



## 17 - Emax power breakers

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# Emax Power breakers



Emax power breakers



ABB's Emax series of low voltage power circuit breakers embodies over half a century's experience and technological development in power circuit breakers. The Emax offers a series of breakers that is totally innovative in its technological design, ease of installation and use, making it the ideal solution for the growing requirements of designers, switchboard and switchgear manufacturers, installers, OEMs and users.

The Emax power circuit breakers are UL Listed and meet the ANSI and IEC Standards for low voltage power circuit breakers.

ABB Emax power circuit breakers are available in five different models with rated continuous current from 800A to 6300A and rated short-circuit current range from 42kA to 200kA (480V).

**Technical catalog 1SDC200005 D0201 is available upon request.**

## General ratings and specifications



### UL 1066

Levels of performance		E1		E2				E3				
		B-A	N-A	B-A	N-A	S-A	H-A	N-A	S-A	H-A	V-A	X-A
Frame Size	[A]	800	800	1600	800	800	800	2000	800	800	800	800
	[A]	1200	1200	—	1200	1200	1200	2500	1200	1200	1200	1200
	[A]	—	—	—	1600	1600	1600	—	1600	1600	1600	1600
	[A]	—	—	—	—	—	—	—	2000	2000	2000	2000
	[A]	—	—	—	—	—	—	—	2500	2500	2500	—
	[A]	—	—	—	—	—	—	—	3200	3200	3200	—
Capacity of neutral pole for four-pole circuit breakers	[%Iu]	100	100	100	100	100	100	100	100	100	100	—
Rated short circuit current												
240V	[kA]	42	50	42	65	65	85	65	85	85	125	200
480V	[kA]	42	50	42	50	65	85	50	65	85	125	200
600V	[kA]	42	50	42	50	65	65	50	65	85	100	14
Rated short time current	[kA]	42	50	42	50	65	65	50	65	65	85	14

### IEC 60947-2

Levels of performance		E1		E2				E3				
		B	N	B	N	S	L	N	S	H	V	L
Currents: rated uninterrupted current (at 40°C) Iu	[A]	800	800	1600	1000	800	1250	2500	1000	800	800	2000
	[A]	1000	1000	2000	1250	1000	1600	3200	1250	1000	1250	2500
	[A]	1250	1250	—	1600	1250	—	—	1600	1250	1600	—
	[A]	1600	1600	—	2000	1600	—	—	2000	1600	2000	—
	[A]	—	—	—	—	2000	—	—	2500	2000	2500	—
	[A]	—	—	—	—	—	—	—	3200	2500	3200	—
	[A]	—	—	—	—	—	—	—	—	3200	—	—
Capacity of neutral pole for four-pole circuit breakers	[%Iu]	100	100	100	100	100	100	100	100	100	100	100
Rated ultimate breaking capacity under short circuit Icu												
220/230/380/400/415V	[kA]	42	50	42	65	85	130	65	75	100	130	130
440V	[kA]	42	50	42	65	85	110	65	75	100	130	110
500/525V	[kA]	42	50	42	55	65	85	65	75	100	100	85
660/690V	[kA]	42	50	42	55	65	85	65	75	85	100	85
Rated service breaking capacity under short circuit Ics												
220/230/380/400/415V	[kA]	42	50	42	65	85	130	65	75	85	100	130
440V	[kA]	42	50	42	65	85	110	65	75	85	100	110
500/525V	[kA]	42	50	42	55	65	65	65	75	85	85	65
660/690V	[kA]	42	50	42	55	65	65	65	75	85	85	65
Rated short time withstand current Icw (1s)	[kA]	42	50	42	55	65	10	65	75	75	85	15

### UL 1066 and IEC 60947-2 ③

#### Overall dimensions

Fixed: H = 418mm/16.46 in; D = 302 mm/11.89 in

W (3 poles/4 poles)

[mm]

296/386

296/386

404/530

W (3 poles/4 poles)

[in]

11.65/15.2

11.65/15.2

15.91/20.82

Draw out: H = 461mm/18.15 in; D = 396.5 mm/15.61 in

W (3 poles/4 poles)

[mm]

324/414

324/414

432/558

W (3 poles/4 poles)

[in]

12.76/16.3

12.76/16.3

17.01/21.97

Weights (circuit breaker complete with trip unit, RH terminals, CS, excluding accessories)

Fixed

3 poles/4 poles

[Kg]

45/54

50/61

66/80

3 poles/4 poles

[lbs]

99/119

110/134

145/176

Draw out

3 poles/4 poles

[Kg]

70/82

78/93

104/125

3 poles/4 poles

[lbs]

154/181

172/205

229/275

① four poles only

② 100% neutral protection

③ For X Versions, see page 16.7.



# General ratings and specifications



E4



E6

UL 1066	E4					E6						
	S-A	H-A	V-A	L-A	H-A/f <sup>①</sup>	H-A	V-A	L-A	X-A	H-A/f <sup>①</sup>	X-A/f <sup>①</sup>	
Levels of performance												
Frame Size	[A]	3200	3200	3200	3200	3200	4000	4000	4000	4000	4000	4000
	[A]	3600	3600	3600	3600	3600	5000	5000	5000	5000	5000	5000
	[A]	—	—	—	—	—	—	—	—	—	—	—
	[A]	—	—	—	—	—	—	—	—	—	—	—
	[A]	—	—	—	—	—	—	—	—	—	—	—
Capacity of neutral pole for four-pole circuit breakers	[%Iu]	50	50	50	50	100	50	50	50	50	100	100
Rated short circuit current												
240V	[kA]	85	100	100	125	100	125	125	150	200	125	200
480V	[kA]	65	85	100	125	85	85	125	150	200	85	200
600V	[kA]	65	85	100	100	85	85	100	100	100	85	100
Rated short time current	[kA]	65	85	100	100	85	100	100	100	100	100	100

IEC 60947-2	E4					E6		
	S	H	V	S/f <sup>①</sup>	H/f <sup>①</sup>	H	V	H/f <sup>①</sup>
Levels of performance								
Currents: rated uninterrupted current (at 40°C) Iu	[A]	4000	3200	3200	4000	3200	4000	4000
	[A]	—	4000	4000	—	4000	5000	5000
	[A]	—	—	—	—	—	6300	6300
	[A]	—	—	—	—	—	6300	—
	[A]	—	—	—	—	—	—	—
	[A]	—	—	—	—	—	—	—
Capacity of neutral pole for four-pole circuit breakers	[%Iu]	50	50	50	100	100	50	100
Rated ultimate breaking capacity under short circuit Ics								
220/230/380/400/415V	[kA]	75	100	150	80	100	100	150
440V	[kA]	75	100	150	80	100	100	150
500/525V	[kA]	75	100	130	75	100	100	130
660/690V	[kA]	75	85	100	75	100	100	100
Rated service breaking capacity under short circuit Ics								
220/230/380/400/415V	[kA]	75	100	150	80	100	100	125
440V	[kA]	75	100	150	80	100	100	125
500/525V	[kA]	75	100	130	75	100	100	100
660/690V	[kA]	75	85	100	75	100	100	100
Rated short time withstand current Icw (1s)	[kA]	75	100	100	80	85	85	85

UL 1066 and IEC 60947-2 <sup>③</sup>				
Overall dimensions				
Fixed: H = 418mm/16.46 in; D = 302 mm/11.89 in				
W (3 poles/4 poles)	[mm]	566/656		746 <sup>②</sup>
W (3 poles/4 poles)	[in]	22.28/25.83		29.37
W (3 poles/4 poles)	[mm]	782/908		1034 <sup>②</sup>
W (3 poles/4 poles)	[in]	30.79/35.78		40.71
Draw out: H = 461mm/18.15 in; D = 396.5 mm/15.61 in				
W (3 poles/4 poles)	[mm]	594/684		774 <sup>②</sup>
W (3 poles/4 poles)	[in]	23.39/26.93		30.47
W (3 poles/4 poles)	[mm]	810/936		1062 <sup>②</sup>
W (3 poles/4 poles)	[in]	31.89/36.85		41.81
Weights (circuit breaker complete with trip unit, RH terminals, CS, excluding accessories)				
Fixed				
3 poles/4 poles	[Kg]	97/117		125 <sup>②</sup>
3 poles/4 poles	[lbs]	214/258		276
3 poles/4 poles	[Kg]	140/160		185 <sup>②</sup>
3 poles/4 poles	[lbs]	308/353		408
Draw out				
3 poles/4 poles	[Kg]	147/165		200 <sup>②</sup>
3 poles/4 poles	[lbs]	324/363		441
3 poles/4 poles	[Kg]	210/240		275 <sup>②</sup>
3 poles/4 poles	[lbs]	463/529		607

① four poles only      ② 100% neutral protection      ③ For X Versions, see page 16.7.

# General information

## Catalog number explanation

### Emax breaker

**D 3 V E H B A H 0 A 0 0 0 X X**

**Locking provisions:** X = none;

A = keylock (open)  
 B = button guard  
 C = padlock provision (open)  
 D = withdrawable position lock (connected, test, and disconnected positions)  
 E = withdrawable position lock (test, and disconnected positions)  
 F=A+B; G=A+C; H=A+D; J=A+E; K=B+D; L=B+E;  
 M=C+D; N=C+E; P=A+B+D; Q=A+B+E; R=A+C+D;  
 S=A+C+E; T=heavy duty padlock provision (open);  
 U=A+T; V=T+D; W=T+E; Y=A+T+D; Z=A+T+E

**Accessories:** X=none;

A=mechanical counter; B = bell alarm  
 C=bell alarm w/remote reset 24-30VAC/DC  
 D=bell alarm w/remote reset 110-130VAC/DC  
 E=bell alarm w/remote reset 220-240VAC/DC  
 F=A+B; G=A+C; H=A+D; J=A+E

**Undervoltage trip:** 0=none

50/60Hz & VDC: A=24VDC B=30V  
 C=48V D=60V  
 E=110-120V F=125-127V  
 G=220-240V H=250V  
 J=380-400VAC K=440-480VAC  
 Second shunt trip: L=24VDC M=30V  
 N=48V P=60V  
 Q=110-120V R=125-127V  
 S=220-240V T= 250V  
 U=380-400VAC V=440-480VAC

**Shunt trip:** 0 = none

50/60Hz & VDC: A=24VDC; B=30; C=48; D=60; E=110-120; F=125-127;  
 G=220-240, H=250; J=380-400VAC; K=440-480VAC;  
 L=special low Z=120-127VAC/DC

**Spring charging motor:** (includes spring charged signal, P/N does not show)

0=none, A=24-30VAC/VDC, B=48-60VAC/VDC, C=110-130VAC/VDC,  
 D=220-250VAC/VDC, E=spring charged signal only

**Contacts:** A=4 aux B=10 aux D=UV energ. N.O. E=UV energ. NC  
 F=A & D G=A & E H=B & D J = B & E  
 (15 auxiliary contacts available as separate accessory)

**Closing coil:** 0=none

50/60Hz & VDC: A=24VDC; B=30; C=48; D=60; E=110-120; F=125-127;  
 G=220-240; H=250; J=380-400VAC; K=440-480VAC

**Trip unit accessories:** (not compatible with PR121/P)

A=PR120/K4C; B=PR120/V (bottom; supplied as std on PR123/P); C=PR120/D-M;  
 D=PR120/D-BT; E=A+B; F=A+C; G=A+D; H=A+B+C; I=A+B+D; J=B+C+D;  
 K=A+C+D; L=A+B+C+D; M=B+C; N=PR120/V (top); P=A+N; Q=A+N+C; R=A+N+D;  
 S=N+C+D; T=A+N+C+D; U=N+C; V=B+D; W=N+D; 0=none

**Trip unit:** A=PR121/P, LI; B=PR121/P, LSI; C=PR121/P, LSIG; D=non-automatic; E=PR122/P, LI; F=PR122/P, LSI  
 G=PR122/P, LSIG; H=PR122/P, LSIRc<sup>①</sup> J=PR123/P, LSI + PR120/V; K=PR123/P, LSIG + PR120/V

**Version:** B=UL fixed<sup>②</sup>; D=UL drawout, less cradle; F=IEC fixed<sup>③</sup>; W=IEC drawout, less cradle

**Rating plug:** A=400; B=600/630; C=800; D=1000; E=1200/1250; F=1600; G=2000; H=2500; J=3000<sup>②</sup>; K=3200, L=3600<sup>②</sup>;  
 M=4000; N=5000; P=6300<sup>①</sup>; 0=None (Non-automatic only)

**Frame ampere rating:** : A=800; B=1200/1250; C=1600; D=2000; E=2500; F=3200; G=3600; H=4000; J=5000, N=6300<sup>②</sup>;  
 P=1000<sup>②</sup>

**Breaking capacity:** B=basic; N=normal; S=standard; H=high; V=very high; L=limiting; Q=1000VAC, R=750VDC (3P) 1000VDC (4P)<sup>②</sup>;  
 X=200kA<sup>②</sup>

**Frame size:** 1=E1, 3P; 2=E2, 3P; 3=E3, 3P; 4=E4, 3P; 6=E6, 3P;  
 A=E1, 4P; B=E2, 4P; C=E3, 4P; D=E4, 4P; (50% neutral); F=E6, 4P (50% neutral); G=E4, 4P (100% neutral); H=E6, 4P (100% neutral)

① IEC only  
 ② UL only  
 ③ Horizontal terminals are standard except for the E3 3200A; for vertical terminals, see page 16.36 for conversion kit.  
 ④ Available as E3 up to 2000A and E6 up to 5000A.  
 ⑤ Consult factory.

# General information

## Catalog number information

### Emax, cradle (fixed part)

**D 3 S 2 5 V A X**

**Options<sup>①</sup>:** X=none  
R=DC rated (750V 3P, 1000V 4P)<sup>①</sup>

**Contacts:** 0=none  
A=5 position auxiliaries, TOC  
B=10 position auxiliaries, TOC

**Terminal types:** (1st letter is upper terminal, 2nd letter is lower terminal)  
UL/IEC: H=rear horz. (H=HH); V=rear vert. (V=VV); A=HV; B=VH  
IEC ONLY: F=front; L=rear flat; FF=FF; LL=LL; C=HF; D=FH; E=HL; G=LH; J=VF; K=VJ; M=VL;  
N=LV; P=FL; Q=LF

**Max. ampere rating:** UL: 12=1200 (E1); 16=1600 (E2); 20=2000 (E3)<sup>②</sup>; 25=2500 (E3); 32=3200 (E3)<sup>②</sup>; 36=3600 (E4);  
50=5000 (E6)  
IEC: 16=1600 (E1); 20=2000 (E2); 32=3200 (E3); 40=4000 (E4); 63=6300 (E6)

**Version:** UL: N=E1B-A; E1N-A; E2B-A; E2N-A;  
H=E2S-A; E2H-A; E4S-A; E4H-A; E4H-A/f; E6H-A; E6H-A/f;  
S=E3N-A; E3S-A;  
V=E3H-A; E3V-A;  
L=E4V-A; E4L-A;  
X=E3X-A<sup>③</sup>; E6V-A; E6L-A; E6X-A  
IEC: C=IEC Cradle

**Frame size:** 1=1, 3P; 2=2, 3P; 3=3, 3P; 4=4, 3P; 6=6, 3P;  
A=1, 4P; B=2, 4P; C=3, 4P; D=4, 4P (50% neutral); F=6, 4P (50% neutral);  
G=4, 4P (100% neutral); H=6, 4P (100% neutral)

① IEC only  
② Available as E3 up to 2000A  
③ Vertical only up to 2000A  
④ Vertical only  
⑤ Consult factory for pricing

## Selection guide UL Circuit breakers

### Common data

Voltages		
Rated maximum voltage	[V]	635
Rated voltage	[V]	600
Test voltage (1 min. 50/60 Hz)	[kV]	2.2
Frequency		
	[Hz]	50 - 60
Number of poles		3 - 4
Version		Fixed (F) - Draw out (W)



		E1		E2			
		B-A	N-A	B-A	N-A	S-A	H-A
<b>Level of performance</b>							
<b>Currents</b>							
<b>Frame size</b>	[A]	800	800	1600	800	800	800
	[A]	1200	1200		1200	1200	1200
	[A]				1600	1600	1600
	[A]						
	[A]						
Capacity of neutral pole for four-pole circuit breakers	[%lu]	100	100	100	100	100	100
<b>Rated short circuit current</b>							
240 V	[kA]	42	50	42	65	65	85
480 V	[kA]	42	50	42	50	65	85
600 V	[kA]	42	50	42	50	65	65
Rated short time current	[kA]	42	50	42	50	65	65
<b>Trip units</b>							
PR121/P		■	■	■	■	■	■
PR122/P		■	■	■	■	■	■
PR123/P		■	■	■	■	■	■
<b>Trip times</b>							
Make time (max)	[ms]	80	80	80	80	80	80
Break time (<ST current) (max)	[ms]	70	70	70	70	70	70
Break time (>ST current) (max)	[ms]	30	30	30	30	30	12
<b>Overall dimensions</b>							
Fixed: H = 418 mm/16.46 in - D = 302 mm/11.89 in *							
W (3 poles/4 poles)	[mm]	296/386		296/386			
W (3 poles/4 poles)	[in]	11.65/15.2		11.65/15.2			
Draw out: H = 461 mm/18.15 in - D = 396.5 mm/15.61 in **							
W (3 poles/4 poles)	[mm]	324/414		324/414			
W (3 poles/4 poles)	[in]	12.76/16.3		12.76/16.3			
<b>Weights</b> (Circuit breaker complete with trip unit, RH terminals, CS, excluding accessories)							
Fixed							
3 poles/4 poles	[kg]	45/54		50/61			
3 poles/4 poles	[lbs]	99/119		110/134			
Draw out							
3 poles/4 poles	[kg]	70/82		78/93			
3 poles/4 poles	[lbs]	154/181		172/205			

(1) four poles only.

\* for E3X-A: H = 438 mm/ 17.24 in - D = 302 mm/ 11.89 in

\*\* for E3X-A: H = 481 mm/ 18.94 in - D = 396.5 mm/ 15.61 in

		E1 B-A/N-A		E2 B-A/N-A/S-A/H-A		
		800	1200	800	1200	1600
<b>Continuous current rating I<sub>u</sub></b>	[A]	800	1200	800	1200	1600
<b>Mechanical life</b> with regular ordinary maintenance	[No. Operations x 1000]	20	20	20	20	20
Operation frequency	[Operations/hour]	30	30	30	30	30
<b>Electrical life</b>	[No. Operations x 1000]	10	10	10	10	10
Operation frequency	[Operations/hour]	30	30	30	30	30

(2) 10 for E3X-A.

(3) 1.5 for E3X-A.

# Selection guide UL Circuit breakers

Emax  
Power breakers



E3					E4					E6					
N-A	S-A	H-A	V-A	X-A	S-A	H-A	V-A	L-A	H-A/f <sup>(1)</sup>	H-A	V-A	L-A	X-A	H-A/f <sup>(1)</sup>	X-A/f <sup>(1)</sup>
2000	800	800	800	800	3200	3200	3200	3200	3200	4000	4000	4000	4000	4000	4000
2500	1200	1200	1200	1200	3600	3600	3600	3600	3600	5000	5000	5000	5000	5000	5000
	1600	1600	1600	1600											
	2000	2000	2000	2000											
	2500	2500	2500												
	3200	3200	3200												
100	100	100	100	100	50	50	50	50	100	50	50	50	50	100	100
65	85	85	125	200	85	100	100	125	100	125	125	150	200	125	200
50	65	85	125	200	65	85	100	125	85	85	125	150	200	85	200
50	65	85	100	14	65	85	100	100	85	85	100	100	100	85	100
50	65	65	85	14	65	85	100	100	85	100	100	100	100	100	100
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	404/530					566/656			746			782/908			1034
	15.91/20.82					22.28/25.83			29.37			30.79/35.78			40.71
	432/558					594/684			774			810/936			1062
	17.01/21.97					23.39/26.93			30.47			31.89/36.85			41.81
	66/80		70/84			97/117			125			140/160			185
	145/176		154/185			214/258			276			308/353			408
	104/125		106/128			147/165			200			210/240			275
	229/275		233/282			324/363			441			463/529			607

E3 N-A/S-A/H-A/V-A					E4 S-A/H-A/V-A/L-A/H-A/f				E6 H-A/V-A/L-A/X-A/H-A/f/X-A/f	
1200	1600	2000	2500	3200	3200	3600			4000	5000
15 <sup>(2)</sup>	15 <sup>(2)</sup>	15 <sup>(2)</sup>	15	15	8	8			8	8
30	30	30	30	30	30	30			30	30
10 <sup>(3)</sup>	10 <sup>(3)</sup>	8 <sup>(3)</sup>	8	8	5	5			5	3
30	30	30	30	30	30	30			30	30

## Non-automatic switches UL



The switches share the same frames and accessories as the circuit breakers, with the only difference the absence of the trip unit.

The switch is available in both three-pole and four-pole fixed and draw out version and is identified by the code "/MS" (on the label). The electrical characteristics of the switches are given in the following table.

		<b>E1B-A/MS</b>	<b>E1N-A/MS</b>	<b>E2B-A/MS</b>	<b>E2 N-A/MS</b>	<b>E2S-A/MS</b>	<b>E3N-A/MS</b>	<b>E3S-A/MS</b>
Frame size	[A]	800	800	1600	800	800	2000	800
	[A]	1200	1200	—	1200	1200	2500	1200
	[A]	—	—	—	1600	1600	—	1600
	[A]	—	—	—	—	—	—	2000
	[A]	—	—	—	—	—	—	2500
	[A]	—	—	—	—	—	—	3200
Number of Poles		3/4	3/4	3/4	3/4	3/4	3/4	3/4
Capacity of neutral pole for four-pole circuit breakers	[%I <sub>n</sub> ]	100	100	100	100	100	100	100
Rated voltage	[V]	600	600	600	600	600	600	600
Rated maximum voltage	[V]	635	635	635	635	635	635	635
Test voltage (1 min. 50/60 Hz)	[kV]	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Frequency	[Hz]	50-60	50-60	50-60	50-60	50-60	50-60	50-60
Rated short time current	[kA]	42	50	42	50	65	650	650
Version		F-W	F-W	F-W	F-W	F-W	F-W	F-W

# Non-automatic switches UL

Emax  
Power breakers



		<b>E4S-A/MS</b>	<b>E4H-A/MS</b>	<b>E4V-A/MS</b>	<b>E4H-Af/MS</b>	<b>E6H-A/MS</b>	<b>E6H-Af/MS</b>
Frame size	[A]	3200	3200	3200	3200	4000	4000
	[A]	3600	3600	3600	3600	5000	5000
	[A]	—	—	—	—	—	—
	[A]	—	—	—	—	—	—
	[A]	—	—	—	—	—	—
Number of Poles		3/4	3/4	3/4	4	3/4	4
Capacity of neutral pole for four-pole circuit breakers	[%I <sub>n</sub> ]	50	50	50	50	50	100
Rated voltage	[V]	600	600	600	600	600	600
Rated maximum voltage	[V]	635	635	635	635	635	635
Test voltage (1 min. 50/60 Hz)	[kV]	2.2	2.2	2.2	2.2	2.2	2.2
Frequency	[Hz]	50-60	50-60	50-60	50-60	50-60	50-60
Rated short time current	[kA]	65	85	100	85	100	100
Version		F -W	F -W	F -W	F -W	F -W	F -W

## Electronic trip units Rating plugs for UL circuit breakers

### Rating plugs

Type of circuit breaker	Rated current I <sub>n</sub>	In [A] 400	600	800	1000	1200	1600	2000	2500	3000	3200	3600	4000	5000
E1B-A	800	•	•	•										
	1200	•	•	•	•	•								
E2B-A	1600	•	•	•	•	•	•							
E2N-A	800	•	•	•										
	1200	•	•	•	•	•								
	1600	•	•	•	•	•	•							
E2S-A	800	•	•	•										
	1200	•	•	•	•	•								
	1600	•	•	•	•	•	•							
E2H-A	800	•	•	•										
	1200	•	•	•	•	•								
	1600	•	•	•	•	•	•							
E3N-A	2000	•	•	•	•	•	•	•						
	2500	•	•	•	•	•	•	•	•					
E3S-A	800	•	•	•										
	1200	•	•	•	•	•								
	1600	•	•	•	•	•	•							
	2000	•	•	•	•	•	•	•						
	2500	•	•	•	•	•	•	•	•					
	3200	•	•	•	•	•	•	•	•	•	•			
E3H-A	800	•	•	•										
	1200	•	•	•	•	•								
	1600	•	•	•	•	•	•							
	2000	•	•	•	•	•	•	•						
	2500	•	•	•	•	•	•	•	•					
	3200	•	•	•	•	•	•	•	•	•	•			
E3V-A	800	•	•	•										
	1200	•	•	•	•	•								
	1600	•	•	•	•	•	•							
	2000	•	•	•	•	•	•	•						
	2500	•	•	•	•	•	•	•	•					
	3200	•	•	•	•	•	•	•	•	•	•			
E4S-A	3200			•	•	•	•	•	•	•	•			
	3600			•	•	•	•	•	•	•	•	•		
E4H-A	3200			•	•	•	•	•	•	•	•			
	3600			•	•	•	•	•	•	•	•	•		
E4V-A	3200			•	•	•	•	•	•	•	•			
	3600			•	•	•	•	•	•	•	•	•		
E4L-A	3200			•	•	•	•	•	•	•	•			
	3600			•	•	•	•	•	•	•	•	•	•	•
E6H-A	4000			•	•	•	•	•	•	•	•	•	•	
	5000			•	•	•	•	•	•	•	•	•	•	•
E6V-A	4000			•	•	•	•	•	•	•	•	•	•	
	5000			•	•	•	•	•	•	•	•	•	•	•
E6L-A	4000			•	•	•	•	•	•	•	•	•	•	
	5000			•	•	•	•	•	•	•	•	•	•	•

① See page 16.29 for rating plugs sold separately.



# Fixed breakers, 3 pole UL

## Fixed breakers

UL	Frame Amps	Interrupting Ratings kA, 480V	Manually Operated	Electrically Operated	Set of Three Vertical Terminals
E1B-A08	800	42	\$ 6,815	\$ 9,176	\$ 644
E1N-A08	800	50	6,933	9,294	644
E2N-A08	800	50	7,729	10,090	690
E2S-A08	800	65	8,458	11,819	690
E2H-A08	800	85	8,664	11,025	690
E3S-A08	800	65	8,755	11,116	790
E3H-A08	800	85	8,931	11,292	790
E3V-A08	800	125	9,926	12,287	790
E3X-A08	800	200	11,678	14,039	790
E1B-A12	1200	42	7,321	9,682	644
E1N-A12	1200	50	7,429	9,790	644
E2N-A12	1200	50	7,819	10,180	690
E2S-A12	1200	65	8,712	11,073	690
E2H-A12	1200	85	8,835	11,196	690
E3S-A12	1200	65	8,780	11,141	790
E3H-A12	1200	85	9,048	11,409	790
E3V-A12	1200	125	9,953	12,314	790
E3X-A12	1200	200	11,709	14,070	790
E2B-A16	1600	42	7,871	10,232	690
E2N-A16	1600	50	9,082	11,443	690
E2S-A16	1600	65	9,764	12,125	690
E2H-A16	1600	85	10,019	12,380	690
E3S-A16	1600	65	9,797	12,158	790
E3H-A16	1600	85	10,352	12,713	790
E3V-A16	1600	125	11,387	13,748	790
E3X-A16	1600	200	13,396	15,757	790
E3N-A20	2000	50	10,032	12,393	790
E3S-A20	2000	65	11,053	13,414	790
E3H-A20	2000	85	13,602	15,963	790
E3V-A20	2000	125	14,962	17,323	790
E3X-A20	2000	200	17,603	19,964	790
E3N-A25	2500	50	14,778	17,139	790
E3S-A25	2500	65	16,451	18,812	790
E3H-A25	2500	85	17,708	20,069	790
E3V-A25	2500	125	19,479	21,840	790
E3S-A32	3200	65	23,242	25,603	6 Vertical Terminals are Standard
E3H-A32	3200	85	23,929	26,290	
E3V-A32	3200	125	26,488	28,849	
E4S-A32	3200	65	21,102	23,463	
E4H-A32	3200	85	21,566	23,927	
E4V-A32	3200	100	24,047	26,408	
E4L-A32	3200	150	27,812	30,173	
E4S-A36	3600	65	23,939	26,300	1,664
E4H-A36	3600	85	27,302	29,663	1,664
E4V-A36	3600	100	28,666	31,027	1,664
E4L-A36	3600	150	29,203	31,564	1,664
E6H-A40	4000	85	31,528	33,889	2,783
E6V-A40	4000	125	43,932	46,293	2,783
E6L-A40	4000	150	50,399	52,760	2,783
E6X-A40	4000	200	53,052	55,413	2,783
E6H-A50	5000	85	43,221	45,582	2,783
E6V-A50	5000	125	51,684	54,045	2,783
E6L-A50	5000	150	55,439	57,800	2,783
E6X-A50	5000	200	58,356	60,717	2,783

### Standard features – manually operated UL breaker

- Rear horizontal terminals except where noted
- PR121 trip unit with LI protection functions
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- 2NO & 2NC auxiliary contacts for open/closed position indication
- Lifting plates
- Current transformers
- Terminal box

## Fixed breakers, 4 pole UL

### Fixed breakers

UL	Frame Amps	Interrupting Ratings kA, 480V	Manually Operated	Electrically Operated	Set of Four Vertical Terminals
E1B-A08	800	42	\$ 9,200	\$ 11,561	\$ 870
E1N-A08	800	50	9,323	11,684	870
E2N-A08	800	50	9,662	12,023	935
E2S-A08	800	65	10,587	12,948	935
E2H-A08	800	85	10,851	13,212	935
E3S-A08	800	65	10,970	13,331	1,067
E3H-A08	800	85	11,197	13,558	1,067
E3V-A08	800	125	12,495	14,856	1,067
E3X-A08	800	200	15,765	18,126	1,067
E1B-A12	1200	42	9,883	12,244	870
E1N-A12	1200	50	10,038	12,399	870
E2N-A12	1200	50	10,556	12,917	935
E2S-A12	1200	65	11,826	14,187	935
E2H-A12	1200	85	11,903	14,264	935
E3S-A12	1200	65	11,853	14,214	1,067
E3H-A12	1200	85	12,215	14,576	1,067
E3V-A12	1200	125	13,436	15,797	1,067
E3X-A12	1200	200	15,807	18,168	1,067
E2B-A16	1600	42	10,626	12,987	935
E2N-A16	1600	50	12,261	14,622	935
E2S-A16	1600	65	12,978	15,339	935
E2H-A16	1600	85	13,121	15,482	935
E3S-A16	1600	65	13,226	15,587	1,067
E3H-A16	1600	85	13,975	16,336	1,067
E3V-A16	1600	125	15,373	17,734	1,067
E3X-A16	1600	200	18,085	20,446	1,067
E3N-A20	2000	50	13,543	15,904	1,067
E3S-A20	2000	65	14,922	17,283	1,067
E3H-A20	2000	85	18,363	20,724	1,067
E3V-A20	2000	125	20,199	22,560	1,067
E3X-A20	2000	200	23,763	26,124	1,067
E3N-A25	2500	50	19,950	22,311	1,067
E3S-A25	2500	65	22,209	24,570	1,067
E3H-A25	2500	85	23,906	26,267	1,067
E3V-A25	2500	125	26,296	28,657	1,067
E3S-A32	3200	65	29,772	32,133	8 Vertical Terminals are standard
E3H-A32	3200	85	30,081	32,442	
E3V-A32	3200	125	33,340	35,701	
E4S-A32	3200	65	28,488	30,849	
E4H-A32	3200	85	29,114	31,475	
E4H-A/f32 ①	3200	85	31,916	34,277	
E4V-A32	3200	100	32,463	34,824	
E4L-A32	3200	150	35,712	38,073	
E4S-A36	3600	65	32,318	34,679	2,250
E4H-A36	3600	85	36,858	39,219	2,250
E4H-A/f36 ①	3600	85	39,866	42,227	2,572
E4V-A36	3600	100	38,669	41,060	2,250
E4L-A36	3600	150	40,931	43,292	2,250
E6H-A40	4000	85	42,563	44,924	3,757
E6H-A/f40 ①	4000	85	46,110	48,471	4,294
E6V-A40	4000	125	59,308	61,669	3,757
E6L-A40	4000	150	65,076	67,437	3,757
E6X-A40	4000	200	71,620	73,981	3,757
E6X-A/f40	4000	200	81,851	84,212	4,294
E6H-A50	5000	85	58,348	60,709	3,757
E6H-A/f50 ①	5000	85	65,097	67,458	4,294
E6V-A50	5000	125	69,773	72,134	3,757
E6L-A50	5000	150	71,628	73,989	3,757
E6X-A50	5000	200	78,781	81,142	3,757
E6X-A/f50	5000	200	90,035	92,396	4,294

### Standard features – manually operated UL breaker

- Rear horizontal terminals except where noted
- PR121 trip unit with LI protection functions
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- 2NO & 2NC auxiliary contacts for open/closed position indication
- Lifting plates
- Current transformers
- Terminal box

① Special 100% neutral pole rating.

### Neutral pole rating

- E1 – E3 = 100% rating
- E4 – E6 = 50% rating

# Withdrawable breakers, 3 pole UL

Emax  
Power breakers

## Withdrawable breakers

UL	Frame Amps	Interrupting Ratings kA, 480V	Manually Operated	Electrically Operated	Cradle w/Rear Horizontal Terminals	Set of Three Vertical Terminals
E1B-A08	800	42	\$ 7,383	\$ 9,744	\$ 2,281	\$ 644
E1N-A08	800	50	7,754	10,115	2,281	644
E2N-A08	800	50	8,529	10,890	2,400	690
E2S-A08	800	65	9,038	11,399	2,400	690
E2H-A08	800	85	9,564	11,925	2,400	690
E3S-A08	800	65	9,408	11,769	2,925	790
E3H-A08	800	85	9,792	12,153	2,925	790
E3V-A08	800	125	10,404	12,765	2,925	790
E3X-A08	800	200	12,240	14,601	4,109	790
E1B-A12	1200	42	8,375	10,736	2,281	644
E1N-A12	1200	50	8,690	11,051	2,281	644
E2N-A12	1200	50	8,814	11,175	2,400	690
E2S-A12	1200	65	9,242	11,603	2,400	690
E2H-A12	1200	85	9,687	12,048	2,400	690
E3S-A12	1200	65	9,520	11,581	2,925	790
E3H-A12	1200	85	9,633	11,994	2,925	790
E3V-A12	1200	125	10,596	12,957	2,925	790
E3X-A12	1200	200	12,467	14,828	4,109	790
E2B-A16	1600	42	9,320	11,681	2,400	690
E2N-A16	1600	50	10,483	12,844	2,400	690
E2S-A16	1600	65	11,506	13,867	2,400	690
E2H-A16	1600	85	11,726	14,087	2,400	690
E3S-A16	1600	65	10,931	13,292	2,925	790
E3H-A16	1600	85	11,445	13,806	2,925	790
E3V-A16	1600	125	12,590	14,951	2,925	790
E3X-A16	1600	200	14,812	17,173	4,109	790
E3N-A20	2000	50	11,386	13,747	2,925	790
E3S-A20	2000	65	12,700	15,061	2,925	790
E3H-A20	2000	85	14,262	16,623	2,925	790
E3V-A20	2000	125	15,688	18,049	2,925	790
E3X-A20	2000	200	18,456	20,817	4,109	790
E3N-A25	2500	50	17,767	20,128	2,925	790
E3S-A25	2500	65	20,315	22,676	2,925	790
E3H-A25	2500	85	22,622	24,983	2,925	790
E3V-A25	2500	125	24,884	27,245	2,925	790
E3S-A32	3200	65	25,310	27,671	7,259	6 Vertical Terminals are standard
E3H-A32	3200	85	26,009	28,370	7,259	1,664
E3V-A32	3200	125	27,177	29,538	7,259	1,664
E4S-A32	3200	65	23,800	26,161	6,259	1,664
E4H-A32	3200	85	24,447	26,808	6,259	1,664
E4V-A32	3200	100	25,863	28,224	6,259	1,664
E4L-A32	3200	150	31,205	33,566	6,259	1,664
E4S-A36	3600	65	26,863	29,224	6,259	1,664
E4H-A36	3600	85	30,865	33,226	6,259	1,664
E4V-A36	3600	100	31,948	34,309	6,259	1,664
E4L-A36	3600	150	42,215	44,576	6,259	1,664
E6H-A40	4000	85	34,676	37,037	7,398	2,783
E6V-A40	4000	125	46,570	48,931	7,398	2,783
E6L-A40	4000	150	51,407	53,768	7,398	2,783
E6X-A40	4000	200	54,113	56,474	7,398	2,783
E6H-A50	5000	85	46,402	48,763	7,398	2,783
E6V-A50	5000	125	57,078	59,439	7,398	2,783
E6L-A50	5000	150	59,375	61,736	7,398	2,783
E6X-A50	5000	200	62,500	64,861	7,398	2,783

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### Standard features – electrically operated breaker

#### Moving part

- PR121 trip unit with LI protection feature
- Spring charging motor
- Shunt trip
- Closing coil
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- 2NO & 2NC auxiliary contacts for open-closed position indication
- Lifting plates
- Current transformers
- Racking device with closed door
- Circuit breaker racking position indicator
- Sliding contacts
- Fail safe device (not available with YU)

### Standard features – electrically operated breaker

#### Fixed part

- Safety shutters
- Rear horizontal terminals except where noted
- Sliding contacts
- Anti-insertion lock
- Ground connection

## Withdrawable breakers, 4 pole UL

### Withdrawable breakers

UL	Frame Amps	Interrupting Ratings kA, 480V	Manually Operated	Electrically Operated	Cradle w/Rear Horizontal Terminals	Set of Four Vertical Terminals
E1B-A08	800	42	\$ 9,967	\$ 12,328	\$ 3,079	\$ 870
E1N-A08	800	50	10,513	12,874	3,079	870
E2N-A08	800	50	11,107	13,468	3,240	935
E2S-A08	800	65	11,306	13,667	3,240	935
E2H-A08	800	85	12,508	14,869	3,240	935
E3S-A08	800	65	11,107	13,468	3,949	1,067
E3H-A08	800	85	12,287	14,648	3,949	1,067
E3V-A08	800	125	13,645	16,006	3,949	1,067
E3X-A08	800	200	16,524	18,885	4,109	1,067
E1B-A12	1200	42	11,306	13,667	3,079	870
E1N-A12	1200	50	11,262	13,623	3,079	870
E2N-A12	1200	50	11,899	14,260	3,240	935
E2S-A12	1200	65	12,596	14,957	3,240	935
E2H-A12	1200	85	12,846	15,207	3,240	935
E3S-A12	1200	65	12,447	14,808	3,949	1,067
E3H-A12	1200	85	13,005	15,366	3,949	1,067
E3V-A12	1200	125	14,305	16,666	3,949	1,067
E3X-A12	1200	200	16,830	19,191	4,109	1,067
E2B-A16	1600	42	12,582	14,943	3,240	935
E2N-A16	1600	50	14,152	16,513	3,240	935
E2S-A16	1600	65	14,515	16,876	3,240	935
E2H-A16	1600	85	14,800	17,161	3,240	935
E3S-A16	1600	65	14,757	17,118	3,949	1,067
E3H-A16	1600	85	15,451	17,812	3,949	1,067
E3V-A16	1600	125	16,996	19,357	3,949	1,067
E3X-A16	1600	200	19,996	22,357	4,109	1,067
E3N-A20	2000	50	15,371	17,732	3,949	1,067
E3S-A20	2000	65	17,145	19,506	3,949	1,067
E3H-A20	2000	85	19,254	21,615	3,949	1,067
E3V-A20	2000	125	21,179	23,540	3,949	1,067
E3X-A20	2000	200	24,916	27,277	4,109	1,067
E3N-A25	2500	50	23,985	26,346	3,949	1,067
E3S-A25	2500	65	27,425	29,786	3,949	1,067
E3H-A25	2500	85	30,540	32,901	3,949	1,067
E3V-A25	2500	125	33,594	35,955	3,949	1,067
E3S-A32	3200	65	24,789	27,150	9,679	8 Vertical Terminals are standard 2,250
E3H-A32	3200	85	33,369	35,730	9,679	
E3V-A32	3200	125	33,884	36,245	9,679	
E4S-A32	3200	65	32,130	34,491	8,450	
E4H-A32	3200	85	33,003	35,364	8,450	
E4H-A/f32 ①	3200	85	34,067	36,428	9,657	
E4V-A32	3200	100	34,915	37,276	8,450	
E4L-A32	3200	150	40,123	42,484	8,450	
E4S-A36	3600	65	36,265	38,626	8,450	2,250
E4H-A36	3600	85	41,668	44,029	8,450	2,250
E4H-A/f36 ①	3600	85	43,659	46,020	9,657	2,572
E4V-A36	3600	100	43,130	45,491	8,450	2,250
E4L-A36	3600	150	48,173	50,534	8,450	2,250
E6H-A40	4000	85	46,813	49,174	9,987	3,757
E6H-A/f40 ①	4000	85	53,123	55,484	11,414	4,294
E6V-A40	4000	125	62,870	65,231	9,987	3,757
E6L-A40	4000	150	66,386	68,747	9,987	3,757
E6X-A40	4000	200	73,053	75,414	9,987	3,757
E6X-A/f40	4000	200	83,489	85,850	11,414	4,294
E6H-A50	5000	85	63,643	65,004	9,987	3,757
E6H-A/f50 ①	5000	85	68,799	71,160	11,414	4,294
E6V-A50	5000	125	77,055	79,416	9,987	3,757
E6L-A50	5000	150	80,156	82,517	9,987	3,757
E6X-A50	5000	200	84,375	86,736	9,987	3,757
E6X-A/f50	5000	200	96,429	98,790	11,414	4,294

#### Standard features – electrically operated breaker

##### Moving part

- PR121 trip unit with LI protection feature
- Spring charging motor
- Shunt trip
- Closing coil
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- 2NO & 2NC auxiliary contacts for open-closed position indication
- Lifting plates
- Current transformers
- Racking device with closed door
- Circuit breaker racking position indicator
- Sliding contacts
- Fail safe device (not available with UY)

#### Standard features – electrically operated breaker

##### Fixed part

- Safety shutters
- Rear horizontal terminals
- Sliding contacts
- Anti-insertion lock
- Ground connection

#### Neutral pole rating

- E1 – E3 = 100% rating
- E4 – E6 = 50% rating

① Special 100% neutral pole rating.

# Non-automatic switches

## Fixed switches (without trip unit & c.t.s.), 3 pole UL

### Fixed switches

UL	Frame Amps	Rated Short Time Current, kA	Manually Operated	Electrically Operated	Set of Three Vertical Terminals
E1B-A/MS-08	800	42	\$ 5,086	\$ 7,447	\$ 644
E1N-A/MS-08	800	50	5,334	7,695	644
E2N-A/MS-08	800	50	7,230	9,591	690
E2S-A/MS-08	800	65	7,498	9,859	690
E3S-A/MS-08	800	65	7,053	9,414	790
E3V-A/MS-08	800	85	9,050	11,411	790
E1B-A/MS-12	1200	42	5,592	7,953	644
E1N-A/MS-12	1200	50	5,627	7,988	644
E2N-A/MS-12	1200	50	6,090	8,451	690
E2S-A/MS-12	1200	65	7,348	9,709	690
E3S-A/MS-12	1200	65	6,944	9,305	790
E3V-A/MS-12	1200	85	9,407	11,768	790
E2B-A/MS-16	1600	42	6,142	8,503	690
E2N-A/MS-16	1600	50	7,353	9,714	690
E2S-A/MS-16	1600	65	8,550	10,911	690
E3S-A/MS-16	1600	65	7,961	10,322	790
E3V-A/MS-16	1600	85	10,731	13,092	790
E3N-A/MS-20	2000	50	8,196	10,557	790
E3S-A/MS-20	2000	65	9,217	11,578	790
E3V-A/MS-20	2000	85	14,564	16,925	790
E3N-A/MS-25	2500	50	12,942	15,303	790
E3S-A/MS-25	2500	65	14,615	16,976	790
E3V-A/MS-25	2500	85	17,658	20,019	790
E3S-A/MS-32	3200	65	20,091	22,452	6 Vertical Terminals are standard
E3V-A/MS-32	3200	85	21,148	23,509	
E4S-A/MS-32	3200	65	18,733	21,094	
E4H-A/MS-32	3200	85	19,197	21,558	
E4V-A/MS-32	3200	100	24,305	26,666	
E4S-A/MS-36	3600	65	21,570	23,931	1,664
E4H-A/MS-36	3600	85	24,933	27,294	1,664
E4V-A/MS-36	3600	100	29,258	31,619	1,664
E6H-A/MS-40	4000	100	28,946	31,307	2,783
E6H-A/MS-50	5000	100	40,639	43,000	2,783

### Standard features – manually operated UL switch

- Rear horizontal terminals except where noted
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- Lifting plates
- Terminal box

## Non-automatic switches

### Fixed switches (without trip unit & c.t.s.), 4 pole UL

#### Fixed switches

UL	Frame Amps	Rated Short Time Current, kA	Manually Operated	Electrically Operated	Set of Four Vertical Terminals
E1B-A/MS-08	800	42	\$ 6,866	\$ 9,227	\$ 870
E1N-A/MS-08	800	50	7,108	9,469	870
E2N-A/MS-08	800	50	9,634	11,995	935
E2S-A/MS-08	800	65	9,991	12,352	935
E3S-A/MS-08	800	65	9,169	11,530	1,067
E3V-A/MS-08	800	85	12,059	14,420	1,067
E1B-A/MS-12	1200	42	7,549	9,910	870
E1N-A/MS-12	1200	50	7,648	10,009	870
E2N-A/MS-12	1200	50	8,222	10,583	935
E2S-A/MS-12	1200	65	10,349	12,710	935
E3S-A/MS-12	1200	65	9,374	11,735	1,067
E3V-A/MS-12	1200	85	12,229	14,590	1,067
E2B-A/MS-16	1600	42	8,282	10,653	935
E2N-A/MS-16	1600	50	9,927	12,288	935
E2S-A/MS-16	1600	65	12,042	14,403	935
E3S-A/MS-16	1600	65	10,747	13,108	1,067
E3V-A/MS-16	1600	85	13,950	16,311	1,067
E3N-A/MS-20	2000	50	11,065	13,426	1,067
E3S-A/MS-20	2000	65	12,443	14,804	1,067
E3V-A/MS-20	2000	85	18,933	21,294	1,067
E3N-A/MS-25	2500	50	17,472	19,833	1,067
E3S-A/MS-25	2500	65	19,730	22,091	1,067
E3V-A/MS-25	2500	85	23,452	25,813	1,067
E3S-A/MS-32	3200	65	26,118	28,479	8 Vertical Terminals are standard
E3V-A/MS-32	3200	85	27,492	29,853	
E4S-A/MS-32	3200	65	25,290	27,651	
E4H-A/MS-32	3200	85	25,916	28,277	
E4H-A/f/MS-32 ①	3200	85	27,899	30,260	
E4V-A/MS-32	3200	100	31,597	33,958	
E4S-A/MS-36	3600	65	29,120	31,481	2,250
E4H-A/MS-36	3600	85	33,660	36,021	2,250
E4H-A/f/MS-36 ①	3600	85	36,372	38,733	2,572
E4V-A/MS-36	3600	100	38,035	40,396	2,250
E6H-A/MS-40	4000	100	39,077	41,438	3,757
E6H-A/f/MS-40 ①	4000	100	42,260	44,621	4,294
E6H-A/MS-50	5000	100	54,863	57,224	3,757
E6H-A/f/MS-50 ①	5000	100	59,535	61,896	4,294

#### Standard features – manually operated UL switch

- Rear horizontal terminals except where noted
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- Lifting plates
- Terminal box

#### Neutral pole rating

- E1 – E3 = 100% rating
- E4 – E6 = 50% rating

① Special 100% neutral pole rating.

# Non-automatic switches

## Withdrawable switches (without trip unit & c.t.s.), 3 pole

### UL

Emax  
Power breakers

#### Withdrawable switches

UL	Frame Amps	Rated Short Time Current, kA	Manually Operated	Electrically Operated	Cradle w/Rear Horizontal Terminals	Set of Three Vertical Terminals
E1B-A/MS-08	800	42	\$ 5,654	\$ 8,015	\$ 2,281	\$ 644
E1N-A/MS-08	800	50	6,355	8,716	2,281	644
E2N-A/MS-08	800	50	7,407	9,768	2,281	690
E2S-A/MS-08	800	65	7,560	9,921	2,281	690
E3S-A/MS-08	800	65	7,931	10,292	2,925	790
E3V-A/MS-08	800	85	9,360	11,721	2,925	790
E1B-A/MS-12	1200	42	6,646	9,007	2,281	644
E1N-A/MS-12	1200	50	6,920	9,281	2,281	644
E2N-A/MS-12	1200	50	7,085	9,446	2,400	690
E2S-A/MS-12	1200	65	8,149	10,510	2,400	690
E3S-A/MS-12	1200	65	7,384	9,745	2,925	790
E3V-A/MS-12	1200	85	10,064	12,425	2,925	790
E2B-A/MS-16	1600	42	7,591	9,952	2,400	690
E2N-A/MS-16	1600	50	8,754	11,115	2,400	690
E2S-A/MS-16	1600	65	10,029	12,390	2,400	690
E3S-A/MS-16	1600	65	9,095	11,456	2,925	790
E3V-A/MS-16	1600	85	11,585	13,946	2,925	790
E3N-A/MS-20	2000	50	9,550	11,911	2,925	790
E3S-A/MS-20	2000	65	10,864	13,225	2,925	790
E3V-A/MS-20	2000	85	14,800	17,161	2,925	790
E3N-A/MS-25	2500	50	15,931	18,292	2,925	790
E3S-A/MS-25	2500	65	18,479	20,840	2,925	790
E3V-A/MS-25	2500	85	22,505	24,866	2,925	790
E3S-A/MS-32	3200	65	23,833	26,194	4,515	6 Vertical Terminals are standard
E3V-A/MS-32	3200	85	25,327	27,688	4,515	
E4S-A/MS-32	3200	65	21,431	23,792	6,259	
E4H-A/MS-32	3200	85	22,078	24,439	6,259	
E4V-A/MS-32	3200	100	24,831	27,192	6,259	
E4S-A/MS-36	3600	65	24,494	26,855	6,259	1,664
E4H-A/MS-36	3600	85	28,496	30,857	6,259	1,664
E4V-A/MS-36	3600	100	32,148	34,509	6,259	1,664
E6H-A/MS-40	4000	100	32,094	34,455	7,398	2,783
E6H-A/MS-50	5000	100	43,820	46,181	7,398	2,783

#### Standard features – manually operated switch

##### Moving part

- Manual mechanical close and open pushbuttons
- Circuit breaker open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- Lifting plates
- Racking device with closed door
- Circuit breaker racking position indicator
- Sliding contacts
- Fail-safe device (not available with YU)

#### Standard features – manually operated switch

##### Fixed part

- Safety shutters
- Rear horizontal terminals except where noted
- Sliding contacts
- Anti-insertion lock
- Ground connection



## Non-automatic switches

### Withdrawable switches (without trip unit & c.t.s.), 4 pole UL

#### Withdrawable switches

UL	Frame Amps	Rated Short Time Current, kA	Manually Operated	Electrically Operated	Cradle w/Rear Horizontal Terminals	Set of Four Vertical Terminals
E1B-A/MS-08	800	42	\$ 7,633	\$ 9,994	\$ 3,079	\$ 870
E1N-A/MS-08	800	50	7,886	10,247	3,079	870
E2N-A/MS-08	800	50	9,244	11,605	3,240	935
E2S-A/MS-08	800	65	9,828	12,189	3,240	935
E3S-A/MS-08	800	65	9,898	12,259	3,949	1,066
E3V-A/MS-08	800	85	11,681	14,042	3,949	1,066
E1B-A/MS-12	1200	42	8,972	11,333	3,079	870
E1N-A/MS-12	1200	50	8,996	11,357	3,079	870
E2N-A/MS-12	1200	50	9,565	11,926	3,240	935
E2S-A/MS-12	1200	65	10,594	12,955	3,240	935
E3S-A/MS-12	1200	65	9,968	12,329	3,949	1,066
E3V-A/MS-12	1200	85	13,084	15,445	3,949	1,066
E2B-A/MS-16	1600	42	10,248	12,609	3,240	935
E2N-A/MS-16	1600	50	11,818	14,179	3,240	935
E2S-A/MS-16	1600	65	12,516	14,877	3,240	897
E3S-A/MS-16	1600	65	12,278	14,639	3,949	1,066
E3V-A/MS-16	1600	85	15,060	17,421	3,949	1,066
E3N-A/MS-20	2000	50	12,893	15,254	3,949	1,066
E3S-A/MS-20	2000	65	14,666	17,027	3,949	1,066
E3V-A/MS-20	2000	85	19,240	21,601	3,949	1,066
E3N-A/MS-25	2500	50	21,507	23,868	3,949	1,066
E3S-A/MS-25	2500	65	24,947	27,308	3,949	1,066
E3V-A/MS-25	2500	85	29,257	31,618	3,949	1,066
E3S-A/MS-32	3200	65	28,599	30,960	6,083	8 Vertical Terminals are standard
E3V-A/MS-32	3200	85	30,181	32,542	6,083	
E4S-A/MS-32	3200	65	28,932	31,293	8,450	
E4H-A/MS-32	3200	85	29,805	32,166	8,450	
E4H-A/f/MS-32 ①	3200	85	31,237	33,598	9,657	
E4V-A/MS-32	3200	100	32,280	34,641	8,450	
E4S-A/MS-36	3600	65	33,067	35,428	8,450	2,250
E4H-A/MS-36	3600	85	38,470	40,831	8,450	2,250
E4H-A/f/MS-36 ①	3600	85	43,786	46,147	9,657	2,572
E4V-A/MS-36	3600	100	45,592	47,953	8,450	2,250
E6H-A/MS-40	4000	100	43,327	45,688	9,987	3,757
E6H-A/f/MS-40 ①	4000	100	46,217	48,578	11,414	4,294
E6H-A/MS-50	5000	100	59,157	61,518	9,987	3,757
E6H-A/f/MS-50 ①	5000	100	63,669	66,030	11,414	4,294

#### Standard features – manually operated switch

##### Moving part

- Manual mechanical close and open pushbuttons
- Circuit breaker open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- Lifting plates
- Racking device with closed door
- Circuit breaker racking position indicator
- Sliding contacts
- Fail-safe device (not available with YU)

#### Standard features – manually operated switches

##### Fixed part

- Safety shutters
- Rear horizontal terminals except where noted
- Sliding contacts
- Anti-insertion lock
- Ground connection

#### Neutral pole rating

- E1 – E3 = 100% rating
- E4 – E6 = 50% rating

① Special 100% neutral pole rating.



# Circuit breakers in accordance with IEC 6097-2

		E1		E2				E3				
		E1B	E1N	E2B	E2N	E2S	E2L	E3N	E3S	E3H	E3V	E3L
<b>Automatic circuit-breakers</b>												
Poles	[No.]	3 - 4		3 - 4				3 - 4				
4p c.-b neutral current-carrying capacity	[%I <sub>n</sub> ]	100		100				100				
I <sub>u</sub> (40 °C)	[A]	800	800	1600	1000	800	1250	2500	1000	800	800	2000
		1000	2500	2000	1250	1000	1600	3200	1250	1000	1250	2500
		1250	1600		1600	1250			1600	1250	1600	
		1600			2000	1600			2000	1600	2000	
									2500	2000	2500	
									3200	2500	3200	
										3200		
U <sub>e</sub>	[V~]	690	690	690	690	690	690	690	690	690	690	690
I <sub>cu</sub> (220...415V)	[kA]	42	50	42	65	85	130	65	75	100	130	130
I <sub>cs</sub> (220...415V)	[kA]	42	50	42	65	85	130	65	75	85	100	130
I <sub>cw</sub> (1s)	[kA]	42	50	42	55	65	10	65	75	75	85	15
I <sub>cw</sub> (3s)	[kA]	36	36	42	42	42	—	65	75	65	65	—
<b>Automatic circuit-breakers with full-size neutral conductor</b>												
Poles	[No.]	Standard version			Standard version			Standard version				
4p c.-b neutral current-carrying capacity	[%I <sub>n</sub> ]											
I <sub>u</sub> (40 °C)	[A]											
U <sub>e</sub>	[V~]											
I <sub>cu</sub> (220...415V)	[kA]											
I <sub>cs</sub> (220...415V)	[kA]											
I <sub>cw</sub> (1s)	[kA]											
I <sub>cw</sub> (3s)	[kA]											
<b>Switch-disconnectors</b>												
		<b>E1B/MS</b>	<b>E1N/MS</b>	<b>E2B/MS</b>	<b>E2N/MS</b>	<b>E2S/MS</b>		<b>E3N/MS</b>	<b>E3S/MS</b>	<b>E3V/MS</b>		
Poles	[No.]	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4		3 - 4	3 - 4	3 - 4		
I <sub>u</sub> (40 °C)	[A]	800	800	1600	1000	1000		2500	1000	800		
		1000	1000	2000	1250	1250		3200	1250	1250		
		1250	2500		1600	1600			1600	1600		
		1600	1600		2000	2000			2000	2000		
									2500	2500		
									3200	3200		
U <sub>e</sub>	[V~]	690	690	690	690	690		690	690	690		
I <sub>cu</sub> (1s)	[kA]	42	50	42	42	65		65	75	85		
I <sub>cs</sub> (3s)	[kA]	36	36	42	42	42		65	65	65		
I <sub>cm</sub> (220...440V)	[kA]	88.2	105	88.2	88.2	143		143	165	286		
<b>Automatic circuit-breakers for applications up to 1150VAC</b>												
				<b>E2B/E</b>	<b>E2N/E</b>			<b>E3H/E</b>				
Poles	[No.]			3 - 4	3 - 4			3 - 4				
I <sub>u</sub> (40 °C)	[A]			1600	1250			1250				
				2000	1600			1600				
					2000			2000				
								2500				
								3200				
U <sub>e</sub>	[V~]			1150	1150			1150				
I <sub>cu</sub> (1150V)	[kA]			20	30			30 ⊕				
I <sub>cs</sub> (1150V)	[kA]			20	30			30 ⊕				
I <sub>cw</sub> (1s)	[kA]			20	30			30 ⊕				
<b>Switch-disconnectors for applications up to 1150VAC</b>												
				<b>E2B/E MS</b>	<b>E2N/E MS</b>			<b>E3H/E MS</b>				
Poles	[No.]			3 - 4	3 - 4			3 - 4				
I <sub>u</sub> (40 °C)	[A]			1600	1250			1250				
				2000	1600			1600				
					2000			2000				
								2500				
								3200				
U <sub>e</sub>	[V~]			1150	1150			1150				
I <sub>cu</sub> (1s)	[kA]			20	30			50				
I <sub>cs</sub> (1000V)	[kA]			40	63			105				
<b>Switch-disconnectors for applications up to 1000VDC</b>												
		<b>E1B/E MS</b>		<b>E2N/E MS</b>				<b>E3H/E MS</b>				
Poles	[No.]	3 - 4		3 - 4				3 - 4				
I <sub>u</sub> (40 °C)	[A]	800-1250		1250				1250				
				1600				1600				
				2000				2000				
								2500				
								3200				
UE	[V~]	750 (3p)- 1000(4p)		750 (3p)- 1000(4p)				750 (3p)- 1000(4p)				
I <sub>cw</sub> (1s)	[kA]	20		25				40				
I <sub>cm</sub> (750V)	[kA]	42		52.5				105				
I <sub>cm</sub> (1000V)	[kA]	42		52.5				105				
<b>Sectionalizing truck</b>												
I <sub>u</sub> (40 °C)	[A]	<b>E1 CS</b>		<b>E2 CS</b>				<b>E3 CS</b>				
		1250		2000				3200				
<b>Earthing switch with making capacity</b>												
I <sub>u</sub> (40 °C)	[A]	<b>E1 MTP</b>		<b>E2 MTP</b>				<b>E3 MTP</b>				
		1250		2000				3200				
<b>Earthing truck</b>												
I <sub>u</sub> (40 °C)	[A]	<b>E1 MT</b>		<b>E2 MT</b>				<b>E3 MT</b>				
		1250		2000				3200				

⊕ The performance at 1000V is 50kA.

## Circuit breakers in accordance with IEC 6097-2

		E4			E6	
		E4S	E4H	E4V	E6H	E6V
<b>Automatic circuit-breakers</b>						
Poles	[No.]		3 - 4		3 - 4	
4p c.-b neutral current-carrying capacity	[%I <sub>n</sub> ]		50		50	
I <sub>n</sub> (40 °C)	[A]	4000	3200-4000	3200-4000	4000-5000-6300	3200-4000-5000-6300
U <sub>e</sub>	[V~]	690	690	690	690	690
I <sub>cu</sub> (220...415V)	[kA]	75	100	150	100	150
I <sub>cs</sub> (220...415V)	[kA]	75	100	150	100	125
I <sub>cw</sub> (1s)	[kA]	75	100	100	100	100
	(3s)	[kA]	75	75	85	85
<b>Automatic circuit-breakers with full-size neutral conductor</b>						
		<b>E4S/f</b>	<b>E4H/f</b>		<b>E6H/f</b>	
Poles	[No.]	4	4		4	
4p c.-b neutral current-carrying capacity	[%I <sub>n</sub> ]	100	100		100	
I <sub>n</sub> (40 °C)	[A]	4000	3200-4000		4000-5000-6300	
U <sub>e</sub>	[V~]	690	690		690	
I <sub>cu</sub> (220...415V)	[kA]	80	100		100	
I <sub>cs</sub> (220...415V)	[kA]	80	100		100	
I <sub>cw</sub> (1s)	[kA]	80	85		100	
	(3s)	[kA]	75	75	100	
<b>Switch-disconnectors</b>						
		<b>E4S/MS</b>	<b>E4H/MS</b>	<b>E4H/fMS</b>	<b>E6H/MS</b>	<b>E6H/fMS</b>
Poles	[No.]	3 - 4	3 - 4	3 - 4	3 - 4	3 - 4
I <sub>n</sub> (40 °C)	[A]	4000	3200-4000	3200-4000	4000-5000-6300	4000-5000-6300
U <sub>e</sub>	[V~]	690	690	690	690	690
I <sub>cw</sub> (1s)	[kA]	75	100	85	100	100
	(3s)	[kA]	75	75	85	85
I <sub>cm</sub> (220...440V)	[kA]	165	220	220	220	220
<b>Automatic circuit-breakers for applications up to 1150VAC</b>						
			<b>E4H/E</b>		<b>E6H/E</b>	
Poles	[No.]		3 - 4		3 - 4	
I <sub>n</sub> (40 °C)	[A]		3200-4000		4000-5000-6300	
U <sub>e</sub>	[V~]		1150		1150	
I <sub>cu</sub> (1150V)	[kA]		65		65	
I <sub>cs</sub> (1150V)	[kA]		65		65	
I <sub>cw</sub> (1s)	[kA]		65		65	
<b>Switch-disconnectors for applications up to 1150VAC</b>						
			<b>E4H/E MS</b>		<b>E6H/E MS</b>	<b>E3H/E MS</b>
Poles	[No.]		3 - 4		3 - 4	
I <sub>n</sub> (40 °C)	[A]		3200-4000		4000-5000	
U <sub>e</sub>	[V~]		1150		1150	
I <sub>cu</sub> (1s)	[kA]		65		65	
I <sub>cs</sub> (1000V)	[kA]		143		143	
<b>Switch-disconnectors for applications up to 1000VDC</b>						
			<b>E4H/E MS</b>		<b>E6H/E MS</b>	
Poles	[No.]		3 - 4		3 - 4	
I <sub>n</sub> (40 °C)	[A]		3200-4000		4000-5000-6300	
U <sub>e</sub>	[V~]		750(3p) - 1000(4p)		750(3p) - 1000(4p)	
I <sub>cw</sub> (1s)	[kA]		65		65	
I <sub>cm</sub> (750V)	[kA]		143		143	
	(1000V)	[kA]	143		143	
<b>Sectionalizing truck</b>						
			<b>E4 CS</b>		<b>E6 CS</b>	
I <sub>n</sub> (40 °C)	[A]		4000		6300	
<b>Earthing switch with making capacity</b>						
			<b>E4 MTP</b>		<b>E6 MTP</b>	
I <sub>n</sub> (40 °C)	[A]		4000		6300	
<b>Earthing truck</b>						
			<b>E4 MT</b>		<b>E6 MT</b>	
I <sub>n</sub> (40 °C)	[A]		4000		6300	

# Fixed breakers, 3 pole IEC

## Fixed breakers

IEC	Frame Amps	Interrupting Ratings kA, 415V	Manually Operated	Electrically Operated	Set of Three Vertical Terminals	Set of Three Front Terminals
E1B08	800	42	\$ 6,027	\$ 8,388	\$ 644	\$ 367
E1N08	800	50	6,199	8,560	644	367
E2S08	800	85	6,968	9,329	690	888
E3H08	800	100	7,709	10,070	790	1,232
E3V08	800	130	7,825	10,186	790	1,232
E1B10	1000	42	6,289	8,650	644	367
E1N10	1000	50	6,352	8,713	644	367
E2N10	1000	65	7,078	9,439	690	888
E2S10	1000	85	7,184	9,545	690	888
E3S10	1000	75	7,947	10,308	790	1,232
E3H10	1000	100	8,190	10,551	790	1,232
E1B12	1250	42	6,656	9,017	644	367
E1N12	1250	50	6,839	9,200	644	367
E2N12	1250	65	7,314	9,675	690	888
E2S12	1250	85	7,854	10,215	690	888
E2L12	1250	130	9,368	11,729	690	888
E3S12	1250	75	7,808	10,169	790	1,232
E3H12	1250	100	8,036	10,397	790	1,232
E3V12	1250	130	9,453	11,814	790	1,232
E1B16	1600	42	6,940	9,301	644	367
E1N16	1600	50	7,010	9,371	644	367
E2B16	1600	42	7,293	9,654	690	888
E2N16	1600	65	8,014	10,375	690	888
E2S16	1600	85	8,689	11,050	690	888
E2L16	1600	130	11,189	13,550	690	888
E3S16	1600	75	8,700	11,061	790	1,232
E3H16	1600	100	9,232	11,593	790	1,232
E3V16	1600	130	11,265	13,626	790	1,232
E2B20	2000	42	8,509	10,870	690	888
E2N20	2000	65	9,024	11,385	690	888
E2S20	2000	85	9,784	12,145	690	888
E3S20	2000	75	9,817	12,178	790	1,232
E3H20	2000	100	11,762	14,123	790	1,232
E3V20	2000	130	13,157	15,518	790	1,232
E3L20	2000	130	13,425	15,786	790	1,232
E3N25	2500	65	13,870	16,231	790	1,232
E3S25	2500	75	15,242	17,603	790	1,232
E3H25	2500	100	16,948	19,309	790	1,232
E3V25	2500	130	18,010	20,371	790	1,232
E3L25	2500	130	19,454	21,815	790	1,232
E3N32	3200	65	17,963	20,324	790	1,232
E3S32	3200	75	18,662	21,023	790	1,232
E3H32	3200	100	20,217	22,578	790	1,232
E3V32	3200	130	21,711	24,072	790	1,232
E4H32	3200	100	22,085	24,446	1,664	1,696
E4V32	3200	150	28,163	30,524	2,783	2,464
E6V32	3200	150	36,328	38,689	2,783	2,464
E4S40	4000	75	26,873	29,234	1,664	1,696
E4H40	4000	85	30,645	33,006	1,664	1,696
E4V40	4000	100	34,445	36,806	1,664	1,696
E6H40	4000	100	38,497	40,858	2,783	2,464
E6V40	4000	150	42,739	45,100	2,783	2,464
E6H50	5000	100	42,047	44,408	2,783	2,464
E6V50	5000	150	50,281	52,642	2,783	2,464
E6H63	6300	100	50,456	52,817	2,783	2,464
E6V63	6300	150	60,337	63,698	2,783	2,464

## Standard features – manually operated breaker

### Fixed breaker

- Rear horizontal terminals
- PR121 trip unit with LI protection functions
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- 2NO & 2NC auxiliary contacts for open-closed position indication
- Lifting plates
- Current transformers
- Terminal box

## Fixed breakers, 4 pole IEC

### Fixed breakers

IEC	Frame Amps	Interrupting Ratings kA, 415V	Manually Operated	Electrically Operated	Set of Four Vertical Terminals	Set of Four Front Terminals
E1B08	800	42	\$ 7,475	\$ 9,836	\$ 837	\$ 489
E1N08	800	50	7,688	10,049	837	489
E2S08	800	85	8,960	11,321	897	1,183
E3H08	800	100	9,213	11,574	1,027	1,643
E3V08	800	130	10,353	12,714	1,027	1,643
E1B10	1000	42	7,800	10,161	837	489
E1N10	1000	50	8,053	10,414	837	489
E2N10	1000	65	8,512	10,873	897	1,183
E2S10	1000	85	8,959	11,320	897	1,183
E3S10	1000	75	9,069	11,430	1,027	1,643
E3H10	1000	100	9,452	11,813	1,027	1,643
E1B12	1250	42	8,293	10,654	837	489
E1N12	1250	50	8,520	10,881	837	489
E2N12	1250	65	9,148	11,509	897	1,183
E2S12	1250	85	9,446	11,807	897	1,183
E2L12	1250	130	12,725	15,086	897	1,183
E3S12	1250	75	9,306	11,667	1,027	1,643
E3H12	1250	100	9,591	11,952	1,027	1,643
E3V12	1250	130	11,389	13,750	1,027	1,643
E1B16	1600	42	8,647	11,008	837	489
E1N16	1600	50	8,733	11,094	837	489
E2B16	1600	42	9,121	11,482	897	1,183
E2N16	1600	65	10,059	12,420	897	1,183
E2S16	1600	85	10,906	13,267	897	1,183
E2L16	1600	130	13,666	16,849	897	1,183
E3S16	1600	75	10,413	12,774	1,027	1,643
E3H16	1600	100	10,550	12,911	1,027	1,643
E3V16	1600	130	14,162	16,523	1,027	1,643
E2B20	2000	42	10,701	13,062	897	1,183
E2N20	2000	65	11,371	13,732	897	1,183
E2S20	2000	85	12,329	14,690	897	1,183
E3S20	2000	75	11,795	14,156	1,027	1,643
E3H20	2000	100	13,621	15,982	1,027	1,643
E3V20	2000	130	16,872	19,233	1,027	1,643
E3L20	2000	130	17,093	19,454	1,027	1,643
E3N25	2500	65	17,671	20,032	1,027	1,643
E3S25	2500	75	19,454	21,815	1,027	1,643
E3H25	2500	100	21,672	24,033	1,027	1,643
E3V25	2500	130	23,301	25,662	1,027	1,643
E3L25	2500	130	24,930	27,291	1,027	1,643
E3N32	3200	65	22,992	25,353	1,027	1,643
E3S32	3200	75	23,900	26,261	1,027	1,643
E3H32	3200	100	27,307	29,668	1,027	1,643
E3V32	3200	130	30,714	33,075	1,027	1,643
E4H32	3200	100	28,351	30,712	2,163	2,260
E4H/f32	3200	100	29,920	32,281	2,472	2,583
E4V32	3200	150	36,153	38,514	2,163	2,260
E6V32	3200	150	45,410	47,771	3,618	3,286
E4S40	4000	75	34,610	36,971	2,163	2,260
E4H40	4000	85	39,516	41,877	2,163	2,260
E4H/f40	4000	85	41,652	44,013	2,472	2,583
E4V40	4000	100	42,923	45,284	2,163	2,260
E6H40	4000	100	48,122	50,483	3,618	3,286
E6H/f40	4000	100	50,528	52,889	4,135	3,756
E6V40	4000	150	53,424	55,785	3,618	3,286
E6H50	5000	100	52,558	54,919	3,618	3,286
E6H/f50	5000	100	56,142	58,503	4,135	3,756
E6V50	5000	150	62,852	65,213	3,618	3,286
E6H63	6300	100	63,070	65,431	3,818	3,286
E6H/f63	6300	100	67,370	69,731	4,135	3,756
E6V63	6300	150	75,422	77,783	3,618	3,286

### Standard features – manually operated breaker

#### Fixed breaker

- Rear horizontal terminals
- PR121 trip unit with LI protection functions
- Manual mechanical close and open pushbuttons
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator

① Consult factory for special 100% neutral pole rating.

- 2NO & 2NC auxiliary contacts for open-closed position indication
- Lifting plates
- Current transformers
- Terminal box

#### Neutral pole rating

- E1 – E3 = 100% rating
- E4 – E6 = 50% rating

# Withdrawable breakers, 3 pole IEC

Emax  
Power breakers

## Withdrawable breakers

IEC	Frame Amps	Interrupting Ratings kA, 415V	Manually Operated	Electrically Operated	Cradle w/Rear Horizontal Terminals	Set of Three Vertical Terminals	Set of Three Front Terminals
E1B08	800	42	\$ 6,501	\$ 8,862	\$ 2,281	\$ 644	\$ 367
E1N08	800	50	6,877	9,238	2,281	644	367
E2S08	800	85	7,883	10,244	2,400	690	888
E3H08	800	100	8,125	10,486	2,925	790	1,232
E3V08	800	130	8,246	10,607	2,925	790	1,232
E1B10	1000	42	7,337	9,698	2,281	644	367
E1N10	1000	50	7,684	10,045	2,281	644	367
E2N10	1000	65	8,007	10,368	2,400	690	888
E2S10	1000	85	8,127	10,488	2,400	690	888
E3S10	1000	75	8,585	10,946	2,925	790	1,232
E3H10	1000	100	8,749	11,110	2,925	790	1,232
E1B12	1250	42	7,757	10,118	2,281	644	367
E1N12	1250	50	8,101	10,462	2,281	644	367
E2N12	1250	65	8,626	10,987	2,400	690	888
E2S12	1250	85	9,151	11,512	2,400	690	888
E2L12	1250	130	12,180	14,541	2,400	690	888
E3S12	1250	75	8,760	11,121	2,925	790	1,232
E3H12	1250	100	8,897	11,258	2,925	790	1,232
E3V12	1250	130	9,363	11,724	2,925	790	1,232
E1B16	1600	42	8,222	10,583	2,281	644	367
E1N16	1600	50	8,304	10,665	2,281	644	367
E2B16	1600	42	9,097	11,458	2,400	690	888
E2N16	1600	65	10,234	12,595	2,400	690	888
E2S16	1600	85	11,371	13,732	2,400	690	888
E2L16	1600	130	14,704	18,281	2,400	690	888
E3S16	1600	75	10,674	13,035	2,925	790	1,232
E3H16	1600	100	11,100	13,461	2,925	790	1,232
E3V16	1600	130	15,126	17,487	2,925	790	1,232
E2B20	2000	42	10,987	13,348	2,400	690	888
E2N20	2000	65	11,182	13,543	2,400	690	888
E2S20	2000	85	11,377	13,738	2,400	690	888
E3S20	2000	75	11,361	13,722	2,925	790	1,232
E3H20	2000	100	13,256	15,617	2,925	790	1,232
E3V20	2000	130	13,864	16,225	2,925	790	1,232
E3L20	2000	130	17,817	20,178	2,925	790	1,232
E3N25	2500	65	15,220	17,581	2,925	790	1,232
E3S25	2500	75	17,896	20,257	2,925	790	1,232
E3H25	2500	100	19,528	21,889	2,925	790	1,232
E3V25	2500	130	21,210	23,571	2,925	790	1,232
E3L25	2500	130	22,892	25,253	2,925	790	1,232
E3N32	3200	65	22,337	24,698	2,925	790	1,232
E3S32	3200	75	23,340	25,701	2,925	790	1,232
E3H32	3200	100	23,724	26,085	2,925	790	1,232
E3V32	3200	130	25,367	27,728	2,925	790	1,232
E4H32	3200	100	23,842	26,203	6,259	1,664	1,696
E4V32	3200	150	25,731	28,092	6,259	1,664	1,696
E6V32	3200	150	38,539	40,900	7,398	2,783	2,464
E4S40	4000	75	30,399	32,760	6,259	1,664	1,696
E4H40	4000	85	34,540	36,901	6,259	1,664	1,696
E4V40	4000	100	38,681	41,042	6,259	1,664	1,696
E6H40	4000	100	44,177	47,701	7,398	2,783	2,464
E6V40	4000	150	50,140	52,501	7,398	2,783	2,464
E6H50	5000	100	45,541	47,902	7,398	2,783	2,464
E6V50	5000	150	53,341	55,702	7,398	2,783	2,464
E6H63	6300	100	64,163	66,524	7,398	2,783	2,464
E6V63	6300	150	78,427	80,788	7,398	2,783	2,464

### Standard features – electrically operated breaker

#### Moving part

- PR121 trip unit with LI protection functions
- Spring charging motor
- Shunt trip
- Closing coil
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- 2NO & 2NC auxiliary contacts for open-closed position indication
- Lifting plates
- Current transformers
- Racking device with closed door
- Circuit breaker racking position indicator
- Sliding contacts

### Standard features – electrically operated breaker

#### Fixed part

- Safety shutters
- Rear horizontal terminals
- Sliding contacts
- Anti-insertion lock
- Ground connection

# Withdrawable breakers, 4 pole IEC

## Withdrawable breakers

IEC	Frame Amps	Interrupting Ratings kA, 415V	Manually Operated	Electrically Operated	Cradle w/Rear Horizontal Terminals	Set of Four Vertical Terminals	Set of Four Front Terminals
E1B08	800	42	\$ 7,717	\$ 10,078	\$ 2,572	\$ 837	\$ 489
E1N08	800	50	8,605	10,966	2,572	837	489
E2S08	800	85	9,998	12,359	3,192	897	1,183
E3H08	800	100	10,398	12,759	3,890	1,027	1,643
E3V08	800	130	10,554	12,915	3,890	1,027	1,643
E1B10	1000	42	9,621	11,982	2,572	837	489
E1N10	1000	50	9,717	12,078	2,572	837	489
E2N10	1000	65	10,155	12,516	3,192	897	1,183
E2S10	1000	85	10,307	12,668	3,192	897	1,183
E3S10	1000	75	10,988	13,349	3,890	1,027	1,643
E3H10	1000	100	11,103	13,464	3,890	1,027	1,643
E1B12	1250	42	10,649	13,010	2,572	837	489
E1N12	1250	50	11,098	13,459	2,572	837	489
E2N12	1250	65	11,372	13,733	3,192	897	1,183
E2S12	1250	85	11,772	14,133	3,192	897	1,183
E2L12	1250	130	14,395	17,763	3,192	897	1,183
E3S12	1250	75	11,906	14,267	3,890	1,027	1,643
E3H12	1250	100	12,229	14,590	3,890	1,027	1,643
E3V12	1250	130	15,445	17,806	3,890	1,027	1,643
E1B16	1600	42	10,812	13,173	2,572	837	489
E1N16	1600	50	11,375	13,736	2,572	837	489
E2B16	1600	42	11,395	13,756	3,192	897	1,183
E2N16	1600	65	12,873	15,234	3,192	897	1,183
E2S16	1600	85	13,460	15,821	3,192	897	1,183
E2L16	1600	130	17,501	22,625	3,192	897	1,183
E3S16	1600	75	12,472	14,833	3,890	1,027	1,643
E3H16	1600	100	13,304	15,665	3,890	1,027	1,643
E3V16	1600	130	18,408	20,769	3,890	1,027	1,643
E2B20	2000	42	13,851	16,212	3,192	897	1,183
E2N20	2000	65	15,661	18,022	3,192	897	1,183
E2S20	2000	85	16,825	19,186	3,192	897	1,183
E3S20	2000	75	14,873	17,234	3,890	1,027	1,643
E3H20	2000	100	16,784	19,145	3,890	1,027	1,643
E3V20	2000	130	19,212	21,573	3,890	1,027	1,643
E3L20	2000	130	22,714	25,075	3,890	1,027	1,643
E3N25	2500	65	20,380	22,741	3,890	1,027	1,643
E3S25	2500	75	22,816	25,177	3,890	1,027	1,643
E3H25	2500	100	24,938	27,299	3,890	1,027	1,643
E3V25	2500	130	27,125	29,486	3,890	1,027	1,643
E3L25	2500	130	29,312	31,673	3,890	1,027	1,643
E3N32	3200	65	29,555	31,916	3,890	1,027	1,643
E3S32	3200	75	29,893	32,254	3,890	1,027	1,643
E3H32	3200	100	32,017	34,378	3,890	1,027	1,643
E3V32	3200	130	34,141	36,502	3,890	1,027	1,643
E4S32	3200	75	33,317	35,678	8,324	2,163	2,260
E4H32	3200	100	32,589	34,959	8,324	2,163	2,260
E4H/f32 ①	3200	100	33,523	35,884	9,513	2,472	2,583
E4V32	3200	150	47,423	49,784	8,324	2,163	2,260
E6V32	3200	150	49,722	52,083	9,839	3,618	3,286
E4S40	4000	75	41,350	43,711	8,324	2,163	2,260
E4H40	4000	85	44,409	46,770	8,324	2,163	2,260
E4H/f40 ①	4000	85	45,478	47,839	9,513	2,472	2,583
E4V40	4000	100	45,930	48,291	8,324	2,163	2,260
E6H40	4000	100	48,486	60,857	9,839	3,618	3,286
E6H/f40 ①	4000	100	50,911	53,272	11,245	4,135	3,756
E6V40	4000	150	58,496	60,857	9,839	3,618	3,286
E6H50	5000	100	58,680	61,041	9,839	3,618	3,286
E6H/f50 ①	5000	100	66,853	69,214	11,245	4,135	3,756
E6V50	5000	150	56,568	71,181	9,839	3,618	3,286
E6H63	6300	100	82,888	85,249	9,839	3,618	3,286
E6H/f63	6300	100	94,017	96,378	9,839	4,135	3,756
E6V63	6300	150	101,432	103,793	9,839	3,618	3,286

### Standard features – electrically operated breaker

#### Moving part

- PR121 trip unit with LI protection functions
- Spring charging motor
- Shunt trip
- Closing coil
- Manual mechanical close and open pushbuttons
- CB open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- 2NO & 2NC auxiliary contacts for open-closed position indication
- Lifting plates
- Current transformers
- Racking device with closed door

① Special 100% neutral pole rating.

- Circuit breaker racking position indicator
- Sliding contacts

### Standard features – electrically operated breaker

#### Fixed part

- Safety shutters
- Rear horizontal terminals
- Sliding contacts
- Anti-insertion lock
- Ground connection

### Neutral pole rating

- E1 –E3 = 100% rating
- E4 – E6 = 50% rating

# Non-automatic switches

## Fixed switches (Without trip unit & c.t.s.), 3 pole IEC

### Fixed switches, 3 pole

IEC	Frame Amps	Rated Short Time Current, kA	Manually Operated	Electrically Operated	Set of Three Vertical Terminals	Set of Three Front Terminals
E1B/MS08	800	42	\$ 4,298	\$ 6,659	\$ 644	\$ 367
E1N/MS08	800	50	4,903	7,264	644	367
E3V/MS08	800	85	5,883	8,244	790	1,232
E1B/MS10	1000	42	4,816	7,177	644	367
E1N/MS10	1000	50	5,101	7,462	644	367
E2N/MS10	1000	55	5,502	7,863	690	888
E2S/MS10	1000	65	5,799	8,160	690	888
E3S/MS10	1000	75	5,921	8,282	790	1,232
E1B/MS12	1250	42	4,927	7,288	644	367
E1N/MS12	1250	50	5,203	7,564	644	367
E2N/MS12	1250	55	5,585	7,946	690	888
E2S/MS12	1250	65	5,887	8,248	690	888
E3S/MS12	1250	75	5,972	8,333	790	1,232
E3V/MS12	1250	85	7,089	9,450	790	1,232
E1B/MS16	1600	42	5,203	7,564	644	367
E1N/MS16	1600	50	5,307	7,668	644	367
E2B/MS16	1600	42	5,564	7,925	690	888
E2N/MS16	1600	55	6,285	8,646	690	888
E2S/MS16	1600	65	6,722	9,083	690	888
E3S/MS16	1600	75	6,864	9,225	790	1,232
E3V/MS16	1600	85	8,145	10,506	790	1,232
E2B/MS20	2000	42	6,780	9,141	690	888
E2N/MS20	2000	55	7,295	9,556	690	888
E2S/MS20	2000	65	8,280	10,641	690	888
E3S/MS20	2000	75	7,981	10,342	790	1,232
E3V/MS20	2000	85	9,451	11,812	790	1,232
E3N/MS25	2500	65	12,034	14,395	790	1,232
E3S/MS25	2500	75	13,406	15,767	790	1,232
E3V/MS25	2500	85	14,246	16,607	790	1,232
E3N/MS32	3200	65	16,127	18,488	790	1,232
E3S/MS32	3200	75	16,826	19,187	790	1,232
E3V/MS32	3200	85	17,901	20,262	790	1,232
E4H/MS32	3200	100	18,688	21,049	790	1,232
E4S/MS40	4000	75	24,504	26,865	1,664	1,696
E4H/MS40	4000	100	28,276	30,637	1,664	1,696
E6H/MS40	4000	100	33,114	35,475	2,783	2,464
E6H/MS50	5000	100	39,465	41,826	2,783	2,464
E6H/MS63	6300	100	47,874	50,235	2,783	2,464

### Standard features – manually operated switch

- Rear horizontal terminals
- Manual mechanical close and open pushbuttons
- Circuit breaker open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- Lifting plates
- Terminal box



## Non-automatic switches

### Fixed switches (Without trip unit & c.t.s.), 4 pole IEC

#### Fixed switches, 4 pole

IEC	Frame Amps	Rated Short Time Current, kA	Manually Operated	Electrically Operated	Set of Four Vertical Terminals	Set of Three Front Terminals
E1B/MS08	800	42	\$ 5,533	\$ 7,894	\$ 837	\$ 489
E1N/MS08	800	50	6,251	8,612	837	489
E3V/MS08	800	85	7,501	9,862	1,027	1,643
E1B/MS10	1000	42	6,139	8,500	837	489
E1N/MS10	1000	50	6,503	8,864	837	489
E2N/MS10	1000	55	6,705	9,066	897	1,183
E2S/MS10	1000	65	7,350	9,711	897	1,183
E3S/MS10	1000	75	7,666	10,027	1,027	1,643
E1B/MS12	1250	42	6,351	8,712	837	489
E1N/MS12	1250	50	6,633	8,994	837	489
E2N/MS12	1250	55	7,206	9,567	897	1,183
E2S/MS12	1250	65	7,462	9,823	897	1,183
E3S/MS12	1250	75	7,221	9,582	1,027	1,643
E3V/MS12	1250	85	9,178	11,539	1,027	1,643
E1B/MS16	1600	42	6,633	8,994	837	489
E1N/MS16	1600	50	6,766	9,127	837	489
E2B/MS16	1600	42	7,179	9,540	897	1,183
E2N/MS16	1600	55	8,117	10,478	897	1,183
E2S/MS16	1600	65	8,636	10,997	897	1,183
E3S/MS16	1600	75	8,328	10,689	1,027	1,643
E3V/MS16	1600	85	10,444	12,805	1,027	1,643
E2B/MS20	2000	42	8,759	11,120	897	1,183
E2N/MS20	2000	55	9,429	11,790	897	1,183
E2S/MS20	2000	65	10,059	12,420	897	1,183
E3S/MS20	2000	75	9,710	12,071	1,027	1,643
E3V/MS20	2000	85	12,141	14,502	1,027	1,643
E3N/MS25	2500	65	15,586	17,947	1,027	1,643
E3S/MS25	2500	75	17,369	19,730	1,027	1,643
E3V/MS25	2500	85	18,432	20,793	1,027	1,643
E3N/MS32	3200	65	20,907	23,268	1,027	1,643
E3S/MS32	3200	75	21,815	24,176	1,027	1,643
E3V/MS32	3200	85	23,184	25,545	1,027	1,643
E4H/MS32	3200	100	24,146	26,507	2,163	2,260
E4H/f MS32 ①	3200	100	26,368	28,729	2,472	2,583
E4S/MS40	4000	75	31,815	34,176	2,163	2,260
E4H/MS40	4000	100	36,721	39,082	2,163	2,260
E4H/f MS40 ①	4000	85	39,196	41,557	2,472	2,583
E6H/MS40	4000	100	39,352	41,713	3,618	3,286
E6H/f MS40 ①	4000	100	43,116	45,477	4,135	3,756
E6H/MS50	5000	100	49,479	51,480	3,618	3,286
E6H/f MS50 ①	5000	100	56,638	58,999	4,135	3,756
E6H/MS63	6300	100	59,991	62,352	3,618	3,286
E6H/f MS63 ①	6300	100	68,802	71,163	4,135	3,756

#### Standard features – manually operated switch

- Rear horizontal terminals
- Manual mechanical close and open pushbuttons
- Circuit breaker open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- Lifting plates
- Terminal box

#### Neutral pole rating

- E1 – E3 = 100% rating
- E4 – E6 = 50% rating

① Special 100% neutral pole rating.



# Non-automatic switches

## Withdrawable switches (Without trip unit & c.t.s.), 3 pole

### IEC

Emax  
Power breakers

#### Withdrawable switches, 3 pole

IEC	Frame Amps	Rated Short Time Current, kA	Manually Operated	Electrically Operated	Cradle w/Rear Horizontal Terminals	Set of Three Vertical Terminals	Set of Three Front Terminals
E1B/MS08	800	42	\$ 4,772	\$ 7,133	\$ 2,281	\$ 644	\$ 367
E1N/MS08	800	50	4,952	7,313	2,281	644	367
E3V/MS08	800	85	7,060	9,421	2,925	790	1,232
E1B/MS10	1000	42	5,051	7,412	2,281	644	367
E1N/MS10	1000	50	5,152	7,513	2,281	644	367
E2N/MS10	1000	55	5,770	8,131	2,400	690	888
E2S/MS10	1000	65	5,857	8,218	2,400	690	888
E3S/MS10	1000	75	6,716	9,077	2,925	790	1,232
E1B/MS12	1250	42	6,028	8,389	2,281	644	367
E1N/MS12	1250	50	5,255	7,616	2,281	644	367
E2N/MS12	1250	55	6,897	9,258	2,400	690	888
E2S/MS12	1250	65	7,718	10,079	2,400	690	888
E3S/MS12	1250	75	6,924	9,285	2,925	790	1,232
E3V/MS12	1250	85	7,237	9,598	2,925	790	1,232
E1B/MS16	1600	42	6,831	9,192	2,281	644	367
E1N/MS16	1600	50	6,968	9,329	2,281	644	367
E2B/MS16	1600	42	7,368	9,729	2,400	690	888
E2N/MS16	1600	55	8,505	10,866	2,400	690	888
E2S/MS16	1600	65	8,331	10,692	2,400	690	888
E3S/MS16	1600	75	8,838	11,199	2,925	790	1,232
E3V/MS16	1600	85	9,160	11,521	2,925	790	1,232
E2B/MS20	2000	42	9,258	11,619	2,400	690	888
E2N/MS20	2000	55	9,453	11,814	2,400	690	888
E2S/MS20	2000	65	9,648	12,009	2,400	690	888
E3S/MS20	2000	75	9,525	11,886	2,925	790	1,232
E3V/MS20	2000	85	10,737	13,098	2,925	790	1,232
E3N/MS25	2500	65	13,384	15,745	2,925	790	1,232
E3S/MS25	2500	75	16,060	18,421	2,925	790	1,232
E3V/MS25	2500	85	16,611	18,972	2,925	790	1,232
E3N/MS32	3200	65	20,501	22,862	2,925	790	1,232
E3S/MS32	3200	75	21,540	23,865	2,925	790	1,232
E3V/MS32	3200	85	22,281	24,642	2,925	790	1,232
E4H/MS32	3200	100	24,011	26,372	6,259	1,664	1,696
E4S/MS40	4000	75	28,030	30,391	6,259	1,664	1,696
E4H/MS40	4000	100	32,171	34,532	6,259	1,664	1,696
E6H/MS40	4000	100	36,789	39,150	6,259	2,783	2,464
E6H/MS50	5000	100	42,959	45,320	7,398	2,783	2,464
E6H/MS63	6300	100	61,581	63,942	7,398	2,783	2,464

#### Standard features – manually operated switch

##### Moving part

- Manual mechanical close and open pushbuttons
- Circuit breaker open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- Lifting plates
- Racking device with closed door
- Circuit breaker racking position indicator
- Sliding contacts

#### Standard features – manually operated switch

##### Fixed part

- Safety shutters
- Rear horizontal terminals
- Sliding contacts
- Anti-insertion lock
- Ground connection

## Non-automatic switches

### Withdrawable switches (Without trip unit & c.t.s.), 4 pole IEC

#### Withdrawable switches, 4 pole

IEC	Frame Amps	Rated Short Time Current, kA	Manually Operated	Electrically Operated	Cradle w/Rear Horizontal / Flat Terminals	Set of Four Vertical Terminals	Set of Four Front Terminals
E1B/MS08	800	42	\$ 5,775	\$ 8,136	\$ 2,572	\$ 837	\$ 489
E1N/MS08	800	50	6,314	8,675	2,572	837	489
E3V/MS08	800	85	7,501	9,862	3,890	1,027	1,643
E1B/MS10	1000	42	6,440	8,801	2,572	837	489
E1N/MS10	1000	50	6,569	8,930	2,572	837	489
E2N/MS10	1000	55	7,033	9,394	3,192	897	1,183
E2S/MS10	1000	65	7,139	9,500	3,192	897	1,183
E3S/MS10	1000	75	8,696	11,057	3,890	1,027	1,643
E1B/MS12	1250	42	8,707	11,068	2,572	837	489
E1N/MS12	1250	50	9,168	11,529	2,572	837	489
E2N/MS12	1250	55	9,430	11,791	3,192	897	1,183
E2S/MS12	1250	65	9,610	11,971	3,192	897	1,183
E3S/MS12	1250	75	9,821	12,182	3,890	1,027	1,643
E3V/MS12	1250	85	10,312	12,673	3,890	1,027	1,643
E1B/MS16	1600	42	8,888	11,249	2,572	837	489
E1N/MS16	1600	50	9,065	11,426	2,572	837	489
E2B/MS16	1600	42	9,453	11,814	3,192	897	1,183
E2N/MS16	1600	55	10,931	13,292	3,192	897	1,183
E2S/MS16	1600	65	11,733	14,094	3,192	897	1,183
E3S/MS16	1600	75	10,387	12,748	3,890	1,027	1,643
E3V/MS16	1600	85	11,762	14,123	3,890	1,027	1,643
E2B/MS20	2000	42	11,909	14,270	3,192	837	1,183
E2N/MS20	2000	55	13,719	16,080	3,192	897	1,183
E2S/MS20	2000	65	14,241	16,602	3,192	897	1,183
E3S/MS20	2000	75	12,788	15,149	3,890	1,027	1,643
E3V/MS20	2000	85	15,119	17,480	3,890	1,027	1,643
E3N/MS25	2500	65	18,295	20,656	3,890	1,027	1,643
E3S/MS25	2500	75	20,731	23,092	3,890	1,027	1,643
E3V/MS25	2500	85	21,625	23,986	3,890	1,027	1,643
E3N/MS32	3200	65	27,470	29,831	3,890	1,027	1,643
E3S/MS32	3200	75	27,808	30,169	3,890	1,027	1,643
E3V/MS32	3200	85	28,996	31,357	3,890	1,027	1,643
E4H/MS32	3200	100	30,738	33,099	8,324	2,163	2,260
E4H/fMS32 ①	3200	100	32,273	34,634	9,513	2,472	2,583
E4S/MS40	4000	75	38,555	40,916	8,324	2,163	2,260
E4H/MS40	4000	100	41,614	43,975	8,324	2,163	2,260
E4H/f MS40 ①	4000	100	45,598	47,959	9,513	2,472	2,583
E6H/MS40	4000	100	43,359	45,720	9,839	3,618	3,286
E6H/f MS40 ①	4000	100	45,527	47,888	11,245	4,135	3,756
E6H/MS50	5000	100	55,601	57,962	9,839	3,618	3,286
E6H/f MS50	5000	100	62,290	64,651	11,245	4,135	3,756
E6H/MS63	6300	100	79,809	82,170	9,839	3,618	3,286
E6H/f MS63 ①	6300	100	88,561	90,922	11,245	4,135	3,756

#### 17 Standard features – manually operated switch

##### Moving part

- Manual mechanical close and open pushbuttons
- Circuit breaker open/closed mechanical indicator
- Spring charged/discharged mechanical indicator
- Lifting plates
- Racking device with closed door
- Circuit breaker racking position indicator
- Sliding contacts

#### Standard features – manually operated switch

##### Fixed part

- Safety shutters
- Rear horizontal terminals
- Sliding contacts
- Anti-insertion lock
- Ground connection

##### Neutral pole rating

- E1 – E3 = 100% rating
- E4 – E6 = 50% rating

① Special 100% neutral pole rating.

# Air circuit breakers

## Installed optional features

### UL & IEC

#### 1.20 Trip Units<sup>①</sup>

Catalog number	Factory installation price adder	Field installable price
PR121/P-LI	—	—
PR121/P-LSI	\$ 515	\$ 1,089 <sup>②</sup>
PR121/P-LSIG	1,208	1,604 <sup>②</sup>
PR122/P-LI	1,686	2,775
PR122/P-LSI	2,210	3,299
PR122/P-LSIRc (IEC only)	3,189	4,278
PR122/P-LSIG	2,904	3,993
PR123/P-LSI (Standard with PR120/V)	6,631	7,720
PR123/P-LSIG (Standard with PR120/V)	7,323	8,412

#### 1.21 Rating Plugs

UL	E1	E2	E3	E4	E6	Field installable price
DE0400RP	X	X	X			\$ 125
DE0600RP	X	X	X			125
DE0800RP	X	X	X	X	X	125
DE1000RP	X	X	X	X	X	125
DE1200RP	X	X	X	X	X	125
DE1600RP		X	X	X	X	125
DE2000RP			X	X	X	125
DE2500RP			X	X	X	125
DE3000RP			X	X	X	125
DE3200RP			X	X	X	125
DE3600RP				X	X	125
DE4000RP					X	125
DE5000RP					X	125
IEC	E1	E2	E3	E4	E6	Field installable price
DE0400RP	X	X	X			125
DE0630RP	X	X	X			125
DE0800RP	X	X	X	X	X	125
DE1000RP	X	X	X	X	X	125
DE1250RP	X	X	X	X	X	125
DE1600RP	X	X	X	X	X	125
DE2000RP		X	X	X	X	125
DE2500RP			X	X	X	125
DE3000RP			X	X	X	125
DE3200RP			X	X	X	125
DE4000RP				X	X	125
DE5000RP					X	125
DE6300RP					X	125

① Must order rating plug separately when ordering trip unit separately.

② Requires PRO30/B to be purchased separately. See item 49 on page 16.36.

**Air circuit breakers**  
Installed optional features  
**UL & IEC**

Description	Catalog number	List price
Configuration Test Unit	PR010/T	<b>\$ 12,500</b>
Signaling Unit	PR021/K	<b>5,000.00</b>
Signaling Module 4 output with independent terminals	PR120/K4	<b>2,500.00</b>
Signaling Module 4 + 1 input with common terminal	PR120/K4C	<b>2,500.00</b>
Voltage Measuring Module	PR120/V	<b>2,125.00</b>
Communication Module (Modbus RTU)	PR120/D-M	<b>5,000.00</b>
Bluetooth Wireless Communication Module internal	PR120/D-BT	<b>2,500.00</b>
Bluetooth Wireless Communication Module external	BT030	<b>3,335</b>

① Standard connection when ordered with breaker.

# Air circuit breakers

## Installed optional features

### UL & IEC

#### 23. – 30. Electrical and mechanical accessories

Item	Factory installation list price adder	Field installation catalog number	Field installation list price
<b>23a. Shunt trip coil (included in the electrically operated breaker)</b> <b>Rated voltage</b> 24V 30V 48V 60V 110/120V 125/127V 220/240V 250V 380/400V 440/480V	<b>\$ 374</b>	KE6S0 KE6S9 KE6S8 KE6S7 KE6S6 KE6S5 KE6S4 KE6S3 KE6S2 KE6S1	<b>\$ 374</b>
<b>23b. Second shunt trip coil (includes accessory support) ①</b> 24V 30V 48V 60V 110/120V 125/127V 220/240V 250V 380/400V 440/480V	<b>456</b>	KE6S0-2 KE6S9-2 KE6S8-2 KE6S7-2 KE6S6-2 KE6S5-2 KE6S4-2 KE6S3-2 KE6S2-2 KE6S1-2	<b>456</b>
<b>24. Closing coil (included in the electrically operated breaker)</b> <b>Rated voltage</b> 24V 30V 48V 60V 110/120V 125/127V 220/240V 250V 380/400V 440/480V	<b>374</b>	KE6C0 KE6C9 KE6C8 KE6C7 KE6C6 KE6C5 KE6C4 KE6C3 KE6C2 KE6C1	<b>374</b>
<b>25. Spring charging motor with limit switch and electrical indication charged spring (included in the electrically operated breaker)</b> <b>Rated voltage</b> 24/30V 48/60V 100/130V 220/250V <b>Spring charged signal only</b>	<b>1613</b>    <b>73</b>	KE6M9 KE6M7 KE6M5 KE6M3 KE6SC	<b>1,613</b>    <b>73</b>
<b>26. Instantaneous under voltage trip release</b> <b>Rated voltage</b> 24V 30V 48V 60V 110/120V 125/127V 220/240V 250V 380/400V 440/480V	<b>456</b>	KE6U0 KE6U9 KE6U8 KE6U7 KE6U6 KE6U5 KE6U4 KE6U3 KE6U2 KE6U1	<b>456</b>
<b>27. Energized undervoltage release signalling contact</b> Auxiliary contact normally open Auxiliary contact normally closed	<b>82</b>	KE6UE10 KE6UE01	<b>82</b>

① Order as alternative to UV trip.

## Air circuit breakers

### Installed optional features

### UL & IEC

Item	Factory installation list price adder	Field installation catalog number	Field installation list price
<b>28. Auxiliary contacts for breakers ①</b>			
Rated 5A-250VAC / 0.3A –125VDC			
28a. 4 auxiliary open/closed contacts (PR121/ on-automatic switch)	–	KE6A4	<b>\$ 297</b>
28b. 4 auxiliary open/closed contacts for digital signals (PR121/non-automatic switch)	<b>297</b>	KE6A4D	<b>297</b>
28c. 4 auxiliary open/closed contacts (2NO+2NC+2PR122-3)	–	KE6A4-PR122/3	<b>297</b>
28d. 4 auxiliary open/closed contacts (2NO+2NC+2PR122-3) for digital signals	<b>297</b>	KE6A4-PR122/3D	<b>297</b>
28e. 10 auxiliary open/closed contacts (PR121/non-automatic switch)	<b>753</b>	KE6A10	<b>1050</b>
28f. 10 auxiliary open/closed contacts for digital signals (PR121/non-automatic switch)	<b>753</b>	KE6A10D	<b>1,050</b>
28g. 10 auxiliary open/closed contacts (5NO+5NC+2PR122-3)	<b>753</b>	KE6A10-PR122/3	<b>1,050</b>
28h. 10 auxiliary open/closed contacts (5NO+5NC+2PR122-3) for digital signals	<b>753</b>	KE6A10-PR122/3D	<b>1,050</b>
28i. 15 additional auxiliary contacts for field installation on fixed breakers (connected to breaker with flexible cable) ②	<b>1507</b>	KE6A15	<b>1,507</b>
28j. 15 additional auxiliary contacts for field installation on withdrawable breakers (connected to breaker with flexible cable) ②	<b>1507</b>	KE6A15-W	<b>1,507</b>
<b>29. Auxiliary contacts for switches</b>			
29a. 2NO + 2NC	<b>297</b>	KE6A4	<b>297</b>
29b. 5NO + 5NC	<b>1050</b>	KE6A10	<b>1,050</b>

### 30. – 33. Electrical and mechanical accessories

Item	Factory installation list price adder	Field installation catalog number	Field installation list price
<b>30. Auxiliary contacts for service/test/disconnected position indication</b>			
<b>Cradle mounted</b>			
30a. 5 auxiliary contacts	<b>377</b>	KE6PS1	<b>377</b>
30b. 10 auxiliary contacts for E1/2 3 pole	<b>753</b>	KE2PS3	<b>753</b>
30c. 10 auxiliary contacts for E1/2 4 pole	<b>753</b>	KE2PS4	<b>753</b>
30d. 10 auxiliary contacts for E3 3 pole	<b>753</b>	KE3PS3	<b>753</b>
30e. 10 auxiliary contacts for E3 4 pole	<b>753</b>	KE3PS4	<b>753</b>
30f. 10 auxiliary contacts for E4/6 3/4 pole	<b>753</b>	KE6PS2	<b>753</b>
<b>31. Mechanical operation counter</b>	<b>418</b>	KE6MC	<b>418</b>
<b>32. Bell alarm</b>			
Electrical signalling of overcurrent release tripped, Bell alarm contact	<b>348</b>	DE6TBA	<b>753</b>
<b>33. Bell alarm w/remot reset</b>			
33a. Electrical signalling of overcurrent release tripped with remote reset 220-240V AC/DC		DE6TBAR4	
33b. Electrical signalling of overcurrent release tripped with remote reset 110-130V AC/DC	<b>545</b>	DE6TBAR5	<b>545</b>
33c. Electrical signalling of overcurrent release tripped with remote reset 24-30V AC/DC		DE6TBAR9	

① For field installation, order auxiliary contacts for corresponding trip unit/  
② For mounting on fixed breaker, also requires accessory 41 (KE6MLP).

non-automatic switch.

# Air circuit breakers

## Optional features

### UL & IEC

#### 34. – 39. Locks and interlocks

Item	Factory installation list price adder	Field installation catalog number	Field installation list price
<b>34. Button guard</b>	<b>\$ 48</b>	KE6PG	<b>\$ 48</b>
<b>35. Key lock in open position</b>			
35a. Key lock N. 20005 ①	<b>202</b>	DE6KL2	<b>202</b>
35b. Key lock N. 20006		DE6KL3	
35c. Key lock N. 20007		DE6KL4	
35d. Key lock N. 20008		DE6KL5	
35e. Key lock different keys		DE6KL1	
<b>36a. Padlocking button cover (padlocks not supplied) 3 - 4mm locks</b>	<b>162</b>	KE6PD1	<b>162</b>
<b>36b. 3 - 5/16 locks</b>	<b>350</b>	KE6PDHD2	<b>350</b>
<b>37. Key and padlocking device to lock the breaker in disconnected, test or connected position (position lock)</b>			
37a. Key + padlocking 20005	<b>202</b>	DE6PL2	<b>202</b>
37b. Key + padlocking 20006		DE6PL3	
37c. Key + padlocking 20007		DE6PL4	
37d. Key + padlocking 20008		DE6PL5	
37e. Key + padlocking different keys		DE6PL1	
<b>38. Accessory to lock the breaker in test or disconnected position only ②</b>			
Position lock	<b>212</b>	KE6PLA	<b>212</b>
<b>39. Padlocking device for the safety shutters on the cradle</b>			
Cradle padlock	N/A	KE6SP	<b>43</b>

① Keylock number when factory installed is N3004222.

② Also requires position lock (accessory 37).

## External accessories

### Current transformers, UL & IEC

#### 40a. Neutral current transformer (required for 4 wire ground fault systems)

For breaker	Amps	Catalog number	List price
E1 – E2	400A 800A 1000A 1200A 1250A 1600A 2000A	KE2NCT	<b>\$ 406</b>
E3	400A 800A 1000A 1200A 1250A 1600A 2000A 2500A 3200A	KE3NCT	<b>414</b>
E4	1600A 2000A 2500A 3200A 3600A 4000A	KE4NCT ①	<b>818</b>
E6	3200A 4000A 5000A 6300A	KE6NCT ①	<b>818</b>

① KE4NCT & KE6NCT are 100% rated. For 50% rated neutrals on E4 & E6, use KE2NCT & KE3NCT



## External accessories

### Mechanical interlocks ①

#### 41. Mechanical interlocks (base plate for fixed circuit breaker)

For breaker	Interlock type	Catalog number	List price
E1 – E6	All	KE6MLP	\$ 241

NOTE: order for fixed circuit breaker only; order one accessory for each fixed breaker.

#### 42. Interlock for fixed circuit breaker/fixed part of withdrawable circuit breaker (cable attachment plate)

For breaker	Interlock type	Catalog number	List price
E1 – E6	A, B, D C	KE6MLA KE6MLC	\$ 628

NOTE: order one accessory for each fixed circuit breaker/fixed part of withdrawable circuit breaker

#### 43. Interlock for fixed circuit breaker/moving part of withdrawable circuit breaker (internal interlocking shaft)

For breaker	Interlock type	Catalog number	List price
E1 – E2 E3 E4, 3 pole E4, 4 pole/ E6, 3 pole E6, 4 pole	All	KE2ML KE3ML KE4ML-3 KE6ML-3 KE6ML-4	\$ 145

NOTE: order one accessory for each fixed circuit breaker/mobile part of withdrawable circuit breaker

#### 44. Interlock cables

For breaker	Interlock type	Horizontal Catalog number	Vertical Catalog number	List price
E1 – E6	A	KE6MLC-HA	KE6MLC-VA	\$ 97
	B	KE6MLC-HB	KE6MLC-VB	193
	C	KE6MLC-HC	KE6MLC-VC	193
	D	KE6MLC-HD	KE6MLC-VD	193

NOTE: order one type of cable for each interlock

① Order as an alternative to the Accessory number 15 auxiliary contact (see page 16.32) and kirk key lock.

## External accessories

### Other items

#### 45. Electronic time delay for undervoltage release ①

Item	Delay	Field installation catalog number	List price
<b>45. Time delay Voltage</b> 24/30V 48V 60V 110/125V 220/250V	0.5-1-1.5-2-3-5 s	KE6TL9 KE6TL8 KE6TL7 KE6TL5 KE6TL3	<b>\$ 428</b>

#### 46. Transparent front cover (IP54)

For breaker	Catalog number	List price
<b>46. Cover</b>	E1 – E6	KE6DC
		<b>\$ 557</b>

#### 47. Kirk key lock adaptor plate (in open position)

For breaker	Catalog number	List price
<b>47. Kirk key lock adaptor plate</b>		
47a. E1 – E2 fixed breaker, 3-4 pole	KE6KKC-E2F	<b>\$ 1,436</b>
47b. E1 – E2 withdrawable breaker, 3-4 pole	KE6KKC-E2W	<b>1,195</b>
47c. E3 fixed breaker, 3-4 pole	KE6KKC-E3F	<b>1,436</b>
47d. E3 withdrawable breaker, 3-4 pole	KE6KKC-E3W	<b>1,195</b>
47e. E4 fixed breaker, 3 pole	KE6KKC-E4F	<b>1,436</b>
47f. E4 withdrawable breaker, 3 pole	KE6KKC-E4W	<b>1,195</b>
47g. E6 fixed breaker, 3 pole	KE6KKC-E6F	<b>1,436</b>
47h. E6 withdrawable breaker, 3 pole	KE6KKC-E6W	<b>1,195</b>
47i. E4 fixed breaker, 4 pole	KE6KKC-E4F-4	<b>1,436</b>
47j. E4 withdrawable breaker, 4 pole	KE6KKC-E4W-4	<b>1,195</b>
47k. E6 fixed breaker, 4 pole	KE6KKC-E6F-4	<b>1,436</b>
47l. E6 withdrawable breaker, 4 pole	KE6KKC-E6W-4	<b>1,195</b>

NOTE: Provision for kirk lock (kirk key lock not included; use lock Type F – 1 inch bolt projection in withdrawn position).

#### 48. Kit for converting fixed breaker with rear horizontal terminals to rear vertical (set of three terminals)

Item	Catalog number	List price
<b>48. Conversion kit</b>		
48a. 1/2 3p F HR > F VR E1-A	KE1FHRVR	<b>\$ 644</b>
48b. 1/2 3p F HR > F VR E2-A	KE2FHRVR	<b>690</b>
48c. 1/2 3p F HR > F VR E3-A (12, 16, 20)	KE3FHRVR	<b>790</b>
48d. 1/2 3p F HR > F VR E3-A (25)	KE3F25HRVR	<b>790</b>
48e. 1/2 3p F HR > F VR E4-A	KE4FHRVR	<b>1,664</b>
48f. 1/2 3p F HR > F VR E6-A	KE6FHRVR	<b>2,783</b>

#### 49. – 50. Test kits

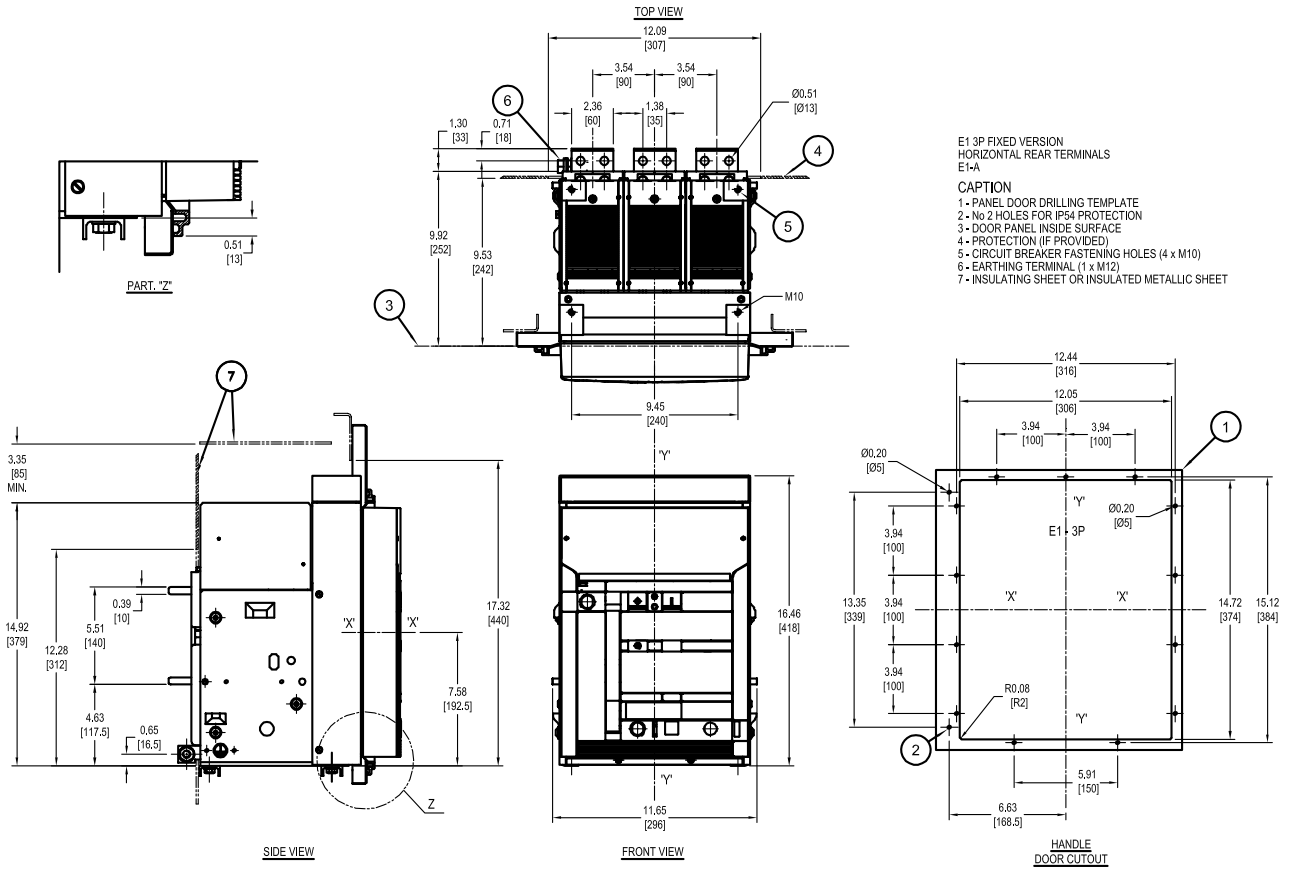
Item	Catalog number	List price
<b>49.</b> Hand-held battery (standard w/PR122 & 123)	PR030/B	<b>275</b>
<b>50.</b> Test and configuration unit SACE PR010/T	PR010/T	<b>12,500</b>

#### 51. – 54. Spare parts

Item	Catalog number	List price
<b>51.</b> Racking crank	1SDA038092R1	<b>\$ 122</b>
<b>52.</b> Door escutcheon	1SDA038096R1	<b>153</b>
<b>53.</b> Support plate for auxiliary releases	1SDA038339R1	<b>244</b>
<b>54.</b> Lifting plates	1SDA038093R1	<b>224</b>

① IEC only.

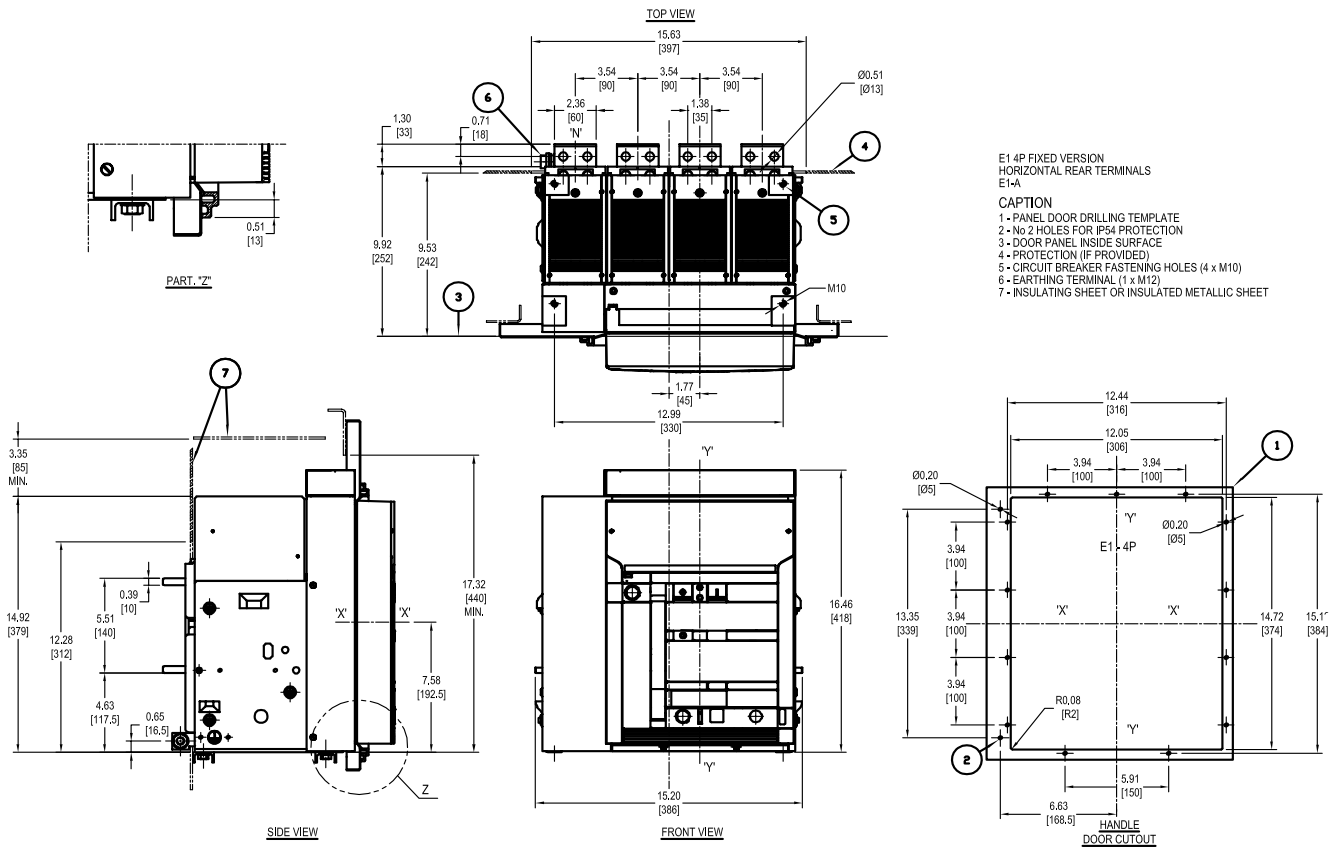
**Approximate dimensions (for UL version) ①**  
**E1, fixed with horizontal rear terminals**  
**3 pole**



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
E1, fixed with horizontal rear terminals  
4 pole

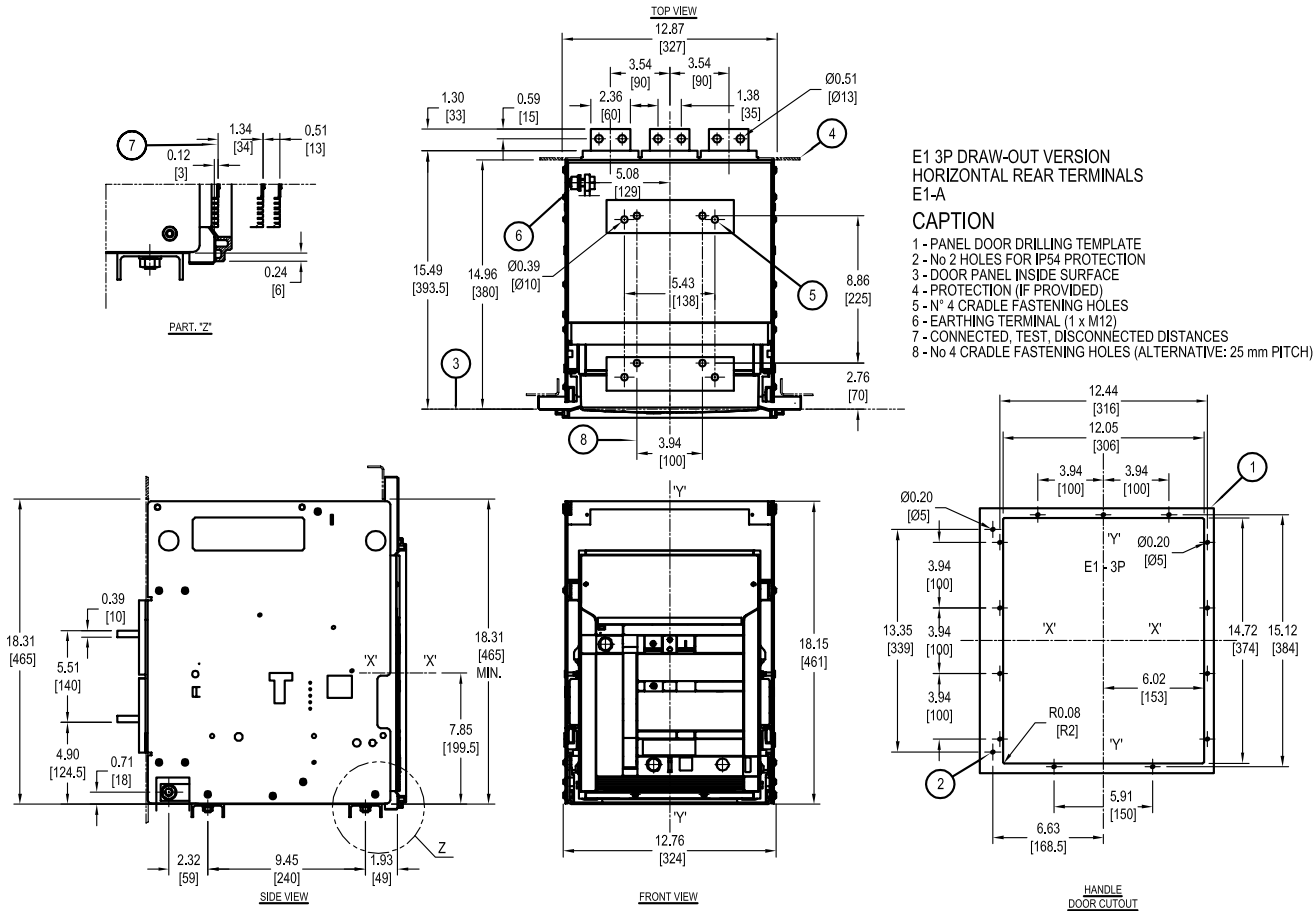
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E1, withdrawable with horizontal rear terminals**  
**3 pole**

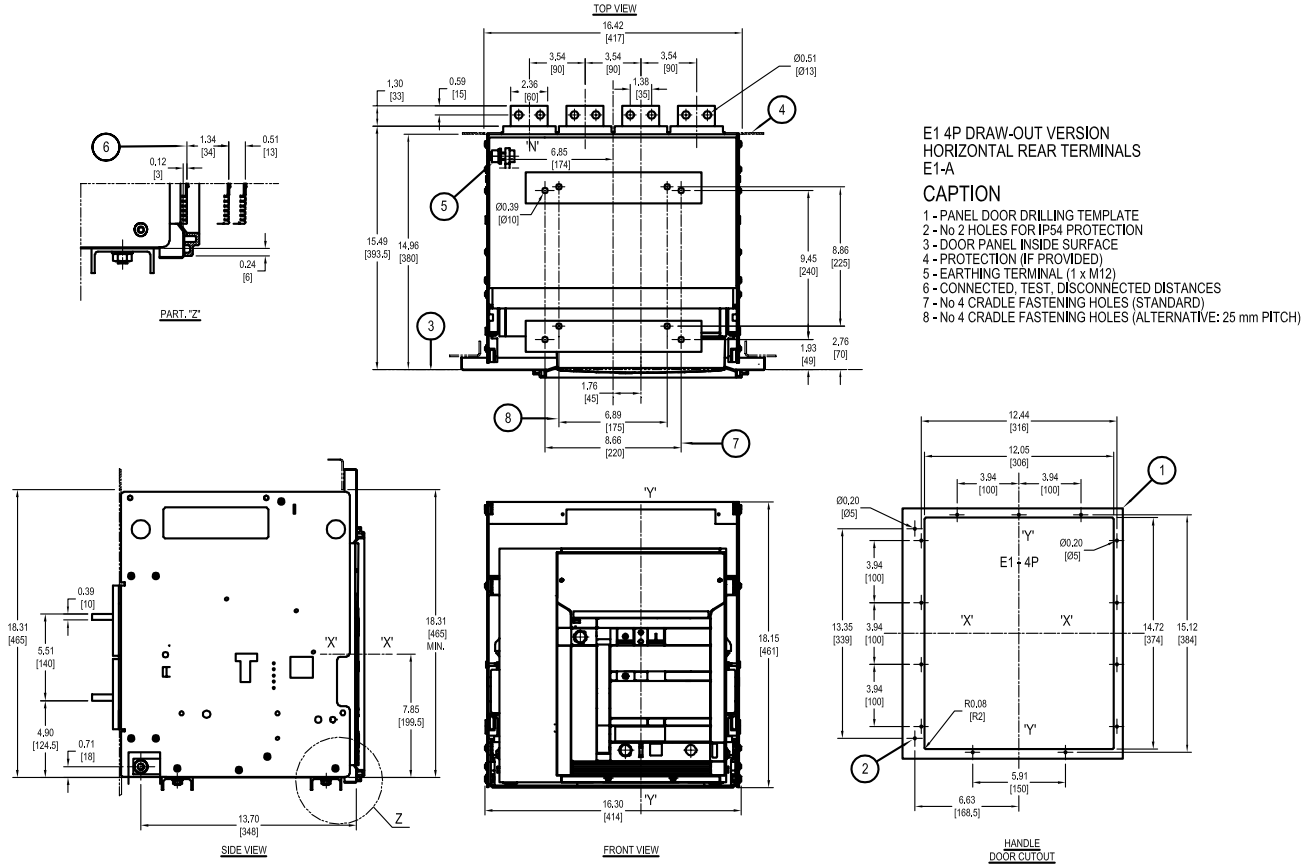
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E1, withdrawable with horizontal rear terminals**  
**4 pole**

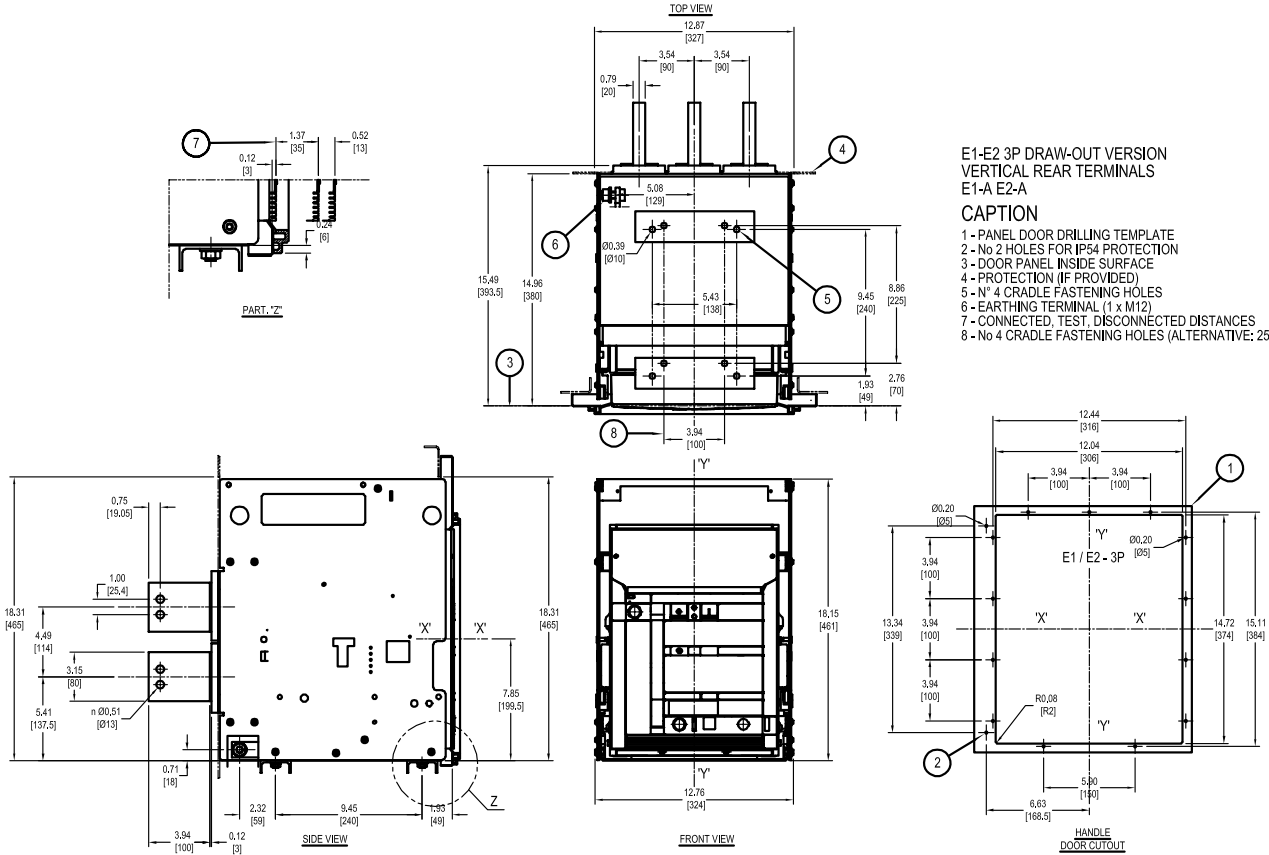
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E1 - E2, withdrawable with vertical rear terminals**  
**3 pole**

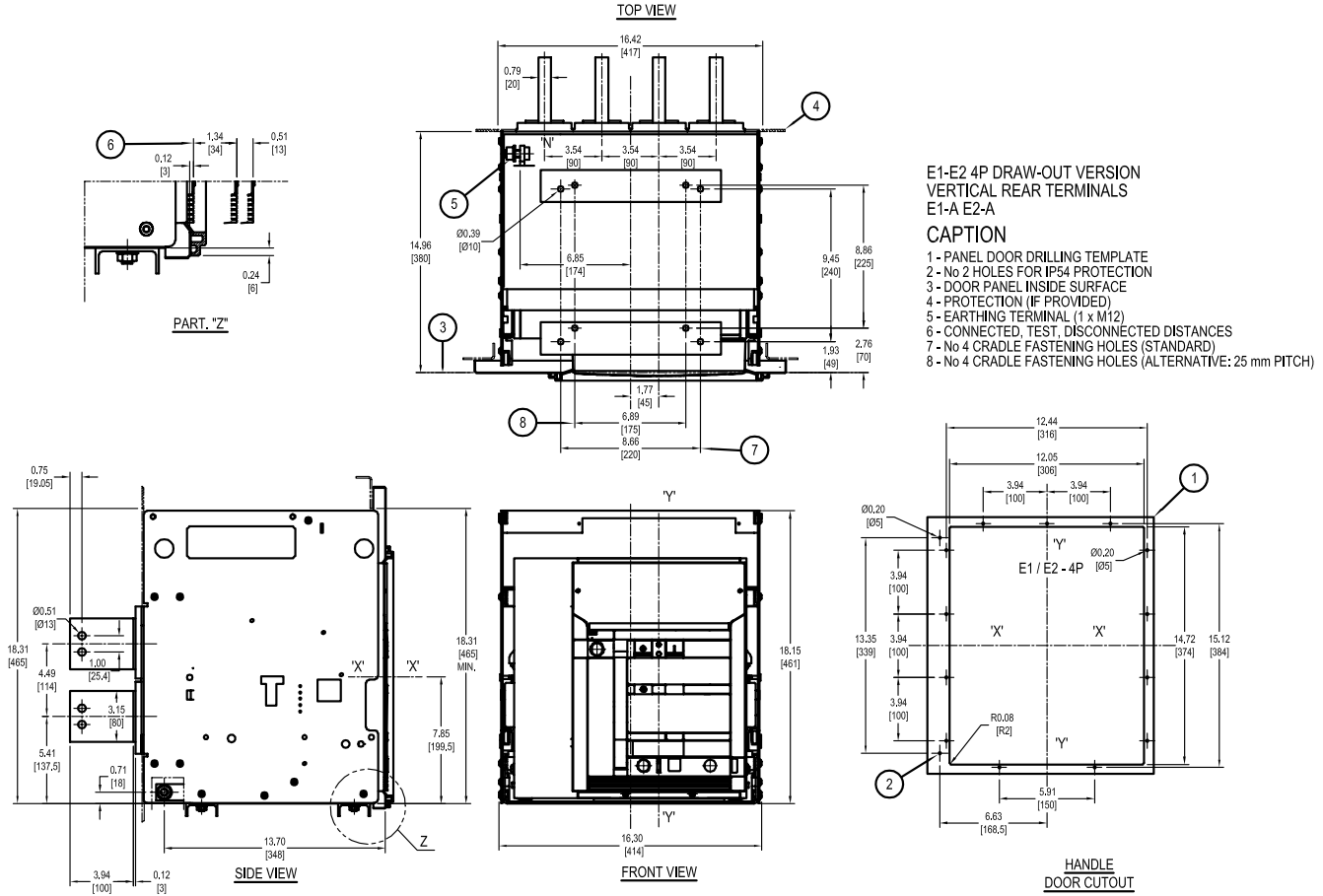
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
E1 - E2, withdrawable with vertical rear terminals  
4 pole

← 00.00 → Inches  
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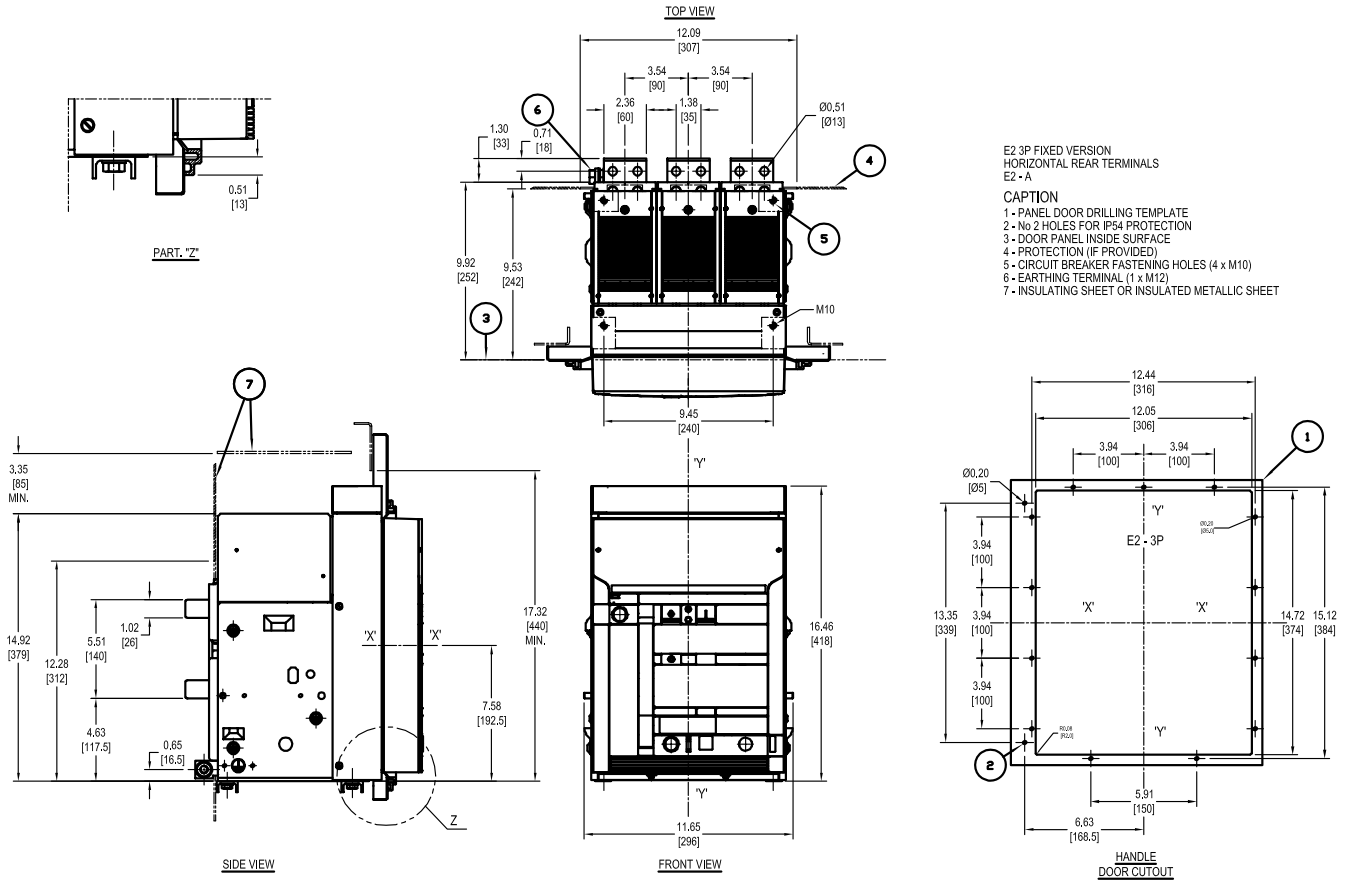


① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>



**Approximate dimensions (for UL version) ①**  
**E2, fixed with horizontal rear terminals**  
**3 pole**

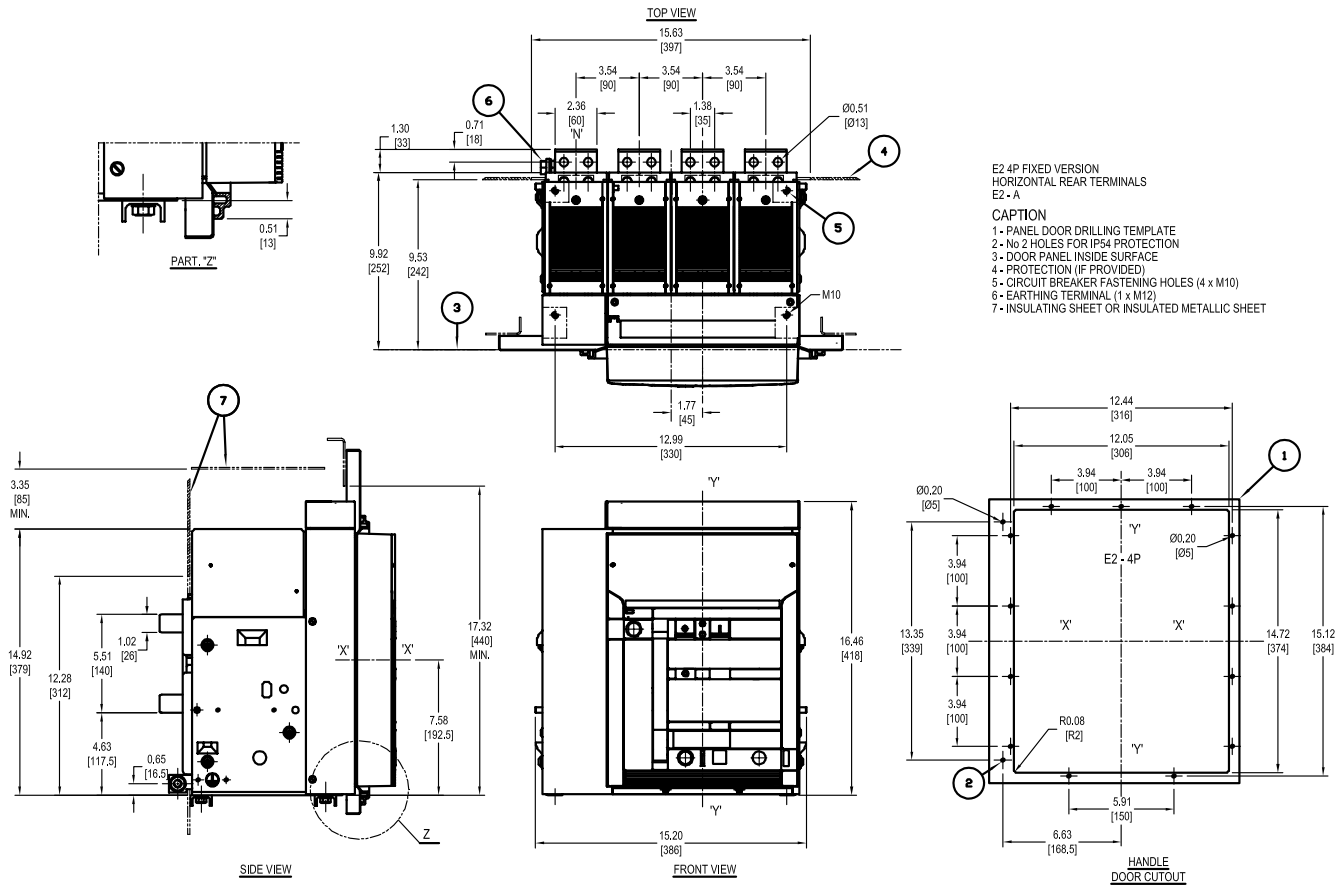
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
E2, fixed with horizontal rear terminals  
4 pole

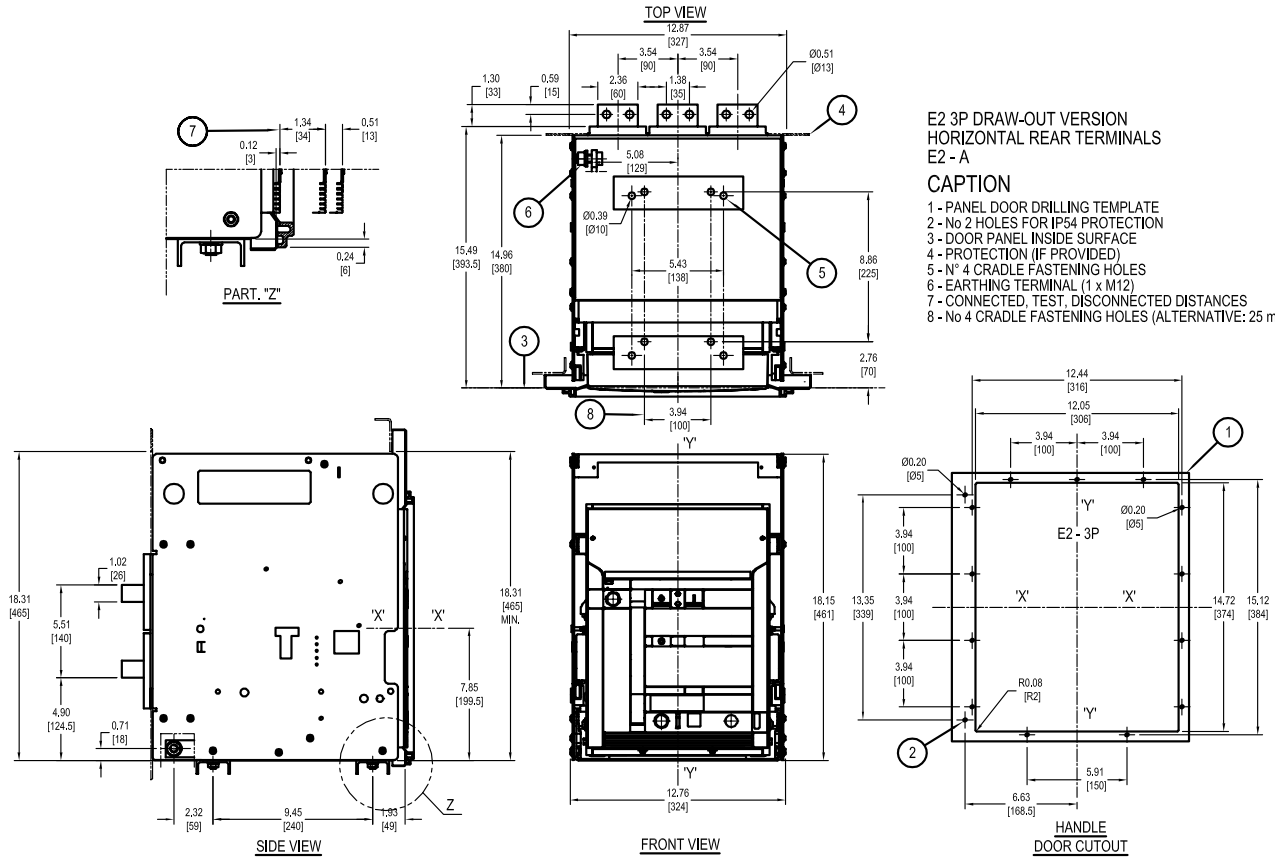
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E2, withdrawable with horizontal rear terminals**  
**3 pole**

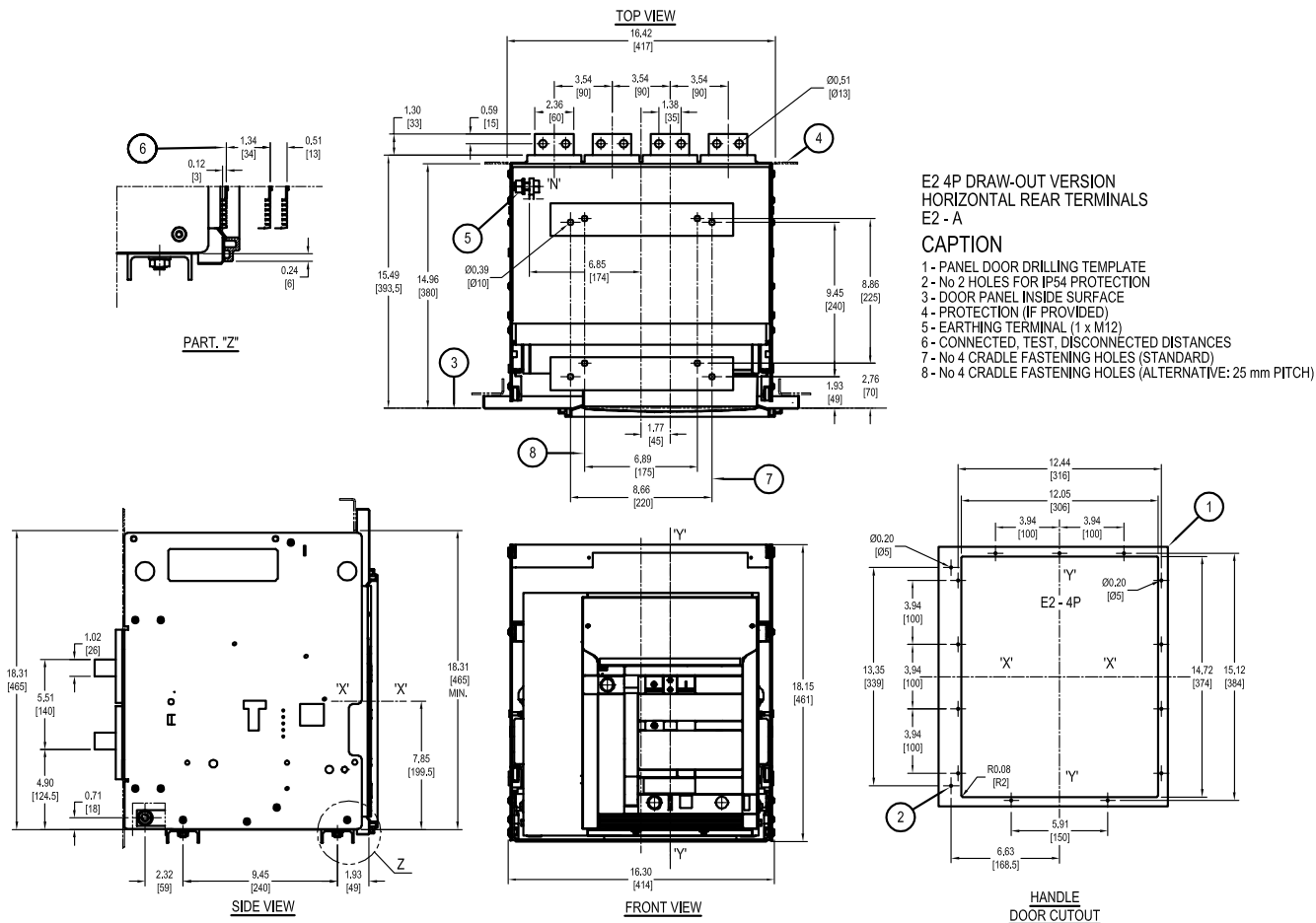
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E2, withdrawable with horizontal rear terminals**  
**4 pole**

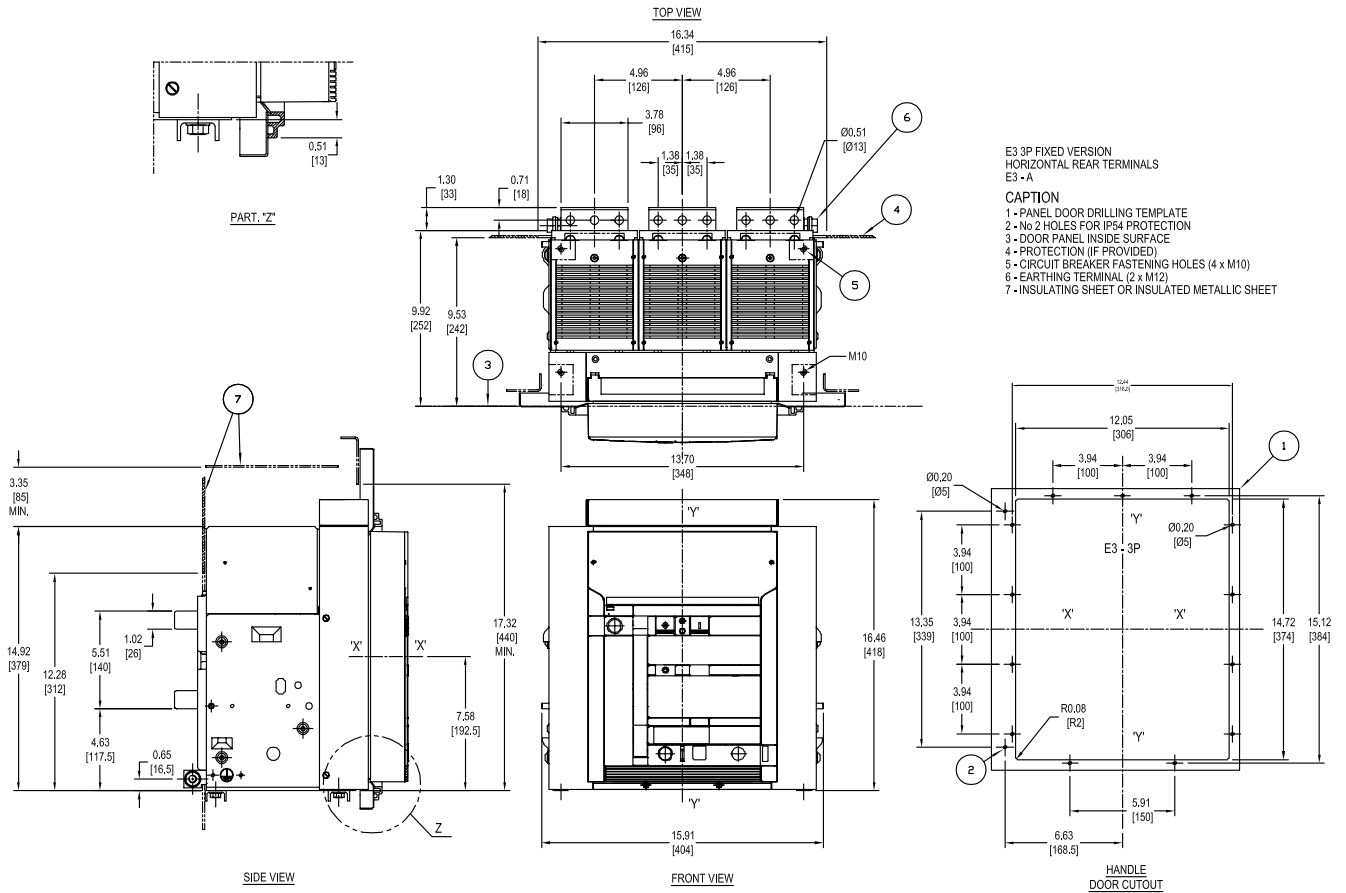
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E3, fixed with horizontal rear terminals**  
**3 pole**

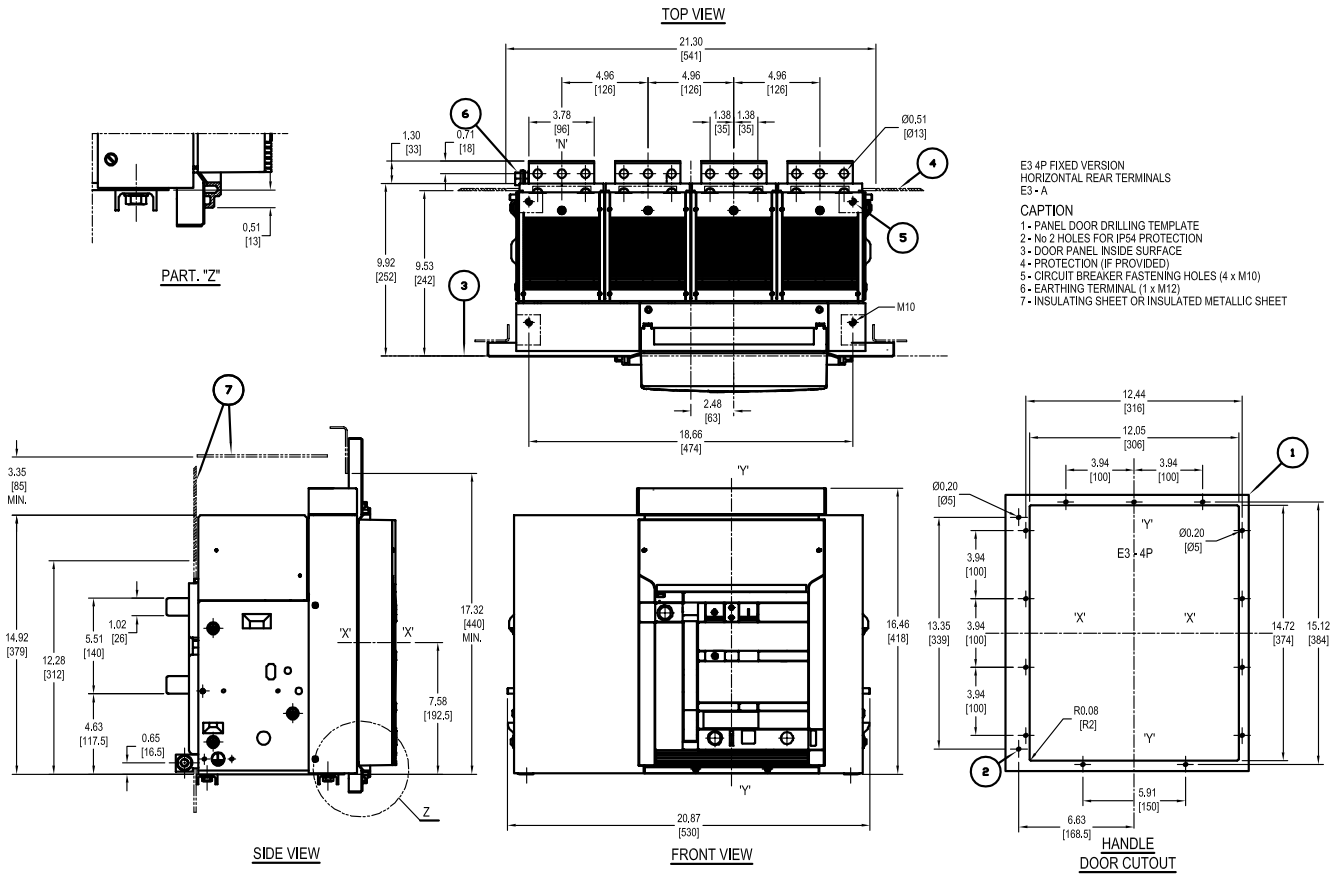
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
E3, fixed with horizontal rear terminals  
4 pole

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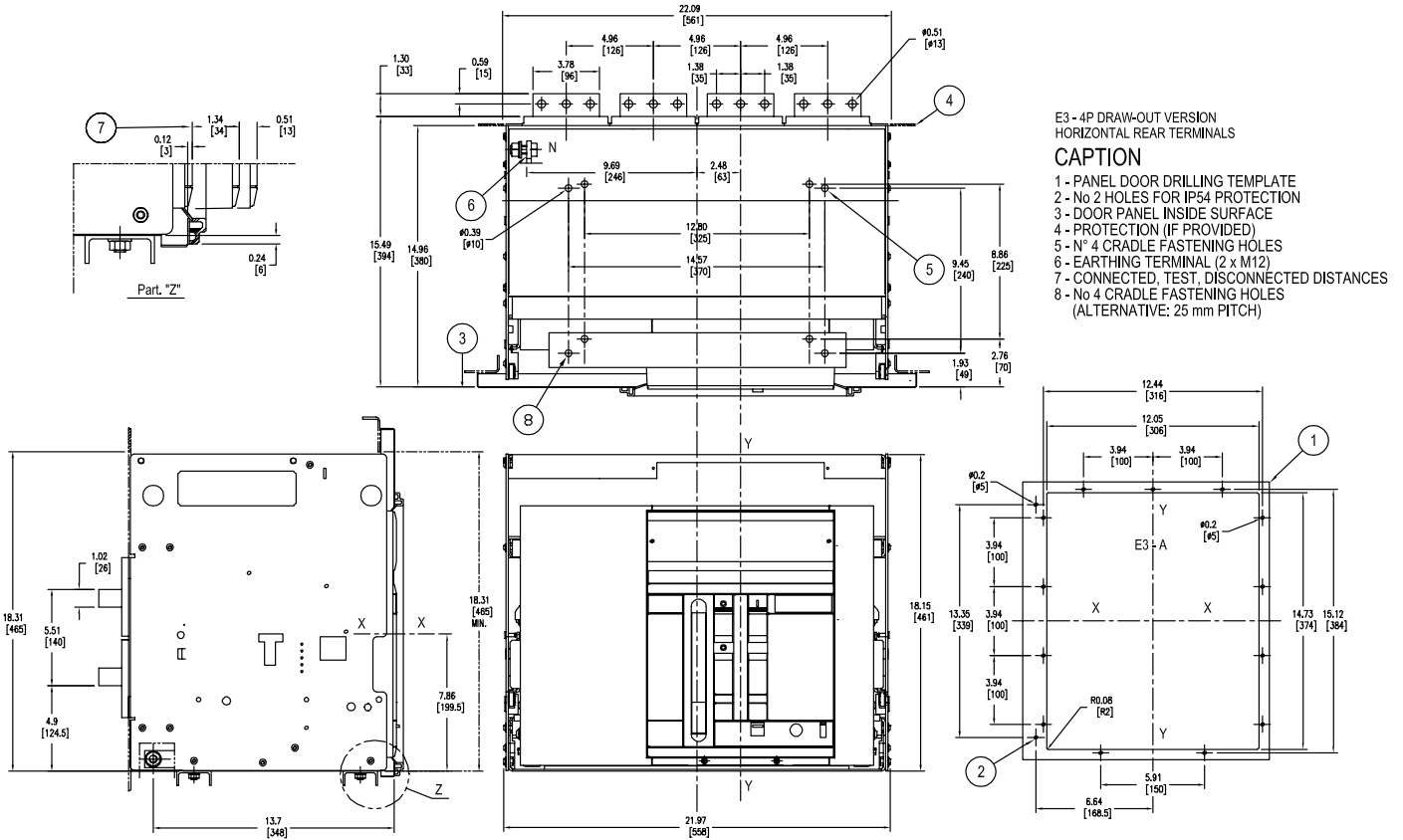


① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>



**Approximate dimensions (for UL version) ①**  
**E3, withdrawable with horizontal rear terminals**  
**4 pole**

← 00.00 → Inches  
00.00 → [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

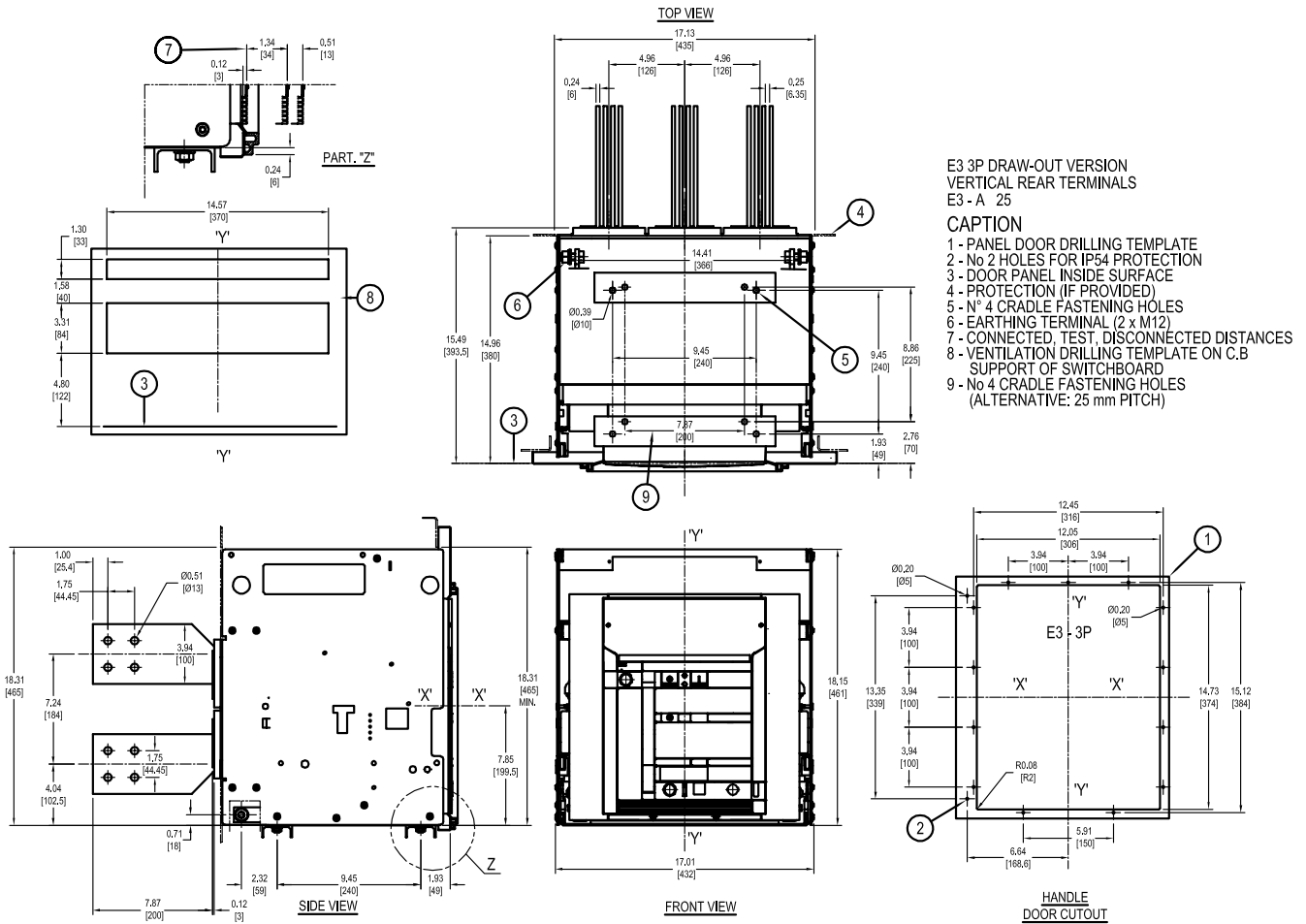


# Approximate dimensions (for UL version) ①

## E3 (2500A), withdrawable with vertical rear terminals

### 3 pole

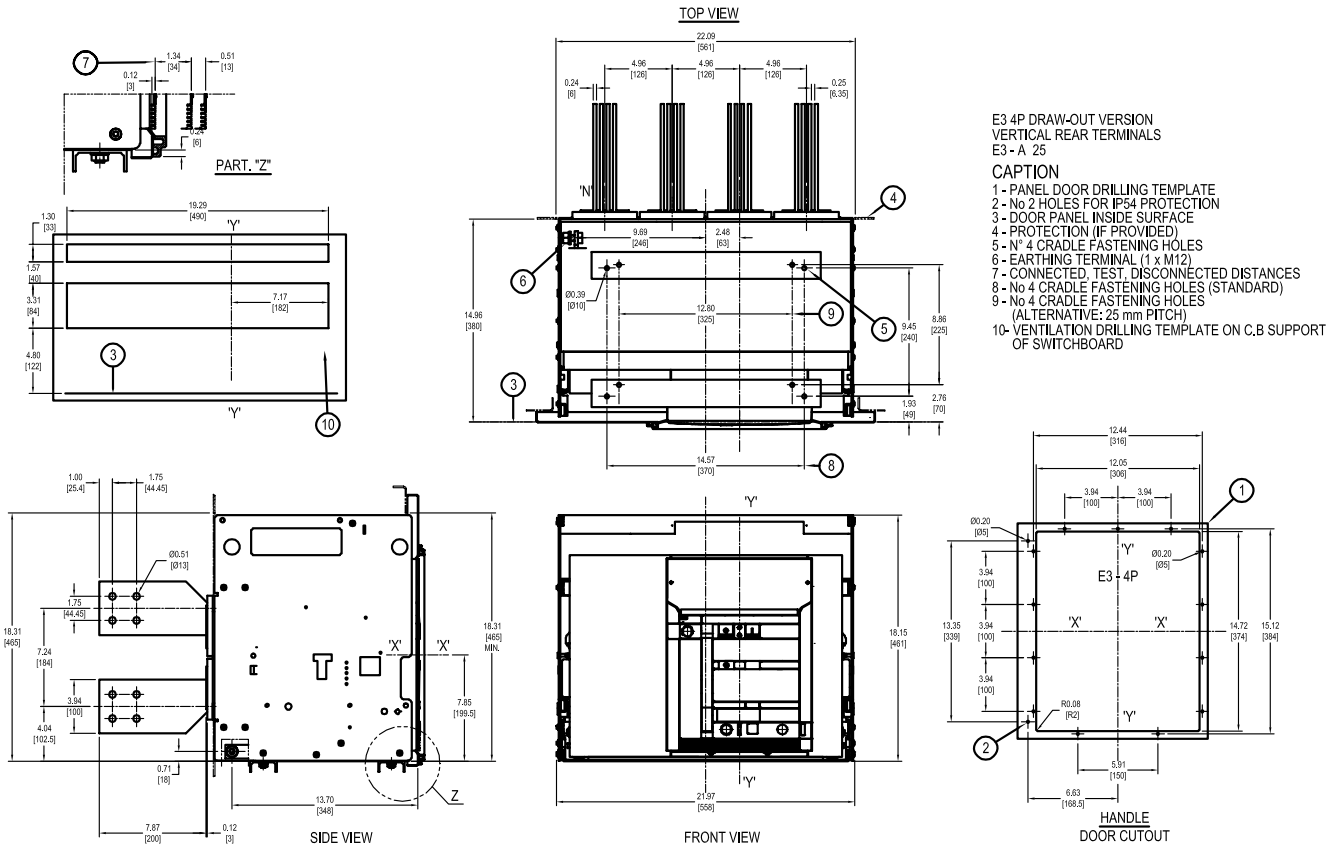
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E3 (2500A), withdrawable with vertical rear terminals**  
**4 pole**

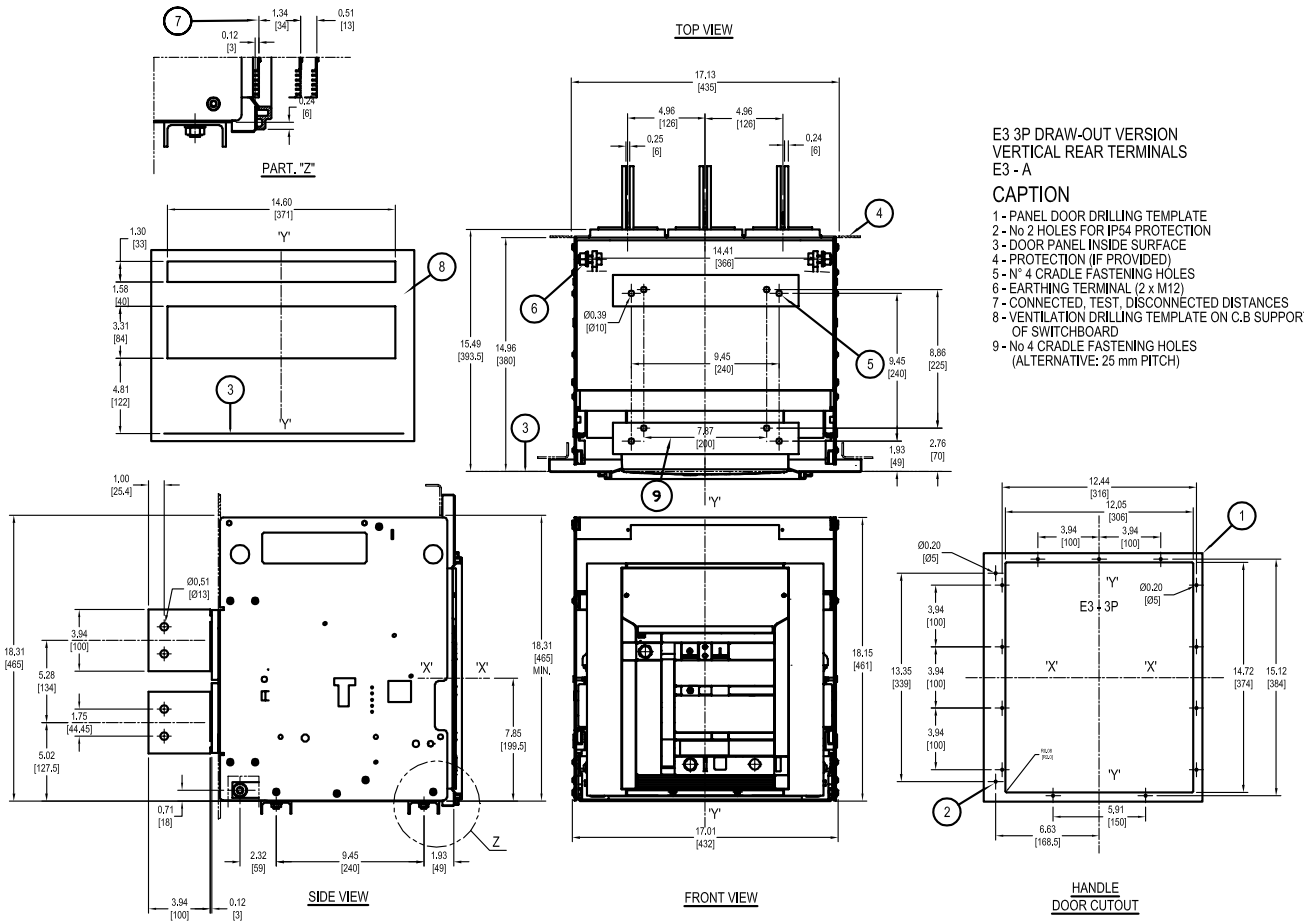
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① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E3 (1200A/1600A/2000A), withdrawable with**  
**Vertical rear terminals, 3 pole**

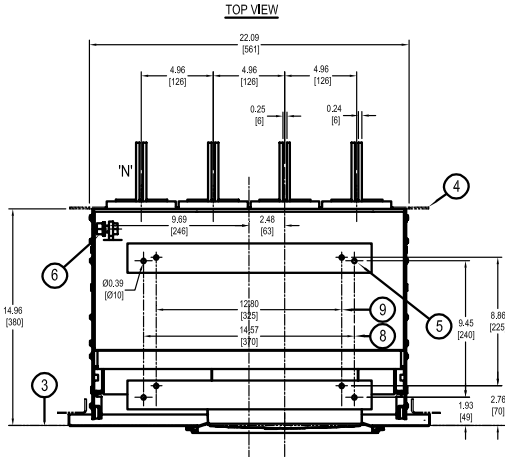
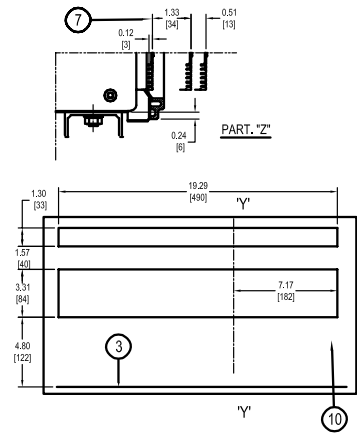
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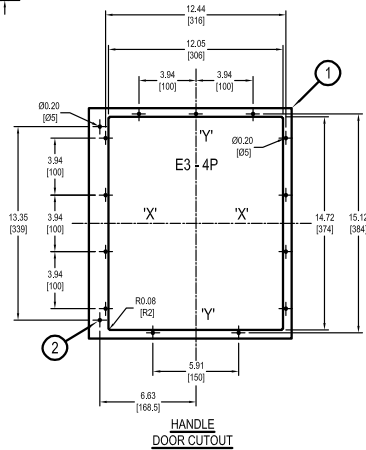
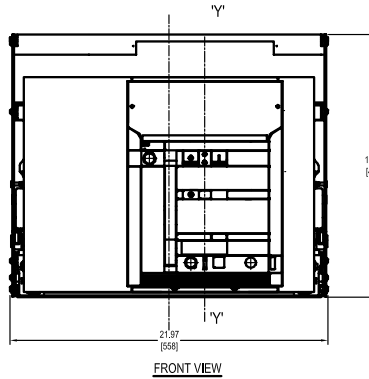
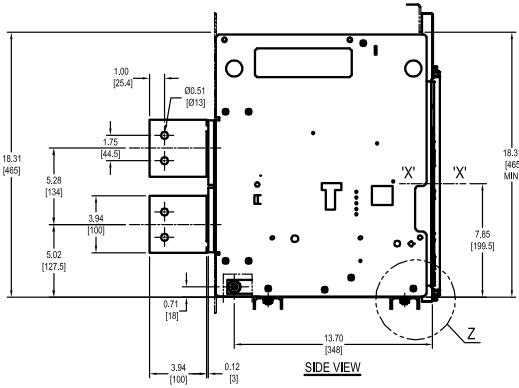
① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E3 (1200A/1600A/2000A), withdrawable with**  
**Vertical rear terminals, 4 pole**

← 00.00 → Inches  
00.00 → [Millimeters]



**E3 4P DRAW-OUT VERSION**  
**VERTICAL REAR TERMINALS**  
**E3 - A**  
**CAPTION**  
1 - PANEL DOOR DRILLING TEMPLATE  
2 - No 2 HOLES FOR IP54 PROTECTION  
3 - DOOR PANEL INSIDE SURFACE  
4 - PROTECTION (IF PROVIDED)  
5 - N° 4 CRADLE FASTENING HOLES  
6 - EARTHING TERMINAL (1 x M12)  
7 - CONNECTED, TEST, DISCONNECTED DISTANCES  
8 - No 4 CRADLE FASTENING HOLES (STANDARD)  
9 - No 4 CRADLE FASTENING HOLES (ALTERNATIVE: 25 mm PITCH)  
10 - VENTILATION DRILLING TEMPLATE ON C.B SUPPORT OF SWITCHBOARD

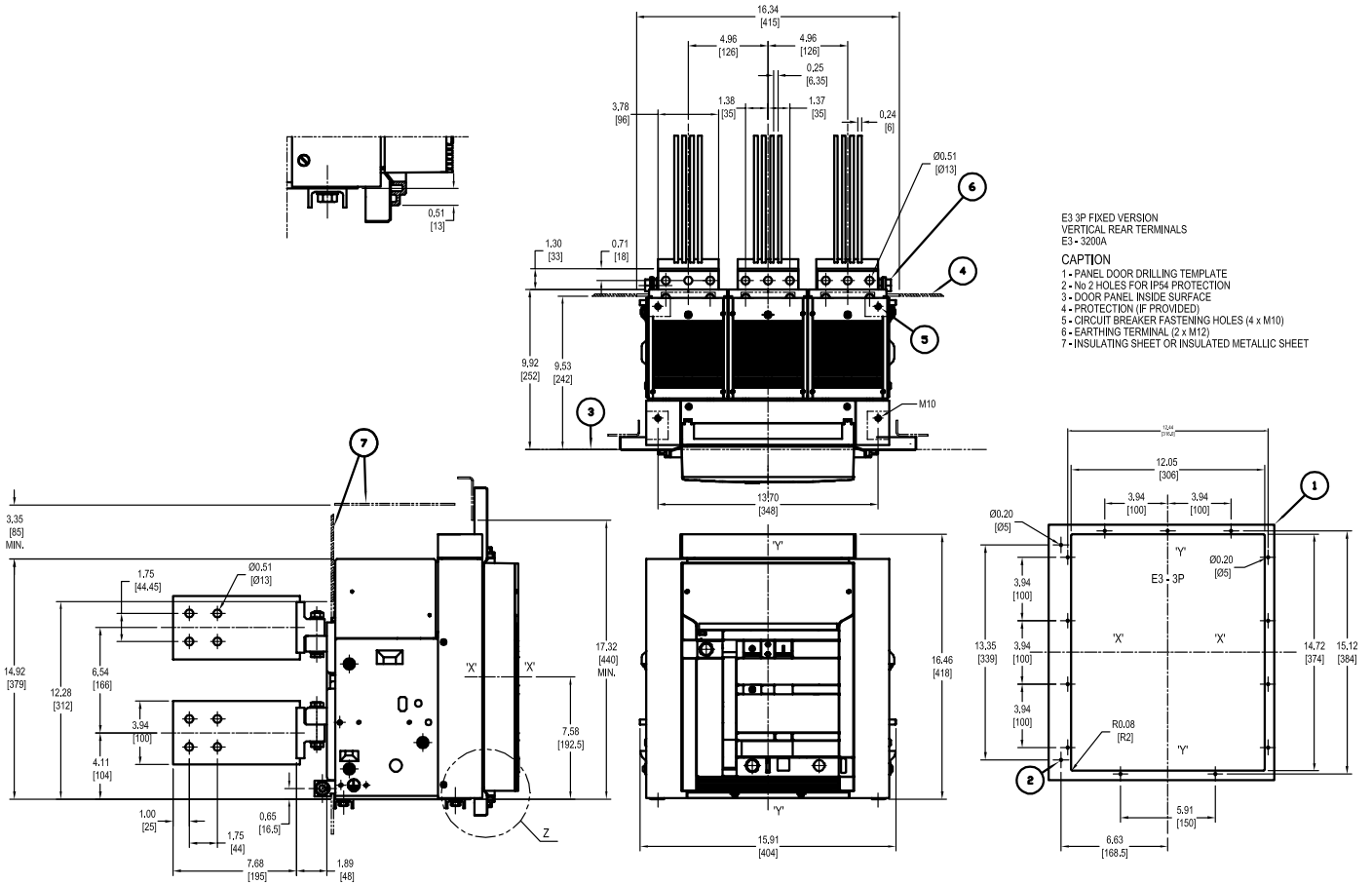


① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

# Approximate dimensions (for UL version) ①

## E3 (3200A), fixed with Vertical rear terminals, 3 pole

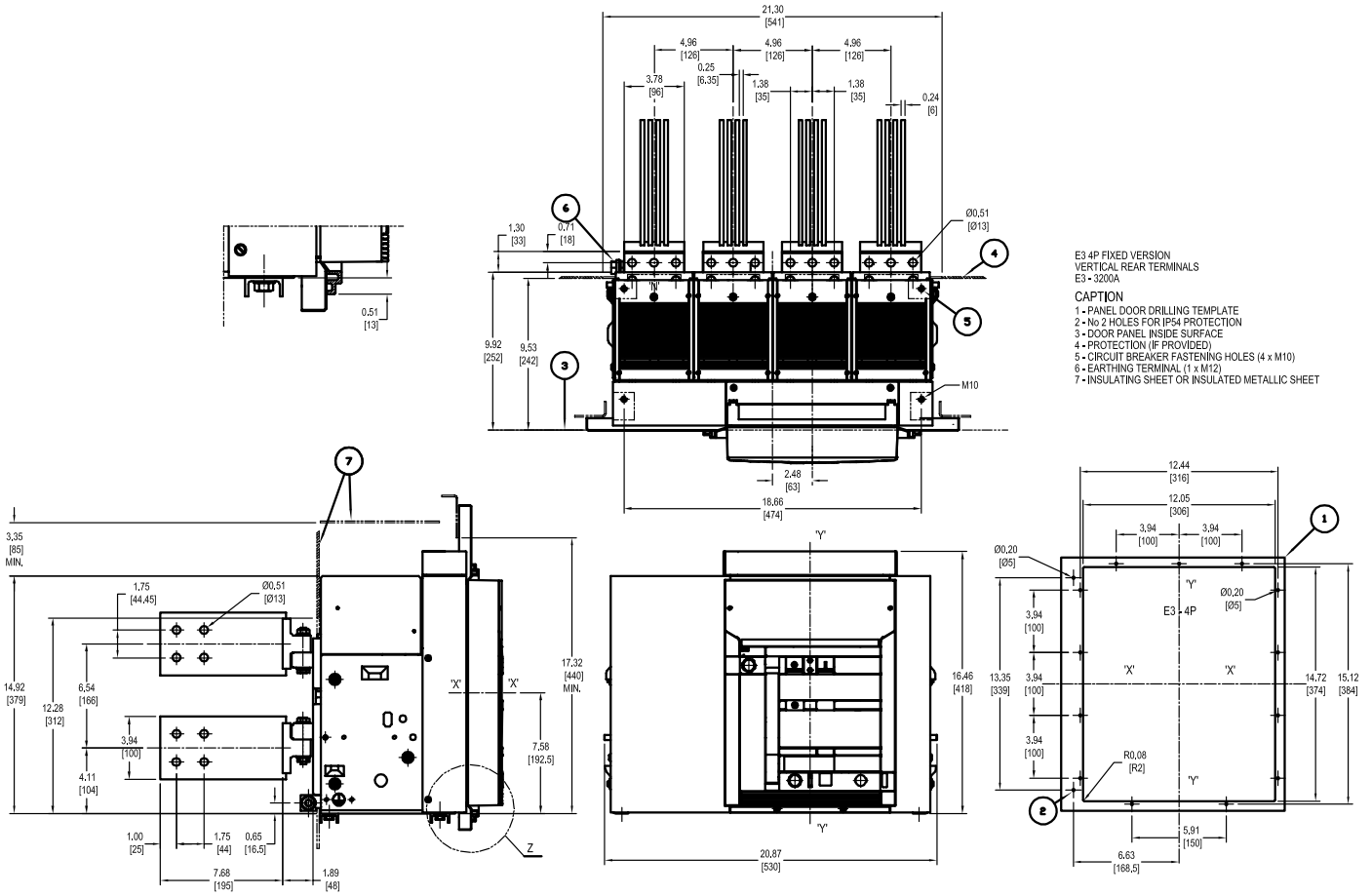
← 00.00 Inches  
00.00 [Millimeters] →



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
E3 (3200A), fixed with  
Vertical rear terminals, 4 pole

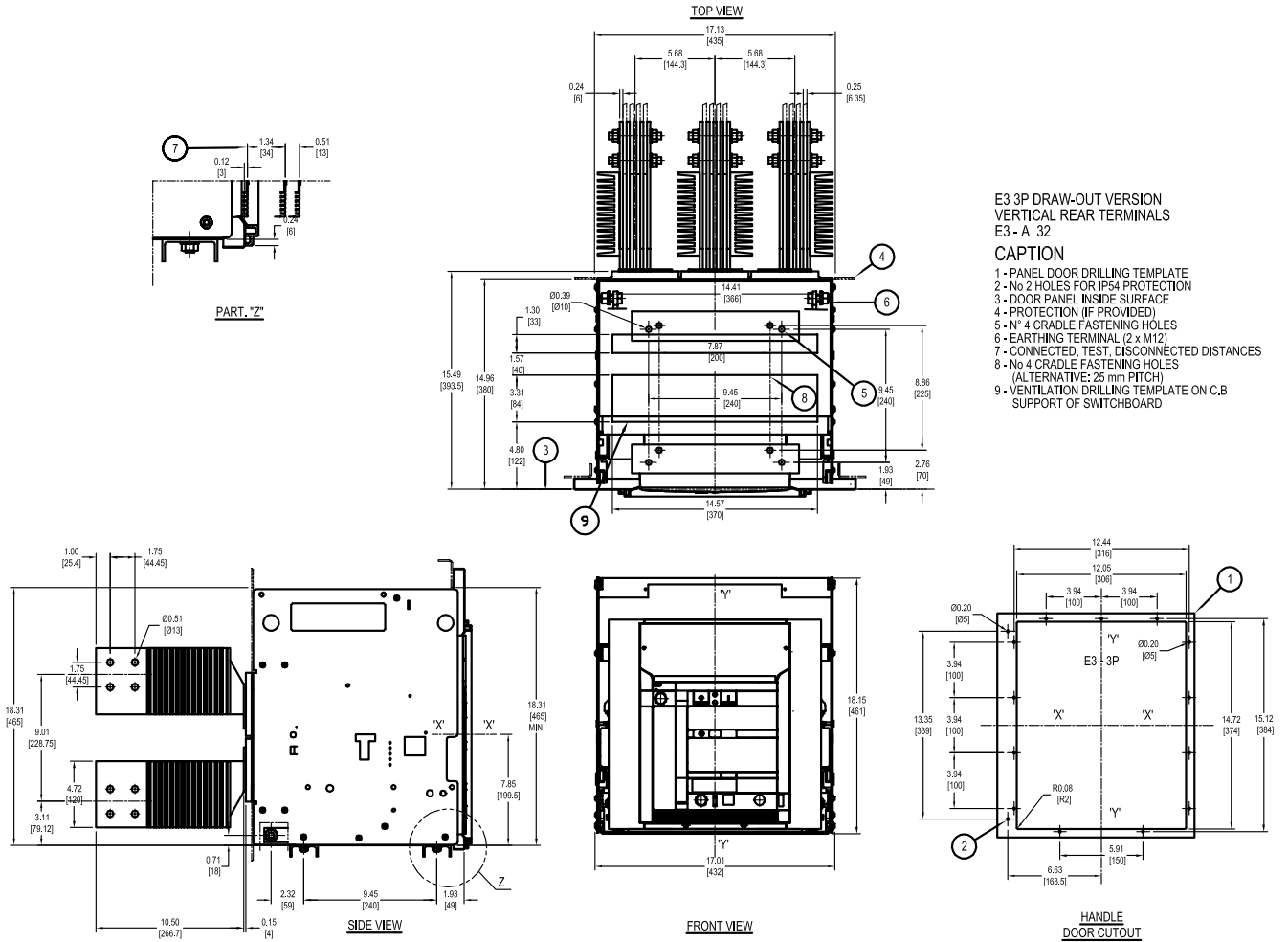
00.00 Inches  
00.00 [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E3 (3200A), withdrawable with**  
**Vertical rear terminals, 3 pole**

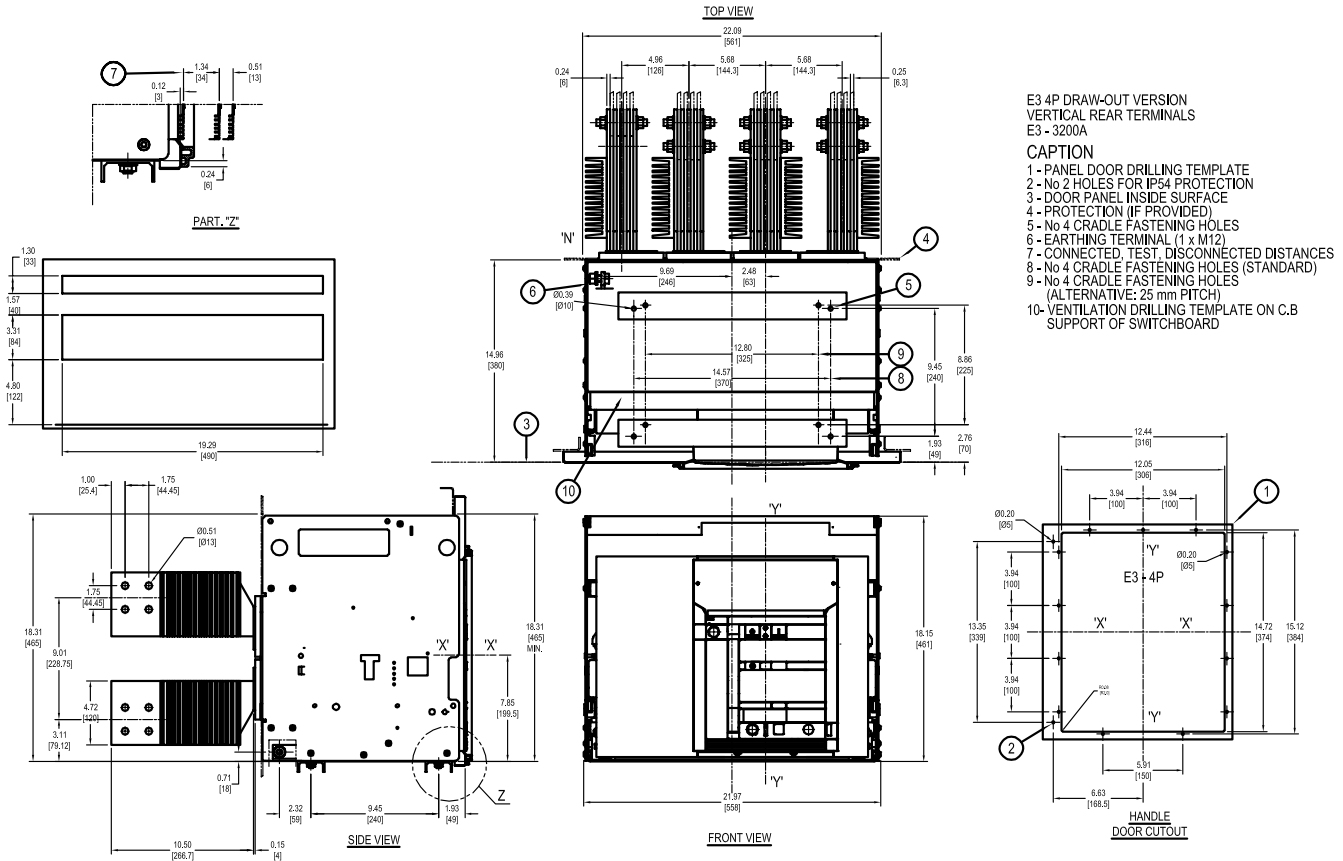
← 00.00 Inches  
 00.00 → [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
E3 (3200A), withdrawable with  
Vertical rear terminals, 4 pole

← 00.00 → Inches  
00.00 → [Millimeters]



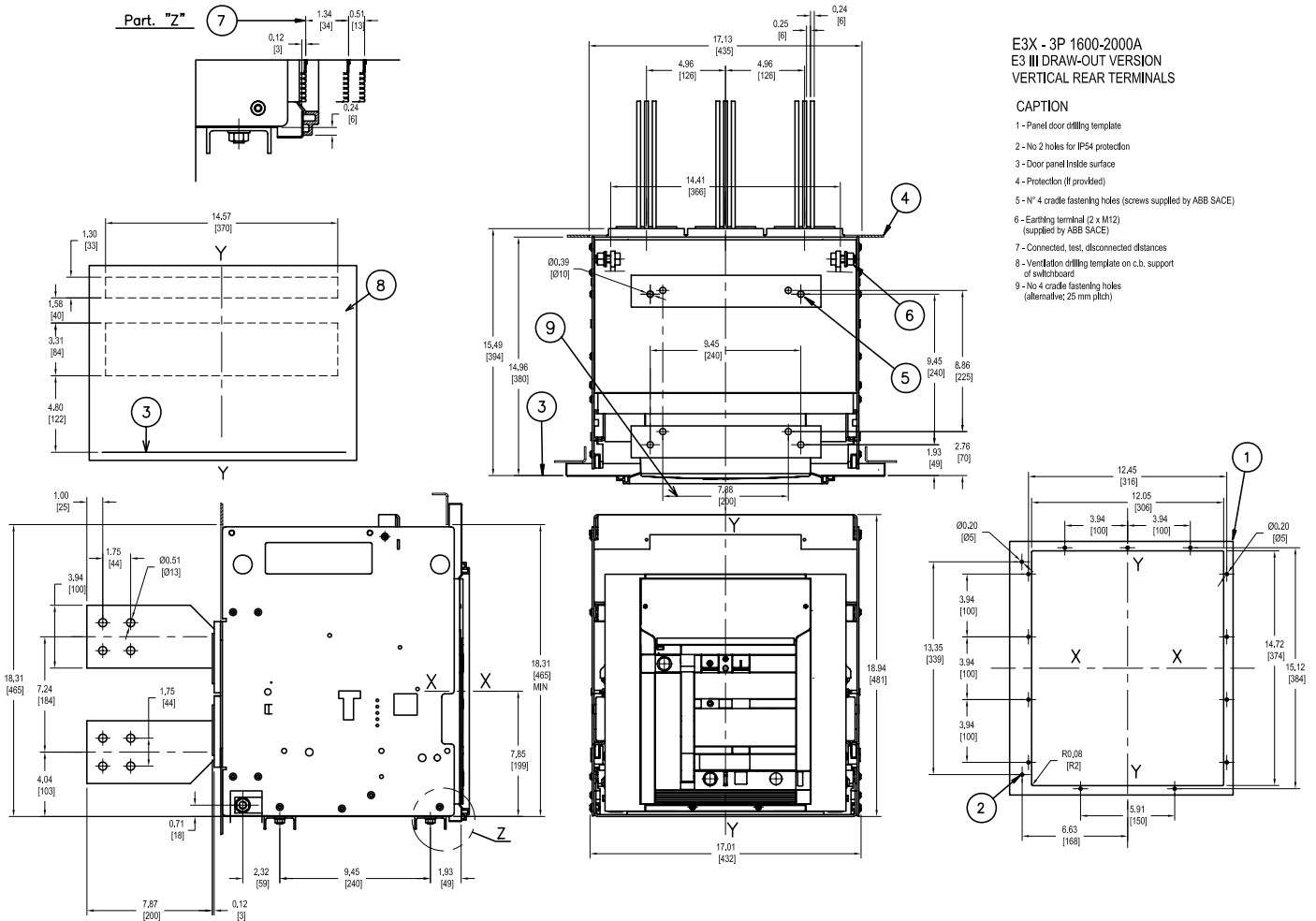
① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>



# Approximate dimensions (for UL version) ①

## E3X Draw-out with Vertical rear terminals, 3 pole, 800-2000A

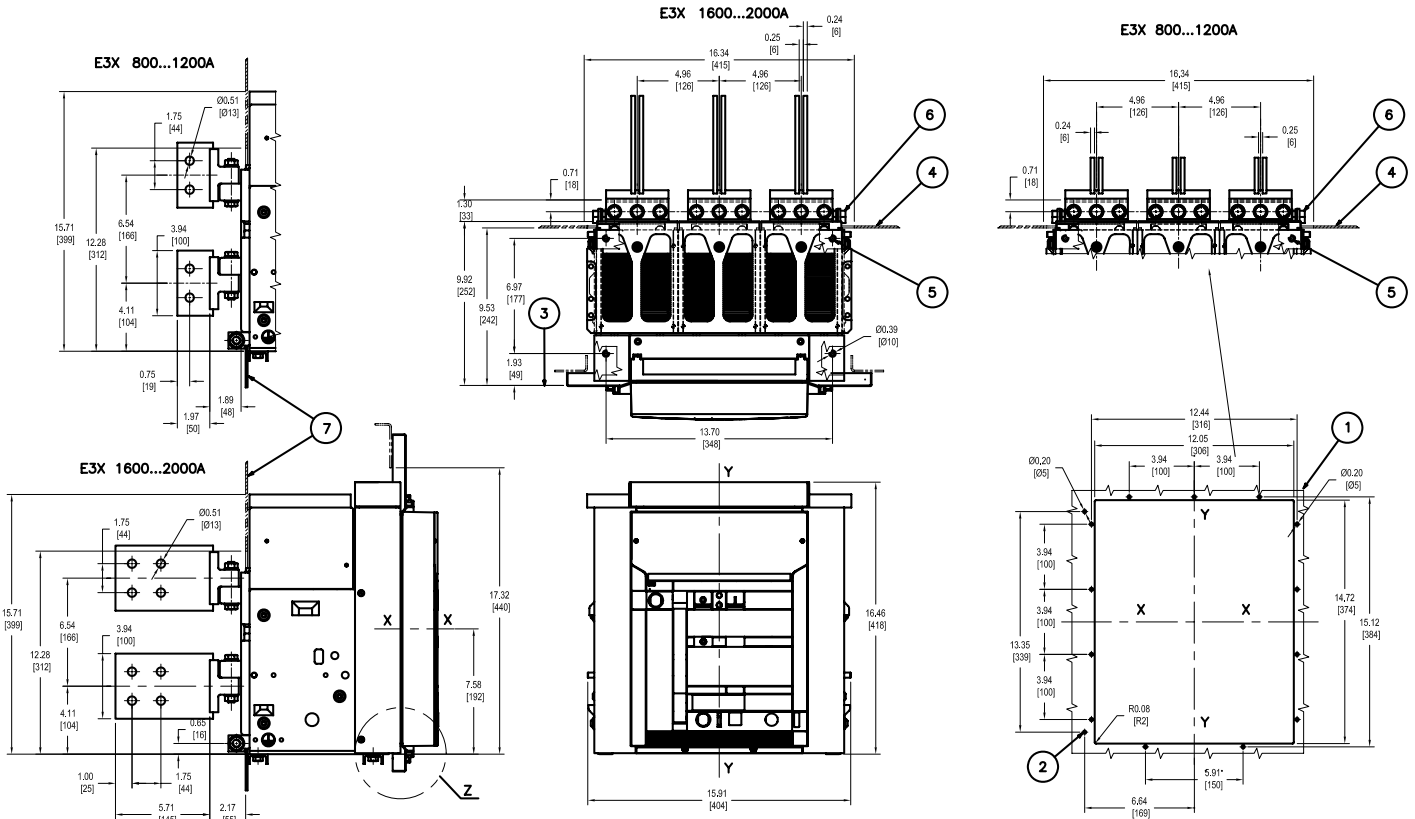
00.00 Inches  
00.00 [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

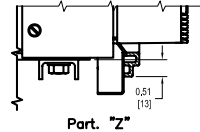
**Approximate dimensions (for UL version) ①**  
**E3X Fixed with**  
**Vertical rear terminals, 3 pole, 800-2000A**

00.00 — Inches  
00.00 — Millimeters



**E3X FIXED VERTICAL REAR TERMINALS**

- CAPTION**
- 1- PANEL DOOR DRILLING TEMPLATE
  - 2- No. 2 HOLES FOR IP54 PROTECTION
  - 3- DOOR PANEL INSIDE SURFACE
  - 4- PROTECTION (IF PROVIDED)
  - 5- CIRCUIT BREAKER FASTENING HOLES (4xM10)
  - 6- EARTHING TERMINALS (2xM12) (SUPPLIED BY ABB SACE)
  - 7- INSULATING SHEET OR INSULATED METALLIC SHEET



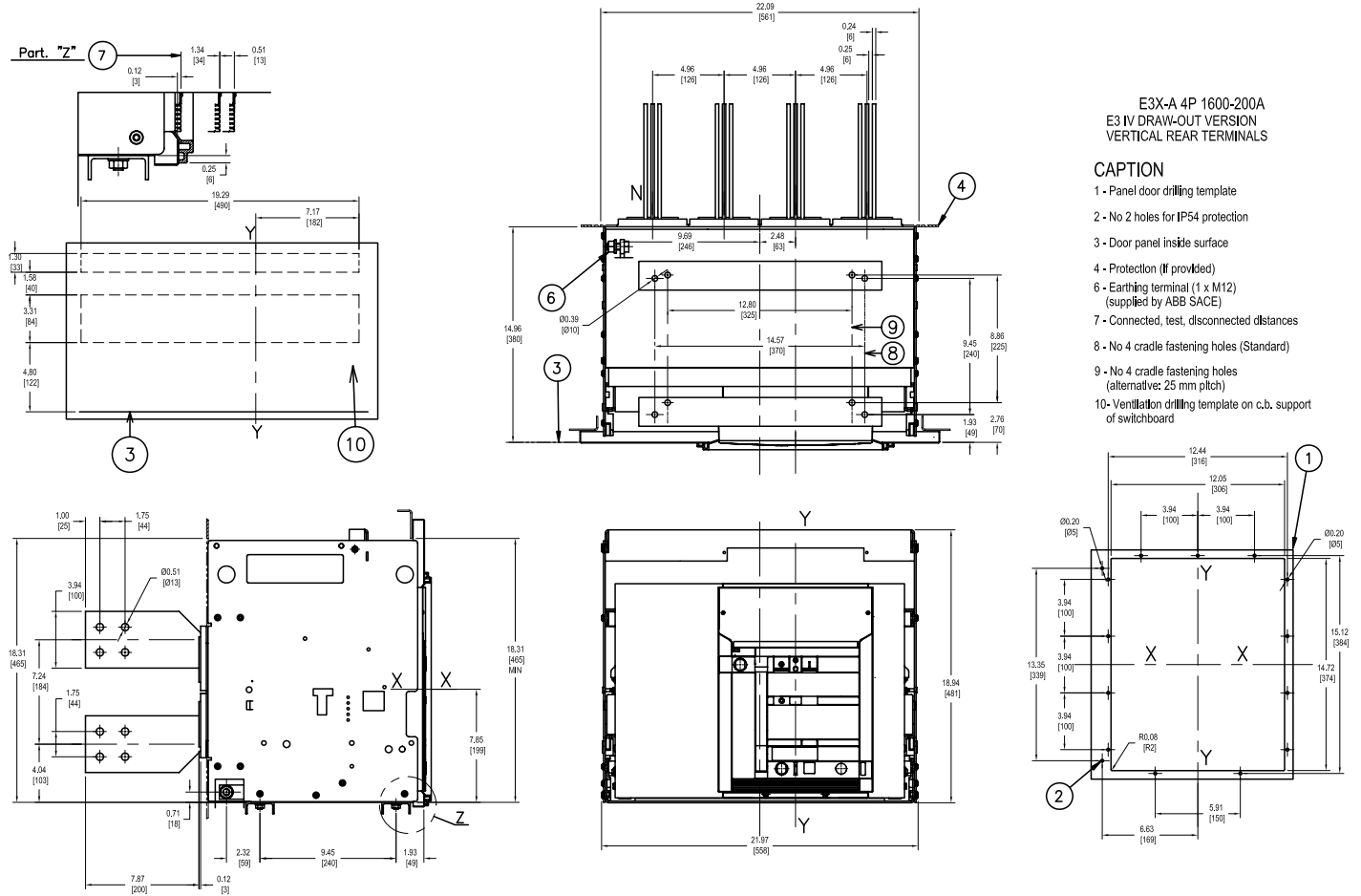
① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

# Approximate dimensions (for UL version) ①

## E3X Draw-out with

### Vertical rear terminals, 4 pole, 1600-2000A

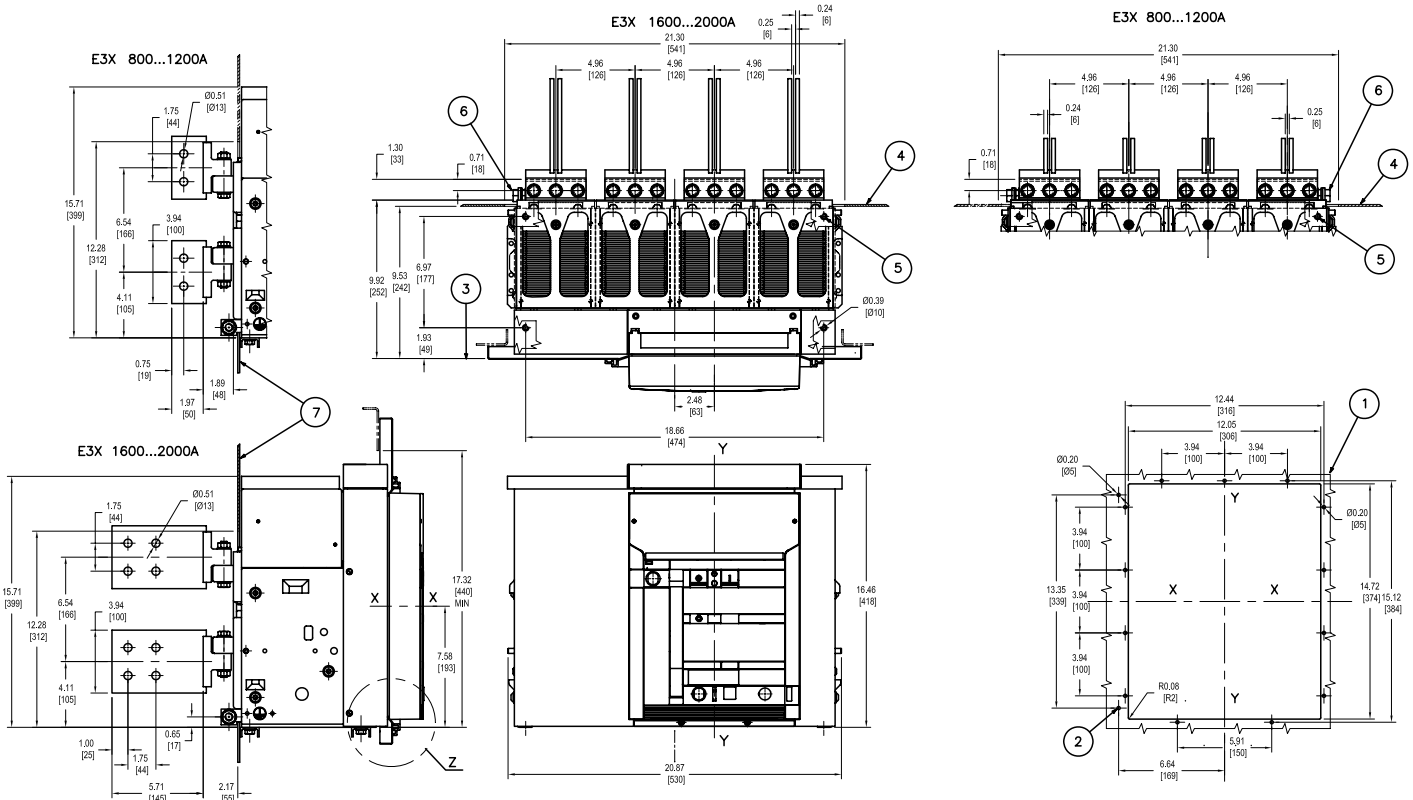
00.00 Inches  
00.00 [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

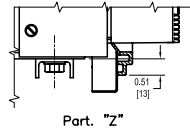
**Approximate dimensions (for UL version) ①**  
**E3X Fixed with**  
**Vertical rear terminals, 4 pole, 800-2000A**

← 00.00 → Inches  
00.00 → [Millimeters]



**E3X IV FIXED VERTICAL REAR TERMINALS**

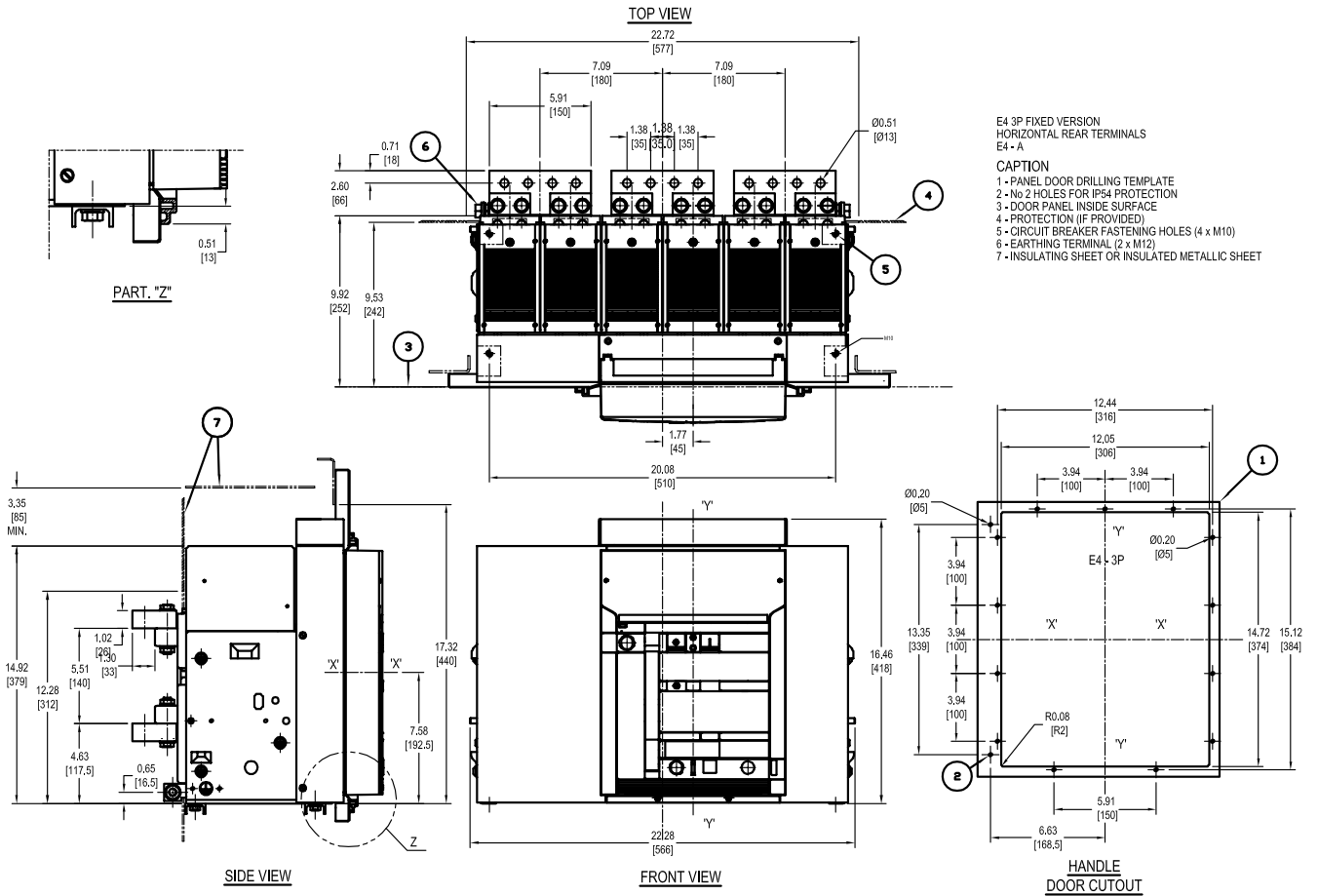
- CAPTION**
- 1- PANEL DOOR DRILLING TEMPLATE
  - 2- No. 2 HOLES FOR IP54 PROTECTION
  - 3- DOOR PANEL INSIDE SURFACE
  - 4- PROTECTION (IF PROVIDED)
  - 5- CIRCUIT BREAKER FASTENING HOLES (4xM10)
  - 6- EARTHING TERMINALS (2xM12) (SUPPLIED BY ABB SACE)
  - 7- INSULATING SHEET OR INSULATED METALLIC SHEET



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E4, fixed with horizontal rear terminals**  
**3 pole**

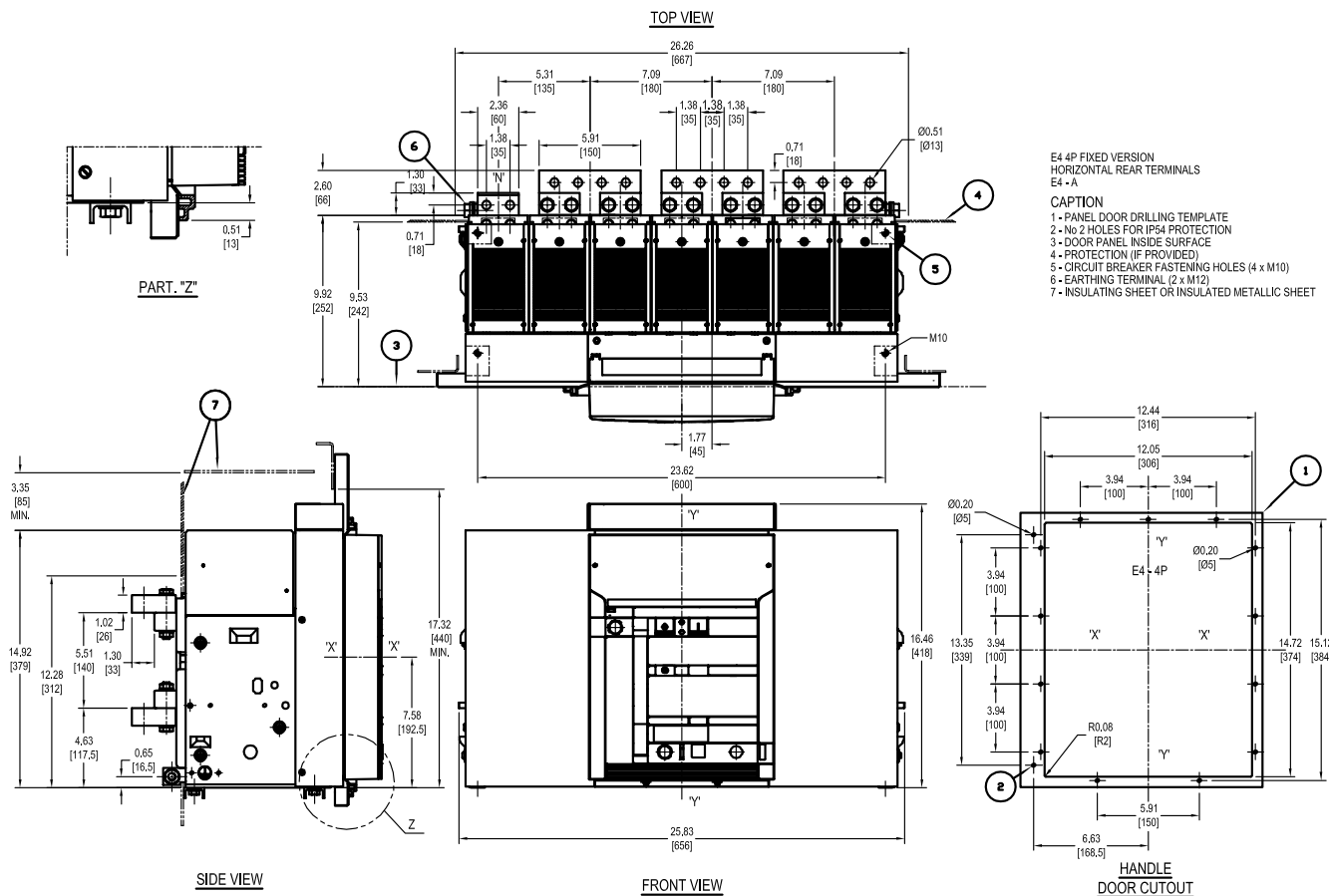
← 00.00 Inches  
 00.00 → [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
E4, fixed with horizontal rear terminals  
4 pole (50% neutral)

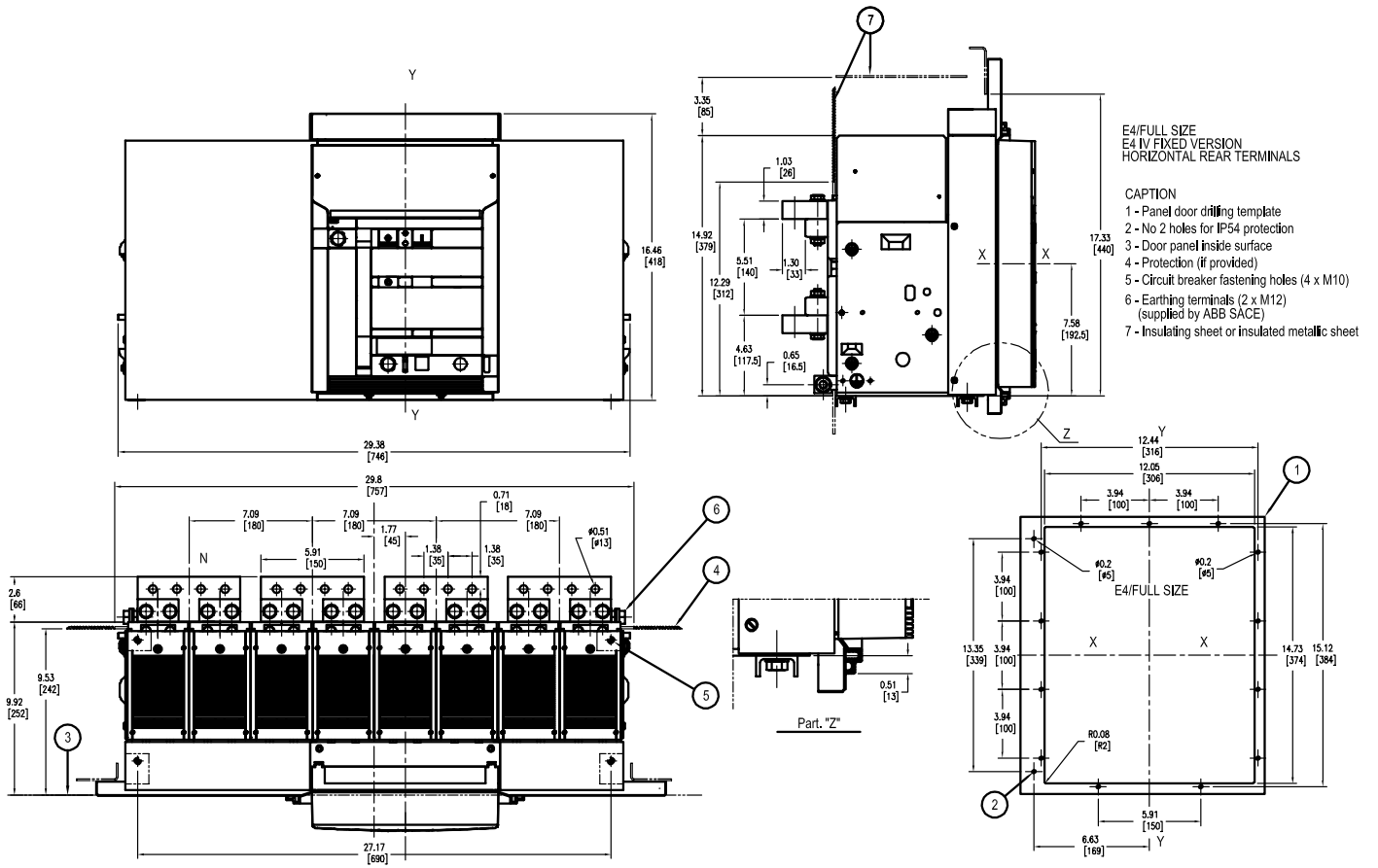
← 00.00 → Inches  
00.00 → [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E4, fixed with horizontal rear terminals**  
**4 pole (100% neutral)**

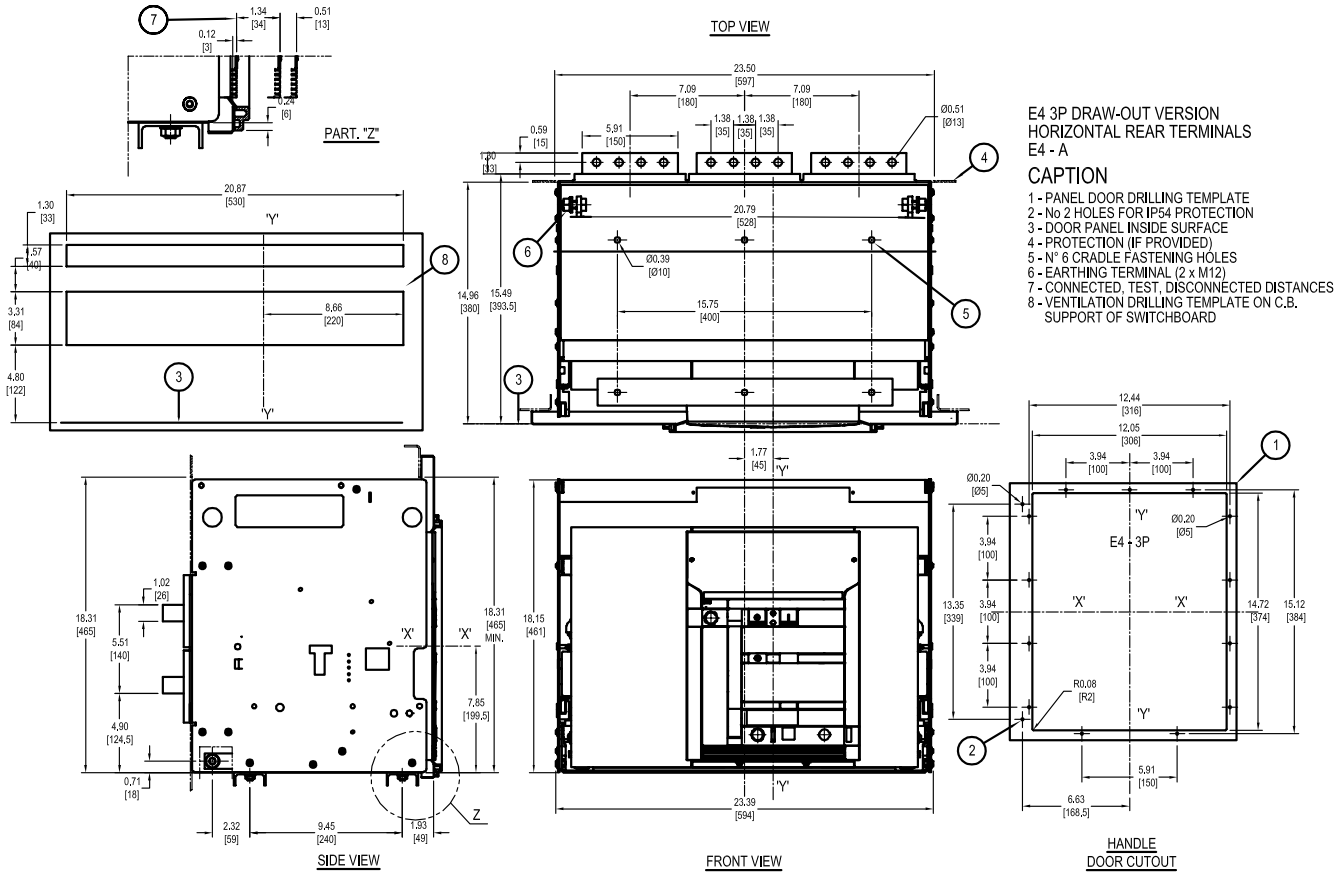
← 00.00 → Inches  
 00.00 → [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E4, withdrawable with horizontal rear terminals**  
**3 pole**

← 00.00 → Inches  
00.00 → [Millimeters]

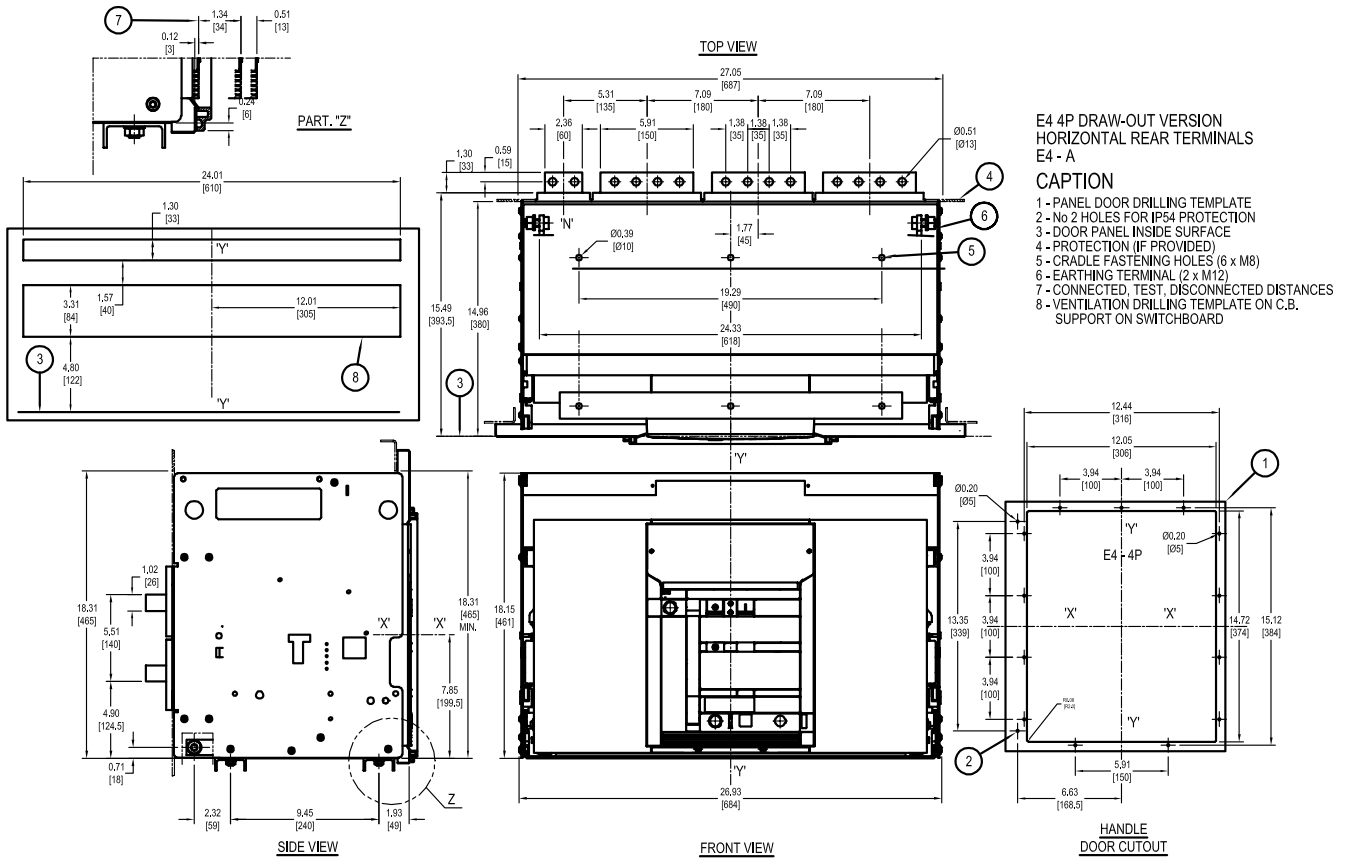


① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>



**Approximate dimensions (for UL version) ①**  
**E4, withdrawable with horizontal rear terminals**  
**4 pole (50% neutral)**

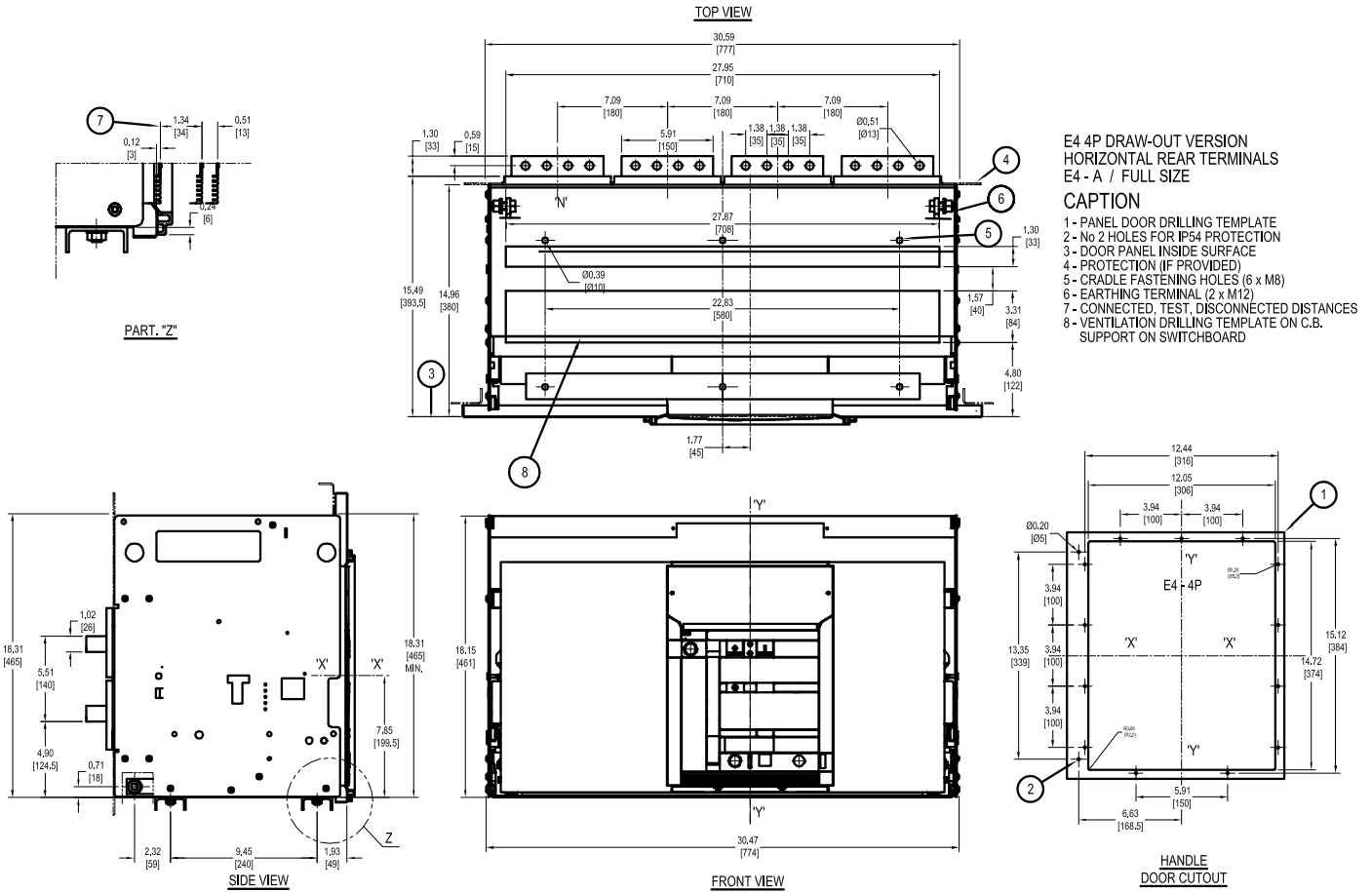
← 00.00 Inches  
 00.00 → [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E4, withdrawable with horizontal rear terminals**  
**4 pole (100% neutral)**

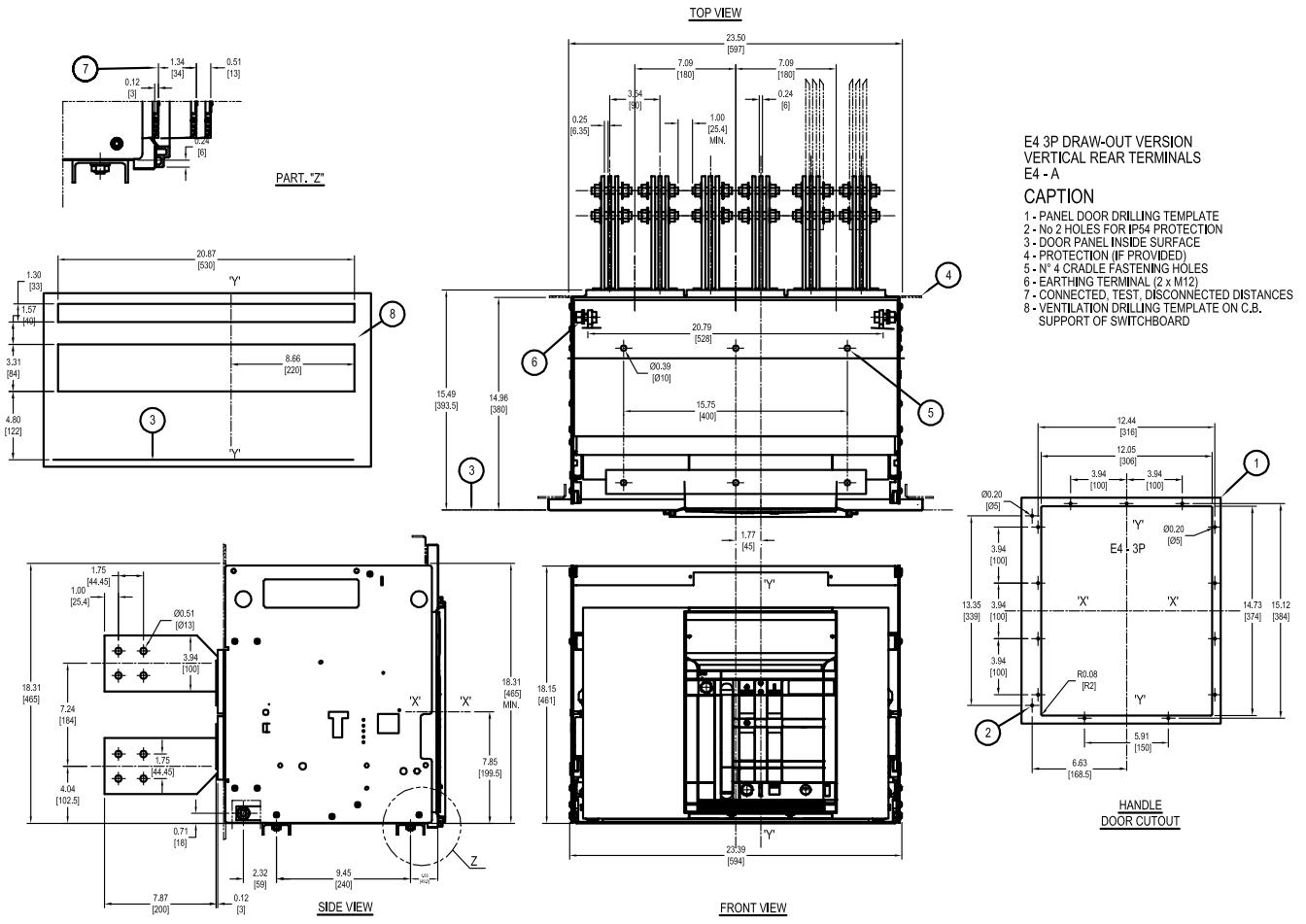
← 00.00 → Inches  
00.00 → Millimeters



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E4, withdrawable with vertical rear terminals**  
**3 pole**

← 00.00 Inches  
 00.00 → [Millimeters]



**E4 3P DRAW-OUT VERSION  
 VERTICAL REAR TERMINALS  
 E4 - A**

**CAPTION**

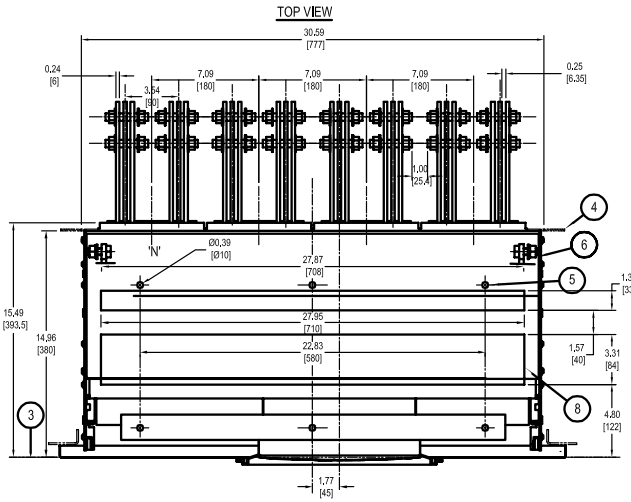
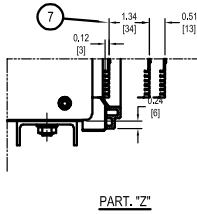
- 1 - PANEL DOOR DRILLING TEMPLATE
- 2 - NO 2 HOLES FOR IP54 PROTECTION
- 3 - DOOR PANEL INSIDE SURFACE
- 4 - PROTECTION (IF PROVIDED)
- 5 - N° 4 CRADLE FASTENING HOLES
- 6 - EARTHING TERMINAL (2 x M12)
- 7 - CONNECTED, TEST, DISCONNECTED DISTANCES
- 8 - VENTILATION DRILLING TEMPLATE ON C.B. SUPPORT OF SWITCHBOARD

① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

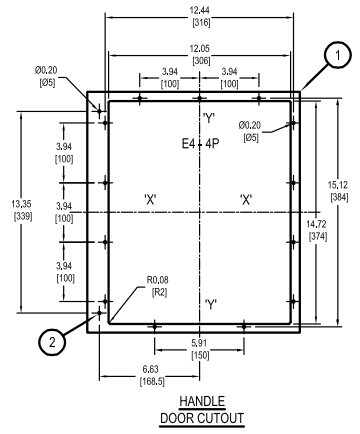
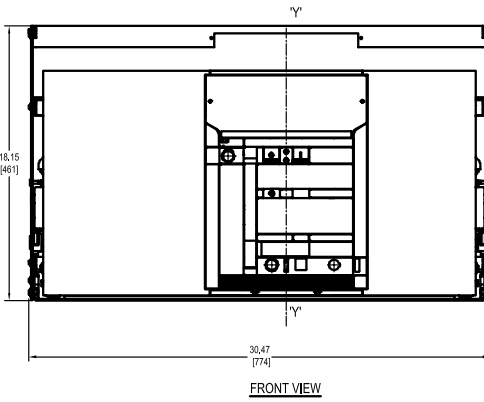
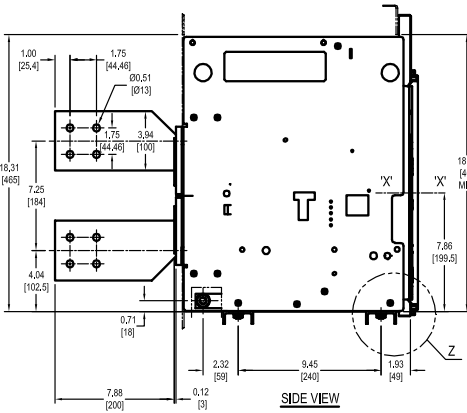


**Approximate dimensions (for UL version) ①**  
**E4, withdrawable with vertical rear terminals**  
**4 pole (100% neutral)**

← 00.00 Inches  
 00.00 Millimeters →



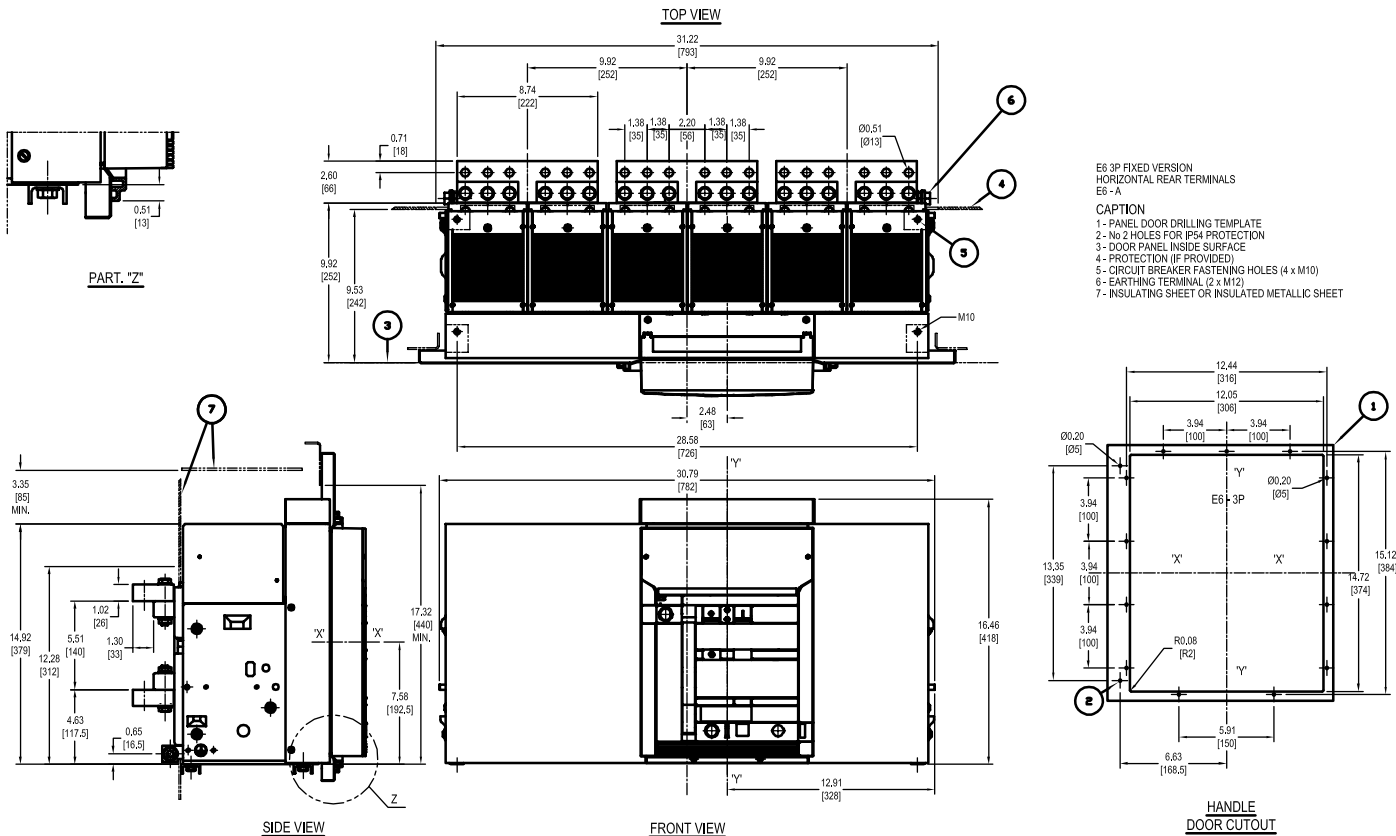
E4 4P DRAW-OUT VERSION  
 VERTICAL REAR TERMINALS  
 E4 - A / FULL SIZE  
**CAPTION**  
 1 - PANEL DOOR DRILLING TEMPLATE  
 2 - No 2 HOLES FOR IP54 PROTECTION  
 3 - DOOR PANEL INSIDE SURFACE  
 4 - PROTECTION (IF PROVIDED)  
 5 - CRADLE FASTENING HOLES (6 x M8)  
 6 - EARTHING TERMINAL (2 x M12)  
 7 - CONNECTED, TEST, DISCONNECTED DISTANCES  
 8 - VENTILATION DRILLING TEMPLATE ON C.B. SUPPORT ON SWITCHBOARD



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E6, fixed with horizontal rear terminals**  
**3 pole**

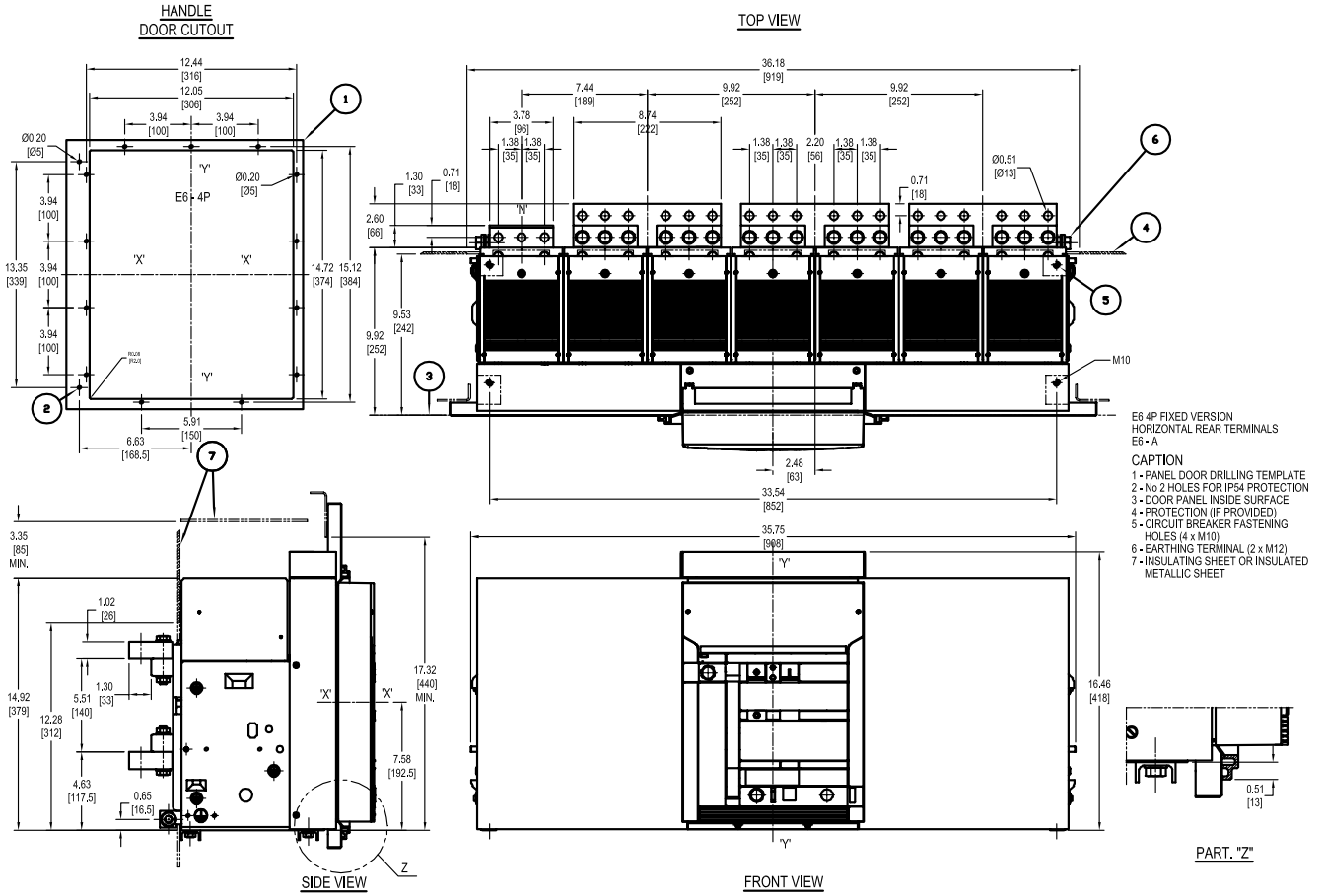
← 00.00 → Inches  
00.00 → [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E6, fixed with horizontal rear terminals**  
**4 pole (50% neutral)**

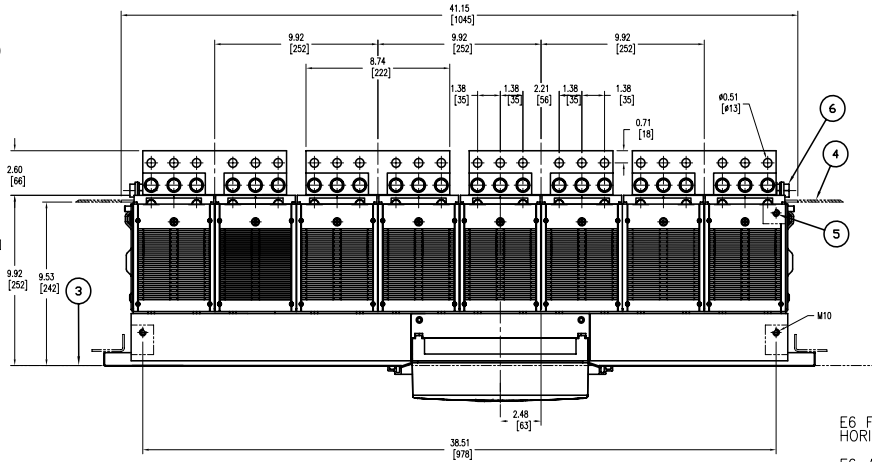
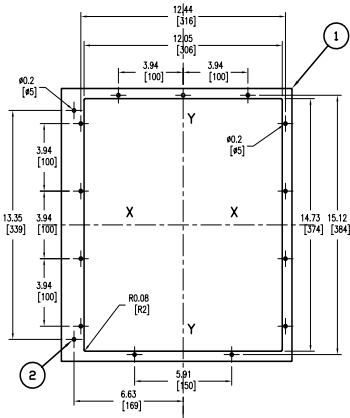
00.00 Inches  
 00.00 [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

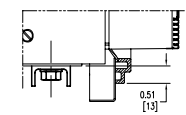
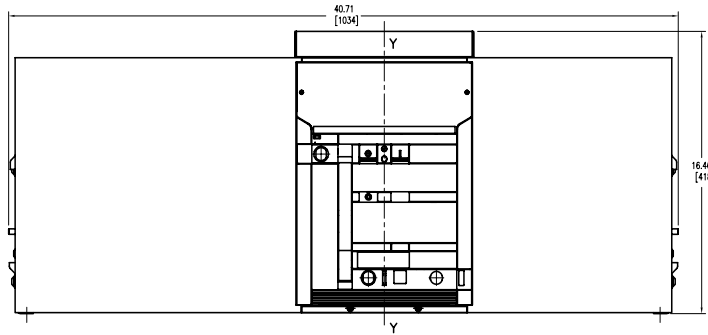
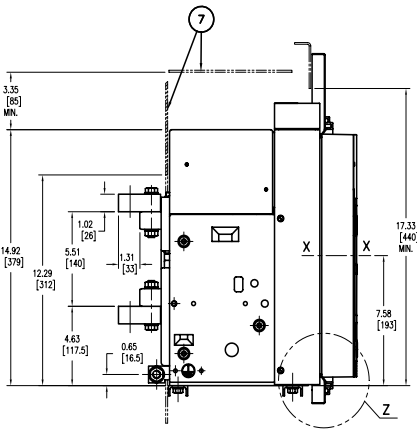
**Approximate dimensions (for UL version) ①**  
E6, fixed with horizontal rear terminals  
4 pole (100% neutral)

← 00.00 → Inches  
00.00 → [Millimeters]



E6 FS FIXED VERSION  
HORIZONTAL REAR TERMINALS  
E6-A

- CAPTION
- 1 - Panel door drilling template
  - 2 - No 2 holes for IP54 protection
  - 3 - Door panel inside surface
  - 4 - Protection (if provided)
  - 5 - Circuit breaker fastening holes (4x10)
  - 6 - Earthing terminals (2 x M12) (supplied by ABB SACE)
  - 7 - Insulating sheet or insulated metallic sheet



Part. "Z"

① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

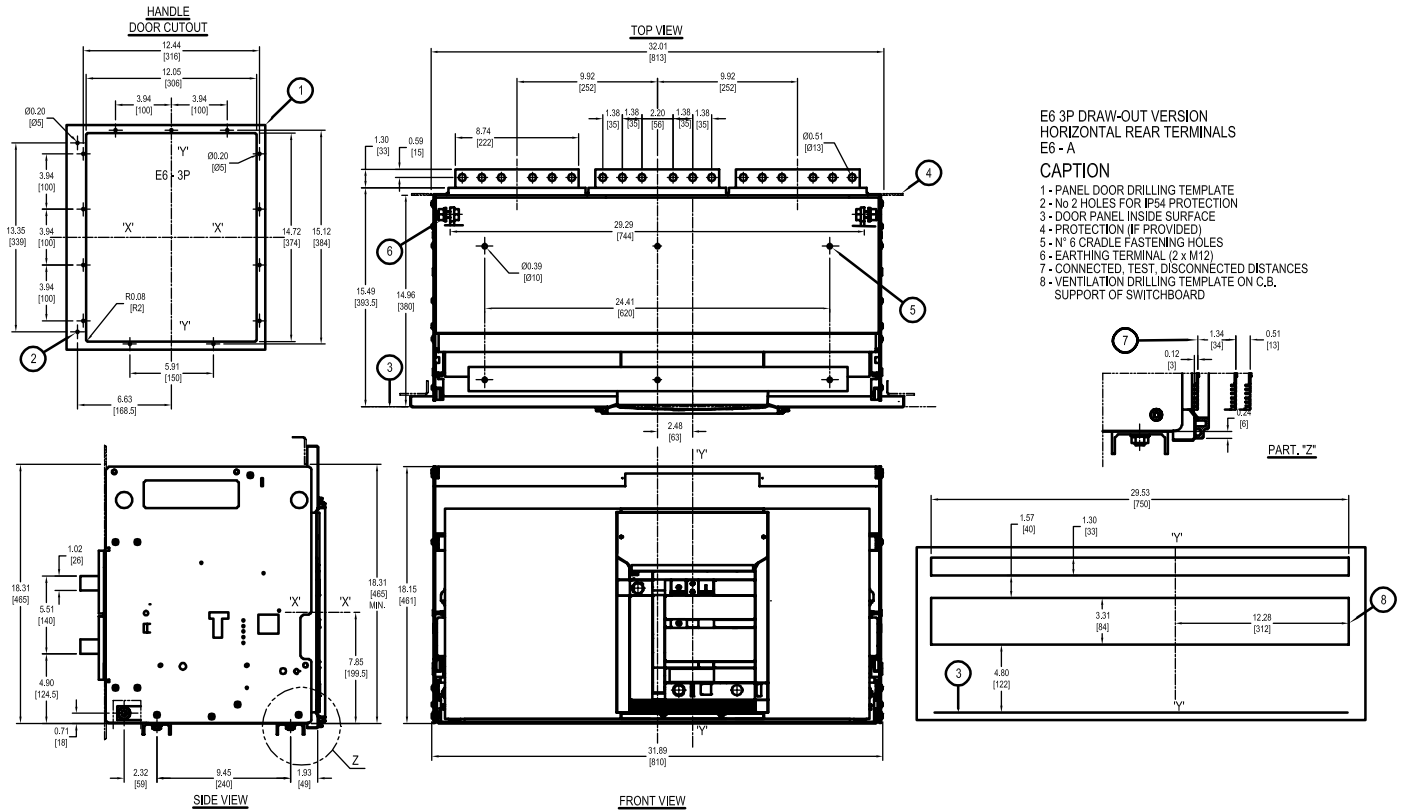


# Approximate dimensions (for UL version) ①

## E6, withdrawable with horizontal rear terminals

### 3 pole

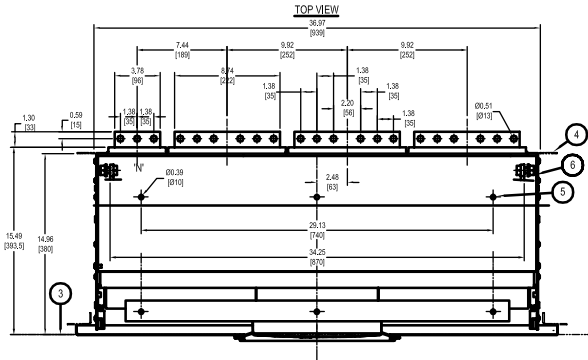
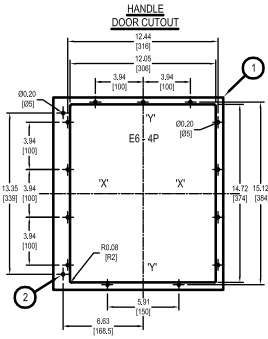
00.00 Inches  
00.00 [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

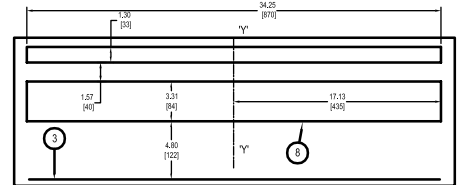
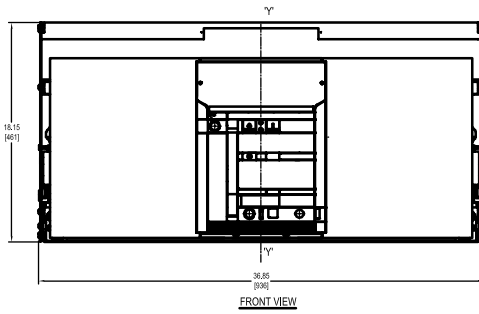
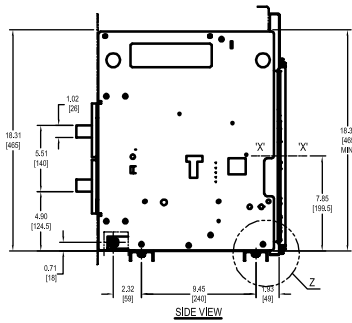
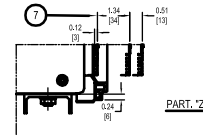
**Approximate dimensions (for UL version) ①**  
E6, withdrawable with horizontal rear terminals  
4 pole (50% neutral)

← 00.00 → Inches  
00.00 → [Millimeters]



E6 4P DRAW-OUT VERSION  
HORIZONTAL REAR TERMINALS  
E6 - A

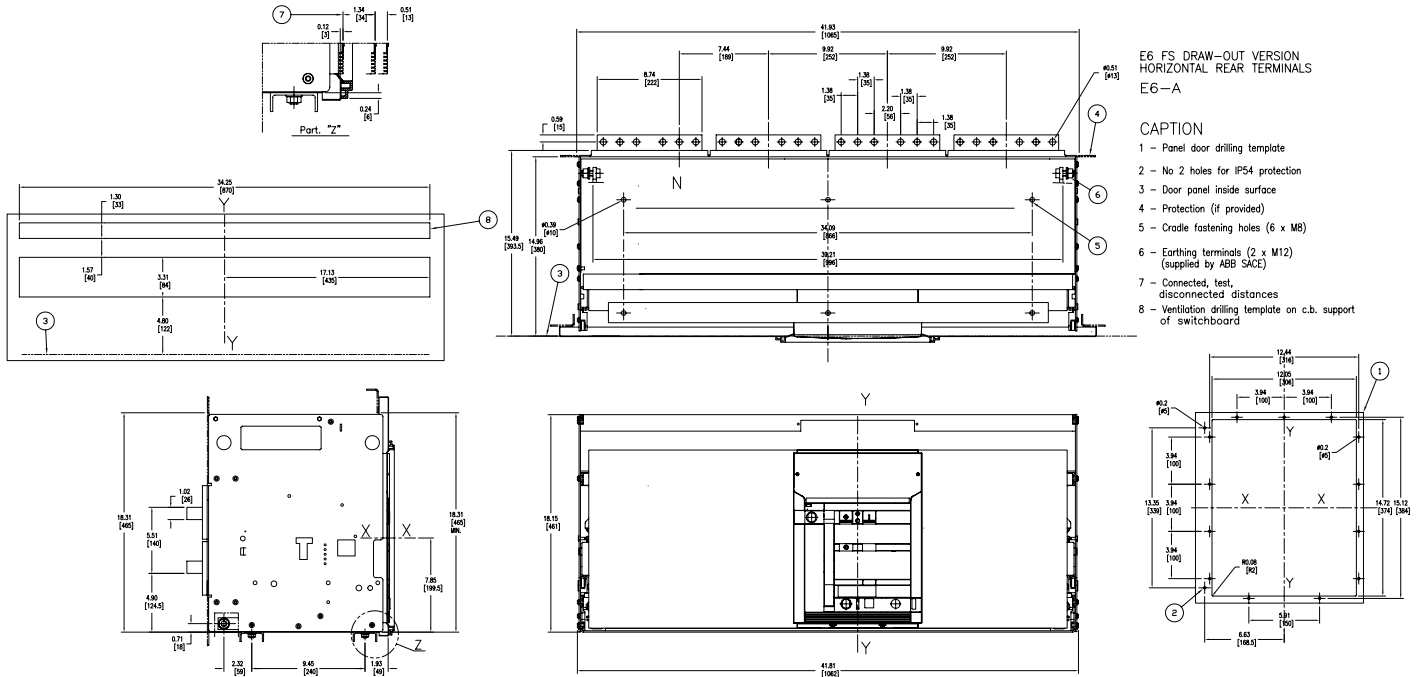
- CAPTION**
- 1 - PANEL DOOR DRILLING TEMPLATE
  - 2 - NO 2 HOLES FOR IP54 PROTECTION
  - 3 - DOOR PANEL INSIDE SURFACE
  - 4 - PROTECTION (IF PROVIDED)
  - 5 - CRADLE FASTENING HOLES (6 x M8)
  - 6 - EARTHING TERMINAL (2 x M12)
  - 7 - CONNECTED, TEST, DISCONNECTED DISTANCES
  - 8 - VENTILATION DRILLING TEMPLATE ON C.B. SUPPORT ON SWITCHBOARD



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E6, withdrawable with horizontal rear terminals**  
**4 pole (100% neutral)**

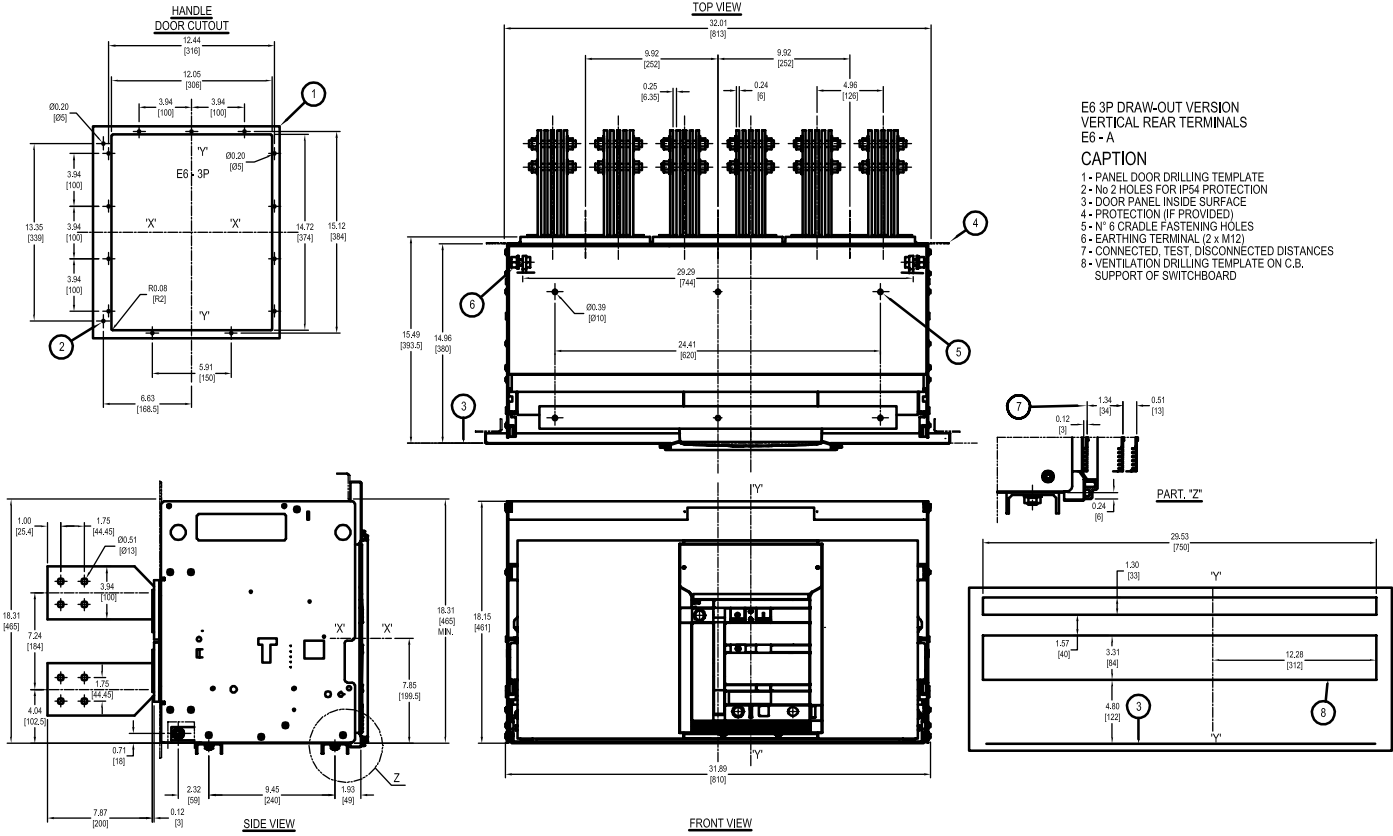
← 00.00 Inches  
 00.00 → [Millimeters]



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E6, withdrawable with vertical rear terminals**  
**3 pole**

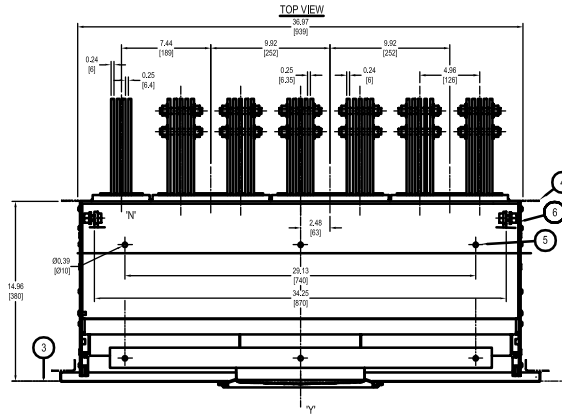
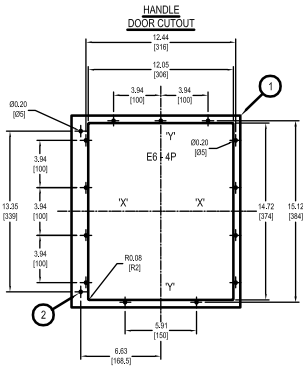
← 00.00 → Inches  
00.00 → [Millimeters]



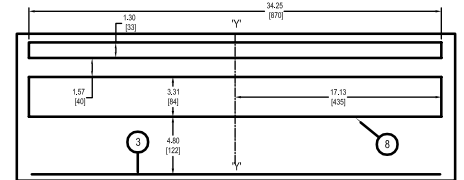
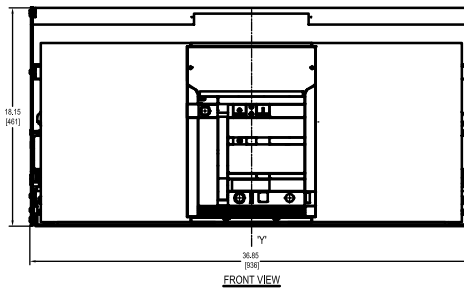
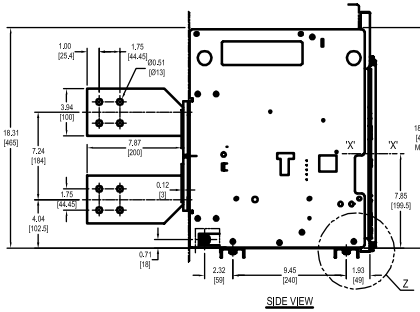
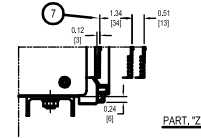
① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

**Approximate dimensions (for UL version) ①**  
**E6, withdrawable with vertical rear terminals**  
**4 pole (50% neutral)**

← 00.00 Inches  
 00.00 → (Millimeters)



E6 4P DRAW-OUT VERSION  
 VERTICAL REAR TERMINALS  
 E6 - A  
**CAPTION**  
 1 - PANEL DOOR DRILLING TEMPLATE  
 2 - NO 2 HOLES FOR IP54 PROTECTION  
 3 - DOOR PANEL INSIDE SURFACE  
 4 - PROTECTION (IF PROVIDED)  
 5 - CRADLE FASTENING HOLES (6 x M8)  
 6 - EARTHING TERMINAL (2 x M12)  
 7 - CONNECTED TEST, DISCONNECTED DISTANCES  
 8 - VENTILATION DRILLING TEMPLATE ON C.B. SUPPORT ON SWITCHBOARD



① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

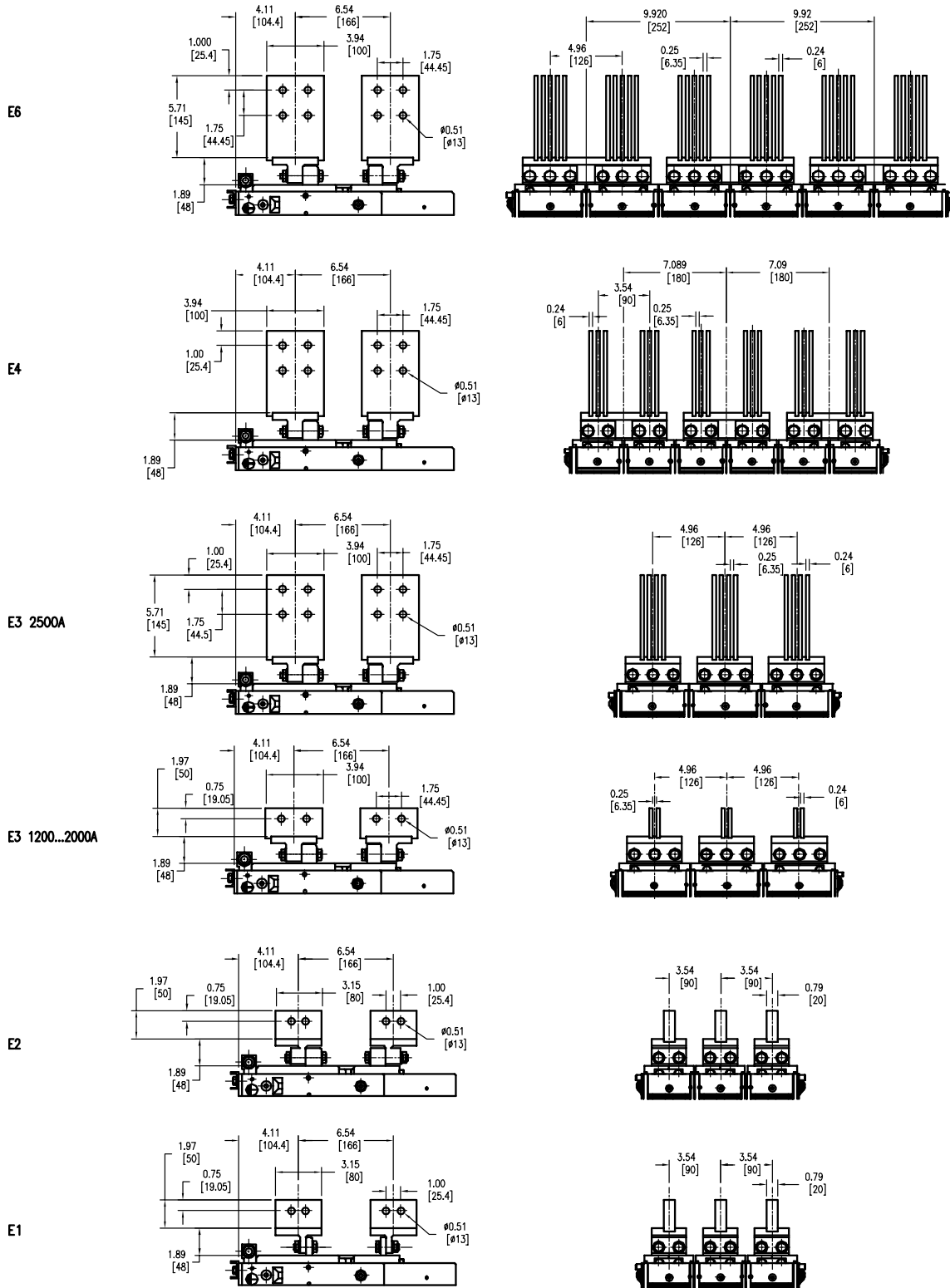


# Approximate dimensions (for UL version) ①

E1 - E6, fixed with vertical rear terminals

3 pole

00.00 Inches  
00.00 [Millimeters]



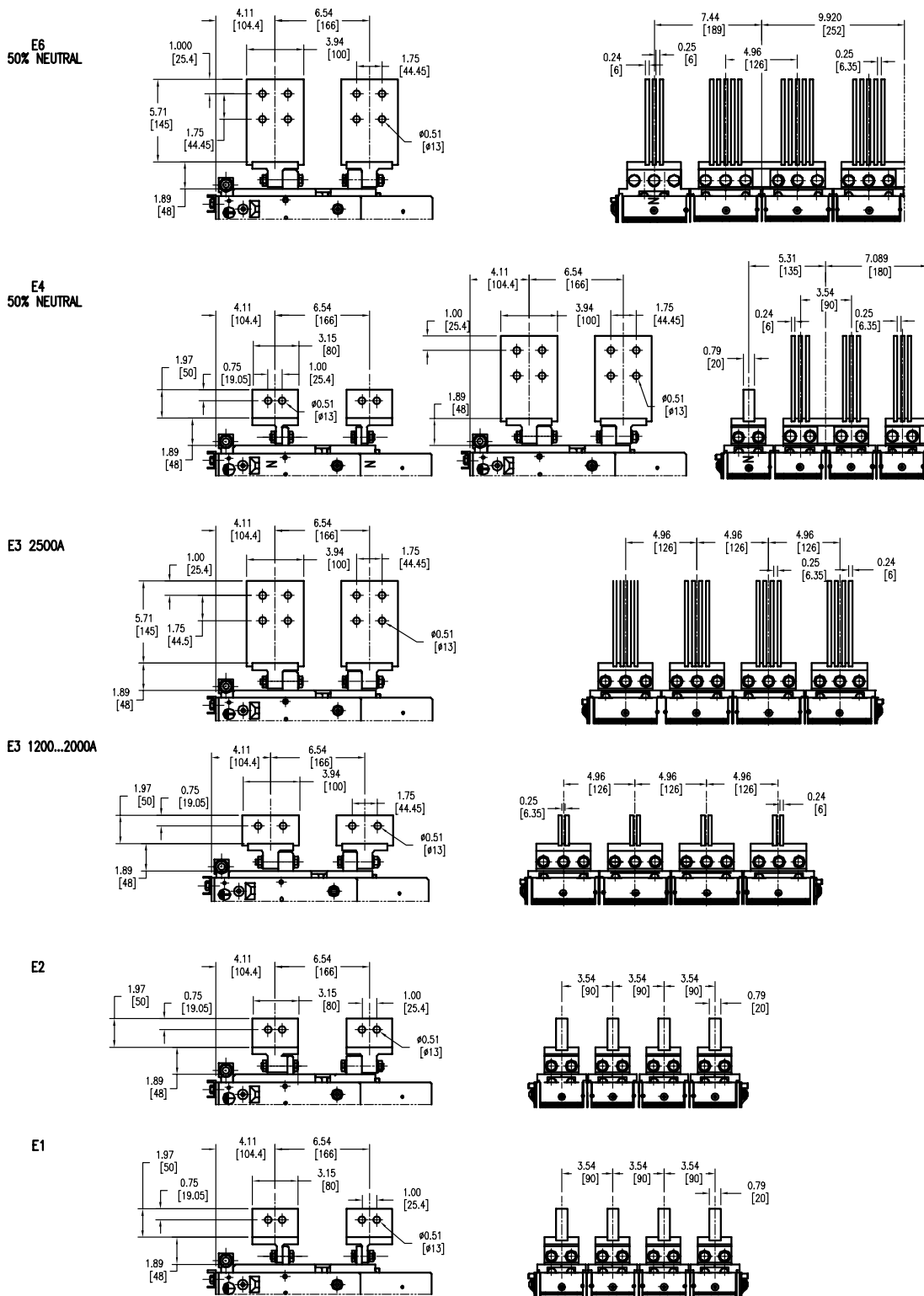
① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>

## Approximate dimensions (for UL version) ①

E1 - E6, fixed with vertical rear terminals

4 pole

← 00.00 → Inches  
00.00 → [Millimeters]

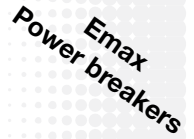


① For IEC dimensions, see Emax technical catalog 1SDC200005D0201 available for download at: <http://www.abb-control.com/pdf/catalog/1SDC200005D0201.pdf>



# Emax circuit breaker submittal sheet

## Request for quote form



<b>Date</b>	<b>Customer Name</b>				
<b>From</b>	<b>Account No.</b>				
<b>Location</b>	<b>Contact Name</b>				
<b>Phone No.</b>	<b>Location</b>				
<b>Fax No.</b>	<b>Phone No.</b>				
<b>Comments</b>	<b>Fax No.</b>				
	<b>RFQ No.</b>				
	<b>Due Date</b>			<b>Close Date</b>	
Quantity					
Frame Size	D	1=1, 3P	4=4, 3P	B=2, 4P	F=6, 4P 50% neutral
		2=2, 3P	6=6, 3P	C=3, 4P	G=4, 4P 100% neutral
		3=3, 3P	A=1, 4P	D=4, 4P 50% neutral	H=6, 4P 100% neutral
Breaking Capacity		B=basic	S=standard	V=very high	X=200kA
		N=normal	H=high	L=limiting (IEC only)	
Frame Ampere Rating		A=800	D=2000	G=3600	N=6300 (IEC only)
		B=1200/1250	E=2500	H=4000	P=1000 (IEC only)
		C=1600	F=3200	J=5000	
Rating Plug:		A=400	E=1200/1250	J=3000 (UL only)	N=5000
		B=600/630	F=1600	K=3200	P=6300 (IEC only)
		C=800	G=2000	L=3600 (UL only)	O=None (non-automatic only)
		D=1000	H=2500	M=4000	
Version		B = fixed, UL	F=Fixed, IEC	Q = 1000VAC	
		D = drawout, UL, less cradle	W=drawout, IEC, less cradle	R = 750VDC (3P) 1000VDC (4P)	
Trip unit:		A = PR121/P, LI	D = non-automatic	G = PR122/PD, LSIG	K = PR123/ P,LSIG+PR120/V
		B = PR121/P, LSI	E = PR122/P, LI	H = PR122/PD, LSIRc	
		C = PR121/P, LSIG	F = PR122/P, LSI	J = PR123/P,LSI+PR120/V	
Trip unit accessories:		O = none	F = A + C	M = B + C	T = A + N + C + D
		A = PR120/K4C	G = A + D	N = PR120/VT	U = N + C
		B = PR120/VB std. on PR123/P	H = A + B + C	P = A + N	V = B + D
		C = PR120/D-M	J = B + C + D	Q = A + N + C	W = N + D
		D = PR120/D-BT	K = A + C + D	R = A + N + D	
		E = A + B	L = A + B + C + D	S = N + C + D	
Closing coil: 50/60Hz & VDC:		O = none	C = 48	F = 125 - 127	J = 380 - 400VAC
		A = 24VDC	D = 60	G = 220 - 240	K = 440 - 480VAC
		B = 30	E = 110 - 120	H = 250	
Contacts:		A = 4 aux	D = UV energ.NO	G = A & E	
		B = 10 aux	E = UV energ.NC	H = B & D	
			F = A & D	J = B & E	
Spring charging motor: (includes spring charged signal, P/N does not show)		O = none	C = 110-130VAC/VDC,		
		A = 24 - 30VAC/VDC,	D = 220 - 250VAC/VDC,		
		B = 48 - 60VAC/VDC	E = spring charged signal only		

Shunt trip: 50/60Hz & VDC:		<b>O</b> = none	<b>C</b> = 48VAC/DC	<b>F</b> = 125 – 127VAC/DC	<b>J</b> = 380 – 400VAC
		<b>A</b> = 24VDC	<b>D</b> = 60VAC/DC	<b>G</b> = 220– 240VAC/DC	<b>K</b> = 440 – 480VAC
		<b>B</b> = 30VAC/DC	<b>E</b> = 110 – 120VAC/DC	<b>H</b> = 250VAC/DC	<b>L</b> = low Z 120-127VAC/DC

Undervoltage trip: 50/60Hz & VDC: OR		<b>O</b> = none	<b>C</b> = 48VAC/DC	<b>F</b> = 125 – 127VAC/DC	<b>J</b> = 380 – 400VAC
		<b>A</b> = 24VDC	<b>D</b> = 60VAC/DC	<b>G</b> = 220– 240VAC/DC	<b>K</b> = 440 – 480VAC
		<b>B</b> = 30VAC/DC	<b>E</b> = 110 – 120VAC/DC	<b>H</b> = 250VAC/DC	

Second Shunt trip: 50/60Hz & VDC:			<b>N</b> = 48VAC/DC	<b>R</b> = 125 – 127VAC/DC	<b>U</b> = 380 – 400VAC
		<b>L</b> = 24VDC	<b>P</b> = 60VAC/DC	<b>S</b> = 220– 240VAC/DC	<b>V</b> = 440 – 480VAC
		<b>M</b> = 30VAC/DC	<b>Q</b> = 110 – 120VAC/DC	<b>T</b> = 250VAC/DC	

Accessories:		<b>X</b> = none	<b>F</b> = A + B		
		<b>A</b> = mechanical counter	<b>G</b> = A + C		
		<b>B</b> = bell alarm	<b>H</b> = A + D		
		<b>C</b> = bell alarm w/remote reset 24-30VAC/DC	<b>J</b> = A + E		
		<b>D</b> = bell alarm w/remote reset 110-130VAC/DC			
		<b>E</b> = bell alarm w/remote reset 220-240VAC/DC			

Locking Provisions		<b>X</b> = none	<b>F</b> = A + B	<b>M</b> = C + D	<b>T</b> = Heavy duty padlock, KE6PDHD1
		<b>A</b> = Keylock	<b>G</b> = A + C	<b>N</b> = C + E	<b>U</b> = A + T
		<b>B</b> = button guard	<b>H</b> = A + D	<b>P</b> = A + B + D	<b>V</b> = T + D
		<b>C</b> = padlock provision (open)	<b>J</b> = A + E	<b>Q</b> = A + B + E	<b>W</b> = T + E
		<b>D</b> = withdrawable position lock (connected, test and disconnected positions)	<b>K</b> = B + D	<b>R</b> = A + C + D	<b>Y</b> = A + T + D
		<b>E</b> = withdrawable position lock ( test and disconnected positions)	<b>L</b> = B + E	<b>S</b> = A + C + E	<b>Z</b> = A + T + E

#### Cradles

Frame Size:		<b>1</b> = 1, 3P	<b>6</b> = 6, 3P	<b>D</b> = 4, 4P (50% neutral)	
		<b>2</b> = 2, 3P	<b>A</b> = 1, 4P	<b>F</b> = 6, 4P (50% neutral)	
		<b>3</b> = 3, 3P	<b>B</b> = 2, 4P	<b>G</b> = 4, 4P (100% neutral)	
		<b>4</b> = 4, 3P	<b>C</b> = 3, 4P	<b>H</b> = 6, 4P (100% neutral)	

Version:		<b>C</b> = IEC cradle	UL cradle		
			<b>N</b> = E1B-A; E1N-A; E2B-A E2N-A	<b>L</b> = E4V-A; E4L-A	
			<b>H</b> = E2S-A; E2H-A; E4S-A; E4H-A; E4H-A/f; E6H-A; E6H-A/f	<b>X</b> = E3X-A2; E6V-A; E6L-A; E6X-A	
Maximum Ampere Rating:		<b>12</b> = 1200 (E1) UL	<b>25</b> = 2500 (E3) UL	<b>50</b> = 5000 (E6) UL	<b>32</b> = 3200 (E3) IEC
		<b>16</b> = 1600 (E2) UL	<b>32</b> = 3200 (E3) UL	<b>12</b> = 1250 (E1) IEC	<b>40</b> = 4000 (E4) IEC
		<b>20</b> = 2000 (E3) UL	<b>36</b> = 3600 (E4) UL	<b>20</b> = 2000 (E4) IEC	<b>63</b> = 6300 (E6) IEC

Terminal Types: (1st letter is upper terminal, 2nd letter is lower terminal) H= Rear Horizontal/V = Rear Vertical/F = Front/L = Rear Flat		<b>H</b> = HH	<b>A</b> = HV	<b>E</b> = HL (IEC only)	<b>M</b> = VL (IEC only)
		<b>V</b> = VV	<b>B</b> = VH	<b>G</b> = LH (IEC only)	<b>N</b> = LV (IEC only)
		<b>F</b> = FF (IEC only)	<b>C</b> = HF (IEC only)	<b>J</b> = VF (IEC only)	<b>P</b> = FL (IEC only)
		<b>L</b> = LL (IEC only)	<b>D</b> = FH (IEC only)	<b>K</b> = FV (IEC only)	<b>Q</b> = LF (IEC only)

Contacts:		<b>O</b> = none			
		<b>A</b> = 5 position auxiliaries, TOC			
		<b>B</b> = 10 position auxiliaries, TOC			

Options:		<b>X</b> = none	<b>R</b> = DC rated (750 V 3P, 1000V 4P) IEC only		
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Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Accepted By: \_\_\_\_\_ Date: \_\_\_\_\_