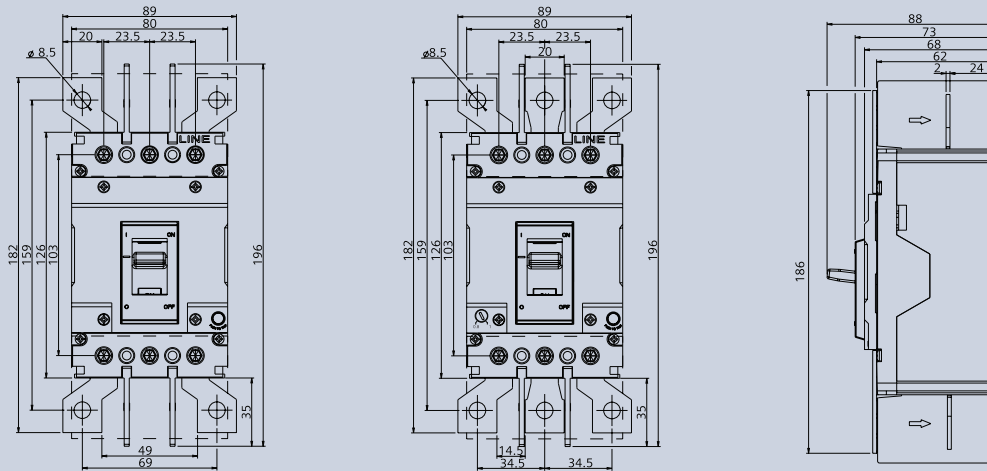


Dimensional Details

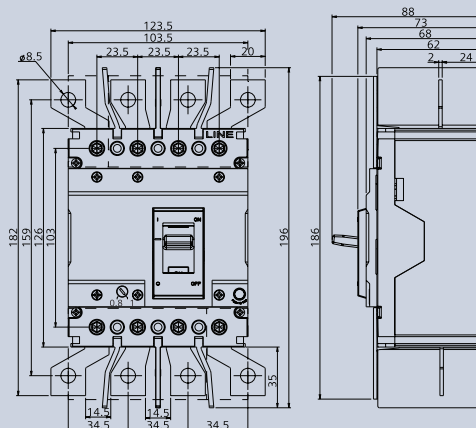
Frame 1x | 3VJ10 1P



Frame 1x | 3VJ10 2P / 3P



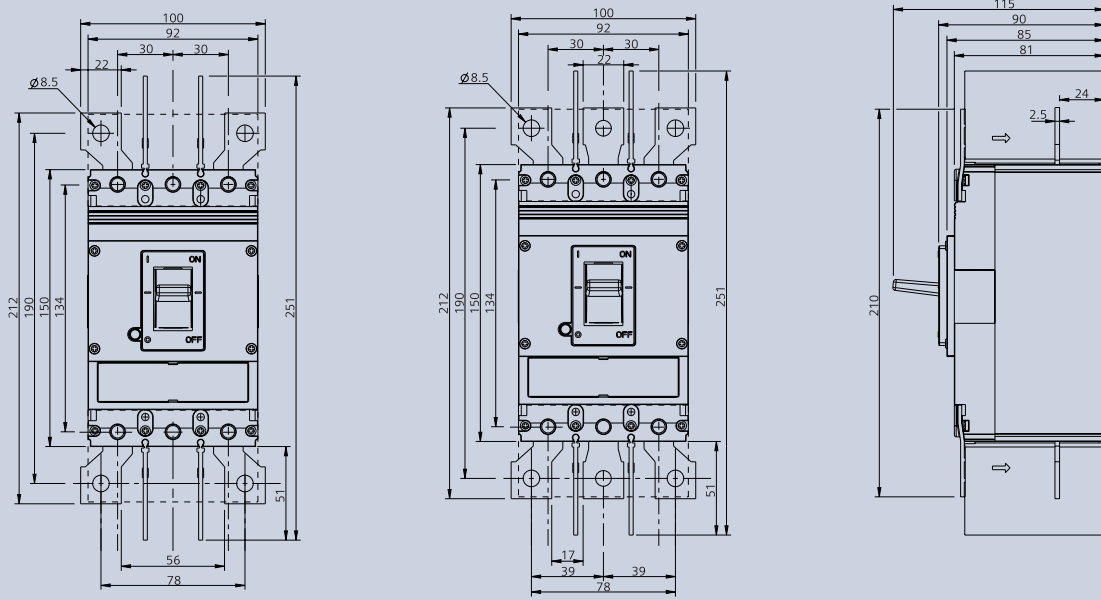
Frame 1x | 3VJ10 4P



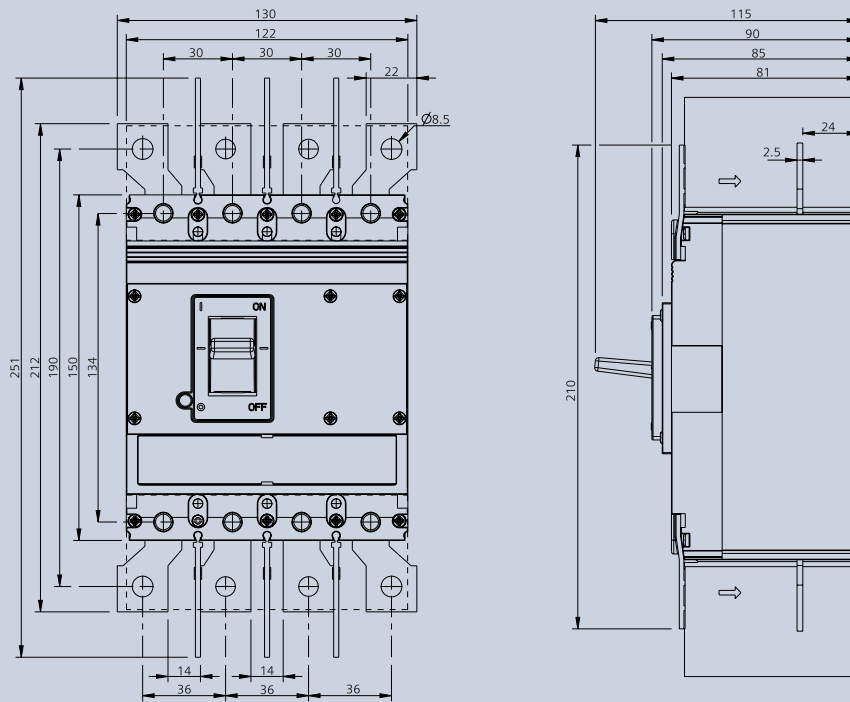
All dimensions are in mm

Dimensional Details

Frame 1 | 3VJ11 2P / 3P



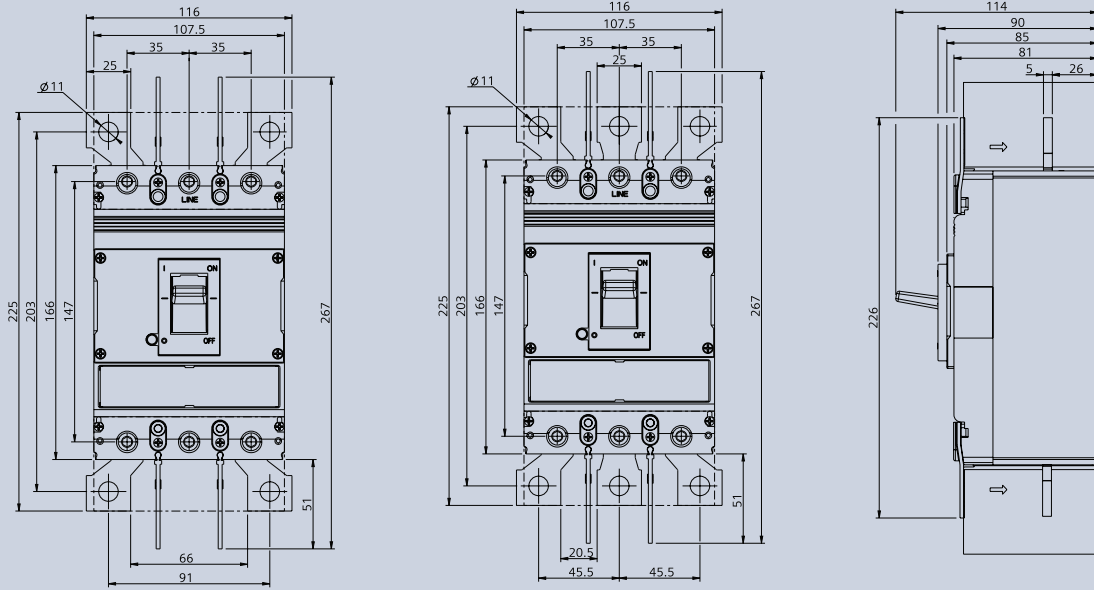
Frame 1 | 3VJ11 4P



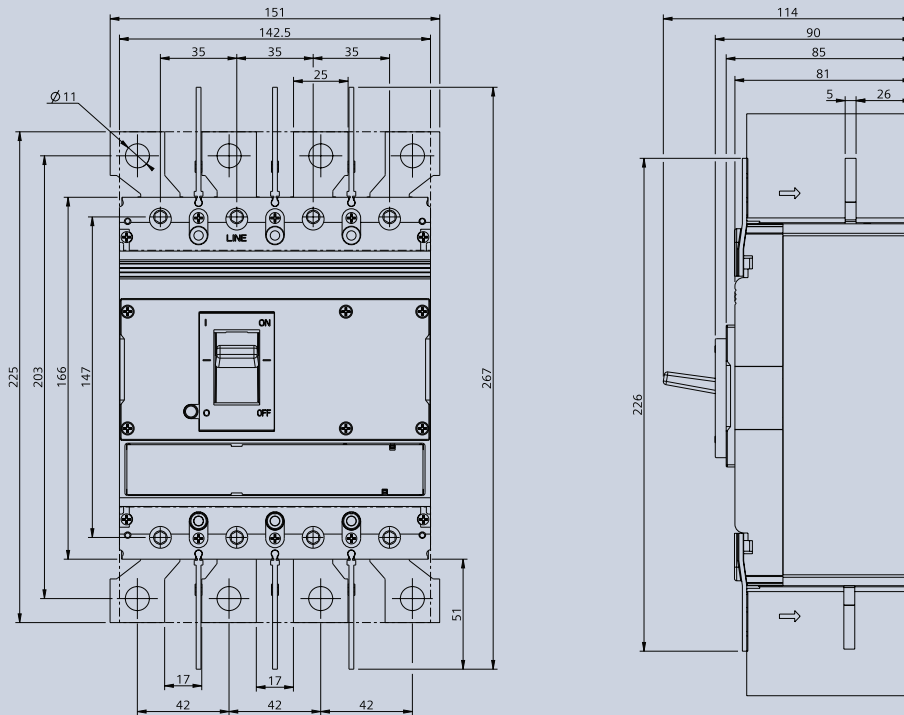
All dimensions are in mm

Dimensional Details

Frame 2 | 3VJ12 2P / 3P



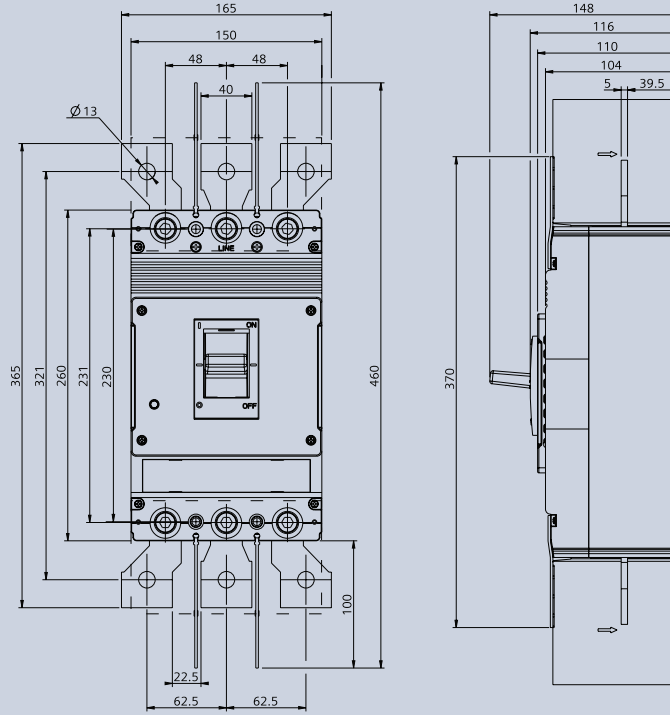
Frame 2 | 3VJ12 4P



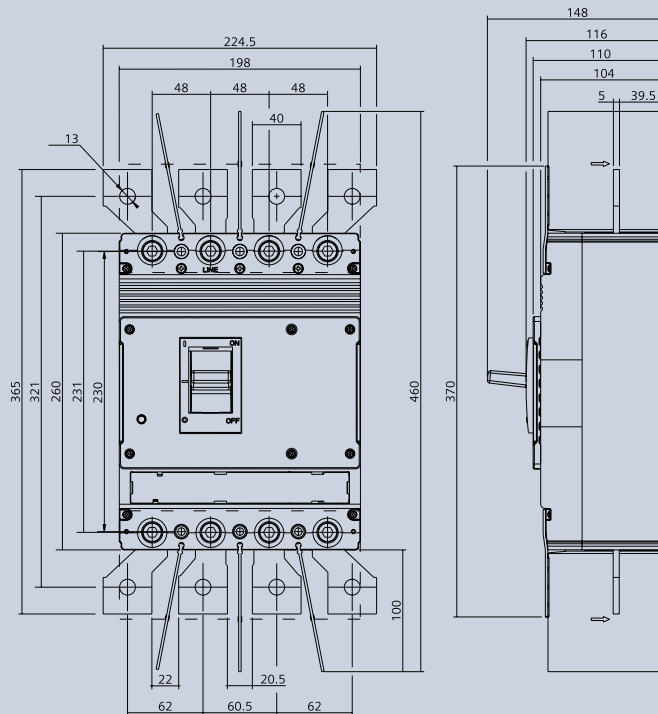
All dimensions are in mm

Dimensional Details

Frame 3 | 3VJ13 3P



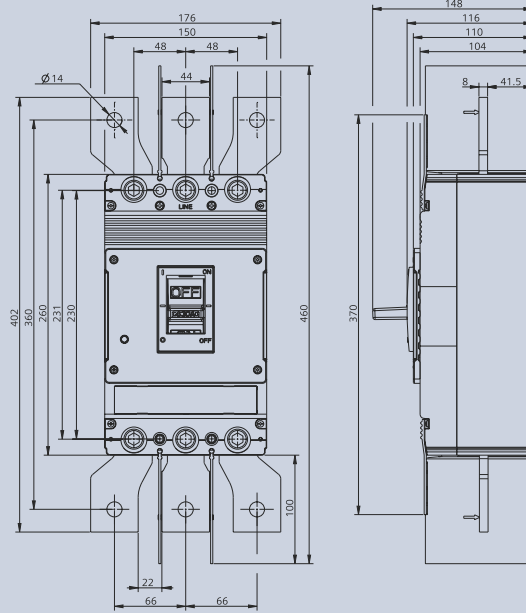
Frame 3 | 3VJ13 4P



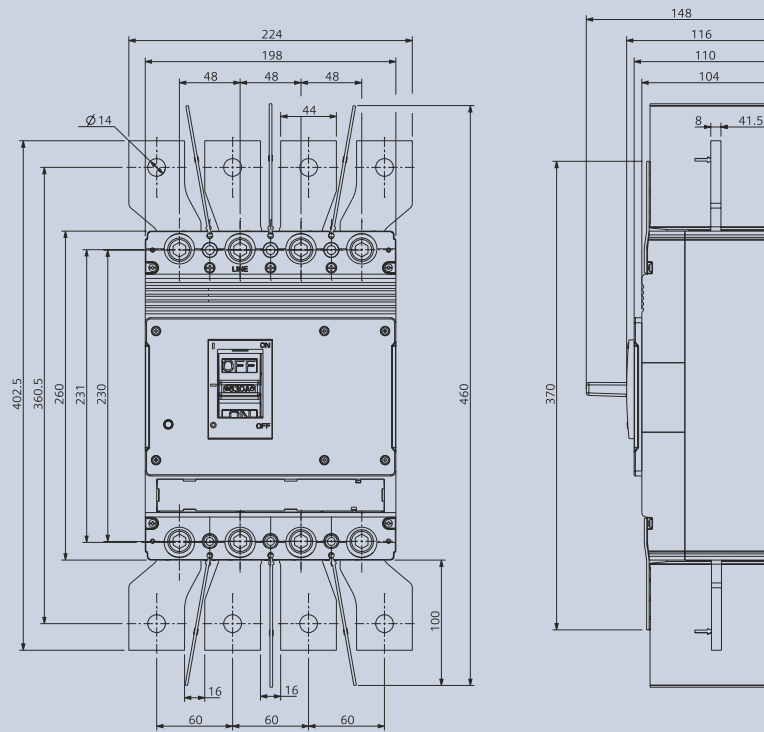
All dimensions are in mm

Dimensional Details

Frame 4 | 3VJ14 3P



Frame 4 | 3VJ14 P



All dimensions are in mm

Product Selection

3VJ10 MCCB, Thermal Magnetic Trip Unit, Fixed Thermal Fixed Magnetic (FTFM)

Frame Size	Breaking Capacity (Icu) @415* AC, 50/60Hz	Rated Current In(A)	1 Pole Type No	2 Pole Type No
3VJ10 (VJ1 125X)	10kA	20	3VJ1002-0DA12-0AA0	3VJ1002-0DA22-0AA0
		25	3VJ1092-0DA12-0AA0	3VJ1092-0DA22-0AA0
		32	3VJ1003-0DA12-0AA0	3VJ1003-0DA22-0AA0
		40	3VJ1004-0DA12-0AA0	3VJ1004-0DA22-0AA0
		50	3VJ1005-0DA12-0AA0	3VJ1005-0DA22-0AA0
		63	3VJ1006-0DA12-0AA0	3VJ1006-0DA22-0AA0
		80	3VJ1008-0DA12-0AA0	3VJ1008-0DA22-0AA0
		100	3VJ1010-0DA12-0AA0	3VJ1010-0DA22-0AA0
		125	3VJ1012-0DA12-0AA0	3VJ1012-0DA22-0AA0
	18kA	20	3VJ1002-1DA12-0AA0	3VJ1002-1DA22-0AA0
		25	3VJ1092-1DA12-0AA0	3VJ1092-1DA22-0AA0
		32	3VJ1003-1DA12-0AA0	3VJ1003-1DA22-0AA0
		40	3VJ1004-1DA12-0AA0	3VJ1004-1DA22-0AA0
		50	3VJ1005-1DA12-0AA0	3VJ1005-1DA22-0AA0
		63	3VJ1006-1DA12-0AA0	3VJ1006-1DA22-0AA0
		80	3VJ1008-1DA12-0AA0	3VJ1008-1DA22-0AA0
		100	3VJ1010-1DA12-0AA0	3VJ1010-1DA22-0AA0
		125	3VJ1012-1DA12-0AA0	3VJ1012-1DA22-0AA0
	25kA	20	3VJ1002-3DA12-0AA0	3VJ1002-3DA22-0AA0
		25	3VJ1092-3DA12-0AA0	3VJ1092-3DA22-0AA0
		32	3VJ1003-3DA12-0AA0	3VJ1003-3DA22-0AA0
		40	3VJ1004-3DA12-0AA0	3VJ1004-3DA22-0AA0
		50	3VJ1005-3DA12-0AA0	3VJ1005-3EA22-0AA0
		63	3VJ1006-3DA12-0AA0	3VJ1006-3DA22-0AA0
		80	3VJ1008-3DA12-0AA0	3VJ1008-3DA22-0AA0
		100	3VJ1010-3DA12-0AA0	3VJ1010-3DA22-0AA0
		125	3VJ1012-3DA12-0AA0	3VJ1012-3DA22-0AA0

Notes: *240V for 1P MCCBs

Phase barriers for 2P MCCBs and Front barriers for 1P & 2P MCCBs are included in the standard MCCB packing



Product Selection

3VJ10 MCCB, Thermal Magnetic Trip Unit, Fixed Thermal Fixed Magnetic (FTFM)

Frame Size	Breaking Capacity @415V AC, 50/60Hz	Rated Current In(A)	3Pole Type No	4Pole Type No
3VJ10 (VJ1 125X)	10kA	20	3VJ1002-0DA32-0AA0	3VJ1002-0EA42-0AA0
		25	3VJ1092-0DA32-0AA0	3VJ1092-0EA42-0AA0
		32	3VJ1003-0DA32-0AA0	3VJ1003-0EA42-0AA0
		40	3VJ1004-0DA32-0AA0	3VJ1004-0EA42-0AA0
		50	3VJ1005-0DA32-0AA0	3VJ1005-0EA42-0AA0
		63	3VJ1006-0DA32-0AA0	3VJ1006-0EA42-0AA0
		80	3VJ1008-0DA32-0AA0	3VJ1008-0EA42-0AA0
		100	3VJ1010-0DA32-0AA0	3VJ1010-0EA42-0AA0
		125	3VJ1012-0DA32-0AA0	3VJ1012-0EA42-0AA0
	18kA	20	3VJ1002-1DA32-0AA0	3VJ1002-1EA42-0AA0
		25	3VJ1092-1DA32-0AA0	3VJ1092-1EA42-0AA0
		32	3VJ1003-1DA32-0AA0	3VJ1003-1EA42-0AA0
		40	3VJ1004-1DA32-0AA0	3VJ1004-1EA42-0AA0
		50	3VJ1005-1DA32-0AA0	3VJ1005-1EA42-0AA0
		63	3VJ1006-1DA32-0AA0	3VJ1006-1EA42-0AA0
		80	3VJ1008-1DA32-0AA0	3VJ1008-1EA42-0AA0
		100	3VJ1010-1DA32-0AA0	3VJ1010-1EA42-0AA0
		125	3VJ1012-1DA32-0AA0	3VJ1012-1EA42-0AA0
	25kA	20	3VJ1002-3DA32-0AA0	3VJ1002-3EA42-0AA0
		25	3VJ1092-3DA32-0AA0	3VJ1092-3EA42-0AA0
		32	3VJ1003-3DA32-0AA0	3VJ1003-3EA42-0AA0
		40	3VJ1004-3DA32-0AA0	3VJ1004-3EA42-0AA0
		50	3VJ1005-3DA32-0AA0	3VJ1005-3EA42-0AA0
		63	3VJ1006-3DA32-0AA0	3VJ1006-3EA42-0AA0
		80	3VJ1008-3DA32-0AA0	3VJ1008-3EA42-0AA0
		100	3VJ1010-3DA32-0AA0	3VJ1010-3EA42-0AA0
		125	3VJ1012-3DA32-0AA0	3VJ1012-3EA42-0AA0

Notes: Phase barriers and Front barriers are included in the standard MCCB packing



Product Selection

3VJ10 MCCB, Thermal Magnetic Trip Unit, Adjustable Thermal Fixed Magnetic (ATFM)

Frame Size	Breaking Capacity @415V AC, 50/60Hz	Rated Current In(A)	3Pole Type No	4Pole Type No
3VJ10 (VJ1 125X)	10kA	20	3VJ1002-0DB32-0AA0	3VJ1002-0EB42-0AA0
		25	3VJ1092-0DB32-0AA0	3VJ1092-0EB42-0AA0
		32	3VJ1003-0DB32-0AA0	3VJ1003-0EB42-0AA0
		40	3VJ1004-0DB32-0AA0	3VJ1004-0EB42-0AA0
		50	3VJ1005-0DB32-0AA0	3VJ1005-0EB42-0AA0
		63	3VJ1006-0DB32-0AA0	3VJ1006-0EB42-0AA0
		80	3VJ1008-0DB32-0AA0	3VJ1008-0EB42-0AA0
		100	3VJ1010-0DB32-0AA0	3VJ1010-0EB42-0AA0
		125	3VJ1012-0DB32-0AA0	3VJ1012-0EB42-0AA0
	18kA	20	3VJ1002-1DB32-0AA0	3VJ1002-1EB42-0AA0
		25	3VJ1092-1DB32-0AA0	3VJ1092-1EB42-0AA0
		32	3VJ1003-1DB32-0AA0	3VJ1003-1EB42-0AA0
		40	3VJ1004-1DB32-0AA0	3VJ1004-1EB42-0AA0
		50	3VJ1005-1DB32-0AA0	3VJ1005-1EB42-0AA0
		63	3VJ1006-1DB32-0AA0	3VJ1006-1EB42-0AA0
		80	3VJ1008-1DB32-0AA0	3VJ1008-1EB42-0AA0
		100	3VJ1010-1DB32-0AA0	3VJ1010-1EB42-0AA0
		125	3VJ1012-1DB32-0AA0	3VJ1012-1EB42-0AA0
	25kA	20	3VJ1002-3DB32-0AA0	3VJ1002-3EB42-0AA0
		25	3VJ1092-3DB32-0AA0	3VJ1092-3EB42-0AA0
		32	3VJ1003-3DB32-0AA0	3VJ1003-3EB42-0AA0
		40	3VJ1004-3DB32-0AA0	3VJ1004-3EB42-0AA0
		50	3VJ1005-3DB32-0AA0	3VJ1005-3EB42-0AA0
		63	3VJ1006-3DB32-0AA0	3VJ1006-3EB42-0AA0
		80	3VJ1008-3DB32-0AA0	3VJ1008-3EB42-0AA0
		100	3VJ1010-3DB32-0AA0	3VJ1010-3EB42-0AA0
		125	3VJ1012-3DB32-0AA0	3VJ1012-3EB42-0AA0

Notes: Phase barriers and Front barriers are included in the standard MCCB packing



Product Selection

3VJ MCCB, Thermal Magnetic Trip Unit, Fixed Thermal Fixed Magnetic (FTFM)

Frame Size	Breaking Capacity @415V AC, 50/60Hz	Rated Current In(A)	2Pole Type No	3Pole Type No	4Pole Type No
3VJ12 (VJ1 250)	18kA	160	3VJ1216-1DA22-0AA0	3VJ1216-1DA32-0AA0	3VJ1216-1EA42-0AA0
		200	3VJ1220-1DA22-0AA0	3VJ1220-1DA32-0AA0	3VJ1220-1EA42-0AA0
		250	3VJ1225-1DA22-0AA0	3VJ1225-1DA32-0AA0	3VJ1225-1EA42-0AA0
3VJ11 (VJ1 125)	25kA	25	3VJ1192-3DA22-0AA0	3VJ1192-3DA32-0AA0	3VJ1192-3EA42-0AA0
		32	3VJ1103-3DA22-0AA0	3VJ1103-3DA32-0AA0	3VJ1103-3EA42-0AA0
		40	3VJ1104-3DA22-0AA0	3VJ1104-3DA32-0AA0	3VJ1104-3EA42-0AA0
		50	3VJ1105-3DA22-0AA0	3VJ1105-3DA32-0AA0	3VJ1105-3EA42-0AA0
		63	3VJ1106-3DA22-0AA0	3VJ1106-3DA32-0AA0	3VJ1106-3EA42-0AA0
		80	3VJ1108-3DA22-0AA0	3VJ1108-3DA32-0AA0	3VJ1108-3EA42-0AA0
		100	3VJ1110-3DA22-0AA0	3VJ1110-3DA32-0AA0	3VJ1110-3EA42-0AA0
		125	3VJ1112-3DA22-0AA0	3VJ1112-3DA32-0AA0	3VJ1112-3EA42-0AA0
3VJ12 (VJ1 250)	25kA	160	3VJ1216-3DA22-0AA0	3VJ1216-3DA32-0AA0	3VJ1216-3EA42-0AA0
		200	3VJ1220-3DA22-0AA0	3VJ1220-3DA32-0AA0	3VJ1220-3EA42-0AA0
		250	3VJ1225-3DA22-0AA0	3VJ1225-3DA32-0AA0	3VJ1225-3EA42-0AA0
3VJ13 (VJ1 400)	25kA	320	-	3VJ1332-3DA32-0AA0	3VJ1332-3EA42-0AA0
		400	-	3VJ1340-3DA32-0AA0	3VJ1340-3EA42-0AA0
3VJ11 (VJ1 125)	36kA	25	3VJ1192-5DA22-0AA0	3VJ1192-5DA32-0AA0	3VJ1192-5EA42-0AA0
		32	3VJ1103-5DA22-0AA0	3VJ1103-5DA32-0AA0	3VJ1103-5EA42-0AA0
		40	3VJ1104-5DA22-0AA0	3VJ1104-5DA32-0AA0	3VJ1104-5EA42-0AA0
		50	3VJ1105-5DA22-0AA0	3VJ1105-5DA32-0AA0	3VJ1105-5EA42-0AA0
		63	3VJ1106-5DA22-0AA0	3VJ1106-5DA32-0AA0	3VJ1106-5EA42-0AA0
		80	3VJ1108-5DA22-0AA0	3VJ1108-5DA32-0AA0	3VJ1108-5EA42-0AA0
		100	3VJ1110-5DA22-0AA0	3VJ1110-5DA32-0AA0	3VJ1110-5EA42-0AA0
		125	3VJ1112-5DA22-0AA0	3VJ1112-5DA32-0AA0	3VJ1112-5EA42-0AA0
3VJ12 (VJ1 250)	36kA	160	3VJ1216-5DA22-0AA0	3VJ1216-5DA32-0AA0	3VJ1216-5EA42-0AA0
		200	3VJ1220-5DA22-0AA0	3VJ1220-5DA32-0AA0	3VJ1220-5EA42-0AA0
		250	3VJ1225-5DA22-0AA0	3VJ1225-5DA32-0AA0	3VJ1225-5EA42-0AA0
3VJ13 (VJ1 400)	36kA	320	-	3VJ1332-5DA32-0AA0	3VJ1332-5EA42-0AA0
		400	-	3VJ1340-5DA32-0AA0	3VJ1340-5EA42-0AA0
3VJ14 (VJ1 630)	36kA	500	-	3VJ1450-5DA32-0AA0	3VJ1450-5EA42-0AA0
		630	-	3VJ1463-5DA32-0AA0	3VJ1463-5EA42-0AA0

Notes: Phase barriers and Front barriers are included in the standard packing

Product Selection

3VJ MCCB, Thermal Magnetic Trip Unit, Fixed Thermal Fixed Magnetic (FTFM)

Frame Size	Breaking Capacity @415V AC, 50/60Hz	Rated Current In(A)	2Pole Type No	3Pole Type No	4Pole Type No
3VJ11 (VJ1 125)	55kA	25	3VJ1192-7DA22-0AA0	3VJ1192-7DA32-0AA0	3VJ1192-7EA42-0AA0
		32	3VJ1103-7DA22-0AA0	3VJ1103-7DA32-0AA0	3VJ1103-7EA42-0AA0
		40	3VJ1104-7DA22-0AA0	3VJ1104-7DA32-0AA0	3VJ1104-7EA42-0AA0
		50	3VJ1105-7DA22-0AA0	3VJ1105-7DA32-0AA0	3VJ1105-7EA42-0AA0
		63	3VJ1106-7DA22-0AA0	3VJ1106-7DA32-0AA0	3VJ1106-7EA42-0AA0
		80	3VJ1108-7DA22-0AA0	3VJ1108-7DA32-0AA0	3VJ1108-7EA42-0AA0
		100	3VJ1110-7DA22-0AA0	3VJ1110-7DA32-0AA0	3VJ1110-7EA42-0AA0
3VJ12 (VJ1 250)		125	3VJ1112-7DA22-0AA0	3VJ1112-7DA32-0AA0	3VJ1112-7EA42-0AA0
		160	3VJ1216-7DA22-0AA0	3VJ1216-7DA32-0AA0	3VJ1216-7EA42-0AA0
		200	3VJ1220-7DA22-0AA0	3VJ1220-7DA32-0AA0	3VJ1220-7EA42-0AA0
3VJ13 (VJ1 400)		250	3VJ1225-7DA22-0AA0	3VJ1225-7DA32-0AA0	3VJ1225-7EA42-0AA0
		320	-	3VJ1332-7DA32-0AA0	3VJ1332-7EA42-0AA0
3VJ14 (VJ1 630)		400	-	3VJ1340-7DA32-0AA0	3VJ1340-7EA42-0AA0
		500	-	3VJ1450-7DA32-0AA0	3VJ1450-7EA42-0AA0
	630	-	3VJ1463-7DA32-0AA0	3VJ1463-7EA42-0AA0	

3VJ MCCB, Thermal Magnetic Trip Unit, Adjustable Thermal Fixed Magnetic (ATFM)

Frame Size	Breaking Capacity @415V AC, 50/60Hz	Rated Current In(A)	3Pole Type No	4Pole Type No
3VJ12 (VJ1 250)	18kA	160	3VJ1216-1DB32-0AA0	3VJ1216-1EB42-0AA0
		200	3VJ1220-1DB32-0AA0	3VJ1220-1EB42-0AA0
		250	3VJ1225-1DB32-0AA0	3VJ1225-1EB42-0AA0
3VJ11 (VJ1 125)	25kA	25	3VJ1192-3DB32-0AA0	3VJ1192-3EB42-0AA0
		32	3VJ1103-3DB32-0AA0	3VJ1103-3EB42-0AA0
		40	3VJ1104-3DB32-0AA0	3VJ1104-3EB42-0AA0
		50	3VJ1105-3DB32-0AA0	3VJ1105-3EB42-0AA0
		63	3VJ1106-3DB32-0AA0	3VJ1106-3EB42-0AA0
		80	3VJ1108-3DB32-0AA0	3VJ1108-3EB42-0AA0
		100	3VJ1110-3DB32-0AA0	3VJ1110-3EB42-0AA0
3VJ11 (VJ1 125)		125	3VJ1112-3DB32-0AA0	3VJ1112-3EB42-0AA0
		160	3VJ1216-3DB32-0AA0	3VJ1216-3EB42-0AA0
		200	3VJ1220-3DB32-0AA0	3VJ1220-3EB42-0AA0
3VJ13 (VJ1 400)		250	3VJ1225-3DB32-0AA0	3VJ1225-3EB42-0AA0
		320	3VJ1332-3DB32-0AA0	3VJ1332-3EB42-0AA0
3VJ13 (VJ1 400)		400	3VJ1340-3DB32-0AA0	3VJ1340-3EB42-0AA0

Notes: Phase barriers and Front barriers are included in the standard packing

Product Selection






3VJ MCCB, Thermal Magnetic Trip Unit, Adjustable Thermal Fixed Magnetic (ATFM)

Frame Size	Breaking Capacity @415V AC, 50/60Hz	Rated Current In(A)	3Pole Type No	4Pole Type No
3VJ11 (VJ1 125)	36kA	25	3VJ1192-5DB32-0AA0	3VJ1192-5EB42-0AA0
		32	3VJ1103-5DB32-0AA0	3VJ1103-5EB42-0AA0
		40	3VJ1104-5DB32-0AA0	3VJ1104-5EB42-0AA0
		50	3VJ1105-5DB32-0AA0	3VJ1105-5EB42-0AA0
		63	3VJ1106-5DB32-0AA0	3VJ1106-5EB42-0AA0
		80	3VJ1108-5DB32-0AA0	3VJ1108-5EB42-0AA0
		100	3VJ1110-5DB32-0AA0	3VJ1110-5EB42-0AA0
		125	3VJ1112-5DB32-0AA0	3VJ1112-5EB42-0AA0
3VJ12 (VJ1 250)		160	3VJ1216-5DB32-0AA0	3VJ1216-5EB42-0AA0
		200	3VJ1220-5DB32-0AA0	3VJ1220-5EB42-0AA0
		250	3VJ1225-5DB32-0AA0	3VJ1225-5EB42-0AA0
3VJ13 (VJ1 400)		320	3VJ1332-5DB32-0AA0	3VJ1332-5EB42-0AA0
		400	3VJ1340-5DB32-0AA0	3VJ1340-5EB42-0AA0
3VJ14 (VJ1 630)		500	3VJ1450-5DB32-0AA0	3VJ1450-5EB42-0AA0
		630	3VJ1463-5DB32-0AA0	3VJ1463-5EB42-0AA0
3VJ11 (VJ1 125)		55kA	25	3VJ1192-7DB32-0AA0
	32		3VJ1103-7DB32-0AA0	3VJ1103-7EB42-0AA0
	40		3VJ1104-7DB32-0AA0	3VJ1104-7EB42-0AA0
	50		3VJ1105-7DB32-0AA0	3VJ1105-7EB42-0AA0
	63		3VJ1106-7DB32-0AA0	3VJ1106-7EB42-0AA0
	80		3VJ1108-7DB32-0AA0	3VJ1108-7EB42-0AA0
	100		3VJ1110-7DB32-0AA0	3VJ1110-7EB42-0AA0
	125		3VJ1112-7DB32-0AA0	3VJ1112-7EB42-0AA0
3VJ12 (VJ1 250)	160		3VJ1216-7DB32-0AA0	3VJ1216-7EB42-0AA0
	200		3VJ1220-7DB32-0AA0	3VJ1220-7EB42-0AA0
	250		3VJ1225-7DB32-0AA0	3VJ1225-7EB42-0AA0
3VJ13 (VJ1 400)	320		3VJ1332-7DB32-0AA0	3VJ1332-7EB42-0AA0
	400		3VJ1340-7DB32-0AA0	3VJ1340-7EB42-0AA0
3VJ14 (VJ1 630)	500		3VJ1450-7DB32-0AA0	3VJ1450-7EB42-0AA0
	630		3VJ1463-7DB32-0AA0	3VJ1463-7EB42-0AA0

Notes: Phase barriers and Front barriers are included in the standard packing

Product Accessories

3VJ Internal Accessories

Frame Size	Reference Image	Accessory compartment/coil voltage	3VJ10 (VJ1 125X)	3VJ11 (VJ1 125)	3VJ12 (VJ1 250)	3VJ13 (VJ1 400)	3VJ14 (VJ1 630)
Accessory							
Auxiliary Switches		Left	3VJ9018-0AN11	3VJ9218-0AN11		3VJ9417-0AN11	
		Right	-	3VJ9218-0AN21		3VJ9417-0AN21	
Alarm Switches		Left	3VJ9018-0AA11	3VJ9118-0AA11	3VJ9218-0AA11	3VJ9417-0AA11	
		Right	-	3VJ9118-0AA21	3VJ9218-0AA21	3VJ9417-0AA21	
Auxiliary + Alarm Switches		Left	3VJ9018-0AD11	3VJ9118-0AD11	3VJ9218-0AD11	3VJ9417-0AD11	
		Right	-	3VJ9118-0AD21	3VJ9218-0AD21	3VJ9417-0AD21	
Shunt Trip (Right)		24V DC	*	3VJ9218-0ST11		-	
		24V AC/DC	-	-		3VJ9417-0ST21	
		48V DC	*	3VJ9218-0ST12		-	
		48V AC/DC	-	-		3VJ9417-0ST22	
		110V DC	3VJ9018-0ST15	3VJ9218-0ST15		-	
		110V AC/DC	-	-		3VJ9417-0ST25	
		110V AC	3VJ9018-0ST35	3VJ9218-0ST35		-	
		220V AC	3VJ9018-0ST36	3VJ9218-0ST36		3VJ9417-0ST36	
		415V AC	3VJ9018-0ST37	3VJ9218-0ST37		3VJ9417-0ST37	
Under-voltage Release (Left)		24V DC	-	3VJ9218-0UV11		-	
		48V DC		3VJ9218-0UV12		-	
		220V AC		3VJ9218-0UV36		3VJ9417-0UV36	
		415V AC		3VJ9218-0UV37		3VJ9417-0UV37	

Notes:

Internal accessories are available only for 2P, 3P & 4P MCCBs

3VJ9218-0ST..shunt releases can be used with 3VJ11(Frame VJ1 125) & 3VJ12(Frame VJ1 250) only

- : NA

* : Coming soon

Product Accessories

3VJ External Accessories

Frame Size Accessory	Reference Image	3VJ10 (VJ1 125X)	3VJ11 (VJ1 125)	3VJ12 (VJ1 250)	3VJ13 (VJ1 400)	3VJ14 (VJ1 630)
Extended Door Mounted Rotary Operator (including 8UC handle) [®]		3VJ9018-0HD11	3VJ9118-0HD11	3VJ9218-0HD11	3VJ9417-0HD11	
Extended terminals#		3VJ9011-0EC00 (1P)	-	-	-	
Spreader Links [^]		3VJ9012-0ED00 (2P)	3VJ9112-0ED00 (2P)	3VJ9212-0ED00 (2P)	-	
		3VJ9013-0ED00 (3P)	3VJ9113-0ED00 (3P)	3VJ9213-0ED00 (3P)	3VJ9313-0ED00	3VJ9413-0ED00
		3VJ9014-0ED00 (4P)	3VJ9114-0ED00 (4P)	3VJ9214-0ED00 (4P)	3VJ9314-0ED00	3VJ9414-0ED00
Phase Barriers [*]		3VJ9018-0CA00	3VJ9218-0CA00		3VJ9417-0CA00	
Front Barriers [§]		3VJ9011-0CJ10 (1P)	-	-	-	
		3VJ9016-0CJ30 (2P/3P)	3VJ9116-0CJ30 (2P/3P)	3VJ9216-0CJ30 (2P/3P)	3VJ9413-0CJ30 (3P)	
			3VJ9114-0CJ40 (4P)	3VJ9214-0CJ40 (4P)	3VJ9414-0CJ40 (4P)	
Toogle handle extension		-	-	-	3VJ9417-0DH10	
MIL		-	3VJ9116-0VM10 (2P, 3P)	3VJ9216-0VM10 (2P, 3P)	3VJ9313-0VM10 (3P)	
		-	3VJ9114-0VM10 (4P)	3VJ9214-0VM10 (4P)	3VJ9314-0VM10 (4P)	
Padlock		-	3VJ91180-LM10	3VJ92180LM10	3VJ93170LM10	
Enclosure		3VJ9016-ODE11 (2P, 3P)	3VJ9116-ODE11 (2P, 3P)	3VJ9216-ODE12 (2P, 3P)	-	-
		3VJ9014-ODE11 (4P)	3VJ9114-ODE11 (4P)	3VJ9214-ODE12 (4P)	-	-

Notes:

[®] 1 set contains rotary mechanism, coupler, shaft and 8UC handle. Rotary operators are not available for 1P 3VJ MCCBs

[^] Spreader link 1 set = 2 nos. links in case of 2 pole; and 3 nos. links in case of 3 pole; and 4 nos. links in case of 4 pole.

[#] Extended terminals 1 set = 2 nos. links

^{*} Available as a spare; 1 set contains 2 phase barriers

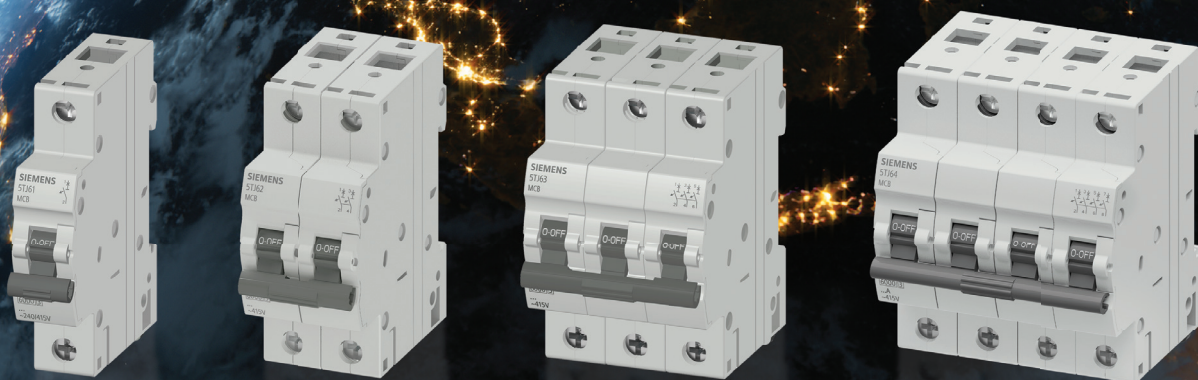
[§] Available as a spare; 1 set contains 2 front barriers (top & bottom)

Toggle handle extension is included in the standard packing of 3VJ13 and 3VJ14 (VJ1 400 & 630) MCCB.

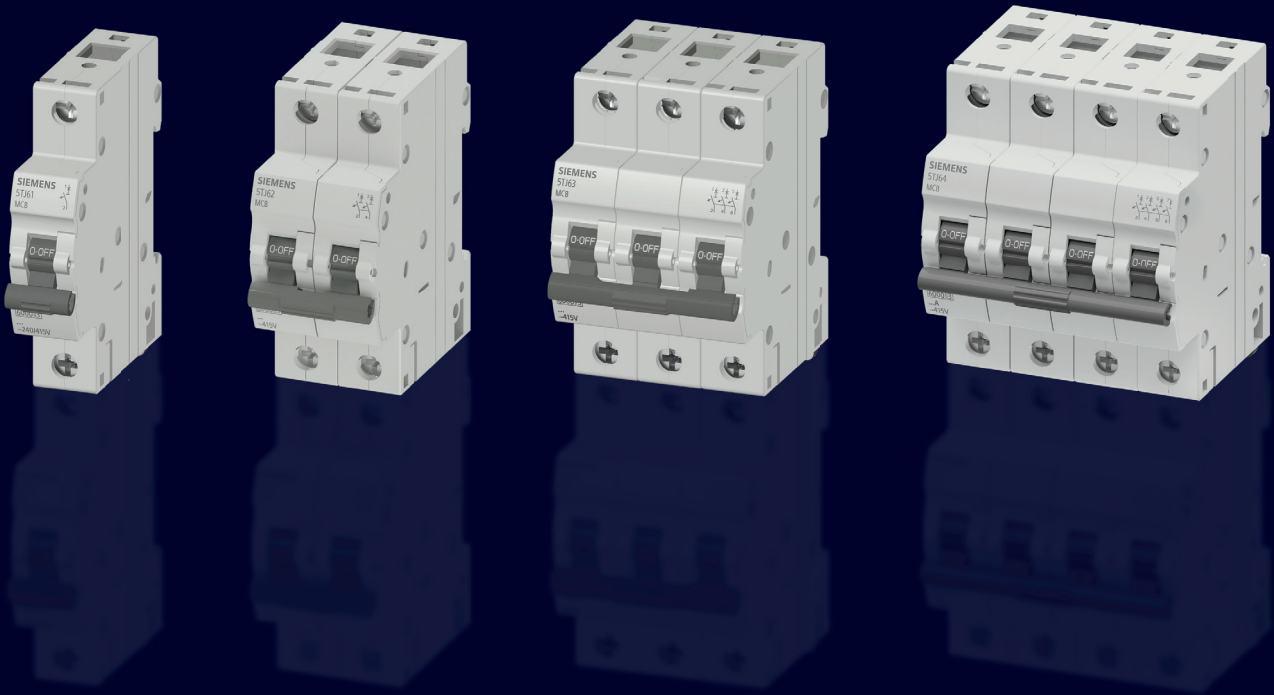
SINOVA 5TJ

Miniature Circuit Breakers

Safety ensured



Key Features



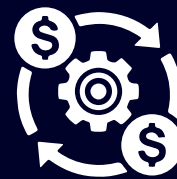
Protection

It provides closer protection for your installation with 4.5kA, 6kA and 10kA breaking capacity.



User friendly

Flexibility in termination options – separate termination for cables and fork type busbar.



Low Lifecycle Cost

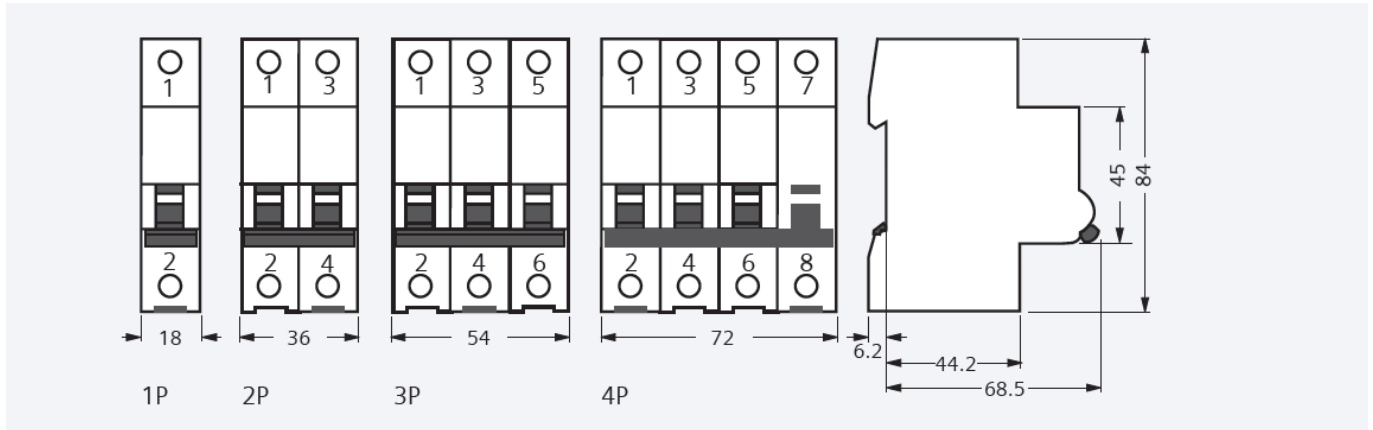
Low energy consumption resulting in cost savings.

Technical Specification



			5TJ3	5TJ6	5TJ4
Standards					
Standards			IEC 60898-1: 2015	IEC 60898-1: 2015	IEC 60898-1: 2015
Basic Data					
Rated Breaking Capacity	acc. to IEC 60898-1	kA AC	4.5kA	6kA	10kA
Current Rating			6...63	6...63	6...63
Number of poles			1P 2P 3P 4P	1P 2P 3P 4P	1P 2P 3P 4P
Tripping Characteristics			C	B C	B C
Approvals					
ROHS Compliant			Yes	Yes	Yes
CFC and Silicone-free			Yes	Yes	Yes
REACH			Yes	Yes	Yes
Operational voltage					
Rated Voltage	V AC		240/415	240/415	240/415
Operational Voltage	Min	V AC/pole	24	24	24
	Max	V AC	440	440	440
Insulation Voltage	V AC		265/456	265/456	265/456
Impulse Withstand Voltage	kV		4	4	4
Rated Frequency	Hz		50/60	50/60	50/60
Connection					
Line Load Reversibility			Yes	Yes	Yes
Degree of Protection	acc. to EN 60529		IP20	IP20	IP20
Terminal Tightening Torque	recommended	N.m	2.5...3	2.5...3	2.5...3
Conductor Cross-Sections	mm ²		1...25	1...25	1...25
Bi-connect (Dual) Terminals			on line side	on line side	on both sides
Busbar Suitability			Both Fork and Pin Type	Both Fork and Pin Type	Both Fork and Pin Type
Mounting Position			Any	Any	Any
Service life/endurance (operating cycles)					
Electrical			5.000	5.000	5.000
Mechanical			20.000	20.000	20.000
Ambient conditions					
Ambient Temperature			-25 ... +55 °C	-25 ... +55 °C	-25 ... +55 °C
Storage temperature			-40 ... +75 °C	-40 ... +75 °C	-40 ... +75 °C
Degree of Pollution			2	2	2
Overvoltage Category			III	III	III

Dimensional drawing of 5TJ



MCB Characteristic Curves

Characteristic curves describe the operational and tripping behavior of MCBs in the event of an overload or short circuit. They represent an important element for the configuration and dimensioning of devices.

Tripping Characteristic

The expected tripping behavior, and in particular the expected break time of the desired MCB can be determined from its I-t tripping characteristic. In line with the two existing tripping systems (overload release = bimetal, short circuit release = short circuit coil), the path of the I-t tripping characteristic consists of two characteristic curve sections:

- Overload section (thermal)
- Short circuit release section (magnetic)

The overload section of the curve describes the tripping behavior of the bimetal, while the short circuit release section of the characteristic curve describes the release behavior of the short circuit coil.

Depending on the equipment used and the operational behavior of the connected loads the short circuit release of the MCB must trip to ensure safe and efficient short circuit protection.

These are called the tripping characteristics. The following tripping characteristics for MCBs are standardized in accordance with IS/IEC 60898-1

- Tripping Characteristic B
- Tripping Characteristic C

B' Characteristics

'B' Characteristic MCBs react quickly to short circuit, and are set to trip when the current passing through them is between 3 to 5 times of the normal full load current.

They are suitable for protecting incandescent lighting and socket outlet circuits in domestic and commercial environments, where there is little risk of surges that could cause the MCB to trip.

'C' Characteristic

'C' characteristics MCBs are used for protection of electrical circuits in general and are most widely used because of its suitability for practically all electrical circuits, cable and line protection. They are capable of protecting the majority of inductive loads including most motor and fluorescent lighting loads.

'C' Characteristic MCBs react quickly to short circuit, and are set to trip when the current passing through them is between 5 to 10 times of the normal full load current.

MCB Characteristic Curves

Standard ranges for immediate tripping in accordance with IEC 60898-1, Table 2:

Tripping characteristic B : $3-5 \times I_n$
 Tripping characteristic C : $5-10 \times I_n$.

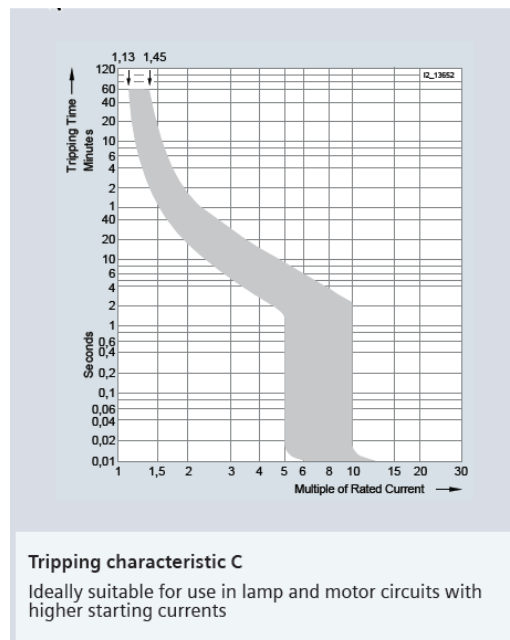
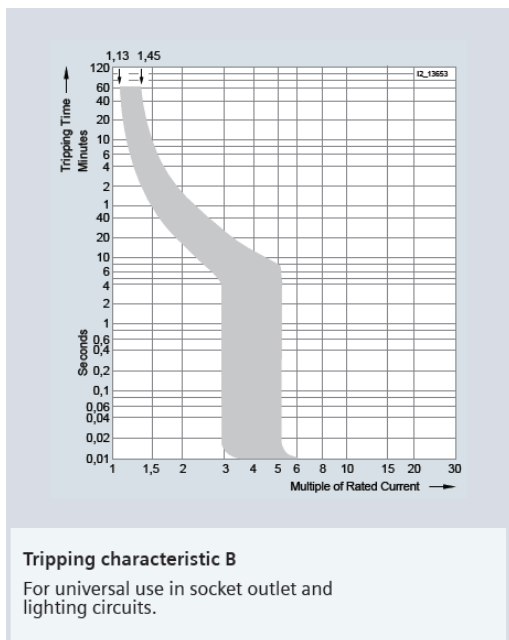
Tripping characteristics at an ambient temperature of 30°C

Tripping Characteristics	Standards	Thermal Trips Test Currents:			Electromagnetic Trips Test Current:		
		Limiting test current I_1	Minimum test current I_2	Tripping time $I_n \leq 63 A$ t	Hold I_4	Latest tripping instant I_5	Tripping time t
B	IEC 60898-1	$1.13 \times I_n$	$1.45 \times I_n$	$>1 h$ $<1 h$	$3 \times I_n$	$5 \times I_n$	$\geq 0.1 s$ $< 0.1 s$
C	IEC 60898-1	$1.13 \times I_n$	$1.45 \times I_n$	$>1 h$ $<1 h$	$5 \times I_n$	$10 \times I_n$	$\geq 0.1 s$ $< 0.1 s$


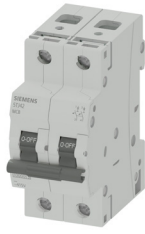


These characteristic allows applying loads having high peak currents without requiring the MCB to be oversized. In fact, thanks to this characteristic, it is possible to apply loads with peak currents up to 5 times I_n , (rated current) and can hence be used to best advantage for handling higher inrush currents e.g.lamps, motors, etc. Under 'C' characteristics, the magnetic operating limits (for short-circuit operations)are between 5 and 10 times the rated current (I_n) of MCB.

For example the instantaneous mechanism of a 10A MCB will operate between 50A and 100A in an overcurrent situation. The Thermal operating limits are between $1.45 I_n$ to Instantaneous tripping limit of the MCB.





Overview of Tripping Characteristic Curves






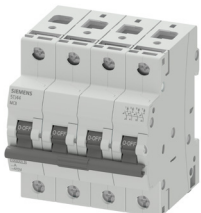
Selection & Ordering Data

4500 A	In (A)	(MW)	Characteristic C Reference No.	Standard Packaging No. of Pieces
1P, 240/415v AC				
	6	1	5TJ3106-7	12
	10		5TJ3110-7	12
	16		5TJ3116-7	12
	20		5TJ3120-7	12
	25		5TJ3125-7	12
	32		5TJ3132-7	12
	40		5TJ3140-7	12
	50		5TJ3150-7	12
	63		5TJ3163-7	12
2P, 415V AC				
	6	2	5TJ3206-7	6
	10		5TJ3210-7	6
	16		5TJ3216-7	6
	20		5TJ3220-7	6
	25		5TJ3225-7	6
	32		5TJ3232-7	6
	40		5TJ3240-7	6
	50		5TJ3250-7	6
	63		5TJ3263-7	6
3P, 415V AC				
	6	3	5TJ3306-7	4
	10		5TJ3310-7	4
	16		5TJ3316-7	4
	20		5TJ3320-7	4
	25		5TJ3325-7	4
	32		5TJ3332-7	4
	40		5TJ3340-7	4
	50		5TJ3350-7	4
	63		5TJ3363-7	4
4P, 415V AC				
	6	4	5TJ3406-7	3
	10		5TJ3410-7	3
	16		5TJ3416-7	3
	20		5TJ3420-7	3
	25		5TJ3425-7	3
	32		5TJ3432-7	3
	40		5TJ3440-7	3
	50		5TJ3450-7	3
	63		5TJ3463-7	3

Selection & Ordering Data

6000 A	In (A)	(MW)	Characteristic B Reference No.	Characteristic C Reference No.	Standard Packaging No. of Pieces
1P, 240/415V AC					
	6	1	5TJ6106-6	5TJ6106-7	12
	10		5TJ6110-6	5TJ6110-7	12
	16		5TJ6116-6	5TJ6116-7	12
	20		5TJ6120-6	5TJ6120-7	12
	25		5TJ6125-6	5TJ6125-7	12
	32		5TJ6132-6	5TJ6132-7	12
	40		5TJ6140-6	5TJ6140-7	12
	50		5TJ6150-6	5TJ6150-7	12
	63		5TJ6163-6	5TJ6163-7	12
2P, 415V AC					
	6	2	5TJ6206-6	5TJ6206-7	6
	10		5TJ6210-6	5TJ6210-7	6
	16		5TJ6216-6	5TJ6216-7	6
	20		5TJ6220-6	5TJ6220-7	6
	25		5TJ6225-6	5TJ6225-7	6
	32		5TJ6232-6	5TJ6232-7	6
	40		5TJ6240-6	5TJ6240-7	6
	50		5TJ6250-6	5TJ6250-7	6
	63		5TJ6263-6	5TJ6263-7	6
3P, 415V AC					
	6	3	5TJ6306-6	5TJ6306-7	4
	10		5TJ6310-6	5TJ6310-7	4
	16		5TJ6316-6	5TJ6316-7	4
	20		5TJ6320-6	5TJ6320-7	4
	25		5TJ6325-6	5TJ6325-7	4
	32		5TJ6332-6	5TJ6332-7	4
	40		5TJ6340-6	5TJ6340-7	4
	50		5TJ6350-6	5TJ6350-7	4
	63		5TJ6363-6	5TJ6363-7	4
4P, 415V AC					
	6	4	5TJ6406-6	5TJ6406-7	3
	10		5TJ6410-6	5TJ6410-7	3
	16		5TJ6416-6	5TJ6416-7	3
	20		5TJ6420-6	5TJ6420-7	3
	25		5TJ6425-6	5TJ6425-7	3
	32		5TJ6432-6	5TJ6432-7	3
	40		5TJ6440-6	5TJ6440-7	3
	50		5TJ6450-6	5TJ6450-7	3
	63		5TJ6463-6	5TJ6463-7	3

Selection & Ordering Data

10000 A	In (A)	(MW)	Characteristic B Reference No.	Characteristic C Reference No.	Standard Packaging No. of Pieces
1P, 240/415v AC					
	6	1	5TJ4106-6	5TJ4106-7	12
	10		5TJ4110-6	5TJ4110-7	12
	16		5TJ4116-6	5TJ4116-7	12
	20		5TJ4120-6	5TJ4120-7	12
	25		5TJ4125-6	5TJ4125-7	12
	32		5TJ4132-6	5TJ4132-7	12
	40		5TJ4140-6	5TJ4140-7	12
	50		5TJ4150-6	5TJ4150-7	12
	63		5TJ4163-6	5TJ4163-7	12
2P, 415V AC					
	6	2	5TJ4206-6	5TJ4206-7	6
	10		5TJ4210-6	5TJ4210-7	6
	16		5TJ4216-6	5TJ4216-7	6
	20		5TJ4220-6	5TJ4220-7	6
	25		5TJ4225-6	5TJ4225-7	6
	32		5TJ4232-6	5TJ4232-7	6
	40		5TJ4240-6	5TJ4240-7	6
	50		5TJ4250-6	5TJ4250-7	6
	63		5TJ4263-6	5TJ4263-7	6
3P, 415V AC					
	6	3	5TJ4306-6	5TJ4306-7	4
	10		5TJ4310-6	5TJ4310-7	4
	16		5TJ4316-6	5TJ4316-7	4
	20		5TJ4320-6	5TJ4320-7	4
	25		5TJ4325-6	5TJ4325-7	4
	32		5TJ4332-6	5TJ4332-7	4
	40		5TJ4340-6	5TJ4340-7	4
	50		5TJ4350-6	5TJ4350-7	4
	63		5TJ4363-6	5TJ4363-7	4
4P, 415V AC					
	6	4	5TJ4406-6	5TJ4406-7	3
	10		5TJ4410-6	5TJ4410-7	3
	16		5TJ4416-6	5TJ4416-7	3
	20		5TJ4420-6	5TJ4420-7	3
	25		5TJ4425-6	5TJ4425-7	3
	32		5TJ4432-6	5TJ4432-7	3
	40		5TJ4440-6	5TJ4440-7	3
	50		5TJ4450-6	5TJ4450-7	3
	63		5TJ4463-6	5TJ4463-7	3

Selection guide for residential appliances

Appliance	Capacity (Watts).	MCB current ratings (Amps).
Iron	1200	6
Mixer Grinder	200	2
Microwave Oven	750	6
Hot Plate	2000	10
Electrical Kettle	1500	10
TV/Audio System	200	2
Washing Machine	2200	16
Refrigerator 350 litres	750	4
Air Conditioner 1 hp	1500	10
1.5 hp	2500	16
2.5 hp	3500	20



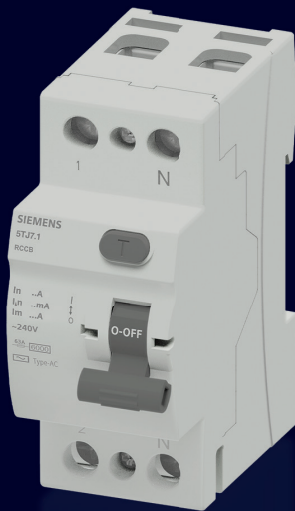
SINOVA 5TJ7

Residual Current Protective Devices

Safety ensured



Key Features



Comprehensive Range
Current ratings of 16A, 25A, 32A, 40A and 63A is available with sensitivity of 30mA, 100mA and 300mA.



User friendly
Flexibility in termination options – separate termination for cables and fork type busbar.



Compatibility
A single product for use in 50Hz and 60Hz frequency – catering to varied customer needs.

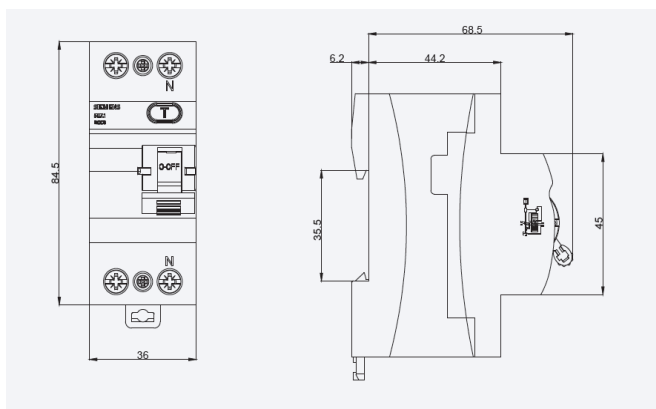
Technical Specification



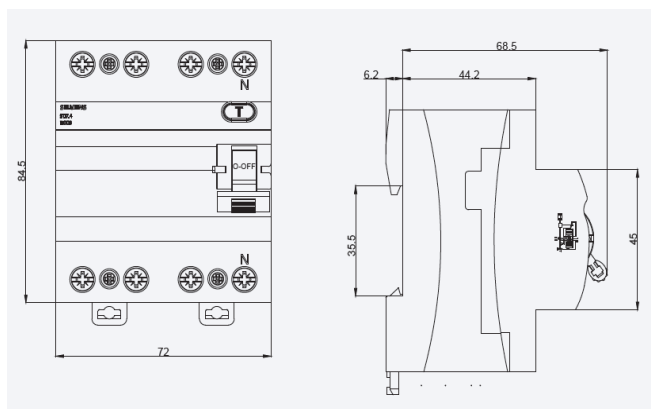
				5TJ7
Standard				
Standards				IEC 61008-1, IEC 61008-2-1
Basic Data				
Number of poles				2P 4P
Rated Current In		A		16, 25, 32, 40 and 63
Type				AC
Rated Residual Current / Δn		mA		30, 100 and 300
Rated Conditional short-circuit current	as per IEC 61008-1	kA		6
Approvals				
ROHS Compliant				Yes
CFC and Silicone-free				Yes
REACH				Yes
Operational voltage				
Rated Voltage		V AC		240/415
Impulse Withstand Voltage		kV		4
Rated Frequency		Hz		50/60
Minimum Operating Voltage for test function	30mA	V AC		90
	100mA	V AC		140
	300mA	V AC		200
Connection				
Handle end position, sealable (Sealing wire)				Yes
Degree of protection	Acc. to EN 60529			IP20 Front
Terminal Tightening Torque	recommended	N.m		2.5...3
Conductor Cross-Sections (Solid and stranded)		mm ²		2.5...35
Bi-connect (Dual) Terminals				Yes (Bottom only)
Busbar Suitability				Both Fork or Pin Type
Mounting Position				Any
Service life/endurance (operating cycles)				
Electrical				10000
Mechanical				15000
Ambient conditions				
Ambient Temperature	max. 95% humidity	°C		-25 ... +55 °C
Storage temperature		°C		-25 ... +60 °C
Degree of Pollution				2
Overvoltage Category				III

Dimension


RCCBs, 2 Pole



RCCBs, 4 Pole



Selection & Ordering Data

	In (A)	Sensitivity			Standard Packaging No. of Pieces
		30mA	100mA	300mA	
2 poles					
	16	5TJ7311-0	5TJ7411-0	5TJ7611-0	5
	25	5TJ7312-0	5TJ7412-0	5TJ7612-0	5
	32	5TJ7313-0	5TJ7413-0	5TJ7613-0	5
	40	5TJ7314-0	5TJ7414-0	5TJ7614-0	5
	63	5TJ7316-0	5TJ7416-0	5TJ7616-0	5
4 poles					
	16	5TJ7341-0	5TJ7441-0	5TJ7641-0	3
	25	5TJ7342-0	5TJ7442-0	5TJ7642-0	3
	32	5TJ7343-0	5TJ7443-0	5TJ7643-0	3
	40	5TJ7344-0	5TJ7444-0	5TJ7644-0	3
	63	5TJ7346-0	5TJ7446-0	5TJ7646-0	3

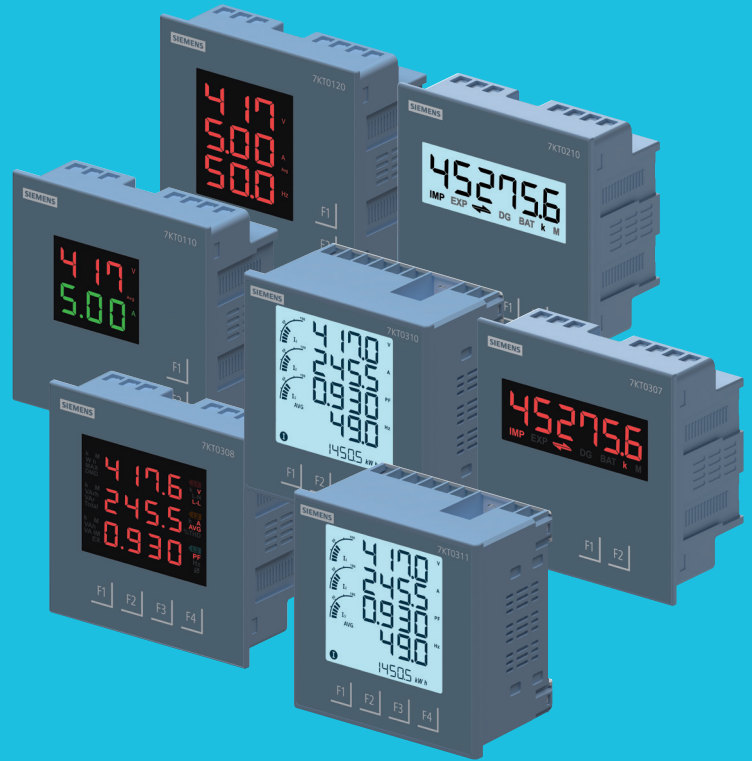
SINOVA 7KT

Power Monitoring Devices



The core component of intelligent power distribution is energy management and the SMART 7KT devices are cornerstone in facilitating the same. Only a robust and accurate sensor can ensure precise and effective energy management. Based on this premise, the entire range of SMART 7KT devices were designed.

These devices comply with the latest IEC standards, have been rigorously tested to ensure that you get the best product to meet all your power monitoring demands. The meters comply with stringent standards in design and manufacturing processes to assure cybersecurity to your plant and processes. The sustainability of our customers and environment is assured by these RoHS compliant devices. In view of the various applications and advisement of IEC standards like IEC 60364-8-1, SMART 7KT devices have been designed to specifically suit the various uses.



Discrete Panel Meter

Accurate and easy visualization for all the basic measurement requirements

Discrete panel meters are most suited when the visual reading of basic parameters like voltage, current and frequency are required. The meters with a bright, large and multi coloured LED ensures high visibility even in dimly lit panel rooms. Energy meters, for dual sources, with integrated communication is the answer when only accurate energy recording is required.

Features:

- Tested accuracy as per IEC 61557-12 and IEC 62053-21
- RoHS compliant
- Modern aesthetics with soft touch keys

VA meter 7KT0110

- Large and bright LED display helps long-distance viewing of parameters
- Ease of identification with different colors of LED
- Easy control with soft touch keys
- Simple tool-less click fit arrangement reduces installation time



VAF meter 7KT0120

- Large and bright LED display enables long-distance viewing of parameters
- Easy control with soft touch keys
- Simple tool-less click fit arrangement reduces installation time
- Accurate RPM measurement



Multi Function Meter

Broad range of uses in industry and infrastructure

For ensuring that energy management happens in accordance with ISO 50000 standards, accurate measurement of the electrical parameters are mandatory. Also, additional data like THD will help to know the influence of the load on the system – thereby helping to maintain a good power quality which in turn would mean lesser energy costs and losses. The multi-function meters, the basis for all these measurements, are hence the cornerstone for any power distribution and energy management systems.

Features:

- Tested accuracy as per IEC 61557-12 and IEC 62053-21 / IEC 62053-22 / IEC 62053-23
- RoHS compliant
- Modern aesthetics with soft touch keys
- Integrated Modbus RTU communication over RS 485
- Measurement of 30x electrical parameters

Single Line LED Class 1 7KT0307

- Integrated communication ensures that the meter is digitalization ready
- Site settable CT and PT ratios reduces inventory
- Easy control with soft touch keys
- Simple tool-less click fit arrangement reduces installation time
- Four-quadrant measurement helps the customer in comprehensive energy management



**Multi Line LED Class 1
7KT0308**

- Large LED display for ease of visualization
- Integrated communication ensures that the meter is digitalization ready
- Site settable CT and PT ratios reduces inventory
- Easy control with soft touch keys
- Simple tool-less click fit arrangement reduces installation time
- Four-quadrant measurement helps the customer in comprehensive energy management
- Integrated DI to communicate the status of the breaker without additional hardware



**LCD Class 1
7KT0310**

- Large backlit LCD display for ease of visualization
- Graphical display makes it easy to visualize the current loading
- Integrated communication ensures that the meter is digitalization ready
- Site settable CT and PT ratios reduces inventory
- Simple tool-less click fit arrangement reduces installation time
- Four-quadrant measurement helps the customer in comprehensive energy management
- Integrated DI to communicate the status of the breaker without additional hardware



**LCD Class 0.5s
7KT0311**

- Large backlit LCD display for ease of visualization
- Graphical display makes it easy to visualize the current loading
- Integrated communication ensures that the meter is digitalization ready
- Site settable CT and PT ratios reduces inventory
- Simple tool-less click fit arrangement reduces installation time
- Four-quadrant measurement helps the customer in comprehensive energy management
- Integrated DI to communicate the status of the breaker without additional hardware
- Configurable DI / DO for load management and integrating the energy values in other systems like BMS



SMART 7KT

Power Monitoring Devices

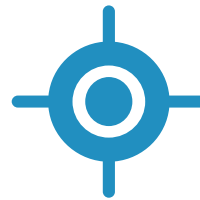
Parameters	SMART 7KT Multi Function Meter				SMART 7KT Discrete Panel Meter		
	7KT0311	7KT0310	7KT0308	7KT0307	7KT0110	7KT0120	7KT0210
Accuracy	Class 0.5s (active energy)	Class 1 (active energy)	Class 1 (active energy)	Class 1 (active energy)	Class 1	Class 1	Class 1 (active energy)
Measured parameters	All parameters	All parameters	All parameters	All parameters	Voltage, Current	Voltage, Current, Frequency	Energy (dual source), Power, powerfactor
DI / DO	1 DI (dual source) + 1 DO	1 DI	1 DI	–	–	–	1 DI for dual source
Power quality measured parameters	THD, Individual harmonics	THD, Individual harmonics	THD, Individual harmonics	–	–	–	–
Communication protocol	Modbus RTU	Modbus RTU	Modbus RTU	Modbus RTU	–	–	Modbus RTU
Display	LCD with graphical display	LCD with graphical display	Multi line LED	Single line LED	Multi line LED (with different colours)	Multi line LED	Single line LCD
Import / Export	Yes	Yes	Yes	Yes	Not applicable	Not applicable	Not applicable



Compliant



Quality



Comprehensive



Versatile





Part 2

SINOVA

Industrial Controls

Overview

SINOVA 3MH7 Contactor Relays, 3MT7 Power Contactors and 3MU7 Thermal Overload Relays are a cost-efficient and reliable solution for a variety of control, switching and motor protection applications.

The comprehensive range is designed for all standard industrial and infrastructure applications.

The range comes with homogeneous design aesthetics and common accessories across the product range for 3MH7 Contactor Relays and for 3MT7 Power Contactors up to 95A .



SINOVA 3MT7

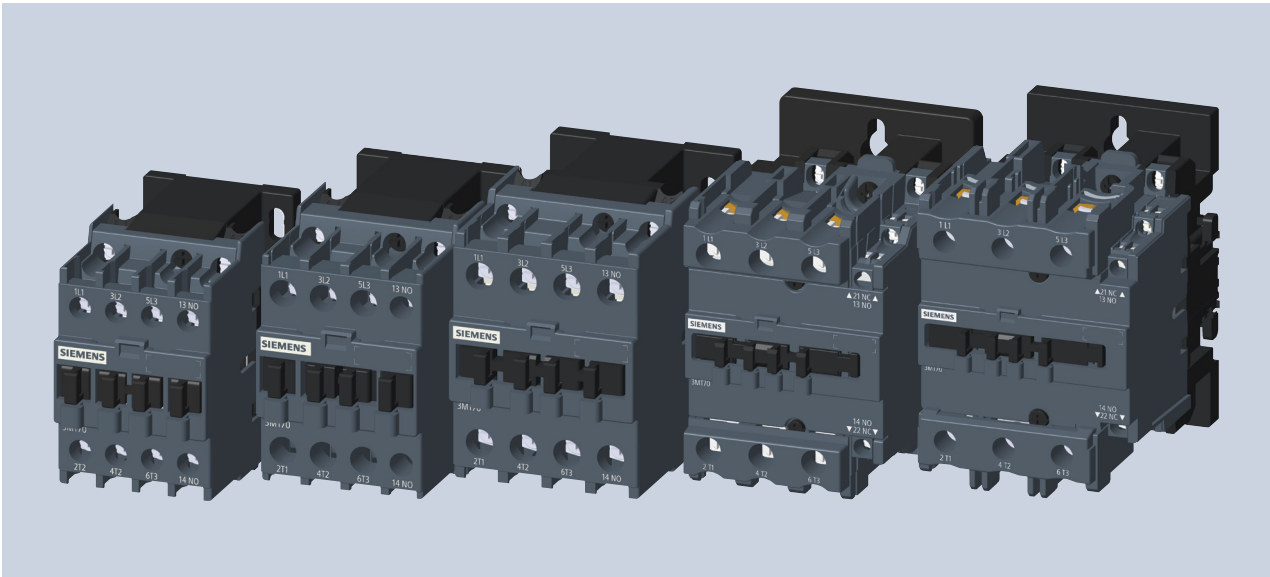
3-Pole Power Contactors

Reliable switching



Overview

The SINOVA 3MT7 Power Contactor range is a cost-efficient and reliable solution for a variety of switching applications. The comprehensive range of contactors provides optimum selection for industrial and infrastructure applications




Article number scheme

Product Version		Article number												
SINOVA 3 Pole Power Contactor	3MT7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	0		
AC-3 current rating at 415V	e.g. 012 = 12 A	0	1	2										
Size	e.g. 0 = Size 0						0							
Type of electrical connection	A= Screw terminals							A						
Number of NO contacts	e.g. 1 = 1 NO								1					
Number of NC contacts	e.g. 0 = 0 NC									0				
Coil circuit	A= AC coil circuit												A	
	e.g. P0= 230V AC, 50 Hz													P 0
Example		3MT7	0	1	2	-	0	A	A	1	0	-	0	A P 0

Note:
 The above scheme shows an overview of the product versions for understanding of the logic behind the article number
 For your orders refer to selection and ordering data

Overview of ratings and sizes


Size 0



6A	9A	12A
----	----	-----

1NO or 1NC

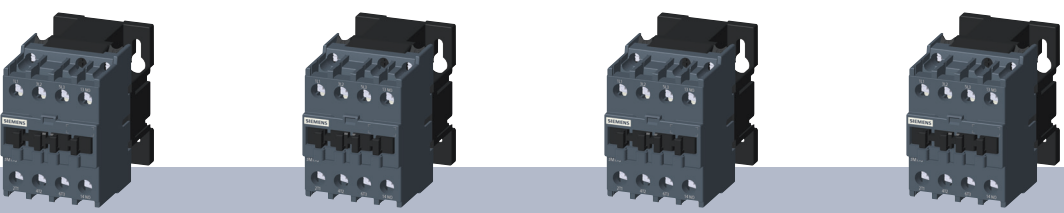
Size 1



18A	22A
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1NO or 1NC

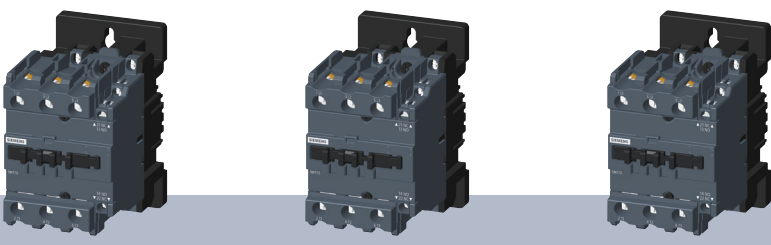
Size 2



25A	32A	38A	40A
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1NO or 1NC

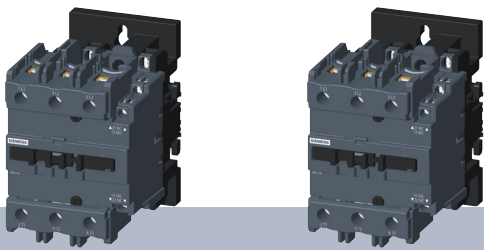
Size 3



40A	50A	65A
-----	-----	-----

1NO + 1NC

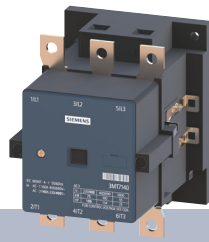
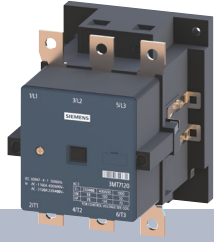
Size 4



80A	95A
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1NO + 1NC

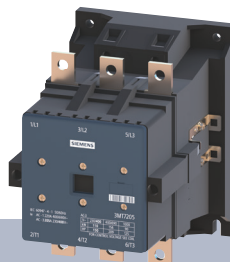
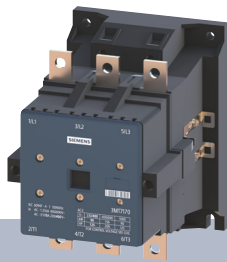
Overview of ratings and sizes



Size 5

120A

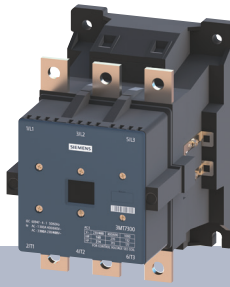
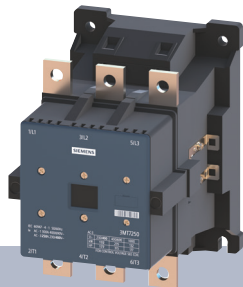
140A



Size 6

170A

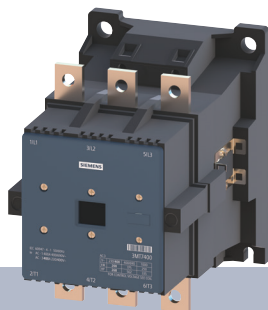
205A



Size 7

250A

300A



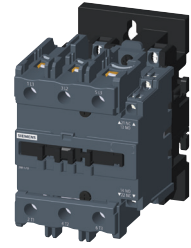
Size 8

400A

Technical Specification



Type		3MT7006-0	3MT7010-0	3MT7012-0	3MT7018-1	3MT7022-1
Size		0	0	0	1	1
General data						
Dimension (W x H x D)						
• Basic unit (W x H x D)		45x77.4x81.8			45x77.4x86.8	
Mounting position						
Rated insulation voltage U_i (pollution degree 3)						
• Main Circuit	V	1000			1000	
• Auxiliary Circuit	V	1000			1000	
Rated impulse withstand voltage U_{imp}						
• Main Circuit	kV	6			6	
• Auxiliary Circuit	kV	6			6	
Permissible ambient temperature						
During operation	°C	-5 ... +55			-5 ... +55	
During storage	°C	-25 ... +70			-25 ... +70	
Relative air humidity	%	10...95			10...95	
Degree of protection IP on the front						
		IP20			IP20	
Installation altitude at height above sea level, maximum						
	m	2000			2000	
Short-circuit protection						
Main circuit						
• Fuse links, operational class gG						
- Type of coordination "1"	A	32	32	32	40	40
- Type of coordination "2"	A	25	25	25	32	32
Auxiliary circuit						
• Fuse links, operational class gG	A	10			10	
Conductor cross-sections						
Main conductors						
Solid or stranded	mm ²	„1 x (1 ... 4 mm ²); 2 x (1 ... 4 mm ²)“			„1 x (1.5 ... 6 mm ²); 2 x (1.5 ... 6 mm ²)“	
Finely stranded with end sleeve	mm ²	„1 x (1 ... 4 mm ²); 2 x (1 ... 1.5 mm ²)“			„1 x (1 ... 6 mm ²); 2 x (1 ... 2.5 mm ²)“	
• Terminal screw		M3.5			M3.5	
- Tightening torque	Nm	1.2			1.7	
Auxiliary conductors and coil terminals						
Solid or stranded	mm ²	„1 x (1.0 ... 4.0 mm ²); 2 x (1.0 ... 4.0 mm ²)“			„1 x (1.0 ... 4.0 mm ²); 2 x (1.0 ... 4.0 mm ²)“	
Finely stranded with end sleeve	mm ²	„1 x (1.0 ... 2.5 mm ²); 2 x (1.0 ... 1.5 mm ²)“			„1 x (1.0 ... 2.5 mm ²); 2 x (1.0 ... 1.5 mm ²)“	
• Terminal screw		M3.5			M3.5	
- Tightening torque	Nm	1,2			1,2	

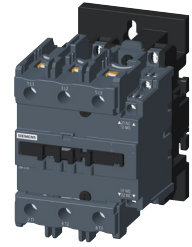


3MT7025-2	3MT7032-2	3MT7038-2	3MT7040-2	3MT7040-3	3MT7050-3	3MT7065-3	3MT7080-4	3MT095-4
2	2	2	2	3	3	3	4	4
56x82.9x95				74.5x127.4x112.6			84.5x127.4x121.3	
22.5° Inclination forward and backward & 360° rotation, in relation to normal vertical mounting plane								
1000				1000			1000	
1000				1000			1000	
6				8			8	
6				6			6	
-5 ... +55				-5 ... +55			-5 ... +55	
-25 ... +70				-25 ... +70			-25 ... +70	
10...95				10...95			10...95	
IP20				IP20			IP20	
2000				2000			2000	
50	50	63	63	80	100	100	160	160
40	40	50	50	63	80	80	125	125
10				10			10	
„1 x (1.5 ... 10 mm ²); 2 x (1.5 ... 6 mm ²)“				„1 x (2.5 ... 25 mm ²); 2 x (2.5 ... 16 mm ²)“			„1 x (4 ... 50 mm ²); 2 x (4 ... 35 mm ²)“	
„1 x (1.5 ... 10 mm ²); 2 x (1.5 ... 4 mm ²)“				„1 x (2.5 ... 25 mm ²); 2 x (2.5 ... 10 mm ²)“			„1 x (4 ... 50 mm ²); 2 x (4 ... 16 mm ²)“	
M4				M8			M10	
1.85				5			9	
„1 x (1.5 4.0 mm ²); 2 x (1.5 4.0 mm ²)“				„1 x (1.0 4.0 mm ²); 2 x (1.0 4.0 mm ²)“			„1 x (1.0 4.0 mm ²); 2 x (1.0 4.0 mm ²)“	
„1 x (1.5 4.0 mm ²); 2 x (1.5 4.0 mm ²)“				„1 x (1.0 2.5 mm ²); 2 x (1.0 1.5 mm ²)“			„1 x (1.0 2.5 mm ²); 2 x (1.0 1.5 mm ²)“	
M4				M3.5			M3.5	
1,85				1,2			1,2	

Technical Specification



Type		3MT7006-0	3MT7010-0	3MT7012-0	3MT7018-1	3MT7022-1
Size		0	0	0	1	1
Control						
Solenoid coil operating range						
• AC operation	at 50/60Hz	0.85 ... 1.1 x Us		0.85 ... 1.1 x Us		
Power consumption of the solenoid coil (maximum)						
• AC operation, 50 Hz						
- Closing	VA/p.f.	70/ 0.75		70/ 0.75		
- Closed	VA/p.f.	11/ 0.3		11/ 0.3		
• AC operation, 50 Hz wide band						
- Closing	VA/p.f.	90/ 0.75		90/ 0.75		
- Closed	VA/p.f.	15/ 0.3		15/ 0.3		
• AC operation, 50/60 Hz						
- Closing	VA/p.f.	80/ 0.75		80/ 0.75		
- Closed	VA/p.f.	12/ 0.3		12/ 0.3		
Operating times within operating range						
• AC operation, 50 Hz						
- Closing delay	ms	9 ... 25		9 ... 25		
- Opening delay	ms	4 ... 15		4 ... 15		
Rated data for Main Contacts						
Load rating with AC						
• Utilization category AC-1						
- Rated operational currents I _e at 40°C up to 690V	A	25	25	25	32	32
Utilization categories AC-3						
- Rated operational currents I _e at 400V, 55°C	A	6	9	12	18	22
- Rated operational currents I _e at 690V, 55°C	A	4	5,2	6,7	10,4	12,8
Rated Operating Power						
• operating power at AC-3 at 400 V	kW	2,2	4	5,5	7,5	11
• operating power at AC-3 at 690 V	kW	3	5,5	5,5	7,5	11
Power loss per pole	W	2,5	2,5	2,5	3,1	3,1
Mechanical service life (in million)						
• Basic units	Operating Cycles	10	10	10	10	10
• Basic unit with mounted auxiliary switch	Operating Cycles	10	10	10	10	10
Electrical service life AC-3 @400V (in million)						
	Operating Cycles	1,4	1,4	1,4	1,2	1,2
Switching frequency						
	Operating cycles/hour					
• No-load switching frequency	1/h	1800	1800	1800	1800	1800
• Switching frequency AC-1	1/h	600	600	600	600	600
• Switching frequency AC-3	1/h	750	750	750	750	750

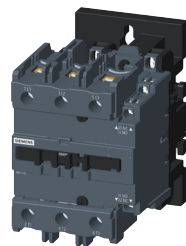


3MT7025-2	3MT7032-2	3MT7038-2	3MT7040-2	3MT7040-3	3MT7050-3	3MT7065-3	3MT7080-4	3MT095-4
2	2	2	2	3	3	3	4	4
0.85 ... 1.1 x Us				0.85 ... 1.1 x Us			0.85 ... 1.1 x Us	
100 / 0.75 15 / 0.3				230 / 0.75 44 / 0.3			230 / 0.75 44 / 0.3	
120 / 0.75 15 / 0.3				-			-	
110 / 0.75 15 / 0.3				280 / 0.75 41 / 0.3			280 / 0.75 41 / 0.3	
12 ... 27 5 ... 22				17 ... 29 6 ... 15			17 ... 38 5 ... 23	
40	40	50	50	60	80	80	125	125
25 13	32 16	38 18,2	40 18,2	40 24	50 24	65 32	80 47	95 47
11 11 3,6	15 15 5,2	18,5 15 5,2	18,5 15 5,2	18,5 22 5,4	22 22 7,4	30 30 6,4	37 45 13,7	45 45 13,7
10 10 0,8	10 10 0,8	10 10 0,9	10 10 0,9	5 5 0,9	5 5 0,9	5 5 0,9	3 3 0,7	3 3 0,7
1800 600 750	1800 600 600	1800 600 600	1800 600 600	1200 600 600	1200 600 600	1200 600 600	1200 600 400	1200 600 400

Technical Specification

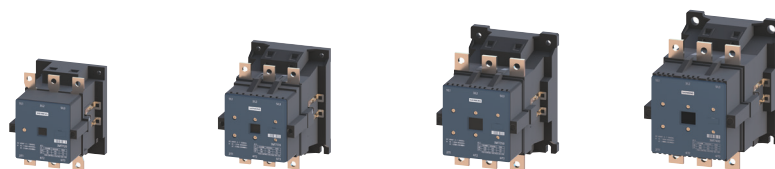


Type	3MT7006-0	3MT7010-0	3MT7012-0	3MT7018-1	3MT7022-1
Size	0	0	0	1	1
Rated data for Auxiliary Contacts					
Number of Auxiliary contacts	1NO or 1NC			1NO or 1NC	
Load rating with AC					
• Rated operational currents I _e					
- AC-12	690V	A	10	10	10
- AC-15 at rated operational voltage U _e	230V	A	6	6	6
	400V	A	3	3	3
	500V	A	2	2	2
	690V	A	1	1	1
• Load rating with DC (1 conducting path)					
- DC-12, at rated operational voltage U _e	24V	A	6	6	6
	110V	A	3	3	3
	220V	A	1	1	1
- DC-13, at rated operational voltage U _e	24V	A	6	6	6
	110V	A	1	1	1
	220V	A	0,3	0,3	0,3
	440V	A	0,14	0,14	0,14
	600V	A	0,1	0,1	0,1



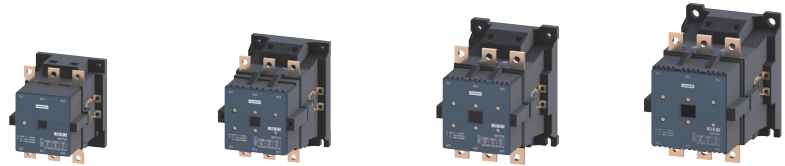
3MT7025-2	3MT7032-2	3MT7038-2	3MT7040-2	3MT7040-3	3MT7050-3	3MT7065-3	3MT7080-4	3MT095-4
2	2	2	2	3	3	3	4	4
1NO or 1NC				1NO + 1NC			1NO + 1NC	
10				10			10	
6				6			6	
3				3			3	
2				2			2	
1				1			1	
6				6			6	
3				3			3	
1				1			1	
6				6			6	
1				1			1	
0,3				0,3			0,3	
0,14				0,14			0,14	
0,1				0,1			0,1	

Technical Specification








Type		3MT7120	3MT7140	3MT7170	3MT7205	3MT7250	3MT7300	3MT7400
Size		5	5	6	6	7	7	8
General data								
Dimension (W x H x D)								
• Basic unit (W x H x D)	mm	120x150x152		135x180x185		150x205x198		160x204x222
Mounting position		22.5° Inclination forward and backward & 360° rotation, in relation to normal vertical mounting plane						
Rated insulation voltage U_i (pollution degree 3)								
• Main Circuit	V	1000		1000		1000		1000
• Auxiliary Circuit	V	1000		1000		1000		1000
Rated impulse withstand voltage U_{imp}								
• Main Circuit	kV	8		8		8		8
Permissible ambient temperature								
During operation	°C	-5 ... +55		-5 ... +55		-5 ... +55		-5 ... +55
During storage	°C	-25 ... +70		-25 ... +70		-25 ... +70		-25 ... +70
Relative air humidity	%	10...95		10...95		10...95		10...95
Degree of protection IP on the front		IP20		IP20		IP20		IP20
Installation altitude at height above sea level, maximum		2000		2000		2000		2000
Short-circuit protection								
Main circuit								
• Fuse links, operational class gG								
- Type of coordination "1"	A	400	400	400	400	500	500	630
- Type of coordination "2"	A	200	250	250	250	400	400	500
Conductor cross-sections								
Main conductors								
Solid or stranded	mm ²	2x (50 ... 120 mm ²)		2x (50 ... 120 mm ²)		2x (70 ... 240 mm ²)		2x (70 ... 240 mm ²)
Finely stranded with end sleeve	mm ²	2x (35 ... 95 mm ²)		2x (35 ... 95 mm ²)		2x (50 ... 240mm ²)		2x (50 ... 240mm ²)
• Terminal bar (max. width)	mm	2x(20x3) mm		2x(20x3) mm		2x(25x5) mm		2x(25x5) mm
• Terminal screw		M8 x 25		M8 x 25		M10 x 30		M10 x 30
- Tightening torque	Nm	10 ... 14 Nm		10 ... 14 Nm		14 ... 24 Nm		14 ... 24 Nm
Auxiliary conductors and coil terminals								
Solid or stranded	mm ²	1 x (1.0 4.0 mm ²); 2 x (1.0 4.0 mm ²)		1 x (1.0 4.0 mm ²); 2 x (1.0 4.0 mm ²)		1 x (1.5 4.0 mm ²); 2 x (1.5 4.0 mm ²)		1 x (1.0 4.0 mm ²); 2 x (1.0 4.0 mm ²)
Finely stranded with end sleeve	mm ²	1 x (1.0 2.5 mm ²); 2 x (1.0 1.5 mm ²)		1 x (1.0 2.5 mm ²); 2 x (1.0 1.5 mm ²)		1 x (1.5 4.0 mm ²); 2 x (1.5 4.0 mm ²)		1 x (1.0 2.5 mm ²); 2 x (1.0 1.5 mm ²)
• Terminal screw		M3.5		M3.5		M4		M3.5
- Tightening torque	Nm	1,2		1,2		1,85		1,2

Technical Specification



Type		3MT7120	3MT7140	3MT7170	3MT7205	3MT7250	3MT7300	3MT7400
Size		5	5	6	6	7	7	8
Control								
Solenoid coil operating range								
• AC operation	at 50/60Hz	0.85 ... 1.1 x Us		0.85 ... 1.1 x Us		0.85 ... 1.1 x Us		0.85 ... 1.1 x Us
Power consumption of the solenoid coil (maximum)								
• AC operation, 50 Hz								
- Closing	VA/p.f.	550 / 0.45		910 / 0.38		1440 / 0.34		2450 / 0.21
- Closed	VA/p.f.	40 / 0.24		65 / 0.26		95 / 0.24		115 / 0.33
• AC operation, 50/60 Hz								
- Closing	VA/p.f.	660 / 0.45		1080 / 0.38		1780 / 0.32		3050 / 0.23
- Closed	VA/p.f.	56 / 0.24		80 / 0.27		122 / 0.23		165 / 0.29
Operating times within operating range								
• AC operation								
- Closing	ms	22 ... 37		25 ... 40		25 ... 40		25 ... 40
- Closed	ms	8 ... 30		10 ... 30		10 ... 30		8 ... 30
Rated data for Main Contacts								
Load rating with AC								
• Utilization category AC-1								
- Rated operational currents I _e at 40°C up to 690V	A	160	160	210	220	300	300	400
Utilization categories AC-3								
- Rated operational currents I _e at 400V, 55°C	A	120	140	170	205	250	300	400
- Rated operational currents I _e at 690V, 55°C	A	110	110	170	170	250	250	400
Rated Operating Power								
• operating power at AC-3 at 400 V	kW	55	75	90	110	132	160	200
• operating power at AC-3 at 690 V	kW	100	100	156	156	235	235	375
Mechanical service life (in million)								
• Basic units	Operating Cycles	3		3		3		3
Electrical service life AC-3 @400V (in million)								
	Operating Cycles	0.6		0.6		0.6		0.6
Switching frequency								
	Operating cycles/hour							
• No-load switching frequency	Cycles/h	5000	5000	5000	5000	3000	3000	3000
• Switching frequency AC-1	Cycles/h	800	800	800	750	800	750	700
• Switching frequency AC-3	Cycles/h	750	750	700	500	700	500	500

Selection and Ordering Information


Size	Rated Data			Auxiliary contacts		Article No.
	AC-3 at 400V at 55°C	Ratings of three-phase motors at 50 Hz and 400V	AC-1 at 690V at 40°C	NO	NC	
	A	kW	A			
Size 0 	6	2.2	25	1	-	3MT7006-0AA10-0A..
	6	2.2	25	-	1	3MT7006-0AA01-0A..
	9	4	25	1	-	3MT7010-0AA10-0A..
	9	4	25	-	1	3MT7010-0AA01-0A..
	12	5.5	25	1	-	3MT7012-0AA10-0A..
	12	5.5	25	-	1	3MT7012-0AA01-0A..
Size 1 	18	7.5	32	1	-	3MT7018-1AA10-0A..
	18	7.5	32	-	1	3MT7018-1AA01-0A..
	22	11	32	1	-	3MT7022-1AA10-0A..
	22	11	32	-	1	3MT7022-1AA01-0A..
Size 2 	25	11	40	1	-	3MT7025-2AA10-0A..
	25	11	40	-	1	3MT7025-2AA01-0A..
	32	15	40	1	-	3MT7032-2AA10-0A..
	32	15	40	-	1	3MT7032-2AA01-0A..
	38	18.5	50	1	-	3MT7038-2AA10-0A..
	38	18.5	50	-	1	3MT7038-2AA01-0A..
	40	18.5	50	1	-	3MT7040-2AA10-0A..
	40	18.5	50	-	1	3MT7040-2AA01-0A..
Size 3 	40	18.5	60	1	1	3MT7040-3AA11-0A..
	50	22	80	1	1	3MT7050-3AA11-0A..
	65	30	80	1	1	3MT7065-3AA11-0A..
Size 4 	80	37	125	1	1	3MT7080-4AA11-0A..
	95	45	125	1	1	3MT7095-4AA11-0A..

.. Please enter coil codes from table below

Coil Code											
	24V	36V	48V	110V	220V	230V	380V	400V	415V	165-273*	353-455V*
50Hz	B0	G0	H0	F0	M0	P0	Q0	V0	R0	S0	T0
50/60Hz	C2	G2	H2	F2	N2	L2	Q2	V2	R2	-	-

Note: *T0 and S0 wide band coils are available upto Size 2 contactors

Selection and Ordering Information

Size	Rated Data			Auxiliary contacts		Article No.
	AC-3 at 400V at 55°C	Ratings of three-phase motors at 50 Hz and 400V	AC-1 at 690V at 40°C	NO	NC	
	A	kW	A			
Size 5 	120	55	160	-	-	3MT71205AA000A..
	140	75	160	-	-	3MT71405AA000A..
Size 6 	170	90	210	-	-	3MT71706AA000A..
	205	110	220	-	-	3MT72056AA000A..
Size 7 	250	132	300	-	-	3MT72507AA000A..
	300	160	300	-	-	3MT73007AA000A..
Size 8 	400	200	400	-	-	3MT74008AA000A..

Note: .. Please enter coil codes from table in next page

Selection and Ordering Information

Accessories



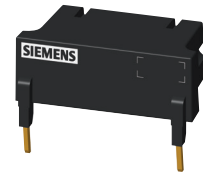
1 & 2 Pole Front Auxiliary switches



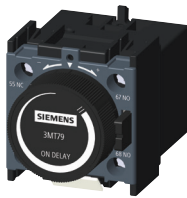
4 Pole Front Auxiliary switches



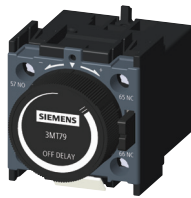
Lateral Auxiliary switches



Surge Suppressor



On Delay Pneumatic timer



Off Delay Pneumatic timer



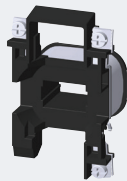
Mechanical Interlock



Electro-Mechanical Interlock

Please refer Chapter no. 40 for more information on accessories

Spare Coils



3MT79000L..1

Size of Contactor	Article No.
Size 0 and Size 1	3MT79000L..1
Size 2	3MT79000L..2
Size 3 and Size 4	3MT79000L..3






.. Please enter coil codes from table below

	Coil Code										
	24V	36V	48V	110V	220V	230V	380V	400V	415V	165-273*	353-455V*
50Hz	B0	G0	H0	F0	M0	P0	Q0	V0	R0	S0	T0
50/60Hz	C2	G2	H2	F2	N2	L2	Q2	V2	R2	-	-

Note : *T0 and S0 wide band coils are available upto Size 2 contactors

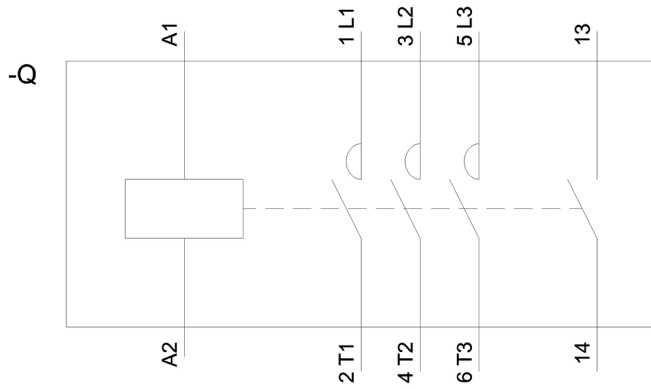
Selection and Ordering Information

Spares Top Housing

Size	AC-3 at 400V at 55°C	Ratings of three- phase motors at 50 Hz and 400V	AC-1 at 690V at 40°C	Auxiliary Contacts		Article No.
	A	kW	A	NO	NC	
Size 0 	6	2.2	25	1	-	3MT7906-0HA10
	6	2.2	25	-	1	3MT7906-0HA01
	9	4	25	1	-	3MT7910-0HA10
	9	4	25	-	1	3MT7910-0HA01
	12	5.5	25	1	-	3MT7912-0HA10
	12	5.5	25	-	1	3MT7912-0HA01
Size 1 	18	7.5	32	1	-	3MT7918-1HA10
	18	7.5	32	-	1	3MT7918-1HA01
	22	11	32	1	-	3MT7922-1HA10
	22	11	32	-	1	3MT7922-1HA01
Size 2 	25	11	40	1	-	3MT7925-2HA10
	25	11	40	-	1	3MT7925-2HA01
	32	15	40	1	-	3MT7932-2HA10
	32	15	40	-	1	3MT7932-2HA01
	38	18.5	50	1	-	3MT7938-2HA10
	38	18.5	50	-	1	3MT7938-2HA01
	40	18.5	50	1	-	3MT7940-2HA10
	40	18.5	50	-	1	3MT7940-2HA01
Size 3 	40	18.5	60	1	1	3MT7940-3HA11
	50	22	80	1	1	3MT7950-3HA11
	65	30	80	1	1	3MT7965-3HA11
Size 4 	80	37	125	1	1	3MT7980-4HA11
	95	45	125	1	1	3MT7995-4HA11

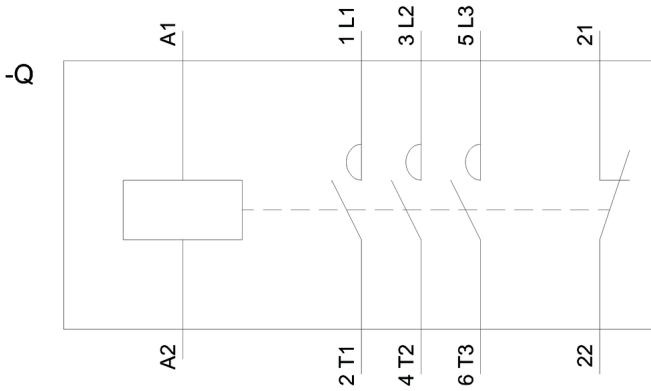
Wiring diagram

Size 0, Size 1, Size 2 (1 NO Version)



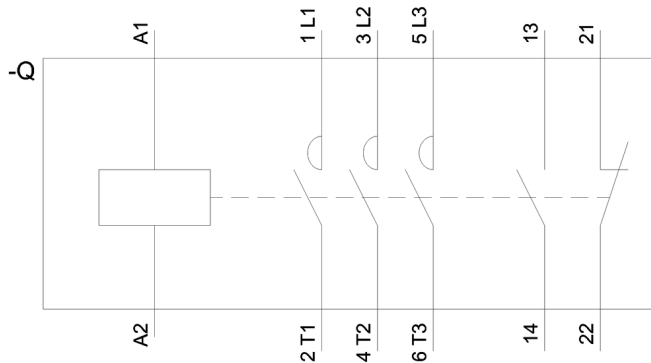
Size 0: 6A / 9A / 12A
 Size 1: 18A / 22A
 Size 2: 25A / 32A / 38A / 40A

Size 0, Size 1, Size 2 (1 NC Version)



Size 0: 6A / 9A / 12A
 Size 1: 18A / 22A
 Size 2: 25A / 32A / 38A / 40A

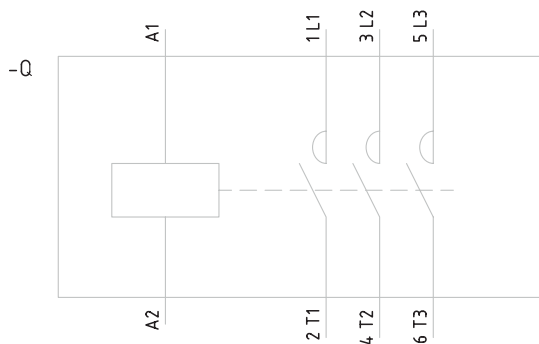
Size 3, Size 4 (1NO+1NC version)



Size 3: 40A / 50A / 65A
 Size 4: 80A / 95A

Wiring Diagram

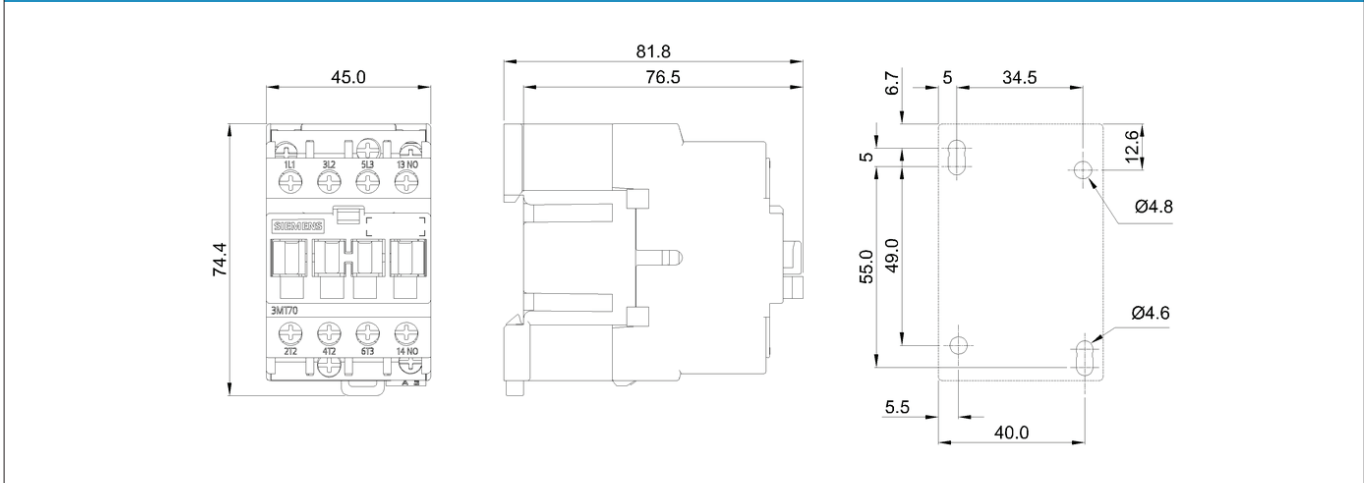
Size 5, Size 6, Size 7, Size 8



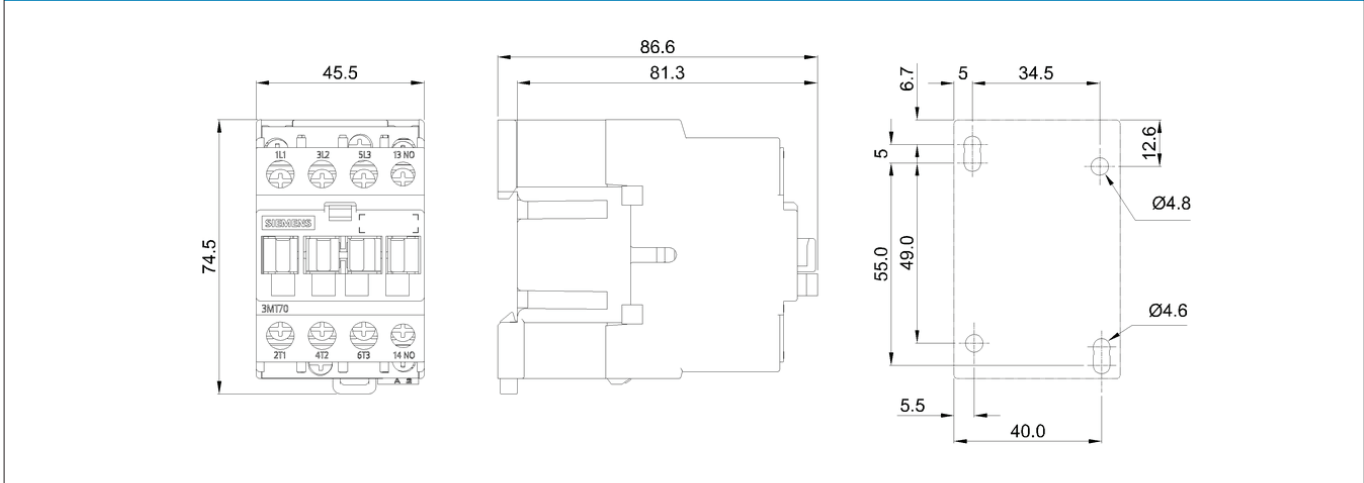
Size 5: 120-140A
Size 6: 170-205A
Size 7: 250-300A
Size 8: 400A

Dimension Drawing

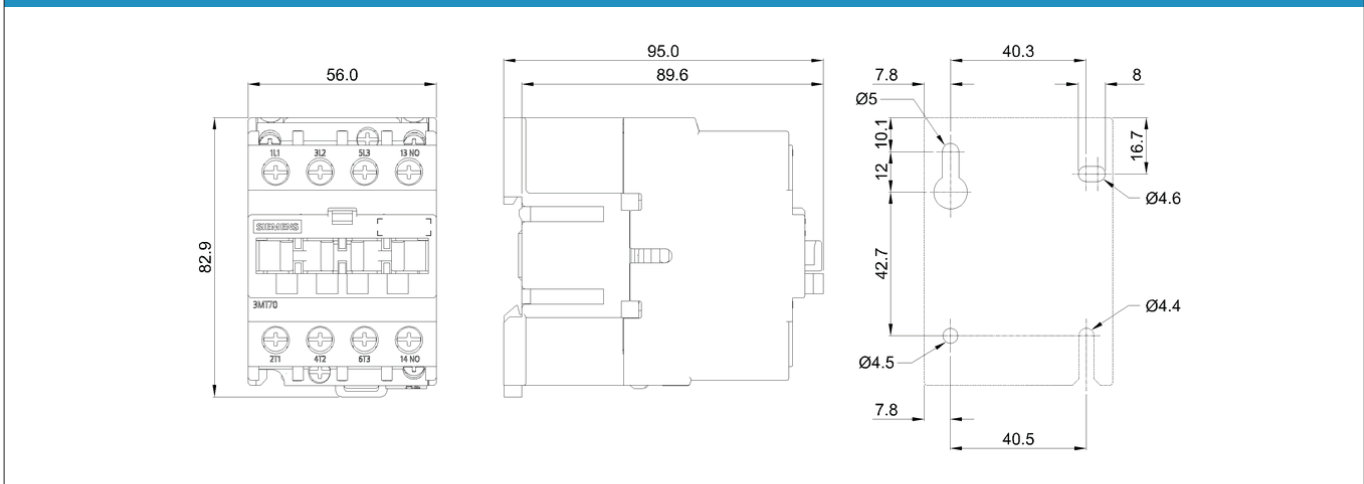
Size 0 (1NO or 1NC version) 6A / 9A / 12A



Size 1 (1NO or 1NC version) 18A / 22A

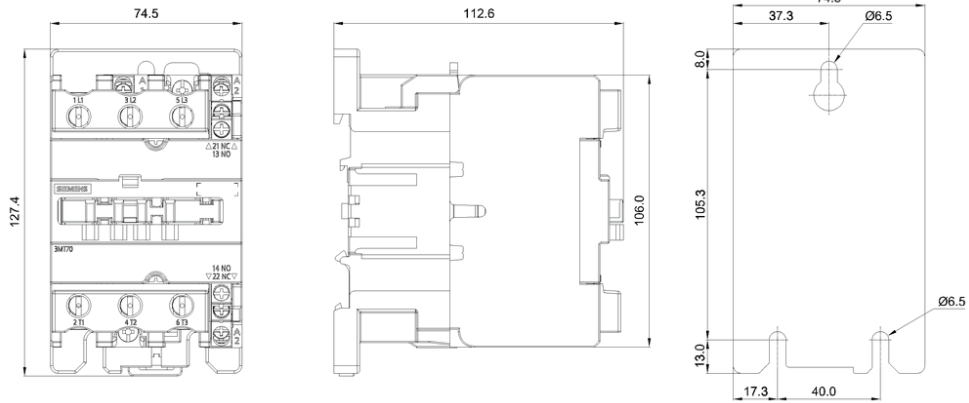


Size 2 (1NO or 1NC version) 25A / 32A / 38A / 40A

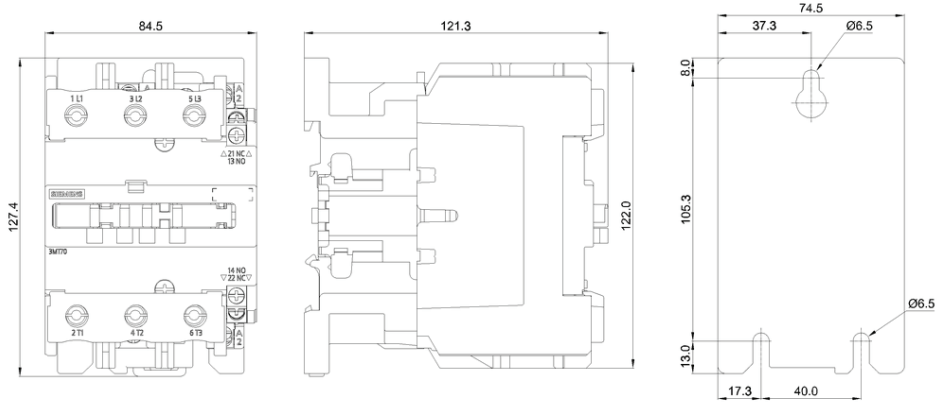


Dimension Drawing

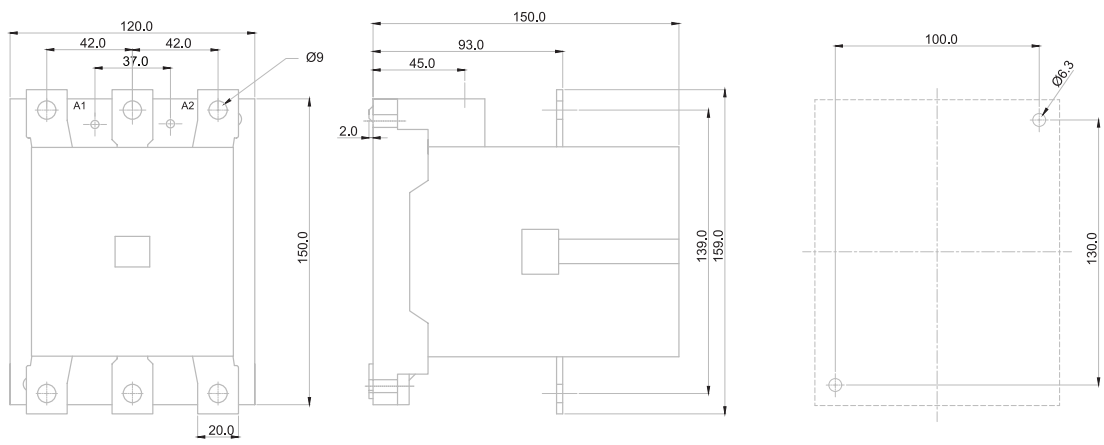
Size 3 (1NO+1NC) 40A / 50A / 65A



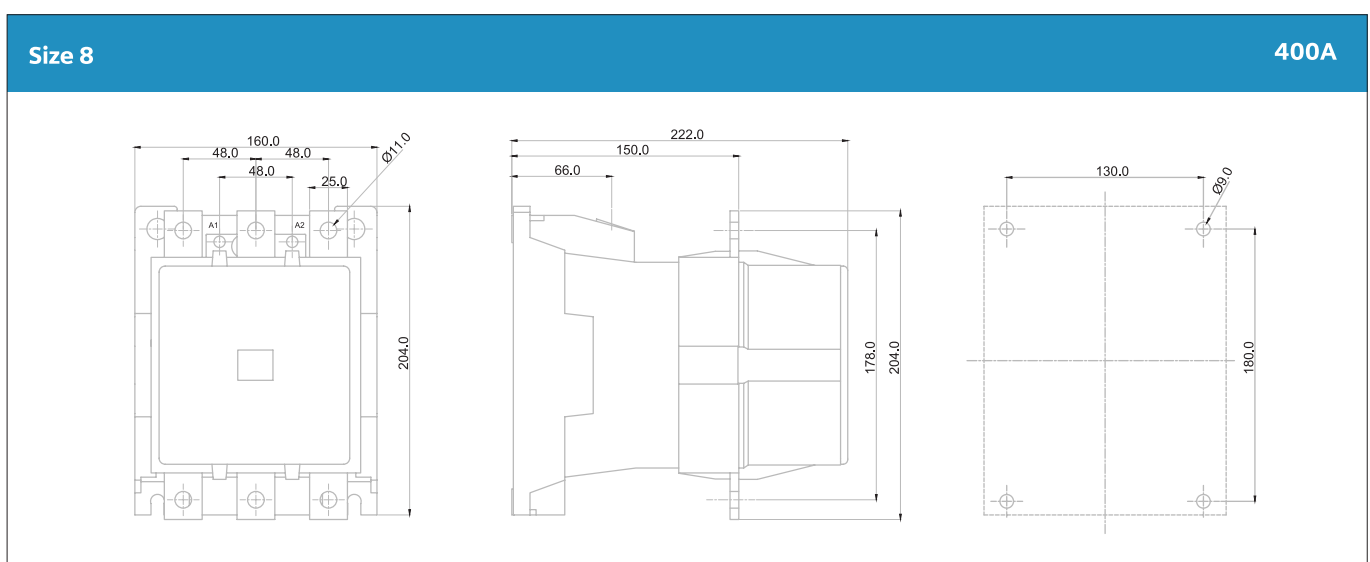
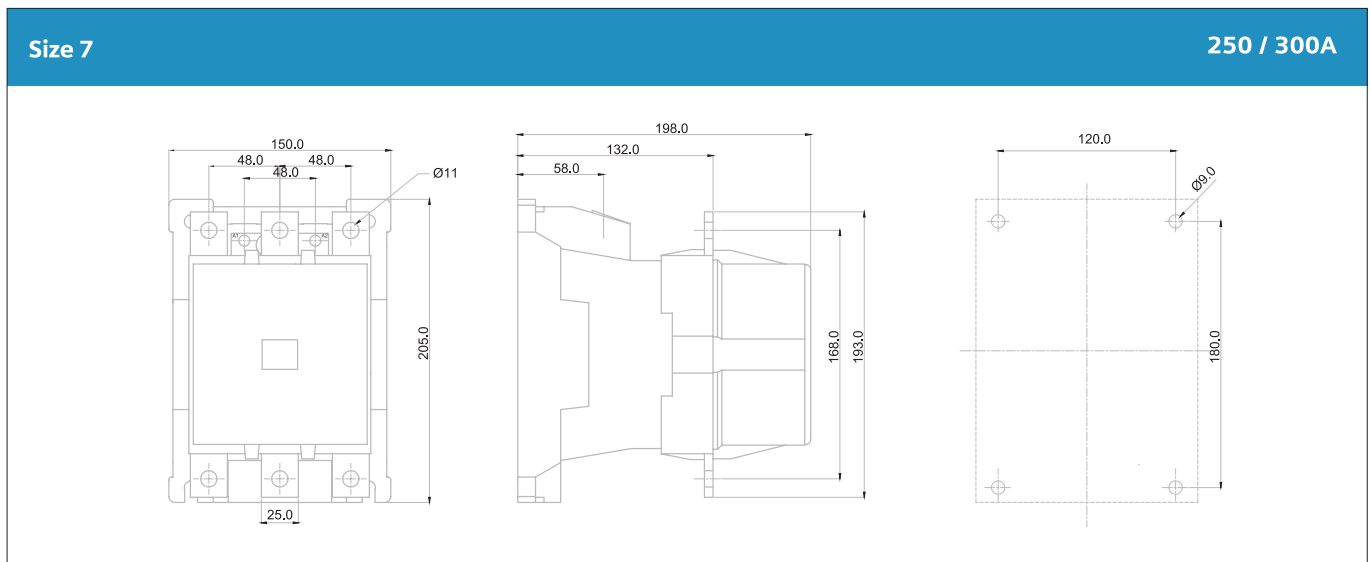
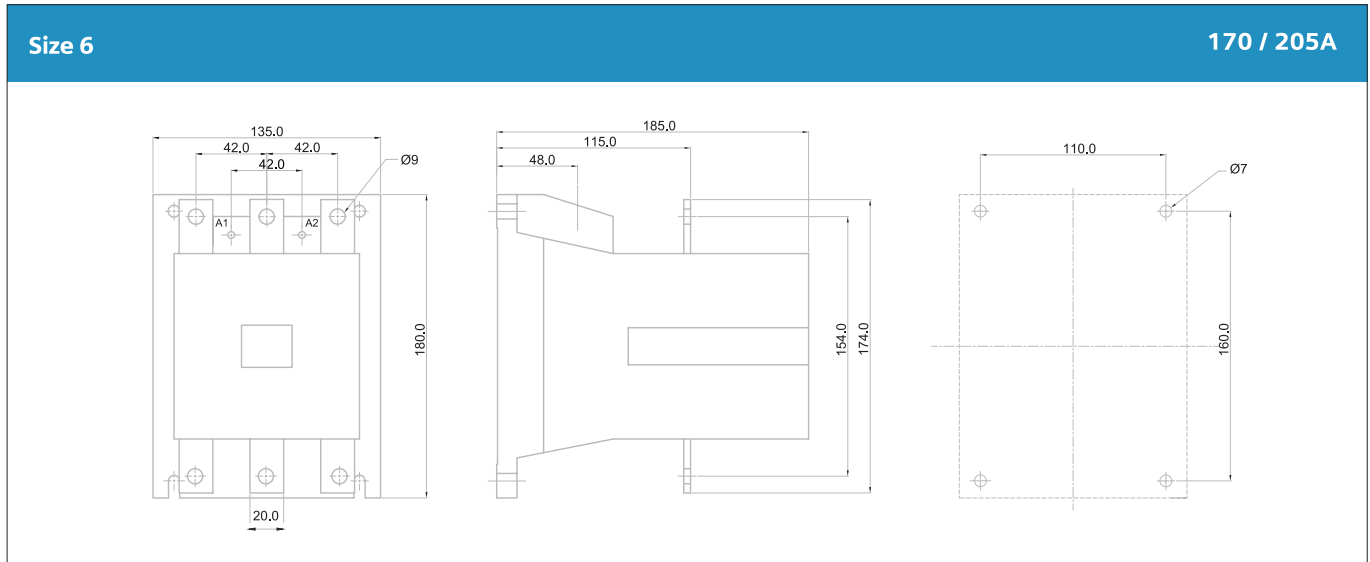
Size 4 (1NO+1NC) 80A / 95A




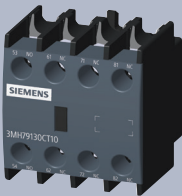

Size 5 120 / 140A

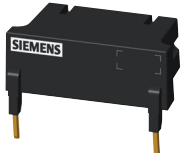


Dimension Drawing

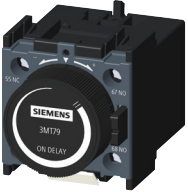
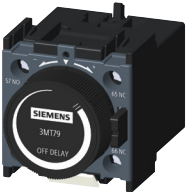



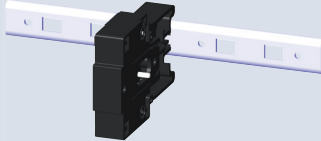
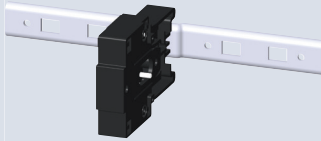

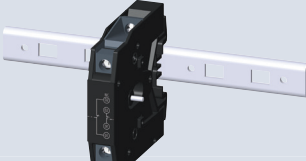
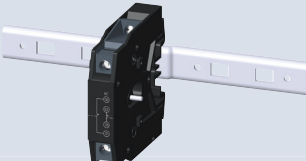

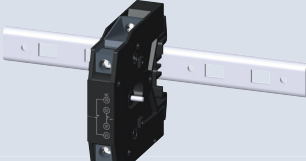
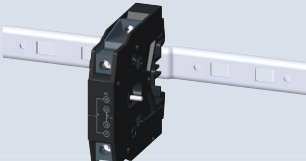
Accessories for Contactors 3MT7 and 3MH7

Auxiliary switches						
Compatible with 3MT7 three pole power contactor and 3MH7 contactor relay						
Product Picture	Number of auxiliary contacts		Mounting Position	Compatible contactor	Maximum mountable auxiliary switches	Article number
	NO	NC				
	1	-	Front	Size 0,1,2,3,4 and Contactor relay	1	3MH7910-OCT10
	-	1				3MH7901-OCT10
	2	-				3MH7920-OCT10
	1	1				3MH7911-OCT10
	-	2				3MH7902-OCT10
	4	-				3MH7940-OCT10
	3	1				3MH7931-OCT10
	2	2				3MH7922-OCT10
	1	3				3MH7913-OCT10
	-	4				3MH7904-OCT10
	2	-	First left	Size 5,6,7,8	2	3MH7920-OCL10
	1	1				3MH7911-OCL10
	1	1	First left or first right	2	3MH79110CL21	
			Second left or second right		2	3MH79110CL22

Surge Suppressor			
Compatible with 3MT7 three pole power contactor Size 0,1,2,3,4 and 3MH7 contactor relay			
Product Picture	Voltage	Mounting Position	Article number
	24-48V AC 50/60Hz	Clip on between A1-A2 coil terminals	3MT7900-1SC21
	110-240V AC 50/60Hz		3MT7900-1SL21
	380-440V AC 50/60Hz		3MT7900-1SV21

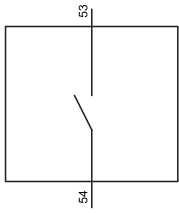
Accessories for Contactors 3MT7 and 3MH7

Pneumatic Timer						
Compatible with 3MT7 three pole power contactor Size 0,1,2,3,4						
Product Picture	Number of auxiliary contacts		Mounting Position	Function	Timing	Article number
	NO	NC			Seconds	
	1	1	Top	On Delay	0.1-3	3MT7900-0PN10
					0.1-30	3MT7900-0PN20
					10-180	3MT7900-0PN30
	1	1	Top	Off Delay	0.1-3	3MT7900-0PF10
					0.1-30	3MT7900-0PF20
					10-180	3MT7900-0PF30

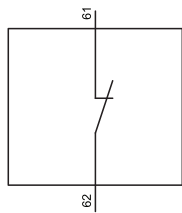
Interlock						
For 3MT7 three pole power contactors						
Mechanical Interlock	Suitable for Contactor Size 0, 1,2	 3MT7900-1XM01	Suitable for Contactor Size 3	 3MT7900-1XM02	Suitable for Contactor Size 4	 3MT7900-1XM03
		 3MT7900-1XE01		 3MT7900-1XE02		 3MT7900-1XE03
		 3MT7900-1XE01		 3MT7900-1XE02		 3MT7900-1XE03

Wiring Diagram

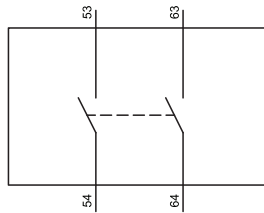
1 & 2 Pole Front Auxiliary switches



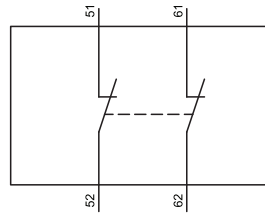
Single Pole 1NO



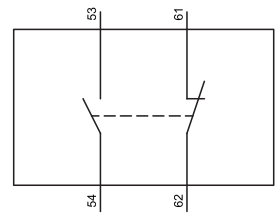
Single Pole 1NC



Two Pole 2NO

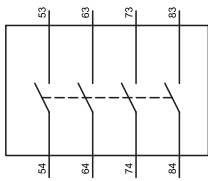


Two Pole 2NC

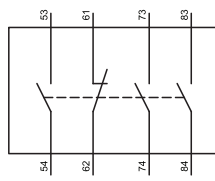


Two Pole 1NO + 1NC

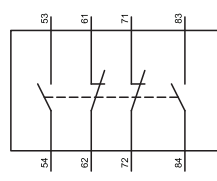
4 Pole Front Auxiliary switches



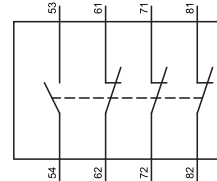
Four Pole 4NO



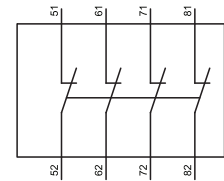
Four Pole 3NO+1NC



Four Pole 2NO+2NC

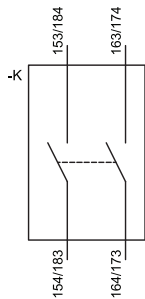


Four Pole 1NO+3NC

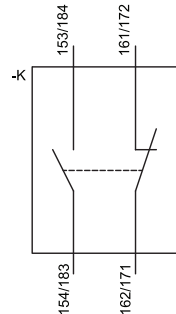


Four Pole 4NC

Lateral Auxiliary Switch

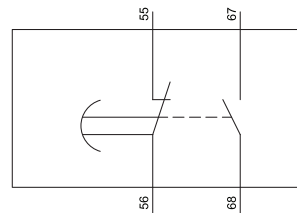


Two pole 2NO

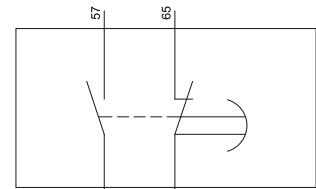


Two pole 1NO + 1NC

Pneumatic Timer

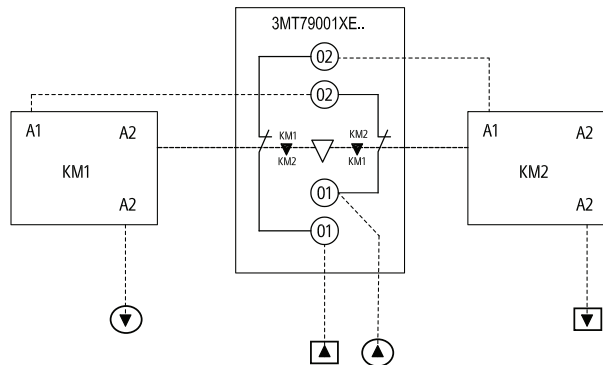
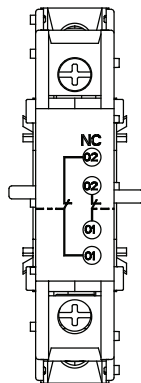


ON Delay timer

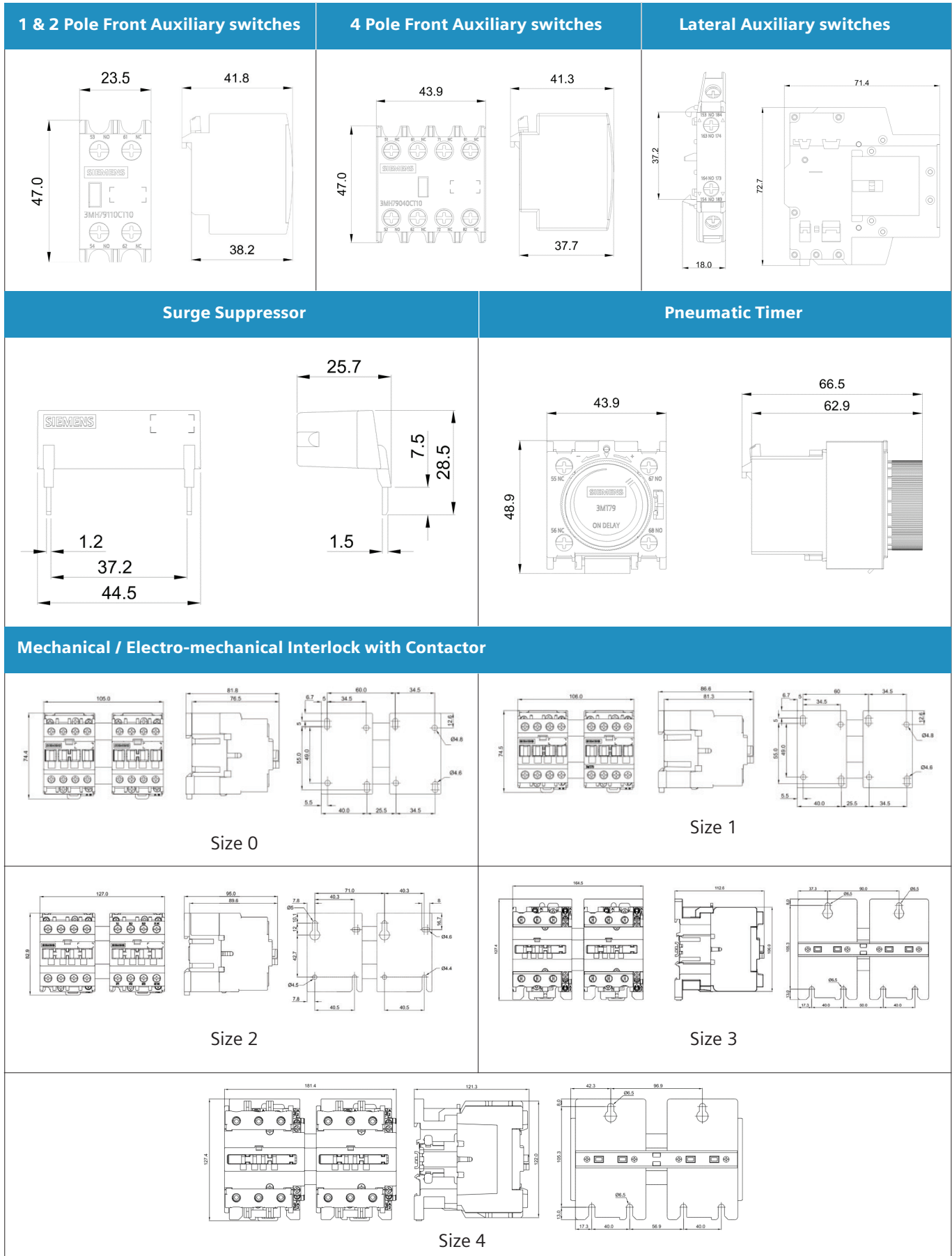


OFF Delay timer

Electro-Mechanical Interlock



Dimension Drawing



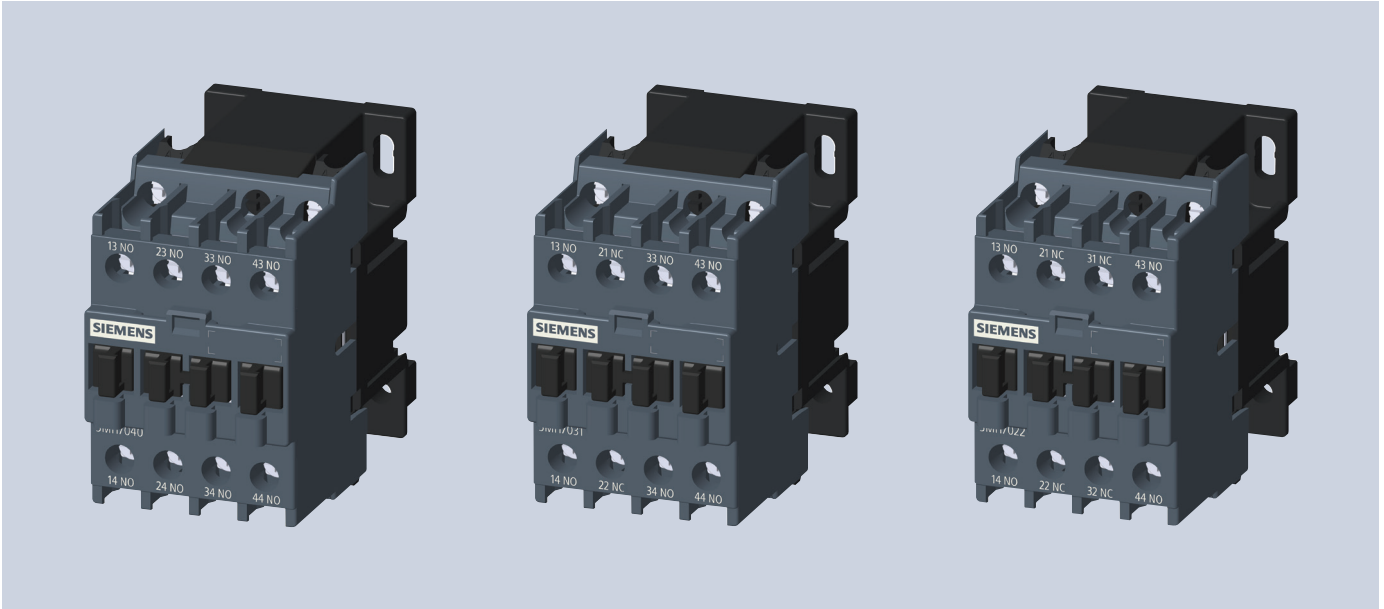
SINOVA 3MH7 Contactor Relays

Reliable control



Overview

SINOVA 3MH7 Contactor Relays are the foremost solution for your control circuit needs. These Contactor Relays are the cost-efficient and reliable choice of switching devices for controlling and signaling.

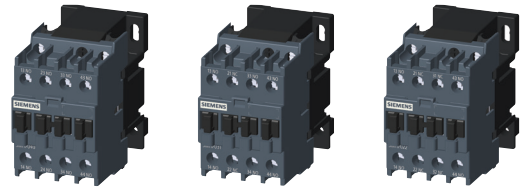


Article number scheme

Product Version		Article number									
SINOVA Contactor Relays		3MH7	0	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>			0
Number of NO contacts	e.g. 2 = 2 NO			2							
Number of NC contacts	e.g. 2 = 2 NC			2							
Type of electrical connection	1= Screw terminals					1					
Coil circuit	A= AC coil circuit					A					
Rated control supply voltage	e.g. P0 = 230V AC, 50 Hz										
Example		3MH7	0	2	2	-	1	A	P	0	0

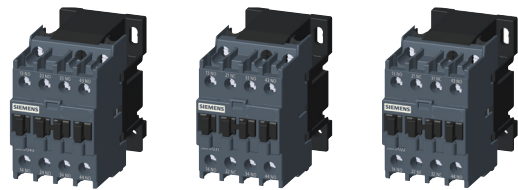
Note:
 The above scheme shows an overview of the product versions for understanding of the logic behind the article number
 For your orders refer to selection and ordering data

Technical Specification



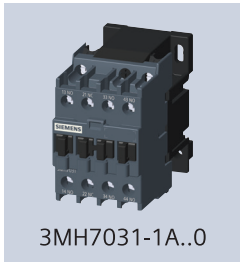
Type			3MH7022	3MH7031	3MH7040
Size			0	0	0
General data					
Dimension (W x H x D)					
• Basic unit	mm		45 x 74.4 x 81.8		
Mounting position			22.5° Inclination forward and Backward & 360° Rotation, in relation to normal vertical mounting plane		
Mechanical service life					
• Basic unit	Operating cycles		10000000		
• Basic unit with mounted auxiliary switch	Operating cycles		10000000		
Rated insulation voltage Ui (pollution degree 3)			V		1000
Rated impulse withstand voltage Uimp			kV		6
Permissible ambient temperature					
	During operation	°C	-5 ... +55		
	During storage	°C	-25 ... +70		
Relative air humidity			%		10...95
Degree of protection IP on the front					IP20
Installation altitude at height above sea level, maximum			m		2000
Short-circuit protection					
• With fuse links of operational class gG:	A		10		
Conductor cross-sections					
Auxiliary conductors and coil terminals					
Solid or stranded			mm ²		1 x (1.0 ... 4.0 mm ²) or 2 x (1.0 ... 4.0 mm ²)
Finely stranded with end sleeve			mm ²		1 x (1.0 ... 2.5 mm ²) or 2 x (1.0 ... 1.5 mm ²)
• Terminal screw					M3.5
- Tightening torque			Nm		1,2
Control					
Solenoid coil operating range					
• AC operation	at 50/60Hz		0.85 ... 1.1 x Us		
Power consumption of the solenoid coil					
• AC operation, 50 Hz			Closing		VA/p.f.
			Closed		VA/p.f.
					70/ 0.75
					11/ 0.3
• AC operation, 50 Hz wide band			Closing		VA/p.f.
			Closed		VA/p.f.
					90/ 0.75
					15/ 0.3
• AC operation, 50/60 Hz			Closing		VA/p.f.
			Closed		VA/p.f.
					80/ 0.75
					12/ 0.3
Operating times within operating range					
• AC operation			Closing delay		ms
			Opening delay		ms
					7...22
					5...20

Technical Specification



Type			3MH7022	3MH7031	3MH7040
Size			0	0	0
Rated data of the auxiliary contacts					
Number of Auxiliary contacts			2NO+ 2NC	3NO+ 1NC	4NO
Load rating with AC					
<ul style="list-style-type: none"> Rated operational currents I_e 					
- AC-12		A		10	
- AC-15 at rated operational voltage U_e	230V	A		6	
	400V	A		3	
	500V	A		2	
	690V	A		1	
<ul style="list-style-type: none"> Load rating with DC (1 conducting path) 					
- DC-12, at rated operational voltage U_e	24V	A		6	
	110V	A		3	
	220V	A		1	
- DC-13, at rated operational voltage U_e	24V	A		6	
	110V	A		1	
	220V	A		0,3	
	440V	A		0,14	
	600V	A		0,1	
Switching frequency		operating cycles/ hour			
<ul style="list-style-type: none"> Rated operation for utilization category 					
- AC-12/AC-15/DC-12/DC-13		1/h		800	
<ul style="list-style-type: none"> No-load switching frequency 				1800	

Selection and Ordering Information



Operational Current AC-15 at 230V AC	Contacts		Article No.
	NO	NC	
6A	4	0	3MH7040-1A..0
6A	3	1	3MH7031-1A..0
6A	2	2	3MH7022-1A..0

.. Please enter coil codes from table below

Coil Code											
Frequency	24V	36V	48V	110V	220V	230V	380V	400V	415V	165-273	353-455V
50Hz	B0	G0	H0	F0	M0	P0	Q0	V0	R0	S0	T0
50/60Hz	C2	G2	H2	F2	N2	L2	Q2	V2	R2	-	-

Accessories & Spares



1 & 2 Pole Front Auxiliary switches



4 Pole Front Auxiliary switches



Lateral Auxiliary switches



Surge Suppressor

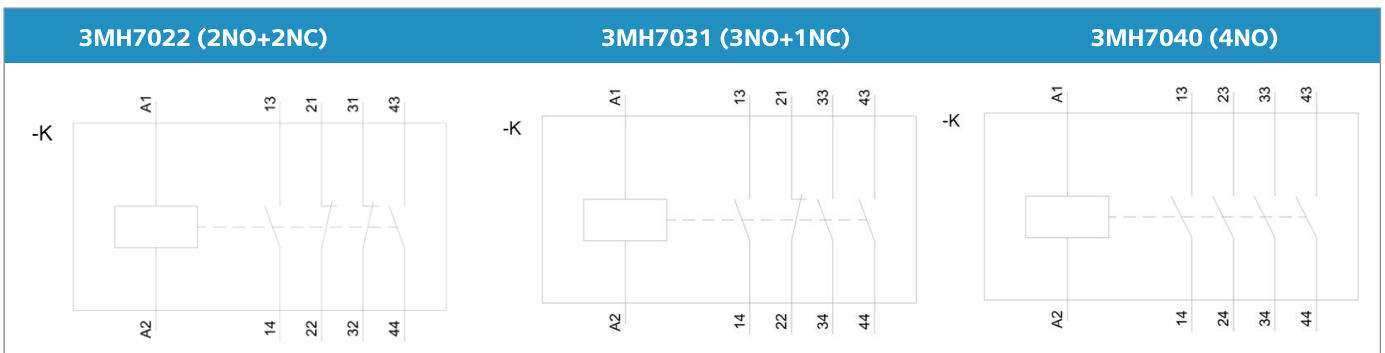


Spare Coil 3MT79000L..1

Please refer page no. 84 for more information on accessories

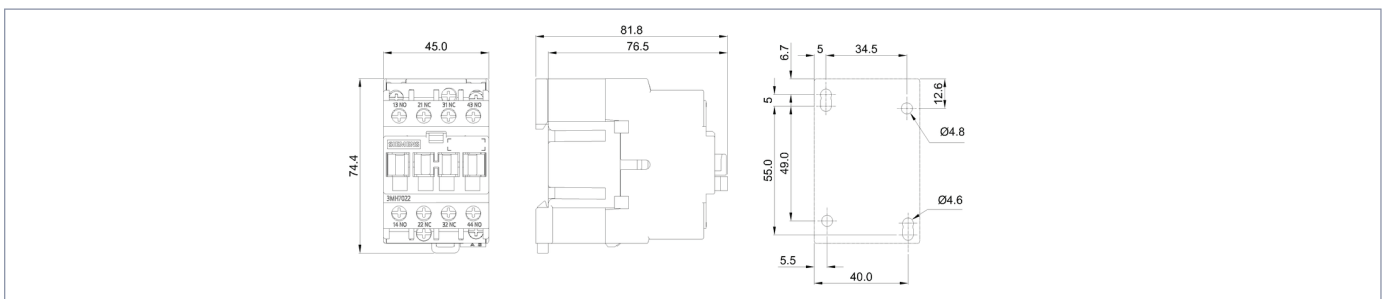
.. Please enter coil codes from table above

Wiring diagram



Dimension Drawing

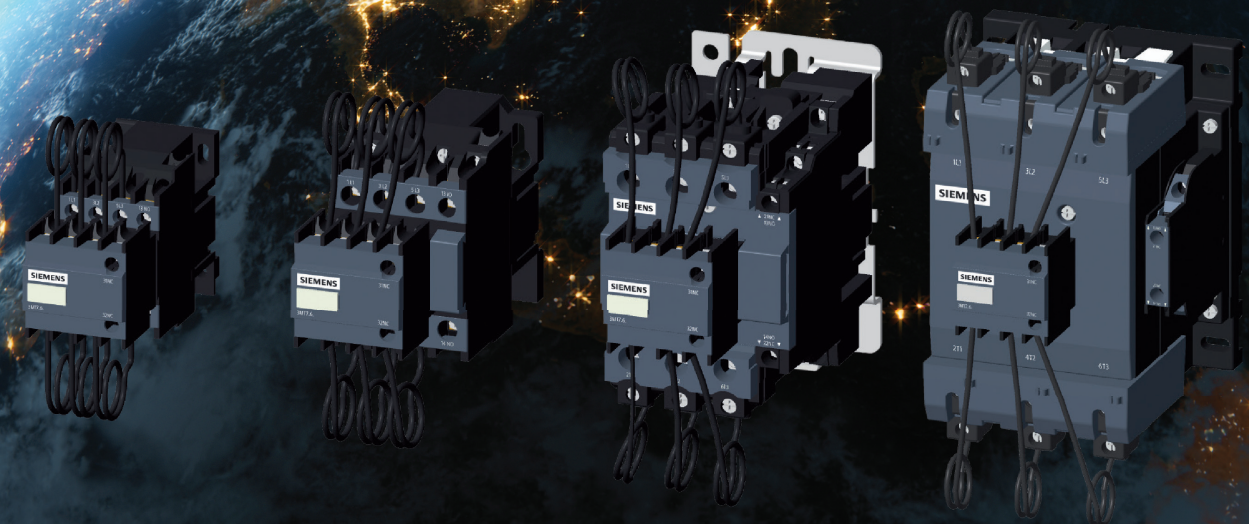
3MH7022 (2NO+2NC)



SINOVA 3MT7

Capacitor Duty Contactors

Reliable switching



Overview

The 3MT7 range of Capacitor Duty Contactors are designed for switching of power factor correction capacitors. These are reliable and economical solution for capacitor switching.



Technical Specification



3MT70002 3MT70005 3MT70007 3MT70010 3MT70012

General technical specifications

Conformance to		UL 508, CSA 22.2, IEC 60947-4-1, IEC 60947-5-1
Approvals		cULus, CE
Degree of protection acc. to IEC 60529	IP	IP20 (Front) IP00 (terminal)
Storage temperature	°C	-60...80 °C
Operating temperature	°C	-5...40 °C
Relative air humidity	%	upto 95 (non-condensing)
Max. installation altitude at height above sea level	m	2000 (without derating)
Pollution Degree		3
Type of mounting	DIN Rail	35 mm
Type of mounting	Screw	Yes

Main Circuit

Rated operational voltage Ue	V					260/440
Rated insulation voltage Ui	V					690
Impulse withstand voltage Uimp	kV					8
Rated frequency	Hz					50/60
Conventional free air thermal Current Ith	A	4,73	9,45	13,5	18,9	24,3
Rated operational Current Ie AC-6b (Harmonic & Safety factor excluded)	240VAC A	3,5	7	10	14	18
	230/400VAC A	3,5	7	10	14	18
	260/440VAC A	3,3	6,6	9,8	13,1	16,4
Rated Power	240VAC kVAr	1,4	2,9	4,1	5,8	7,5
	230/400VAC kVAr	2,5	5	7,5	10	12,5
	260/440VAC kVAr	2,5	5	7,5	10	12,5
Max. switching frequency Mechanical	Cycles/Hr	3600			3600	
Max. switching frequency at AC- 6b rating Electrical	Cycles/Hr	240			240	
Test at Prospective current (I _r -Current)	kA	1			3	
Conditional short-circuit current (I _q)	kA	50			50	
Fuse link for short-circuit protection of the main circuit – with type of coordination 2	A (gG Type)	25			25	
Fuse link for short-circuit protection of the main circuit – with type of coordination 1	A (gG Type)	-			-	
Pole impedance	mΩ	20			10	

Auxiliary circuit

Conventional free air thermal Current Ith	A					10
Auxiliary contacts mounted		1NO or 1NC			1NO + 1NC or 2NC	
Impulse withstand voltage Uimp (aux circuit)	kV				4	



3MT70016	3MT70020	3MT70025	3MT70033	3MT70040	3MT70050	3MT70060	3MT70075	3MT70080	3MT70100
UL 508, CSA 22.2, IEC 60947-4-1, IEC 60947-5-1 cULus, CE IP20 (Front) IP00 (terminal) -60...80 °C -5...40 °C upto 95 (non-condensing) 2000 (without derating) 3 35mm / 75 mm 2x 35mm Yes									
260/440 690 8 50/60									
32,4	39,1	48,6	64,8	78,3	94,5	124	146	155	194
24	29	36	48	58	70	92	108	115	144
24	29	36	48	58	70	92	108	115	144
21,9	26,2	32,8	43,7	52,5	65,6	78,7	98,4	105	131
10	12	15	20	24	29	38	44,9	48	60
16,7	20	25	33,3	40	50	60	75	80	100
16,7	20	25	33,3	40	50	60	75	80	100
3600					1800				
100					100				
5					5			10	
50					50			50	
80					125			-	
-					-			200	
5					1,5			1	
10									
1NO + 2NC									
4									

Technical Specification

			3MT70002	3MT70005	3MT70007	3MT70010	3MT70012
Auxiliary circuit							
Operating current of auxiliary contacts at AC-15 maximum (Inbuilt auxiliary contacts of base contactor)	110V	A				3,64	
	230V	A				2,09	
	400V	A				1,25	
	440V	A				1,14	
Operating current of auxiliary contacts at DC-13 (Inbuilt auxiliary contacts of base contactor)	48V	A				1,88	
	110V	A				0,591	
	220V	A				0,309	
	440V	A				0,139	
Operating current of auxiliary contacts at AC-15 maximum (Side mounted lateral auxiliary contact block)	110V	A				-	
	230V	A				-	
	400V	A				-	
	440V	A				-	
Operating current of auxiliary contacts at DC-13 (Side mounted lateral auxiliary contact block)	48V	A				-	
	110V	A				-	
	220V	A				-	
	440V	A				-	
Fuse link type gG for short-circuit protection (short circuit current 1kA)		A				10	
Control circuit							
Control supply voltage		Uc				AC	
Operating range factor control supply voltage		% of Uc				85 to 110	
Apparent pick-up power		VA max				60	
Apparent holding power		VA max				10	
Closing time		msec				14-25	
Opening time		msec				4-15	
Connecting characteristics							
Main conductors							
Terminal screw size						M3.5	
Screw head type						Combi	
Tightening torque Recommended		N-m				1,2	
Conductor cross-section							
Finely stranded without end sleeve		mm ²				1x (1 ..4) Or 2x (1..4)	
Finely stranded with pin type lugs		mm ²				1x (1 ..4) Or 2x (1..4)	
Solid / Stranded		mm ²				1x (1 ..4) Or 2x (1..4)	
Auxiliary conductors (built-in auxiliary terminals + coil terminals)							
Terminal screw size						M3.5	
Screw head type						Combi Head	
Tightening torque Recommended		N-m				1,2	
Conductor cross-section							
Finely stranded without end sleeve		mm ²				1x (1 to 4) Or 2x (1 to 2.5)	
Finely stranded with end sleeve		mm ²				1x (1 to 4) Or 2x (1 to 4)	
Solid		mm ²				1x (1 to 4) Or 2x (1 to 4)	
Mechanical details							
Product Dimensions (H x W x D)		mm		74x 45x80		130x45x117	
Product weight		kg		0,315		0,4	

3MT70016	3MT70020	3MT70025	3MT70033	3MT70040	3MT70050	3MT70060	3MT70075	3MT70080	3MT70100
					3,64			-	
					2,09			-	
					1,25			-	
					1,14			-	
					1,88			-	
					0,591			-	
					0,309			-	
					0,139			-	
					-			2,5	
					-			2,5	
					-			2,5	
					-			2,5	
					-			1,88	
					-			0,6	
					-			0,28	
					-			0,14	
					10			10	
					AC				
					85 to 110				
	90				250				
	10								
					14-25				
					4-15				
	M3.5 Combi 1,7	M4 Combi 1,85	M4 Combi 2,5		M8 Minus 5		M10 Minus & Allen 9		M8 Allen 9
	1x (1 ..6), 2x (1..4)	1x (1.5 ..10), 2x (1.5..6)	1x (2.5 ..10), 2x (2.5..10)	1x (2.5 ..25), 2x (2.5..16)	1x (2.5 ..35), 2x (2.5..16)		1x (4 ..50), 2x (4..25)		1x (4 ..95), 2x (4..50)
	1x (1.5 ..10), 2x (1.5..6)	1x (1.5 ..10), 2x (1.5..6)	1x (1.5 ..10), 2x (1.5..6)	1x (2.5 ..25), 2x (2.5..10)	1x (2.5 ..35), 2x (2.5..25)		1x (4 ..50), 2x (4..50)		1x (4 ..95), 2x (4..50)
	1x (1.5 ..10), 2x (1.5..6)	1x (1.5 ..10), 2x (1.5..6)	1x (1.5 ..10), 2x (2.5..10)	1x (2.5 ..25), 2x (2.5..16)	1x (2.5 ..25), 2x (2.5..16)		1x (4 ..70), 2x (4..35)		1x (4 ..95), 2x (4..50)
							M3.5 Combi Head 1,2		
							1x (1 to 4) Or 2x (1 to 2.5)		
							1x (1 to 4) Or 2x (1 to 4)		
							1x (1 to 4) Or 2x (1 to 4)		
130x45x122	140x56x130	140x56x135		180x75x150		200x85x157		186x120x154	
0,4	0,58	0,58		1,23		1,56		2,7	

Selection and Ordering Information



Operational Current AC-15 at 230V AC	Contacts		Article No.
	NO	NC	
6A	4	0	3MH7040-1A..0
6A	3	1	3MH7031-1A..0
6A	2	2	3MH7022-1A..0

.. Please enter coil codes from table below

Coil Code											
Frequency	24V	36V	48V	110V	220V	230V	380V	400V	415V	165-273	353-455V
50Hz	B0	G0	H0	F0	M0	P0	Q0	V0	R0	S0	T0
50/60Hz	C2	G2	H2	F2	N2	L2	Q2	V2	R2	-	-

Accessories & Spares

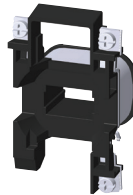
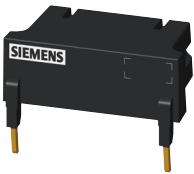


1 & 2 Pole Front
Auxiliary switches

4 Pole Front
Auxiliary switches

Lateral
Auxiliary switches

Please refer page no. 40 for more information on accessories



Surge Suppressor

Spare Coil
3MT79000L..1

.. Please enter coil codes from table above

SINOVA 45.J & 42.J

Definite Purpose Contactors

Reliable switching



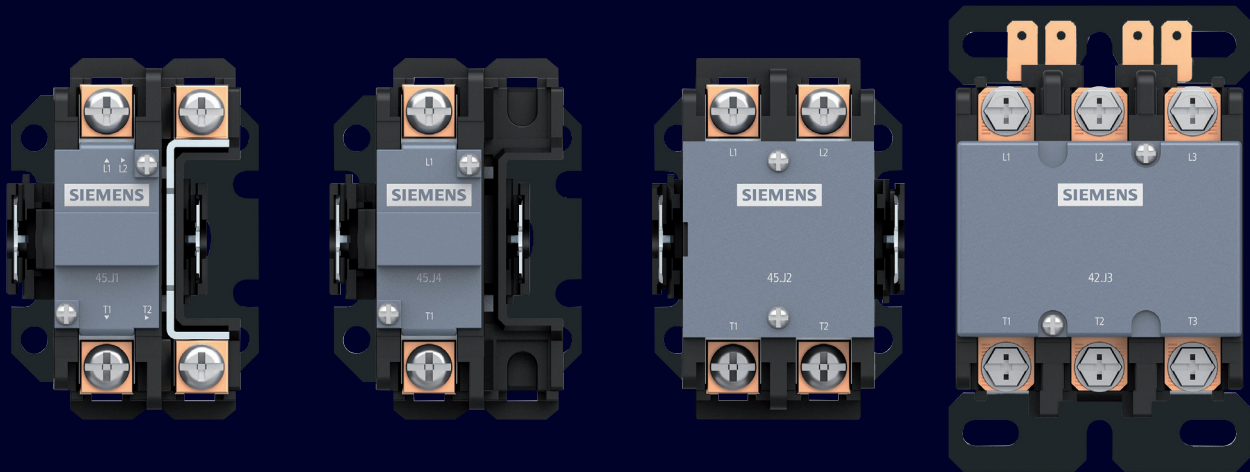
Overview

Definite purpose contactors provide high performance with flexibility and reliability and are designed to match numerous applications.

Originally designed for the HVACR industry, but their use has expanded to a variety of other market segments.

They are ideal for resistive heating, for motors and compressors in air conditioning and refrigeration, as well as for applications with 1 pole and 2 pole contactors like Lighting/ Pumps etc.

This new range of Definite Purpose Contactors is designed keeping application in mind. This is reliable and economical.



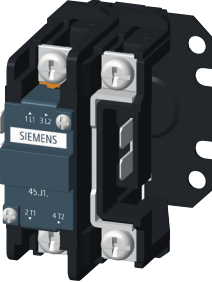
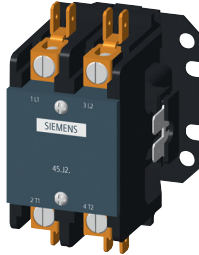
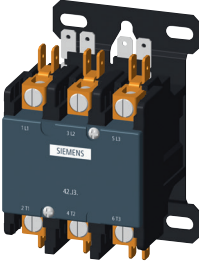
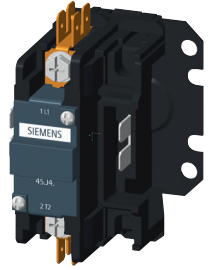

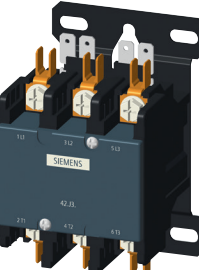
Certification

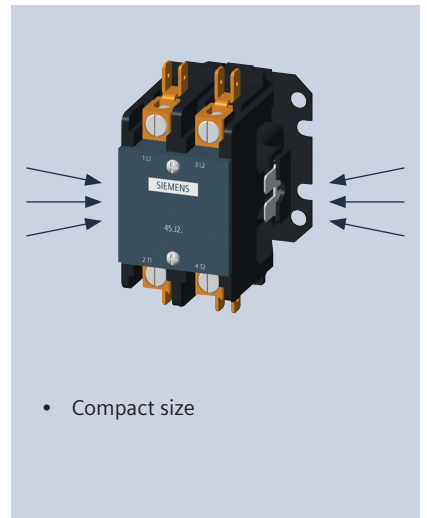


Features

Power Termination Options

Different termination options available, addressing the requirements of variety of applications

1 Pole	2 Pole	3 Pole
 <p>Pan screw terminals</p>	 <p>Box with lug dual quick connect</p>	 <p>Box with lug dual quick connect</p>
 <p>Hex screw quad quick connect</p>	 <p>Hex Screw, Dual Quick Connect</p>	 <p>Hex Screw, Dual Quick Connect</p>



- Complies to UL 508, CSA 22.2, IEC 60947-4-1, IEC 60947-5-1*

*applicable to 3 Pole inbuilt 1NO+1NC version

Technical Specification

Technical Specifications	1Pole without shunt			1Pole with shunt			2Pole			3Pole			
Type number	45CJ4	45DJ4	45EJ4	45CJ1	45DJ1	45EJ1	45BJ2	45DJ2	45EJ2	42BJ3	42CJ3	42DJ3	42EJ3
Rating	25A	30A	40A	25A	30A	40A	20A	30A	40A	20A	25A	30A	40A

General technical specifications

Conformance to	UL 508, CSA 22.2, IEC 60947-4-1, IEC 60947-5-1*												
Approvals	cULus, CE												
Degree of protection	acc. to IEC 60529	IP	IP00										
Storage temperature	°C		-40...65 °C										
Operating temperature	°C		-5...55 °C										
Relative air humidity	%		upto 95 (non-condensing)										
Maximum altitude of site	m		2000										
Type of mounting	Screw mounting												
Pollution degree	3												

Main Circuit

Rated operational voltage Ue	240			240			240/415			240/415					
Rated insulation voltage Ui	600														
Impulse withstand voltage Uimp (Over Voltage Cat. II)	2,5														
Rated frequency	Hz		50/60												
Conventional free air thermal Current Ith	A	30 40 50			30 40 50			30 40 50			30 35 40 50				
Rated current AC-1	as per IEC		at 240V AC			at 240V AC			at 240 / 415 V AC			at 240 / 415 V AC			
			30 40 50			30 40 50			30 40 50			30 35 40 50			
Rated current AC-3	as per IEC		at 240V AC			at 240V AC			at 240 / 415 V AC			at 240 / 415 V AC			
			25 27,5 27,5			25 27,5 27,5			20 27,5 27,5			20 25 27,5 27,5			
Rated current AC-8a	as per IEC A		at 240V AC			at 240V AC			at 240 / 415 V AC			at 415V AC			
			25 30 40			25 30 40			20 30 40			20 25 30 40			
Rated resistive load Current Ie	at 600V (as per UL)	A	30 40 50			30 40 50			30 40 50			30 35 40 50			
Rated inductive load Current Ie	at 600V (as per UL)	A	25 30 40			25 30 40			20 30 40			20 25 30 40			
Locked rotor current	at 600V (as per UL)	A	40 50 160			40 50 160			80 100 150			80 100 120 160			
Max. switching frequency	Mechanical	Cycles/Hr	3600												
	Electrical	Cycles/Hr	180												
Short Circuit Rating	As per UL	kA	5												
Fuse link for Short-circuit protection RK1 fuse	at 600V (as per UL)	A	90												
Type 1 coordination															
- Conditional short-circuit current ("Iq" - Current)	kA		50												
- Test at Prospective current ("Ir" - Current)	kA		3												
Fuse link type gG, for Short-circuit protection	A	32 40 50			32 40 50			32 40 50			32 35 40 50				
Pole Impedance	mΩ		5												

Auxiliary Circuit

Auxiliary contacts	Factory fitted	-			-			-			1 NO + 1 NC*			
Conventional free air thermal Current Ith	A	10*												

Technical Specification

Technical Specifications			1Pole without shunt			1Pole with shunt			2Pole			3Pole					
Type number			45CJ4	45DJ4	45EJ4	45CJ1	45DJ1	45EJ1	45BJ2	45DJ2	45EJ2	42BJ3	42CJ3	42DJ3	42EJ3		
Rating			25A	30A	40A	25A	30A	40A	20A	30A	40A	20A	25A	30A	40A		
Auxiliary Circuit																	
Operating current of auxiliary contacts at AC-15 maximum	at 24V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	at 48V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	at 115V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	at 230V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	at 400V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Operating current of auxiliary contacts at DC-13	at 440V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	at 48V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	1.88*	
	at 110V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6*	
	at 220V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28*	
Contact rating of auxiliary contacts	as per UL		-	-	-	-	-	-	-	-	-	-	-	-	-	-	A 600*
	at 440V	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14*
Fuse link for short-circuit protection (short circuit current 1kA)	A (gG Type)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	10*
Control circuit																	
Control supply voltage	Uc																AC
Operating range factor control supply voltage	% of Uc																85 to 110
Apparent pick-up power	VA max																65
Apparent holding power	VA max																13
Closing time	msec																8-15
Opening time	msec																4-12
Connecting characteristics																	
Main conductors																	
Terminal type and conductor cross section			Pan screw terminals	Pan screw terminals	Pan screw terminals	Pan screw terminals	Pan screw terminals	Pan screw terminals	Box with lug dual quick connect	Box with lug dual quick connect	Box with lug dual quick connect	Box with lug dual quick connect	Box with lug dual quick connect	Box with lug dual quick connect	Box with lug dual quick connect	Box with lug dual quick connect	Box with lug dual quick connect
- Solid / stranded cables	mm ²		2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25
- Finely stranded with end sleeve	mm ²		-	-	-	-	-	-	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10
- Finely stranded with pin type lug	mm ²		2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25
- Finely stranded with fork type lug	mm ²		2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25
- Solid / stranded cables	mm ²		Hex screw quad quick connect	Hex screw quad quick connect	Hex screw quad quick connect	Hex screw quad quick connect	Hex screw quad quick connect	Hex screw quad quick connect									Hex screw dual quick connect
- Finely stranded with pin type lug	mm ²		2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10	2.5 to 10									2.5 to 10
- Finely stranded with fork type lug	mm ²		2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25	2.5 to 25									2.5 to 25
IEC Ratings																	
Tightening torque Recommended	with box terminal	N-m	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5
	with screw terminal	N-m	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Auxiliary conductors																	
Termination Type																	Single 0.250" Quick connect
Mechanical details																	
Product Dimensions (H x W x D)	mm		73.8x50.8x64.8	73.8x50.8x64.8	73.8x50.8x64.8	73.8x50.8x64.8	73.8x50.8x64.8	73.8x50.8x64.8	73.5x53x64.5	73.5x53x64.5	73.5x53x64.5	73.5x53x64.5	73.5x53x64.5	73.5x53x64.5	73.5x53x64.5	73.5x53x64.5	95.3x61.8x67.3 95.3x68x67.3*
Product weight	kg		0,19	0,19	0,19	0,19	0,19	0,19	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,42

*applicable to 3 Pole inbuilt 1NO+1NC version

Ordering Data

Ordering data	AC 8a rating	Pan screw	Hex screw quad quick connect
1 Pole with shunt	25A	45CJ10A_B	45CJ10A_C
	30A	45DJ10A_B	45DJ10A_C
	40A	45EJ10A_B	45EJ10A_C
1 Pole without shunt	25A	45CJ40A_B	45CJ40A_C
	30A	45DJ40A_B	45DJ40A_C
	40A	45EJ40A_B	45EJ40A_C
	AC 8a rating	Box with lug dual quick connect	
2 Pole	20A	45BJ20A_D	
	30A	45DJ20A_D	
	40A	45EJ20A_D	
3 Pole	AC 8a rating	Box with lug dual quick connect	Hex screw dual quick connect
	20A	42BJ35A_D	42BJ35A_E
	25A	42CJ35A_D	42CJ35A_E
	30A	42DJ35A_D	42DJ35A_E
	40A	42EJ35A_D	42EJ35A_E
3 Pole with inbuilt 1NO+1NC aux contacts	20A	42BJ36A_D	42BJ36A_E
	25A	42CJ36A_D	42CJ36A_E
	30A	42DJ36A_D	42DJ36A_E
	40A	42EJ36A_D	42EJ36A_E

Please add coil code from table below

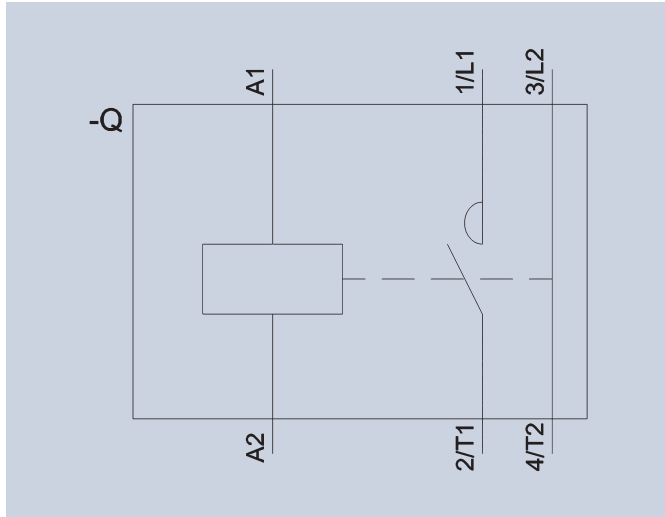
Spare coil	
1 Pole contactor	75J19A_
2 Pole contactor	75J29A_
3 Pole contactor	75J39A_

Please add coil code from table below

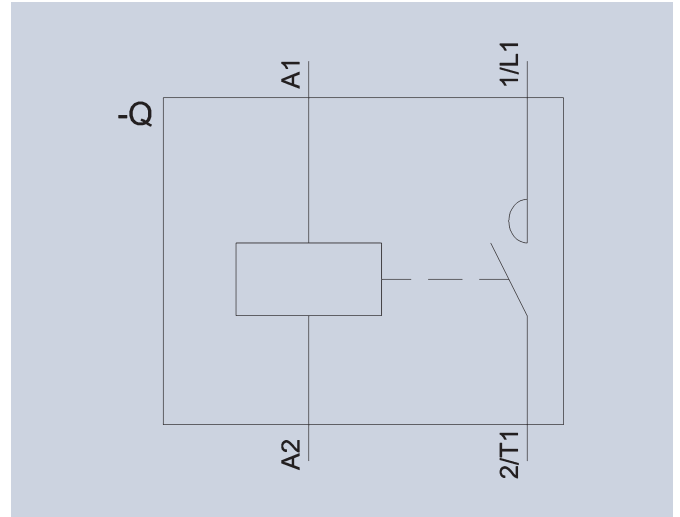
Coil Code	J	F	G	L	H	E
Voltage	24V AC, 50/60 Hz	120V AC, 60 Hz	240V AC, 50/60 Hz	277V AC, 60 Hz	480V AC, 60 Hz	145-180V AC, 50 Hz (available only for 1P & 2P versions)

Wiring diagram

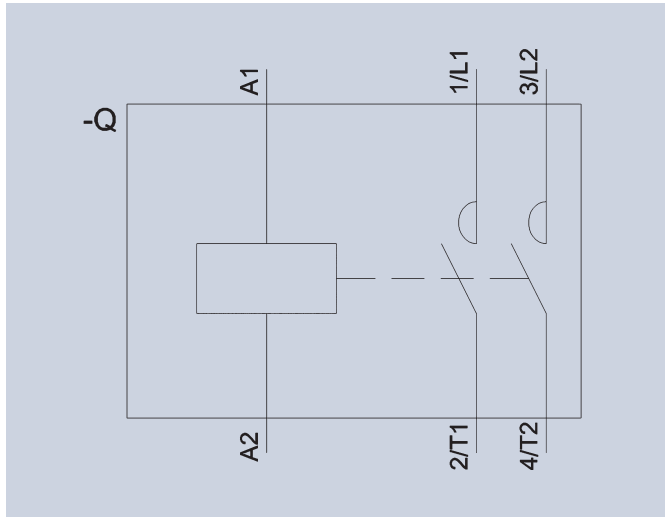
1Pole with shunt



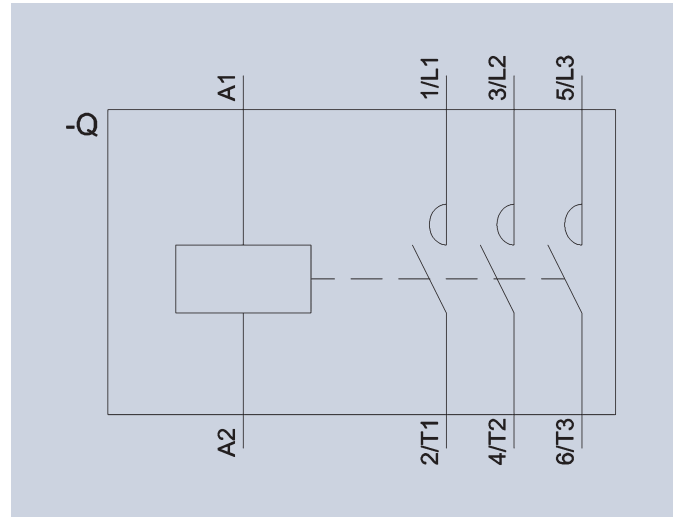
1Pole without shunt



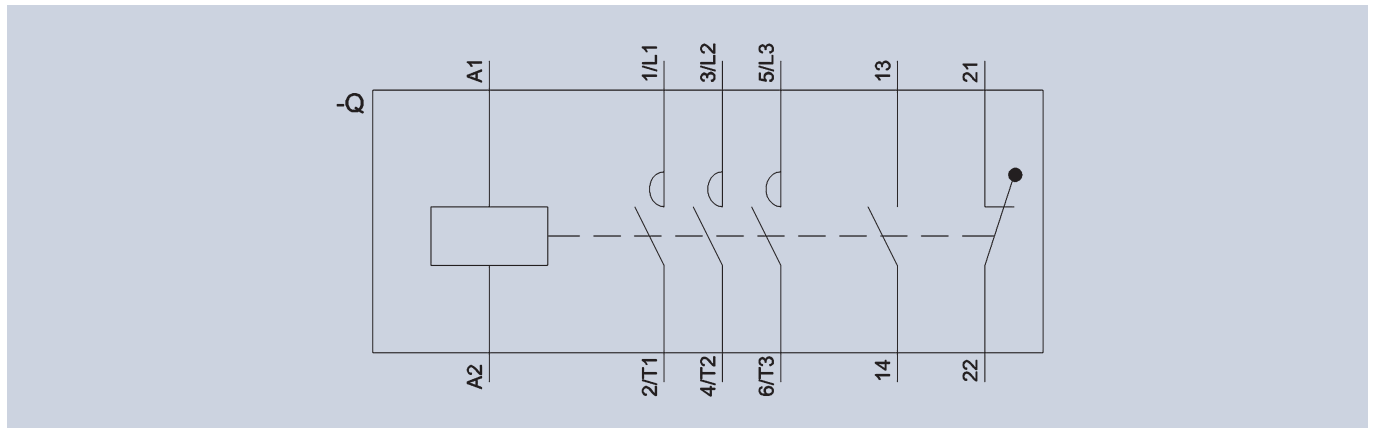
2Pole



3Pole

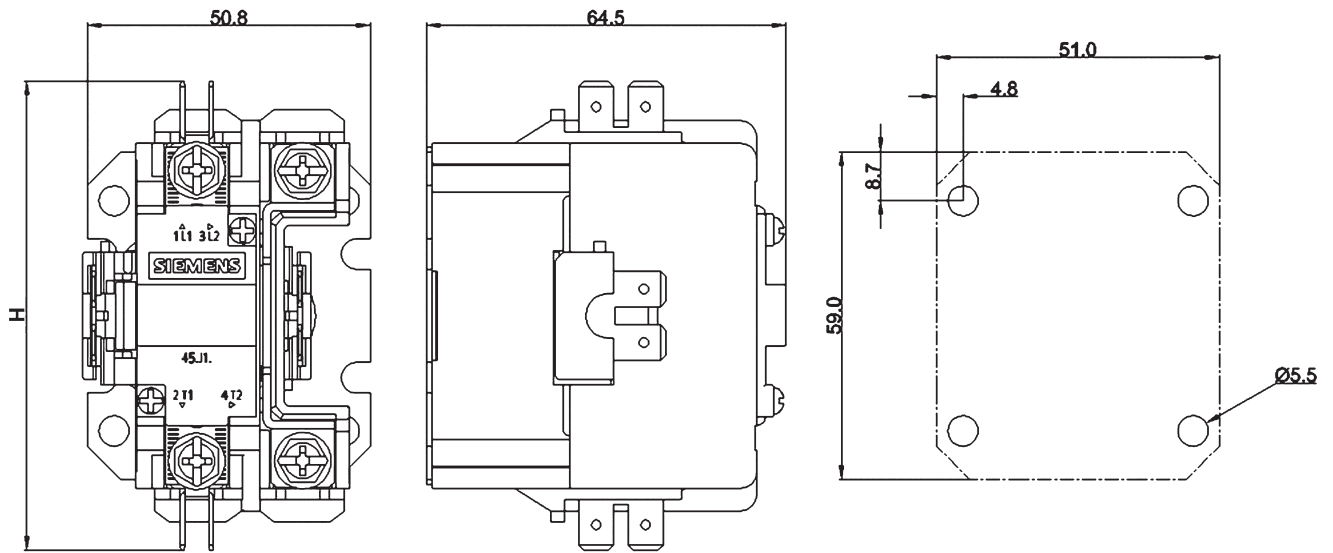


3Pole with inbuilt 1NO+1NC aux contact



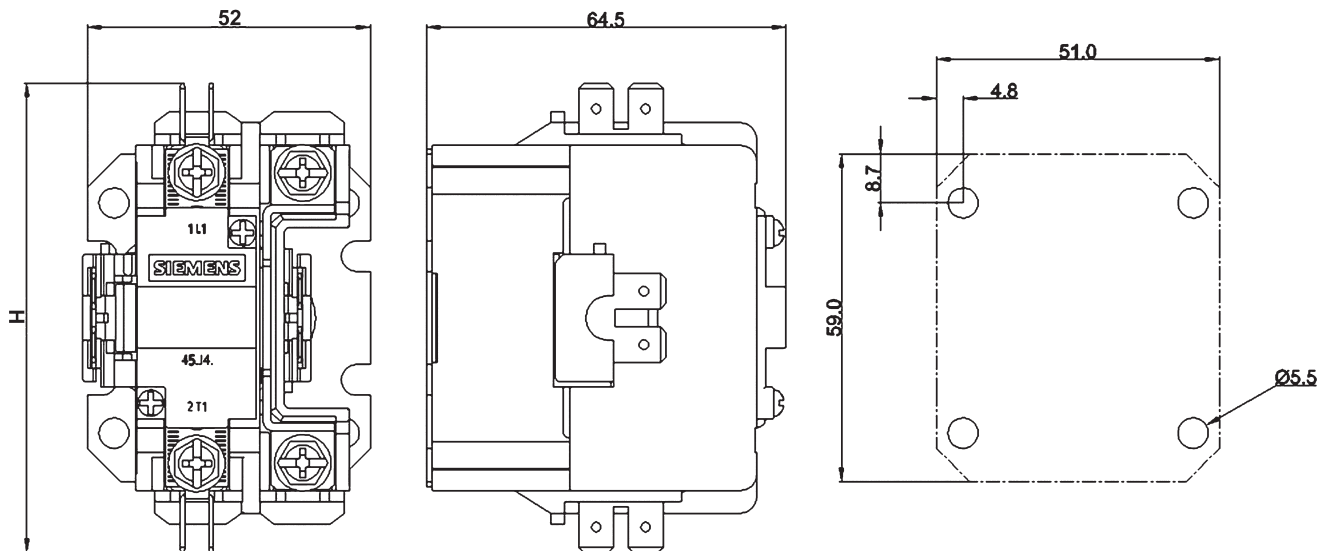
Dimension Drawing

1Pole with shunt



	Pan screw version	Hex screw quad quick connect
H	74	84.2

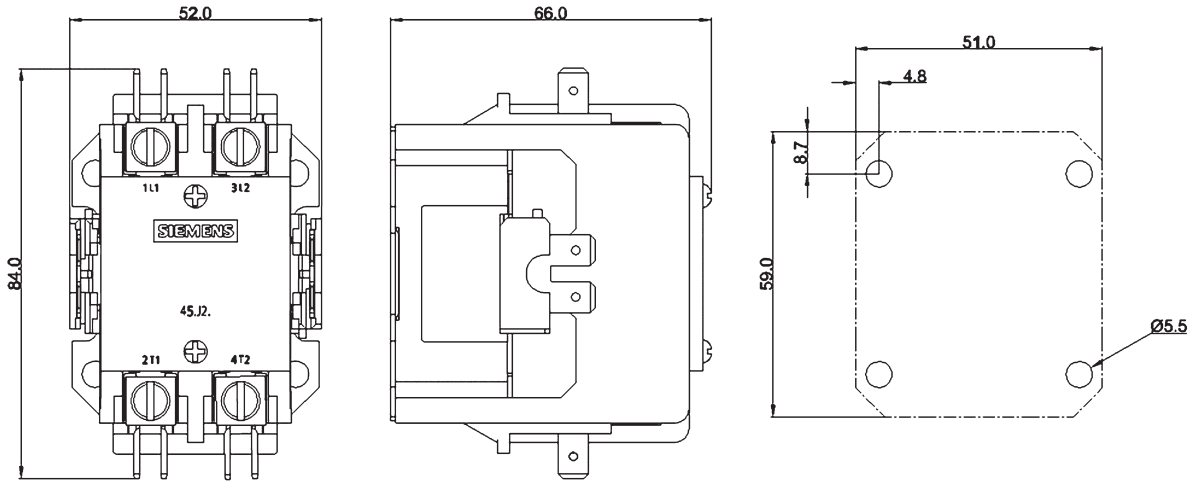
1Pole without shunt



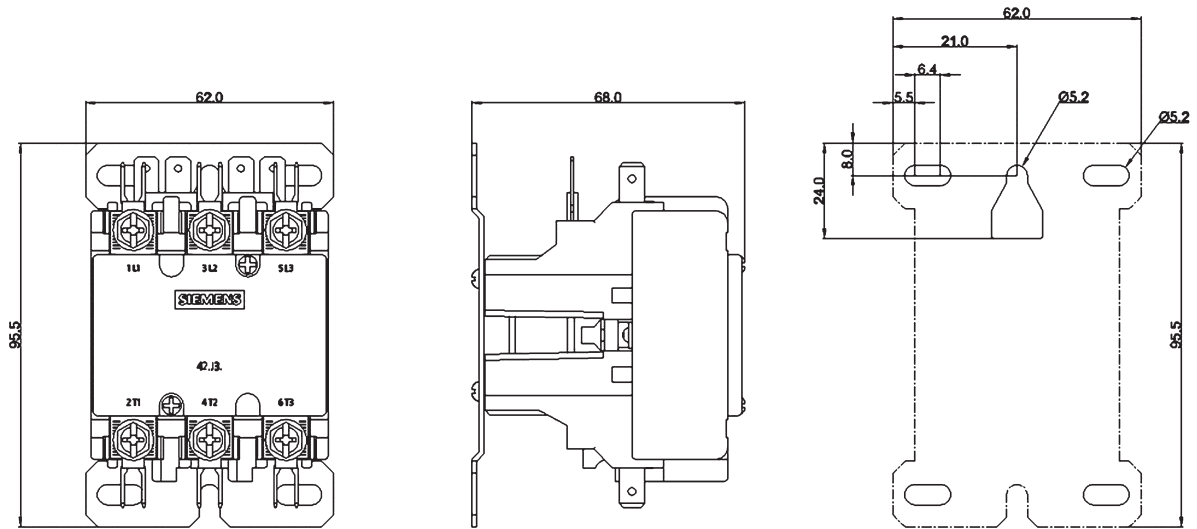
	Pan screw version	Hex screw quad quick connect
H	74	84.2

all dimensions are in mm

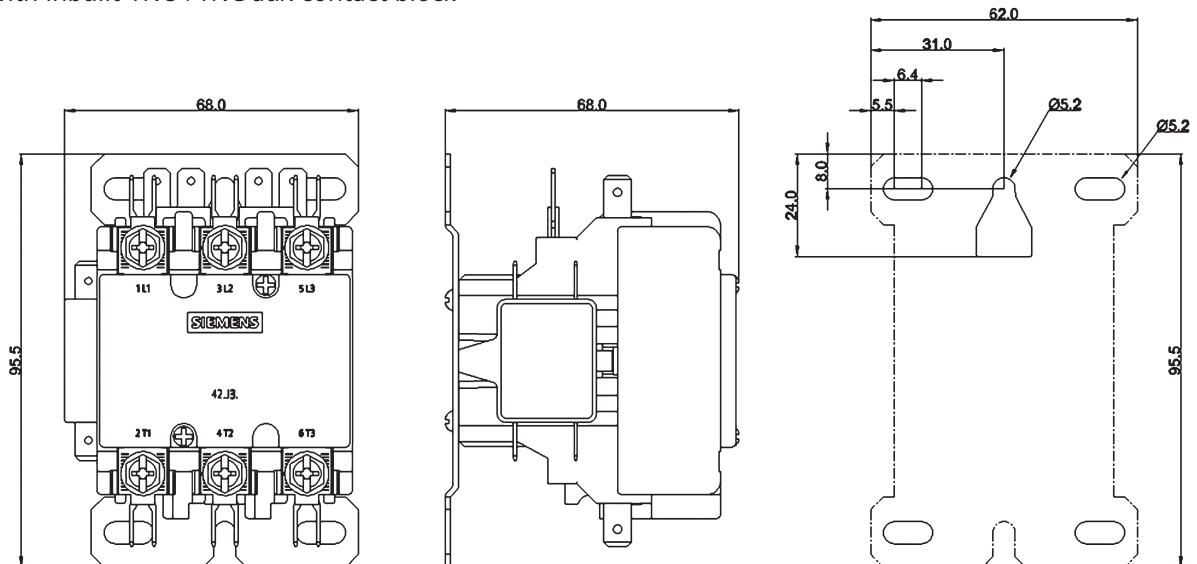
2Pole



3Pole without inbuilt 1NO+1NC aux contact block



3Pole with inbuilt 1NO+1NC aux contact block



all dimensions are in mm

SINOVA 3MU7

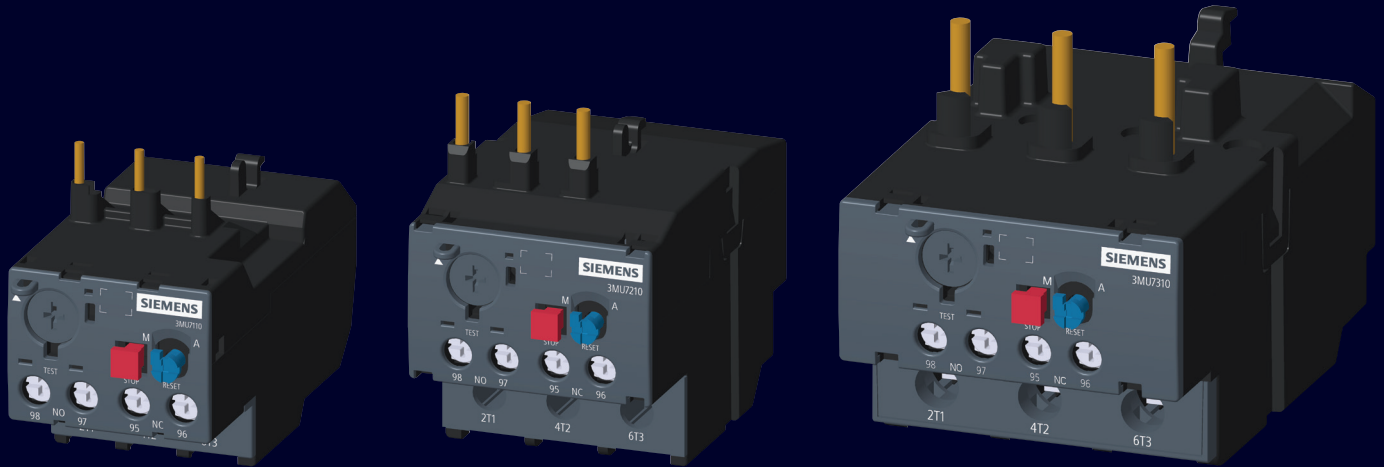
Thermal Overload Relays

Reliable protection



Overview

SINOVA 3MU7 Overload Relays are designed for consistent motor protection in all standard applications. Coupled with 3MT7 Power Contactor they provides optimum control and protection for you motor feeders.



Article number scheme

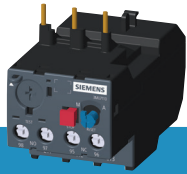
Product Version		Article number								
SINOVA Thermal Overload Relay		3MU7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	A	<input type="checkbox"/>
Size	e.g. 0 = Size 1		1							
Class	10 = Class 10			1	0					
Setting range for overload release	e.g. 0A = 0.10-0.16A						0	A		
Installation type	e.g. 0 = mounting on contactor 1= independent mounting									0
Example		3MU7	1	1	0	-	0	A	A	0

Note:
The above scheme shows an overview of the product versions for understanding of the logic behind the article number

For your orders refer to selection and ordering data

Overview

Overload relays and matching Contactors



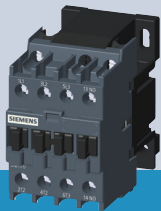
3MU71



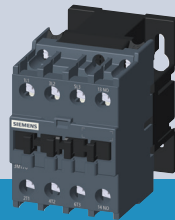
3MU72



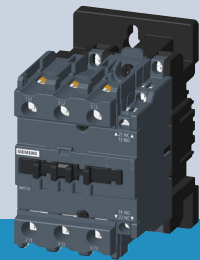
3MU73



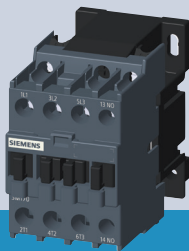
Size 0



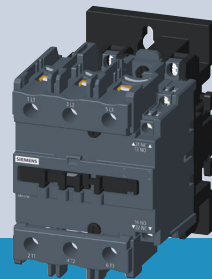
Size 2



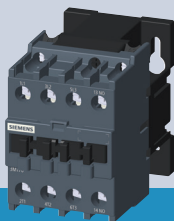
Size 3



Size 1

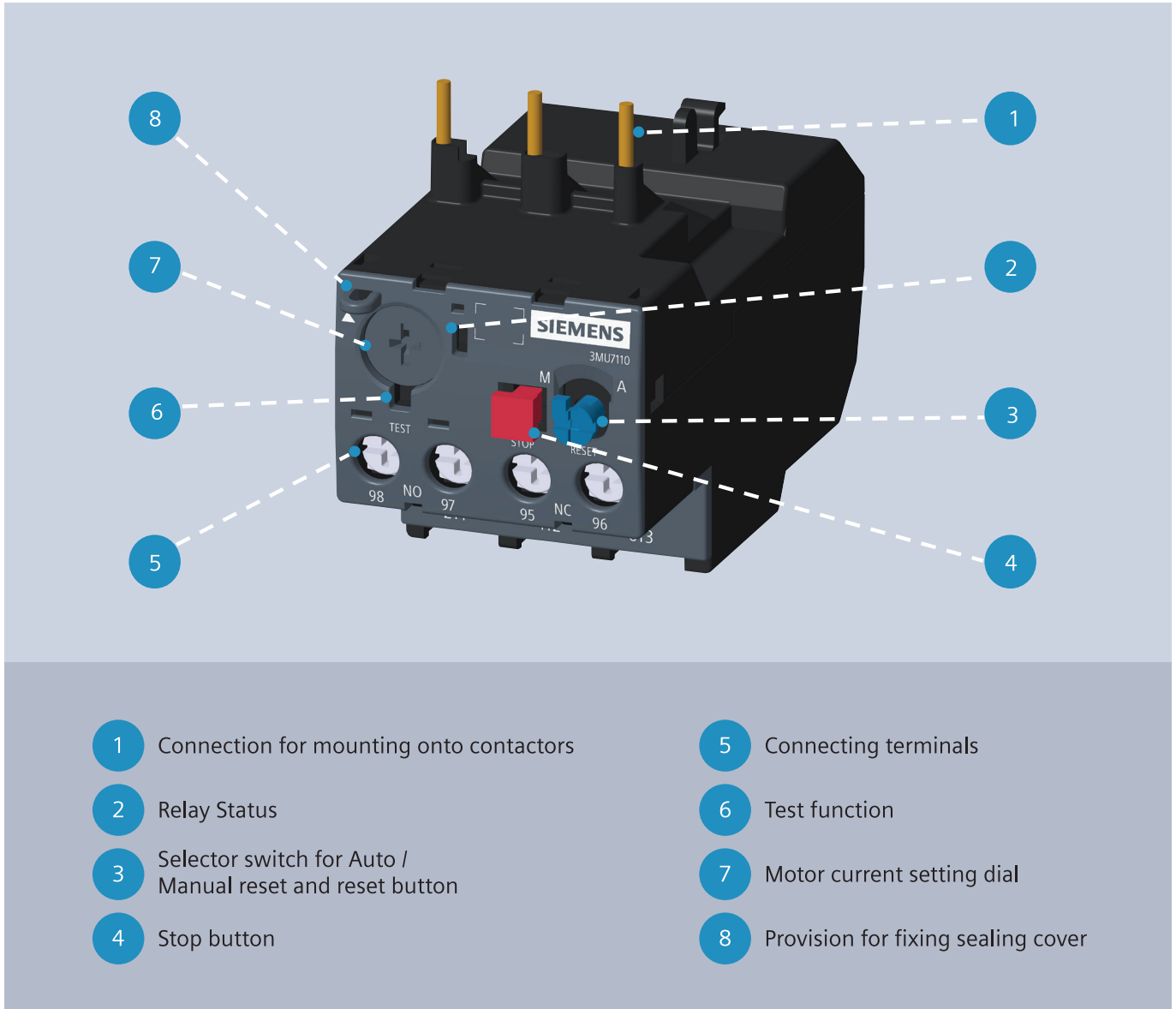


Size 4



Size 2

Functions



1 Connection for mounting onto contactors

2 Relay Status

3 Selector switch for Auto /
Manual reset and reset button

4 Stop button

5 Connecting terminals

6 Test function

7 Motor current setting dial

8 Provision for fixing sealing cover

Protections

- Tripping due to overload
- Tripping due to single phase failure

Application

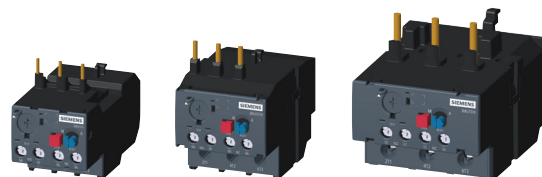
The 3MU7 thermal overload relays are suitable for applications which require optimum inverse-time delayed protection of three-phase or single-phase AC motors.

In case of single-phase motor all the conducting paths of relay must be connected in series.

These relays comply to tripping requirement of trip Class 10 as per IEC 60947-4-1.

3MU7 thermal overload relays compensate ambient temperature in the range from -5 to +55°C according to IEC 60947-4-1.

Technical Specification



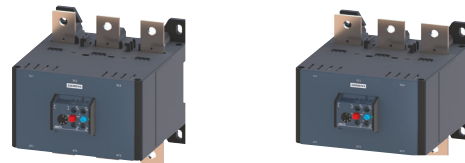
Type		3MU71	3MU72	3MU73
General data				
Dimension (W x H x D)				
• Basic unit	mm	44 x 63.6 x 91.8	54 x 76.1 x 92.4	70 x 79.2 x 115
Tripping in the event of		Overload, Single Phase Failure		
Trip Class acc. to IEC 60947-4-1		Class 10		
Reset		Manual and Remote reset		
Recovery		Minimum recovery time depends on the strength of the tripping current and characteristic		
Rated insulation voltage U_i (pollution degree 3)	V	690		
Rated impulse withstand voltage U_{imp}	Main circuit	kV		
	Aux circuit	kV		
Permissible ambient temperature	During operation	°C		
	During storage	°C		
Relative air humidity	%	10...95		
Degree of protection IP on the front		IP20		
Installation altitude above sea level	m	Up to 2000		
Mounting position		22.5° Inclination forward and Backward & ± 90° Rotation, in relation to normal vertical mounting plane		
Type of Mounting		Direct mounting on contactor Or Stand-alone installation by screw fixing Or Snap-on mounting on standard mounting rail.		
Main Circuit				
Rated operational voltage U_e	V	400/690 (L-N/L-L)		
Operating Frequency	Hz	50/ 60		
Current Setting	A	„0.10 ... 0.16 to 17 ... 25“	„23 ... 32 to 28 ... 36“	„23 ... 32 to 80 ... 93“
	A			
Power loss for rated current in hot state (maximum)	w	16,2		
• Per pole (maximum)	w	5,4		
Short-circuit protection		Refer "Selection and ordering information" Refer Type-2 co-ordination charts		
• With fuse without contactor				
• With fuse with contactor				
Auxiliary Circuit				
Number of Auxiliary contacts		1NO + 1NC		
Auxiliary contacts – Assignment		1 NO for the signal „tripped“; 1 NC for disconnecting the contactor		
Contact rating of the auxiliary contacts				
• AC-12 at 690V	A	5		

Technical Specification



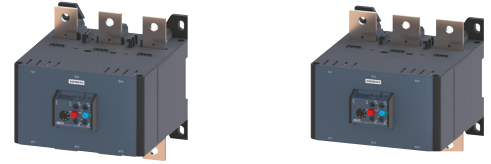
Type			3MU71	3MU72	3MU73
Auxiliary Circuit					
<ul style="list-style-type: none"> AC-15 at rated operational voltage U_e 	24V	A		4,17	
	48V	A		4,17	
	110V	A		3,64	
	220V	A		2,73	
	380V	A		1,58	
	600V	A		1	
	690V	A		0,7	
<ul style="list-style-type: none"> DC-13, at rated operational voltage U_e (1 conducting path) 	24V	A		4,17	
	48V	A		2,08	
	110V	A		0,45	
	220V	A		0,2	
	440V	A		0,05	
Short-circuit protection of auxiliary circuit					
<ul style="list-style-type: none"> With fuse links of operational class gG: A 		A		10	
Conductor cross-sections					
Main conductors					
Solid or stranded		mm ²	1 x (1 ... 6 mm ²)	1 x (1.5 .. 10 mm ²)	1 x (4 ... 35 mm ²)
Finely stranded with end sleeve		mm ²	1x (1 ..10 mm ²)	1x (1.5 .. 10 mm ²)	1x (2.5 ..35 mm ²)
<ul style="list-style-type: none"> Terminal screw 			M4	M4	M10
- Tightening torque		Nm	1.85	2.5	9
Auxiliary conductors					
Solid or stranded		mm ²		1 x (1.0 4.0 mm ²)	
Finely stranded with end sleeve		mm ²		1 x (1.0 4.0 mm ²)	
<ul style="list-style-type: none"> Terminal screw 				M3.5	
- Tightening torque		Nm		1,2	

Technical Specification



Type		3MU74	3MU75
General data			
Dimension (W x H x D)			
• Basic unit	mm	147 x 157 x 173	
Tripping in the event of		Overload, Single Phase Failure	
Trip Class acc. to IEC 60947-4-1		Class 10	
Reset		Manual and Remote reset	
Recovery		Minimum recovery time depends on the strength of the tripping current and characteristic	
Rated insulation voltage U_i (pollution degree 3)	V	1000	
Rated impulse withstand voltage U_{imp}	Main circuit	kV	
	Aux circuit	kV	
Permissible ambient temperature	During operation	°C	
	During storage	°C	
Relative air humidity	%	10...95	
Degree of protection IP on the front		IP20	
Installation altitude above sea level	m	Up to 2000	
Mounting position		22.5° Inclination forward and Backward & ± 90° Rotation, in relation to normal vertical mounting plane	
Type of Mounting		Stand-alone installation by screw fixing	
Main Circuit			
Rated operational voltage U_e	V	230 / 400 (L-N / L-L)	
Operating Frequency	Hz	50/ 60	
Current Setting	A	85 ... 135	312 ... 500
	A	to 250 ... 400	
Power loss for rated current in hot state (maximum)	w	33.6	45
	• Per pole (maximum)	w	11.2
Short-circuit protection		Refer "Selection and ordering information"	
• With fuse links of operational class gG without contactor:			
Auxiliary Circuit			
Number of Auxiliary contacts		1NO + 1NC	
Auxiliary contacts – Assignment		1 NO for the signal „tripped“; 1 NC for disconnecting the contactor	
Contact rating of the auxiliary contacts			
• AC-12 at 690V	A	6	



Technical Specification



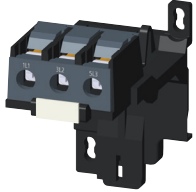

Type			3MU74	3MU75	
Auxiliary Circuit					
<ul style="list-style-type: none"> AC-15 at rated operational voltage Ue 	24V	A	2		
	48V	A	1.25		
	110V	A	1.25		
	220V	A	1.25		
	380V	A	1		
	600V	A	0.3		
	690V	A	0.3		
<ul style="list-style-type: none"> DC-13, at rated operational voltage Ue (1 conducting path) 	24V	A	1		
	48V	A	0.4		
	110V	A	0.22		
	220V	A	0.1		
Short-circuit protection of auxiliary circuit					
<ul style="list-style-type: none"> With fuse links of operational class at 690V gG 		A	6		
Conductor cross-sections					
Main conductors			3MU7410-3AA1 / 3MU7410-3BA1	3MU7410-3CA1 / 3MU7410-3DA1 / 3MU7410-3EA1	3MU7510-4AA1
Flexible cable with Lugs	mm ²		2 x (25 ... 95 mm ²)	2 x (70 ... 240 mm ²)	2 x (150 ... 240 mm ²)
Terminal bar (max. width)	mm ²		2 x (20 x 3)	2 x (25 x 3)	2 x (30 x 5)
<ul style="list-style-type: none"> Terminal screw - Tightening torque 	Nm		M8 10-14	M10 14-24	M10 14-24
Auxiliary conductors					
Solid or stranded	mm ²		2 x (1.0 ... 2.5 mm ²)		
Finely stranded with end sleeve	mm ²		2 x (0.75 ... 1.5 mm ²)		
<ul style="list-style-type: none"> Terminal screw - Tightening torque 	Nm		M3.5 0.8-1.2		

Selection and Ordering Information

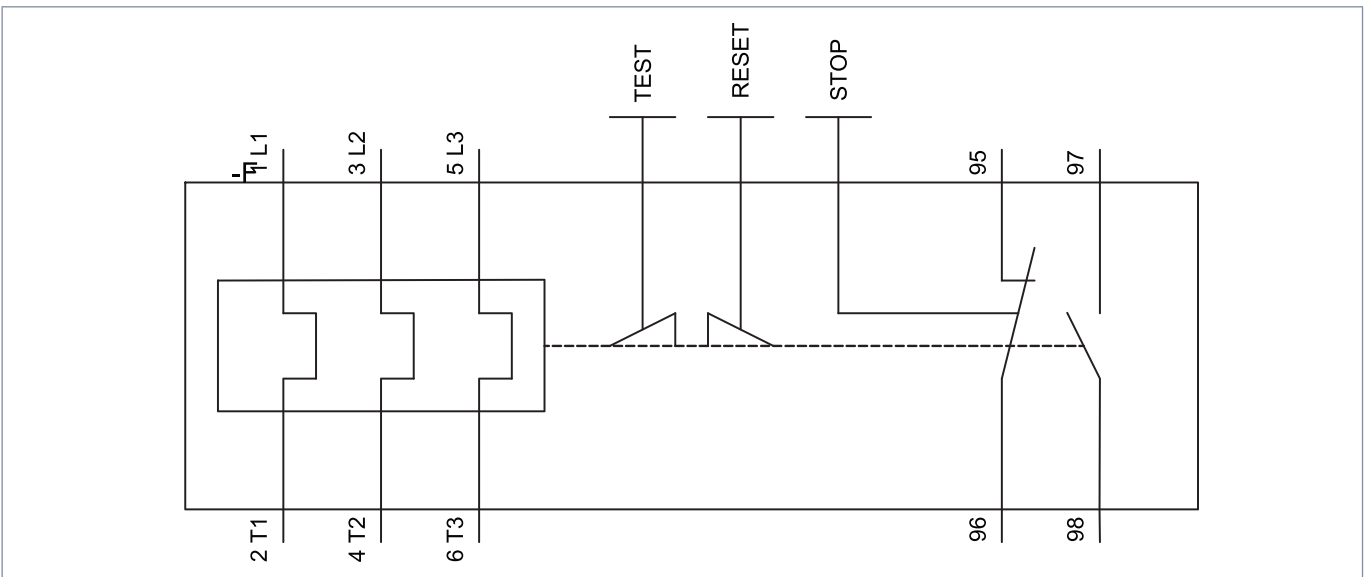
Size	Trip class	Rated power three-phase motor at 400 V	Current setting value	Short-circuit protection with fuse, type of coordination "2" (operational class gG)	Suitable for contactor size	Article No.
	kW		A	A		
	Class 10	0.04	0.10-0.16	2	0, 1, 2	3MU7110-0AA0
	Class 10	0.06	0.16-0.25	2	0, 1, 2	3MU7110-0BA0
	Class 10	0.09	0.25-0.40	2	0, 1, 2	3MU7110-0CA0
	Class 10	0.18	0.40-0.63	2	0, 1, 2	3MU7110-0DA0
	Class 10	0.25	0.63-1	4	0, 1, 2	3MU7110-0EA0
	Class 10	0.55	1-1.6	4	0, 1, 2	3MU7110-0FA0
	Class 10	0.75	1.25-2	6	0, 1, 2	3MU7110-0GA0
	Class 10	0.75	1.6-2.5	6	0, 1, 2	3MU7110-0HA0
	Class 10	1.5	2.5-4	10	0, 1, 2	3MU7110-0JA0
	Class 10	2.2	4-6	16	0, 1, 2	3MU7110-0KA0
	Class 10	3	5.5-8	20	0, 1, 2	3MU7110-0LA0
	Class 10	4	7-10	20	0, 1, 2	3MU7110-0MA0
	Class 10	5.5	9-13	25	0, 1, 2	3MU7110-0NA0
	Class 10	7.5	12-18	32	1, 2	3MU7110-0PA0
	Class 10	11	17-25	50	1, 2	3MU7110-0QA0
	Class 10	15	23-32	63	2	3MU7210-1AA0
	Class 10	18.5	28-36	63	2	3MU7210-1BA0
	Class 10	15	23-32	63	3, 4	3MU7310-2AA0
	Class 10	18.5	30-40	80	3, 4	3MU7310-2BA0
	Class 10	22	37-50	80	3, 4	3MU7310-2CA0
	Class 10	30	48-65	80	3, 4	3MU7310-2DA0
	Class 10	37	55-70	125	4	3MU7310-2EA0
	Class 10	37	63-80	125	4	3MU7310-2FA0
	Class 10	45	80-93	125	4	3MU7310-2GA0

Size	Trip class	Current setting value	Short-circuit protection without contactor with fuse, type of coordination "2" (operational class gG)	Mounting	Article No.
	Class 10A	85-135A	224	Screw mounting	3MU7410-3AA1
	Class 10A	115-180A	250	Screw mounting	3MU7410-3BA1
	Class 10A	160-250A	355	Screw mounting	3MU7410-3CA1
	Class 10A	200-320A	400	Screw mounting	3MU7410-3DA1
	Class 10A	250-400A	500	Screw mounting	3MU7410-3EA1
	Class 10A	312-500A	500	Screw mounting	3MU7510-4AA1

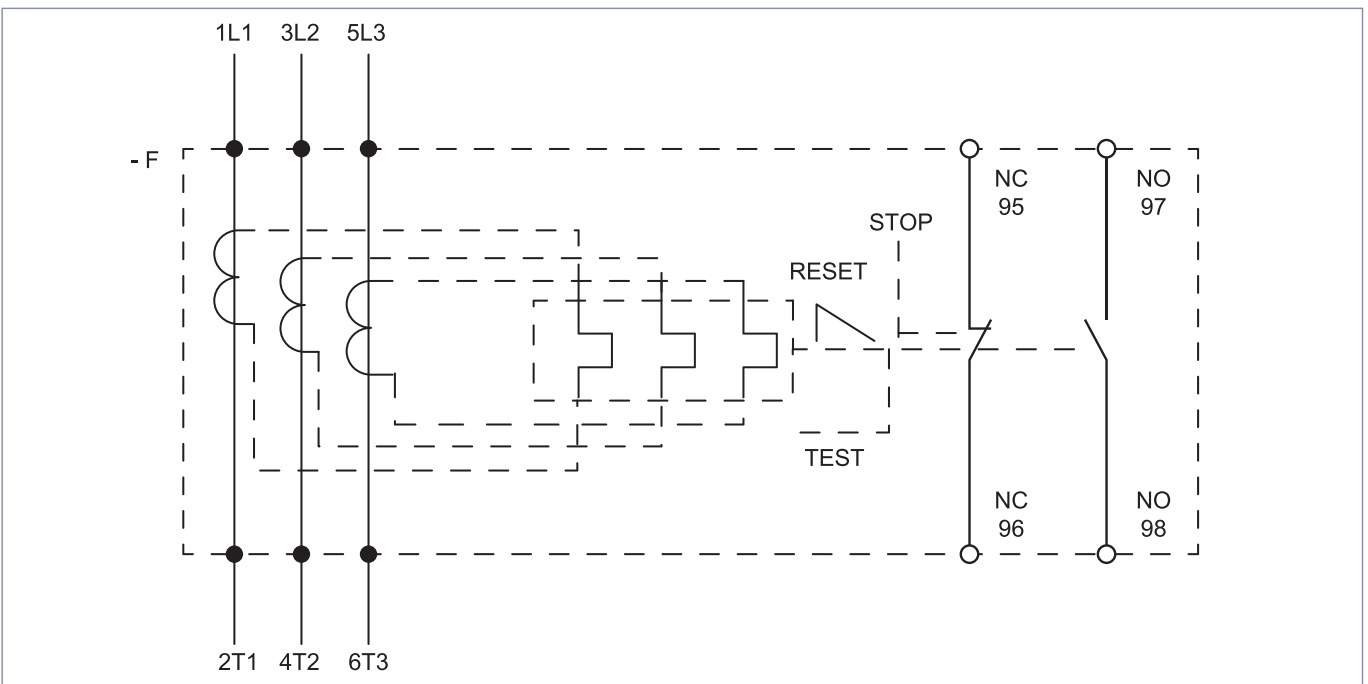
Accessories

Relay stand-alone installation kit	Overload relay frame	Article number	Relay setting dial sealing cover	Article number
	1	3MU7900-0MA10		3MU7900-0CA00 Suitable for relay size 1, 2, 3
	2	3MU7900-0MA20		
	3	3MU7900-0MA30		

Wiring Diagram (3MU71 / 3MU72 / 3MU73)

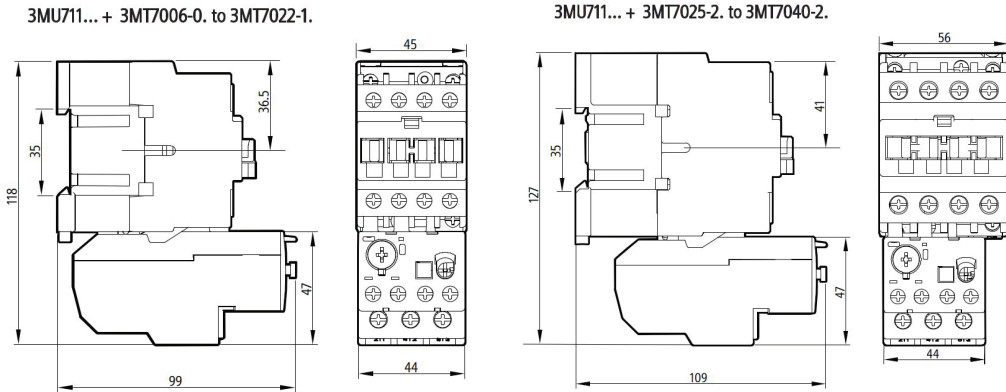


Wiring Diagram (3MU74 & 3MU75)



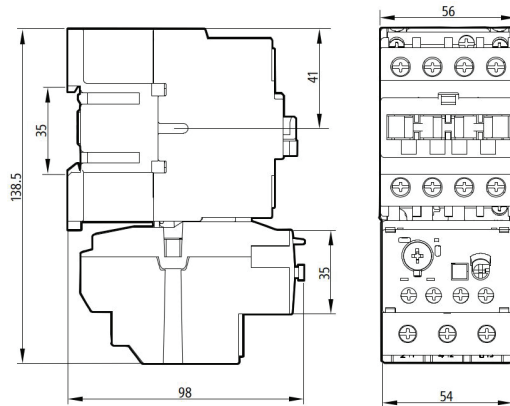
Dimension Drawing (with contactor)

3MU71 with Contactor



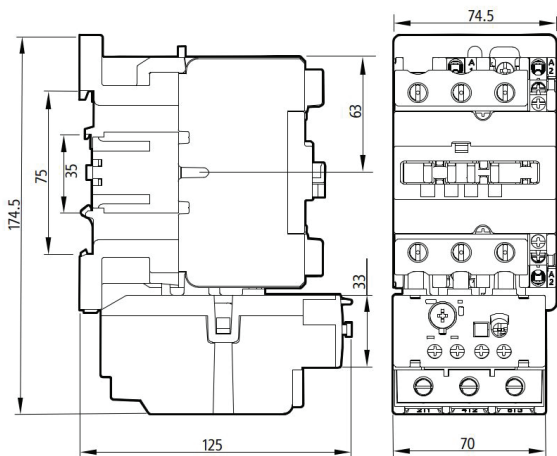
3MU72 with Contactor

3MU721... + 3MT7025-2. to 3MT7040-2.

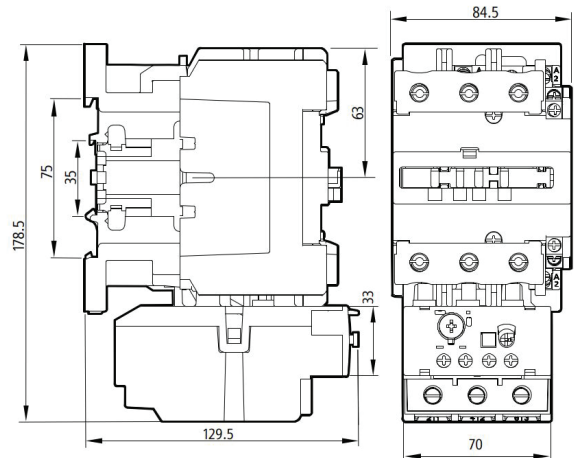


Size 3

3MU731... + 3MT7040-3. to 3MT7065-3.



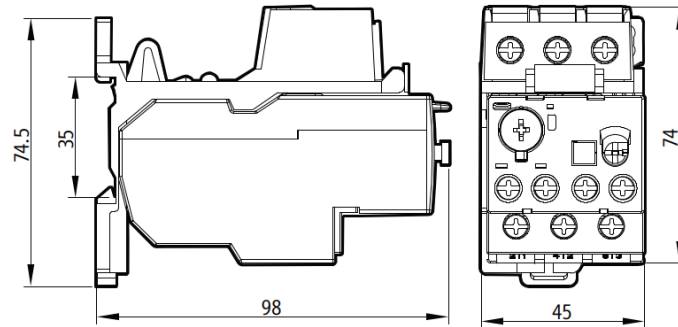
3MU731... + 3MT7070-4. to 3MT7095-4.



Dimension Drawing (with stand-alone installation kit)

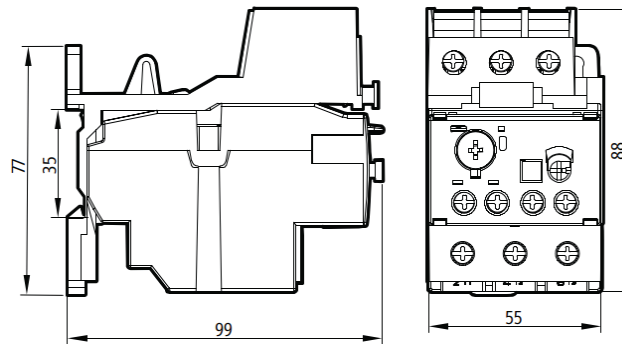
Size 1

(3MU7110-0 AA0 ... QA0 + 3MU7900-0MA10)



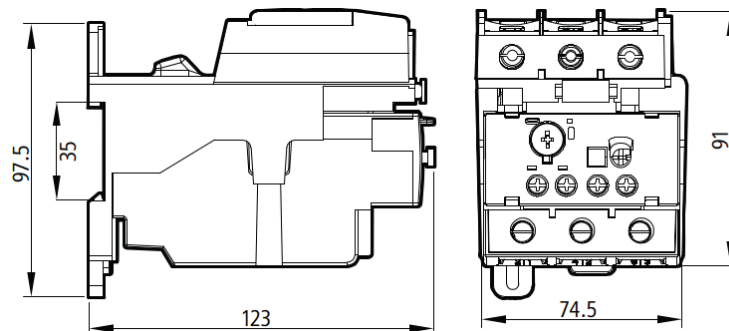
Size 2

(3MU7210-0 AA0 ... BA0 + 3MU7900-0MA20)

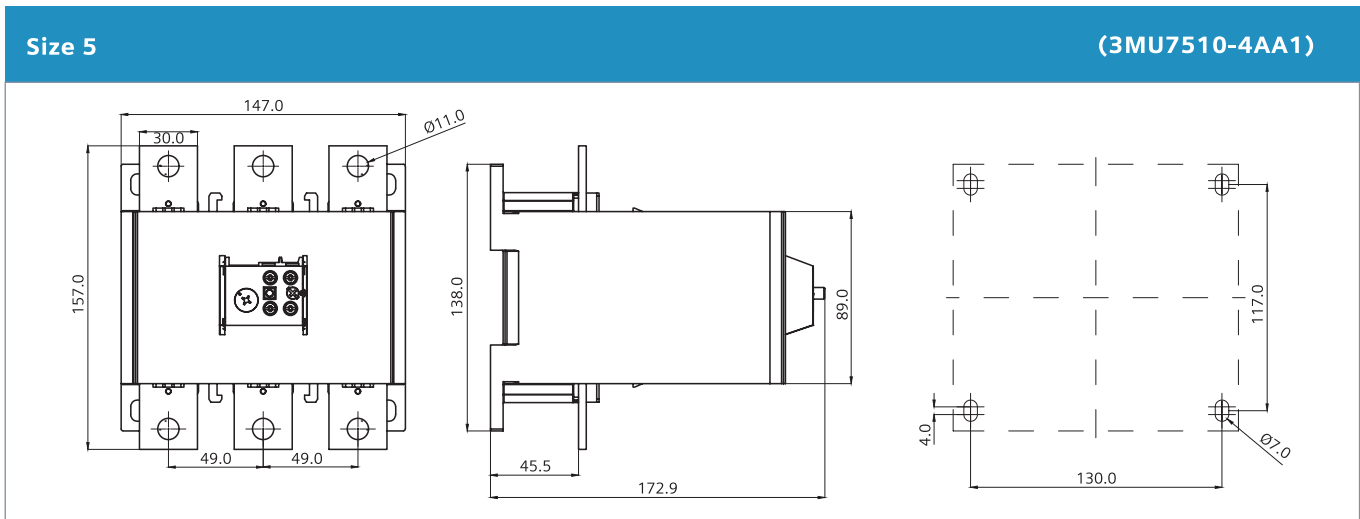
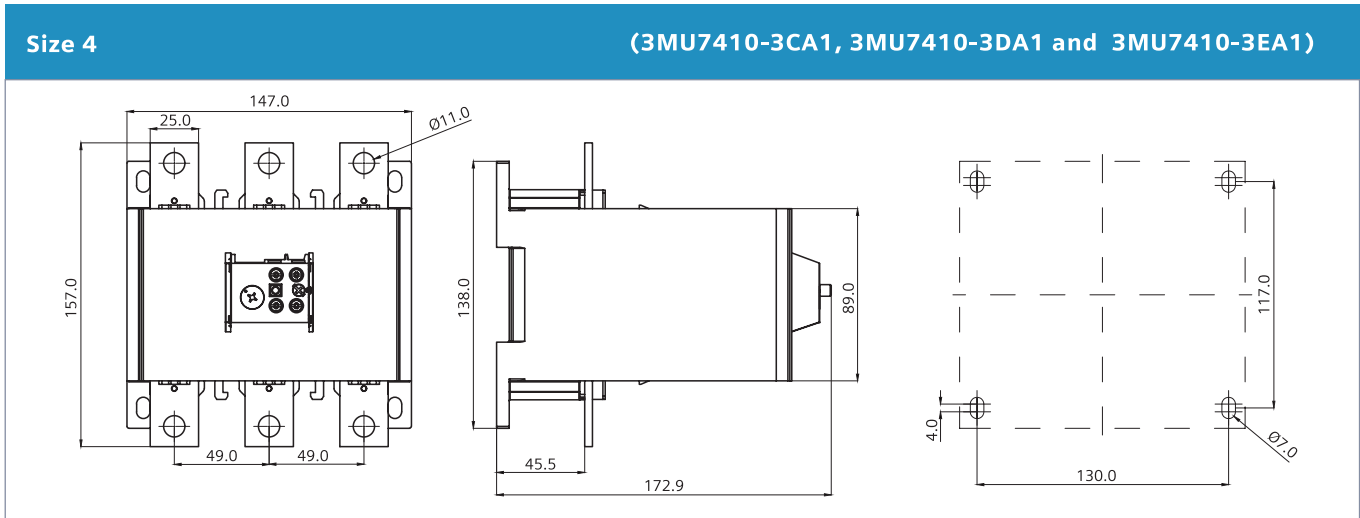
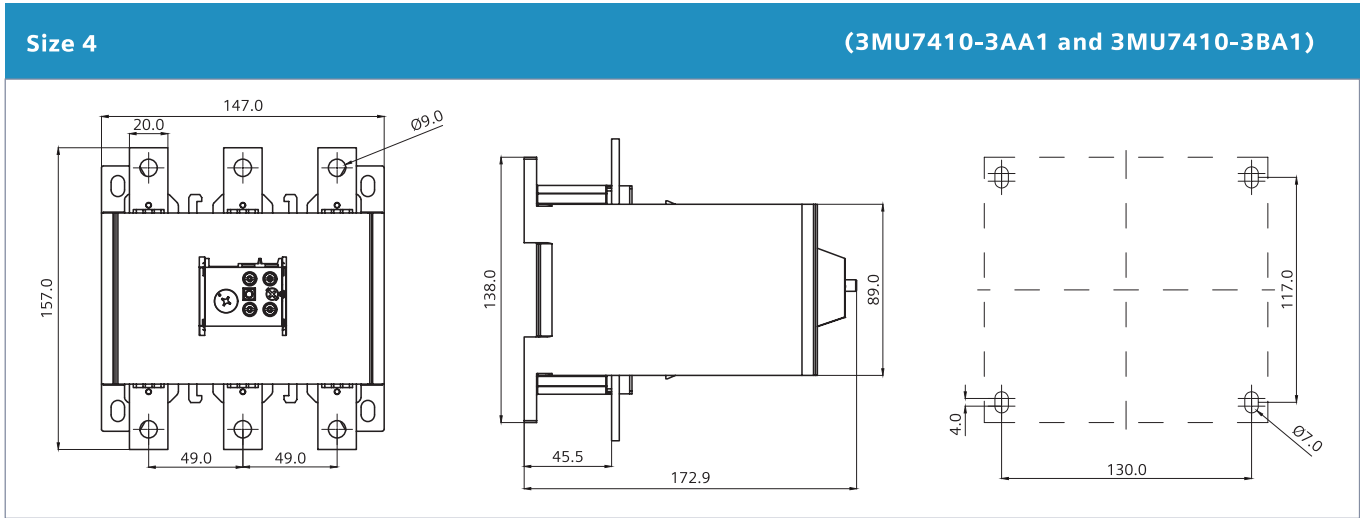


Size 3

(3MU7310-0 AA0 ... GA0 with 3MU7900-0MA30)



Dimension Drawing (stand-alone)

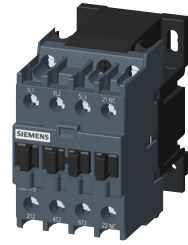
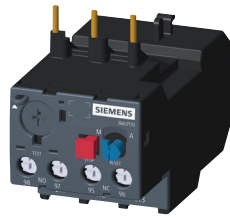


Type-2 Co-ordination Charts



Direct on-line (DOL) starter for IE2 / IE3 motors

Fuse protected selection type 2, I_q = 50kA, IEC:60947-4-1
(3NA with 3MT7 & 3MU7)



SCPD 3NA Fuse

Bi-relay 3MU7

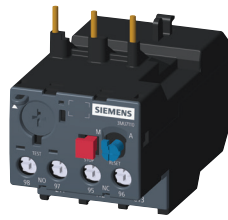
3MT7 Contactor

- The selection is valid only for complete Siemens combinations i.e. DIN Fuse + Contactor + Birelay (+ timer).
- In case this combination is changed to accommodate another brand/rating of DIN Fuse/Contactor/BMR, it shall be the responsibility of the person making such a change to assure type 2 performance.
- Selection is for normal starting conditions (class 10 feeder). (For heavy starting applications e.g. ID/FD fans, reciprocating compressor, ball mills etc., please consult Siemens.)
- All fuses are DIN HRC type.
- Tested Type 2 combinations

Motor rating		Fuse		Contactor		Bi-relay	
kW @400 / 415V, 50Hz	I _L (A)	Type	Rating (A)	Type	Rating (A)	Type	Relay setting range (A)
0.37	1.1	3NA7804	4	3MT70060AA...	6	3MU71100FA0	1-1.6
0.55	1.5	3NA7801	6	3MT70060AA...	6	3MU71100GA0	1.25-2
0.75	1.9	3NA7801	6	3MT70060AA...	6	3MU71100HA0	1.6-2.5
1.1	2.7	3NA7801	6	3MT70060AA...	6	3MU71100HA0 3MU71100JA0	1.6 - 2.5 (IE2) 2.5-4 (IE3)
1.5	3.6	3NA7803	10	3MT70060AA...	6	3MU71100JA0	2.5-4
2.2	5	3NA7805	16	3MT70100AA...	9	3MU71100KA0	4-6
3.7	7.8	3NA7807	20	3MT70120AA...	12	3MU71100MA0	7-10
5.5	11.5	3NA7810	25	3MT70181AA...	18	3MU71100NA0	9-13
7.5	15.5	3NA7817	40	3MT70252AA...	25	3MU71100PA0	12-18
11	22	3NA7820	50	3MT70382AA...	38	3MU71100QA0	17-25
15	29	3NA7822	63	3MT70382AA...	38	3MU72101AA0	23-32
18.5	35	3NA7824	80	3MT70503AA110...	50	3MU73102BA0	30-40
22	41	3NA7824	80	3MT70653AA110...	65	3MU73102CA0	37-50
30	55	3NA7830	100	3MT70704AA110...	70	3MU73102DA0	48-65
37	66	3NA7832	125	3MT70954AA110...	95	3MU73102EA0	55-70
45	80	3NA7836	160	3MT70954AA110...	95	3MU73102FA0 3MU73102GA0	63-80 (IE2) 80-93 (IE3)

Star Delta starter for IE2 / IE3 motors

Fuse protected selection type 2, Iq = 50kA, IEC:60947-4-1
(3NA with 3MT7 & 3MU7)



SCPD 3NA Fuse

Bi-relay 3MU7

3MT7 Contactor

- The selection is valid only for complete Siemens combinations i.e. DIN Fuse + Contactor + Birelay (+ timer).
- In case this combination is changed to accommodate another brand/rating of DIN Fuse/Contactor/BMR, it shall be the responsibility of the person making such a change to assure type 2 performance.
- Selection is for normal starting conditions (class 10 feeder). (For heavy starting applications e.g. ID/FD fans, reciprocating compressor, ball mills etc., please consult Siemens.)
- The electronic star-delta timer type 3RP should be used in star-delta feeders
- All fuses are DIN HRC type.
- Tested Type 2 combinations

Motor rating		Fuse		Contactor Line / Delta		Contactor Star		Bi-relay	
kW @400 / 415V, 50Hz	IL (A)	Type	Rating (A)	Type	Rating (A)	Type	Rating (A)	Rating (A)	Relay setting range (A)
3.7	8	3NA7803	10	3MT70100AA...	9	3MT70060AA...	6	3MU7110-0KA0	4-6
5.5	12	3NA7805	16	3MT70100AA...	9	3MT70100AA...	9	3MU7110-0LA0	5.5-8
7.5	16	3NA7807	20	3MT70120AA...	12	3MT70100AA...	9	3MU7110-0MA0	7-10
11	22	3NA7810	25	3MT70181AA...	18	3MT70120AA...	12	3MU7110-0PA0	12-18
15	29	3NA7812	32	3MT70221AA...	22	3MT70181AA...	18	3MU7110-0PA0	12-18
18.5	35	3NA7817	40	3MT70252AA...	25	3MT70181AA...	18	3MU7110-0QA0	17-25
22	41	3NA7820	50	3MT70382AA...	38	3MT70252AA...	25	3MU7210-1AA0	23-32
30	55	3NA7822	63	3MT70402AA...	40	3MT70382AA...	38	3MU7210-1BA0	28-36
37	66	3NA7824	80	3MT70503AA110...	50	3MT70382AA...	38	3MU7310-2CA0	37-50
45	80	3NA7830	100	3MT70704AA110...	70	3MT70503AA110...	50	3MU7310-2CA0	37-50
55	97	3NA7830	100	3MT70804AA110...	80	3MT70653AA110...	65	3MU7310-2DA0	48-65
75	132	3NA7836	160	3MT70954AA110...	95	3MT70804AA110...	80	3MU7310-2FA0	63-80