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# BULLETIN 140M

## Motor Protection Circuit Breakers / Motor Circuit Protectors










# Motor Protection Circuit Breakers

## Product Line Overview, Continued

	<p><b>Bulletin 140M Motor Protection Circuit Breakers</b></p> <ul style="list-style-type: none"> <li>• Current Range 0.1...630 A</li> <li>• UL Listed for Motor Loads             <ul style="list-style-type: none"> <li>– Short Circuit Protection</li> <li>– Overload Protection</li> </ul> </li> <li>• Visible Trip Indication</li> <li>• High Current Limiting</li> <li>• High Switching Capacity</li> </ul> <p>The Bulletin 140M Motor Protection Circuit Breakers provide short circuit and overload protection for individual motor loads. Factory-installed internal accessories make installation and wiring easy.</p>	<p><b>Table of Contents</b></p> <p>Product Selection — Motor Protection Circuit Breakers.....</p> <p>Approximate Dimensions.....</p> <p><b>Standards and Approvals</b></p> <p><b>Standards Compliance</b></p> <p>60947-1, 2, 3, 4, 5 60204-1 CSA, C22.2 No.14 UL 508 UL 489</p> <p><b>Approvals</b></p> <p>CE CSA Certified UL Listed</p>
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### Product Line Overview

							
	C-Frame	D-Frame	F-Frame	CMN-Frame	I-Frame	J-Frame	L-Frame
Max. Current $I_e$	25 A	25 A	45 A	90 A	205 A	250 A	630 A
Current Rating	0.1...25 A	1.6...25 A	6.3...45 A	16...90 A	40...205 A	20...250 A	100...630 A
Short Circuit Protection	✓	✓	✓	✓	✓	✓	✓
Standard Magnetic Trip	✓	✓	✓	✓	✓	✓	✓
High Magnetic Trip	✓	✓	✓	✓	—	—	—
Overload Protection	✓	✓	✓	✓	✓	✓	✓
Trip Class	10	10	10	10	5...20	10...30	10...30
<b>Standards Compliance:</b>							
CSA 22.2, No. 14	✓	✓	✓	✓	✓	✓	✓
CSA 22.2, No. 5	—	—	—	—	✓	✓	✓
UL 508 (Group Install.)	✓	✓	✓	✓	—	—	—
UL 508 Manual, Self Protected (Type E)	✓	✓	✓	—	—	—	—
UL 508 (Overload Protection)	✓	✓	✓	✓	✓	✓	✓
UL489	—	—	—	—	✓	✓	✓
IEC 60947-2	✓	✓	✓	✓	✓	✓	✓
IEC 60947-4	✓	✓	✓	✓	✓	✓	✓
CE	✓	✓	✓	✓	✓	✓	✓
<b>Accessories</b>							
Ext. Rotary Operator	✓	✓	✓	✓	✓	✓	✓
Flex Cable Operator	—	—	—	—	✓	✓	✓
Auxiliary Contacts	✓	✓	✓	✓	✓	✓	✓
Trip Indication Contacts	✓	✓	✓	✓	✓	✓	✓

## General Information

Motor Protection Circuit Breakers may provide the following protective and control functions.

- Disconnect for Motor Branch Circuit
- Branch-Circuit, Short-Circuit Protection (Magnetic Protection)
- Overload Protection (Thermal Protection)
- Switching (Manual)

In North America, electrical codes require that an individual Motor Branch Circuit be protected by a UL/CSA Listed Fuse, Circuit Breaker or Self-Protected Combination Motor Controller.

### 140M-C, D and F Frames:

The 140M-C, D and F frame Motor Protection Circuit Breakers may have 2 UL/CSA Listings – as Manual, Self-Protected Combination Motor Controllers and as Manual Motor Controllers (with optional approvals for Motor Disconnect and Group Installation).

When UL/CSA listed as Manual, Self-Protected Combination Motor Controllers as shown in Table on page 2-20, the 140M Motor Protection Circuit Breakers provide all of the necessary NEC/CEC requirements for the protection and control of individual Motor Branch Circuits without additional protective devices.

At some higher voltages and currents (particularly at 600V), a few of the 140M-C, D and F frame devices are only UL/CSA Listed as Manual Motor Controllers (with optional approvals for Motor Disconnect and Group Installation). In NEC/CEC Group Installations, these devices must be applied per the appropriate rules which require the use of an upstream Branch-Circuit, Short-Circuit Protective Device (BCPD). See Table on page 2-20 for the specific ratings of each Motor Protection Circuit Breaker.

### 140-CMN Frame:

The 140-CMN frame Motor Protection Circuit Breakers are UL/CSA Listed as Manual Motor Controllers (with optional approvals for Motor Disconnect and Group Installation). In NEC/CEC Group Installations, these devices must be applied per the appropriate rules which require the use of an upstream Branch-Circuit, Short-Circuit Protective Device (BCPD). See Table on page 2-20 for the specific ratings of each Motor Protection Circuit Breaker.

### 140M-I, J and L Frames:

The 140M-I, J and L frame Motor Protection Circuit Breakers are UL/CSA listed as Circuit Breakers as shown in Table page 2-11. In these cases, the 140M Motor Protection Circuit Breakers provide all of the necessary NEC/CEC requirements for the protection and control of individual Motor Branch Circuits without additional protective devices.

For further details on the proper application of Motor Protection Circuit Breakers, please see the diagrams on the following page as well as the Technical Paper titled “Application of Rockwell Automation Circuit Breakers”, Publication Number 140M-WP002A-EN-P.

Bulletin 140M  
**Motor Protection Circuit Breakers**  
 Product Selection

**Motor Protection Circuit Breakers**

- Short Circuit Protection — Standard Magnetic Trip (Fixed at  $13 \times I_a$ )
- Overload Protection — Trip Class 10



Cat. No. 140M-C



Cat. No. 140M-D



Cat. No. 140M-F



Cat. No. 140-CMN

Rated Operational Current ( $I_a$ ) [A]	Motor Current Adjustment Range [A]	Magnetic Trip Current [A]	Ultimate Interrupting Current [kA] ( $I_{cu}$ )		3-phase Hp Ratings [Hp]*				Max. kW, 3-Phase				Cat. No.
			400V	480V	200V	230V	460V	575V	230V	400/415V	500V	690V	
<b>C-Frame</b>													
0.16 A	0.10...0.16	2.1	100	65	—	—	—	—	—	0.02	—	—	140M-C2E-A16
0.25 A	0.16...0.25	3.3	100	65	—	—	—	—	—	0.06	—	—	140M-C2E-A25
0.40 A	0.25...0.40	5.2	100	65	—	—	—	—	—	0.09	—	—	140M-C2E-A40
0.63 A	0.40...0.63	8.2	100	65	—	—	—	—	0.06...0.09	0.12...0.18	0.18	0.25	140M-C2E-A63
1.0 A	0.63...1.0	13	100	65	—	—	—	0.5	0.12	0.25	0.25...0.37	0.37...0.55	140M-C2E-B10
1.6 A	1.0...1.6	21	100	65	—	—	0.5...0.75	0.75	0.18...0.25	0.37...0.55	0.55...0.75	0.75...1.1	140M-C2E-B16
2.5 A	1.6...2.5	33	100	65	0.5	0.5	0.75...1	1...1.5	0.37	0.75	1.1	1.8	140M-C2E-B25
4.0 A	2.5...4.0	52	100	65	0.75	0.75	1.5...2	2...3	0.55...0.75	1.1...1.5	1.5...2.2	2.2...3.0	140M-C2E-B40
6.3 A	4.0...6.3	82	100	65	1	1...1.5	3	5	1.1...1.5	2.2	2.5...3.0	4.0	140M-C2E-B63
10 A	6.3...10	130	100	65	1.5...2	2...3	5	7.5	2.2	3.0...4.0	4.0...6.3	5.5...7.5	140M-C2E-C10
16 A	10...16	208	50	30	3	—	7.5...10	10	3.0...4.0	5.5...7.5	7.5...10	11...13	140M-C2E-C16
20 A	14.5...20	260	15	30	5	5	—	15	4.0...5.5	7.5...10	11	15...17	140M-C2E-C20
25 A	18...25	325	15	25	—	7.5	15	20	—	11	15	18.5...22	140M-C2E-C25
<b>D-Frame</b>													
2.5 A	1.6...2.5	33	100	65	0.5	0.5	0.75...1	1...1.5	0.37	0.75	1.1	1.8	140M-D8E-B25
4.0 A	2.5...4.0	52	100	65	0.75	0.75	1.5...2	2-3	0.55...0.75	1.1...1.5	1.5...2.2	2.2...3.0	140M-D8E-B40
6.3 A	4.0...6.3	82	100	65	1	1...1.5	3	5	1.1...1.5	2.2	2.5...3.0	4.0	140M-D8E-B63
10 A	6.3...10	130	100	65	1.5...2	2...3	5	7.5	2.2	3.0...4.0	4.0...6.3	5.5...7.5	140M-D8E-C10
16 A	10...16	208	100	65	3	—	7.5...10	10	3.0...4.0	5.5...7.5	7.5...10	11...13	140M-D8E-C16
20 A	14.5...20	260	50	65	5	5	—	15	4.0...5.5	7.5...10	11	15...17	140M-D8E-C20
25 A	18...25	325	50	65	—	7.5	15	20	—	11	15	18.5...22	140M-D8E-C25
<b>F-Frame</b>													
10 A	6.3...10	130	65	65	1.5...2	2...3	5	7.5	2.2	3.0...4.0	4.0...6.3	5.5...7.5	140M-F8E-C10
16 A	10...16	208	65	65	3	—	7.5...10	10	3.0...4.0	5.5...7.5	7.5...10	11...13	140M-F8E-C16
20 A	14.5...20	260	65	65	5	5	—	15	4.0...5.5	7.5...10	11	15...17	140M-F8E-C20
25 A	18...25	325	65	65	—	7.5	15	20	5.5...6.3	11	15	18.5...22	140M-F8E-C25
32 A	23...32	416	65	65	7.5	10	20	25...30	7.5	15	15...20	22...25	140M-F8E-C32
45 A	32...45	585	—	—	10	15	25...30	30...40	11...13	18.5...22	22...30	30...40	140M-F8E-C45
<b>CMN-Frame</b>													
25 A	16...25	350	65	65	5	7.5	15	15...20	5.5...7.5	7.5...13	11...15	15...22	140-CMN-2500
40 A	25...40	560	65	65	10	10	20...30	25...30	10...11	15...22	18.5...25	25...30	140-CMN-4000
63 A	40...63	882	65	42	15...20	15...20	30...40	40...60	13...20	25...32	30...40	37...55	140-CMN-6300
90 A	63...90	1260	50	35	25...30	25...30	50...60	75	22...25	37...45	45...55	63...75	140-CMN-9000

\* Horsepower/kW ratings shown in the table above are for reference. The final selection of the MPCB depends on the actual motor full load current and service factor.

**Motor Protection Circuit Breakers**

- Short Circuit Protection — Standard Magnetic Trip (Fixed at 12...15 x I<sub>e</sub>)
- Overload Protection — Trip Class 10...30 (Adjustable)



Cat. No. 140M-I



Cat. No. 140M-J



Cat. No. 140M-L

Rated Operational Current [A] (I <sub>e</sub> )	Motor Current Adjustment Range [A]	Magnetic Trip Current [A]	Ultimate Interrupting Current [kA] (I <sub>cm</sub> )		3-phase Hp Ratings [Hp]*				Max. kW, 3-Phase			Cat. No.	
			400V	480V	200V	230V	460V	575V	230V	400/415 V	500V		690V
<b>I-Frame</b>													
80 A	40...80	1200	70*	65	25	30	60	75	22	37	55	75	140M-I8E-C80*
100 A	80...100	1500	70*	65	30	40	75	100	30	55	55	90	140M-I8E-D10*
160 A	100...160	2400	70*	65	50	60	125	150	45	75	110	132	140M-I8E-D16*
205 A	160...205	2665	70*	65	60	75	150	200	55	110	132	200	140M-I8E-D20*
<b>J-Frame</b>													
80 A	20...50	700	25	25	25	30	60	75	15	22	30	45	140M-J2E-C50
100 A	40...100	1400	25	25	30	40	75	100	30	55	55	90	140M-J2E-D10
160 A	64...160	2240	25	25	50	60	125	150	45	90	110	160	140M-J2E-D16
250 A	100...250	3500	25	25	75	100	200	250	55	132	160	250	140M-J2E-D25
<b>J-Frame (continued)</b>													
80 A	20...50	700	70	65	25	30	60	75	15	22	30	45	140M-J8E-C50
100 A	40...100	1400	70	65	30	40	75	100	30	55	55	90	140M-J8E-D10
160 A	64...160	2240	70	65	50	60	125	150	45	90	110	160	140M-J8E-D16
250 A	100...250	3500	70	65	75	100	200	250	55	132	160	250	140M-J8E-D25
<b>L-Frame</b>													
250 A	100...250	3000	40	35	75	100	200	250	55	132	160	250	140M-L2E-D25
400 A	160...400	4800	40	35	125	150	300	400	132	200	250	400	140M-L2E-D40
600 A	250...630	7580	40	35	200	250	500	600	200	355	450	630	140M-L2E-D63
<b>L-Frame (continued)</b>													
250 A	100...250	3000	70	65	75	100	200	250	55	132	160	250	140M-L8E-D25
400 A	160...400	4800	70	65	150	150	350	450	132	200	250	400	140M-L8E-D40
630 A	250...630	7560	70	65	200	250	500	600	200	355	450	630	140M-L8E-D63

\* Horsepower/kW ratings shown in the table above are for reference. **The final selection of the MPCB depends on the actual motor full load current and service factor.**

\* For IEC approvals and CE marking, add an "E" to the end of the Cat. No. Example: 140M-18E-C80E.

Bulletin 140M  
**Motor Protection Circuit Breakers**  
 Product Selection, Continued

**Motor Protection Circuit Breakers**

- Short Circuit Protection — High Magnetic Trip (Fixed at 16...20 x  $I_a$ )
- Overload Protection — Trip Class 10



Cat. No. 140M-C



Cat. No. 140M-D




Cat. No. 140M-F

Rated Operational Current [A] ( $I_a$ )	Motor Current Adjustment Range [A]	Magnetic Trip Current [A]	Ultimate Interrupting Current [kA] ( $I_{cm}$ )		3-phase Hp Ratings [Hp]*				Max kW, 3-Phase				Cat. No.*
			400V	480V	200V	230V	460V	575V	230V	400/415V	500V	690V	
<b>C-Frame</b>													
0.16 A	0.10...0.16	3.3	100	65	—	—	—	—	—	0.02	—	—	140M-C2T-A16
0.25 A	0.16...0.25	5.2	100	65	—	—	—	—	—	0.06	—	—	140M-C2T-A25
0.40 A	0.25...0.40	8.2	100	65	—	—	—	—	—	0.09	—	—	140M-C2T-A40
0.63 A	0.40...0.63	13	100	65	—	—	—	—	0.06...0.09	0.12...0.18	0.18	0.25	140M-C2T-A63
1.0 A	0.63...1.0	21	100	65	—	—	—	0.5	0.12	0.25	0.25...0.37	0.37...0.5	140M-C2T-B10
1.6 A	1.0...1.6	33	100	65	—	—	0.5...0.75	0.75	0.18...0.25	0.37...0.5	0.55...0.75	0.75...1.1	140M-C2T-B16
2.5 A	1.6...2.5	52	100	65	0.5	0.5	0.75...1	1...1.5	0.37	0.75	1.1	1.8	140M-C2T-B25
4.0 A	2.5...4	82	100	65	0.75	0.75	1.5...2	2...3	0.55...0.7	1.1...1.5	1.5...2.2	2.2...3.0	140M-C2T-B40
6.3 A	4...6.3	130	100	65	1	1...1.5	3	5	1.1...1.5	2.2	2.5...3.0	4.0	140M-C2T-B63
10 A	6.3...10	208	50	30	1.5...2	2...3	5	7.5	2.2	3.0...4.0	4.0...6.3	5.5...7.5	140M-C2T-C10
16 A	10...16	260	15	30	3	—	7.5...10	10	3.0...4.0	5.5...7.5	7.5...10	11...13	140M-C2T-C16
<b>D-Frame</b>													
16 A	10...16	260	50	65	3	—	7.5...10	10	3.0...4.0	5.5...7.5	7.5...10	11...13	140M-D8T-C16
20 A	14.5...20	325	50	65	5	5	—	15	4.0...5.5	7.5...10	11	15...17	140M-D8T-C20
<b>F-Frame</b>													
25 A	18...25	416	65	65	—	7.5	15	20	5.5...6.3	11	15	18.5...22	140M-F8T-C25
32 A	23...32	585	65	65	7.5	10	20	25...30	7.5	15	15...20	22...25	140M-F8T-C32








\* Horsepower/kW ratings shown in the table above are for reference. **The final selection of the manual starter depends on the actual motor full load current and service factor.**

\* These devices are also suitable for the protection of three phase transformers outside North America.

	<p style="text-align: center;"><b>Bulletin 140M Motor Circuit Protectors</b></p> <ul style="list-style-type: none"> <li>• Current Range 0.16...1200 A</li> <li>• UL Listed/Recognized for Motor Loads                         <ul style="list-style-type: none"> <li>– Short Circuit Protection</li> <li>– Overload protection must be provided separately</li> </ul> </li> <li>• Visible Trip Indication</li> <li>• High Current Limiting</li> <li>• High Switching Capacity</li> </ul> <p>The Bulletin 140M Motor Circuit Protectors provide short circuit protection for individual motor loads. Factory-installed internal accessories make installation and wiring easy.</p>	<p style="text-align: center;"><b>Table of Contents</b></p> <p>Product Selection —              Motor Protection              Circuit Breakers..... 2-10              Approximate              Dimensions..... 2-48</p> <p style="text-align: center;"><b>Standards and Approvals              Conformity to Standards</b></p> <p>IEC 947-1/2/4/5              IEC 204-1              CSA, C22.2 No.14              UL 508              UL 489</p> <p style="text-align: center;"><b>Approvals</b></p> <p>CE              CSA Certified              UL Listed/Recognized</p>
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Your order must include: cat. no. of the Motor Circuit Protector selected and, if required, cat. no. of any accessories.

**Product Line Overview**

							
	<b>C-Frame</b>	<b>D-Frame</b>	<b>F-Frame</b>	<b>H-Frame</b>	<b>J-Frame</b>	<b>L-Frame</b>	<b>N-Frame</b>
Max. Current $I_e$	25 A	25 A	45 A	100 A	250 A	600 A	1200 A
Current Rating	0.16...2.5 A	2.5...25 A	25...45 A	3...100	70...250	125...600	640...1200
Short Circuit Protection	✓	✓	✓	✓	✓	✓	✓
<b>Standards Compliance:</b>							
CSA 22.2, No. 14	✓	✓	✓				
CSA 22.2, No. 5	—	—	—	✓	✓	✓	✓
UL 508 (Group Install.)	✓	✓	✓				
UL489 (Recognized)	—	—	—	✓	✓	✓	✓
IEC 60947-2	✓	✓	✓	✓	✓	✓	✓
CE	✓	✓	✓	✓	✓	✓	✓
<b>Accessories</b>							
Ext. Rotary Operator	✓	✓	✓	✓	✓	✓	✓
Flex Cable Operator	—	—	—	✓	✓	✓	✓
Auxiliary Contacts	✓	✓	✓	✓	✓	✓	✓
Trip Indication Contacts	✓	✓	✓	✓	✓	✓	✓

### General Information

Motor Circuit Protectors may provide the following protective and control functions.

- Disconnect for Motor Branch Circuit
- Branch-Circuit, Short-Circuit Protection (Magnetic Protection)
- Switching (Manual)

In North America, electrical codes require that an individual Motor Branch Circuit be protected by a UL/CSA Listed Fuse, Circuit Breaker or Self-Protected Combination Motor Controller.

#### **140M-C, D and F Frames:**

The 140M-C, D and F frame Motor Circuit Protectors have 1 UL/CSA Listing – as Manual Motor Controllers (with optional approvals for Motor Disconnect and Group Installation). In NEC/CEC Group Installations, these devices must be applied per the appropriate rules which require the use of an upstream Branch-Circuit, Short-Circuit Protective Device (BCPD). See Table on page 2-22 for the specific ratings of each Motor Circuit Protector.

The 140M-C, D and F Frame Motor Circuit Protectors are also UL/CSA Listed, together with a Bulletin 100C contactor and Bulletin 193 overload relay, as part of our Bulletin 103T and 107T Self-Protected IEC Combination Starters. These starters are then able to provide all of the necessary NEC/CEC requirements for the protection and control of individual Motor Branch Circuits without additional protective devices.

#### **140M-H, J and L Frames:**

The 140M-H, J and L frame Motor Circuit Protectors are UL/CSA Recognized as Circuit Breakers as shown in Table on page 2-22. They are UL/CSA Recognized, rather than UL/CSA Listed, since they only provide short circuit protection and not thermal overload protection for the motor.

140M-H, J and L frame Motor Circuit Protectors (MCP's) are also UL/CSA Listed, together with a Bulletin 100C contactor and Bulletin 193 overload relay, as part of our Bulletin 113 IEC Combination Starters. These starters are then able to provide all of the necessary NEC/CEC requirements for the protection and control of individual Motor Branch Circuits without additional protective devices.

For further details on the proper application of Motor Circuit Protectors, please see the Technical Paper titled "Application of Rockwell Automation Circuit Breakers", Publication Number 140M-WP002A-EN-P.

**Motor Circuit Protectors**

- Short Circuit Protection — Standard Magnetic Trip (Fixed at  $13 \times I_a$ )
- Overload Protection — None (Magnetic Trip Only)



Cat. No. 140M-C



Cat. No. 140M-D



Cat. No. 140M-F

Rated Operational Current [A] ( $I_a$ )	Magnetic Trip Current [A]	Ultimate Interrupting Current [kA], ( $I_{cm}$ )		3-phase Hp Ratings [Hp]*				3-phase kW Ratings				Cat. No.
		400V	480V	200V	230V	460V	575V	230V	400/415V	500V	690V	
<b>C-Frame</b>												
0.16 A	2.1	100	65	—	—	—	—	—	0.02	—	—	140M-C2N-A16
0.25 A	3.3	100	65	—	—	—	—	—	0.06	—	—	140M-C2N-A25
0.40 A	5.2	100	65	—	—	—	—	—	0.09	—	—	140M-C2N-A40
0.63 A	8.2	100	65	—	—	—	—	0.06...0.09	0.12...0.18	0.18	0.25	140M-C2N-A63
1.0 A	13	100	65	—	—	—	0.5	0.12	0.25	0.25...0.37	0.37...0.55	140M-C2N-B10
1.6 A	21	100	65	—	—	0.5...0.75	0.75	0.18...0.25	0.37...0.55	0.55...0.75	0.75...1.1	140M-C2N-B16
2.5 A	33	100	65	0.5	0.5	0.75-1	1...1.5	0.37	0.75	1.1	1.8	140M-C2N-B25
<b>D-Frame</b>												
2.5 A	33	100	65	0.5	0.5	0.75...1	1...1.5	0.37	0.75	1.1	1.8	140M-D8N-B25
4.0 A	52	100	65	0.75	0.75	1.5...2	2...3	0.55...0.75	1.1...1.5	1.5...2.2	2.2...3.0	140M-D8N-B40
6.3 A	82	100	65	1	1...1.5	3	5	1.1...1.5	2.2	2.5...3.0	4.0	140M-D8N-B63
10 A	130	100	65	1.5...2	2...3	5	7.5	2.2	3.0...4.0	4.0...6.3	5.5...7.5	140M-D8N-C10
16 A	208	100	65	3	—	7.5...10	10	3.0...4.0	5.5...7.5	7.5...10	11...13	140M-D8N-C16
25 A	325	50	65	5	5...7.5	15	15...20	—	11	15	18.5...22	140M-D8N-C25
<b>F-Frame</b>												
25 A	325	65	65	5	5...7.5	15	15...20	5.5...6.3	11	15	18.5...22	140M-F8N-C25
32 A	416	65	65	7.5	10	20	25...30	7.5	15	15...20	22...25	140M-F8N-C32
45 A	585	65	65	10	15	25...30	30...40	11...13	18.5...22	22...30	30...40	140M-F8N-C45

\* Horsepower/kW ratings shown in the table above are for reference. **The final selection of the manual starter depends on the actual motor full load current and service factor.**

Bulletin 140M  
**Motor Circuit Protectors**  
 Product Selection, Continued

**Motor Circuit Protectors**

- Short Circuit Protection — Magnetic Trip (Adjustable at 3...10 x I<sub>e</sub>)
- Overload Protection — None (Magnetic Trip Only)



Cat. No. 140M-H



Cat. No. 140M-J



Cat. No. 140M-L

Rated Operational Current [A] (I <sub>e</sub> )	Magnetic Trip Current [A]									3-phase Hp Ratings [Hp]*				3-phase kW Ratings*				Cat. No.*
	Cam Setting									200V	230V	460V	575V	230V	400/ 415V	500V	690V	
	A	B	C	D	E	F	G	H	I									
<b>H-Frame</b>																		
3 A	9	15	21	27	30	33	—	—	—	0.5	0.5	1.5	2	0.6	0.75	1.1	1.5	140M-H8P-B30
7 A	21	35	49	63	70	77	—	—	—	1.5	2	3	5	1.1	2.2	3	4	140M-H8P-B70
15 A	45	75	100	135	150	165	—	—	—	3	3	10	10	3	5.5	7.5	11	140M-H8P-C15
30 A	90	150	210	270	300	330	—	—	—	7.5	10	20	25	5.5	11	15	22	140M-H8P-C30
50 A	150	250	350	450	500	550	—	—	—	15	15	30	40	11	22	22	37	140M-H8P-C50
70 A	210	350	490	630	700	770	—	—	—	20	25	50	60	15	30	37	55	140M-H8P-C70
100 A	300	500	700	900	1000	1100	—	—	—	25	30	60	75	22	45	55	75	140M-H8P-D10
100 A	500	700	900	1100	1300	1500	—	—	—	30	30	75	100	30	55	75	110	140M-H8R-D10
<b>J-Frame</b>																		
100 A	500	600	700	800	900	1000	—	—	—	30	30	75	100	22	37	45	55	140M-J8P-D10
125 A	625	750	875	1000	1125	1250	—	—	—	40	40	100	125	22	45	55	90	140M-J8P-D12
150 A	750	900	1050	1200	1350	1500	—	—	—	50	50	100	150	30	55	75	110	140M-J8P-D15
175 A	875	1050	1225	1400	1575	1750	—	—	—	50	60	125	150	37	55	90	132	140M-J8P-D17
200 A	1000	1200	1400	1600	1800	2000	—	—	—	60	75	150	200	45	75	90	132	140M-J8P-D20
225 A	1125	1350	1575	1800	2025	2250	—	—	—	75	75	150	200	55	90	110	160	140M-J8P-D22
250 A	1250	1500	1750	2000	2250	2500	—	—	—	75	100	200	250	55	90	132	160	140M-J8P-D25
<b>L-Frame</b>																		
225 A	1125	1265	1410	1545	1690	1830	1970	2110	2250	50	60	125	150	55	90	110	160	140M-L8P-D22
250 A	1250	1405	1560	1720	1875	2030	2185	2340	2500	60	75	150	200	55	90	132	160	140M-L8P-D25
300 A	1500	1690	1875	2060	2250	2440	2625	2810	3000	75	75	150	200	55	110	160	200	140M-L8P-D30
350 A	1750	1970	2190	2410	2625	2840	3065	3285	3500	75	100	200	250	75	132	160	250	140M-L8P-D35
400 A	2000	2250	2500	2750	3000	3250	3500	3750	4000	100	100	250	300	90	160	200	250	140M-L8P-D40
450 A	2250	2530	2810	3098	3375	3660	3940	4220	4500	100	125	250	350	110	160	200	315	140M-L8P-D45
500 A	2500	2810	3125	3440	3750	4060	4375	4690	5000	125	150	300	400	110	200	250	355	140M-L8P-D50
600 A	3000	3375	3760	4110	4500	4880	5250	5630	6000	150	150	350	450	132	250	315	450	140M-L8P-D60
<b>N-Frame</b>																		
800 A	1600	2400	3200	4000	4800	5600	6400	--	--	150	200	400	500	160	250	355	500	140M-N8P-D80
1200 A	2400	3600	4800	6000	7200	8400	9600	--	--	250	300	600	700	200	250	500	710	140M-N8P-E12

\* The HP and kW ratings shown are for reference only. They allow for a Magnetic Trip Setting of at least up to 13X the motor FLA. However, the final selection of the MCP should be made based on motor Full Load Current and the requirements of local electrical codes.

\* The interrupting rating for MCPs is dependent upon the controller used. Please contact Allen-Bradley for further information.

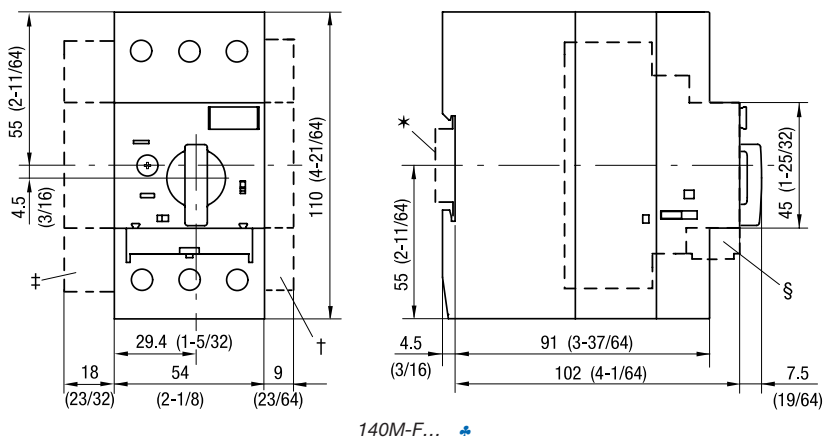
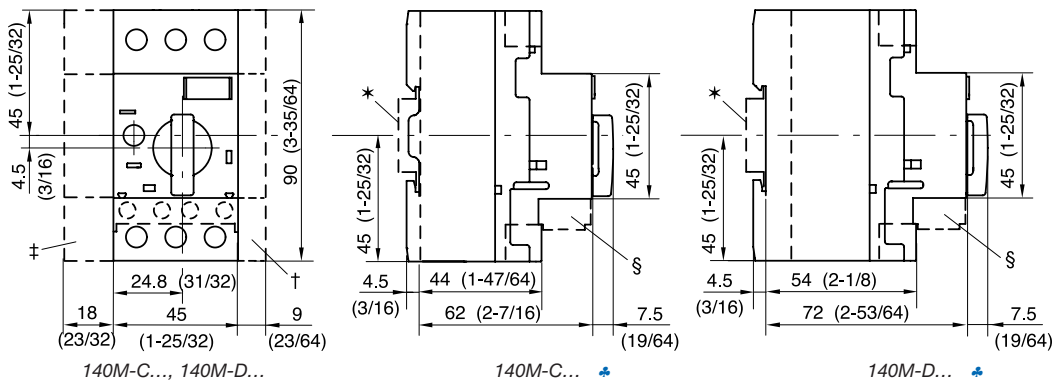
# Motor Protection Circuit Breakers/Motor Circuit Protectors

Approximate Dimensions

## Approximate Dimensions

### Cat. No. 140M-C, -D, -F

Dimensions are shown in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

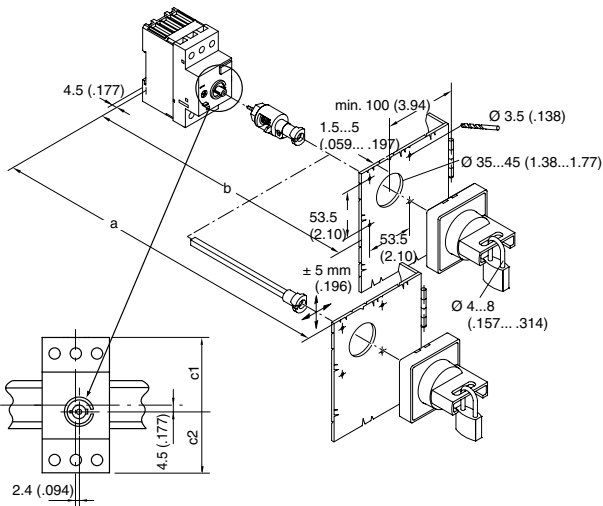


- \* Mounting on 35 mm top hat (DIN) Rail EN 50 022-35
- S Auxiliary contact and/or trip contact (side mounted), adds 9 mm (23/64) each
- † Undervoltage trip or Shunt trip
- S Auxiliary contact (front-mounted)
- \* With 140M-C, -K...-KRY lockable twist knob = 20.5 mm (13.6)

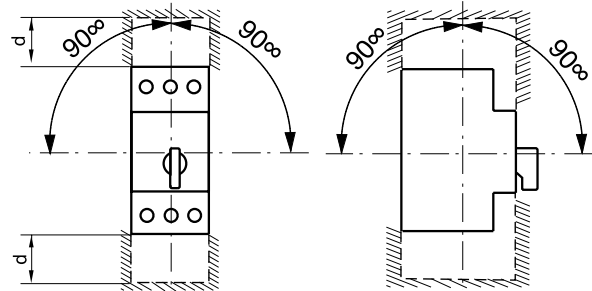
# Motor Protection Circuit Breakers/Motor Circuit Protectors

## Approximate Dimensions, Continued

Dimensions are shown in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.



140M-C-D...66

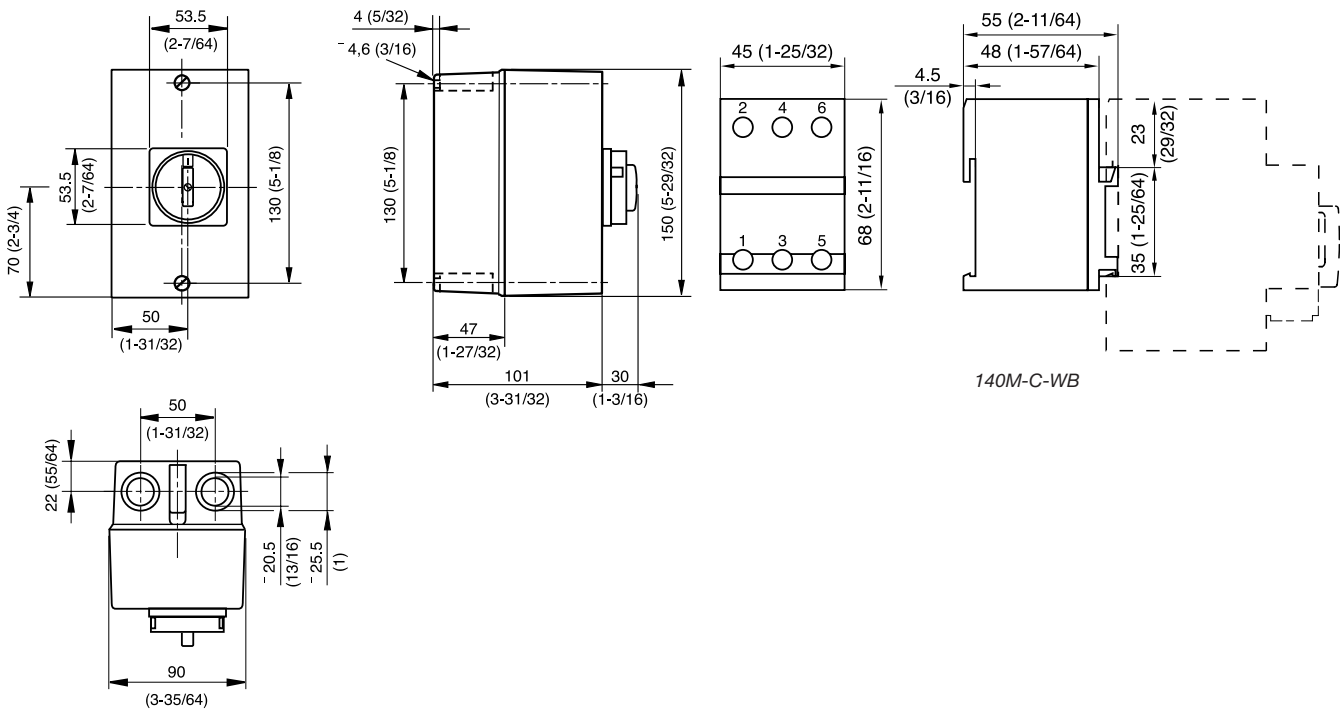


Mounting position/safety clearance of Cat. No. 140M-C..., 140M-D..., 140M-F...

Cat. No.	a	b	c1	c2	c2
140M-C	117...338	105.5 ±5	49.5	40.5	25
140M-D	126...347	114.5 ±5	49.5	40.5	25
140M-F	148.6...369.6	137.1 ±5	59.35	50.35	30

### Cat. No. 198E...

Dimensions are shown in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.



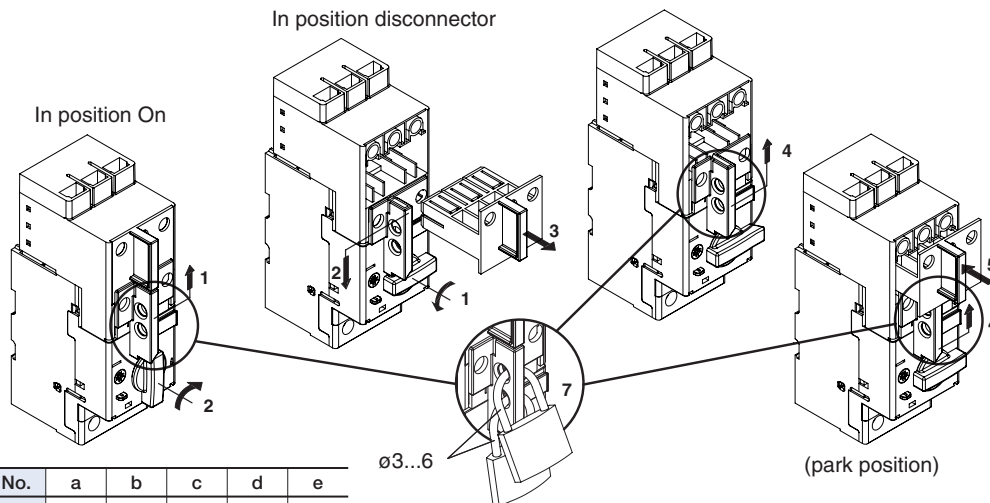
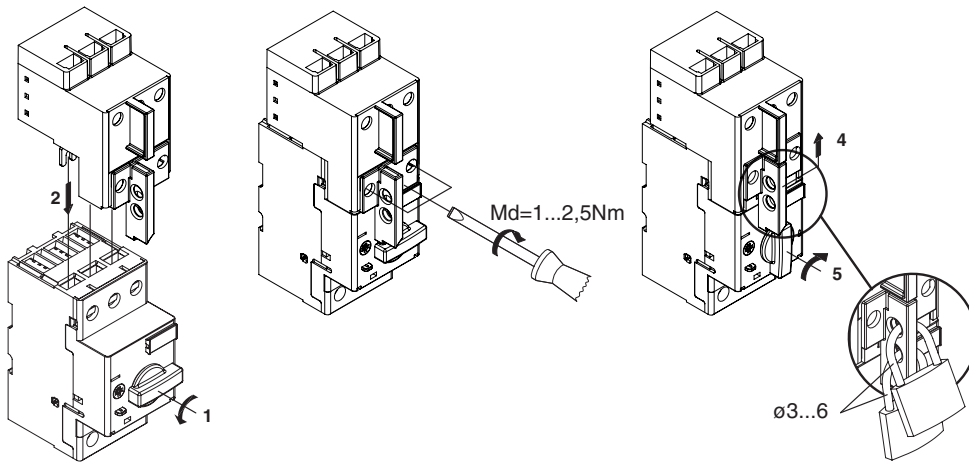
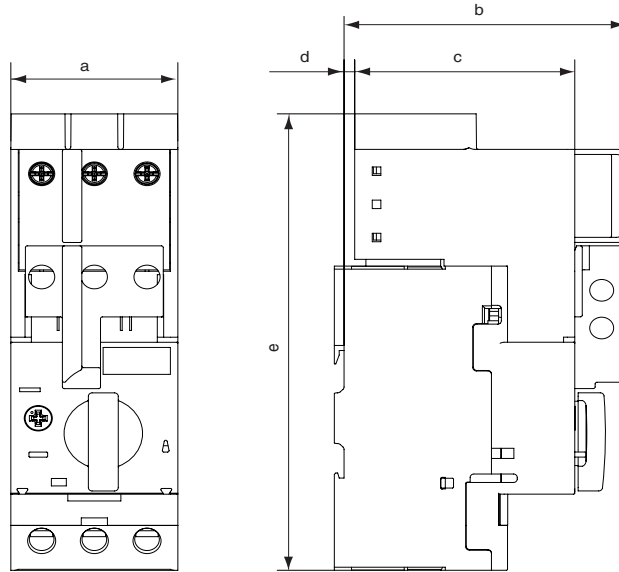
198E-AYT...

# Motor Protection Circuit Breakers/Motor Circuit Protectors

Approximate Dimensions, Continued

Dimensions are shown in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

<p>L1 L2 L3 1 3 5</p>	<p>1, 3, 5</p>
<p>1*1..4 mm<sup>2</sup> 2*1..4 mm<sup>2</sup> No. 16...10 AWG</p>	
<p>1*1.5..6 mm<sup>2</sup> 2*1.5..6 mm<sup>2</sup> No. 16...10 AWG</p>	
<p>9 mm 1*1..6 mm<sup>2</sup> 2*1..6 mm<sup>2</sup> No. 16...10 AWG</p>	
<p>Use 75°C wire only</p>	
<p>1...2.5 Nm 8.9..22 lb-in</p>	
<p>No. 3 Pozidriv No. 2</p>	



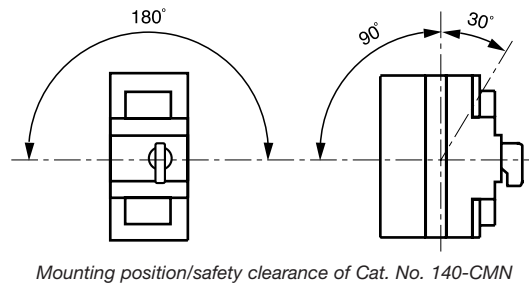
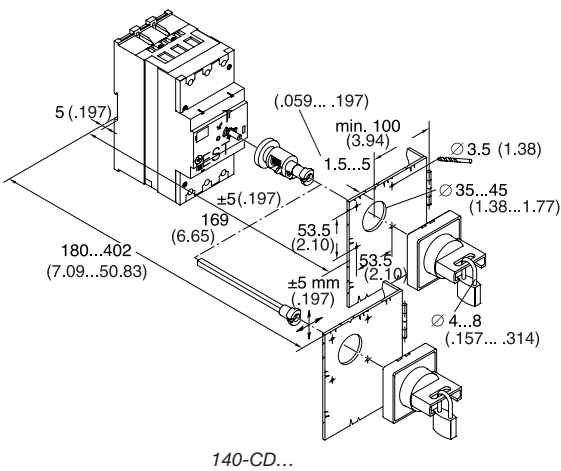
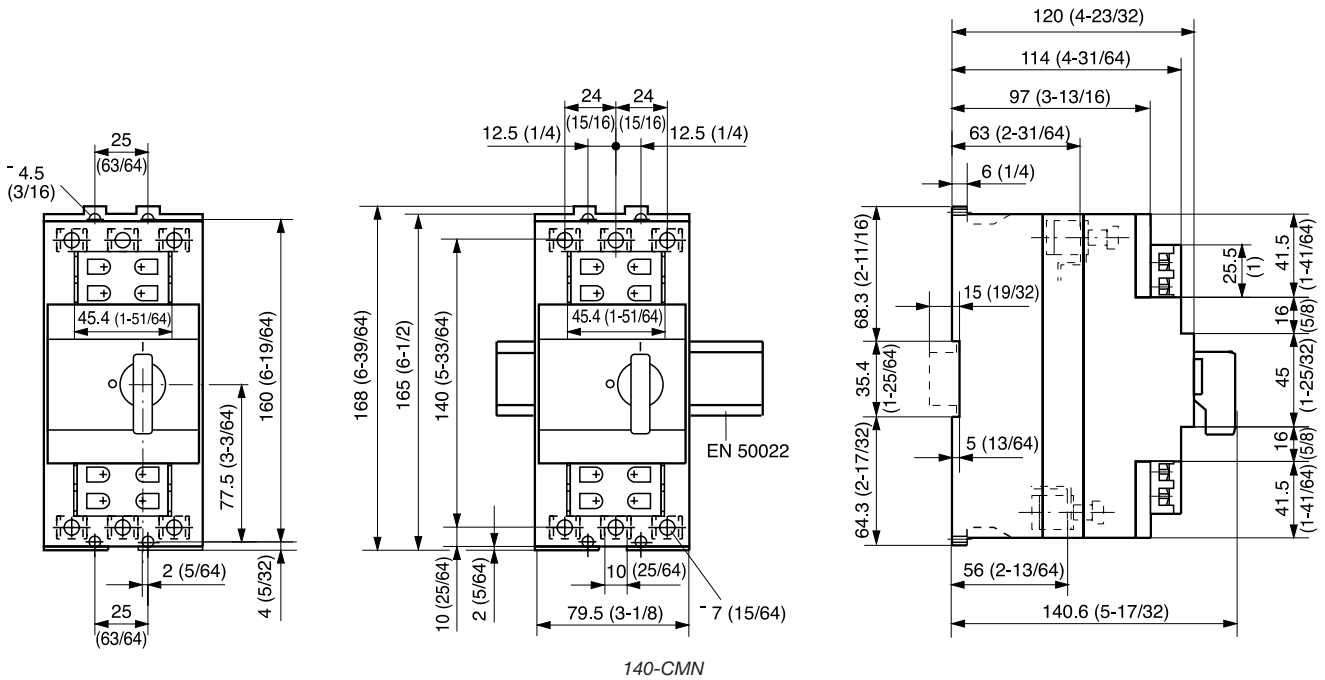
Cat. No.	a	b	c	d	e
140M-C	44.7	75.55	58.9	2.85	134.9
140M-D	44.7	85.55	58.9	12.85	134.9

# Motor Protection Circuit Breakers/Motor Circuit Protectors

## Approximate Dimensions, Continued

Dimensions are shown in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

Cat. No. 140-CMN...





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