

NHP ELECTRICAL ENGINEERING PRODUCTS

NHP



Allen-Bradley

MOTOR CONTROL AND PROTECTION

140MT Motor Protection Circuit Breakers

Reliable motor protection
for your application



Learn more

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The new generation

Industrial operators can realise cost savings in their applications using the new Allen-Bradley 140MT motor protection circuit breakers and circuit protectors, which are available in sizes up to 40 amps.

The products are available as motor circuit protectors for three-component starters and motor protection circuit breakers for two-component starters. Special 140MT product variants also address specific applications, like protection of high inrush, high efficiency motors.

Part of the Allen-Bradley Advanced Control System, 140MT products are available with connectors to enable direct wiring to Allen-Bradley 100-K/C & E series contactors.

Advanced Control System components are tested together in various combinations to give users worldwide standards compliance and certification. The components are also backed by NHP Sales and Support.

The right circuit breaker for your application

The 140MT circuit breaker family consists of two basic frame sizes, both 45mm wide in three variations with different protection characteristics covering currents up to 40 Amps.

- 140MT Motor protection circuit breaker
- 140MT Motor circuit protector / starter protection
- 140MT-D9T protection of high efficiency motors with high inrush current

Features and Benefits

- 140MT-C3E frame (C) is up to 32A
- 140MT-D9* frame (D) is extending current range up to 40A
- Improved thermal performance compared to existing product line (lower heat loss)
- Different product variants e.g. 140MT-D9T (High inrush) & 140MT-D9V (VFD output) are covered by a single frame size
- Lockable knob and anti-tamper shield as standard offering
- Connecting modules for use with 100-K/C and E series contactors



	Protection characteristic	
	Magnetic	Thermal
140MT MPCB (Standard)	14 x Ie	Yes
140MT MCP (Standard)	14 x Ie	No
140MT MPCB (High Inrush)	18...22 x Ie	Yes



Product Line Variants

140MT C Frame 0.1-32A

- 140MT-C3E (Normal Break)

140MT D Frame 0.1-40A

- 140MT-D9E (High Break)
- 140MT-D9V (High Break for VFD Output)
- 140MT-D9N (MCP High Break)
- Standard lockable knob
- Standard anti-tamper shield



140MT C Frame 0.1-32A

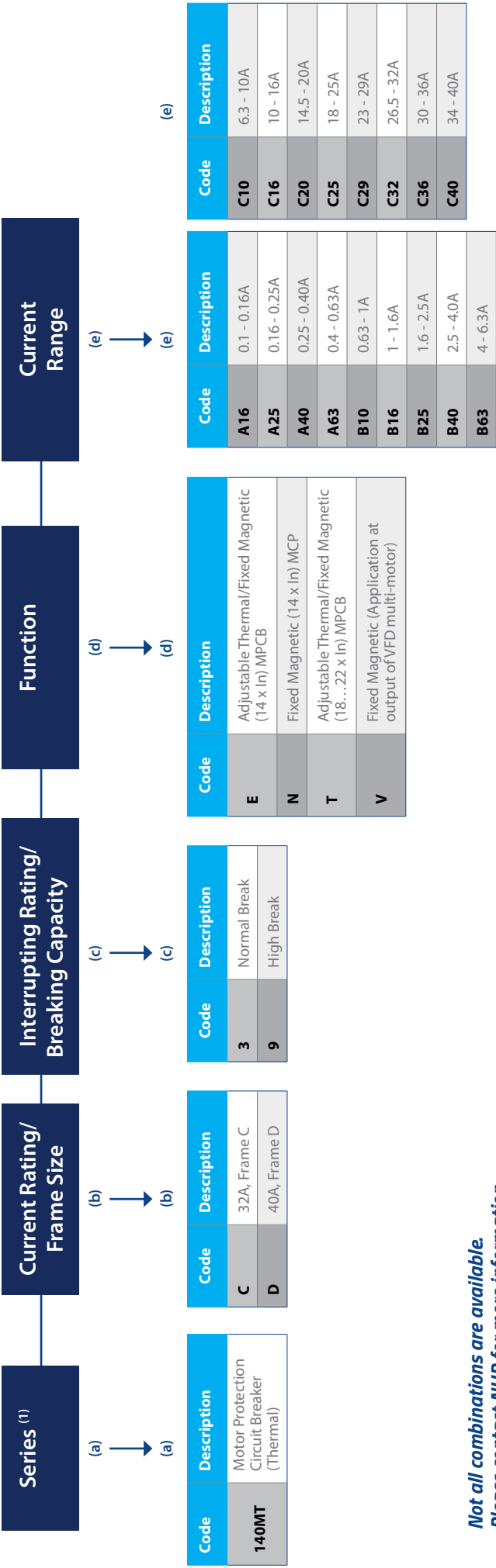


140MT D Frame 0.1-40A

Catalogue number construction

This chart provides a general guide to creating a 140MT catalogue number to match your application. Not all possible combinations are valid.

C- and D-Frame Devices



Not all combinations are available. Please contact NHP for more information. (1) For unit part numbers with pre-supplied lockable knob options, AUX contacts, undervoltage & shunt trips, contact NHP

Catalogue number construction

This chart provides a general guide to creating a 140MT catalogue number to match your application. Not all possible combinations are valid.

F-Frame Devices



Not all combinations are available. Please contact NHP for more information.
(1) For unit part numbers with pre-supplied lockable knob options, AUX contacts, undervoltage & shunt trips, contact NHP



140MT Base Unit

140MT-C3E

C Frame, Adjustable Thermal / Fixed Magnetic (14x In)

kW AC-3 (kW@ 400/415V) ⁽¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	Icu (kA @ 400/415V AC)	Ics (kA @ 400/415V AC)	Catalogue number
0.02	0.10...0.16	2.2	100	100	140MT-C3E-A16
0.04	0.16...0.25	3.5	100	100	140MT-C3E-A25
0.09	0.25...0.40	5.6	100	100	140MT-C3E-A40
0.18	0.40...0.63	8.8	100	100	140MT-C3E-A63
0.25	0.63...1.0	14	100	100	140MT-C3E-B10
0.55	1.0...1.6	22	100	100	140MT-C3E-B16
0.75	1.6...2.5	35	100	100	140MT-C3E-B25
1.5	2.5...4.0	56	100	100	140MT-C3E-B40
2.2	4.0...6.3	88	100	100	140MT-C3E-B63
4	6.3...10	140	100	50	140MT-C3E-C10
7.5	10...16	224	65	50	140MT-C3E-C16
10	14.5...20	280	50	15	140MT-C3E-C20
11	18...25	350	15	15	140MT-C3E-C25
15	26.5...32	448	15	10	140MT-C3E-C32



140MT-C3E

140MT-D9E

D Frame, Adjustable Thermal / Fixed Magnetic (14x In)

kW AC-3 (kW @ 400/415V) ⁽¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	Icu (kA @ 400/415V AC)	Ics (kA @ 400/415V AC)	Catalogue number
0.75	1.6...2.5	35	100	100	140MT-D9E-B25
1.5	2.5...4.0	56	100	100	140MT-D9E-B40
2.2	4.0...6.3	88	100	100	140MT-D9E-B63
4	6.3...10	140	100	100	140MT-D9E-C10
7.5	10...16	224	100	50	140MT-D9E-C16
10	14.5...20	280	100	25	140MT-D9E-C20
11	18...25	350	65	25	140MT-D9E-C25
13	23...29	406	50	25	140MT-D9E-C29
15	26.5...32	448	50	25	140MT-D9E-C32



140MT-D9E

(1) kW ratings shown are for reference. The final selection of the motor protection circuit breaker depends on the actual motor full load current.

140MT-D9V

Fixed Magnetic (Application at output of VFD multi-motor)

kW AC-3 (kW @400/415V) ⁽¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	Icu (kA @400/415V AC)	Ics (kA @400/415V AC)	Catalogue number
0.55	1.0...1.6	88	100	100	140MT-D9V-B16
0.75	1.6...2.5	88	100	100	140MT-D9V-B25
1.5	2.5...4.0	88	100	100	140MT-D9V-B40
2.2	4.0...6.3	88	100	100	140MT-D9V-B63
11	18...25	350	65	25	140MT-D9V-C25
15	26.5...32	448	50	25	140MT-D9V-C32

140MT-D9T

D Frame, High Inrush, Adjustable Thermal / Fixed Magnetic (18...22x In)

kW AC-3 (kW @400/415V) ⁽¹⁾	Current adjustment range (A)	Magnetic release response Current (A)	Icu (kA @400/415V AC)	Ics (kA @400/415V AC)	Catalogue number
0.09	0.25...0.40	8.8	100	100	140MT-D9T-A40
0.25	0.63...1.0	22	100	100	140MT-D9T-B10
0.75	1.6...2.5	55	100	100	140MT-D9T-B25

The 140MT-D9T* has a fixed magnetic trip set at 18 to 22x the maximum value of the current adjustment range (as opposed to the 140MT-C3E* magnetic trip of approximately 14x adjustment range). The 140MT-D9T* MPCB's are typically used in applications where nuisance tripping might occur, as with some high efficiency motors.



140MT-D9T

140MT-D9N

D Frame, Motor Circuit Protectors, Fixed Magnetic (14x In)

kW AC-3 (kW @400/415V) ⁽¹⁾	Rated Operational Current Ie (A)	Magnetic release response Current (A)	Icu (kA @400/415V AC)	Ics (kA @400/415V AC)	Catalogue number
0.55	1.6	22	100	100	140MT-D9N-B16
0.75	2.5	35	100	100	140MT-D9N-B25
1.5	4	56	100	100	140MT-D9N-B40
2.2	6.3	88	100	100	140MT-D9N-B63
4	10	140	100	100	140MT-D9N-C10
7.5	16	224	100	50	140MT-D9N-C16
11	25	350	65	25	140MT-D9N-C25
15	32	448	50	25	140MT-D9N-C32

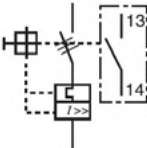
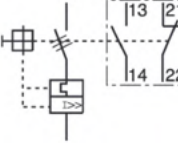
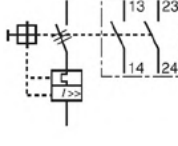
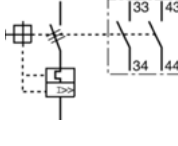
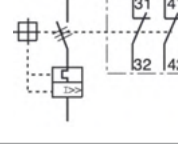
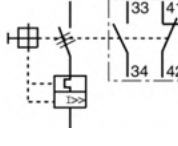
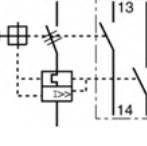
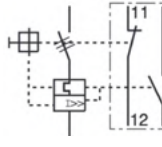
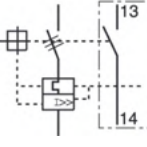
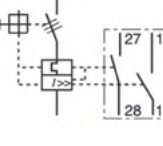
The 140MT-D9N* is designed without a thermal trip element (i.e. current adjustment range). It should be selected for applications where a separate motor overload protection device is used. Magnetic trip is approximately 14x operational current for the 140MT-D9N*



140MT-D9N

(1) kW ratings shown are for reference. The final selection of the motor protection circuit breaker depends on the actual motor full load current.

Accessories for 140MT

Accessory	Description	Operator position ⁽¹⁾			Term. number	Type	Connection diagram and terminal markings ⁽²⁾	For use with	Catalogue number
		OFF 	ON 	Tripped 					
	Front-Mounted Auxiliary Contact • 1-pole or 2-pole • No additional space required • Only one per device	0	X	0	13-14	N.O. Aux		140MT-C, D 140UT-D	140MT-C-AFA10
		0	X	0	13-14	N.O. Aux		140MT-C, D 140UT-D	140MT-C-AFA11
		X	0	X	21-22	N.C. Aux			
		0	X	0	13-14	N.O. Aux		140MT-C, D 140UT-D	140MT-C-AFA20
		0	X	0	23-24	N.O. Aux			
	Right Side-Mounted Auxiliary Contact • 2-pole • Adds 9 mm to the width of the device • One per device • Not suitable for UL 489 applications	0	X	0	33-34	N.O. Aux		140MT-C, D 140UT-D	140MT-C-ASA20
		0	X	0	43-44	N.O. Aux			
		X	0	X	31-32	N.C. Aux		140MT-C, D 140UT-D	140MT-C-ASA02
		X	0	X	41-42	N.C. Aux			
		0	X	0	33-34	N.O. Aux		140MT-C, D 140UT-D	140MT-C-ASA11
		X	0	X	41-42	N.C. Aux			
		0	X	0	13-14	N.O. Aux		140MT-C, D 140UT-D	140MT-C-AFAR10A10
		0	0	X	27-28	N.O. Trip (short-circuit and overload)			
		X	0	X	11-12	N.C. Aux		140MT-C, D 140UT-D	140MT-C-AFAR10A01
		0	0	X	27-28	N.O. Trip (short-circuit and overload)			
		0	X	0	13-14	N.O. Aux		140MT-C, D 140UT-D	140MT-C-AFAR01A10
		X	X	0	25-26	N.O. Trip (short-circuit and overload)			
		0	0	X	27-28	N.O. Trip (short-circuit and overload)		140MT-C, D 140UT-D	140MT-C-AFAR10M10
		0	0	X	17-18	N.O. Trip (short-circuit and overload)			

(1) X=Contact Closed
0=Contact Open

(2)

 140M/140MT Operator

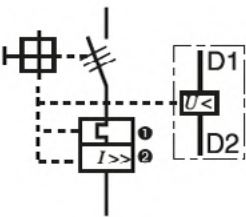
 Overload (thermal) trip

 Short-circuit (thermal) trip

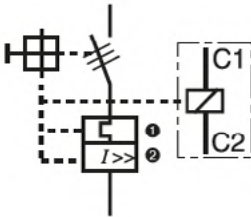
(1) X=Contact Closed
O=Contact Open
(2)  140M/140MT Operator
 Overload (thermal) trip
 Short-circuit (thermal) trip

Accessories for 140MT

Accessory	Description	For use with	AC Coil Voltage		Catalogue number	
			50 Hz	60 Hz	Shunt Trip	Undervoltage
	Undervoltage Trip • Left-side mounted • Adds 18mm to the width of the device • Automatically trips MPCB/MCP when voltage falls below 35...70% Shunt trip • Left-side mounted • Adds 18mm to width of device • Provides remote tripping of the MPCB/MCP • Maximum on time for DC operated devices: 5 sec.	140MT-C,D 140UT-D	24V	24...28V	140MT-C-SNK	140MT-C-UXK
			220...230V	-	140MT-C-SNF	140MT-C-UXF
			-	240...260V	140MT-C-SNA	140MT-C-UXA
			DC Coil Voltage		Shunt Trip	Undervoltage
			24V DC		140MT-C-SNZJ	-



Undervoltage Trip
Connection Diagram



Shunt Trip
Connection Diagram

(1) For Overload (thermal) Trip of 140MT.
(2) For Short-Circuit (magnetic) Trip of 140MT.

140MT Classic Handle Assembly

Type 1/ IPX4 Protection

Accessory	Description	Colour	Legend	For use with	Frame Size (Length)	Catalogue number
	Door Coupling Handle • For 3 padlocks 4...8 mm (5/16 in.) in diameter • IPX4 Protection/Type 1, 3R Interlock override capability • Can be modified for locking in ON position • Ships with coupling — order extension shaft and legend plate separately	Black	O - I OFF -ON Trip	140MT-C, D 140UT- D	65 x 65mm	140MT-C-DN66
		Red/ Yellow	O - I OFF -ON Trip		65 x 65mm	140MT-C- DRY66

Accessory	Description	For use with	Catalogue number
	Extension Shaft (Standard Length) • Cut to required length for mounting depth (front of DIN Rail to front of enclosure door): -140MT-C: 136...358 mm (5.35...14.1 in) -140MT-D: 143...364 mm (5.63...14.33 in) • For use with catalogue numbers 140MT-C-DN66 and 140MT-C-DRY66 handles	140MT-C, D 140M-F 140UT- D	140MT-C-DS
	Extension Shaft (Extended Length) • Cut to required length for mounting depth (front of DIN Rail to front of enclosure door): -140MT-C: 136...507 mm (5.35...19.96 in) -140MT-D: 143...513 mm (5.63...20.2 in) • For use with catalogue numbers 140MT-C-DN66 and 140MT-C-DRY66 handles		140MT-C-DSL

Accessory	Description	Colour	Legend	For use with	Frame Size (Length)	Catalogue number
	Door Coupling Handle • Type 3, 3R, 4, 4X, 12 (IP66) • For up to 2 padlocks • Fits in 30.5 mm cutout • Requires 140MT-C-DNC (140MT-C, 140MT-D, 140UT-D) or 140M-C-DNC (140M-F) coupler	Black	O - I OFF - ON Trip	140MT-C,D 140UT-D	48.7 X 47mm	140MT-SB
	Extension Shaft • Cut to required length for mounting depth (front of DIN Rail to front of enclosure door)			140MT-SB, 140MT-SY	304.8mm	140MT-S1
	Coupler • Included with Catalogue Numbers 140MT-C-DN66 and 140MT-C-DRY66			140MT-C,D 140UT-D	-	140MT-C-DNC

Handle Accessories

Accessory	Description	For use with	Catalogue number
	Extension Shaft Support - Provides consistent alignment of the 140M/MT-C-DS and 140M/MT-C-DSL shafts with the 140M/MT-C-DN66 or 140M/MT-C-DRY66 door coupling handles - Recommended for shaft lengths >200 mm - Snaps on the right side of the 140MT-C, -D, 140M-F, or 140UT-D device and allows the addition of one side-mounted auxiliary contact. - Width: 9 mm - For use with screw-mounted or hat rail mounted devices	140MT-C,D 140UT-D	140MT-C-SHS

Accessories for 140MT

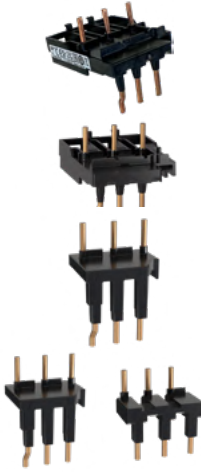
Accessory	Description	Colour	For use with	Catalogue number
	Lockable Twist Knob - For 1 padlock 4...6 mm (3/16 in.) diameter shackle - Can be locked in OFF position	Black	140MT-C,D	140MT-C-KN
		Red/Yellow		140MT-C-KRY
	Locking Tag - Padlock attachment to the lockable handles - Up to three padlocks 4...8 mm (5/16 in.) diameter shackle		140MT-C-KN 140MT-C-KRY	140MT-C-M3

Marking Systems

Accessory	Description	Pkg. Qty.	For use with	Catalogue number
	Label Sheet 105 self-adhesive paper labels each, 6 x 17 mm (0.236 x 0.67 in)	1	140MT-C, -D 140M-F	100-FMS
	Self-adhesive Markers 40 markers/card - Each label 6 x 15mm (0.236 x 0.59 inc)	1		1492-MAS6X15

Connecting Modules

(For connecting 140MT-C or 140MT-D to 100E, 100SE or 100K Contactors)

Module	Type	Description	For Connecting	Catalogue number
	ECO Connecting Module — 12 A (IEC)	- For DOL and reversing starters - Eco-starters mount on single DIN Rail (140MT on DIN Rail) - Electrical and mechanical interconnection of 140MT and 100-K contactors	140MT-C to 100-K	140MT-C-PEK12
	ECO Connecting Modules — 18 A (IEC)	- Eco-starters mount on single DIN Rail (140MT on DIN Rail) - Electrical and mechanical interconnection of 140MT MPCB and 100-E contactors	140MT-C to 100(S)-E09...16 ⁽¹⁾	140MT-C-PE16
			140MT-D to 100(S)-E09...16 ⁽¹⁾	140MT-D-PE16
	ECO Connecting Modules — 40 A (IEC)	- Eco-starters mount on single DIN Rail (140MT on DIN Rail) - Electrical and mechanical interconnection of 140MT MPCB and 100-E contactors	140MT-C to 100(S)-E26...38 ⁽¹⁾	140MT-C-PE38
			140MT-D to 100(S)-E26...38 ⁽¹⁾	140MT-D-PE38
	Spacing Adapter	- Spacing adapter - Required for self-protected combination motor controller (Type E) applications of Bul. 140MT-C, -D, and 140M-F MPCBs. - Not for use with bus bars	140MT-C,D	140MT-C-TE

Other Accessories

Accessory	Description		For Use With	Catalogue number
	Feeder Block for Compact Busbar • Supply of compact busbars • Increases terminal capacity		140MT-C	140MT-C-WBE
	Feeder Terminal for Compact Busbar • For supply of compact busbars • Top feed — overlaps compact busbar		140MT-C, -D	140MT-C-WTEN
	Three-phase Compact Busbar for MPCBs — 64 A Max Continuous Current • 45 mm (1.77 in.) spacing • For use with front-mounted auxiliary contact	2 Connections	140MT-C, -D	140MT-C-W452
		3 Connections		140MT-C-W453
		4 Connections		140MT-C-W454
		5 Connections		140MT-C-W455
	Three-phase Compact Busbar for MPCBs — 64 A Max Continuous Current • 54 mm (2.13 in.) spacing • For use with side-mounted auxiliary contact	3 Connections	140MT-C, -D	140MT-C-W543
		4 Connections		140MT-C-W544
		5 Connections		140MT-C-W545
	Terminal Cover • For covering of unused compact bus bar terminals • IP2X finger protection		140MT-C, -D	140MT-C-WSN
	Top Hat Rail Adapter — 10 mm • Adjusts the depth of the 140MT-C to the 140MT-D • Allows the use of compact busbars across both frame sizes • Must be ordered in multiples of 10 • 10 pieces/pkg		140MT-C	140MT-KBH

Product Migration

Why Upgrade or Migrate

With the launch of the new 140MT Motor Protection Circuit Breakers, Rockwell Automation have discontinued the existing 140M range (C and D frame sizes).

NHP will continue to serve our customers with the balance of the 140M MPCB's that is the F-frame up to 45A.

Mitigate and Eliminate the Risks of Obsolescence

Rockwell Automation and NHP understands that your Motor Protection Circuit Breakers are critical assets in your motor control system, and we support that by providing you with the latest technology to maximise your investment. New technologies can improve and extend the operation of existing equipment and provide an immediate boost to productivity. By migrating from your legacy 140M product to new 140MT Motor Protection Circuit Breakers, you can help to decrease downtime and optimise operations well into the future.

NHP will help you to meet this demand to innovate by proactively planning and managing your transition every step of the way to help you get the highest possible return on your motor control investment.



Obsolete 140M



140MT series

(1) Not suitable for 100(S)-E09...38QJ contactors

Frequently Asked Questions

Are 140M-C2 and 140M-D8 dimensions the same as 140MT products, will I need to change my drawings for mounting?

140MT device height and depth are different but width is the same so replacement should be easier. Please see CAD drawings for further information.

Are the 140MT auxiliaries and accessories same as 140M?

140MT auxiliaries and accessories are different then those used with the 140M range. Please refer to migration tables for replacement part numbers.

Are connecting modules for 140MT to Allen-Bradley contactor product lines available?

Yes, we have various types and ratings of connecting modules available for connecting 140MT with 100E, 100C and 100K Contactors.

Can I apply and install the 140MT products with Rockwell Automation's different product lines?

Yes, combination SCCR testing at various voltages (400V, 480V & 600V) of 140MT products and 100-E, 100-C, 100-K contactors are published on RA's technical data guide

What to do if I am using 140M F frame size?

140M F frame is not being discontinued at present so please continue using 140M F frame devices until further advised.

Are external door handles same for 140M and 140MT?

External handles 140MT-C-DN66 and 140-MT-C-DRY66 looks like the 140M equivalent handles but there are minor differences so suggest applying the new handles.



Comparison Guide

This comparison guide is intended to provide an overview of the features available with the series 140M-C and 140MP-A products along with the new series 140MT

			NEW		NEW	
Bulletin No.	140MP-A	140M-C	140MT-C	140M-D	140MT-D	140M-F
Frame size	–	C-Frame	C-Frame	D-Frame	D-Frame	F-Frame
Dimensions (W x H x D) (mm)	45 x 90 x 85.5	45 x 92 x 75	45 x 96 x 84	45 x 92 x 85	45 x 96 x 94	54 x 111 x 115
Current range (A)	0.1 - 32	0.1 - 32	0.1 - 32	1.6 - 32	0.4 - 40	6.3 - 45
SCCR @ 480V (kA)	18-30	25-65	30-65	30-65	30-50-65	65
SCCR @ 400V (kA)	15-50-100	15-65-100	15-65-100	50-65-100	50-65-100	65-100
Short Circuit Protection	✓	✓	✓	✓	✓	✓
Overload Protection	✓	✓	✓	✓	✓	✓
Overload Trip Class	10	10	10	10	10	10
Phase Loss Sensitivity	✓	✓	✓	✓	✓	✓
Short Circuit Indication	✗	✓	✓	✓	✓	✓
Lockable Knob	Optional	Optional	Optional	Optional	Standard	Optional
Compatible at output of VFD	✗	✗	✗	✓	✓	✓
MCP Version, High Inrush Version	✗	✓	✗	✓	✓	✓

140M to 140MT

Part Number Conversion

Motor Protection Circuit Breakers

140M-C (Obsolete)	140MT-C (New)
140M-C2E-A16	140MT-C3E-A16
140M-C2E-A25	140MT-C3E-A25
140M-C2E-A40	140MT-C3E-A40
140M-C2E-A63	140MT-C3E-A63
140M-C2E-B10	140MT-C3E-B10
140M-C2E-B16	140MT-C3E-B16
140M-C2E-B25	140MT-C3E-B25
140M-C2E-B40	140MT-C3E-B40
140M-C2E-B63	140MT-C3E-B63
140M-C2E-C10	140MT-C3E-C10
140M-C2E-C16	140MT-C3E-C16
140M-C2E-C20	140MT-C3E-C20 ⁽¹⁾
140M-C2E-C25	140MT-C3E-C25 ⁽¹⁾
140M-C2E-C29	140MT-C3E-C29 ⁽¹⁾
140M-C2E-C32	140MT-C3E-C32 ⁽¹⁾

(1) Refer to tech data for change in short circuit ratings at 480V and 600V

140M-D (Obsolete)	140MT-D (New)
-	140MT-D9E-A63
-	140MT-D9E-B10
-	140MT-D9E-B16
140M-D8E-B25	140MT-D9E-B25
140M-D8E-B40	140MT-D9E-B40
140M-D8E-B63	140MT-D9E-B63
140M-D8E-C10	140MT-D9E-C10
140M-D8E-C16	140MT-D9E-C16
140M-D8E-C20	140MT-D9E-C20
140M-D8E-C25	140MT-D9E-C25
140M-D8E-C29	140MT-D9E-C29
140M-D8E-C32	140MT-D9E-C32
-	140MT-D9E-C36
-	140MT-D9E-C40
140M-D8V-B16	140MT-D9V-B16
140M-D8V-B25	140MT-D9V-B25
140M-D8V-B40	140MT-D9V-B40
140M-D8V-B63	140MT-D9V-B63
140M-D8V-C10	140MT-D9V-C10
140M-D8V-C16	140MT-D9V-C16
140M-D8V-C20	140MT-D9V-C20
140M-D8V-C25	140MT-D9V-C25
140M-D8V-C29	140MT-D9V-C29
140M-D8V-C32	140MT-D9V-C32
-	140MT-D9V-C36
-	140MT-D9V-C40

140M High Inrush version	140MT High Inrush version
140M-C2T-A16	140MT-D9T-A16
140M-C2T-A25	140MT-D9T-A25
140M-C2T-A40	140MT-D9T-A40
140M-C2T-A63	140MT-D9T-A63
140M-C2T-B10	140MT-D9T-B10
140M-C2T-B16	140MT-D9T-B16
140M-C2T-B25	140MT-D9T-B25
140M-C2T-B40	140MT-D9T-B40
140M-C2T-B63	140MT-D9T-B63
140M-C2T-C10	140MT-D9T-C10
140M-C2T-C16	140MT-D9T-C16
140M-D8T-C16	
140M-D8T-C20	140MT-D9T-C20
	140MT-D9T-C25

140M MCP Version	140MT MCP Version
140M-C2N-A16	140MT-D9N-A16
140M-C2N-A25	140MT-D9N-A25
140M-C2N-A40	140MT-D9N-A40
140M-C2N-A63	140MT-D9N-A63
140M-C2N-B10	140MT-D9N-B10
140M-C2N-B16	140MT-D9N-B16
140M-C2N-B25	140MT-D9N-B25
140M-D8N-B25	
140M-D8N-B40	140MT-D9N-B40
140M-D8N-B63	140MT-D9N-B63
140M-D8N-C10	140MT-D9N-C10
140M-D8N-C16	140MT-D9N-C16
140M-D8N-C25	140MT-D9N-C25
140M-D8N-C32	140MT-D9N-C32
-	140MT-D9N-C36
-	140MT-D9N-C40

140M Screwless version	140MT w/ Screw Terminal
140M-RC2E-A16	140MT-C3E-A16
140M-RC2E-A25	140MT-C3E-A25
140M-RC2E-A40	140MT-C3E-A40
140M-RC2E-A63	140MT-C3E-A63
140M-RC2E-B10	140MT-C3E-B10
140M-RC2E-B16	140MT-C3E-B16
140M-RC2E-B25	140MT-C3E-B25
140M-RC2E-B40	140MT-C3E-B40
140M-RC2E-B63	140MT-C3E-B63
140M-RC2E-C10	140MT-C3E-C10
140M-RC2E-C16	140MT-C3E-C16

140M (Multipack)	140MT (Single Pack)
140M-C2E-B10M	140MT-C3E-B10
140M-C2E-B16M	140MT-C3E-B16
140M-C2E-B25M	140MT-C3E-B25
140M-C2E-B40M	140MT-C3E-B40
140M-C2E-B63M	140MT-C3E-B63
140M-C2E-C10M	140MT-C3E-C10
140M-C2E-C16M	140MT-C3E-C16
140M-C2E-C20M	140MT-C3E-C20
140M-C2E-C25M	140MT-C3E-C25
140M-C2T-C10M	140MT-D9T-C10
140M-C2T-C16M	140MT-D9T-C16
140M-D8N-C25M	140MT-D9N-C25
140M-D8E-B40M	140MT-D9E-B40
140M-D8E-B63M	140MT-D9E-B63
140M-D8E-C10M	140MT-D9E-C10

Auxiliary Contacts

140M	140MT	Functional options
140M-C-AFA01	140MT-C-AFA11	–
140M-C-AFA02	#N/A	140MT-C-ASA02
140M-C-AFA10	140MT-C-AFA10	–
140M-C-AFA11	140MT-C-AFA11	–
140M-C-AFA20	140MT-C-AFA20	–
140M-C-AFAR10A01	140MT-C-AFAR10A01	–
140M-C-AFAR10A10	140MT-C-AFAR10A10	–
140M-C-ASA02	140MT-C-ASA02	–
140M-C-ASA11	140MT-C-ASA11	–
140M-C-ASA20	140MT-C-ASA20	–
140M-C-ASAM11	#N/A	140MT-C-AFAR10M10
140M-C-ASAR01M01	#N/A	–
140M-C-ASAR01M10	#N/A	140MT-C-AFAR01A10
140M-C-ASAR10M01	#N/A	–
140M-C-ASAR10M10	#N/A	140MT-C-AFAR10M10
140M-RC-AFA10	#N/A	140MT-C-AFA10
140M-RC-AFA01	#N/A	140MT-C-AFA11
140M-RC-AFA11	#N/A	–
140M-RC-AFA20	#N/A	140MT-C-AFA20
140M-RC-AFAR10A01	#N/A	140MT-C-AFAR10A01
140M-RC-AFAR10A10	#N/A	140MT-C-AFAR10A10

Shunt Trip Release

140M	140MT
140M-C-SNA	140MT-C-SNA
140M-C-SNB	140MT-C-SNB
140M-C-SND	140MT-C-SND
140M-C-SNF	140MT-C-SNF
140M-C-SNH	#N/A
140M-C-SNK	140MT-C-SNK
140M-C-SNJ	#N/A
140M-C-SNKD	#N/A
140M-C-SNM	#N/A
140M-C-SNN	140MT-C-SNN
140M-C-SNT	140MT-C-SNT
140M-C-SNVC	#N/A
140M-C-SNX	#N/A
140M-C-SNZJ	140MT-C-SNZJ

Other Installation accessories

140M	140MT
140M-C-CA	140MT-C-CA
140M-C-DFCN	140MT-C-DFCN
140M-C-DFCRY	140MT-C-DFCRY
140M-C-DN66	140MT-C-DN66
140M-C-DNC	140MT-C-DNC
140M-C-DRY66	140MT-C-DRY66
140M-C-DS	140MT-C-DS
140M-C-DSL	140MT-C-DSL
140M-C-KN1	140MT-C-KN
140M-C-KRY1	140MT-C-KRY
140M-C-M3	140MT-C-M3
140M-C-N45	140MT-C-N45
140M-C-SHS	140MT-C-SHS
140M-SB	140MT-SB
140M-SY	140MT-SY
140M-S1	140MT-S1
140M-S2	140MT-S2
140M-KBH2	140MT-KBH
	140MT-C-DSS
140M-C-TE1	140MT-C-TE

Undervoltage Release

140M		140MT
140M-C-UXA		140MT-C-UXA
140M-C-UXB		140MT-C-UXB
140M-C-UXD		140MT-C-UXD
140M-C-UXF		140MT-C-UXF
140M-C-UXH		#N/A
140M-C-UXJ		#N/A
140M-C-UXK		140MT-C-UXK
140M-C-UXKD		#N/A
140M-C-UXM		#N/A
140M-C-UXN		140MT-C-UXN
140M-C-UXT		#N/A
140M-C-UXVC		#N/A
140M-C-UXC		140MT-C-UXD
With early make contacts		Without early make contacts 140MT
140M	140MT	Functional Options
140M-C-UCA	#N/A	140MT-C-UXA
140M-C-UCB	#N/A	140MT-C-UXB
140M-C-UCD	#N/A	140MT-C-UXD
140M-C-UCF	#N/A	140MT-C-UXF
140M-C-UCH	#N/A	#N/A
140M-C-UCJ	#N/A	#N/A
140M-C-UCK	#N/A	140MT-C-UXK
140M-C-UCN	#N/A	140MT-C-UXN
140M-C-UCT	#N/A	#N/A
140M-C-UCVC	#N/A	#N/A
140M-C-UCX	#N/A	#N/A
140M-C-UCM	#N/A	#N/A
140M-C-UCC	#N/A	140MT-C-UXD

Busbars & Connecting modules

140M	140MT
140M-C-W452N	140MT-C-W452
140M-C-W453N	140MT-C-W453
140M-C-W454N	140MT-C-W454
140M-C-W455N	140MT-C-W455
140M-C-W542N	140MT-C-W542
140M-C-W543N	140MT-C-W543
140M-C-W544N	140MT-C-W544
140M-C-W545N	140MT-C-W545
140M-C-WBE	140MT-C-WBE
140M-C-WSN	140MT-C-WSN
140M-C-WTEN	140MT-C-WTEN
140M-C-PEC23	140MT-C-PEC23
140M-C-PEC23A	#N/A
140M-C-PEC23M	140MT-C-PEC23
140M-C-PEK12	140MT-C-PEK12
140M-C-PEK12M	140MT-C-PEK12
140M-C-PKC23	140MT-C-PNC23 + 140MT-C-PSC23
140M-C-PKC23M	#N/A
140M-C-PNC23	140MT-C-PNC23
140M-C-PNC23M	140MT-C-PNC23
140M-C-PSC23	140MT-C-PSC23
140M-C-PSC23M	
140M-D-PEC23	140MT-D-PEC23
140M-D-PNC23	140MT-D-PNC23
140M-D-PNC37	140MT-D-PNC37
140M-D-PKC23	140MT-D-PNC23 + 140MT-C-PSC23

General data

Attribute			140MT-C	140MT-D	140M-F
Standards compliance	IEC		IEC/EN60947-2,IEC/EN 60947-4-1		
	cULus		UL 60947-4-1.CSA C22.2,No.60947-4-1		
Certifications	Regional		cULusListed(File No.ES4612,NLRV(n [205542, NKJH(7);ES18407		
			CCC,EAC,CE,IEC, CBScheme		CCC,EAC,CE
Rated Insulation Voltage Ui	IEC	[V]	690		
	UL/CSA	[V]	600		
Rated Impulse Withstand Voltage Uimp	Pollution degree		3		
	Main circuits Uimp /Overvoltage Category		6 kV/III, 8 kV (Disconnect)		
	Auxiliary circuits Uimp /Overvoltage Category		6 kV/III		
Rated Frequency		[Hz]	45-65		
Utilization Category	IEC60947-2(Circuit breaker)		A		
	IEC60947-4-1(Motor starter)		AC-3		
Life Span	Mechanical	[operations]	100,000		30,000
	Electrical (Ie max.)	[operations]	100,000		30,000
Switching Frequency		[operations/hours]	Max. 25		
Ambient Temperature	Storage	[°C (°F)]	-40...+85°C (-40-185°F)		
	Operation	[°C (°F)]	-25...+70°C (-13-158°F)		
Climatic resistance	Operating Humidity/Moisture heat (60068-2-3)		5...95% Non-condensing		
Site Altitude		[m]	To 2000 (6561 ft)		
Protection Class			IP2X from all directions		
Resistance to Shock, Transport (60068-2-27)	ON		15 G/11 ms		
	OFF		30 G/11 ms		
Resistance to Vibration, Operation (60068-2-6)			5 G		
Rated Thermal Current Ith	Up to 40 °C (104 °F) ambient temperature	[A]	0.1...32	0.63...40	6.3...45
	Up to 60 °C (140 °F) ambient temperature	[A]	0.1...32	0.63...40	6.3...45
Rated Supply Current Ie		[A]	0.1...32	0.63...40	6.3...45
Dependence on Temperature	40 °C (104 °F)	[A]	No reduction		
	50 °C (122 °F)	[A]	No reduction		
	60 °C (140 °F)	[A]	No reduction		
	70 °C (158 °F)	[A]	15% current reduction of the upper rated current Ie		
Overload Protection Characteristics			IEC60947-4-1Motor protection (except Cat.Nos.140MT-D9N,140M-F9N)		
Ambient Temperature Compensation		[°C (°F)]	-25...+60 (-13...+140)		
Phase-loss Protection			Differential release		
Trip class			10 (except Cat. Nos. 140MT-D9N, 140M-F8N) fixed setting		
Magnetic Release			Fixed setting		
Release current (±20%)	for E,N Version	[A]	14 x Ie max. ⁽¹⁾		13 x Ie max
	for E,N Version C36,C40	[A]	12 x Ie max. ⁽¹⁾		~
	for T Version	[A]	18...22 x Ie max. ⁽²⁾		
Total Power loss Pv	Circuit Breaker at rated load/operating temp.	[W]	4...11	4...14	7...22
Main Disconnect Switch Application			Yes, with accessories		
Application Conditions	140MT-D...C36, -C40: Suitable for continuous operation at 90% current rating at 480V only if used in a minimum enclosure size of 250x175x150mm (10 x 7x 6in).				
	For utilisation outside North America, assemblies (of products) shall comply to the IEC 61439-1 requirements				
	140M and 140MT manual motor starters are intended for use in closed areas without hazardous operating conditions such as dust or explosive or corrosive gases. Enclosures of appropriate manner need to be in place to protect devices in such environments.				

(1) Ie max. = maximum values of setting ranges fixed magnetic setting for 140MT-09V; see ratings.
(2) Ie max. = maximum values of setting ranges; see ratings.

MPCB Connecting Characteristics

Connection			No. of conductors	140MT-C,140MT-D ≤16 A	140MT-C,140MT-D > 16 A	140M-F
Power Terminals						
Type of terminals				Screw Clamp up to 16A,M4	Screw Clamp greater then 16A,M4	
Connection screw				Pozidriv No.2/Blade No.3	Pozidriv No.2/Blade No.3	Pozidriv No.2/Blade No.3
Wiring	Solid or stranded 	1	1...6 mm ²	1.5...10 mm ²	2.5...25 mm ²	
		2	1...2.5 mm ² 2.5...6 mm ²	1.5...4 mm ² 4...10 mm ²	2.5...25 mm ²	
	Flexible with ferrule (end sleeve) 	1	1...6 mm ²	1.5...10 mm ²	2.5...25 mm ²	
		2	1...2.5 mm ² 2.5...4 mm ²	1.5...4 mm ² 4...10 mm ²	2.5...25 mm ²	
	Finely stranded 	1	1.5...6 mm ²	2.5...10 mm ²	16...25 mm ²	
		2	1.5...4 mm ² 2.5...6 mm ²	2.5...6 mm ² 4...10 mm ²	16...25 mm ²	
	Cross section per UL/ CSA solid, stranded  	1	No. 14...10 AWG	No. 14...8 AWG	No.14...8	
		2	No. 14...10 AWG	No. 14...10 AWG No. 12...8 AWG	No.14...8	
Stripping length			10 mm (0.39 in.)	10 mm (0.39 in.)	10 mm (0.39 in.)	
Tightening torques		[Nm]/[lb-in.]	2...2.5 /18...22	2...2.5/18...22	3...3.5/27...30	

Approval Comparison

Approval Comparison






Bulletin no.	140MP-A	140MT-C	140MT-D	140M-F
Frame size	–	C-Frame	D-Frame	F-Frame
Current Rating	0.1...32 A	0.1...32 A	0.4...40 A	6.3...45 A
Short Circuit Protection	✓	✓	✓	✓
Standard magnetic Trip	✓	✓	140MT-D9E...	140M-F8E...
High Magnetic Trip	–	–	140MT-D9T...	140M-F8T...
Magnetic Only Trip (MCP)	–	–	140MT-D9N...	140M-F8N...
Overload Protection	✓	✓	✓	✓
Trip Class	10	10	10	10
Phase loss sensitivity	✓	✓	✓	✓
Short-circuit indication	–	✓	✓	✓
Variable-frequency Drive (VFD) downstream compatible	–	–	140MT-D9V...	✓
Standard compliance and certifications:				
UL 60947-4-1, CSA C22.2, No. 60947-4-1	✓	✓	✓	✓
IEC/EN 60947-2, IEC/EN 60947-4-1	✓	✓	✓	✓
CE	✓	✓	✓	✓
IECEx	–	✓	✓ ⁽¹⁾	–
CCC	✓	✓	✓	✓
Accessories (Optional)				
External rotary operator	✓	✓	✓	✓
Auxiliary contacts	✓	✓	✓	✓
Trip indication contacts	✓	✓	✓	✓
Undervoltage release	✓	✓	✓	✓
Shunt release	✓	✓	✓	✓
Insulated three-phase busbar	✓	✓	✓	✓
Connecting modules for 100-C contactors	✓	✓	✓	✓
Connecting modules for 100-E contactors	✓	✓	✓	–
Connecting modules for 100-K contactors	✓	✓	–	–
Lockable knob	✓	✓	Standard	✓
Anti-tamper cover	✓	✓	Standard	✓

(1) Does not apply to Cat.No 140MT-D9...devices.

Auxiliary Contact Specifications - for 140MT-C... and 140MT-D...Devices

Attribute				Front-mounted Auxiliary Contacts Cat. No. 140MT-C-AFA, -AFAR/ -AFAR10M10	Right Side-mounted Auxiliary Contacts Cat. No.140MT-C-ASA
Rated Thermal Current I_{th}	at 40°C (104°F) ambient temperature		[A]	5	10
	at 60°C (140°F) ambient temperature		[A]	4	6
Back-up Fuses gG, gL			[A]	10	10
General Use current			[A]	5	10
Rated insulation voltage Ui	IEC		[V]	250	690
	UL/CSA		[V]	240	600
Contact rating code designation (UL/CSA)			AC	B300	A600
			DC	R300	Q600
Rated Supply Current I_e	AC-15	24V	[A]	4	6
		120V	[A]	3	5
		240V	[A]	1.5	3
		415V	[A]	-	2
		690V	[A]	-	1
	DC-13	24V	[A]	1.2	2
		125V	[A]	0.22	0.55
		250V	[A]	0.11	0.27
		400V	[A]	-	0.15
		500V	[A]	-	0.13
Type of Terminals					
Recommended Screwdriver			Pozidrive No. 2/Blade No. 3	Pozidrive No. 2/Blade No. 3	
Flexible with insulated ferrule		1 or 2 conductors	0.5...1.5 mm²/No. 18...14 AWG	0.5...2.5 mm²/No. 18...14 AWG	
Flexible		1 or 2 conductors	0.5...1.5 mm²/No. 18...14 AWG	0.75...2.5 mm²/No. 18...14 AWG	
Stranded per UL/CSA		1 or 2 conductors	0.5...1.5 mm²/No. 18...14 AWG	0.75...2.5 mm²/No. 18...14 AWG	
Solid		1 or 2 conductors	0.5...1.5 mm²/No. 18...14 AWG	0.5...2.5 mm²/No. 18...14 AWG	
Conductor steps			Max 2 conductor steps allowed	Max 2 conductor steps allowed	
Tightening torque			1...1.2 N•m/8.9...10.6 lb•in	1...1.2 N•m/8.9...10.6 lb•in1... 1.2	

Auxiliary Contact Specifications - for 140M-F...devices

Attribute				Front-mounted Auxiliary Contacts Cat. Nos. 140M-C-AFA..., 140M-C-AFAR...	Right Side-mounted Auxiliary Contacts Cat. Nos. 140M-C-ASA..., 140M-C-ASAR...
Rated Thermal Current Ith	at 40°C (104°F) ambient temperature		[A]	5	10
	at 60°C (140°F) ambient temperature		[A]	4	6
Back-up Fuses gG, gL			[A]	10	10
Contact rating code designation (UL/CSA)			AC	B300	B600
			DC	Q300	Q600
Rated Supply Current Ie	AC-15	24V	[A]	4	6
		120V	[A]	3	5
		240V	[A]	1.5	3
		415V	[A]	-	2
		690V	[A]	-	0.7
	DC-13	24V	[A]	2	2
		120V	[A]	0.5	0.5
		240V	[A]	0.25	0.25
415V		[A]	-	0.15	
Type of Terminals					
Recommended Screwdriver				Pozidriv No. 2/Blade No.3	Pozidriv No. 2/Blade No.3
Flexible with insulated ferrule		1 conductor	0.5...1.5 mm²		0.5...2.5 mm²
		2 conductors	0.75...1.5 mm²		0.75...2.5 mm²
Stranded per UL/CSA		1 or 2 conductors	0.75...1.5 mm²/No. 18...14 AWG		0.75...2.5 mm²/No. 18...14 AWG
Solid		1 or 2 conductors	0.75...1.5 mm²/No. 18...14 AWG		0.75...2.5 mm²/No. 18...14 AWG
Tightening torque				1.2...1.5 N•m/10.6...13 lb•in	1.2...1.5 N•m/10.6...13 lb•in

Undervoltage and Shunt Trip Specifications - For 140MT-C...and 140MT-D...Devices

Attribute				Undervoltage Trip for Left-side Mounting Cat. No. 140MT-C-UX	Shunt Trip for Left-side Mounting Cat. No. 140MT-C-SN
Actuating Voltage		Pick-up [V]		0.85...1.1 x Us	0.7...1.1 x Us
		Drop-out [V]		0.7...0.35 x Us	0.7...1.1 x Us
Rated AC Control Voltage	140MT-C-UXK	50 Hz	[V AC]	24	-
		60 Hz	[V AC]	28	-
	140MT-C-UXD	50 Hz	[V AC]	110	-
		60 Hz	[V AC]	120	-
	140MT-C-UXF	50 Hz	[V AC]	220...230	-
		60 Hz	[V AC]	-	-
	140MT-C-UXA	50 Hz	[V AC]	-	-
		60 Hz	[V AC]	240...260	-
	140MT-C-UXN	50 Hz	[V AC]	380...400	-
		60 Hz	[V AC]	440...460	-
	140MT-C-UXB	50 Hz	[V AC]	415	-
		60 Hz	[V AC]	480	-
	140MT-C-SNK	50 Hz	[V AC]	-	24
		60 Hz	[V AC]	-	24...28
	140MT-C-SND	50 Hz	[V AC]	-	110
		60 Hz	[V AC]	-	120
	140MT-C-SNF	50 Hz	[V AC]	-	220...230
		60 Hz	[V AC]	-	-
	140MT-C-SNA	50 Hz	[V AC]	-	-
		60 Hz	[V AC]	-	240...260
	140MT-C-SNT	50 Hz	[V AC]	-	240
		60 Hz	[V AC]	-	277
	140MT-C-SNN	50 Hz	[V AC]	-	380...400
		60 Hz	[V AC]	-	440...460
	140MT-C-SNB	50 Hz	[V AC]	-	415
		60 Hz	[V AC]	-	480
	On-time			Continuous duty	
	Coil consumption	Pick-up	[VA/W]	8.5/8	
		Hold-in	[VA/W]	4/2	
	Rated DC Control Voltage	140MT-C-SNZJ		[V DC]	-
On-time			Max 5 s		
Coil consumption		Pick-up	[W]	50	
Type of Terminals					
Recommended screwdriver				Pozidrive No. 2/Blade No. 3	Pozidrive No. 2/Blade No. 3
Flexible with insulated ferrule		1 or 2 conductors		0.5...2.5 mm²/ No. 18...14 AWG	0.5...2.5 mm²/ No. 18...14 AWG
Flexible		1 or 2 conductors		0.75...2.5 mm²/ No. 18...14 AWG	0.75...2.5 mm²/ No. 18...14 AWG
Stranded per UL/CSA		1 or 2 conductors		0.75...2.5 mm²/ No. 18...14 AWG	0.75...2.5 mm²/ No. 18...14 AWG
Solid		1 or 2 conductors		0.5...2.5 mm²/ No. 18...14 AWG	0.5...2.5 mm²/ No. 18...14 AWG
Conductor steps				Max 2 conductor steps allowed	
Tightening torque				1...1.2 N·m/8.9...10.6 lb·in	

Undervoltage and Shunt Trip Specifications - For 140M-F...devices

Attribute					Undervoltage Trip for Left-side Mounting Cat. No. 140M-C-UX..., -UC...		Shunt Trip for Left-side Mounting Cat. No. 140M-C-SN...	
Actuating Voltage	Pick-up			[V]	0.85...1.1 x Us		0.7 ...1.1 x Us	
	Drop-out			[V]	0.7...0.35 x Us		0.7 ...1.1 x Us	
Rated AC Control Voltage		Min	50 Hz	[V AC]	21		21	
			60 Hz	[V AC]	24		24	
		Max	60 Hz	[V AC]	600		600	
	On-time				Continuous duty		Continuous duty	
	Coil consumption		Pick-up	[VA/W]	8.5/8		8.5/8	
			Hold-in	[VA/W]	4/2		4/2	
Type of Terminals								
Recommended Screwdriver					Pozidrive No. 2/Blade No. 3		Pozidrive No. 2/Blade No. 3	
Flexible with insulated ferrule		1 conductor			0.5...2.5 mm²		0.5...2.5 mm²	
		2 conductors			0.75...2.5 mm²		0.75...2.5 mm²	
Stranded per UL/CSA		1 or 2 conductors			0.75...2.5 mm²/No. 18...14 AWG		0.75...2.5 mm²/No. 18...14 AWG	
Solid		1 or 2 conductors			0.75...2.5 mm²/No. 18...14 AWG		0.75...2.5 mm²/No. 18...14 AWG	
Tightening torque					1.2...1.5 N·m/10.6...13.3 lb·in		1.2...1.5 N·m/10.6...13.3 lb·in	

Time-Current Characteristic

1. Thermal Release Trip Current

The adjustable current-dependent delayed bimetal release protects motors against overload. The curve shows the mean operating current at an ambient temperature of 20°C starting from the cold state. Careful testing and setting ensures effective motor protection even in the case of single-phasing. The overload characteristic is also valid for transformer protection.

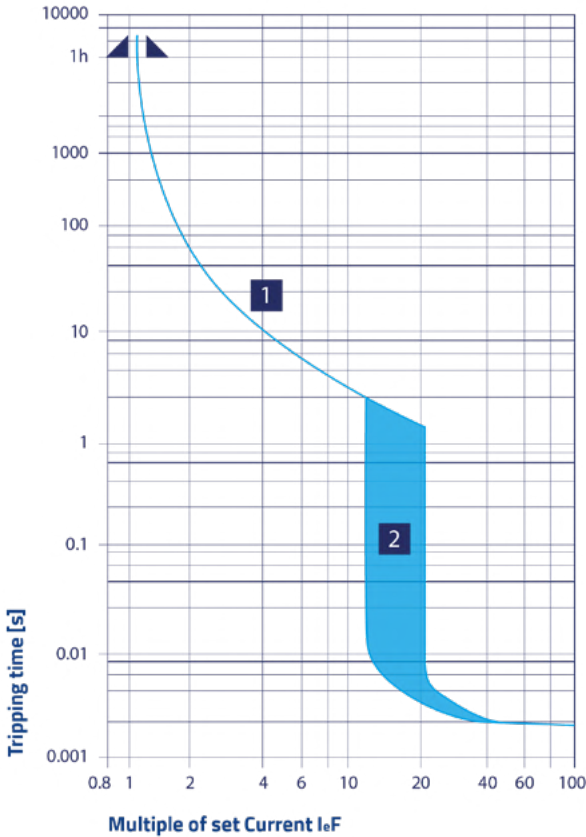
2. Magnetic Release Trip Current

The instantaneous magnetic trip has a fixed operating current setting. This corresponds to 13...14 times the maximum value of setting range (high inrush protection -20 x Ie maximum). At a lower overload setting the magnetic trip is correspondingly higher.

Current Setting I.e

The overload trip corresponds to a thermal overload relay in a motor starter conforming to IEC 60947-4-1. If a different value is prescribed (e.g., reduced Ie for cooling medium having a temperature higher than 40°C or a place of installation higher than 2000m above sea level), the setting current is equal to the reduced rated current Ie of the motor.

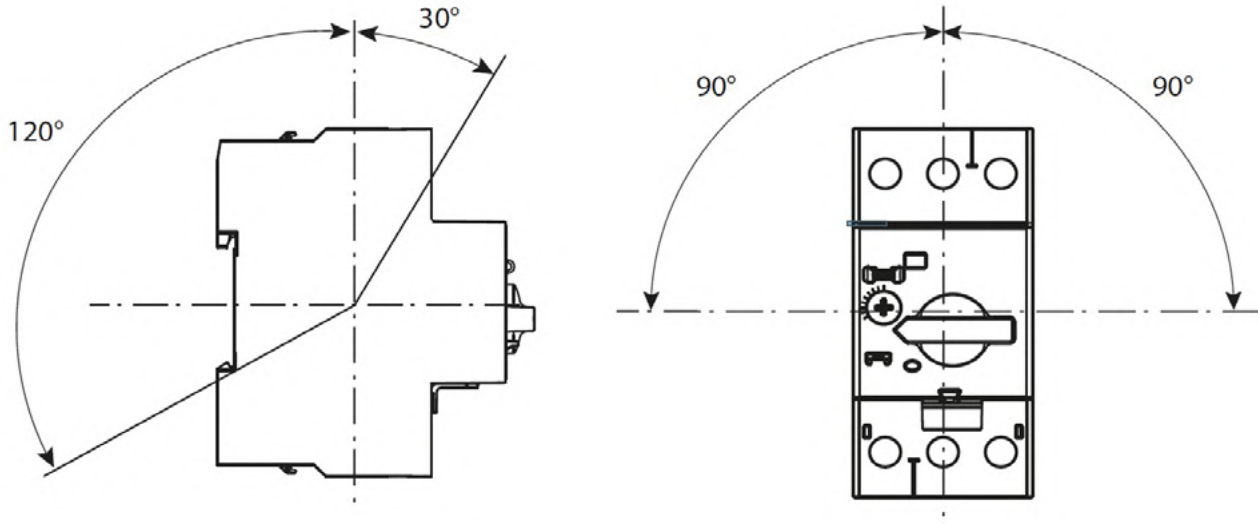
140MT-C, -D, 140M-F Motor Protection Circuit Breakers (for 140MT-D9V, see ratings)



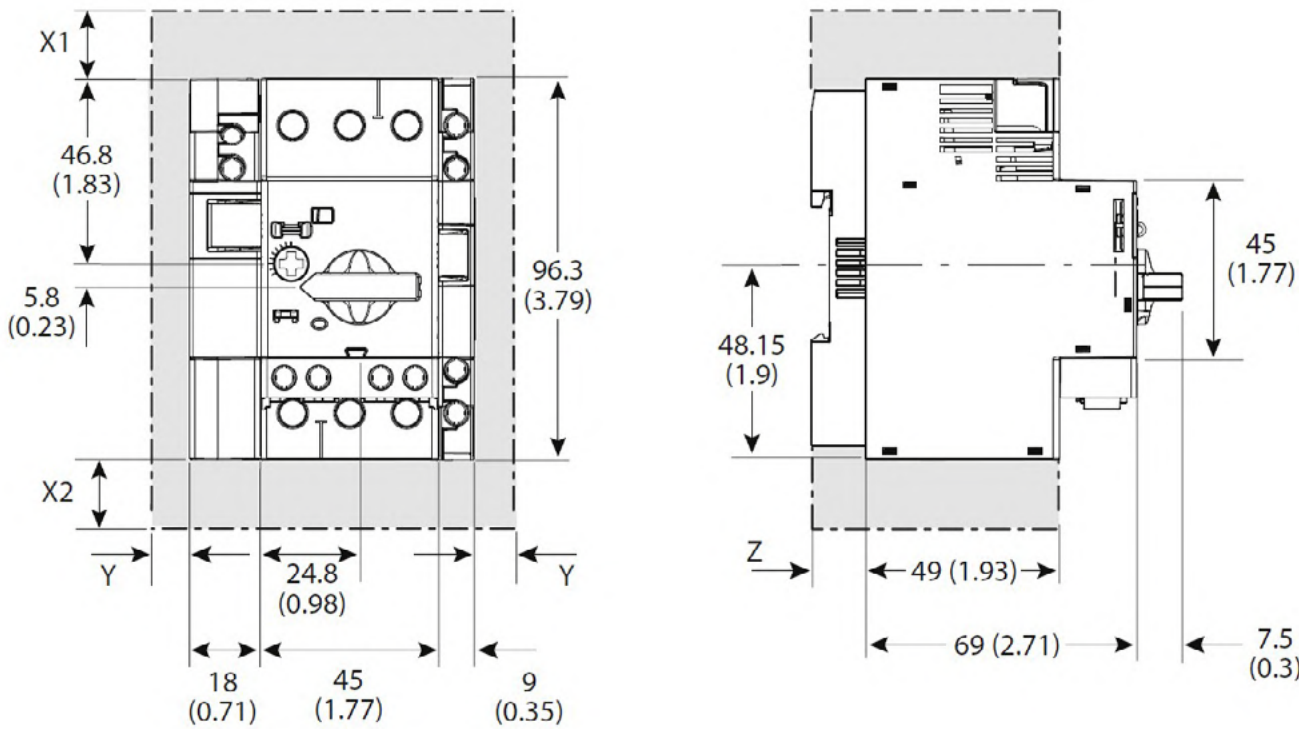
Approximate Dimensions

Dimensions are in millimeters (inches) and are not intended for manufacturing purpose

140MT-C, 140MT-D Devices and Accessories - Mounting Orientation

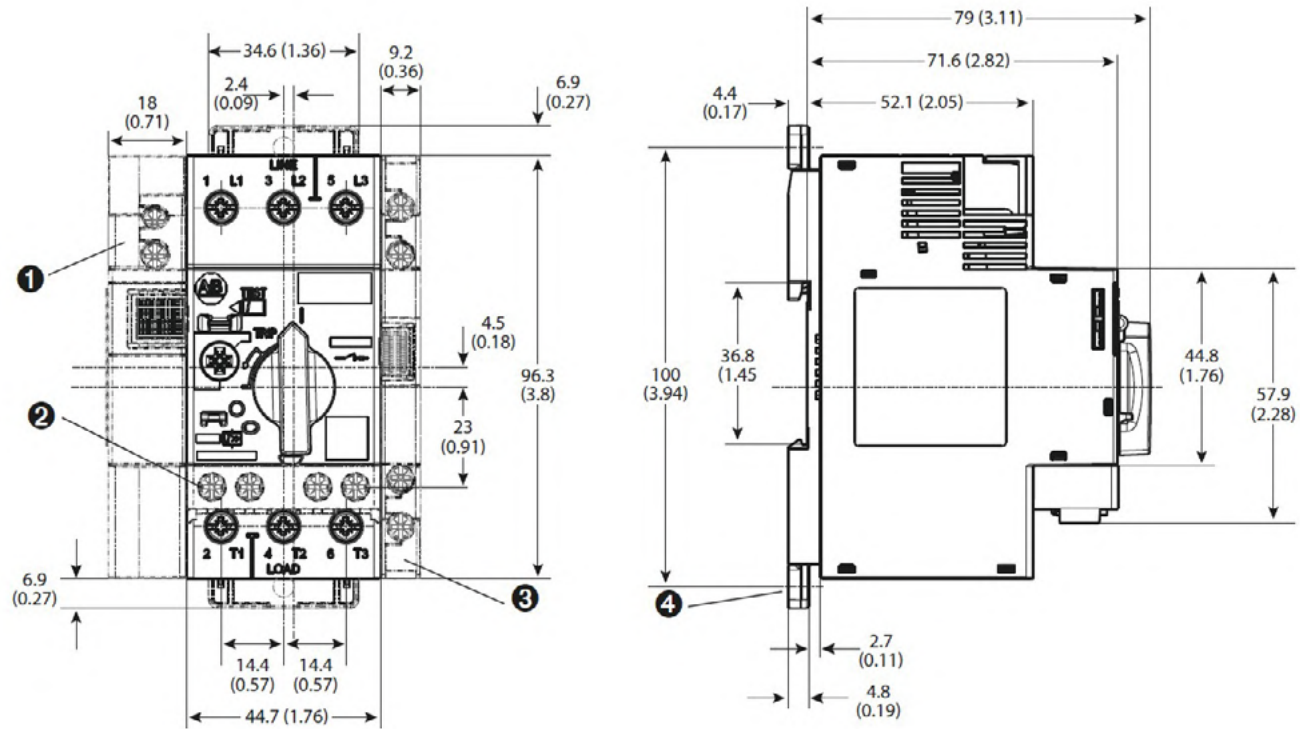


140MT-C, 140MT-D Devices and Accessories - Mounting Orientation

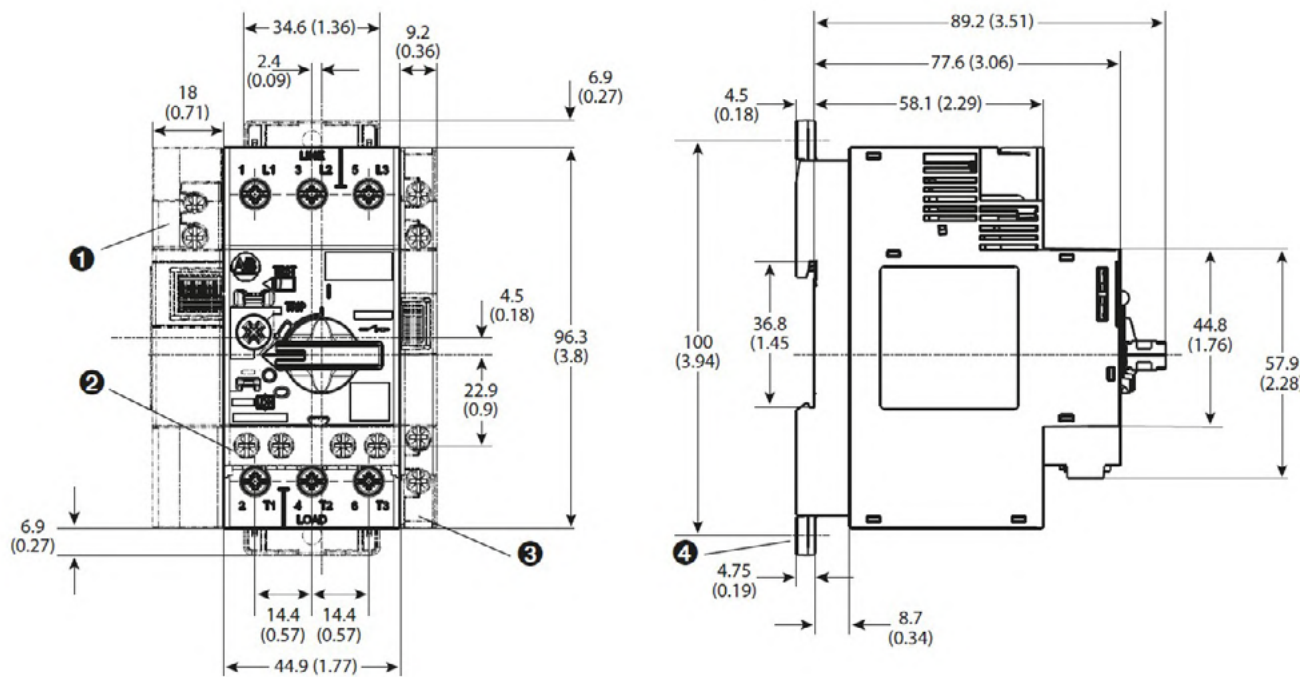


Frame Size	Voltage [V AC]	Minimum Distance to Grounded Parts or Walls [mm (in)]			Z
		X1	X2	Y	
140MT-C (C-Frame)	400	30 (1-3/16)	30 (1-3/16)	9 (23/64)	7.5 (19/64)
	500	30 (1-3/16)	30 (1-3/16)	9 (23/64)	
	690	50 (1-31/32)	50 (1-31/32)	30 (1-3/16)	
140MT-D (D-Frame)	400	30 (1-3/16)	30 (1-3/16)	9 (23/64)	13.5 (17/32)
	500	30 (1-3/16)	30 (1-3/16)	9 (23/64)	
	690	50 (1-31/32)	50 (1-31/32)	30 (1-3/16)	

Motor Protection Circuit Breaker (C-Frame),
Cat. No. 140MT-C3...

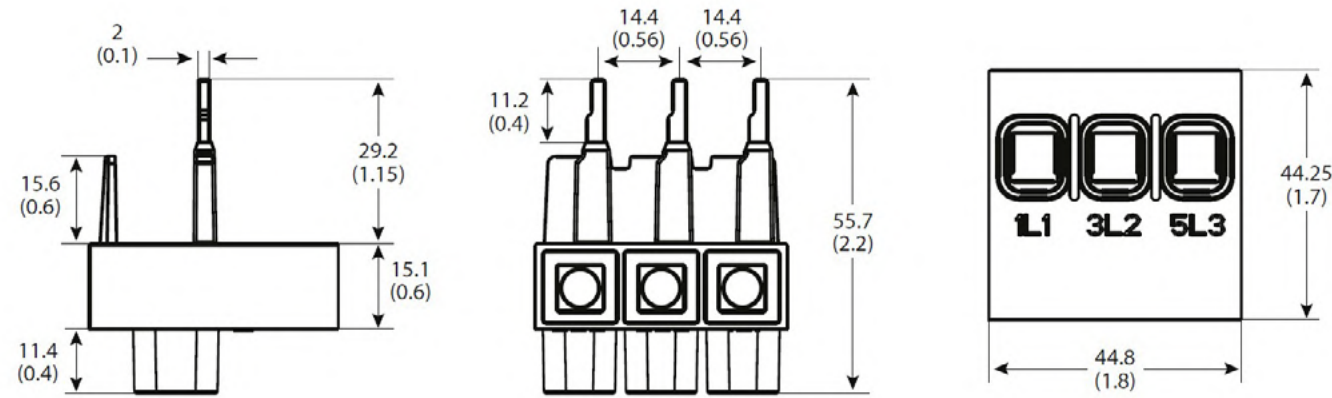


Motor Protection Circuit Breaker (D-Frame),
Cat. No. 140MT-D9...

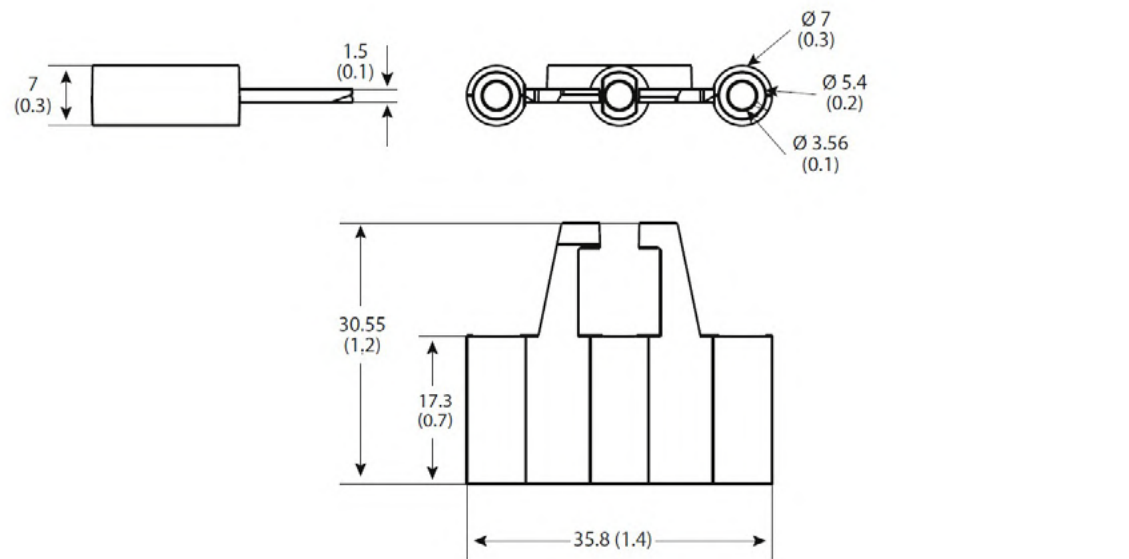


- (1) Undervoltage/shunt trip
- (2) Auxiliary contact (front mounted)
- (3) Auxiliary contact (side mounted)
- (4) Screw mounting adapter

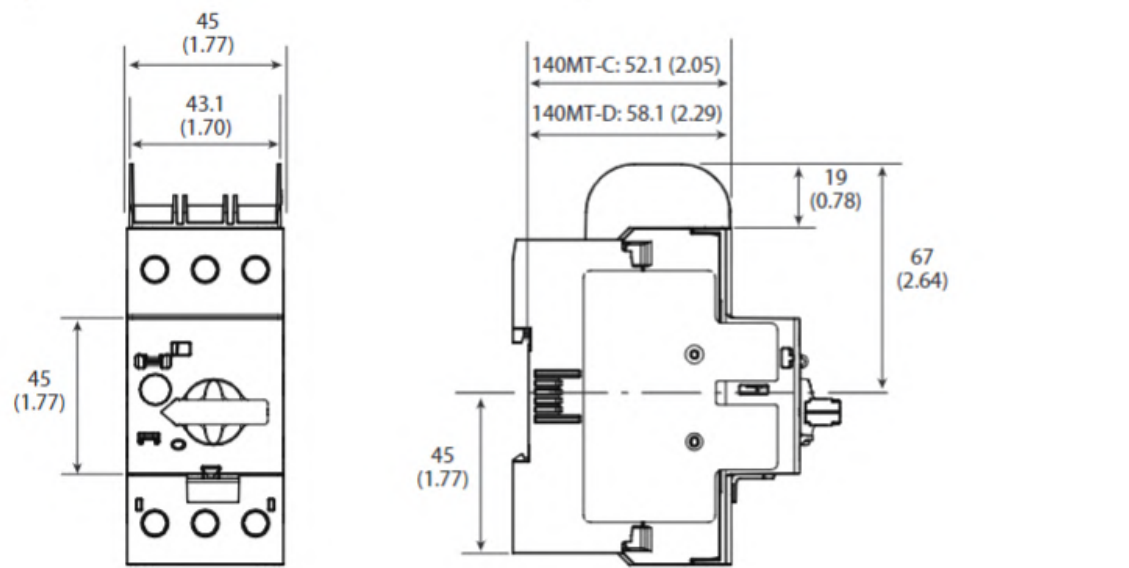
Feeder Terminal for Compact Busbar,
Cat. No. 140MT-C-WTEN



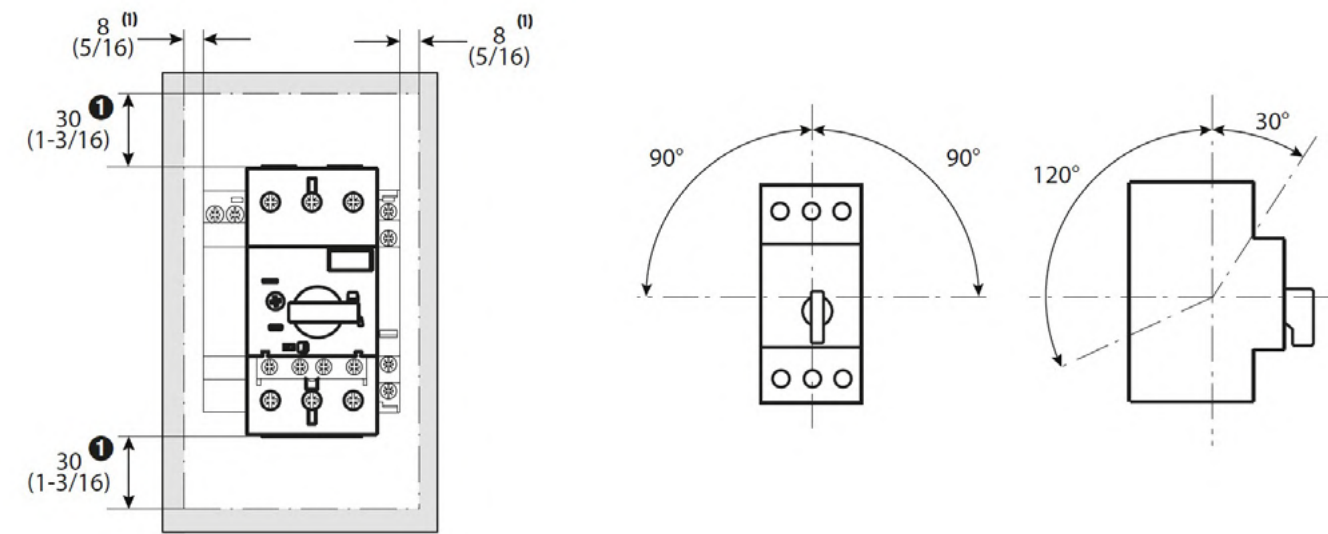
Terminal Cover, Cat. No. 140MT-C-WSN



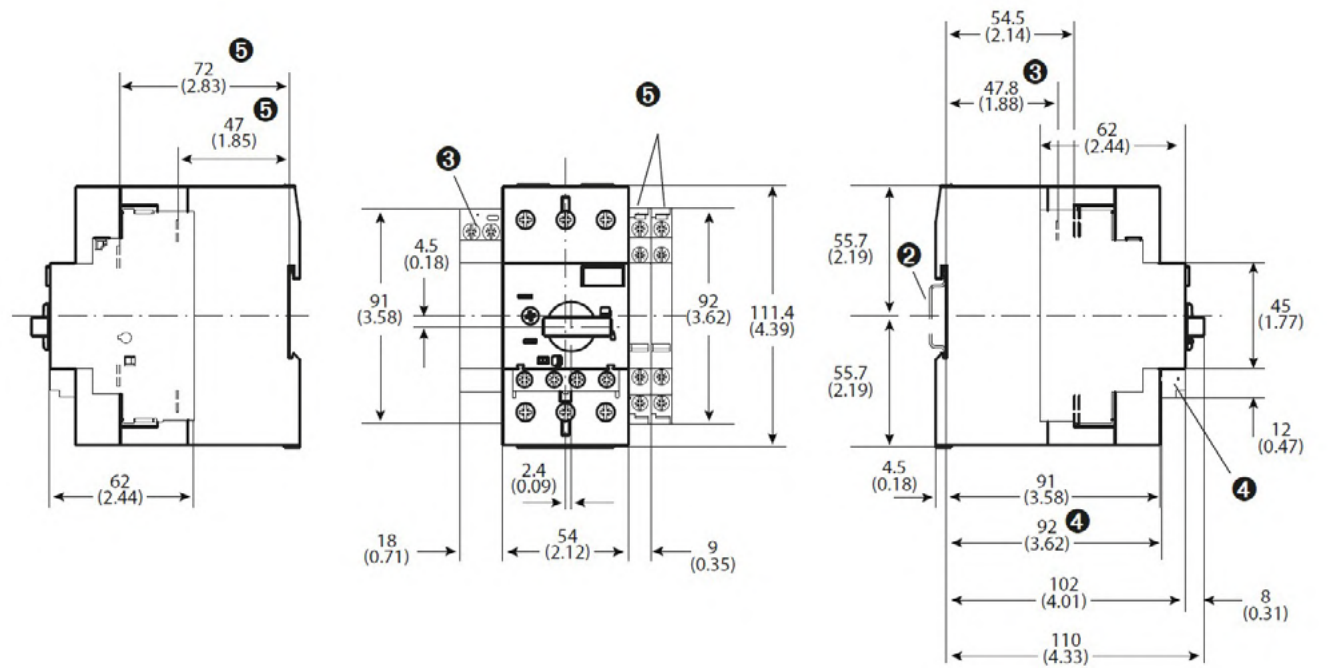
140MT-C and 140MT-D with Cat. No. 140MT-C-TE Type E Adapter



140M-F Mounting Position / Safety Clearance



Motor Protection Circuit Breaker (F-Frame), Cat. No. 140M-F8...



- (1) Minimum distance to grounded parts or walls
- (2) Mounting on 35 mm DIN Rail
- (3) Undervoltage/shunt trip
- (4) Auxiliary contact (front mounted)
- (5) Auxiliary contact (side mounted)



Notes



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