

## Molded Case Circuit Breakers Molded Case Switches

Ex9 Series - M



## NOARK Electric

### Electrical Equipment Manufacturer for Distribution and Control



NOARK Electric is a global manufacturer of electrical distribution and control products that address a variety of customer needs, ranging from components to intelligent system solutions. Our global product lines include: circuit breakers, contactors, relays and intelligent control. Based in Shanghai, China, NOARK Electric was established in 2007 and covers the globe with regional headquarters in North America, Latin America, Europe and Middle East/Africa.

Globally, NOARK Electric serves the industrial, commercial, utility and residential markets. In North America, NOARK Electric focuses primarily on industrial OEMs, users and associated channel partners. Our motto is "Excellent Product...Exceptional Value," which NOARK Electric delivers to our customer by maintaining local inventory, providing local sales, customer service and support and manufacturing quality, aggressively priced products backed by a five-year limited warranty.

#### Quality Product

- Backed by a five-year limited warranty\*



#### Exceptional Value

- Reduce the cost of products
- Improve profitability
- Increase margins

#### Local Support and Local Inventory

- Superb customer service
- Knowledgeable technical support
- Dedicated sales force
- Well-stocked inventory
- North American headquarters

\*Contact NOARK Electric for complete details.

## NOARK Electric

### International Headquarter Locations



## Global reach. Local resources.

The best of both worlds come together when customers count on NOARK as their electrical product manufacturer.

# Molded Case Circuit Breakers and Switches

## M1-M4 Product Lineup



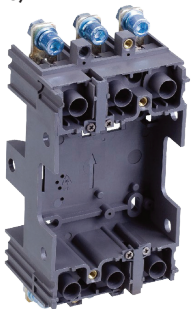
**Alarm Switch (AL)/  
Auxiliary Contact (AX)**  
(C45)



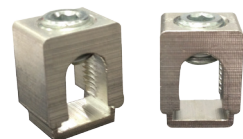
**Under-Voltage Trip (UVT)**  
(C47)



**Shunt Trip (SHT)**  
(C46)



**Plug-In Base (PIA)**  
(C52)



**Terminal Lugs (LTC)**  
(C52)



**Mechanical Interlock (MIT)**  
(C48)



**Handle Lock (KLK)**  
(C48)



**Molded Case Circuit Breaker (A3-28)  
Molded Case Switch (B31-41)**



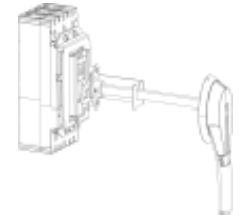
**Rear Connection Kit (RCP)**  
(C53)



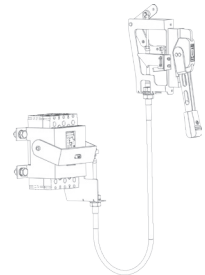
**Motor Operator (MOD)**  
(C49)



**Rotary Handle (RHD)  
Close Coupled (C50)**



**Extended Rotary Handle (ERH)  
Through the Door (C52)**



**Flange Handle Mechanism (FHM)  
Through the Door (C53)**



**Draw-Out Base (DOB)  
Breaker/Switch sold separately**  
(C53)

# NOARK Electric

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# MOLDED CASE CIRCUIT BREAKERS



# M1 ~ M4

## Molded Case Circuit Breakers

### M1-M4 Product Overview

A

# Features

#### Ex9 Series - M Molded Case Circuit Breakers, 15~600 A

NOARK Electric offers a complete range of 2 and 3 pole Molded Case Circuit Breakers in four frame sizes: M1 - 100 A, M2 - 225 A, M3 - 400 A and M4 - 600 A. Each frame size offers a range of interrupting voltage ratings from 240-690 Vac and 250-600 Vdc. The M series conforms to global standards that include UL 489, CSA C22.2 No 5.1 and IEC 60947-2.

#### The Ex9 Series - M offers:

- High-breaking capacity and a new patented arc extinguishing design
- New patented technology reduces the manual operating force
- High quality compact modular with energy saving and environmentally friendly design
- Installation flexibility:
  - ✓ Bus Bar Connection
  - ✓ Lug Line/Load Side Connection
  - ✓ Plug-In
  - ✓ Rear Connection
  - ✓ Draw-Out
- Fixed and adjustable trip setting units
- Wide range of accessories:
  - ✓ Alarm Switch and Auxiliary Contact
  - ✓ Shunt and Under-Voltage Trip
  - ✓ Interlock
  - ✓ Rotary Handle
  - ✓ Motor Operator

## Molded Case Circuit Breakers

### M1-M4 National and International Standards

### Certifications

- UL 489 Listed, File Number E355392  
(Standard for connection terminals which allows the user to apply field wiring directly to the breaker)
- Certified for Canada according to CSA standards 22.2 No. 5-02
- IEC/EN 60947-2
- CE Compliant
- RoHS Compliant





# Molded Case Circuit Breakers

## M1-M4 Product Selection Guide

### Label

**M4S**

Circuit Breaker  
 Interruptor Automático  
 Disjoncteur

600V ~ 50/60Hz  
 UL489 (CSA C22.2)  
 Interrupting Rating  
 Valor de Interrupción  
 Valeur d'interruption

240V	~	65kA
480V	+	42kA
600V	~	22kA
600V	~	35kA(2P)
600V	~	35kA(3P)

IEC60947-2  
 U=800V Uimp=8kV  
 Ics=100%Icu  
 220/240V ~ 65kA  
 380/415V ~ 65kA  
 660/690V ~ 12kA  
 500V ~ 50kA(3P)

**M4N**

Circuit Breaker  
 Interruptor Automático  
 Disjoncteur

600V ~ 50/60Hz  
 UL489 (CSA C22.2)  
 Interrupting Rating  
 Valor de Interrupción  
 Valeur d'interruption

240V	~	100kA
480V	+	65kA
600V	~	30kA
600V	~	50kA(2P)
600V	~	50kA(3P)

IEC60947-2  
 U=800V Uimp=8kV  
 Ics=100%Icu  
 220/240V ~ 100kA  
 380/415V ~ 100kA  
 660/690V ~ 15kA  
 500V ~ 50kA(3P)



E355392

UL LISTED  
 CIRCUIT BREAKER

75°C Cu Wire Only  
 14-30 AWG 89 lb-in/pulg/oo  
 2.5-9.5mm² 10N/m

Cal. A 40°C

HACR Type

CE

- 1 Handle
- 2 Product Series
- 3 Product Selection
- 4 Test Button
- 5 Adjustable Current Setting (M1) or Adjustable Current and Magnetic Setting (M2~M4)

- 6 Brand
- 7 UL Listed Mark
- 8 CE Mark
- 9 Rated Current

### Product Selection Guide

M	1	S	100	T	3	L
NOARK Ex9 Series - M	Frame Size	Interrupting Rating	Amperage	Trip Unit	Pole	Terminal Option
	1: 100 A	S: M1~M2: 50 kA @ 240 Vac M3~M4: 65 kA @ 240 Vac	M1: 15~100 A	T: Thermal-Magnetic	2: 2 Poles	Blank: Bus Bar Connection
	2: 225 A	N: 100 kA @ 240 Vac	M2: 100~225 A		3: 3 Poles	L: Lug Line/Load Side Connection (Standard configuration for M1: 1 hole, M2: 1 hole, M3: 1 hole, M4 2 hole. Optional Configuration for M1: 3 hole, M3: 2 hole, need to be ordered separately.)
	3: 400 A		M3: 225~400 A			P: Plug-In
	4: 600 A		M4: 400~600 A			R: Rear Connection
						D: Draw-Out

# Molded Case Circuit Breakers

## M1 Bus Bar Connection

- Bus Bar Connection MCCB not sold with Bus Bar\* or Terminal Lugs



Rated Amperage (A)	2 Poles		3 Poles		
	Adjustable Thermal • Fixed Magnetic		Adjustable Thermal • Fixed Magnetic		
	Product	Part Number	Product	Part Number	
	Bus Bar Connection		Bus Bar Connection		
M1S (50 kA @ 240 Vac)	15	M1S15T2	1100105	M1S15T3	1100001
	20	M1S20T2	1100106	M1S20T3	1100002
	25	M1S25T2	1100107	M1S25T3	1100003
	30	M1S30T2	1100108	M1S30T3	1100004
	35	M1S35T2	1100109	M1S35T3	1100005
	40	M1S40T2	1100110	M1S40T3	1100006
	45	M1S45T2	1100111	M1S45T3	1100007
	50	M1S50T2	1100112	M1S50T3	1100008
	60	M1S60T2	1100113	M1S60T3	1100009
	70	M1S70T2	1100114	M1S70T3	1100010
	80	M1S80T2	1100115	M1S80T3	1100011
90	M1S90T2	1100116	M1S90T3	1100012	
100	M1S100T2	1100117	M1S100T3	1100013	
M1N (100 kA @ 240 Vac)	15	M1N15T2	1100118	M1N15T3	1100014
	20	M1N20T2	1100119	M1N20T3	1100015
	25	M1N25T2	1100120	M1N25T3	1100016
	30	M1N30T2	1100121	M1N30T3	1100017
	35	M1N35T2	1100122	M1N35T3	1100018
	40	M1N40T2	1100123	M1N40T3	1100019
	45	M1N45T2	1100124	M1N45T3	1100020
	50	M1N50T2	1100125	M1N50T3	1100021
	60	M1N60T2	1100126	M1N60T3	1100022
	70	M1N70T2	1100127	M1N70T3	1100023
	80	M1N80T2	1100128	M1N80T3	1100024
90	M1N90T2	1100129	M1N90T3	1100025	
100	M1N100T2	1100130	M1N100T3	1100026	

Specifications.....	A16 to A17	Trip Curve.....	A20 to A21	Accessories.....	C42 to C69
Interruption Polarity.....	A17	Dimensions.....	A25		
Trip Unit.....	A18	Mounting Position.....	A27		

\*NOTE: Bus Bar Connection not available through NOARK Electric.

# Molded Case Circuit Breakers

## M1 Lug Line/Load Side Connection

A

- Lug Line/Load Side Connection  
MCCB sold with Terminal Lugs



Rated Amperage (A)	2 Poles		3 Poles	
	Adjustable Thermal • Fixed Magnetic		Adjustable Thermal • Fixed Magnetic	
	Product	Part Number	Product	Part Number
	Lug Line/Load Side Connection		Lug Line/Load Side Connection	
M1S (50 kA @ 240 Vac)	15	M1S15T2L 1100131	M1S15T3L 1100027	
	20	M1S20T2L 1100132	M1S20T3L 1100028	
	25	M1S25T2L 1100133	M1S25T3L 1100029	
	30	M1S30T2L 1100134	M1S30T3L 1100030	
	35	M1S35T2L 1100135	M1S35T3L 1100031	
	40	M1S40T2L 1100136	M1S40T3L 1100032	
	45	M1S45T2L 1100137	M1S45T3L 1100033	
	50	M1S50T2L 1100138	M1S50T3L 1100034	
	60	M1S60T2L 1100139	M1S60T3L 1100035	
	70	M1S70T2L 1100140	M1S70T3L 1100036	
	80	M1S80T2L 1100141	M1S80T3L 1100037	
90	M1S90T2L 1100142	M1S90T3L 1100038		
100	M1S100T2L 1100143	M1S100T3L 1100039		
M1N (100 kA @ 240 Vac)	15	M1N15T2L 1100144	M1N15T3L 1100040	
	20	M1N20T2L 1100145	M1N20T3L 1100041	
	25	M1N25T2L 1100146	M1N25T3L 1100042	
	30	M1N30T2L 1100147	M1N30T3L 1100043	
	35	M1N35T2L 1100148	M1N35T3L 1100044	
	40	M1N40T2L 1100149	M1N40T3L 1100045	
	45	M1N45T2L 1100150	M1N45T3L 1100046	
	50	M1N50T2L 1100151	M1N50T3L 1100047	
	60	M1N60T2L 1100152	M1N60T3L 1100048	
	70	M1N70T2L 1100153	M1N70T3L 1100049	
	80	M1N80T2L 1100154	M1N80T3L 1100050	
90	M1N90T2L 1100155	M1N90T3L 1100051		
100	M1N100T2L 1100156	M1N100T3L 1100052		

Specifications.....A16 to A17	Trip Curve.....A20 to A21	Accessories.....C42 to C69
Interruption Polarity.....A17	Dimensions.....A25	
Trip Unit.....A18	Mounting Position.....A27	

# Molded Case Circuit Breakers

## M1 Plug-In

- Plug-In MCCB sold with Plug-In Base



Rated Amperage (A)	2 Poles				3 Poles			
	Adjustable Thermal • Fixed Magnetic				Adjustable Thermal • Fixed Magnetic			
	Product	Part Number		Product	Part Number			
	Plug-In				Plug-In			
<b>M1S</b> (50 kA @ 240 Vac)	15	M1S15T2P	1100157		M1S15T3P	1100053		
	20	M1S20T2P	1100158		M1S20T3P	1100054		
	25	M1S25T2P	1100159		M1S25T3P	1100055		
	30	M1S30T2P	1100160		M1S30T3P	1100056		
	35	M1S35T2P	1100161		M1S35T3P	1100057		
	40	M1S40T2P	1100162		M1S40T3P	1100058		
	45	M1S45T2P	1100163		M1S45T3P	1100059		
	50	M1S50T2P	1100164		M1S50T3P	1100060		
	60	M1S60T2P	1100165		M1S60T3P	1100061		
	70	M1S70T2P	1100166		M1S70T3P	1100062		
	80	M1S80T2P	1100167		M1S80T3P	1100063		
90	M1S90T2P	1100168		M1S90T3P	1100064			
100	M1S100T2P	1100169		M1S100T3P	1100065			
<b>M1N</b> (100 kA @ 240 Vac)	15	M1N15T2P	1100170		M1N15T3P	1100066		
	20	M1N20T2P	1100171		M1N20T3P	1100067		
	25	M1N25T2P	1100172		M1N25T3P	1100068		
	30	M1N30T2P	1100173		M1N30T3P	1100069		
	35	M1N35T2P	1100174		M1N35T3P	1100070		
	40	M1N40T2P	1100175		M1N40T3P	1100071		
	45	M1N45T2P	1100176		M1N45T3P	1100072		
	50	M1N50T2P	1100177		M1N50T3P	1100073		
	60	M1N60T2P	1100178		M1N60T3P	1100074		
	70	M1N70T2P	1100179		M1N70T3P	1100075		
	80	M1N80T2P	1100180		M1N80T3P	1100076		
90	M1N90T2P	1100181		M1N90T3P	1100077			
100	M1N100T2P	1100182		M1N100T3P	1100078			

Specifications.....	A16 to A17	Trip Curve.....	A20 to A21	Accessories.....	C42 to C69
Interruption Polarity.....	A17	Dimensions.....	A25		
Trip Unit.....	A18	Mounting Position.....	A27		

# Molded Case Circuit Breakers

## M1 Rear Connection

A

- Rear Connection MCCB sold with Rear Connection Kit



Rated Amperage (A)	2 Poles		3 Poles		
	Adjustable Thermal • Fixed Magnetic		Adjustable Thermal • Fixed Magnetic		
	Product	Part Number	Product	Part Number	
	Rear Connection		Rear Connection		
M1S (50 kA @ 240 Vac)	15	M1S15T2R	1100183	M1S15T3R	1100079
	20	M1S20T2R	1100184	M1S20T3R	1100080
	25	M1S25T2R	1100185	M1S25T3R	1100081
	30	M1S30T2R	1100186	M1S30T3R	1100082
	35	M1S35T2R	1100187	M1S35T3R	1100083
	40	M1S40T2R	1100188	M1S40T3R	1100084
	45	M1S45T2R	1100189	M1S45T3R	1100085
	50	M1S50T2R	1100190	M1S50T3R	1100086
	60	M1S60T2R	1100191	M1S60T3R	1100087
	70	M1S70T2R	1100192	M1S70T3R	1100088
	80	M1S80T2R	1100193	M1S80T3R	1100089
90	M1S90T2R	1100194	M1S90T3R	1100090	
100	M1S100T2R	1100195	M1S100T3R	1100091	
M1N (100 kA @ 240 Vac)	15	M1N15T2R	1100196	M1N15T3R	1100092
	20	M1N20T2R	1100197	M1N20T3R	1100093
	25	M1N25T2R	1100198	M1N25T3R	1100094
	30	M1N30T2R	1100199	M1N30T3R	1100095
	35	M1N35T2R	1100200	M1N35T3R	1100096
	40	M1N40T2R	1100201	M1N40T3R	1100097
	45	M1N45T2R	1100202	M1N45T3R	1100098
	50	M1N50T2R	1100203	M1N50T3R	1100099
	60	M1N60T2R	1100204	M1N60T3R	1100100
	70	M1N70T2R	1100205	M1N70T3R	1100101
	80	M1N80T2R	1100206	M1N80T3R	1100102
90	M1N90T2R	1100207	M1N90T3R	1100103	
100	M1N100T2R	1100208	M1N100T3R	1100104	

Specifications.....A16 to A17	Trip Curve.....A20 to A21	Accessories.....C42 to C69
Interruption Polarity.....A17	Dimensions.....A25	
Trip Unit.....A18	Mounting Position.....A27	

# Molded Case Circuit Breakers

## M2 Bus Bar Connection and Lug Line/Load Side Connection

- Bus Bar Connection MCCB not sold with Bus Bar\* or Terminal Lugs
- Lug Line/Load Side Connection MCCB sold with Terminal Lugs



Rated Amperage (A)	2 Poles		3 Poles		
	Adjustable Thermal • Adjustable Magnetic		Adjustable Thermal • Adjustable Magnetic		
	Product	Part Number	Product	Part Number	
	Bus Bar Connection		Bus Bar Connection		
<b>M2S</b> (50 kA @ 240 Vac)	100	M2S100T2	1100257	M2S100T3	1100209
	125	M2S125T2	1100258	M2S125T3	1100210
	150	M2S150T2	1100259	M2S150T3	1100211
	175	M2S175T2	1100260	M2S175T3	1100212
	200	M2S200T2	1100261	M2S200T3	1100213
	225	M2S225T2	1100262	M2S225T3	1100214
<b>M2N</b> (100 kA @ 240 Vac)	100	M2N100T2	1100263	M2N100T3	1100215
	125	M2N125T2	1100264	M2N125T3	1100216
	150	M2N150T2	1100265	M2N150T3	1100217
	175	M2N175T2	1100266	M2N175T3	1100218
	200	M2N200T2	1100267	M2N200T3	1100219
	225	M2N225T2	1100268	M2N225T3	1100220
	Lug Line/Load Side Connection		Lug Line/Load Side Connection		
<b>M2S</b> (50 kA @ 240 Vac)	100	M2S100T2L	1100269	M2S100T3L	1100221
	125	M2S125T2L	1100270	M2S125T3L	1100222
	150	M2S150T2L	1100271	M2S150T3L	1100223
	175	M2S175T2L	1100272	M2S175T3L	1100224
	200	M2S200T2L	1100273	M2S200T3L	1100225
	225	M2S225T2L	1100274	M2S225T3L	1100226
<b>M2N</b> (100 kA @ 240 Vac)	100	M2N100T2L	1100275	M2N100T3L	1100227
	125	M2N125T2L	1100276	M2N125T3L	1100228
	150	M2N150T2L	1100277	M2N150T3L	1100229
	175	M2N175T2L	1100278	M2N175T3L	1100230
	200	M2N200T2L	1100279	M2N200T3L	1100231
	225	M2N225T2L	1100280	M2N225T3L	1100232

Specifications.....	A16 to A17	Trip Curve.....	A22	Accessories.....	C42 to C69
Interruption Polarity.....	A17	Dimensions.....	A25		
Trip Unit.....	A19	Mounting Position.....	A27		

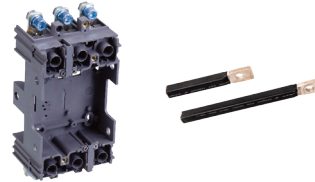
\*NOTE: Bus Bar Connection not available through NOARK Electric.

# Molded Case Circuit Breakers

## M2 Plug-In and Rear Connection

A

- Plug-In MCCB sold with Plug-In Base
- Rear Connection MCCB sold with Rear Connection Kit



Rated Amperage (A)	2 Poles			3 Poles		
	Adjustable Thermal • Adjustable Magnetic			Adjustable Thermal • Adjustable Magnetic		
	Product	Part Number		Product	Part Number	
			Plug-In			Plug-In
M2S (50 kA @ 240 Vac)	100	M2S100T2P	1100281	M2S100T3P	1100233	
	125	M2S125T2P	1100282	M2S125T3P	1100234	
	150	M2S150T2P	1100283	M2S150T3P	1100235	
	175	M2S175T2P	1100284	M2S175T3P	1100236	
	200	M2S200T2P	1100285	M2S200T3P	1100237	
	225	M2S225T2P	1100286	M2S225T3P	1100238	
M2N (100 kA @ 240 Vac)	100	M2N100T2P	1100287	M2N100T3P	1100239	
	125	M2N125T2P	1100288	M2N125T3P	1100240	
	150	M2N150T2P	1100289	M2N150T3P	1100241	
	175	M2N175T2P	1100290	M2N175T3P	1100242	
	200	M2N200T2P	1100291	M2N200T3P	1100243	
	225	M2N225T2P	1100292	M2N225T3P	1100244	
			Rear Connection			Rear Connection
M2S (50 kA @ 240 Vac)	100	M2S100T2R	1100293	M2S100T3R	1100245	
	125	M2S125T2R	1100294	M2S125T3R	1100246	
	150	M2S150T2R	1100295	M2S150T3R	1100247	
	175	M2S175T2R	1100296	M2S175T3R	1100248	
	200	M2S200T2R	1100297	M2S200T3R	1100249	
	225	M2S225T2R	1100298	M2S225T3R	1100250	
M2N (100 kA @ 240 Vac)	100	M2N100T2R	1100299	M2N100T3R	1100251	
	125	M2N125T2R	1100300	M2N125T3R	1100252	
	150	M2N150T2R	1100301	M2N150T3R	1100253	
	175	M2N175T2R	1100302	M2N175T3R	1100254	
	200	M2N200T2R	1100303	M2N200T3R	1100255	
	225	M2N225T2R	1100304	M2N225T3R	1100256	

Specifications .....A16 to A17	Trip Curve.....A22	Accessories.....C42 to C69
Interruption Polarity.....A17	Dimensions.....A25	
Trip Unit.....A19	Mounting Position.....A27	

# Molded Case Circuit Breakers

## M3 Bus Bar Connection and Lug Line/Load Side Connection

- Bus Bar Connection MCCB not sold with Bus Bar\* or Terminal Lugs
- Lug Line/Load Side Connection MCCB sold with Terminal Lugs



Rated Amperage (A)	2 Poles		3 Poles		
	Adjustable Thermal • Adjustable Magnetic		Adjustable Thermal • Adjustable Magnetic		
	Product	Part Number	Product	Part Number	
	Bus Bar Connection		Bus Bar Connection		
<b>M3S</b> (65 kA @ 240 Vac)	225	M3S225T2	1100305	M3S225T3	1100355
	250	M3S250T2	1100306	M3S250T3	1100356
	300	M3S300T2	1100307	M3S300T3	1100357
	350	M3S350T2	1100308	M3S350T3	1100358
	400	M3S400T2	1100309	M3S400T3	1100359
<b>M3N</b> (100 kA @ 240 Vac)	225	M3N225T2	1100310	M3N225T3	1100360
	250	M3N250T2	1100311	M3N250T3	1100361
	300	M3N300T2	1100312	M3N300T3	1100362
	350	M3N350T2	1100313	M3N350T3	1100363
	400	M3N400T2	1100314	M3N400T3	1100364
	Lug Line/Load Side Connection (1-Hole)		Lug Line/Load Side Connection (1-Hole)		
<b>M3S</b> (65 kA @ 240 Vac)	225	M3S225T2L	1100315	M3S225T3L	1100365
	250	M3S250T2L	1100316	M3S250T3L	1100366
	300	M3S300T2L	1100317	M3S300T3L	1100367
	350	M3S350T2L	1100318	M3S350T3L	1100368
	400	M3S400T2L	1100319	M3S400T3L	1100369
<b>M3N</b> (100 kA @ 240 Vac)	225	M3N225T2L	1100320	M3N225T3L	1100370
	250	M3N250T2L	1100321	M3N250T3L	1100371
	300	M3N300T2L	1100322	M3N300T3L	1100372
	350	M3N350T2L	1100323	M3N350T3L	1100373
	400	M3N400T2L	1100324	M3N400T3L	1100374
	Lug Line/Load Side Connection (2-Holes)		Lug Line/Load Side Connection (2-Holes)		
<b>M3S</b> (65 kA @ 240 Vac)	225	M3S225T2L2	1100986	M3S225T3L2	1100996
	250	M3S250T2L2	1100987	M3S250T3L2	1100997
	300	M3S300T2L2	1100988	M3S300T3L2	1100998
	350	M3S350T2L2	1100989	M3S350T3L2	1100999
	400	M3S400T2L2	1100990	M3S400T3L2	1101000
<b>M3N</b> (100 kA @ 240 Vac)	225	M3N225T2L2	1100991	M3N225T3L2	1101001
	250	M3N250T2L2	1100992	M3N250T3L2	1101002
	300	M3N300T2L2	1100993	M3N300T3L2	1101003
	350	M3N350T2L2	1100994	M3N350T3L2	1101004
	400	M3N400T2L2	1100995	M3N400T3L2	1101005

Specifications.....A16 to A17	Trip Curve.....A23	Accessories.....C42 to C69
Interruption Polarity.....A17	Dimensions.....A26	
Trip Unit.....A19	Mounting Position.....A28	

\*NOTE: Bus Bar Connection not available through NOARK Electric.



# Molded Case Circuit Breakers

## M3 Plug-In, Rear Connection and Draw-Out

- Plug-In MCCB sold with Plug-In Base
- Rear Connection MCCB sold with Rear Connection Kit
- Draw-Out MCCB sold with Draw-Out Base



Rated Amperage (A)	2 Poles			3 Poles		
	Adjustable Thermal • Adjustable Magnetic			Adjustable Thermal • Adjustable Magnetic		
	Product	Part Number		Product	Part Number	
	Plug-In			Plug-In		
M3S (65 kA @ 240 Vac)	225	M3S225T2P	1100325	M3S225T3P	1100375	
	250	M3S250T2P	1100326	M3S250T3P	1100376	
	300	M3S300T2P	1100327	M3S300T3P	1100377	
	350	M3S350T2P	1100328	M3S350T3P	1100378	
	400	M3S400T2P	1100329	M3S400T3P	1100379	
M3N (100 kA @ 240 Vac)	225	M3N225T2P	1100330	M3N225T3P	1100380	
	250	M3N250T2P	1100331	M3N250T3P	1100381	
	300	M3N300T2P	1100332	M3N300T3P	1100382	
	350	M3N350T2P	1100333	M3N350T3P	1100383	
	400	M3N400T2P	1100334	M3N400T3P	1100384	
	Rear Connection			Rear Connection		
M3S (65 kA @ 240 Vac)	225	M3S225T2R	1100335	M3S225T3R	1100385	
	250	M3S250T2R	1100336	M3S250T3R	1100386	
	300	M3S300T2R	1100337	M3S300T3R	1100387	
	350	M3S350T2R	1100338	M3S350T3R	1100388	
	400	M3S400T2R	1100339	M3S400T3R	1100389	
M3N (100 kA @ 240 Vac)	225	M3N225T2R	1100340	M3N225T3R	1100390	
	250	M3N250T2R	1100341	M3N250T3R	1100391	
	300	M3N300T2R	1100342	M3N300T3R	1100392	
	350	M3N350T2R	1100343	M3N350T3R	1100393	
	400	M3N400T2R	1100344	M3N400T3R	1100394	
	Draw-Out			Draw-Out		
M3S (65 kA @ 240 Vac)	225	M3S225T2D	1100345	M3S225T3D	1100395	
	250	M3S250T2D	1100346	M3S250T3D	1100396	
	300	M3S300T2D	1100347	M3S300T3D	1100397	
	350	M3S350T2D	1100348	M3S350T3D	1100398	
	400	M3S400T2D	1100349	M3S400T3D	1100399	
M3N (100 kA @ 240 Vac)	225	M3N225T2D	1100350	M3N225T3D	1100400	
	250	M3N250T2D	1100351	M3N250T3D	1100401	
	300	M3N300T2D	1100352	M3N300T3D	1100402	
	350	M3N350T2D	1100353	M3N350T3D	1100403	
	400	M3N400T2D	1100354	M3N400T3D	1100404	

Specifications.....A16 to A17	Trip Curve.....A23	Accessories.....C42 to C69
Interruption Polarity.....A17	Dimensions.....A26	
Trip Unit.....A19	Mounting Position.....A28	

# Molded Case Circuit Breakers

## M4 Bus Bar Connection and Lug Line/Load Side Connection

- Bus Bar Connection MCCB not sold with Bus Bar\* or Terminal Lugs
- Lug Line/Load Side Connection MCCB sold with Terminal Lugs



Rated Amperage (A)	2 Poles		3 Poles	
	Adjustable Thermal • Adjustable Magnetic		Adjustable Thermal • Adjustable Magnetic	
	Product	Part Number	Product	Part Number
	Bus Bar Connection		Bus Bar Connection	
<b>M4S</b> (65 kA @ 240 Vac)	400	M4S400T2 1100429	M4S400T3 1100405	
	500	M4S500T2 1100430	M4S500T3 1100406	
	600	M4S600T2 1100431	M4S600T3 1100407	
<b>M4N</b> (100 kA @ 240 Vac)	400	M4N400T2 1100432	M4N400T3 1100408	
	500	M4N500T2 1100433	M4N500T3 1100409	
	600	M4N600T2 1100434	M4N600T3 1100410	
	Lug Line/Load Side Connection		Lug Line/Load Side Connection	
<b>M4S</b> (65 kA @ 240 Vac)	400	M4S400T2L 1100435	M4S400T3L 1100411	
	500	M4S500T2L 1100436	M4S500T3L 1100412	
	600	M4S600T2L 1100437	M4S600T3L 1100413	
<b>M4N</b> (100 kA @ 240 Vac)	400	M4N400T2L 1100438	M4N400T3L 1100414	
	500	M4N500T2L 1100439	M4N500T3L 1100415	
	600	M4N600T2L 1100440	M4N600T3L 1100416	

Specifications.....	A16 to A17	Trip Curve.....	A24	Accessories.....	C42 to C69
Interruption Polarity.....	A17	Dimensions.....	A26		
Trip Unit.....	A19	Mounting Position.....	A28		

\*NOTE: Bus Bar Connection not available through NOARK Electric.

# Molded Case Circuit Breakers

## M4 Rear Connection and Draw-Out

A

- Rear Connection MCCB sold with Rear Connection Kit
- Draw-Out MCCB sold with Draw-Out Base



Rated Amperage (A)		2 Poles		3 Poles	
		Adjustable Thermal • Adjustable Magnetic		Adjustable Thermal • Adjustable Magnetic	
		Product	Part Number	Product	Part Number
		Rear Connection		Rear Connection	
M4S (65 kA @ 240 Vac)	400	M4S400T2R	1100441	M4S400T3R	1100417
	500	M4S500T2R	1100442	M4S500T3R	1100418
	600	M4S600T2R	1100443	M4S600T3R	1100419
M4N (100 kA @ 240 Vac)	400	M4N400T2R	1100444	M4N400T3R	1100420
	500	M4N500T2R	1100445	M4N500T3R	1100421
	600	M4N600T2R	1100446	M4N600T3R	1100422
		Draw-Out		Draw-Out	
M4S (65 kA @ 240 Vac)	400	M4S400T2D	1100447	M4S400T3D	1100423
	500	M4S500T2D	1100448	M4S500T3D	1100424
	600	M4S600T2D	1100449	M4S600T3D	1100425
M4N (100 kA @ 240 Vac)	400	M4N400T2D	1100450	M4N400T3D	1100426
	500	M4N500T2D	1100451	M4N500T3D	1100427
	600	M4N600T2D	1100452	M4N600T3D	1100428

Specifications.....A16 to A17	Trip Curve.....A24	Accessories.....C42 to C69
Interruption Polarity.....A17	Dimensions.....A26	
Trip Unit.....A19	Mounting Position.....A28	

# Molded Case Circuit Breakers

## M1-M4 Specifications

		M1			M2			M3			M4		
Rated Current (A)		15~100			100~225			225~400			400~600		
Number of Poles		2, 3											
Breaker Type		S	N	H	S	N	H	S	N	H	S	N	H
Rated Voltage 50/60 Hz	Vac	600											
	Vdc	600											
<b>Interrupting Capacity (kA rms)</b>													
Circuit Breaker Ratings UL 489 CSA C22.2 (kA rms) Vac 50/60 Hz	240 Vac	50	100	150	50	100	150	65	100	150	65	100	150
	480 Vac	35	65	100	35	65	100	42	65	100	42	65	100
	600 Vac	14	20	25	14	20	25	18	25	30	18	30	50
	500 Vdc 3 Poles	25	35	50	20	35	50	35	50	65	35	50	65
	600 Vdc 3 Poles	20	35	50	20	35	50	35	50	65	35	50	65
Circuit Breaker Ratings IEC 60947-2	220 / 240 Vac	50	100	150	50	100	150	65	100	150	65	100	150
	380 / 415 Vac												
	660 / 690 Vac	5	8	10	6	10	12	10	15	20	12	15	20
Ultimate Breaking Capacity (Icu = 100% Ics) (kA rms)	500 Vdc 3 Poles	25	35	50	25	35	50	35	50	65	35	50	65
	500 Vdc 2 Poles	20	35	50	20	35	50	35	50	65	35	50	65
Current Rating (A) @ 104 °F (40 °C)		15~100			100~225			225~400			400~600		
Thermal-Magnetic Trip Units (Fixed)	A = Adjustable T = Thermal F = Fixed M = Magnetic	AT / FM			AT / AM								
<b>Accessories</b>													
Alarm Switch													
Auxiliary Contact													
Shunt Trip													
Under-Voltage Trip													
Handle Lock		n											
Mechanical Interlock													
Motor Operator													
Handle Operators													
Terminal Cover and Kits													
<b>Connection</b>													
Bus Bar Connection													
Lug Line/Load Side Connection		n										n	
Plug-In		-											
Rear Connection													
Draw-Out		-						n					

# Molded Case Circuit Breakers

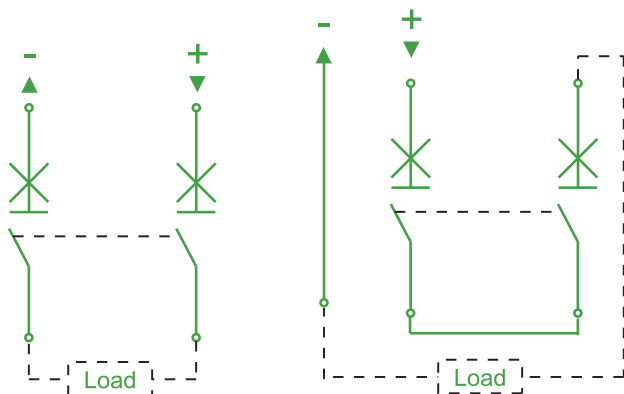
## M1-M4 Specifications

A

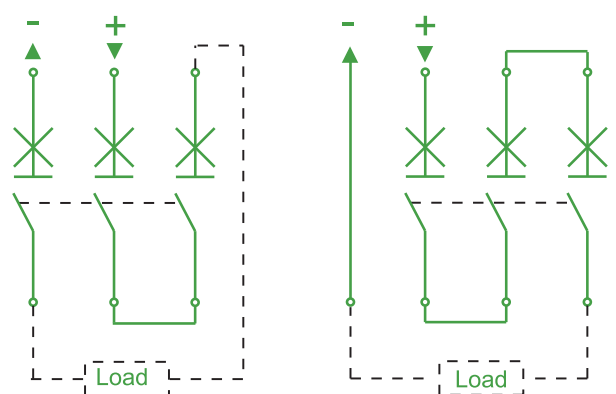
	M1	M2	M3	M4
Insulation Voltage (Vi)	800 V			
Impulse Withstand Voltage (Vimp)	8 kV			
Operational Voltage (Ve)	690 V			
	480V		600 V	
IEC Ics (% Icu)	100%			
Utilization Category	A			
Mechanical Operating Cycles	10,000		8,000	
Electrical Operating Cycles	6,000		5,000	
Dimensions LxWxD in (mm)	6.46x3.54x3.33 (164x90x84.5)	7.17x4.13x3.47 (182x105x88)	11.22x5.51x4.59 (285x140x116.5)	12.32x7.68x5.43 (313x195x138)
Weight of Unit lb (kg)	2 Poles	3.17 (1.44)	3.75 (1.70)	8.97 (4.07)
	3 Poles	3.68 (1.67)	4.41 (2.00)	13.45 (6.1)
Cable Connection Wire 167 °F (75 °C) Cu Wire Only AWG (mm <sup>2</sup> )	1-Hole	14-3/0 (2.5-95)	1-Hole 8 - 350 kcmil (10-185)	3/0 - 500 kcmil (95-240)
	3-Holes	14-3/0 (2.5-6)		2-Holes 3 - 250 kcmil (35-120)
Lugs in-lb (N.m)	89 (10)		230 (23)	
			310 (35)	

## Interrupting Polarity for DC Application

2 Poles



3 Poles

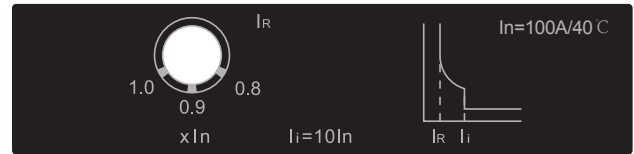


# Molded Case Circuit Breakers

## M1 Trip Unit

### Adjustable Thermal, Fixed Magnetic

- Adjustable Thermal:  
15~100 A rated current  
Adjustable: 0.8~1 x I<sub>n</sub>
- Fixed Magnetic:  
150~1,000 A tripping current



		M1													
		I <sub>r</sub>	15 A	20 A	25 A	30 A	35 A	40 A	45 A	50 A	60 A	70 A	80 A	90 A	100 A
Adjustable Thermal Overload Protection	0.8 x I <sub>n</sub>									40	48	56	64	72	80
	0.9 x I <sub>n</sub>									45	54	63	72	81	90
	1.0 x I <sub>n</sub>									50	60	70	80	90	100
Fixed Magnetic Short Circuit Protection	I <sub>i</sub>		15 A	20 A	25 A	30 A	35 A	40 A	45 A	50 A	60 A	70 A	80 A	90 A	100 A
	Fixed 10 x I <sub>n</sub>		150	200	250	300	350	400	450	500	600	700	800	900	1,000

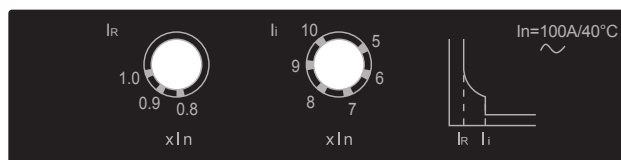
# Molded Case Circuit Breakers

## M2-M4 Trip Unit

A

### Adjustable Thermal, Adjustable Magnetic

- Adjustable Thermal:  
100~600 A rated current  
Adjustable: 0.8~1 x I<sub>n</sub>
- Adjustable Magnetic:  
1,000~6,000 A tripping current  
Adjustable: M2 100~150 = 7~12 x I<sub>n</sub>  
M2 175~225 = 5~10 x I<sub>n</sub>  
M3 & M4 225~600 = 5~10 x I<sub>n</sub>
- Frames applicable to M2: 225 A, M3: 400 A, M4: 600 A

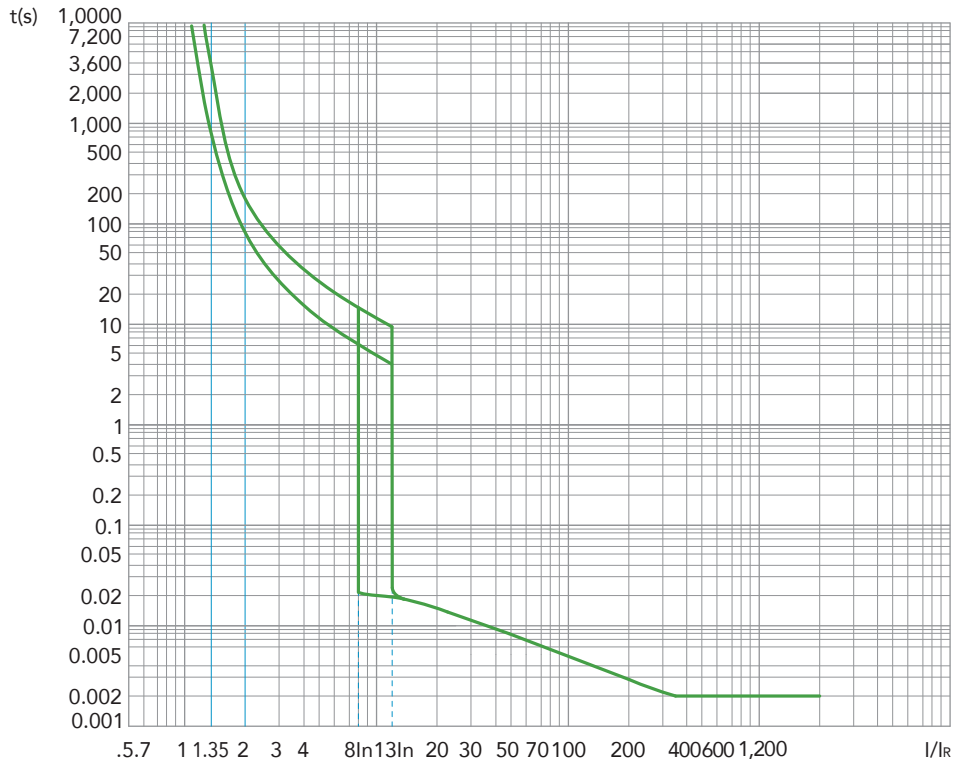


		M2								
		I <sub>R</sub>	100 A	125 A	150 A	175 A	200 A	225 A		
Adjustable Thermal Overload Protection	0.8 x I <sub>n</sub>		80	100	120	140	160	180		
	0.9 x I <sub>n</sub>		90	112.5	135	157.5	180	202.5		
	1.0 x I <sub>n</sub>		100	125	150	175	200	225		
Adjustable Magnetic Short Circuit Protection	I <sub>i</sub>	100 A	125 A	150 A	175 A	200 A	225 A			
	5 x I <sub>n</sub>	-				875	1,000	1,125		
	6 x I <sub>n</sub>	-				1,050	1,200	1,350		
	7 x I <sub>n</sub>	700	875	1,050	1,225	1,400	1,575			
	8 x I <sub>n</sub>	800	1,000	1,200	1,400	1,600	1,800			
	9 x I <sub>n</sub>	900	1,125	1,350	1,575	1,800	2,025			
	10 x I <sub>n</sub>	1,000	1,250	1,500	1,750	2,000	2,250			
	11 x I <sub>n</sub>	1,100	1,375	1,650	-					
12 x I <sub>n</sub>	1,200	1,500	1,800	-						
		M3					M4			
		I <sub>R</sub>	225 A	250 A	300 A	350 A	400 A	400 A	500 A	600 A
Adjustable Thermal Overload Protection	0.8 x I <sub>n</sub>		180	200	240	280	320	320	400	480
	0.9 x I <sub>n</sub>		202.5	225	270	315	360	360	450	540
	1.0 x I <sub>n</sub>		225	250	300	350	400	400	500	600
Adjustable Magnetic Short Circuit Protection	I <sub>i</sub>	225 A	250 A	300 A	350 A	400 A	400 A	500 A	600 A	
	5 x I <sub>n</sub>	1,125	1,250	1,500	1,750	2,000	2,000	2,500	3,000	
	6 x I <sub>n</sub>	1,350	1,500	1,800	2,100	2,400	2,400	3,000	3,600	
	7 x I <sub>n</sub>	1,575	1,750	2,100	2,450	2,800	2,800	3,500	4,200	
	8 x I <sub>n</sub>	1,800	2,000	2,400	2,800	3,200	3,200	4,000	4,800	
	9 x I <sub>n</sub>	2,025	2,250	2,700	3,150	3,600	3,600	4,500	5,400	
10 x I <sub>n</sub>	2,250	2,500	3,000	3,500	4,000	4,000	5,000	6,000		

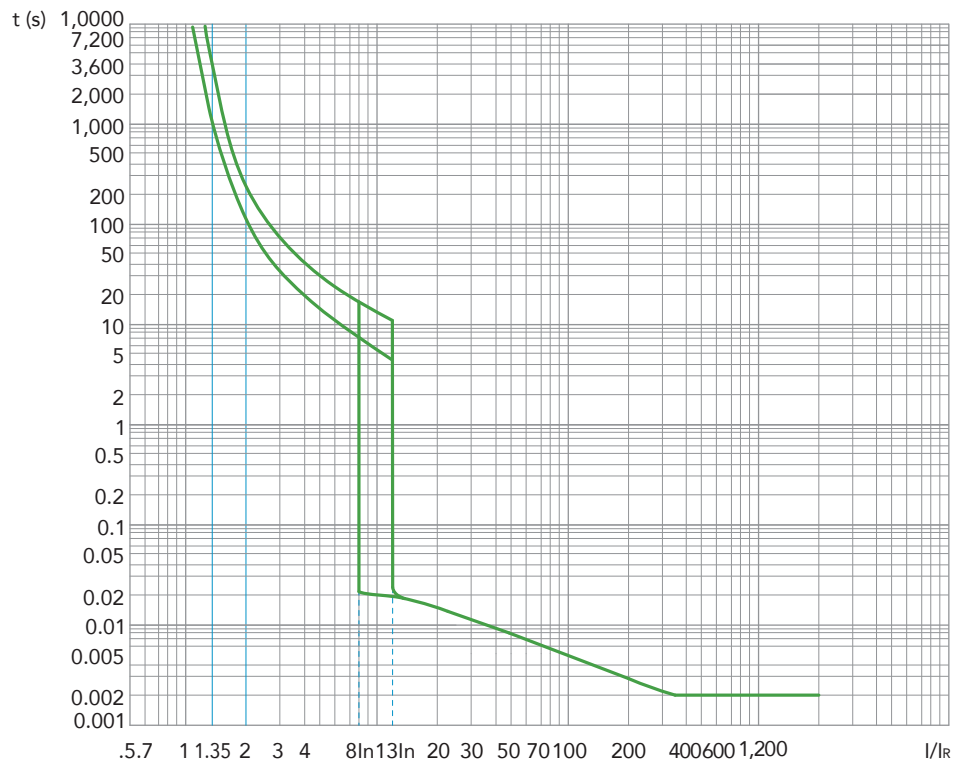
# Molded Case Circuit Breakers

## M1 Trip Curves

**M1**  
(15~35 A)



**M1**  
(40~50 A)



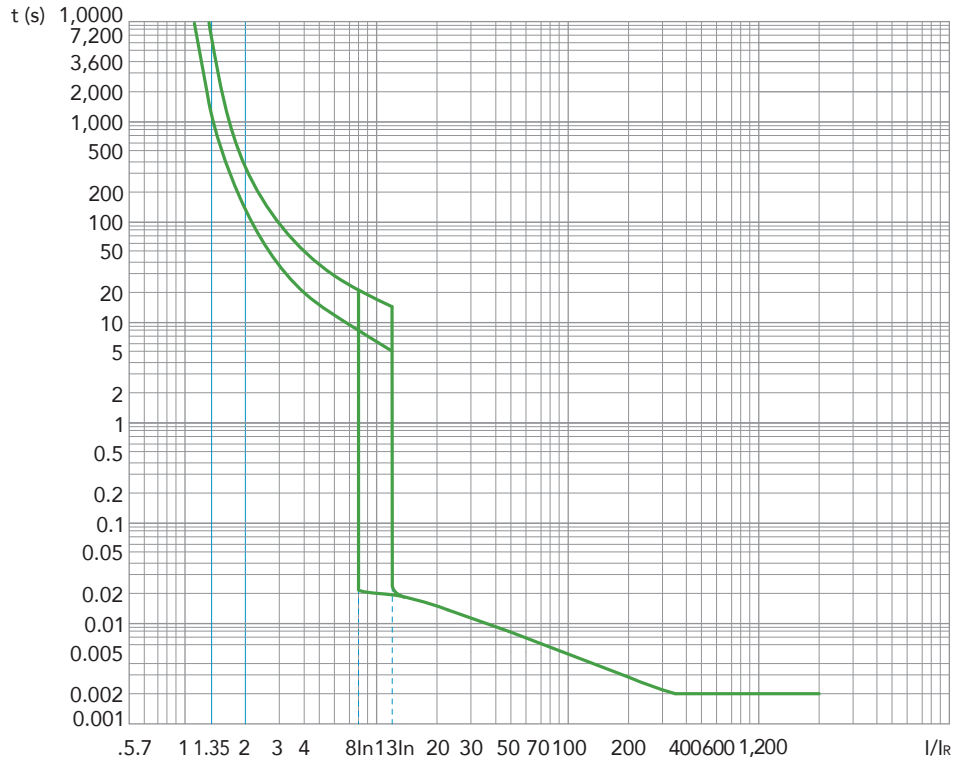


# Molded Case Circuit Breakers

## M1 Trip Curves

A

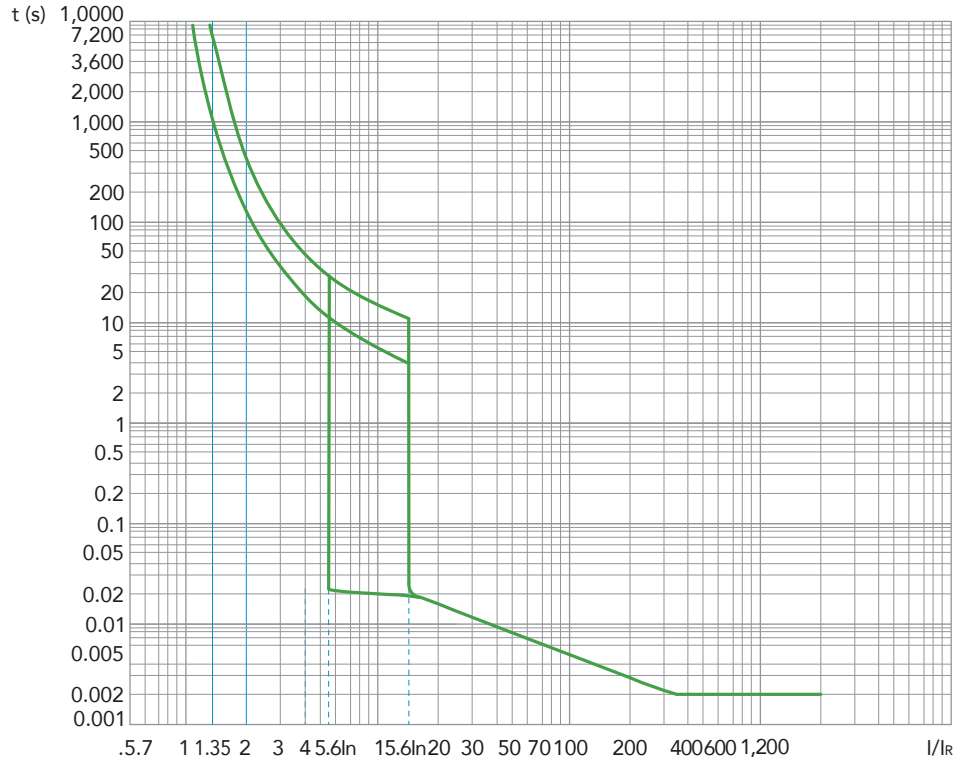
**M1**  
(60~100 A)



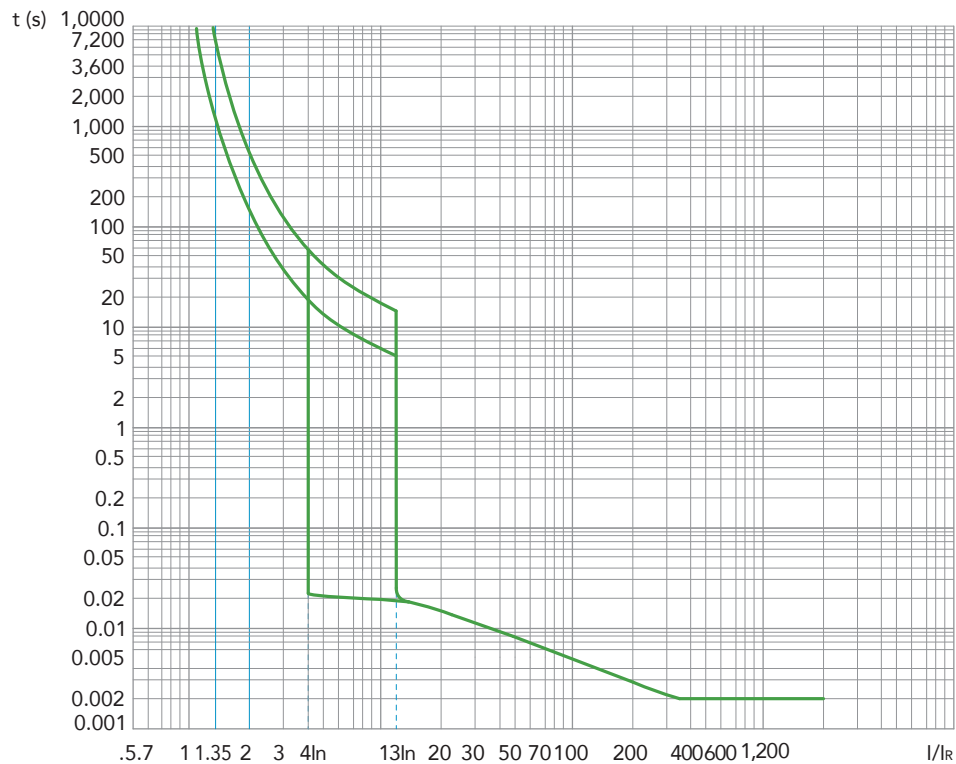
# Molded Case Circuit Breakers

## M2 Trip Curves

**M2**  
(100~150 A)



**M2**  
(175~225 A)

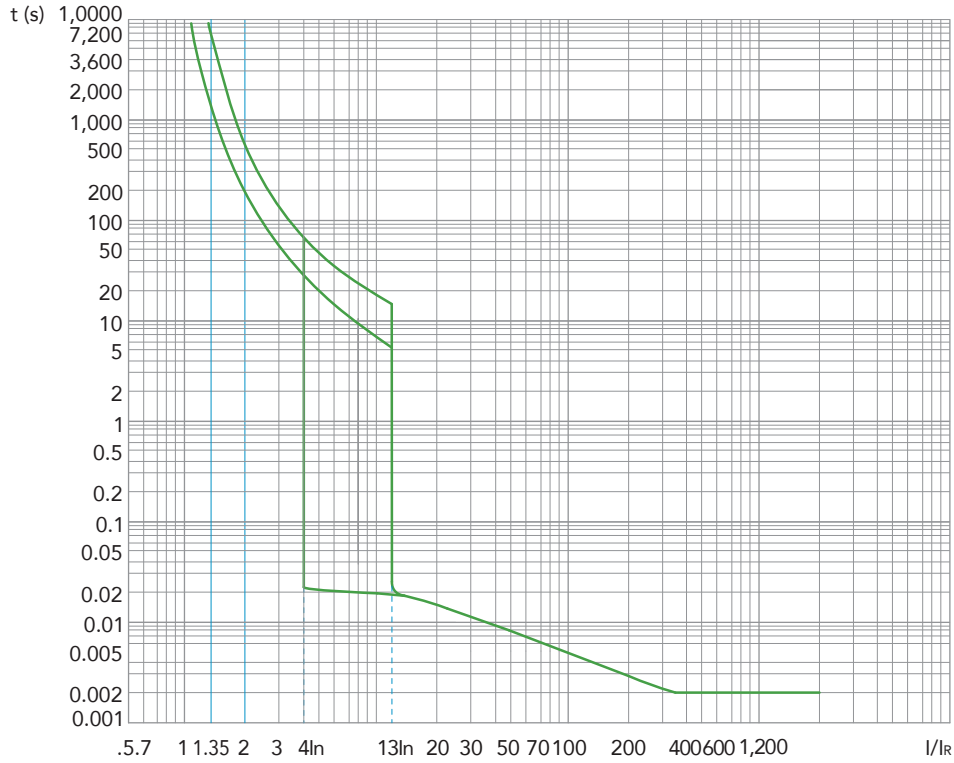


# Molded Case Circuit Breakers

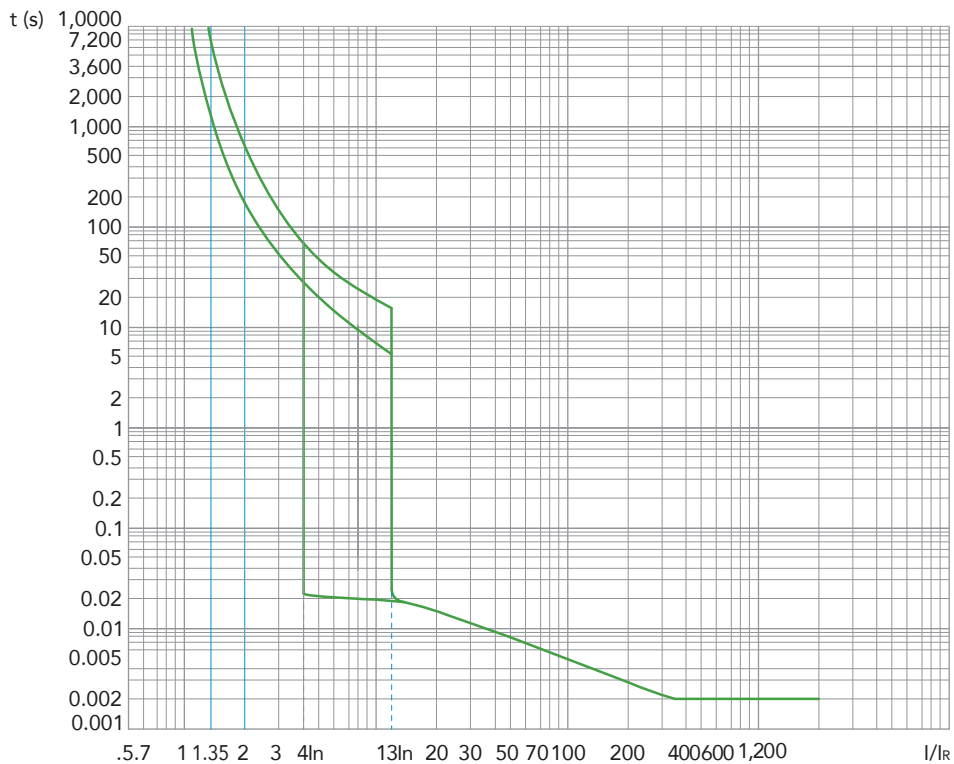
## M3 Trip Curves

A

**M3**  
(225~350 A)



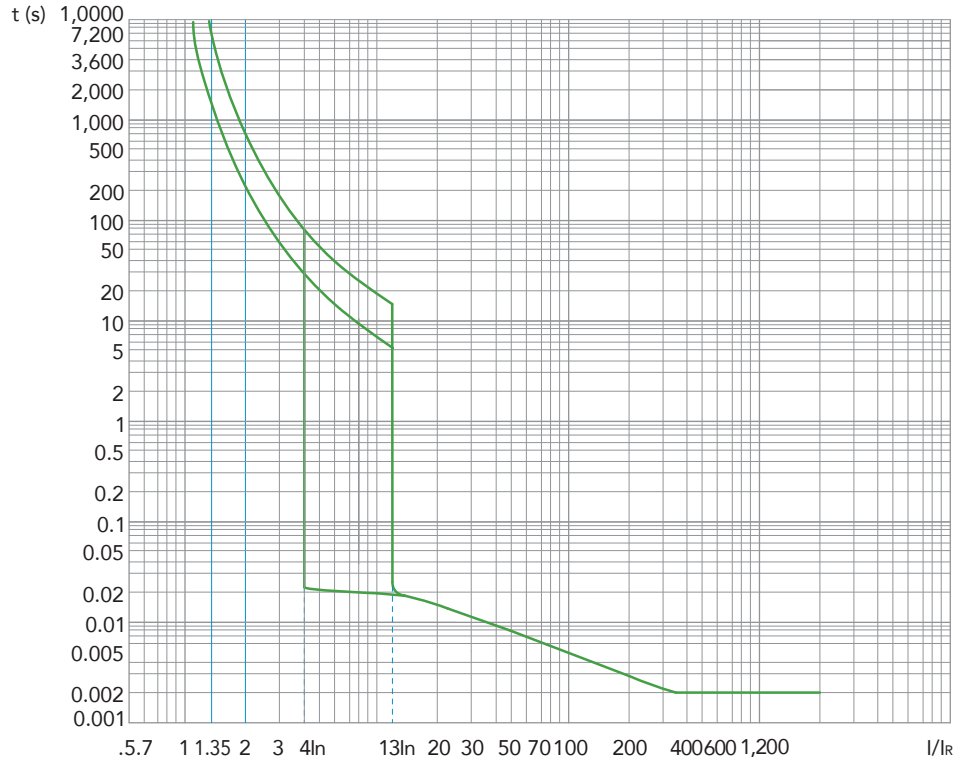
**M3**  
(400 A)



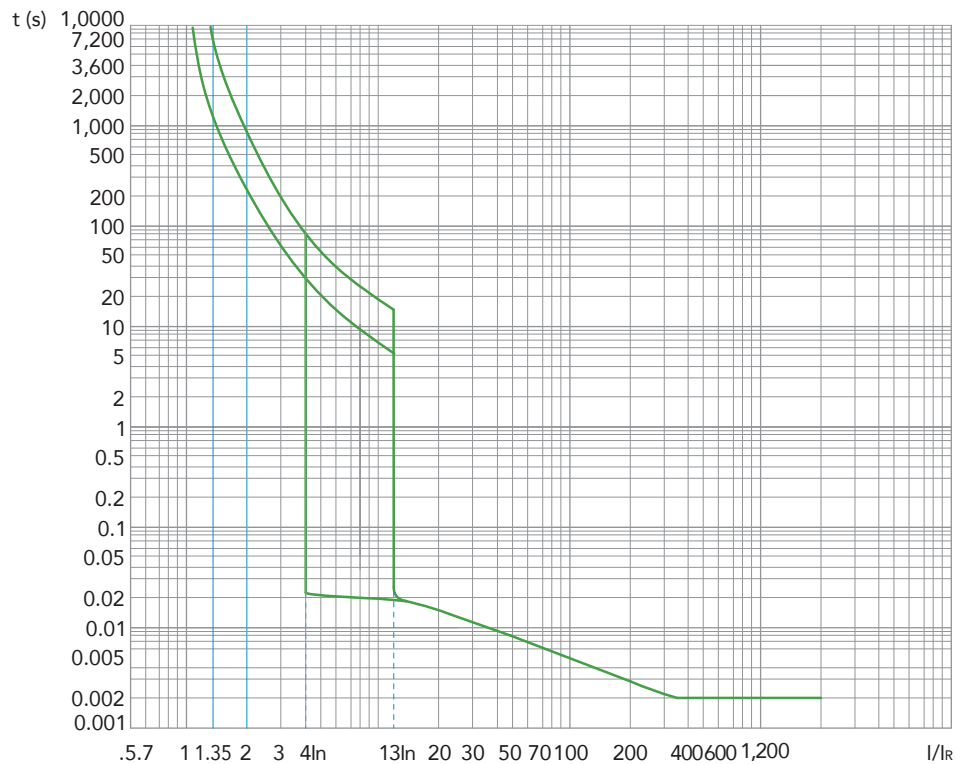
# Molded Case Circuit Breakers

## M4 Trip Curves

**M4**  
(400 A)



**M4**  
(500~600 A)

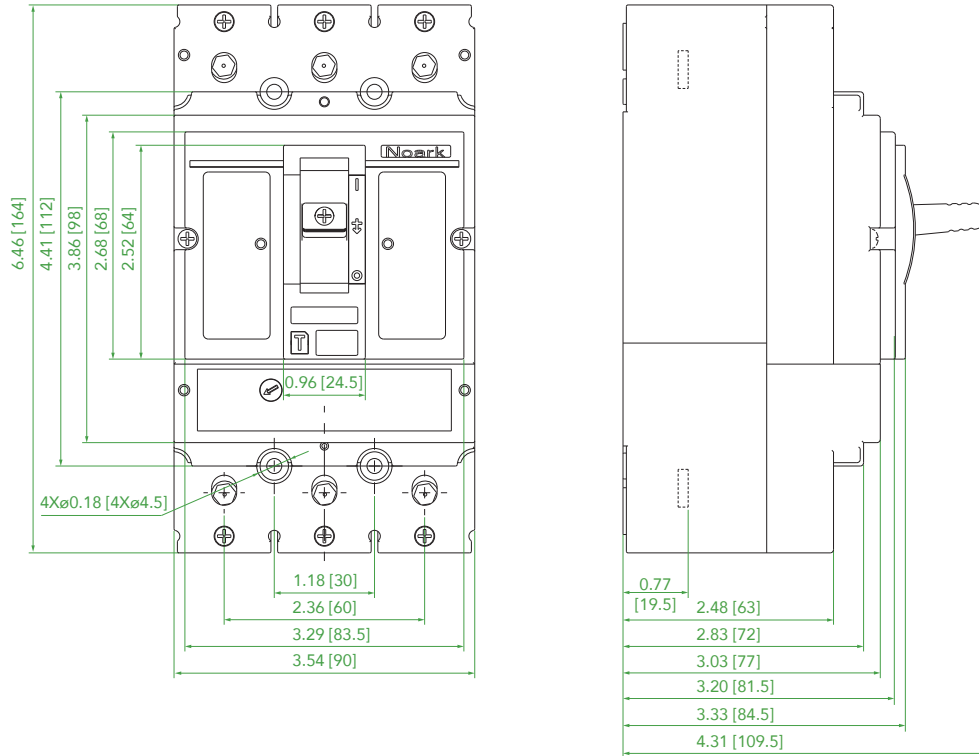


# Molded Case Circuit Breakers

## M1-M2 Dimensions

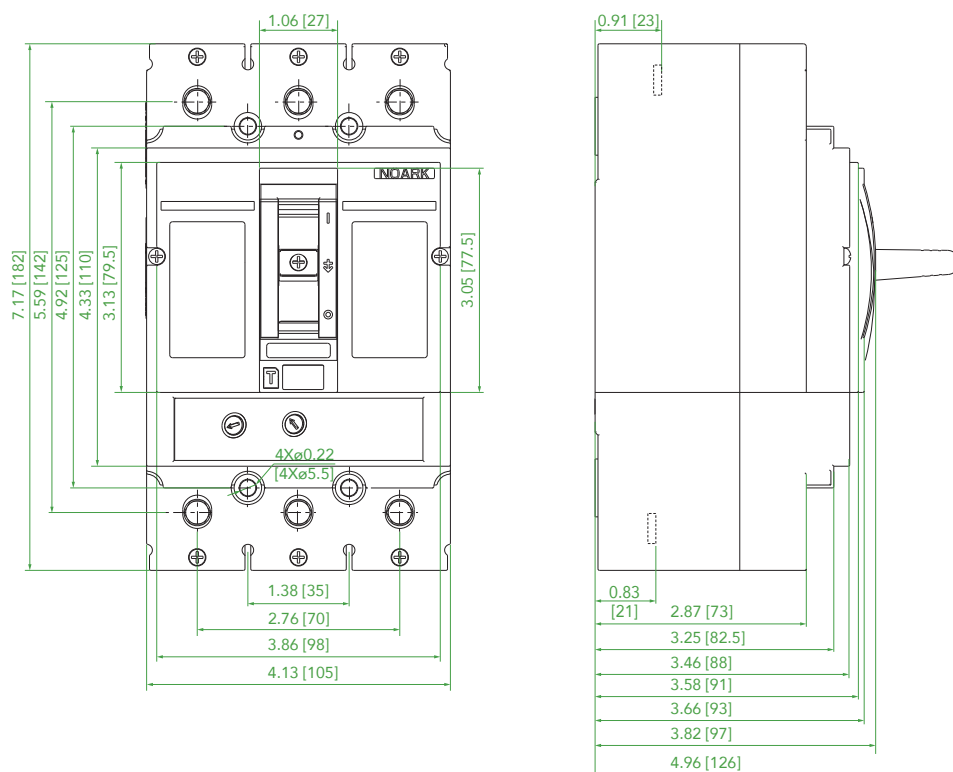
### M1

Unit: in [mm]



### M2

Unit: in [mm]

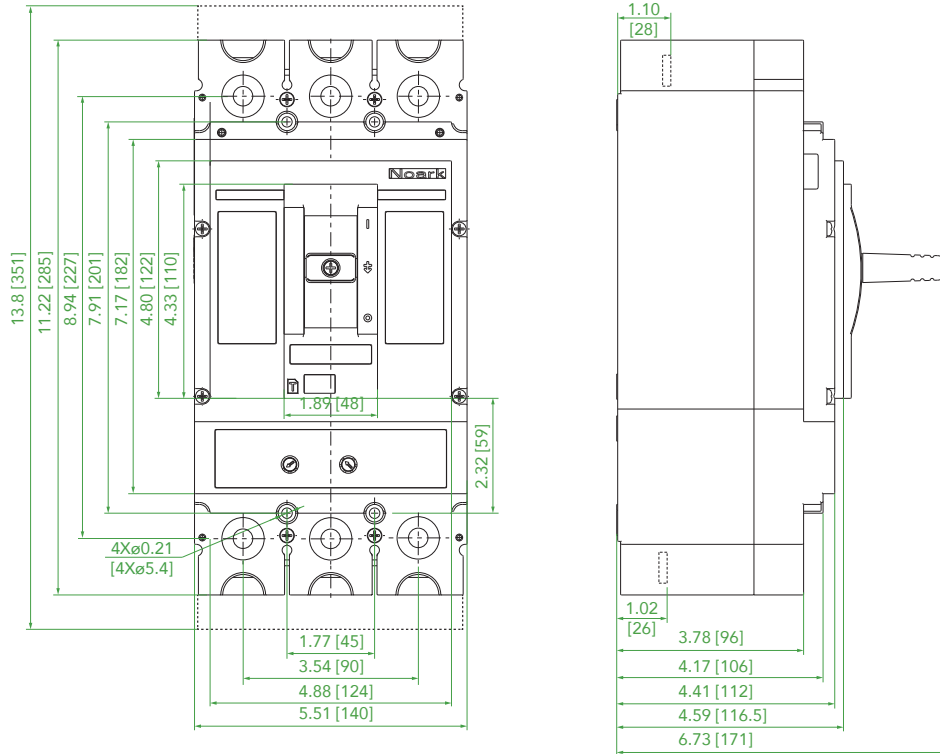


# Molded Case Circuit Breakers

## M3-M4 Dimensions

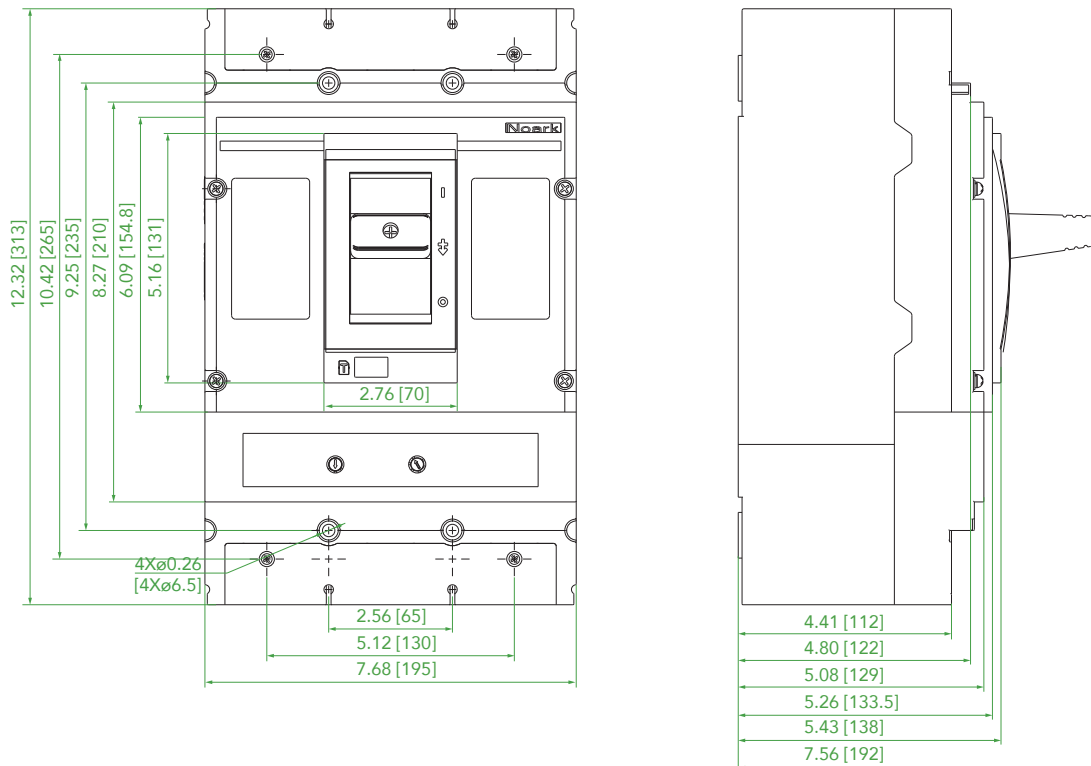
### M3

Unit: in [mm]



### M4

Unit: in [mm]

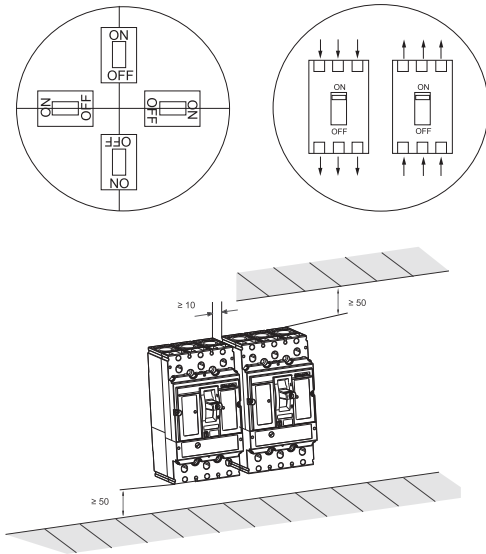


# Molded Case Circuit Breakers

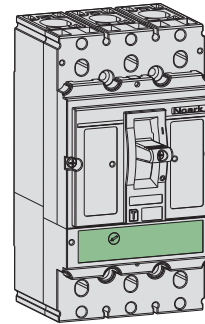
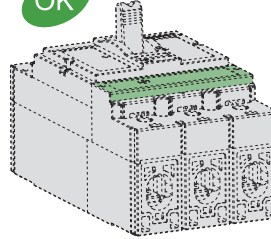
## M1-M2 Mounting Positions

### M1

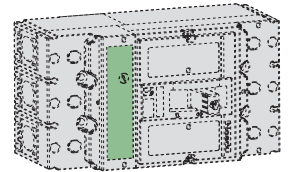
Reverse Feed Allowed



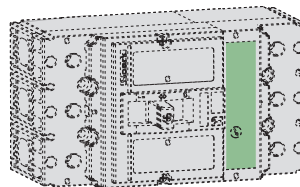
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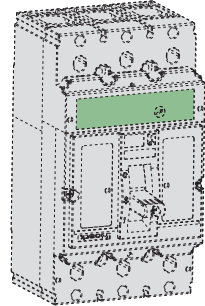
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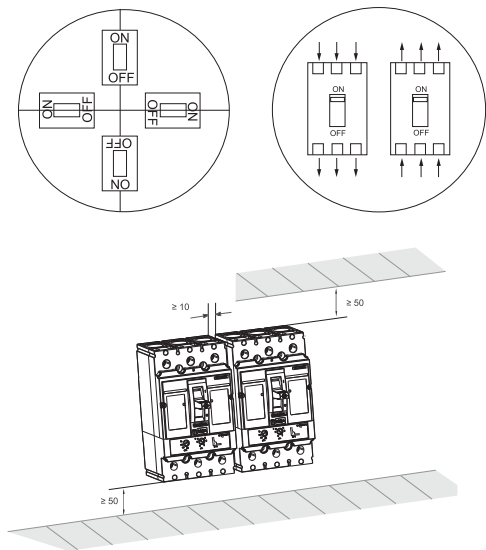


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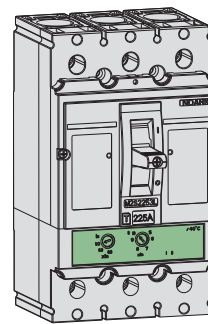
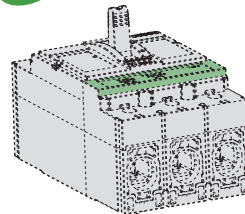


### M2

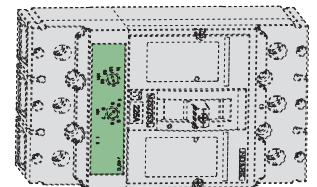
Reverse Feed Allowed



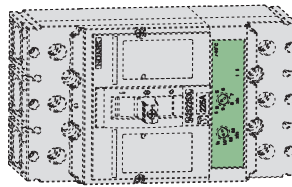
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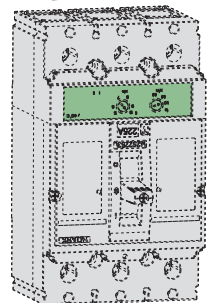
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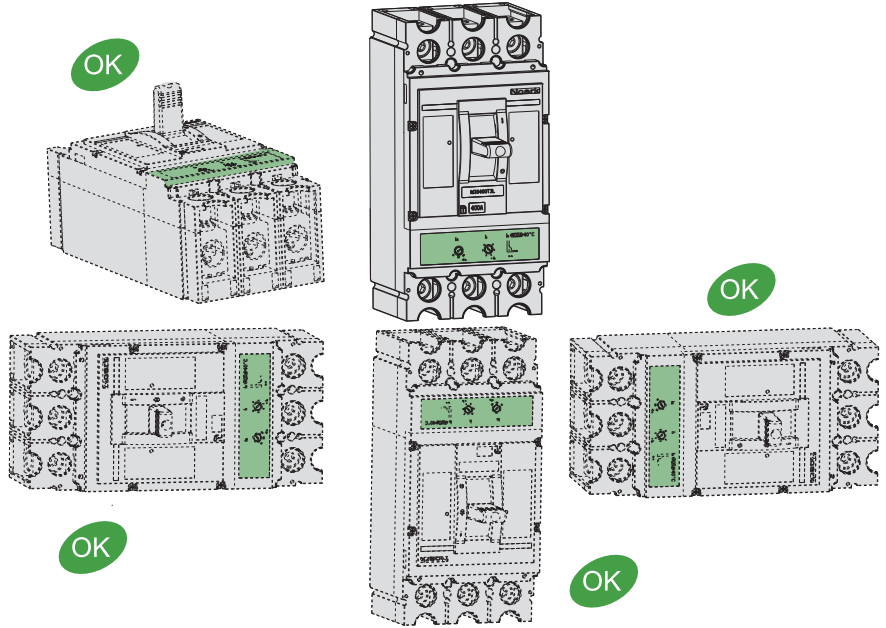
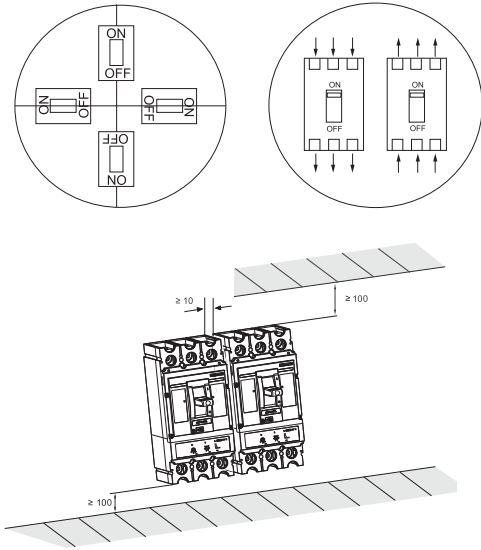
OK



## Molded Case Circuit Breakers M3-M4 Mounting Positions

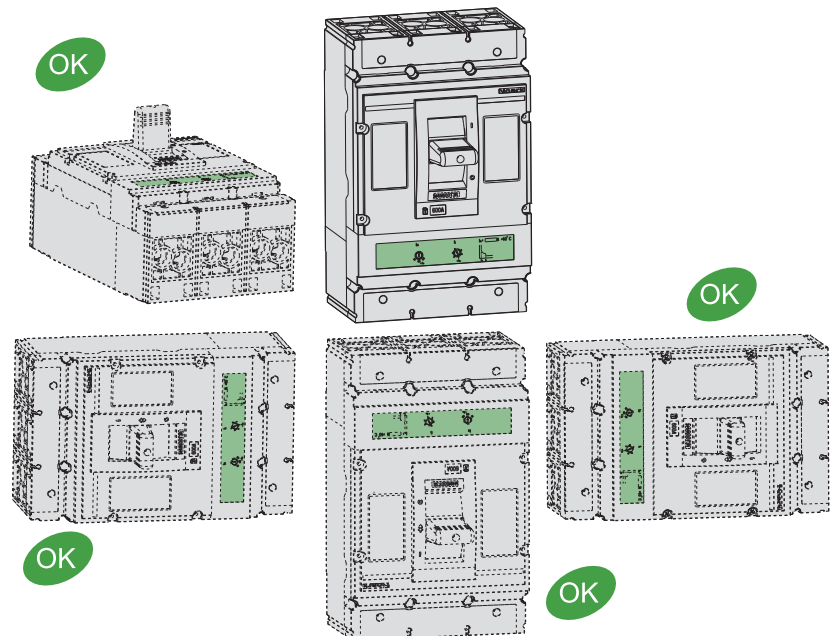
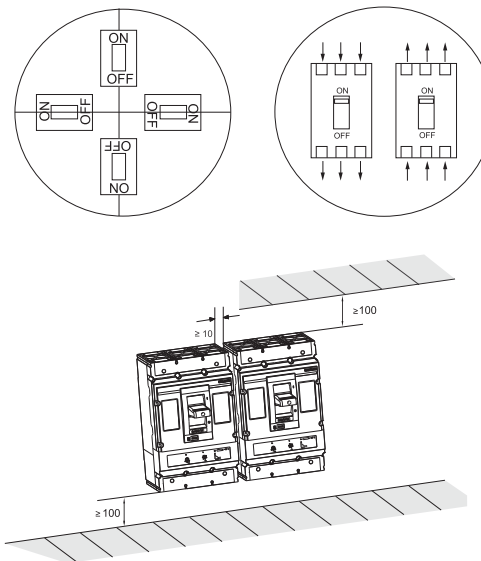
### M3

Reverse Feed Allowed



### M4

Reverse Feed Allowed







# MOLDED CASE SWITCHES



# M1D ~ M4D

## Molded Case Switches

### M1D-M4D Product Overview

# Features

B

#### Ex9 Series - M Molded Case Switches, 100~600 A

NOARK Electric offers a complete range of 2 and 3 pole Molded Case Switches in four frame sizes: M1 - 100 A, M2 - 225 A, M3 - 400 A and M4 - 600 A. Each frame size offers a range of interrupting voltage ratings from 240-690 Vac and 250-600 Vdc. The Ex9 Series – M Molded Case Switches are only used for magnetic protection applications mainly as supply circuit protection and emergency-off disconnect switches. The Ex9 Series – M conforms to global standards that include UL 489, CSA C22.2 No 5.1 and IEC 60947-2.

#### The Ex9 Series – M offers:

- Instantaneous trip ability and a new patented arc extinguishing design
- New patented technology reduces the manual operating force
- High-quality compact modular with energy saving and environmentally friendly design
- Installation flexibility:
  - ✓ Bus Bar Connection
  - ✓ Lug Line/Load Side Connection
  - ✓ Plug-In
  - ✓ Rear Connection
  - ✓ Draw-Out
- Wide range of accessories:
  - ✓ Alarm Switch and Auxiliary Contact
  - ✓ Shunt and Under-Voltage Trip
  - ✓ Interlock
  - ✓ Rotary Handle
  - ✓ Motor Operator

## Molded Case Switches

### M1D-M4D National and International Standards

## Certifications

- UL 489 Listed, File Number E355396  
(Standard for connection terminals which allows the user to apply field wiring directly to the breaker)
- Certified for Canada according to CSA standards 22.2 No. 5-02
- IEC/EN 60947-2
- CE Compliant
- RoHS Compliant

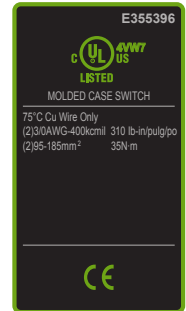
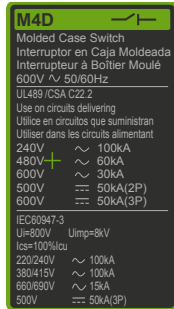


# Molded Case Switches

## M1D-M4D Product Selection Guide

### Label

B



- 1 Product Series
- 2 Handle
- 3 Test Button
- 4 Warning Label

- 6 Brand
- 7 UL Listed Mark
- 8 CE Mark
- 9 Rated Current

## Product Selection Guide

M	1	D	100	3	L
NOARK Ex9 Series - M	Frame Size	Protection Type	Amperage	Pole	Terminal Option
	1: 100 A	D: Disconnect Switch	M1: 100 A	2: 2 Poles	Blank: Bus Bar Connection
	2: 225 A		M2: 125-225 A	3: 3 Poles	L: Lug Line/Load Side Connection (Standard configuration for M1: 1 hole, M2: 1 hole, M3: 1 hole, M4 2 hole. Optional Configuration for M1: 3 hole, M3: 2 hole, need to be ordered separately.)
	3: 400 A		M3: 250-400 A		P: Plug-In
	4: 600 A		M4: 600 A		R: Rear Connection
					D: Draw-Out

# Molded Case Switches

## M1D Bus Bar, Lug Line/Load Side, Plug-In and Rear

- Bus Bar Connection MCS not sold with Bus Bar\* or Terminal Lugs
- Lug Line/Load Side Connection MCS sold with Terminal Lugs
- Plug-In MCS sold with Plug-In Base
- Rear Connection MCS sold with Rear Connection Kit



Rated Amperage (A)	2 Poles		3 Poles	
	Product	Part Number	Product	Part Number
M1	Bus Bar Connection		Bus Bar Connection	
	M1D1002	1100457	M1D1003	1100453
	Lug Line/Load Side Connection (1-Hole)		Lug Line/Load Side Connection (1-Hole)	
	M1D1002L	1100458	M1D1003L	1100454
	Plug-In		Plug-In	
	M1D1002P	1100459	M1D1003P	1100455
	Rear Connection		Rear Connection	
	M1D1002R	1100460	M1D1003R	1100456

\*NOTE: Bus Bar Connection not available through NOARK Electric.

# Molded Case Switches

## M2D Bus Bar, Lug Line/Load Side, Plug-In and Rear

- Bus Bar Connection MCS not sold with Bus Bar\* or Terminal Lugs
- Lug Line/Load Side Connection MCS sold with Terminal Lugs
- Plug-In MCS sold with Plug-In Base
- Rear Connection MCS sold with Rear Connection Kit



B

Rated Amperage (A)	2 Poles		3 Poles	
	Product	Part Number	Product	Part Number
M2	Bus Bar Connection		Bus Bar Connection	
	125	M2D1252 1100698	M2D1253 1100694	
	150	M2D1502 1100706	M2D1503 1100702	
	225	M2D2252 1100465	M2D2253 1100461	
	Lug Line/Load Side Connection (1-Hole)		Lug Line/Load Side Connection (1-Hole)	
	125	M2D1252L 1100699	M2D1253L 1100695	
	150	M2D1502L 1100707	M2D1503L 1100703	
	225	M2D2252L 1100466	M2D2253L 1100462	
	Plug-In		Plug-In	
	125	M2D1252P 1100700	M2D1253P 1100696	
	150	M2D1502P 1100708	M2D1503P 1100704	
	225	M2D2252P 1100467	M2D2253P 1100463	
Rear Connection		Rear Connection		
125	M2D1252R 1100701	M2D1253R 1100697		
150	M2D1502R 1100709	M2D1503R 1100705		
225	M2D2252R 1100468	M2D2253R 1100464		

Specifications .....B38 to B39      Dimensions.....B40      Accessories.....C42 to C69

\*NOTE: Bus Bar Connection not available through NOARK Electric.

# Molded Case Switches

## M3D Bus Bar, Lug Line/Load Side, Plug-In, Rear, Draw-Out

- Bus Bar Connection MCS not sold with Bus Bar\* or Terminal Lugs
- Lug Line/Load Side Connection MCS sold with Terminal Lugs
- Plug-In MCS sold with Plug-In Base
- Rear Connection MCS sold with Rear Connection Kit
- Draw-Out MCS sold with Draw-Out Base



Rated Amperage (A)	2 Poles		3 Poles		
	Product	Part Number	Product	Part Number	
M3	Bus Bar Connection		Bus Bar Connection		
	250	M3D2502	1100715	M3D2503	1100710
	400	M3D4002	1100474	M3D4003	1100469
	Lug Line/Load Side Connection (1-Hole)		Lug Line/Load Side Connection (1-Hole)		
	250	M3D2502L	1100716	M3D2503L	1100711
	400	M3D4002L	1100475	M3D4003L	1100470
	Lug Line/Load Side Connection (2-Holes)		Lug Line/Load Side Connection (2-Holes)		
	250	M3D2502L2	1101006	M3D2503L2	1101008
	400	M3D4002L2	1101007	M3D4003L2	1101009
	Plug-In		Plug-In		
	250	M3D2502P	1100717	M3D2503P	1100712
	400	M3D4002P	1100476	M3D4003P	1100471
	Rear Connection		Rear Connection		
	250	M3D2502R	1100718	M3D2503R	1100713
	400	M3D4002R	1100477	M3D4003R	1100472
	Draw-Out		Draw-Out		
	250	M3D2502D	1100719	M3D2503D	1100714
	400	M3D4002D	1100478	M3D4003D	1100473

Specifications .....B38 to B39

Dimensions..... B41

Accessories.....C42 to C69

\*NOTE: Bus Bar Connection not available through NOARK Electric.



# Molded Case Switches

## M4D Bus Bar, Lug Line/Load Side, Rear, Draw-Out

- Bus Bar Connection MCS not sold with Bus Bar\* or Terminal Lugs
- Lug Line/Load Side Connection MCS sold with Terminal Lugs
- Rear Connection MCS sold with Rear Connection Kit
- Draw-Out MCS sold with Draw-Out Base



B

Rated Amperage (A)		2 Poles		3 Poles	
		Product	Part Number	Product	Part Number
M4	600	Bus Bar Connection		Bus Bar Connection	
		M4D6002	1100483	M4D6003	1100479
		Lug Line/Load Side Connection (1-Hole)		Lug Line/Load Side Connection (1-Hole)	
		M4D6002L	1100484	M4D6003L	1100480
		Rear Connection		Rear Connection	
		M4D6002R	1100485	M4D6003R	1100481
		Draw-Out		Draw-Out	
		M4D6002D	1100486	M4D6003D	1100482

Specifications .....B38 to B39      Dimensions.....B41      Accessories.....C42 to C69

\*NOTE: Bus Bar Connection not available through NOARK Electric.

# Molded Case Switches

## M1D-M4D Specifications

		M1D	M2D	M3D	M4D					
Rated Current (A)		15~100	100~225	225~400	400~600					
Number of Poles		2, 3								
Breaker Type		S N H	S N H	S N H	S N H					
Rated Voltage 50/60 Hz	Vac	600								
	Vdc	600								
<b>Interrupting Capacity (kA rms)</b>										
100	240 Vac	50	100	150	65	100	150	65	100	150
65	480 Vac	35	65	100	42	65	100	42	65	100
30	600 Vac	14	20	25	18	25	30	18	30	50
50	500 Vdc 3 Poles	25	35	50	35	50	65	35	50	65
	600 Vdc 3 Poles	20	35	50	35	50	65	35	50	65
100	220 / 240 Vac	50	100	150	65	100	150	65	100	150
	380 / 415 Vac									
15	660 / 690 Vac	5	8	10	10	15	20	12	15	20
50	500 Vdc 3 Poles	25	35	50	35	50	65	35	50	65
	500 Vdc 2 Poles	20	35	50	35	50	65	35	50	65
Current Rating (A) @ 104 °F (40 °C)		15~100	100~225	225~400	400~600					
Thermal-Magnetic Trip Units (Fixed)	A = Adjustable T = Thermal F = Fixed M = Magnetic	AT / FM		AT / AM						
<b>Accessories</b>										
Alarm Switch										
Auxiliary Contact										
Shunt Trip										
Under-Voltage Trip										
Handle Lock		n								
Mechanical Interlock										
Motor Operator										
Handle Operators										
Terminal Cover and Kits										
<b>Connection</b>										
Bus Bar Connection										
Lug Line/Load Side Connection		n			n					
Plug-In					-					
Rear Connection					n					
Draw-Out		-			n					

\*NOTE: The withstand rating is the fault, at rated voltage, that the molded case switch with withstand without damage when protected by a circuit breaker or fuse with and equal continuous current rating.

# Molded Case Switches

## M1D-M4D Specifications

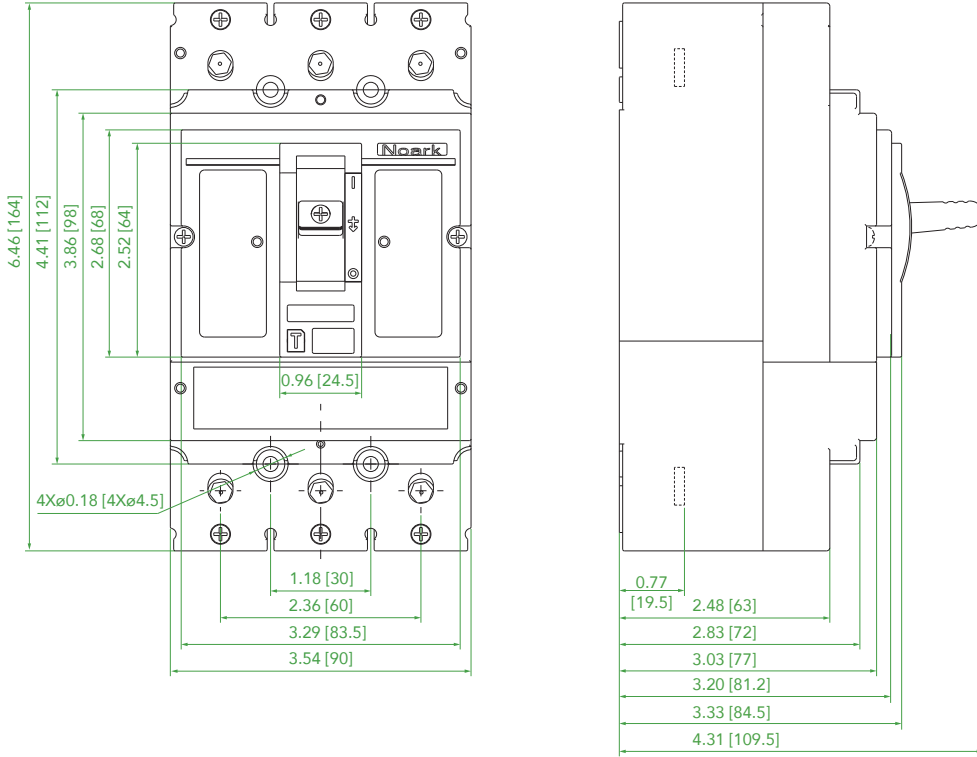
	M1D	M2D	M3D	M4D	B
Insulation Voltage (Vi)	800 V				
Impulse Withstand Voltage (Vimp)	8 kV				
Operational Voltage (Ve)	690 V				
	480V		600 V		
IEC Ics (% Icu)	100%				
Utilization Category	A				
Mechanical Operating Cycles	10,000		8,000		
Electrical Operating Cycles	6,000		5,000		
Dimensions LxWxD in (mm)	6.46x3.54x3.33 (164x90x84.5)	7.17x4.13x3.47 (182x105x88)	11.22x5.51x4.59 (285x140x116.5)	12.32x7.68x5.43 (313x195x138)	
Weight of Unit lb (kg)	2 Poles	3.17 (1.44)	3.75 (1.70)	8.97 (4.07)	20.94 (9.5)
	3 Poles	3.68 (1.67)	4.41 (2.00)	13.45 (6.1)	25.35 (11.5)
Cable Connection Wire 167 °F (75 °C) Cu Wire Only AWG (mm <sup>2</sup> )	1-Hole 14-3/0 (2.5-95)	1-Hole 8 - 350 kcmil (10-185)	1-Hole 3/0 - 500 kcmil (95-240)	2-Holes (2x) 3/0 - 400 kcmil ((2x) 95-185)	
	3-Holes 14-3/0 (2.5-6)		2-Holes 3 - 250 kcmil (35-120)		
Lugs lb-in (N.m)	89 (10)		230 (23)		310 (35)

# Molded Case Switches

## M1D-M2D Dimensions

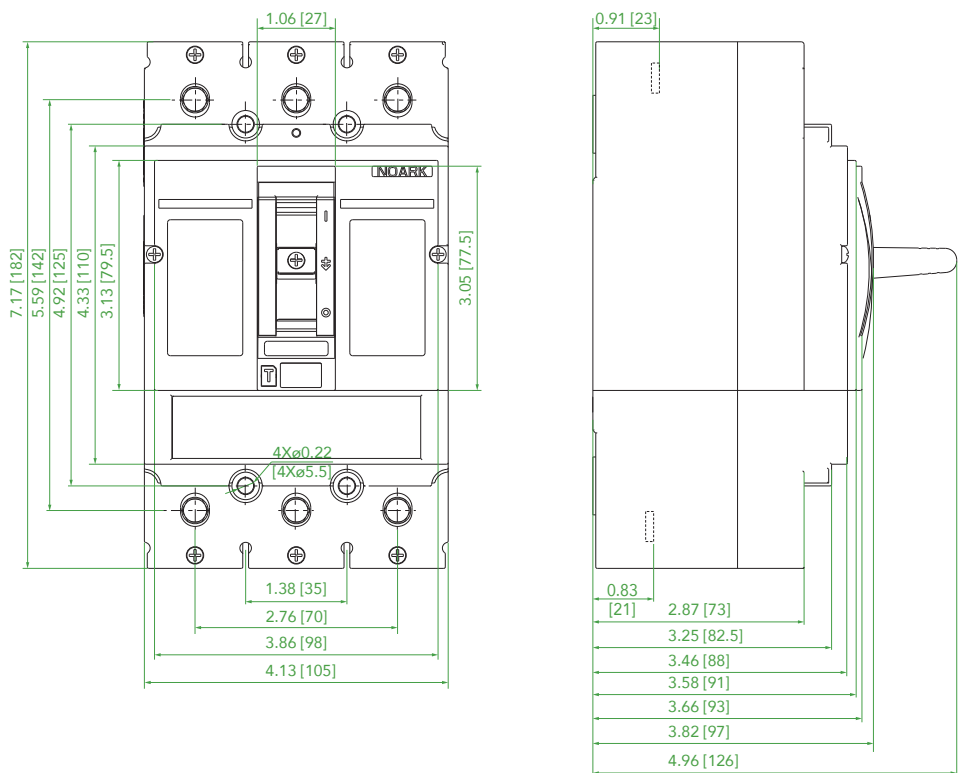
### M1D

Unit: in [mm]



### M2D

Unit: in [mm]

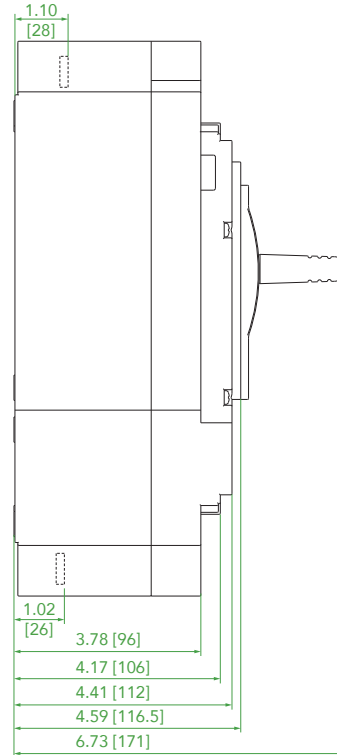
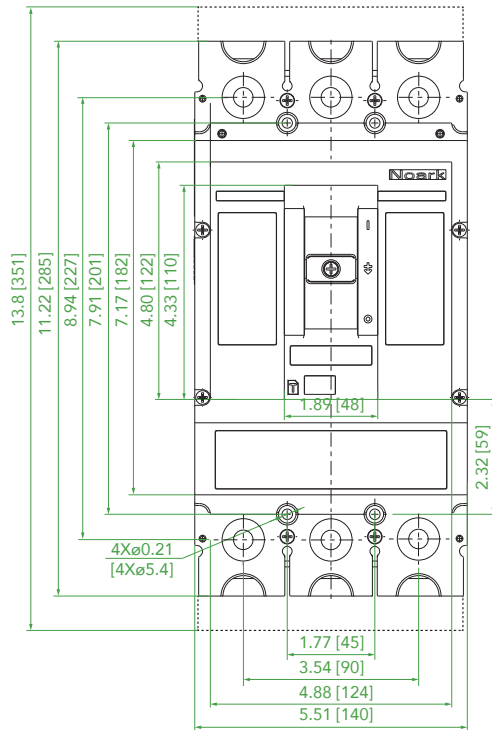


# Molded Case Switches

## M3D-M4D Dimensions

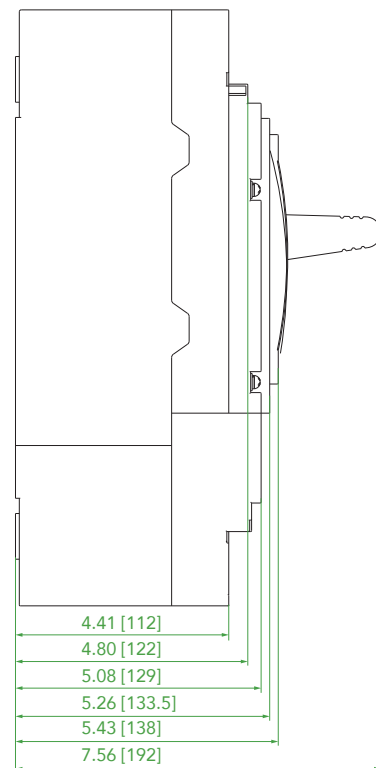
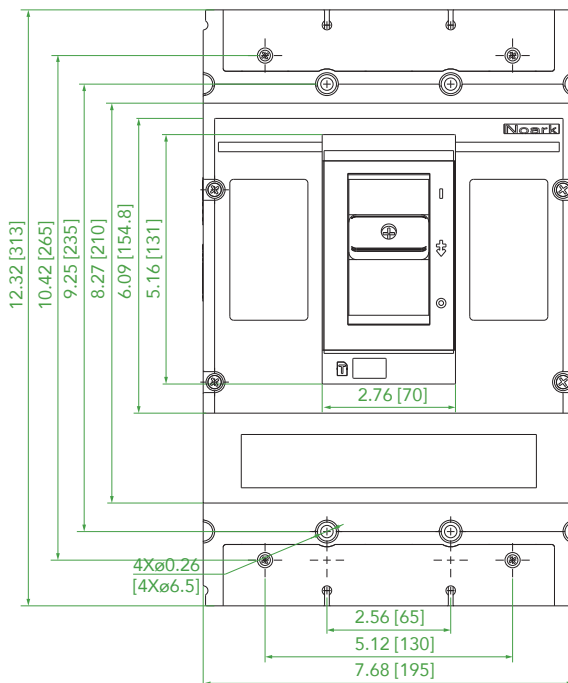
### M3D

Unit: in [mm]



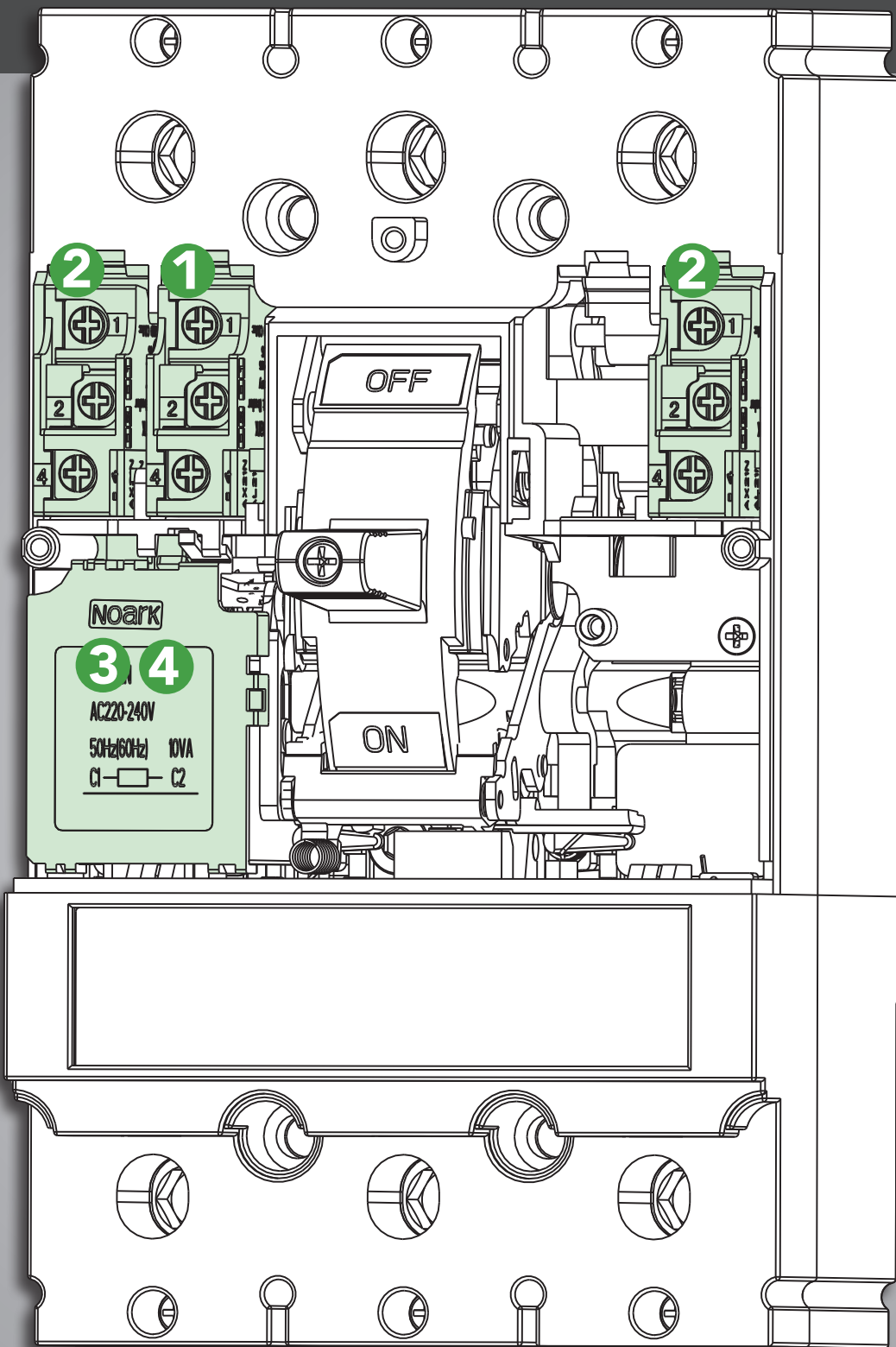
### M4D

Unit: in [mm]



B

# MOLDED CASE ACCESSORIES



# Molded Case Accessories

## Accessory Overview

# Internal Accessories (Pictured Left)



1 Alarm Switch (AL)



3 Shunt Trip (SHT)



2 Auxiliary Contact (AX)



4 Under-Voltage Trip (UVT)

C

# External Accessories



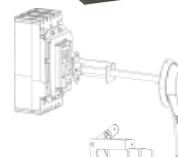
Handle Lock (KLK)



Rotary Handle (RHD)  
(Closed Coupled)



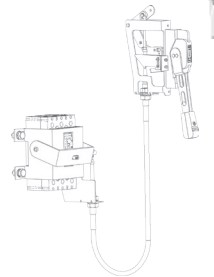
Mechanical Interlock (MIT)



Extended Rotary Handle (ERH)  
(Through the Door)



Motor Operator (MOD)



Flange Handle Mechanism  
(FHM) (Through the Door)

# Connection Hardware



Terminal Lugs (LTC)  
(M1: 1 hole and 3 hole, M2: 1 hole,  
M3: 1 hole and 2 hole, M4: 2 hole)



Rear Connection Kit (RCP)



Plug-In Base (PIA)



Draw-Out Base (DOB)

## Molded Case Accessories

### National and International Standards

## Certifications

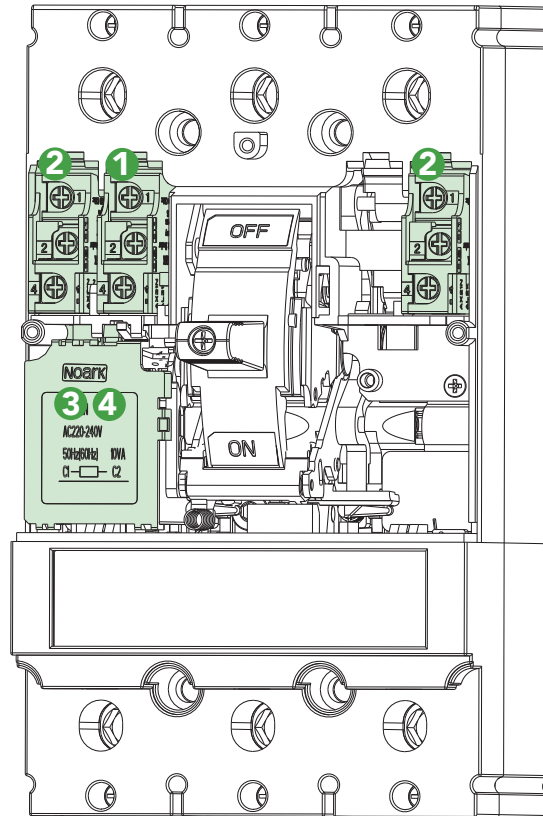
- UL 489 Listed, File Number E355392  
For: Alarm Switch, Auxiliary Contact, Shunt Trip, Under-Voltage Trip, Handle Lock, Mechanical Interlock, Motor Operator, Rotary Handle, Extended Rotary Handle, Plug-In Base, Rear Connection Kit and Draw-Out Base
- UL 489 Listed, File Number E348494  
For: Terminal Lugs
- Certified for Canada according to CSA standards 22.2 No. 5-02
- IEC/EN 60947-2
- CE Compliant
- RoHS Compliant
- CSA Certified  
For: Extended Rotary Handle
- UL listed, File No. E355392-20160823, E484125-20160527  
For: Flange Handle Mechanism
- cULus meets all requirements for standards in U.S. & Canada  
For: Flange Handle Mechanism





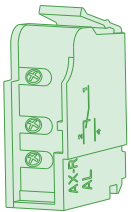
# Molded Case Accessories

## Internal Accessories



C

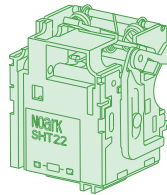
### Alarm Switch (AL)



1

- Function:**
- Sends an alarm signal when the circuit breaker trips
- Type:**
- One NO, one NC

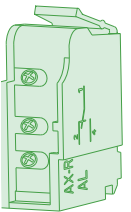
### Shunt Release (SHT)



3

- Function:**
- Allows circuit breaker to be opened remotely
- Type of Power Supply:**
- 100-130 Vac, 220-240 Vac, 380-440 Vac, 480-500 Vac, 24 Vdc, 220-250 Vdc

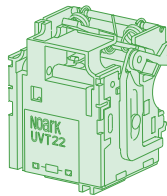
### Auxiliary Contact (AX)



2

- Function:**
- Indicates the state of a circuit breaker (open/close)
- Type:**
- One NO, one NC
  - Two NO, two NC

### Under-Voltage Release (UVT)



4

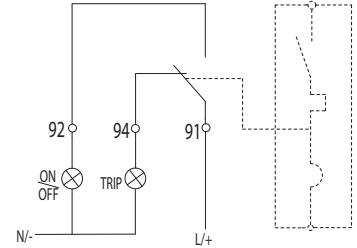
- Function:**
- Prevents circuit breaker from closing during an under-voltage situation
- Type of Power Supply:**
- 110-127 Vac, 220-240 Vac, 380-440 Vac, 24-30 Vdc, 48 Vdc, 60 Vdc, 110-125 Vdc, 220-250 Vdc

# Molded Case Accessories

## Internal Accessories: Alarm Switch and Auxiliary Contact



<b>AL</b>	<b>21</b>	<b>N</b>
↓	↓	↓
<b>Description</b>	<b>Type</b>	<b>Device Category</b>
Alarm Switch	21: for M1-M4	N: UL 489



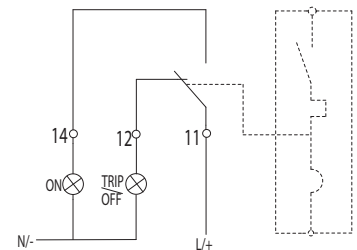
- Rated Operational Voltage: 240/480 Vac, 110/220 Vdc
- Rated Operational Current:
  - .25 A @ 110 V
  - .25 A @ 220V
  - 5 A @ 240 V
  - 2 A @ 480 V

Dimensions..... C55

Accessory Description	Product	Part Number
Alarm Switch	AL21N	1100554



<b>AX</b>	<b>21</b>	<b>N</b>
↓	↓	↓
<b>Description</b>	<b>Type</b>	<b>Device Category</b>
Auxiliary Contact	21: for M1-M4	N: UL 489



- Rated Operational Voltage: 240/480 Vac, 110/220 Vdc
- Rated Operational Current:
  - .25 A @ 110 V
  - .25 A @ 220V
  - 5 A @ 240 V
  - 2 A @ 480 V

Dimensions..... C55

Accessory Description	Product	Part Number
Auxiliary Contact	AX21N	1100553

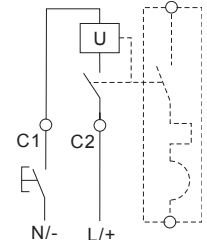
# Molded Case Accessories

## Internal Accessories: Shunt Trip

AL21N



SHT	21	N	A
Description	Type	Device Category	Control Voltage
Shunt Trip	21: for M1 22: for M2-M3 24: for M4	N: UL 489	A: 100~130 Vac B: 220~240 Vac C: 380~440 Vac D: 480~500 Vac E: 24 Vdc H: 220~250 Vdc



- Response Voltage, Pick-Up: Us 70-110%
- Opening Time: Interrupts Automatically  $\geq 10$  ms,  $\leq 60$  ms

Dimensions..... C55

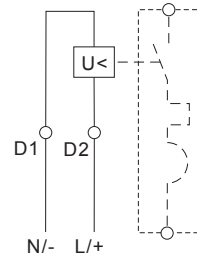
Accessory Description	Type	Voltage	Product	Part Number
Shunt Trip	M1	100-130 Vac	SHT21NA	1100505
		220-240 Vac	SHT21NB	1100506
		380-440 Vac	SHT21NC	1100507
		480-500 Vac	SHT21ND	1100508
		24 Vdc	SHT21NE	1100509
		220-250 Vdc	SHT21NH	1100512
	M2-M3	100-130 Vac	SHT22NA	1100513
		220-240 Vac	SHT22NB	1100514
		380-440 Vac	SHT22NC	1100515
		480-500 Vac	SHT22ND	1100516
		24 Vdc	SHT22NE	1100517
		220-250 Vdc	SHT22NH	1100520
	M4	100-130 Vac	SHT24NA	1100521
		220-240 Vac	SHT24NB	1100522
		380-440 Vac	SHT24NC	1100523
		480-500 Vac	SHT24ND	1100524
		24 Vdc	SHT24NE	1100525
		220-250 Vdc	SHT24NH	1100528

# Molded Case Accessories

## Internal Accessories: Under-Voltage Trip



UVT	21	N	A
Description	Type	Device Category	Control Voltage
Under-Voltage Trip	21: for M1 22: for M2-M3 24: for M4	N: UL 489	A: 110~127 Vac B: 220~240 Vac C: 380~440 Vac D: 24~30 Vdc E: 48 Vdc F: 60 Vdc G: 110~125 Vdc H: 220~250 Vdc



- Response Voltage, Drop: Ue 35-70%
- Response Voltage, Pick-Up: Ue 85-110%
- Opening Time: Interrupts Automatically  $\geq 10$  ms,  $\leq 60$  ms

Dimensions..... C55

Accessory Description	Type	Voltage	Product	Part Number
Under-Voltage Trip	M1	110-127 Vac	UVT21NA	1100529
		220-240 Vac	UVT21NB	1100530
		380-440 Vac	UVT21NC	1100531
		24-30 Vdc	UVT21ND	1100532
		48 Vdc	UVT21NE	1100533
		60 Vdc	UVT21NF	1100534
	M2-M3	110-125 Vdc	UVT21NG	1100535
		220-250 Vdc	UVT21NH	1100536
		110-127 Vac	UVT22NA	1100537
		220-240 Vac	UVT22NB	1100538
		380-440 Vac	UVT22NC	1100539
		24-30 Vdc	UVT22ND	1100540
M4	48 Vdc	UVT22NE	1100541	
	60 Vdc	UVT22NF	1100542	
	110-125 Vdc	UVT22NG	1100543	
	220-250 Vdc	UVT22NH	1100544	
	110-127 Vac	UVT24NA	1100545	
	220-240 Vac	UVT24NB	1100546	
		380-440 Vac	UVT24NC	1100547
		24-30 Vdc	UVT24ND	1100548
		48 Vdc	UVT24NE	1100549
		60 Vdc	UVT24NF	1100550
		110-125 Vdc	UVT24NG	1100551
		220-250 Vdc	UVT24NH	1100552

# Molded Case Accessories

## External Accessories: Handle Lock and Mechanical Interlock



Dimensions..... C56

KLK	21	N	A
Description	Type	Device Category	Position
Handle Lock (Padlockable Position)	21: for M1	N: UL 489	A: Off
	22: for M2		B: On/Off
	23: for M3		C: On
	24: for M4		

C

Accessory Description	Type	Position	Product	Part Number
Handle Lock	M1	Off	KLK21NA	1100575
		On/Off	KLK21NB	1100576
		On	KLK21NC	1100577
	M2	Off	KLK22NA	1100578
		On/Off	KLK22NB	1100579
		On	KLK22NC	1100580
	M3	Off	KLK23NA	1100581
		On/Off	KLK23NB	1100582
		On	KLK23NC	1100583
	M4	Off	KLK24NA	1100584
		On/Off	KLK24NB	1100585
		On	KLK24NC	1100586



Dimensions..... C56

MIT	21	N	A
Description	Type	Device Category	Breaker Distance
Mechanical Interlock	21: for M1	N: UL 489	A: Distance of two MCCBs, contact NOARK sales for order assistance
	22: for M2		
	23: for M3		
	24: for M4		

Accessory Description	Type	Product	Part Number
Mechanical Interlock	M1	MIT21NA	1100596
	M2	MIT22NA	1100599
	M3	MIT23NA	1100602
	M4	MIT24NA	1100605

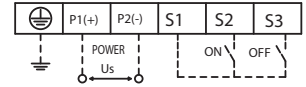
# Molded Case Accessories

## External Accessories: Motor Operator

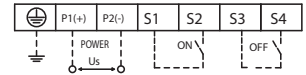


Dimensions..... C57  
to C58

MOD	21	N	A
Description	Type	Device Category	Control Voltage
Motor Operator	21: for M1	N: UL 489	A: 120 Vac/dc
	22: for M2		B: 240 Vac/dc
	23: for M3		C: 24 Vdc
	24: for M4		



MOD21N / MOD22N



MOD23N / MOD24N

Accessory Description	Type	Voltage	Product	Part Number
Motor Operator	M1	120 Vac/dc	MOD21NA	1100563
		240 Vac/dc	MOD21NB	1100564
		24 Vdc	MOD21NC	1100565
	M2	120 Vac/dc	MOD22NA	1100566
		240 Vac/dc	MOD22NB	1100567
		24 Vdc	MOD22NC	1100568
	M3	120 Vac/dc	MOD23NA	1100569
		240 Vac/dc	MOD23NB	1100570
		24 Vdc	MOD23NC	1100571
	M4	120 Vac/dc	MOD24NA	1100572
		240 Vac/dc	MOD24NB	1100573
		24 Vdc	MOD24NC	1100574

# Molded Case Accessories

## External Accessories: Rotary Handle



- Grey/Green or Yellow/Red
- IP 54
- NEMA 4/4X

Dimensions..... C59 to C60

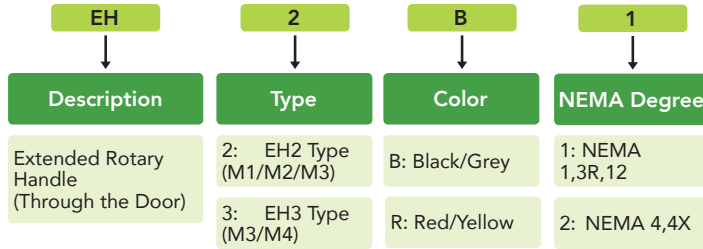
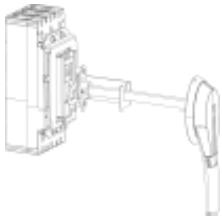
<b>RHD</b>	<b>21</b>	<b>N</b>	<b>1</b>	<b>6</b>
↓	↓	↓	↓	↓
<b>Description</b>	<b>Type</b>	<b>Device Category</b>	<b>Color</b>	<b>IP Rating</b>
Rotary Handle (Closed Coupled)	21: for M1 22: for M2 23: for M3 24: for M4	N: UL 489	1: Grey/Green 2: Red/Yellow	Blank: IP 54

Accessory Description		Type	Product	Part Number	
Rotary Handle (Closed Coupled)	IP 54	Grey/Green	M1	RHD21N1	1100555
			M2	RHD22N1	1100556
			M3	RHD23N1	1100557
			M4	RHD24N1	1100558
	Red/Yellow		M1	RHD21N2	1100613
			M2	RHD22N2	1100614
			M3	RHD23N2	1100615
			M4	RHD24N2	1100616



# Molded Case Accessories

## External Accessories: Extended Rotary Handle



- Black/Grey or Red/Yellow
- IP 54
- NEMA 1,3R,12,4,4X

Dimensions..... C60

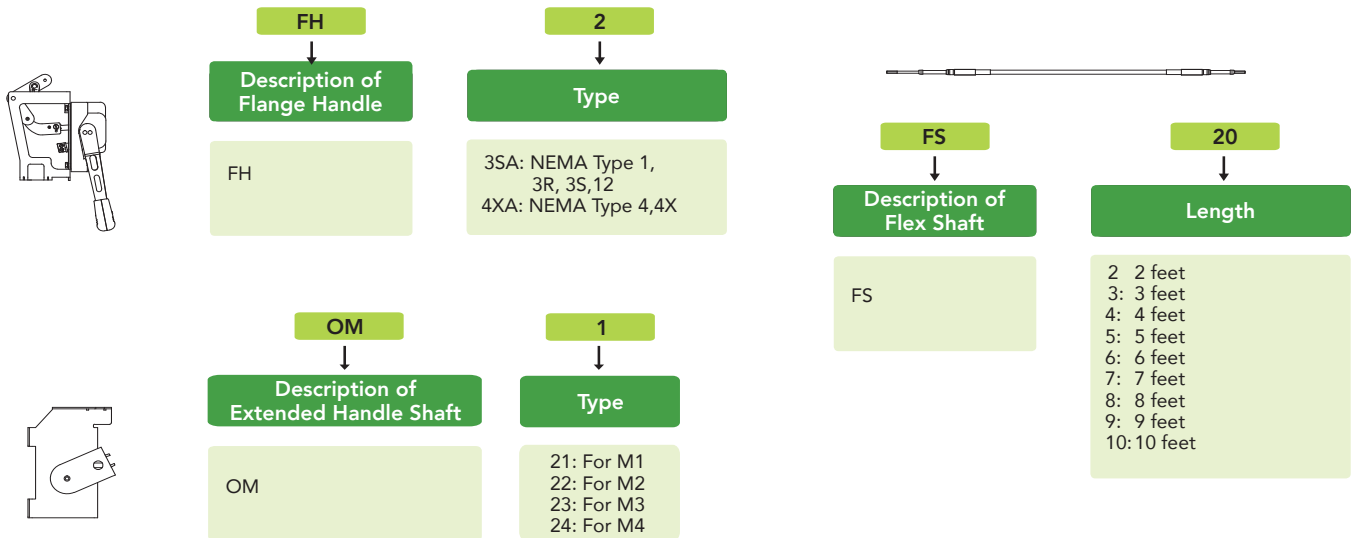
Order Number	NOARK SKU	Description	Suitable for
1100859	EH2B1	External Handle, S2 Type, Black/Grey, NEMA 1,3R, 12	M1\M2\M3
1100860	EH2B2	External Handle, S2 Type, Black/Grey, NEMA 4,4X	M1\M2\M3
1100861	EH2R1	External Handle, S2 Type, Red/Yellow, NEMA 1,3R, 12	M1\M2\M3
1100862	EH2R2	External Handle, S2 Type, Red/Yellow, NEMA 4,4X	M1\M2\M3
1100863	EH3B1	External Handle, S3 Type, Black/Grey, NEMA 1,3R, 12	M3/M4
1100864	EH3B2	External Handle, S3 Type, Black/Grey, NEMA 4,4X	M3/M4
1100865	EH3R1	External Handle, S3 Type, Red/Yellow, NEMA 1,3R, 12	M3/M4
1100866	EH3R2	External Handle, S3 Type, Red/Yellow, NEMA 4,4X	M3/M4
1100867	EHS20A	External Handle Shaft, Cross Sectional Area 10×10mm, Length 200mm	M1/M2/M3
1100868	EHS32A	External Handle Shaft, Cross Sectional Area 10×10mm, Length 320mm	M1/M2/M3
1100869	EHS50A	External Handle Shaft, Cross Sectional Area 10×10mm, Length 500mm	M1/M2/M3
1100870	EHS20B	External Handle Shaft, Cross Sectional Area 12×12mm, Length 200mm	M3/M4
1100871	EHS32B	External Handle Shaft, Cross Sectional Area 12×12mm, Length 320mm	M3/M4
1100872	EHS50B	External Handle Shaft, Cross Sectional Area 12×12mm, Length 500mm	M3/M4
1100873	HOM1A	Handle Operating Mechanism, for M1, Hole 10×10mm	M1
1100874	HOM2A	Handle Operating Mechanism, for M2, Hole 10×10mm	M2
1100875	HOM3A	Handle Operating Mechanism, for M3, Hole 10×10mm	M3
1100876	HOM3B	Handle Operating Mechanism, for M3, Hole 12×12mm	M3
1100877	HOM4B	Handle Operating Mechanism, for M4, Hole 12×12mm	M4



# Molded Case Accessories

## External Accessories: Flange Handle Mechanism

Flange handle mechanism selection is separated into 3 parts: flange handle, flex shaft, and operating mechanism. NOARK UL MCCB frame size: M1(15-100A), M2(100-225A), M3(225-400A), M4(400-600A)

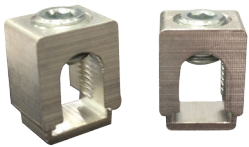


## Components

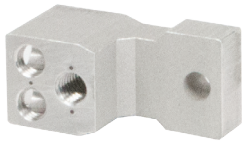
Order Number	NOARK SKU	Description	Suitable for
1101254	FH3SA	Flange Handle, NEMA 1,3R, 3S,12	M1\M2\M3\M4
1101255	FH4XA	Flange Handle, NEMA 4,4X	
1101256	FS2	Flexible Shaft, length is 2 feet	
1101257	FS3	Flexible Shaft, length is 3 feet	
1101258	FS4	Flexible Shaft, length is 4 feet	
1101259	FS5	Flexible Shaft, length is 5 feet	
1101260	FS6	Flexible Shaft, length is 6 feet	
1101261	FS7	Flexible Shaft, length is 7 feet	
1101262	FS8	Flexible Shaft, length is 8 feet	
1101263	FS9	Flexible Shaft, length is 9 feet	
1101264	FS10	Flexible Shaft, length is 10 feet	
1101265	OM21	Operating Mechanism for M1	
1101266	OM22	Operating Mechanism for M2	
1101267	OM23	Operating Mechanism for M3	
1101268	OM24	Operating Mechanism for M4	

# Molded Case Accessories

## Connection Hardware: Terminal Lugs and Plug-In Base



1-Hole

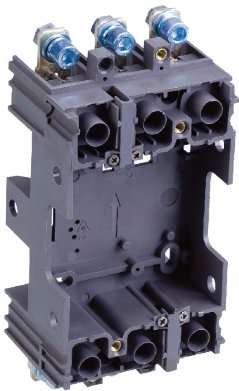


3-Holes

Dimensions..... C63

LTC	21	N	A
Description	Type	Device Category	Number of Holes
Terminal Lugs	21: for M1	N: UL 489	A: 1-Hole (M1~M3)
	22: for M2		B: 2-Hole (M3~M4)
	23: for M3		C: 3-Hole (M1)
	24: for M4		

Accessory Description	Type	Voltage	Product	Part Number
Terminal Lugs	M1	1-Hole	LTC21NA	1100608
		3-Holes	LTC21NC	1100669
	M2	1-Hole	LTC22NA	1100609
		2-Holes	LTC23NB	1100611
	M3	1-Hole	LTC23NA	1100610
M4	2-Holes	LTC24NB	1100612	



Dimensions..... C64 to C66

PIA	21	N
Description	Type	Device Category
Plug-In Base	21: for M1	N: UL 489
	22: for M2	
	23: for M3	

Accessory Description	Type	Product	Part Number
Plug-In Base (3 Pole Only)	M1	PIA21N	1100591
	M2	PIA22N	1100592
	M3	PIA23N	1100593

# Molded Case Accessories

## Connection Hardware: Rear Connection Kit and Draw-Out Base



Dimensions..... C67 to C68

RCP	21	N
Description	Type	Certification
Rear Connection Kit	21: for M1	N: UL 489
	22: for M2	
	23: for M3	
	24: for M4	

Accessory Description	Type	Product	Part Number
Rear Connection Kit	M1	RCP21N	1100587
	M2	RCP22N	1100588
	M3	RCP23N	1100589
	M4	RCP24N	1100590



Dimensions..... C69

DOB	21	N
Description	Type	Certification
Draw-Out Base	23: for M3	N: UL 489
	24: for M4	

Accessory Description	Type	Product	Part Number
Draw-Out Base	M3	DOB23N	1100594
	M4	DOB24N	1100595

NOTE: Molded Case Circuit Breaker/Switch sold separately.

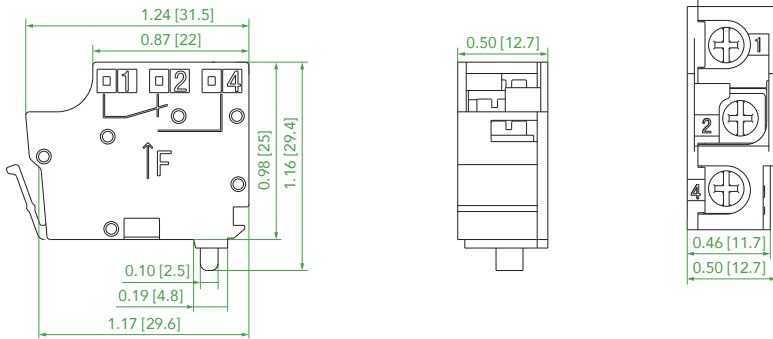
# Molded Case Accessories

## Internal Accessory Dimensions

### AL21N / AX21N

Alarm Switch / Auxiliary Contact

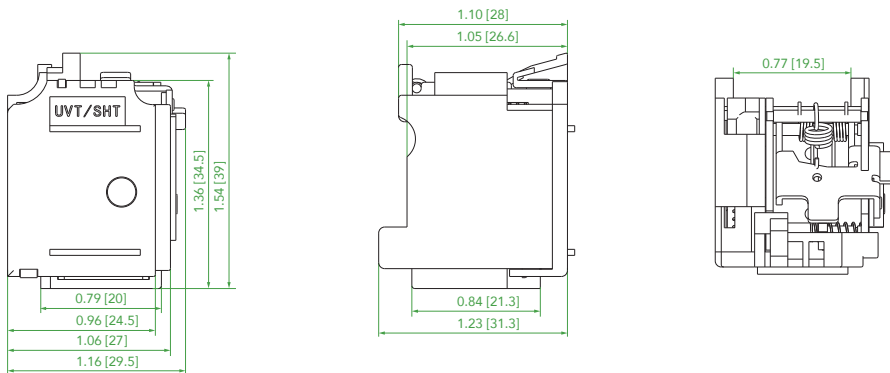
Unit: in [mm]



### SHT21N / UVT21N

Shunt Trip / Under-Voltage Trip for M1

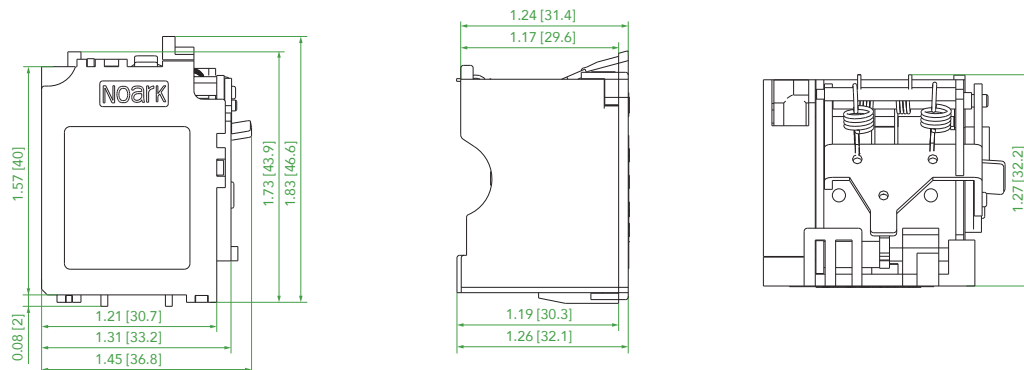
Unit: in [mm]



### SHT22N-24N / UVT22N-24N

Shunt Trip / Under-Voltage Trip for M2-M4

Unit: in [mm]

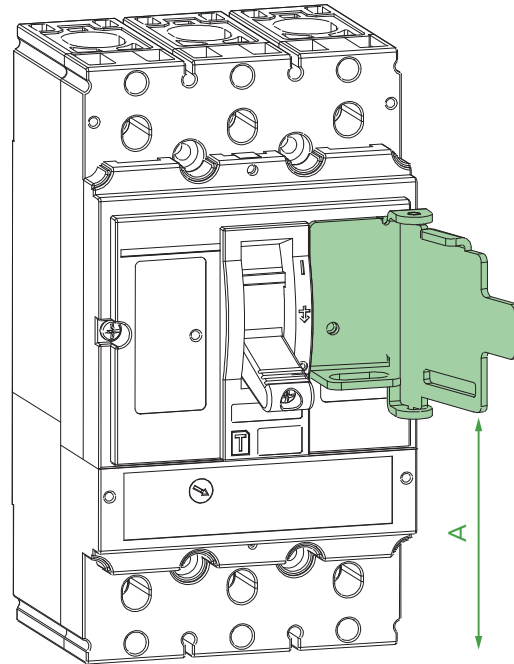


# Molded Case Accessories

## External Accessory Dimensions

**KLK21N**  
 Handle Lock  
 Unit: in [mm]

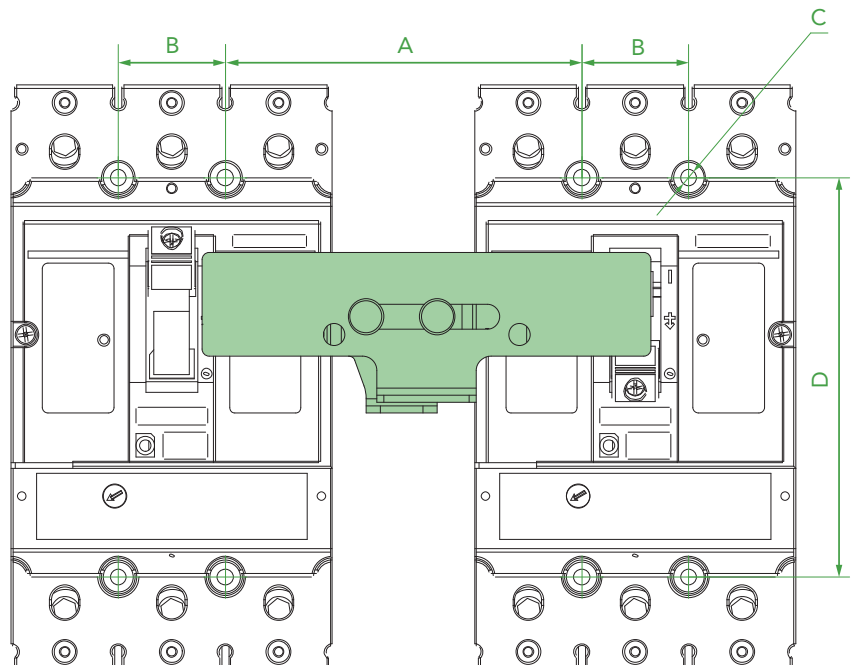
Handle Lock	A
MIT21N	5.71 [145]
MIT22N	6.50 [165]
MIT23N	8.46 [215]
MIT24N	10.51 [267]



C

**MIT21N**  
 Mechanical Interlock  
 Unit: in [mm]

Mechanical Interlock	A	B	C	D
MIT21N	3.94 [100]	1.18 [30]	ø0.18 [ø4.5]	4.41 [112]
MIT22N	4.53 [115]	1.38 [35]	ø0.22 [ø5.5]	4.92 [125]
MIT23N	5.63 [143]	1.77 [45]	ø0.22 [ø5.5]	7.91 [201]
MIT24N	8.03 [204]	2.56 [65]	ø0.26 [ø6.5]	9.25 [235]



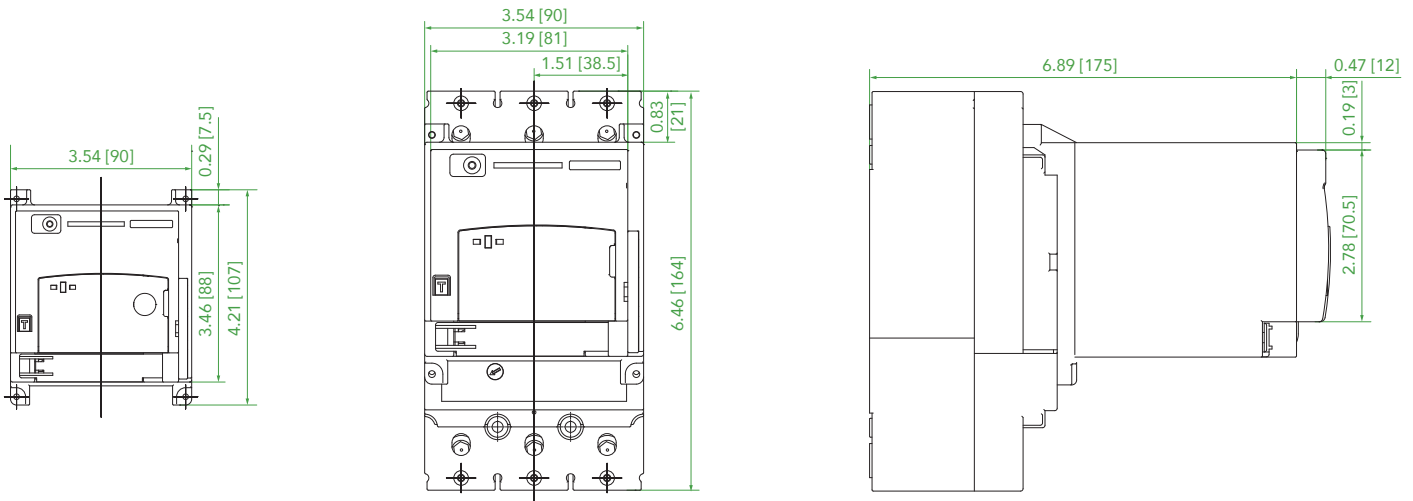
# Molded Case Accessories

## External Accessory Dimensions

### MOD21N

Motor Operator for M1

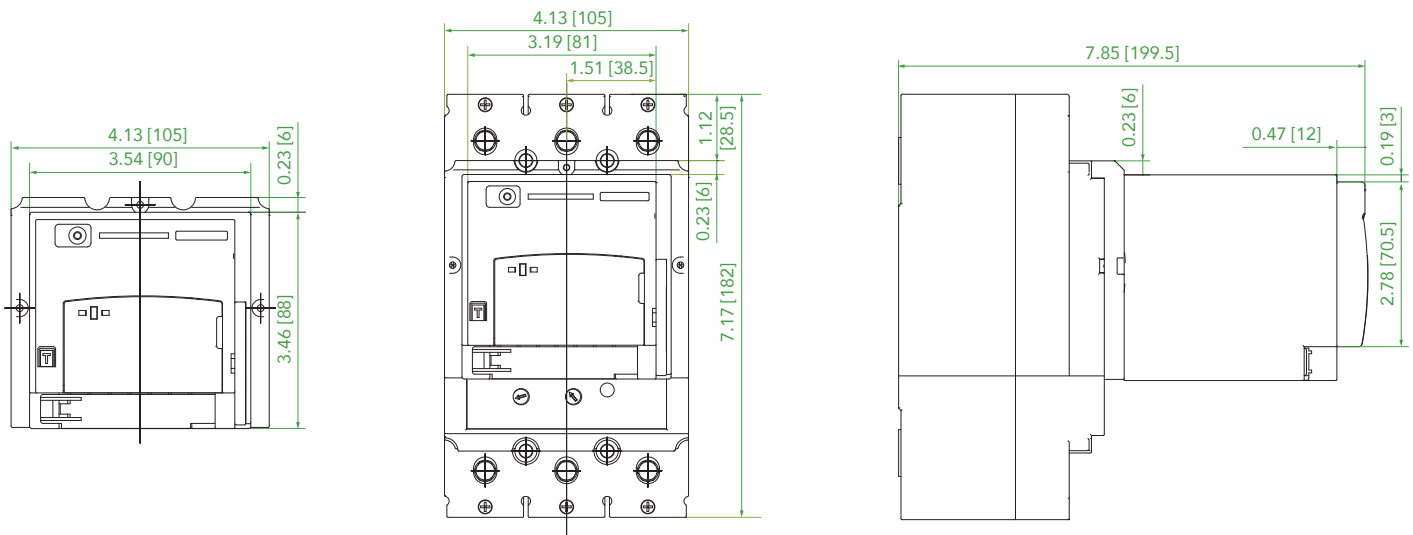
Unit: in [mm]



### MOD22N

Motor Operator for M2

Unit: in [mm]



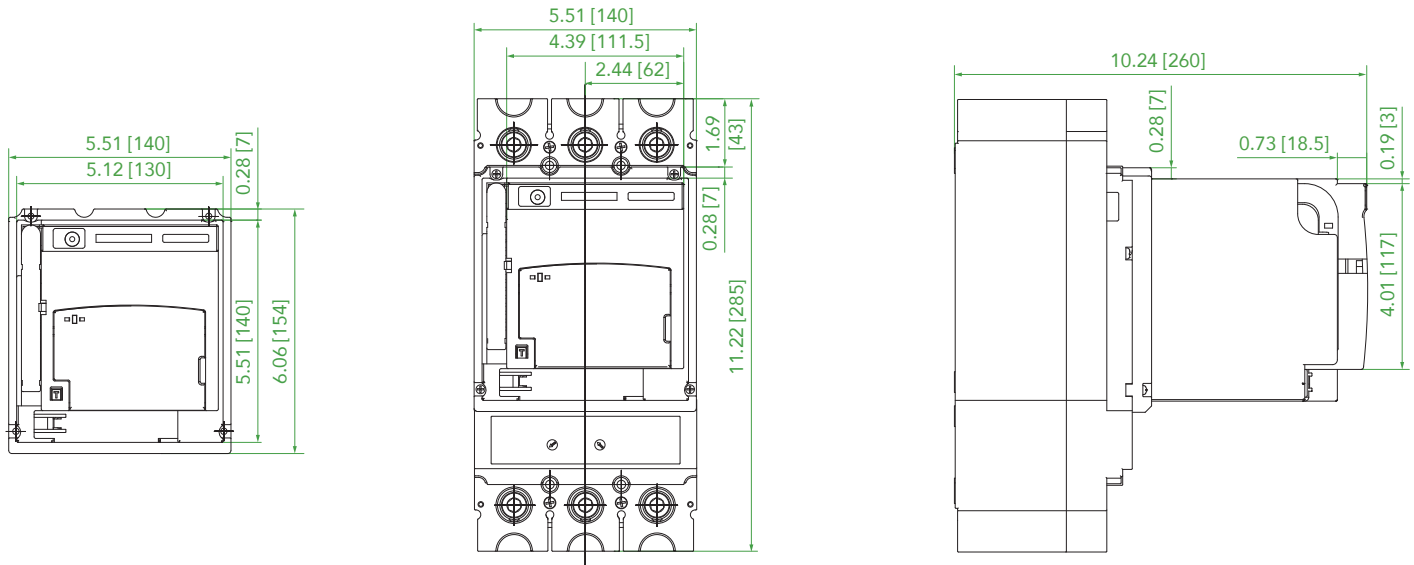
# Molded Case Accessories

## External Accessory Dimensions

### MOD23N

Motor Operator for M3

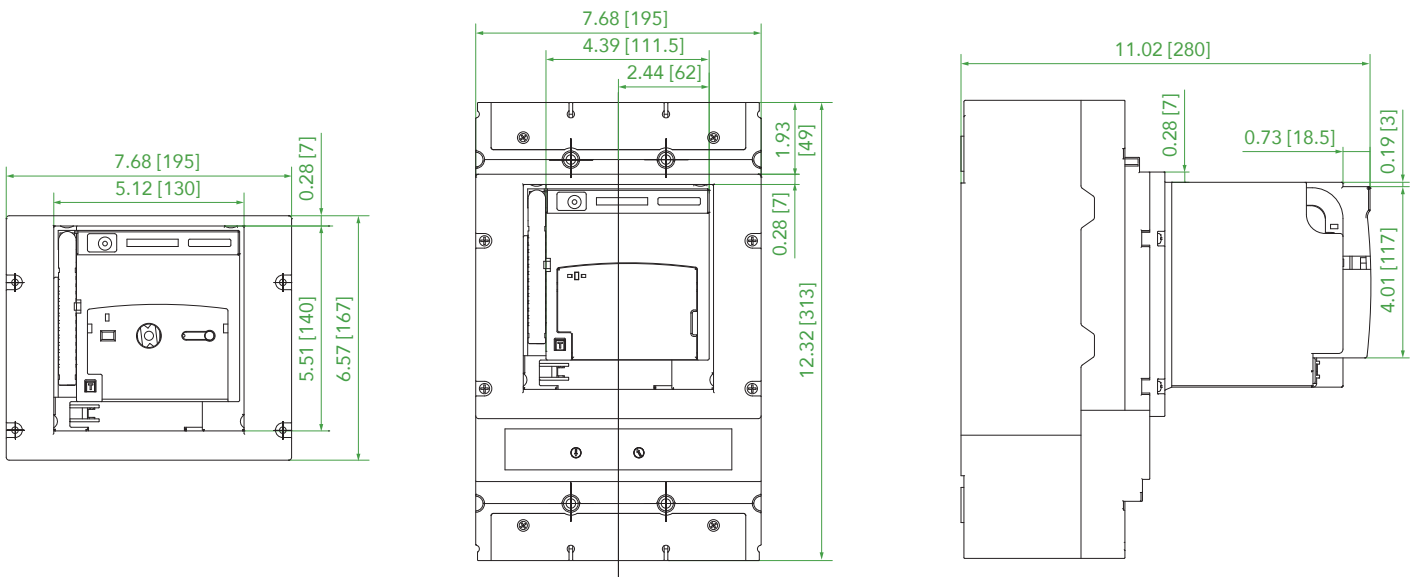
Unit: in [mm]



### MOD24N

Motor Operator for M4

Unit: in [mm]



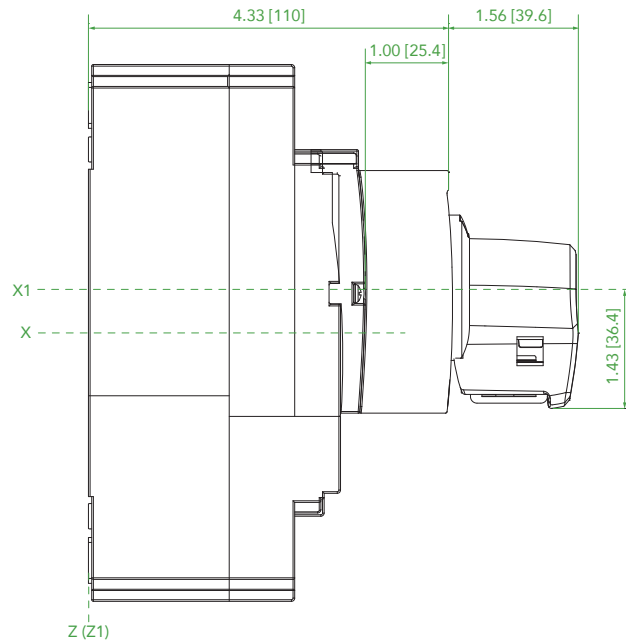
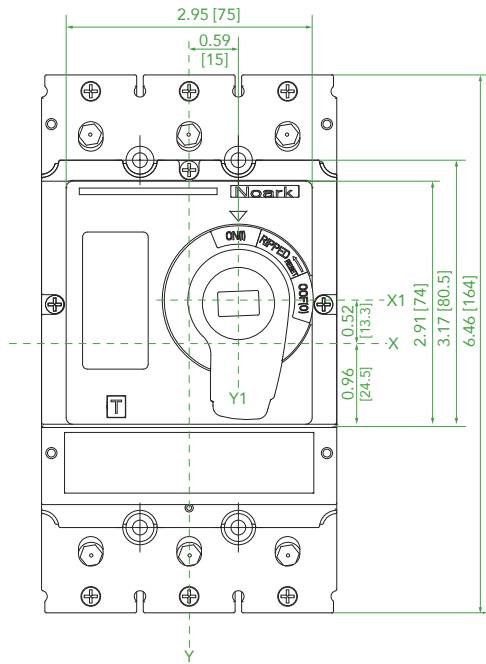
# Molded Case Accessories

## External Accessory Dimensions

### RHD21N

Rotary Handle for M1

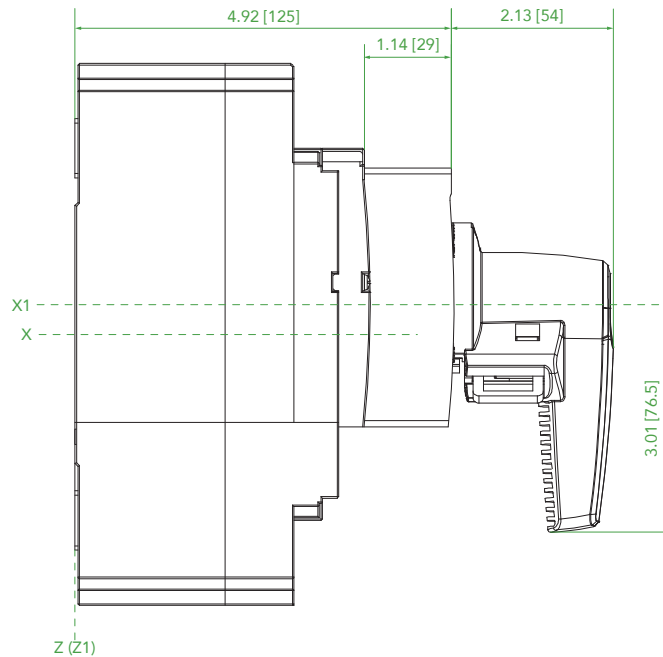
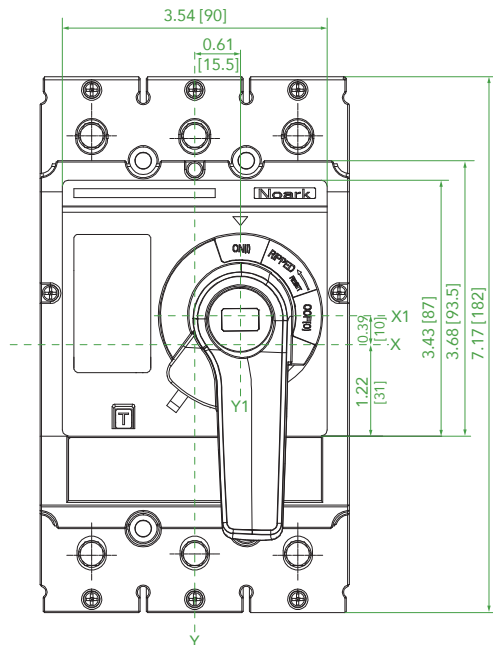
Unit: in [mm]



### RHD22N

Rotary Handle for M2

Unit: in [mm]





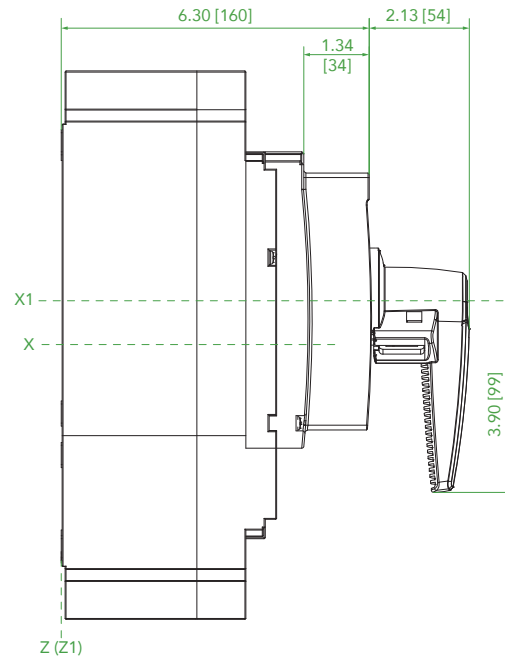
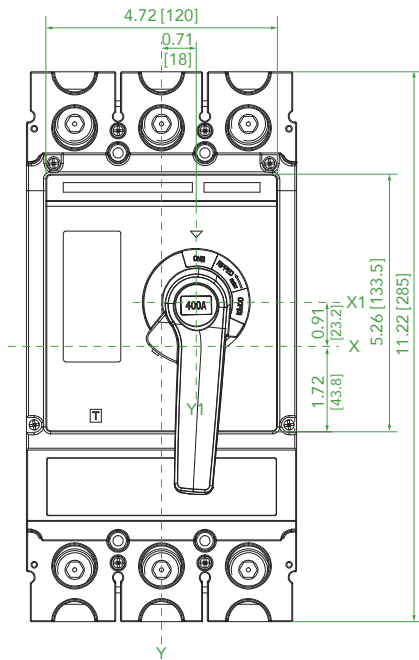
# Molded Case Accessories

## External Accessory Dimensions

### RHD23N

Rotary Handle for M3

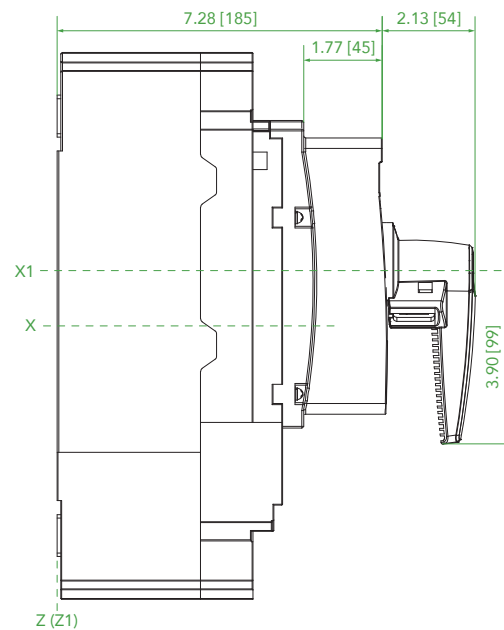
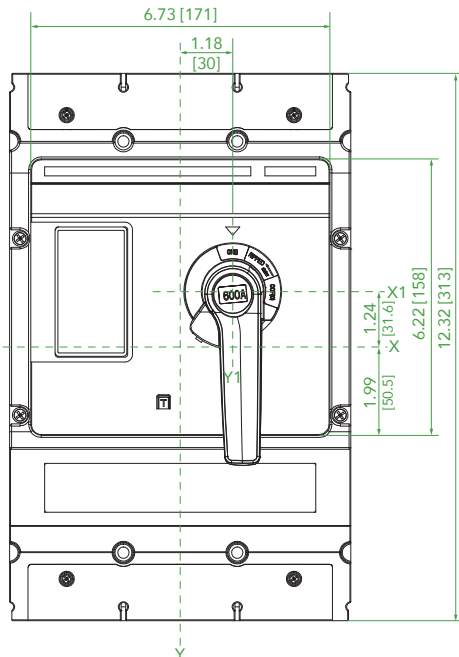
Unit: in [mm]



### RHD24N

Rotary Handle for M4

Unit: in [mm]



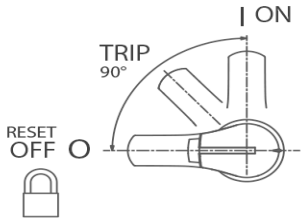
# Molded Case Accessories

## External Accessory Dimensions

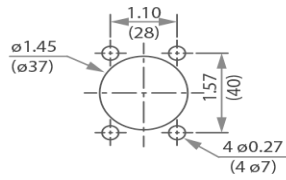
### Extended Rotary Handle

Unit: in [mm]

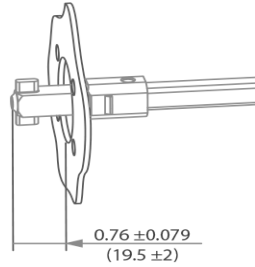
Padlocking Position



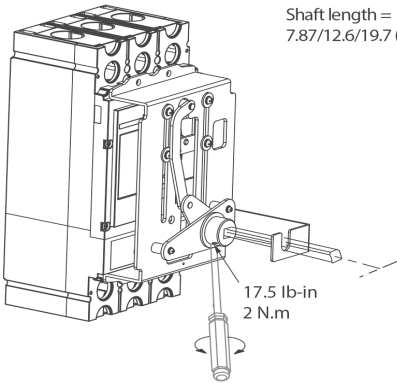
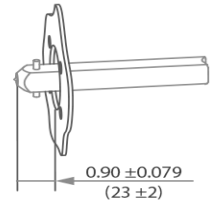
Door Drilling



A

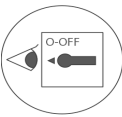
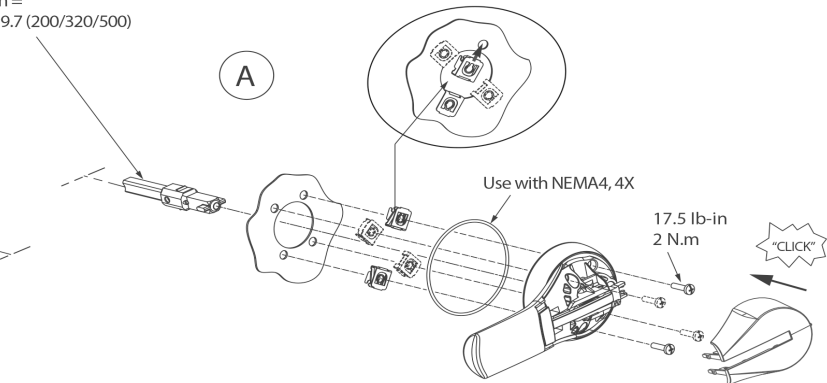


B



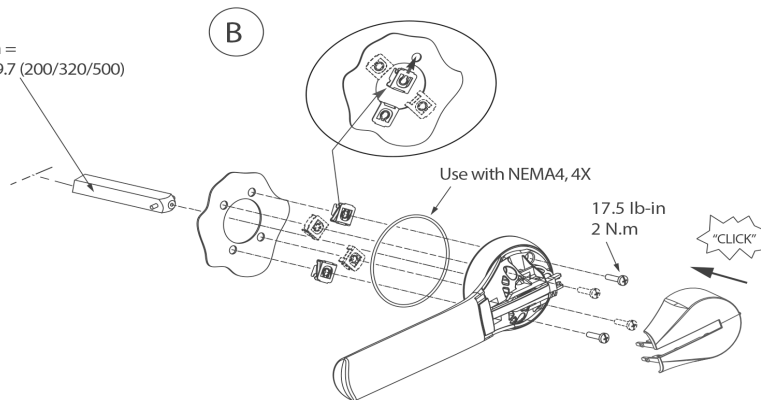
Shaft length = 7.87/12.6/19.7 (200/320/500)

A



Shaft length = 7.87/12.6/19.7 (200/320/500)

B



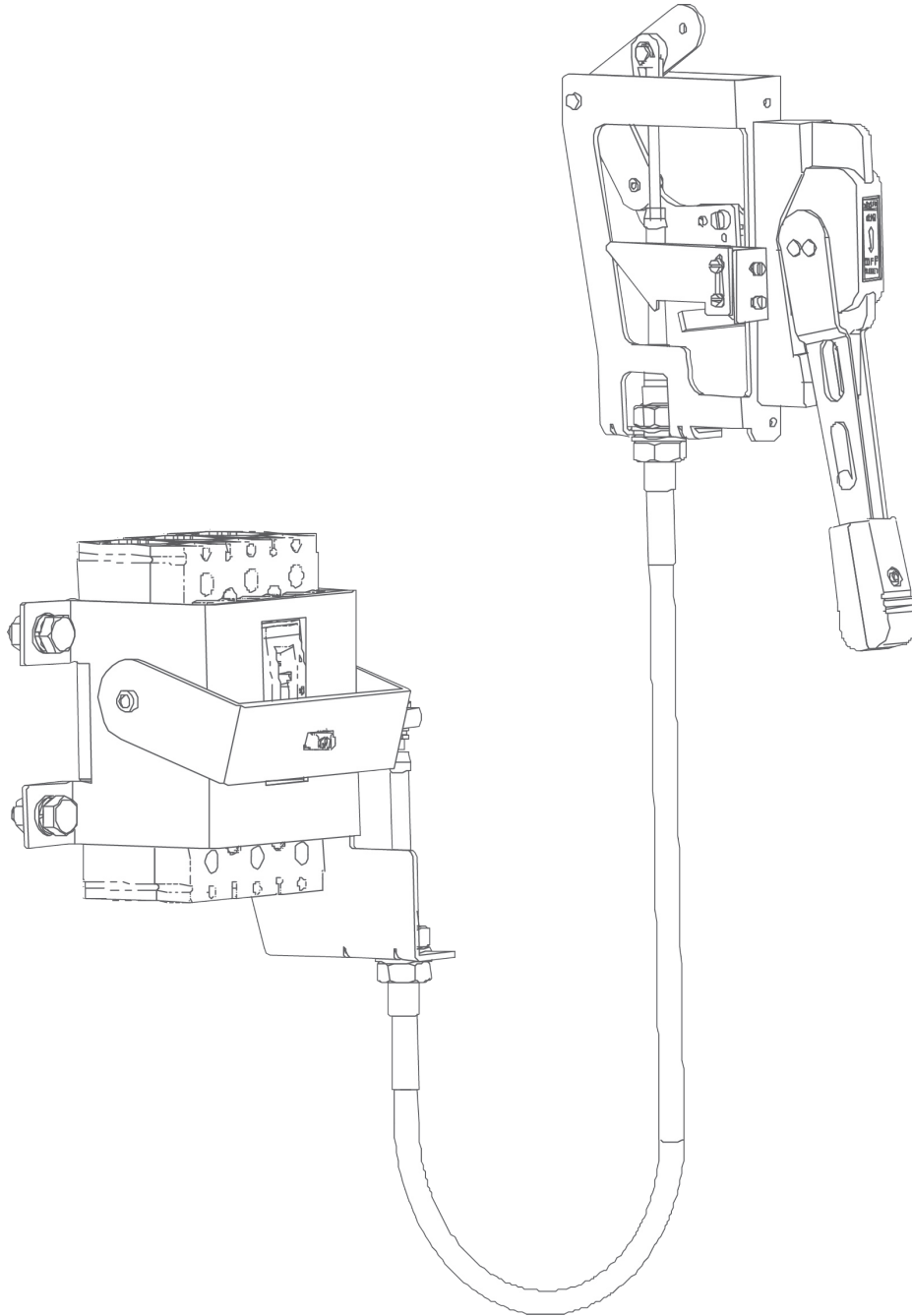
- A External Operation: EH2 Type
- B External Operation: EH3 Type



# Molded Case Accessories

## External Accessory Dimensions

### Flange Handle Mechanism



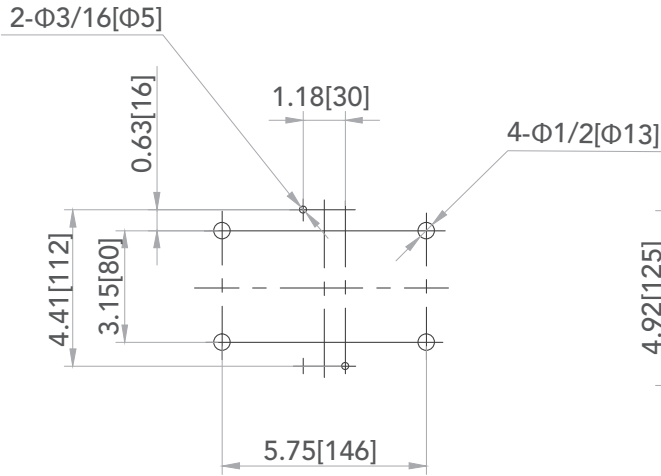
# Molded Case Accessories

## Connection Hardware Dimensions

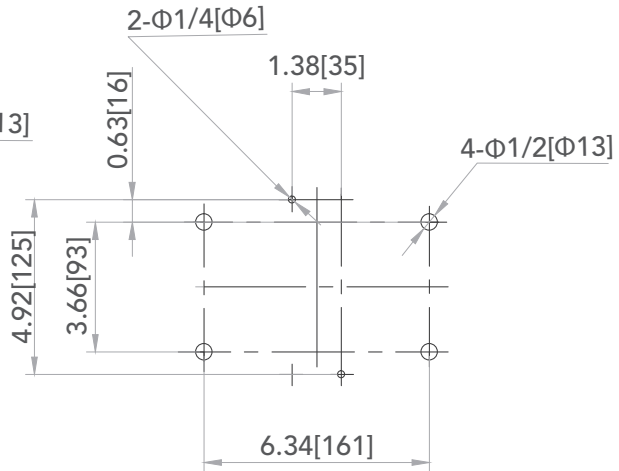
### Flange Handle Mechanism

#### Drilling Plate for Operating Mechanism

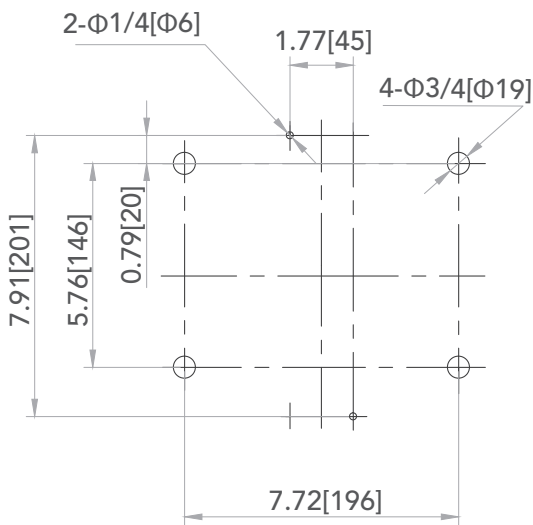
C



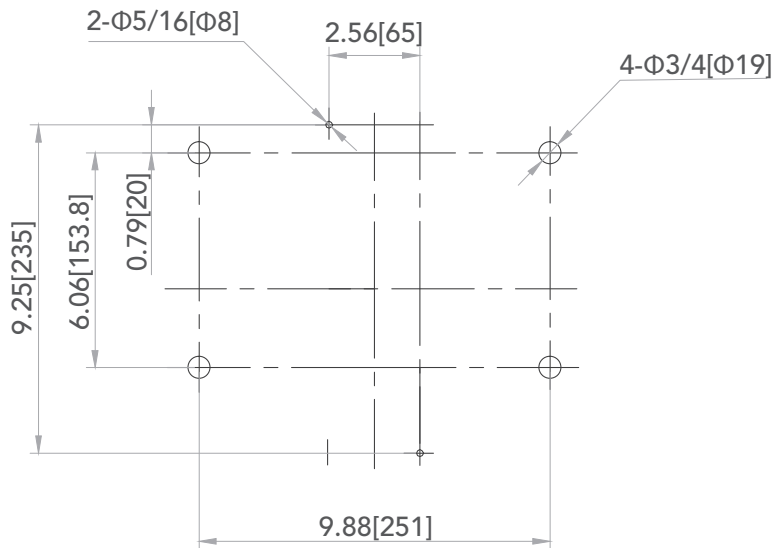
**Drilling Plate for OM21**



**Drilling Plate for OM22**



**Drilling Plate for OM23**



**Drilling Plate for OM24**

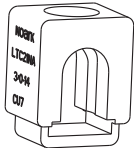
# Molded Case Accessories

## Connection Hardware Dimensions

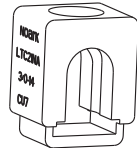
### LTC21-24N

#### Terminal Lug Connection

Unit: in [mm]



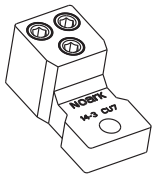
**M2** 1-Hole  
167 °F (75 °C)  
Cu wire only  
14-3/0 AWG  
2.5~95 mm<sup>2</sup>  
89 in-lb (10 N.m)



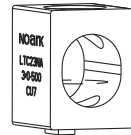
**M3** 1-Hole  
167 °F (75 °C)  
Cu wire only  
8 AWG - 350 kcmil  
10~185 mm<sup>2</sup>  
230 in-lb (23 N.m)



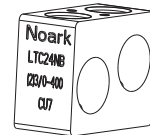
**M4** 2-Holes  
167 °F (75 °C)  
Cu wire only  
3 AWG - 250 kcmil  
35~120 mm<sup>2</sup>  
310 in-lb (35 N.m)



**M1** 3-Holes  
167 °F (75 °C)  
Cu wire only  
14-10 AWG  
2.5~6 mm<sup>2</sup>  
44.5 in-lb (5 N.m)  
  
8-3 AWG  
10~35 mm<sup>2</sup>  
89 in-lb (10 N.m)



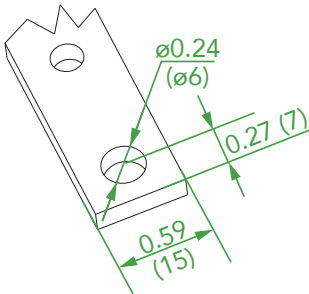
**M5** 1-Hole  
167 °F (75 °C)  
Cu wire only  
3/0 AWG - 500 kcmil  
95~240 mm<sup>2</sup>  
310 in-lb (35 N.m)



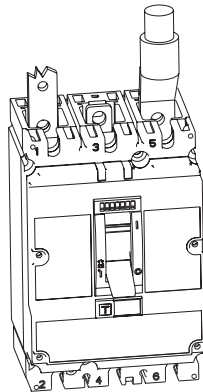
**M6** 2-Holes  
167 °F (75 °C)  
Cu wire only  
(2) 3/0 AWG - 400 kcmil  
(2) 95~185 mm<sup>2</sup>  
310 in-lb (35 N.m)

### Bus Bar Connection

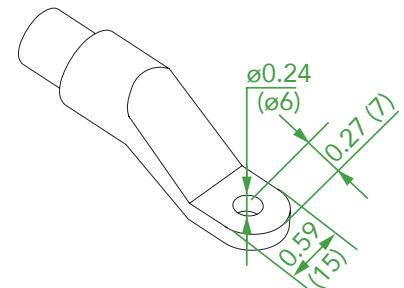
Unit: in [mm]



Bus Bar Connection  
Copper Plate



Distance Between Poles  
1.18 (30)



Bus Bar Connection  
Copper Cable

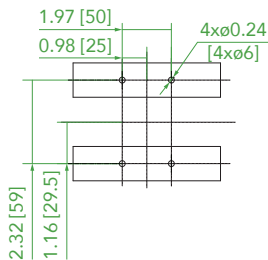
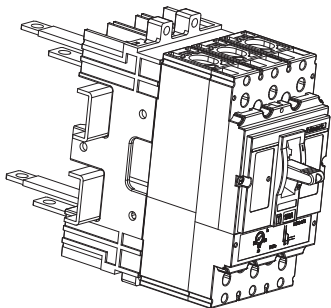
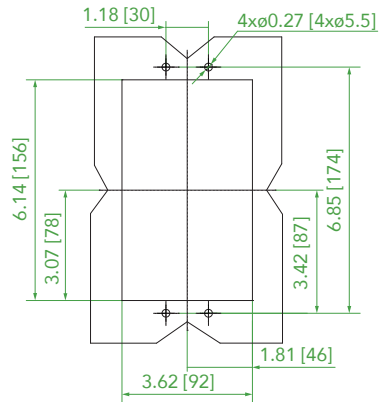
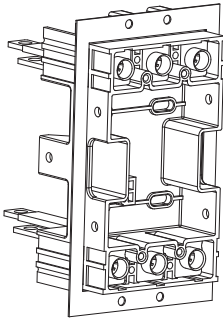
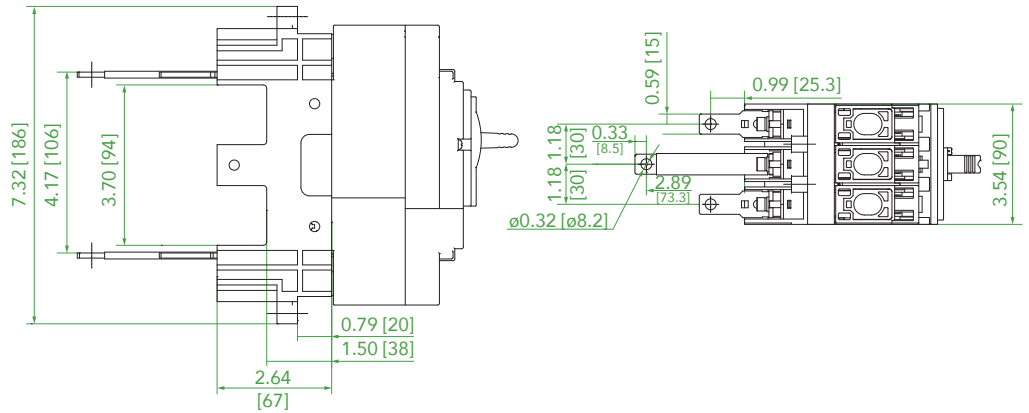
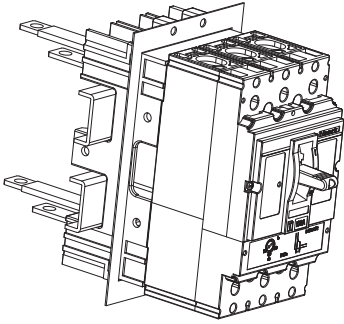
# Molded Case Accessories

## Connection Hardware Dimensions

### PIA21N

Plug-In Base for M1

Unit: in [mm]



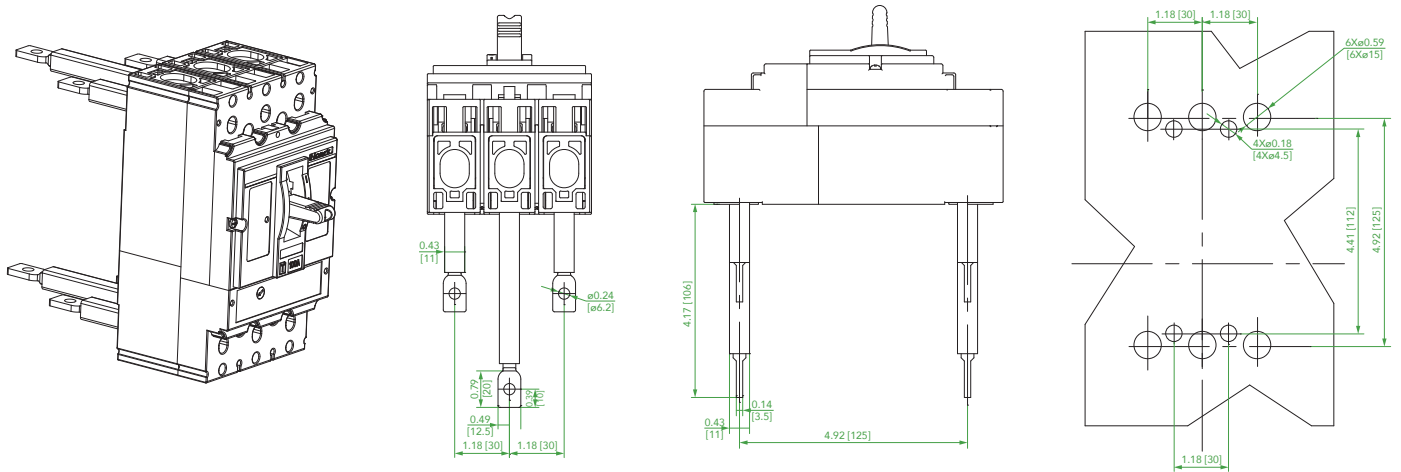
# Molded Case Accessories

## Connection Hardware Dimensions

### RCP21N

Rear Connection Kit for M1

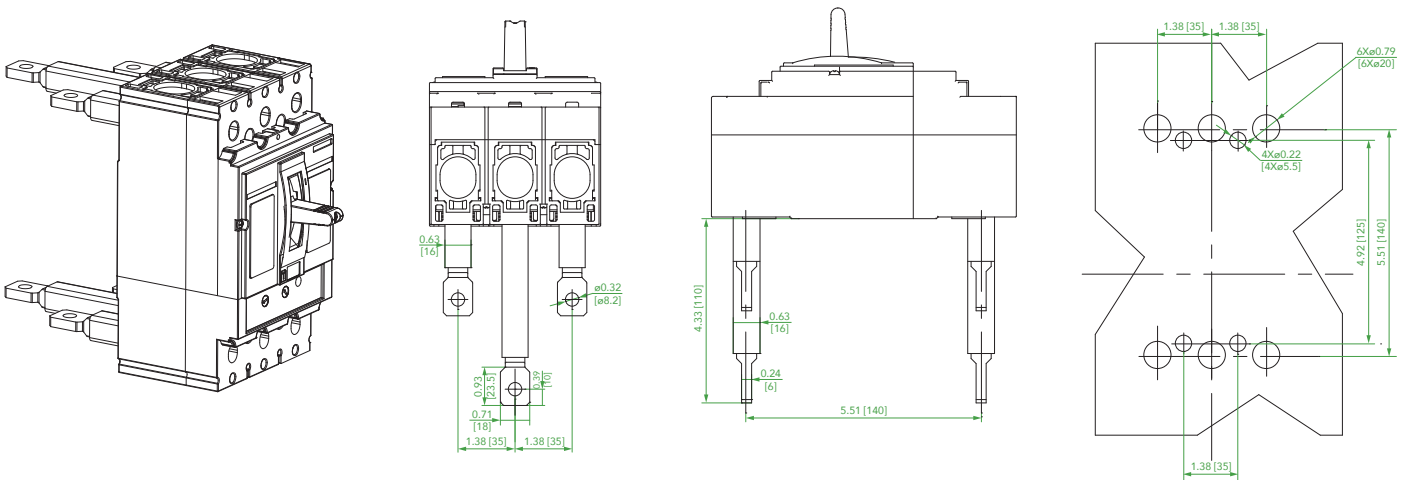
Unit: in [mm]



### RCP22N

Rear Connection Kit for M2

Unit: in [mm]



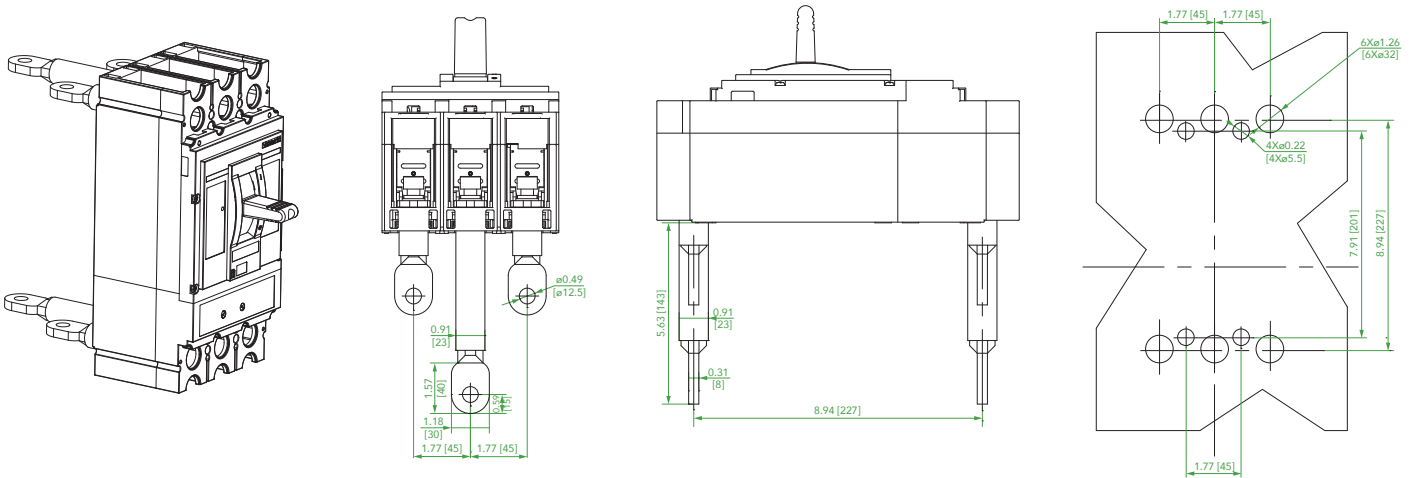
# Molded Case Accessories

## Connection Hardware Dimensions

### RCP23N

Rear Connection Kit for M3

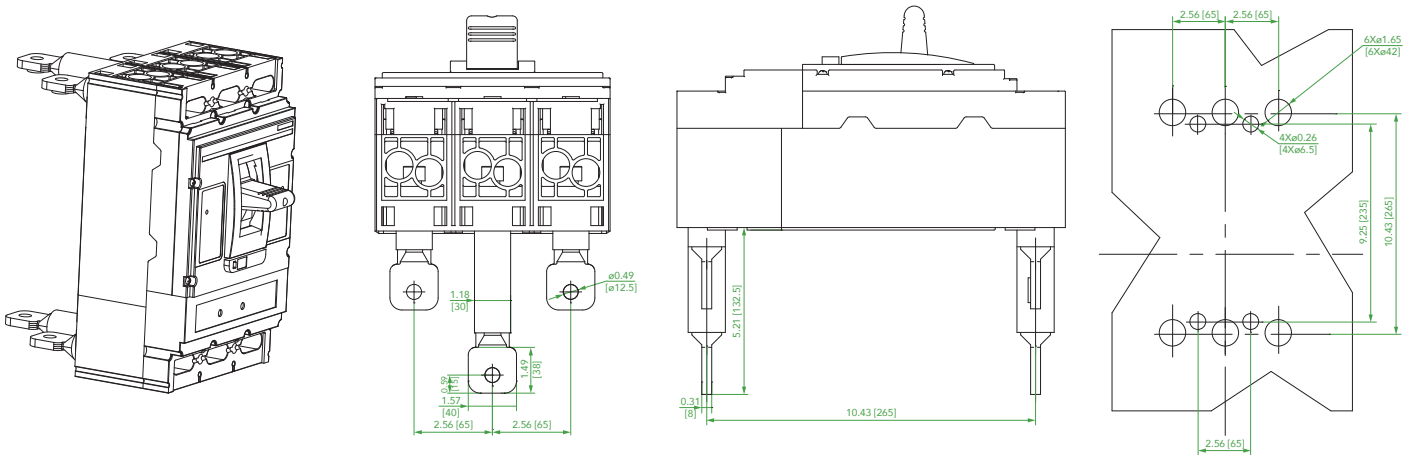
Unit: in [mm]



### RCP24N

Rear Connection Kit for M4

Unit: in [mm]





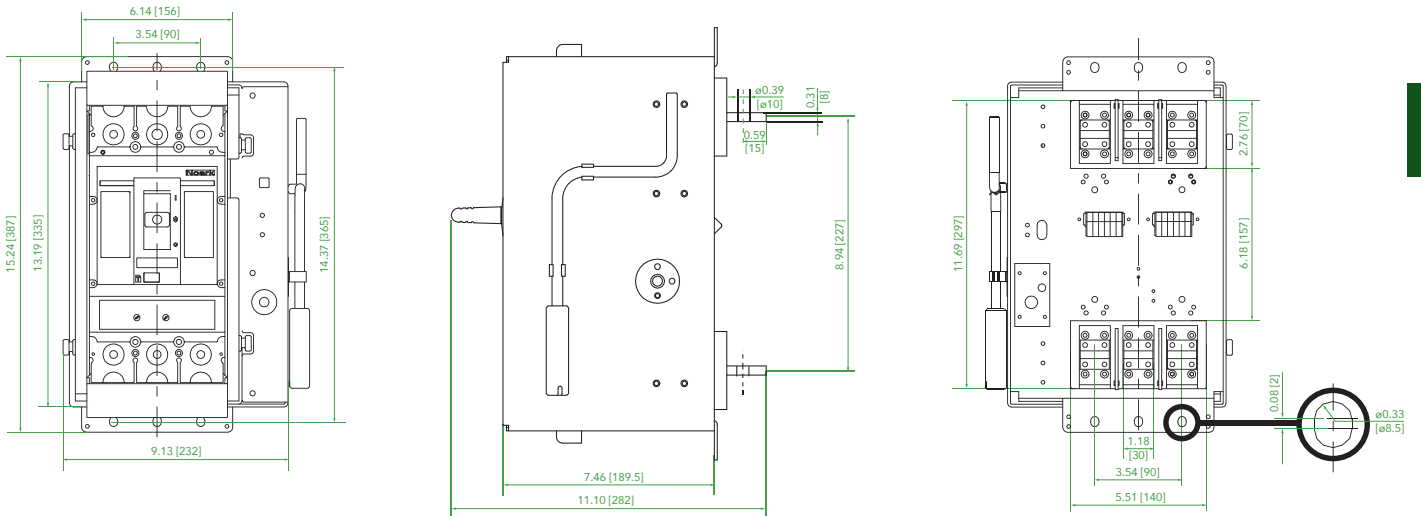
# Molded Case Accessories

## Connection Hardware Dimensions

### DOB23N

Draw-Out Base for M3

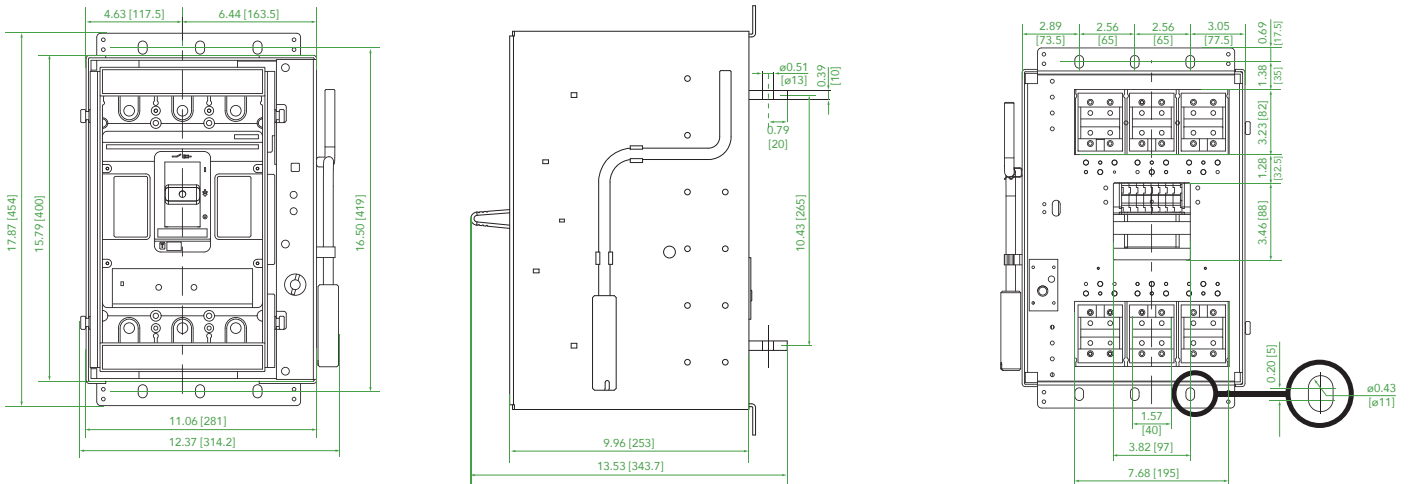
Unit: in [mm]



### DOB24N

Draw-Out Base for M4

Unit: in [mm]




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