

IEC Starter Approximate Dimensions

Bulletin Numbers 103H/107H/140M, 103-C/107/C, 105, 109, 106, 112, 113, 190E/191E, 190S/191S, 103S/107S, 103T/107T

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Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, http://www.ab.com	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.



Notes:

Enclosed Starters and Motor Protectors

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

103H/107H/140M Enclosed Combination Starters and Motor Protectors

Figure 8 - Enclosure Style A

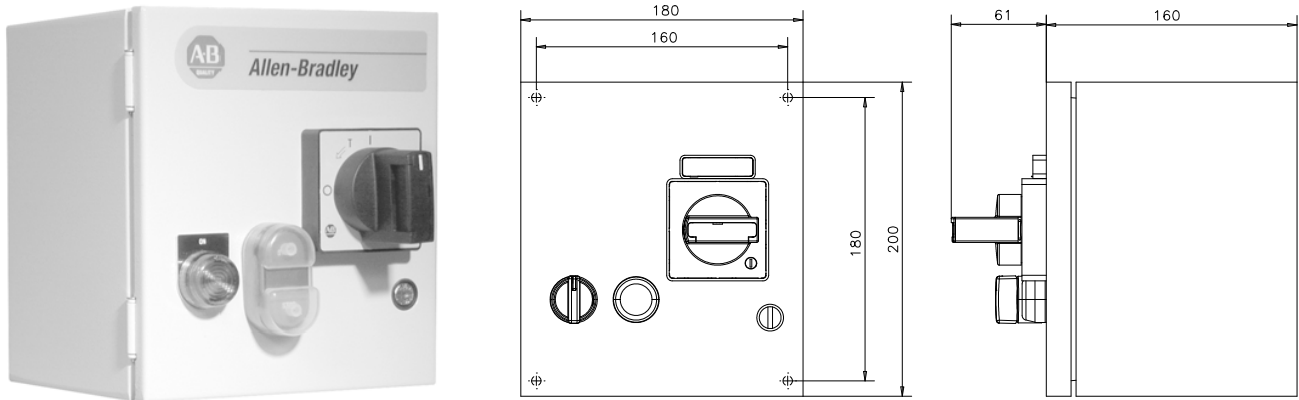


Figure 9 - Enclosure Style B

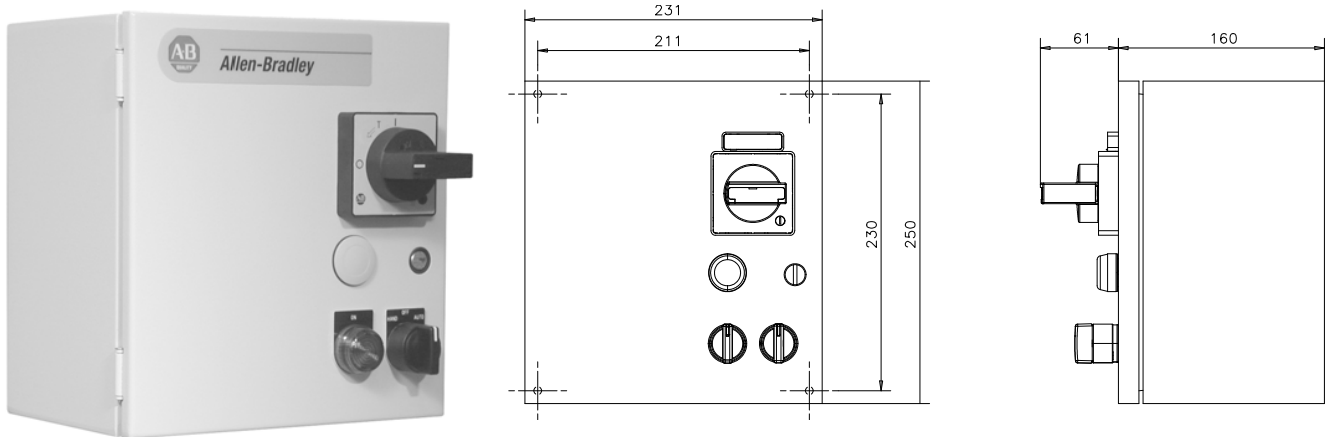
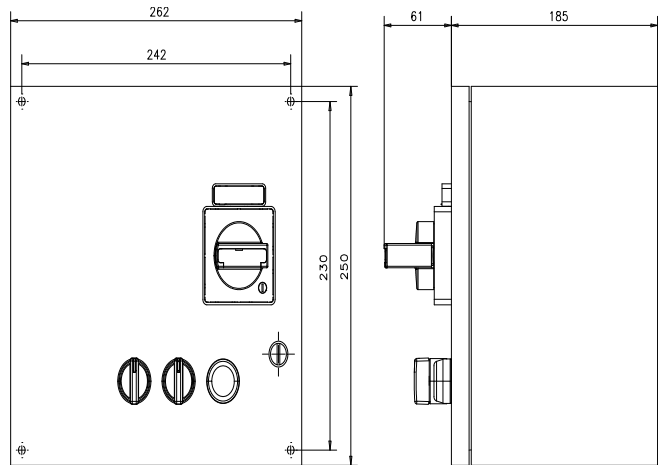


Figure 10 - Enclosure Style C



Plastic Lift-off Enclosures

Bulletin 109 Plastic Lift-Off Enclosure

Figure 11 - Cat. Nos. 198E-A0S1, -C0S1, -C0S4

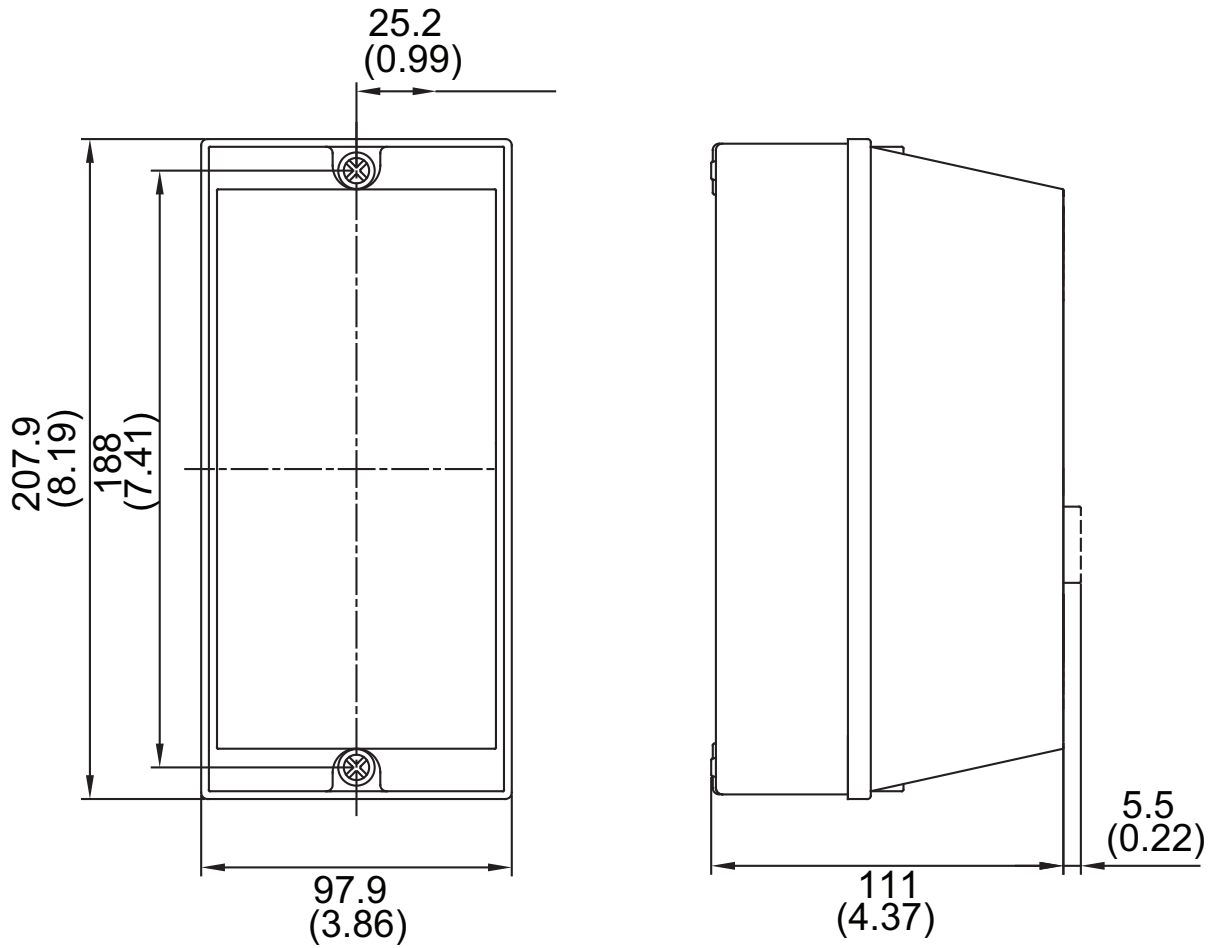


Figure 12 - Cat. No. 198E-C0S4R

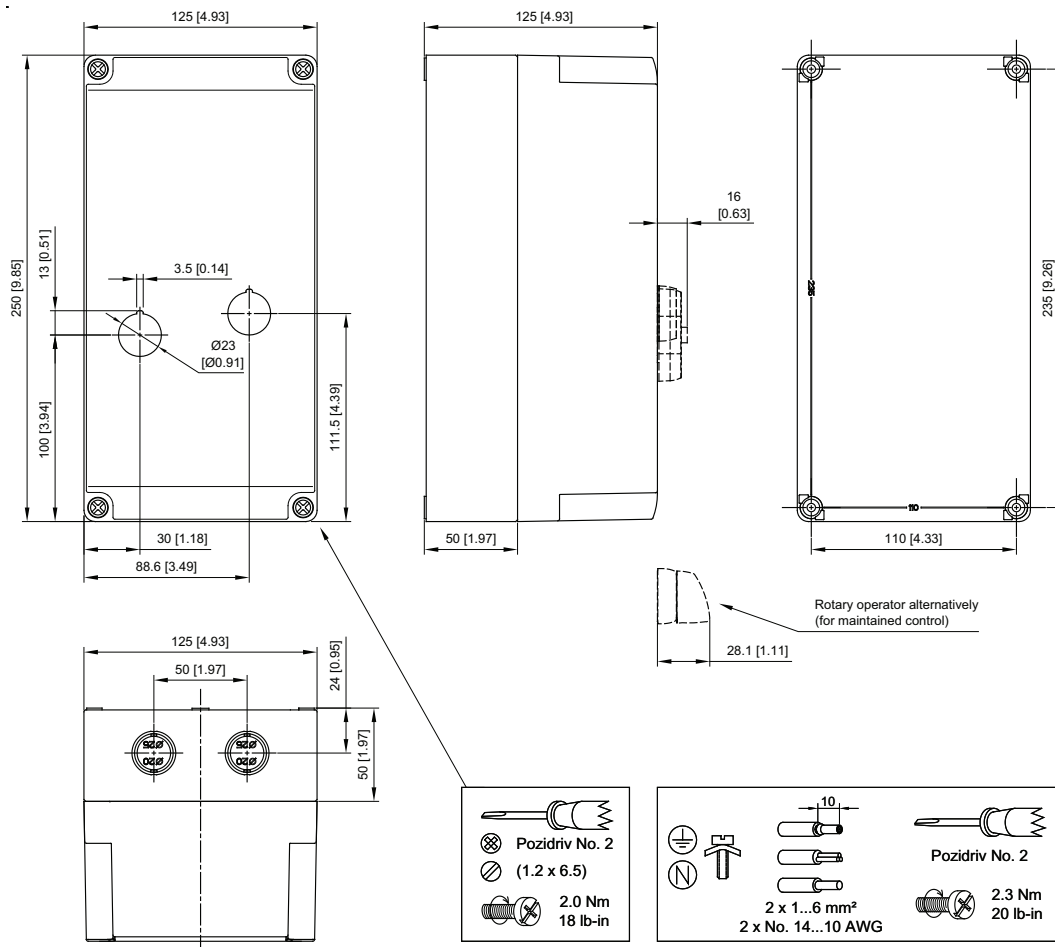
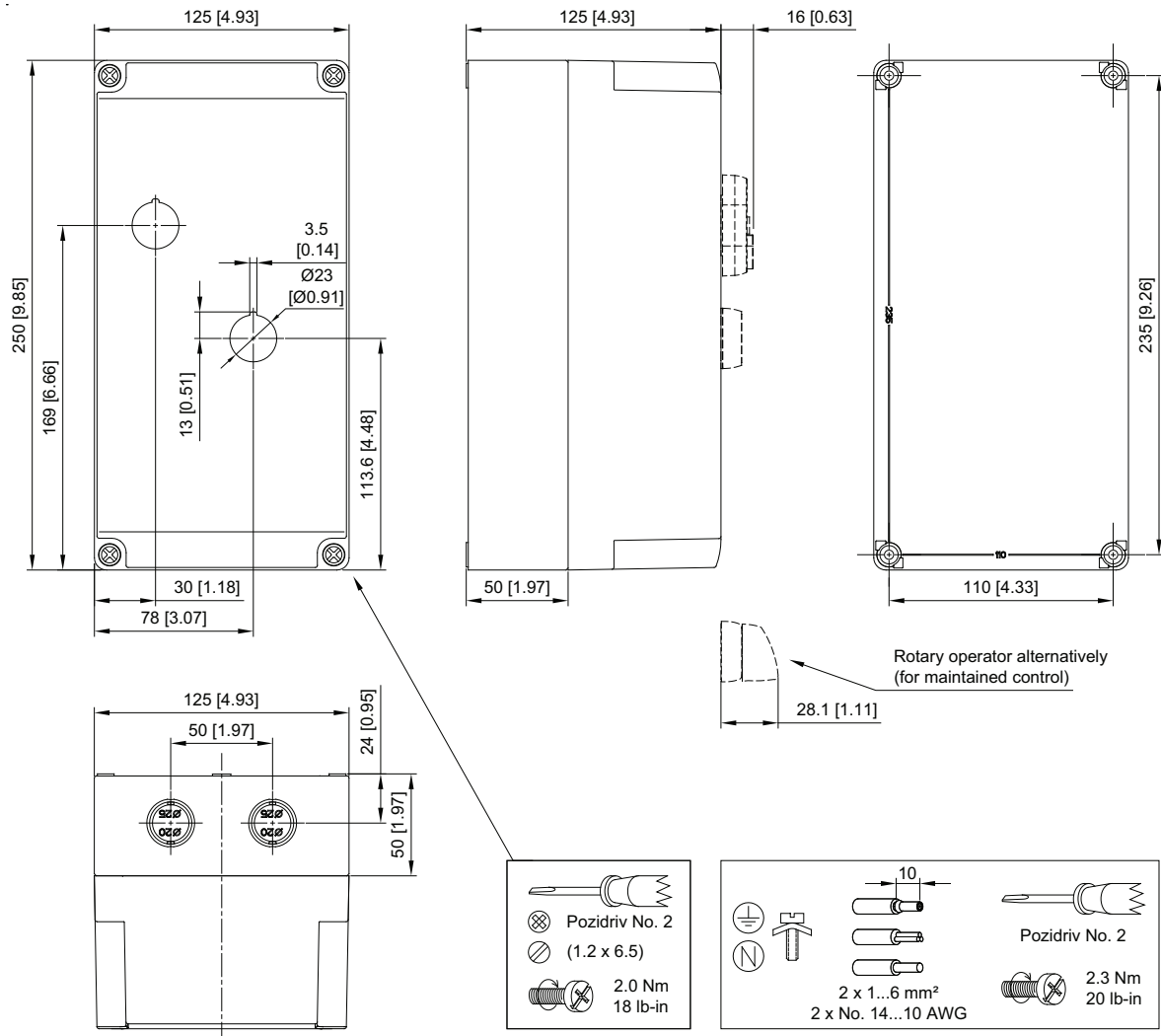
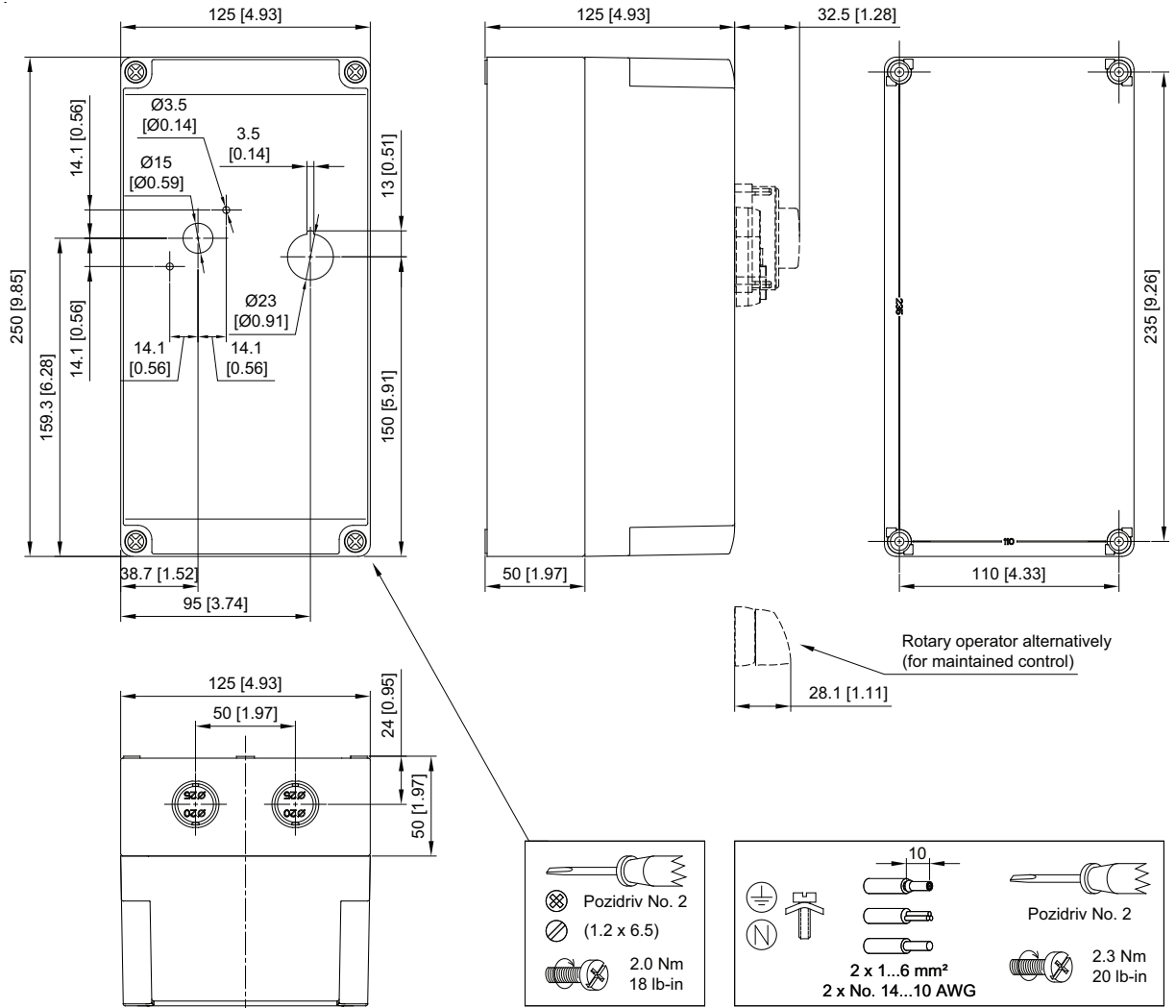


Figure 13 - Cat. No. 198E-C2S4



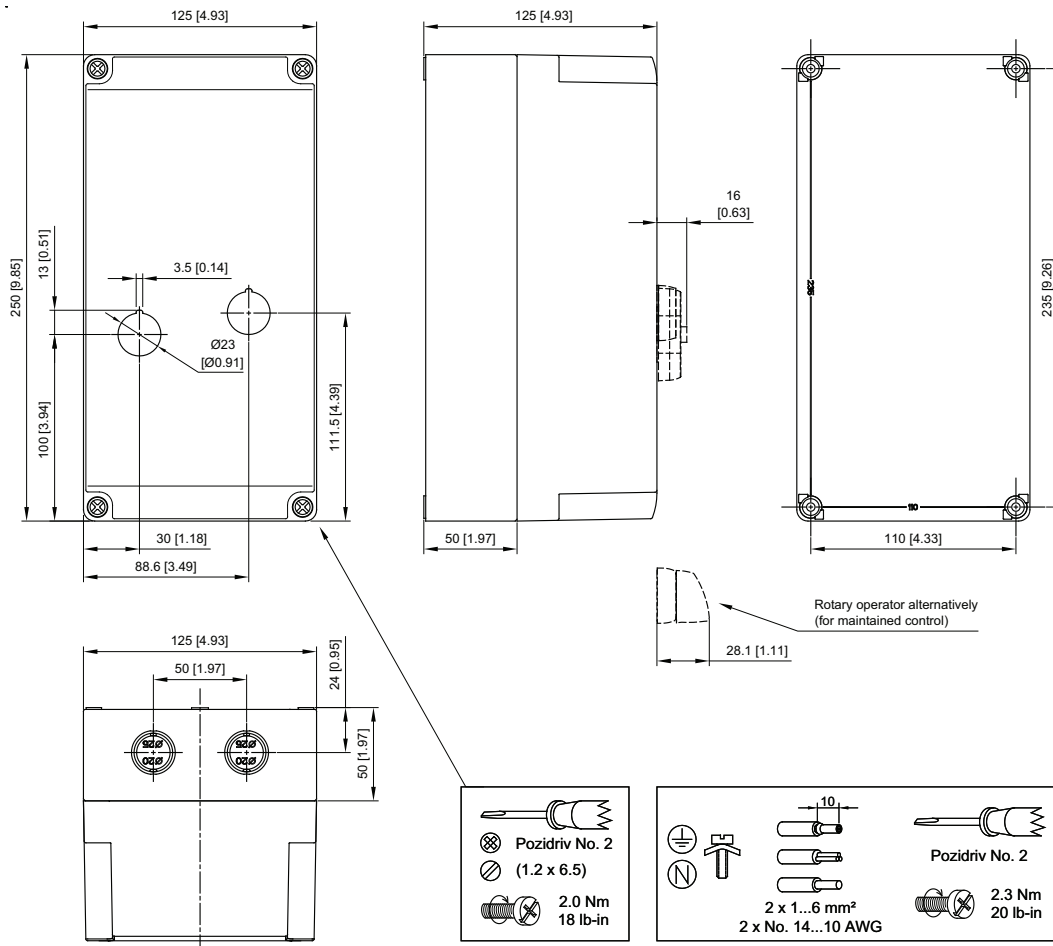
103C/107C Plastic Lift-Off Enclosure

Figure 14 - Cat. No. 198E-C0C4R



105C Plastic Lift-Off Enclosure

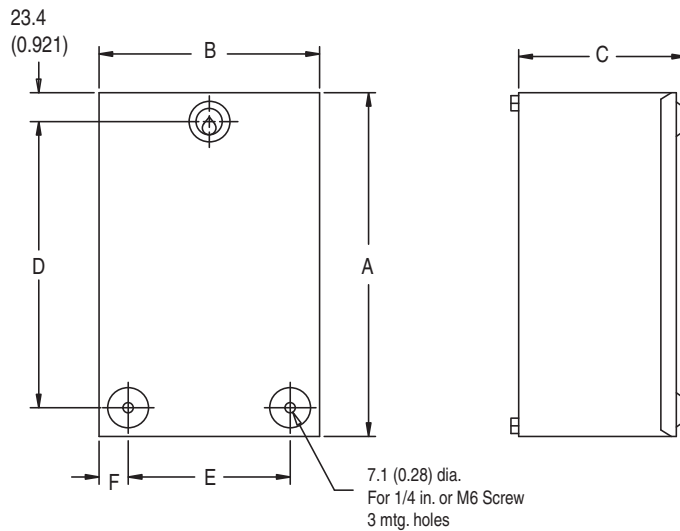
Figure 15 - Cat. No. 198E-C054R



Metal Lift-Off and Hinged Enclosures

Bulletin 109 Metal Lift-Off Enclosures, Type 1 (IP42)

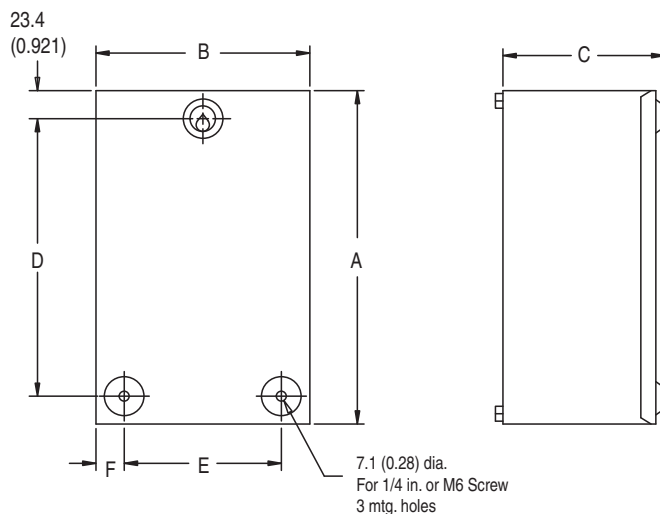
Figure 16 - 109 Metal Lift-off Enclosures



Contactor Size	A Height	B Width	C Depth	D	E	F
IP42 (Type 1) General Purpose Metal Lift-Off Enclosure for Bulletin 109 (Without Transformer)						
C09...C23	328 (12.91)	187 (7.35)	140 (5.52)	277 (10.75)	133 (5.24)	27(1.06)
C30...C55						
C60...C72	305 (12)	178 (7)	203 (8)	270 (10-5/8)	140 (5-33/64)	24 (15/16)
C85	585 (23-1/32)	257 (10-7/64)	203 (8)	540 (21-17/64)	210 (8-17/64)	23.5 (59/64)
IP42 (Type 1) General Purpose Metal Lift-Off Enclosure for Bulletin 109 (With Transformer)						
C09...C23	328 (12.91)	187 (7.35)	140 (5.52)	277 (10.75)	133 (5.24)	27(1.06)
C30...C55						
C60...C72	315 (12-27/64)	325 (12-51/64)	203 (8)	270 (10-5/8)	280 (11-1/64)	22.5 (57/64)
C85	585 (23-1/32)	257 (10-7/64)	203 (8)	540 (21-17/64)	210 (8-17/64)	23.5 (59/64)

105 Metal Lift-Off Enclosures Type 1 (IP42)

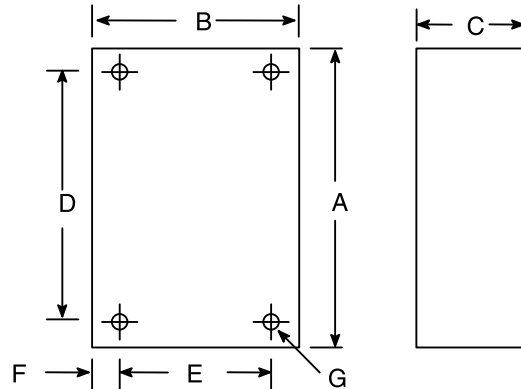
Figure 17 - 105 Metal Lift-Off Enclosure



Contactor Size	A Height	B Width	C Depth	D	E	F	G (diameter)
IP42 (Type 1) General Purpose Metal Lift-off Enclosure for Bulletin 105 (Without Transformer)							
C09...C37	328 (12.91)	187 (7.36)	140 (5.52)	273 (10.75)	133 (5.24)	27 (1.06)	—
C43	290 (11-27/64)	270 (10-5/8)	152 (5-31/32)	245 (9-41/32)	225 (8-55/64)	22.5 (57/64)	—
C60...C72	315 (12-27/64)	325 (12-51/64)	203 (8)	270 (10-5/8)	280 (11-1/64)	22.5 (57/64)	—
C85	610 (24)	406 (16)	230 (9-1/16)	572 (22-1/2)	368 (14-1/2)	19 (3/4)	11 (7-16)
IP42 (Type 1) General Purpose Metal Lift-Off Enclosure for Bulletin 105 (With Transformer)							
C09...C23	290 (11-27/64)	270 (10-5/8)	152 (5-31/32)	245 (9-41/64)	225 (8-55/64)	22.5 (57/64)	—
C30...C43	315 (12-27/64)	325 (12-51/64)	203 (8)	270 (10-5/8)	280 (11-1/64)	22.5 (57/64)	—

106, 112, and 113 Metal Hinged Enclosures Type 1 (IP42), Type 3/4/12 (IP66)

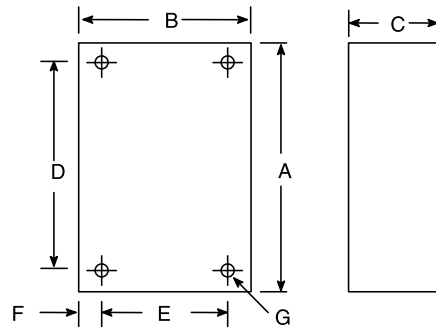
Figure 18 - 106, 112, and 113 Metal Hinged Enclosures



Contactor Size	A Height	B Width	C Depth	D	E	F	G (diameter)
IP42 (Type 1) and IP66 (Type 3/4/12) General Purpose Metal Hinged Enclosure for Bulletin 106 (With and Without Transformer)							
C09...C43	350 (13-25/32)	400 (15-3/4)	200 (7-7/8)	315 (12-13/32)	178 (7)	62 (2-7/16)	6.4 (1/4)
C60...C72	610 (24)	406 (16)	224 (8-13/16)	572 (22-1/2)	368 (14-1/2)	19 (3/4)	12.7 (1/2)
IP42 (Type 1) and IP66 (Type 3/4/12) General Purpose Metal Hinged Enclosure for Bulletin 112 (With and Without Transformer)							
C09...C23	350 (13-25/32)	200 (7-7/8)	200 (7-7/8)	315 (12-13/32)	76 (3)	62 (2-7/16)	6.4 (1/4)
C30...C43	350 (13-25/32)	400 (15-3/4)	200 (7-7/8)	315 (12-13/32)	178 (7)	111 (4-3/8)	6.4 (1/4)
C60...C72	610 (24)	406 (16)	224 (8-13/16)	572 (22-1/2)	368 (14-1/2)	19 (3/4)	12.7 (1/2)
IP42 (Type 1) and IP66 (Type 3/4/12) General Purpose Metal Hinged Enclosure for Bulletin 113 (With and Without Transformer)							
C30...C72	610 (24)	406 (16)	224 (8-13/16)	572 (22-1/2)	368 (14-1/2)	19 (3/4)	12.7 (1/2)

109 Metal Hinged Enclosures Type 3/4/12 (IP66)

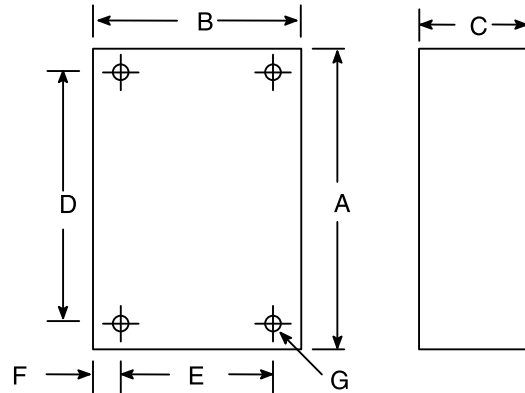
Figure 19 - 109 Metal Hinged Enclosures



Contactor Size	A Height	B Width	C Depth	D	E	F	G (diameter)
IP66 (Type 3/4/12) Metal Hinged Enclosure for Bulletin 109 (Without Transformer)							
C09...C43	300 (11-13/16)	200 (7-7/8)	160 (6-5/16)	265 (10-7/16)	76 (3)	62 (2-7/16)	5.5 (7/32)
C60...C72	350 (13/25/32)	200 (7-7/8)	210 (8-9/32)	315 (12-13/32)	76 (3)	62 (2-7/16)	5.5 (7/32)
C85	762 (30)	305 (12)	276 (10-7/8)	724 (28-1/2)	267 (10-1/2)	19 (3/4)	11 (7/16)
IP66 (Type 3/4/12) Metal Hinged Enclosure for Bulletin 109 (With Transformer)							
C09...C23	300 (11-13/16)	200 (7-7/8)	160 (6-5/16)	265 (10-7/16)	76 (3)	62 (2-7/16)	5.5 (7/32)
C30...C43	300 (11-13/16)	300 (11-13/16)	160 (6-5/16)	236 (9-5/16)	178 (7)	61 (2-13/32)	5.5 (7/32)
C60...C72	350 (13-25/32)	400 (15-3/4)	210 (8-9/32)	315 (12-13/32)	178 (7)	111 (4-3/8)	5.5 (7/32)
C85	610 (24)	406 (16)	230 (9-1/16)	572 (22-1/2)	368 (14-1/2)	19 (3/4)	11 (7/16)

105 Metal Hinged Enclosures Type 3/4/12 (IP66)

Figure 20 - 105 Metal Hinged Enclosures

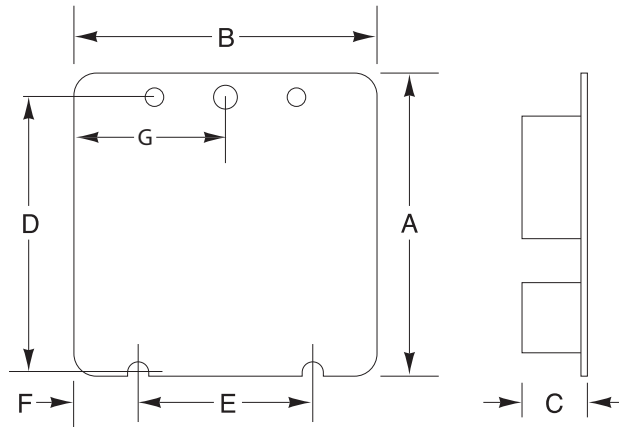


Contactor Size	A Height	B Width	C Depth	D	E	F	G (diameter)
IP66 (Type 3/4/12) Metal Hinged Enclosure for Bulletin 105 (Without Transformer)							
C09...C23	250 (9-13/16)	250 (9-13/16)	160 (6-5/16)	186 (7-5/16)	76 (3)	87 (3-13/32)	5.5 (7/32)
C30...C43	300 (11-13/16)	300 (11-13/16)	160 (6-5/16)		178 (7)	61 (2-13/32)	5.5 (7/32)
C60...C72	350 (13/25/32)	400 (15-3/4)	210 (8-9/32)	315 (12-13/32)	178 (7)	111 (4-3/8)	5.5 (7/32)
C85	610 (24)	406 (16)	230 (9-1/16)	572 (22-1/2)	368 (14-1/2)	19 (3/4)	11 (7/16)
IP66 (Type 3/4/12) Metal Hinged Enclosure for Bulletin 105 (With Transformer)							
C09...C23	300 (11-13/16)	200 (7-7/8)	160 (6-5/16)	236 (9-5/16)	178 (7)	61 (2-13/32)	5.5 (7/32)
C30...C43	350 (13-25/32)	400 (15-3/4)	210 (8-9/32)	315 (12-13/32)	178 (7)	111 (4-3/8)	5.5 (7/32)
C60...C72	610 (24)	406 (16)	230 (9-1/16)	572 (22-1/2)	368 (14-1/2)	19 (3/4)	11 (7/16)
C85	762 (30)	610 (24)	281 (11-1/16)	724 (28-1/2)	572 (22-1/2)	19 (3/4)	11 (7/16)

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

Starters with Eutectic Alloy Overload Relay

Figure 8 - 105 and 109 Open Style Starters

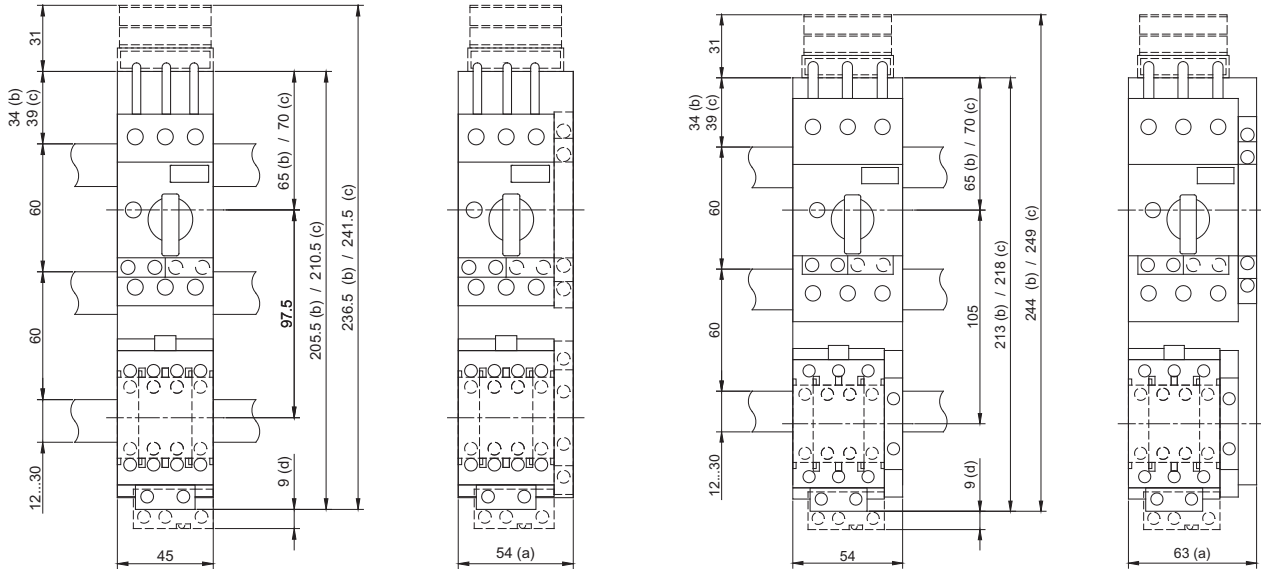


Starter Type	Starter Current Rating [A]	A Height	B Width	C Depth	D	E	F	G (diameter)	H
109, AC or DC voltage	9...23	202.4 (7-63/64)	69.8 (2-3/4)	98.4 (3-57/64)	190.5 (7-1/2)	5.08 (2)	9.5 (25/64)	34.9 (1-25/64)	—
	30	247.6 (9-3/4)	88.9 (3-1/2)	110.8 (4-23/64)	235.7 (9-9/32)	69.8 (2-3/4)	9.5 (25/64)	44.4 (1-3/4)	—
	37...43	247.6 (9-3/4)	88.9 (3-1/2)	120.8 (4-3/4)	235.7 (9-9/32)	69.8 (2-3/4)	9.5 (25/64)	—	76.2 (3)
	60	323.9 (12-3/4)	127 (5)	133.1 (5-15/16)	308.1 (12-9/64)	101.6 (4)	12.7 (1-1/2)	—	101.6 (4)
	72	323.9 (12-3/4)	137.6 (5-27/64)	133.1 (5-15/16)	308.1 (12-9/64)	101.6 (4)	12.7 (1-1/2)	—	101.6 (4)
105, AC or DC voltage	9...23	202.4 (7-63/64)	120.6 (4-3/4)	98.4 (3-57/64)	190.5 (7-1/2)	101.6 (4)	9.5 (25/64)	60.4 (2-25/64)	—
	30	247.6 (9-3/4)	152.4 (6)	110.8 (4-23/64)	235.7 (9-9/32)	133.3 (5-1/4)	9.5 (25/64)	76.2 (3)	—
	37...43	247.6 (9-3/4)	152.4 (6)	120.8 (4-3/4)	235.7 (9-9/32)	133.3 (5-1/4)	9.5 (25/64)	76.2 (3)	—
	60	323.9 (12-3/4)	241.3 (9-1/2)	133.1 (5-15/16)	308.1 (12-9/64)	215.9 (8-1/2)	12.7 (1-1/2)	—	215.9 (8-1/2)
	72	323.9 (12-3/4)	251.9 (9-15/16)	133.1 (5-15/16)	308.1 (12-9/64)	215.9 (8-1/2)	12.7 (1-1/2)	—	215.9 (8-1/2)

Bulletin 103S/107S Combination Starters

Standard and ISO Busbar Mount — Bulletin 103S Non-Reversing and 107S Reversing Starters

Figure 9 - 103S Busbar Mount

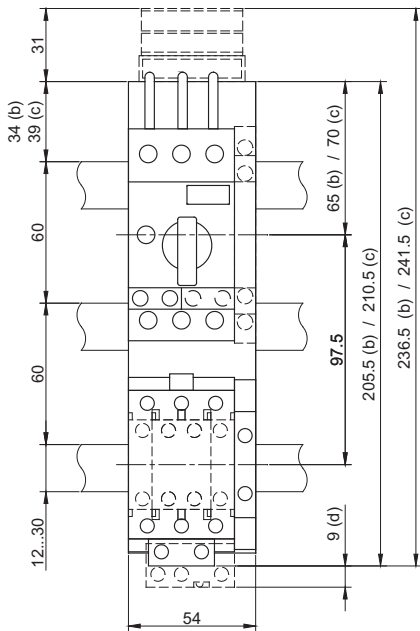


Circuit Breaker: 140M-C / -D
 Contactor: 100-C09...23
 Reference Print: D00GMD

(a) With additional side-mount aux. or trip contact(s)
 (b) Standard busbar mount with control plug
 (c) Iso busbar mount
 (d) Electronic interface

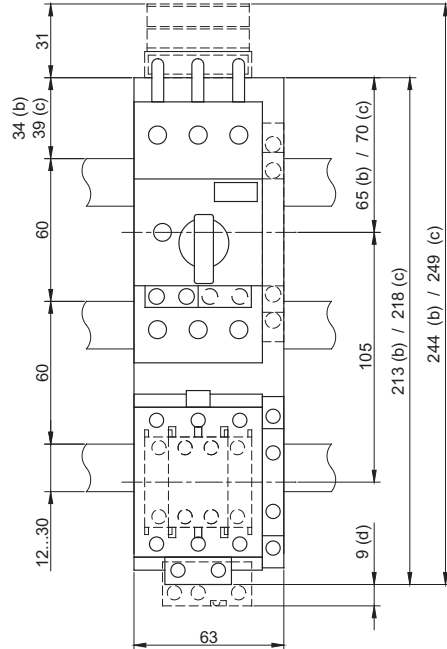
Circuit Breaker: 140M-F
 Contactor: 100-C30...37
 Reference Print: D10GMF

(a) With additional side-mount aux. or trip contact
 (b) Standard busbar mount with control plug
 (c) Iso busbar mount
 (d) Electronic interface



Circuit Breaker: 140M-D
 Contactor: 100-C30...37
 Reference Print: D10GMD

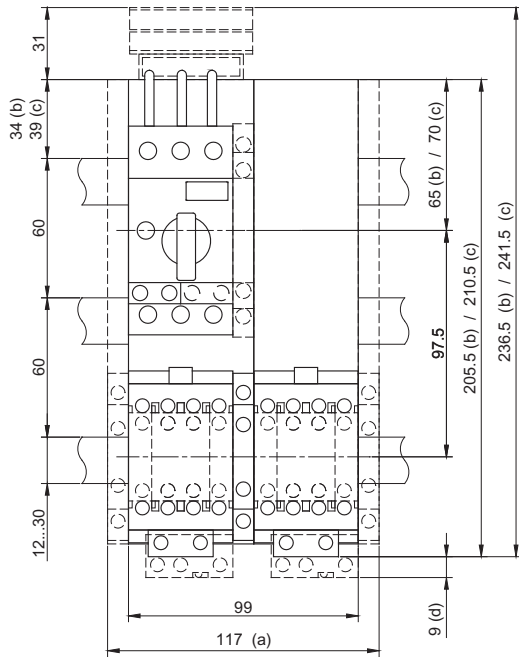
(b) Standard busbar mount with control plug
 (c) Iso busbar mount
 (d) Electronic interface



Circuit Breaker: 140M-F
 Contactor: 100-C43
 Reference Print: D20GMF

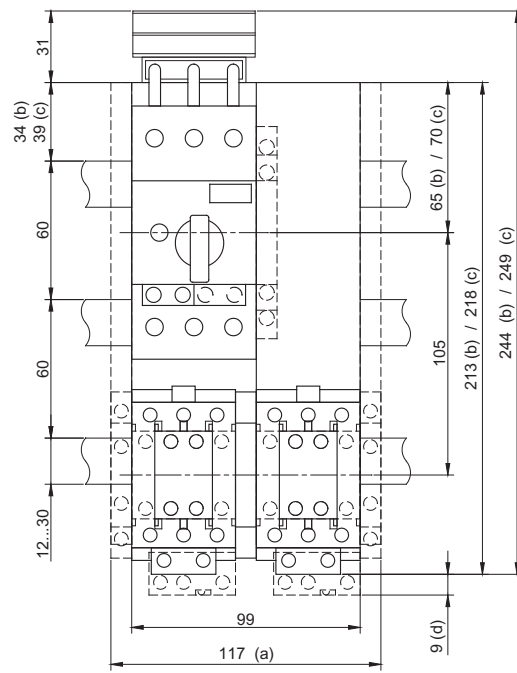
(b) Standard busbar mount with control plug
 (c) Iso busbar mount
 (d) Electronic interface

Figure 10 - 107S Busbar Mount



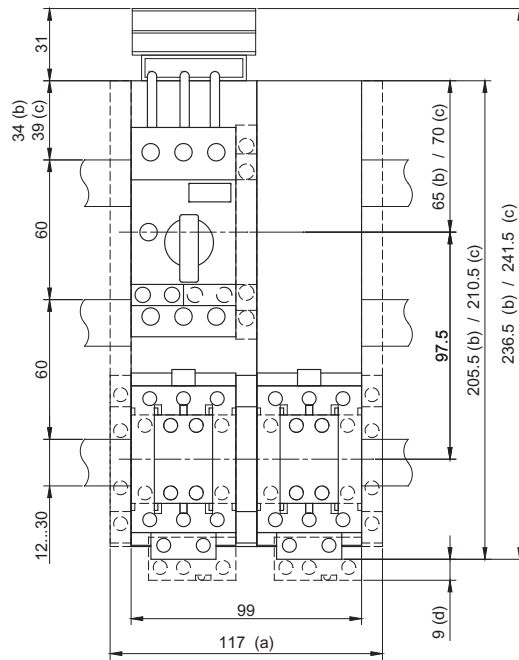
Circuit Breaker: 140M-D
 Contactors: 100-C09...23
 Reference Print: R00GMD

(a) With additional side-mount aux. contacts
 (b) Standard busbar mount with control plug
 (c) Iso busbar mount
 (d) Electronic interfaces



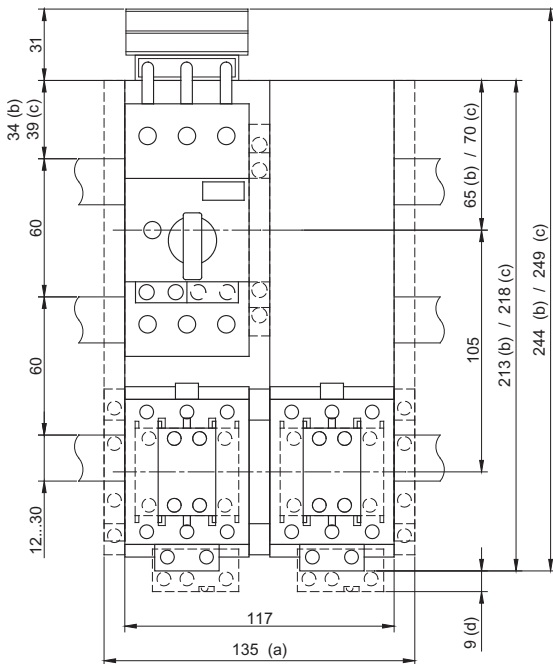
Circuit Breaker: 140M-F
 Contactors: 100-C30...37
 Reference Print: R10GMF

(a) With additional side-mount aux. contacts
 (b) Standard busbar mount with control plug
 (c) Iso busbar mount
 (d) Electronic interface



Circuit Breaker: 140M-D
 Contactors: 100-C30...37
 Reference Print: R10GMD

(a) With additional side-mount aux. contacts
 (b) Standard busbar mount with control plug
 (c) Iso busbar mount
 (d) Electronic interface

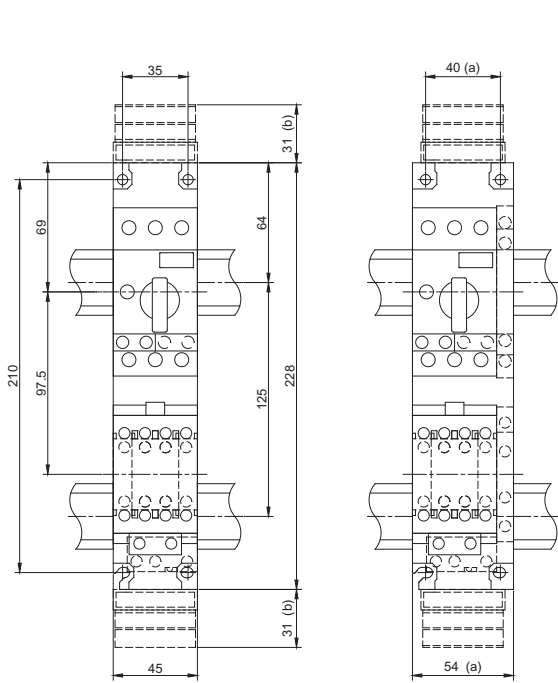


Circuit Breaker: 140M-F
 Contactors: 100-C43
 Reference Print: R20GMF

(a) With additional side-mount aux. contacts
 (b) Standard busbar mount with control plug
 (c) Iso busbar mount
 (d) Electronic interface

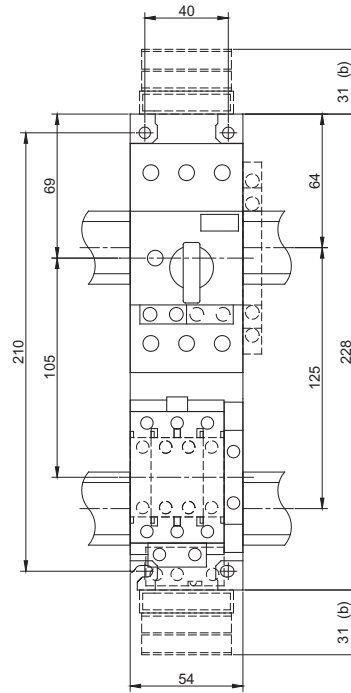
Panel Mount — 103S Non-Reversing and 107S Reversing Starters

Figure 11 - 103S Panel Mount



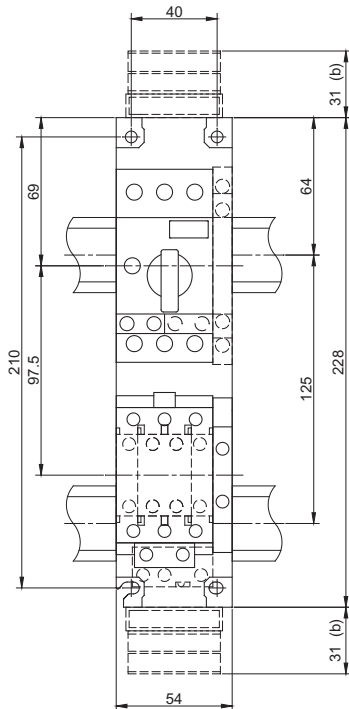
Circuit Breaker: 140M-C/D
 Contactor: 100-C09...23
 Reference Print: D00WMD

(a) With additional side-mount aux. or trip contact(s)
 (b) Control plug on top OR bottom side optional



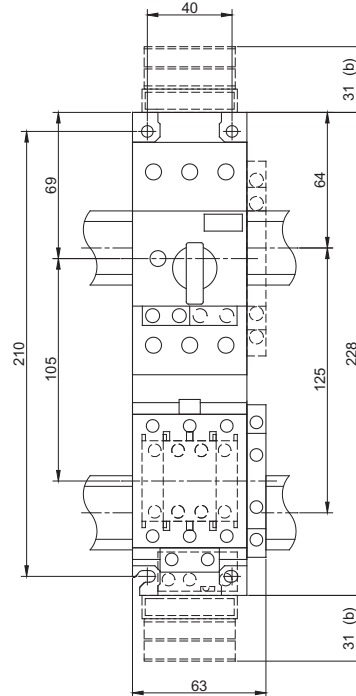
Circuit Breaker: 140M-F
 Contactor: 100-C30...37
 Reference Print: D10WMF

(a) With additional side-mount aux. or trip contact
 (b) Control plug on top OR bottom side optional



Circuit Breaker: 140M-D
 Contactor: 100-C30...37
 Reference Print: D10WMD

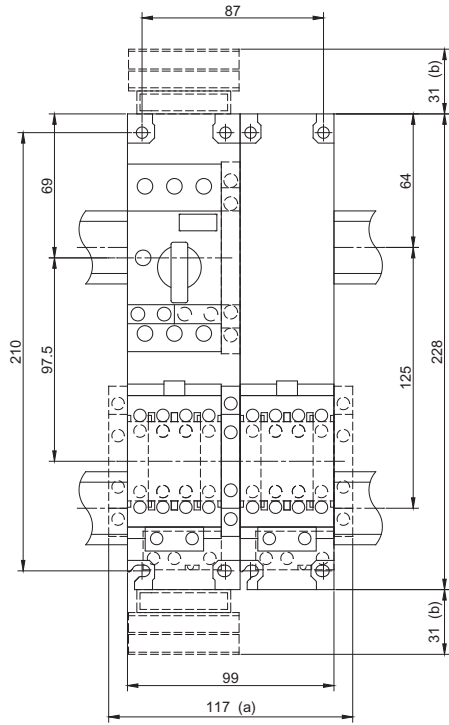
(b) Control plug on top OR bottom side optional



Circuit Breaker: 140M-F
 Contactor: 100-C43
 Reference Print: D20WMF

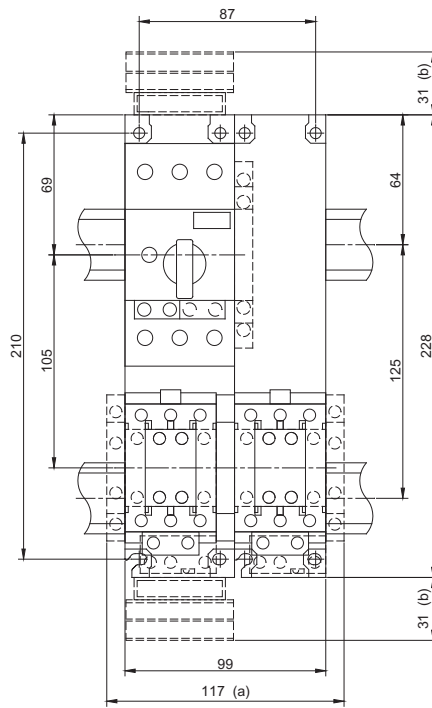
(a) With additional side-mount aux. or trip contact
 (b) Control plug on top OR bottom side optional

Figure 12 - 107S Panel Mount



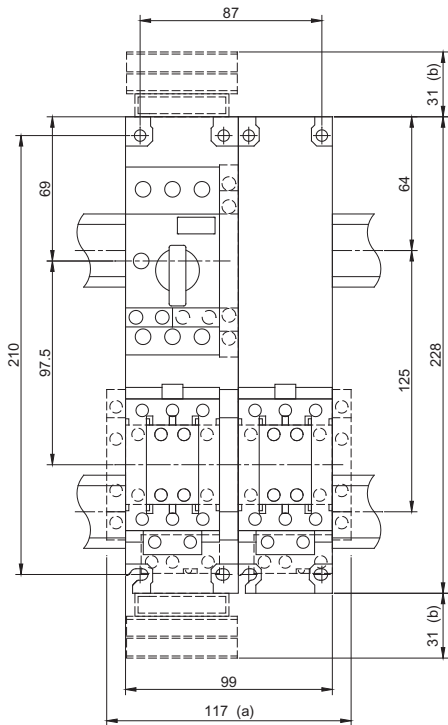
Circuit Breaker: 140M-C/D
 Contactors: 100-C09...23
 Reference Print: R00WMD

(a) With additional side-mount aux. contacts
 (b) Control plug on top OR bottom side optional



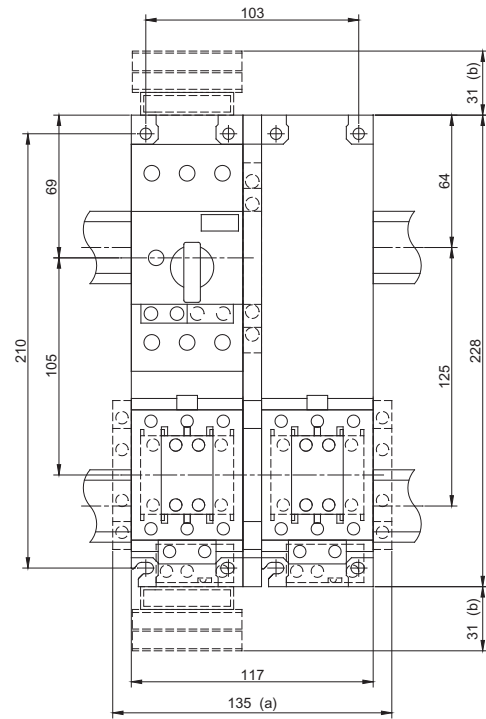
Circuit Breaker: 140M-F
 Contactors: 100-C30...37
 Reference Print: R10WMF

(a) With additional side-mount aux. contacts
 (b) Control plug on top OR bottom side optional



Circuit Breaker: 140M-D
 Contactors: 100-C30...37
 Reference Print: R10WMD

(a) With additional side-mount aux. contacts
 (b) Control plug on top OR bottom side optional



Circuit Breaker: 140M-F
 Contactors: 100-C43
 Reference Print: R20WMF

(a) With additional side-mount aux. contacts
 (b) Control plug on top OR bottom side optional

Figure 13 - Cat. No. 140M-C-TE1 Type E adapter on Cat. No. 140M-C2E...

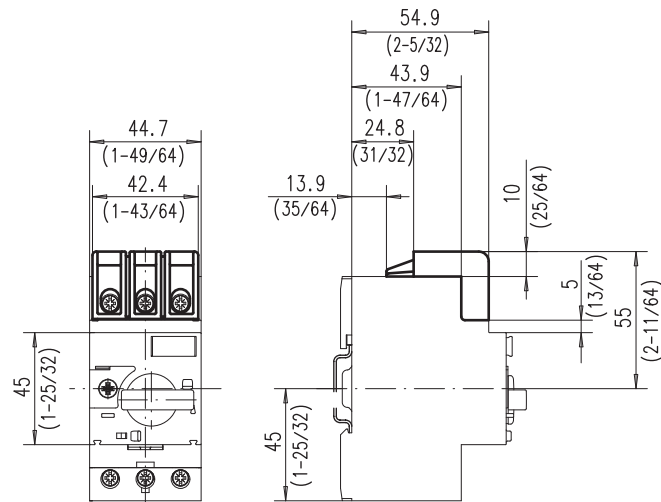


Figure 14 - Cat. No. 140M-C-TE1 Type E adapter on Cat. No. 140M-D8E...

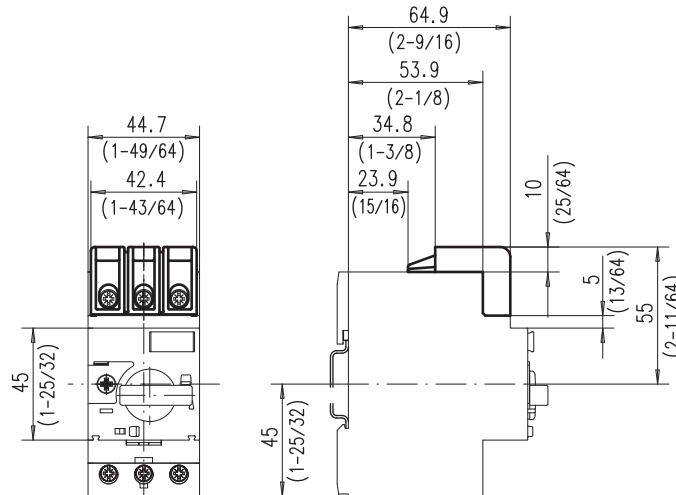


Figure 15 - Cat. No. 140M-C-TE1 Type E adapter on Cat. No. 140M-F8E...

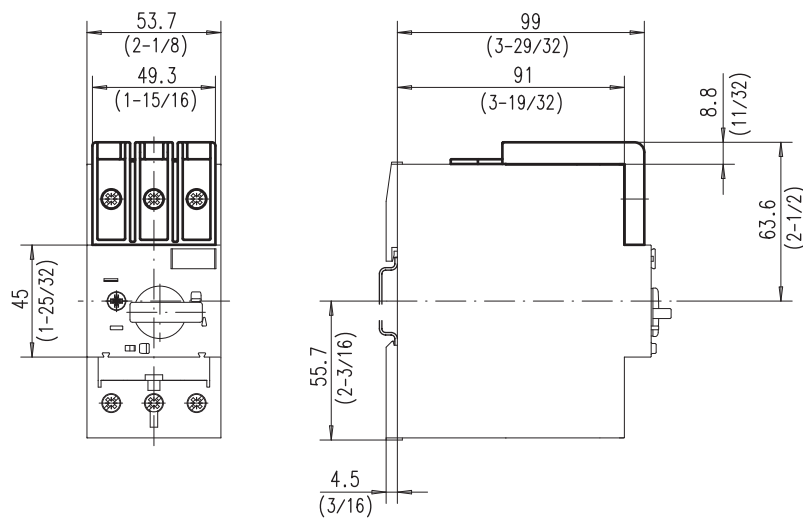


Figure 16 - Screw Adapter 140M-C-N45 for 140M-C2/D8 and 140M-F8

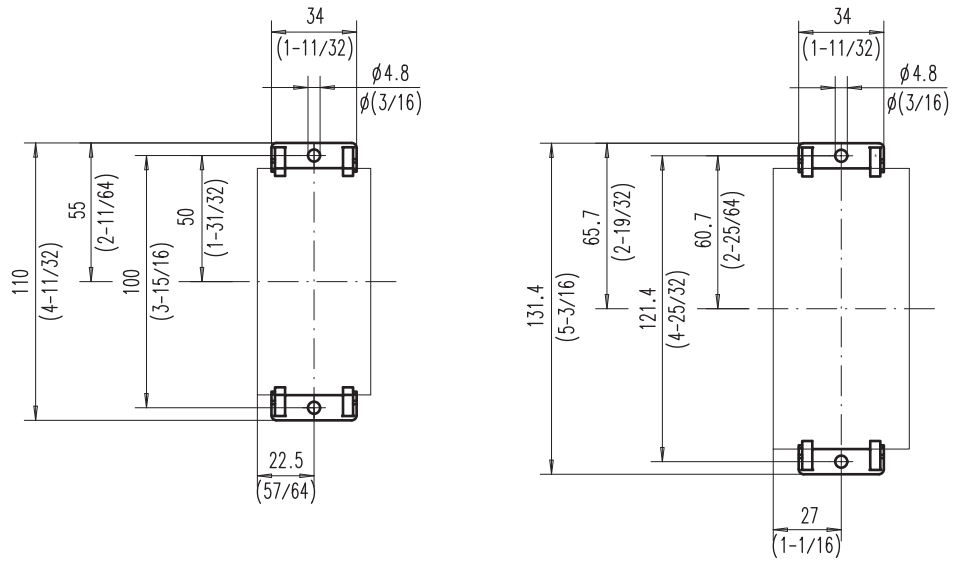


Figure 17 - Cat. No. 140M-C with Busbar

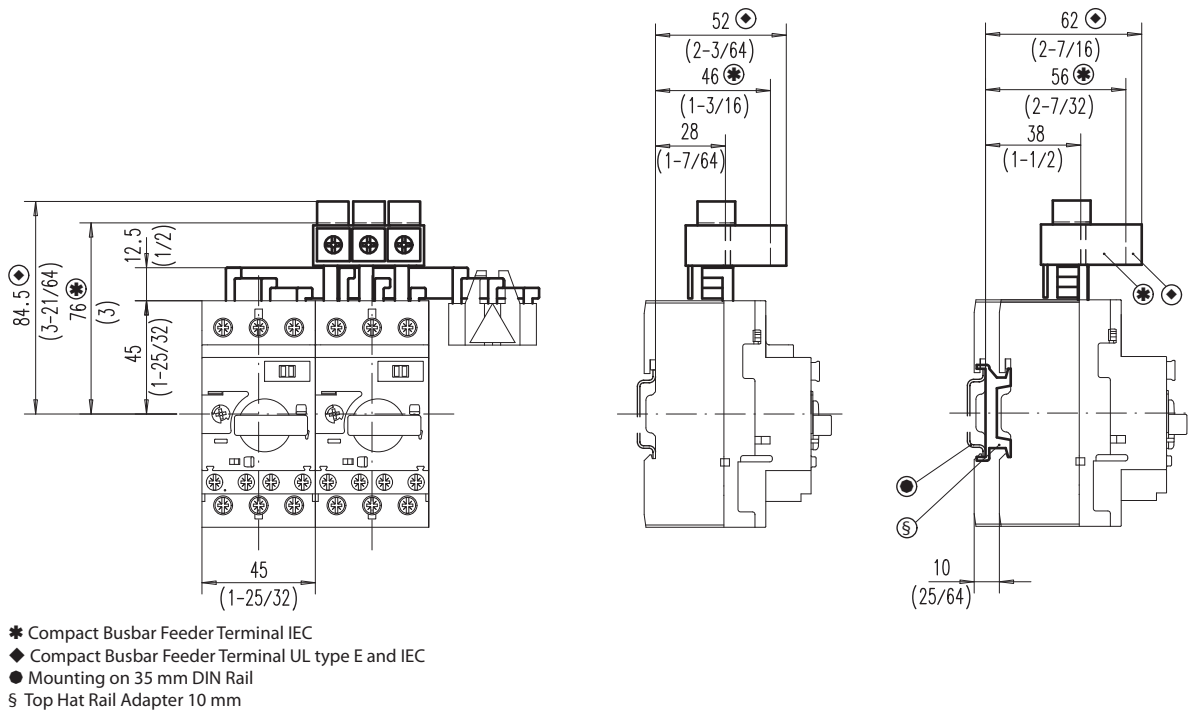


Figure 18 - 140M-C-SHS Screw Adapter

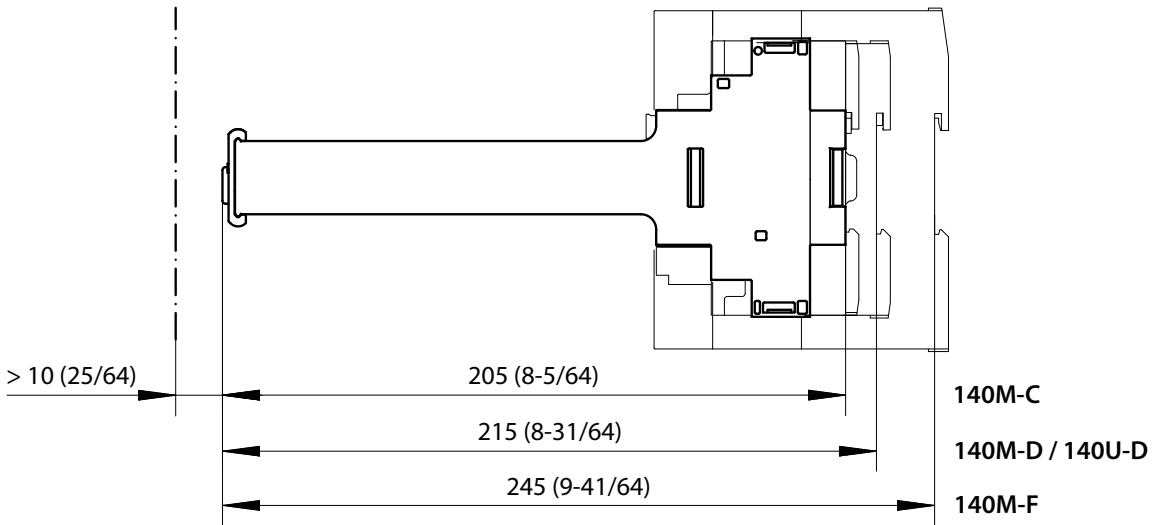
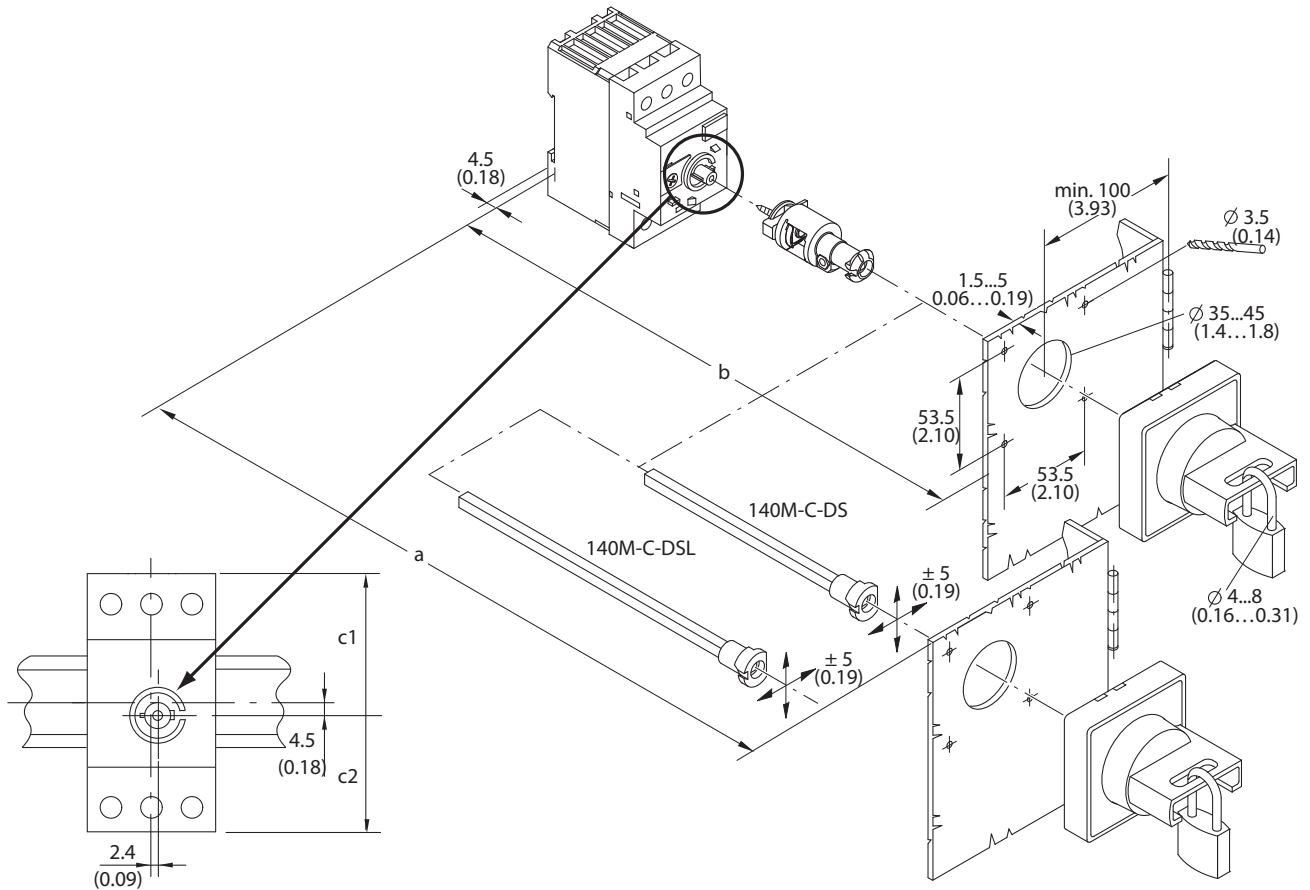


Figure 19 - 140M-C-D...66



Cat. No.	With Cat. No. 140-M-C-DS Shaft				With Cat. No. 140-M-C-DSL Shaft			
	a	b	c1	c2	a	b	c1	c2
140M-C	117...338	105.5 ±5	49.5	40.5	117...438	105.5 ±5	49.5	40.5
140M-D	126...347	114.5 ±5	49.5	40.5	126...497	114.5 ±5	49.5	40.5
140M-F	148.6...369.6	137.1 ±5	59.35	50.35	148.6...519	137.1 ±5	59.35	50.35

Figure 20 - 140M-C-WBE

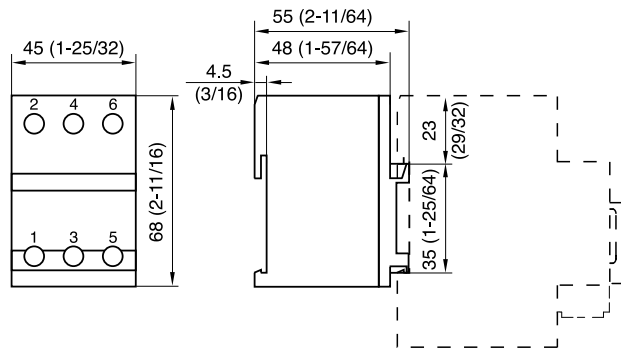


Figure 21 - Cat. No. 198E...

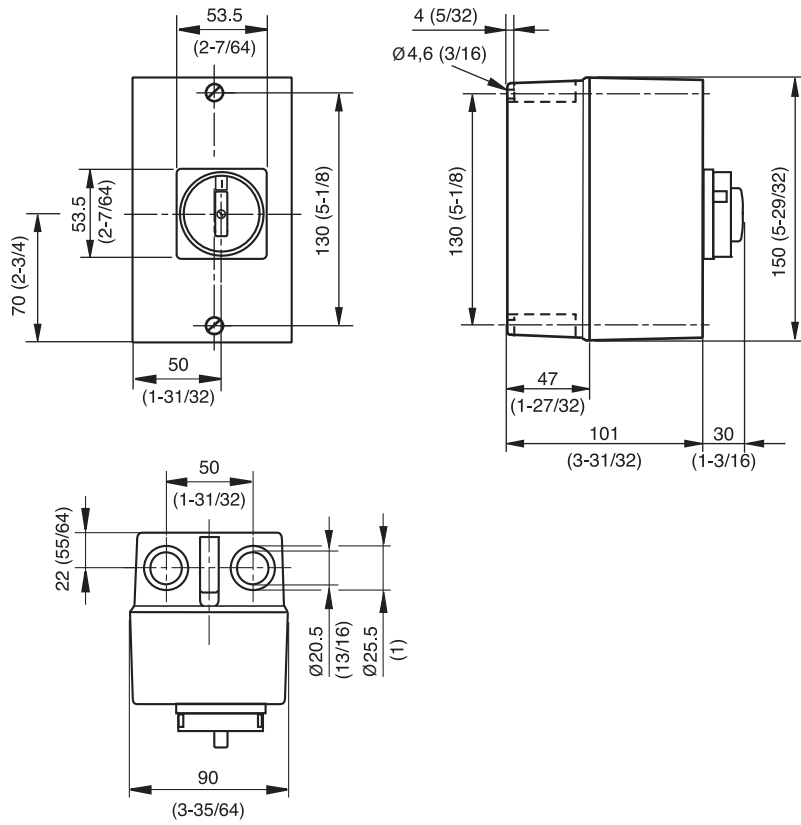
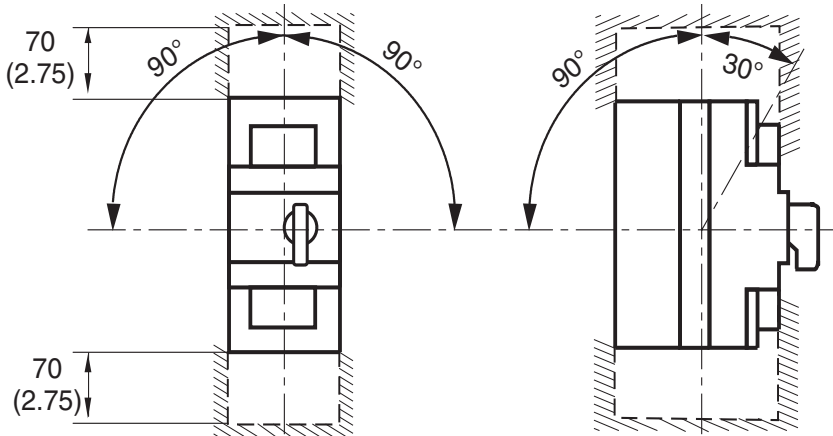


Figure 24 - Mounting position/safety clearance of Cat. No. 140-CMN



Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

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