

Beyond X™

Susol MCCB

Up to 690/800/1000 V AC
for Renewable and High-Altitude Applications



vector Energy

LS ELECTRIC

Characteristics and Ratings

Characteristics

For renewable and high altitude applications
- High breaking capacity (up to 1000 V AC)
- Compact size
- Various trip units
- Standards: IEC/UL rated





Ratings

Frame		UTV250		
Rated voltage		690/800/1000 V AC		
Rated current		60, 80, 100, 150, 200, 250 A		
Number of poles		3/4		
Breaker type		E	N	H
UL 489				
Interrupting capacity (kA) UL, CSA	690 V AC	50	65	85
	800 V AC	25	42	50
	1000 V AC	14	20	30
IEC 60947-2				
Maximum fault current (kA), Icu	690 V AC	65	85	85
	800 V AC	25	40	50
	1000 V AC	15	20	30
Fault breaking capacity (kA), Ics (% of Icu)	690 V AC	100 %	100 %	100 %
	800 V AC	75 %	75 %	75 %
	1000 V AC	50 %	50 %	50 %
Insulation voltage, Ui		1000 V AC		
Impulse withstand voltage, Uimp		8 kV		
Utilization category		A		
IEC 60947-3				
Insulation voltage, Ui		1000 V AC		
Impulse withstand voltage, Uimp		8 kV		
Rated short-time withstand current, Icw		3 kA		
Utilization category		AC-23 A		
Trip unit				
Trip unit	FTU (UL 489, IEC 60947-2)	60, 80, 100, 150, 200, 250 A		
	FMU (UL 489, IEC 60947-2)	60, 80, 100, 150, 200, 250 A		
	ATU (UL 489, IEC 60947-2)	100, 150, 200, 250 A		
	MCS (UL 489)	60, 80, 100, 150, 200, 250 A		
	DSU (IEC 60947-3)	250 A		
Accessories				
Unit mounted		available		
Mechanical lugs		available		
Busbar connectors		available		
Control wire terminal kit		available		
Motor operator		available		
Interphase barriers		available		
Shunt trip		available		
Undervoltage trip		available		
Auxiliary switch		available		
Alarm switch		available		
Directly-Mounted rotary operating handle		available		
IEC Door-Mounted operating mechanism		available		
Padlock attachment		available		
Weight (approximate), lbs. (kg)	3 Pole	4.85 (2.20)		
	4 Pole	6.35 (2.88)		
Dimensions, in (mm)		**W**	**H**	**D**
	3 Pole	4.13 (105)	8.07 (205)	3.62 (92)
	4 Pole	5.51 (140)	8.07 (205)	3.62 (92)

Characteristics

For renewable and high altitude applications
- High breaking capacity (up to 1000 V AC)
- Various trip units
- Standards: IEC/UL rated



Ratings

Frame		UTV400		
Rated voltage		690*/800/1000 V AC		
Rated current		320, 400 A		
Number of poles		3/4		
Breaker type		E	N	H
UL 489				
Interrupting capacity (kA) UL, CSA	690 V AC	50	65	85
	800 V AC	25	42	50
	1000 V AC	14	20	25
IEC 60947-2				
Maximum fault current (kA), Icu	800 V AC	25	42	50
	1000 V AC	15	20	25
Fault breaking capacity (kA), Ics (% of Icu)	800 V AC	100 %	60 %	50 %
	1000 V AC	100 %	75 %	60 %
Insulation voltage, Ui		1000 V AC		
Impulse withstand voltage, Uimp		8 kV		
Utilization category		A		
Trip unit				
Trip unit	FTU (UL 489, IEC 60947-2)	320, 400 A		
	FMU (UL 489, IEC 60947-2)	320, 400 A		
	ATU (UL 489, IEC 60947-2)	320, 400 A		
Accessories				
Unit mounted		available		
Mechanical lugs		available		
Busbar connectors		available		
Control wire terminal kit		available		
Motor operator		available		
Terminal shields		available		
Interphase barriers		available		
Shunt trip, SHT		available		
Undervoltage trip, UVT		available		
Auxiliary switch, AX		available		
Alarm switch, AL		available		
Directly-Mounted rotary operating handle		available		
IEC Door-Mounted operating mechanism		available		
Padlock attachment		available		
Weight (approximate), lbs. (kg)	3 Pole	15.87 (7.2)		
	4 Pole	19.18 (8.7)		
Dimensions, in (mm)		**W**	**H**	**D**
	3 Pole	5.51 (140)	11.42 (290)	4.33 (110)
	4 Pole	7.34 (186.5)	11.42 (290)	4.33 (110)

* The 690 V AC rated voltage is certified only to UL 489.

Ordering and Temperature Derating

Ordering

UT	V	250	ET	FTU	250 A	4P	UL
UL MCCB	800/1000 V AC	AF	Type / Rating / Interrupting capacity (800 V AC)	Trip unit	Rated current	Poles	UL standard

AF

250	250 AF
400	400 AF

Type	Rating	Interrupting capacity (800 V AC)
ET	100 %	25 kA
E*	80 %	
NT	100 %	42 kA
N*	80 %	
HT	100 %	50 kA
H*	80 %	
NA	None	None

*400 AF is available only for E/N/H types.

Trip unit

FTU*	Fixed Thermal, Fixed Magnet
FMU*	Adj. Thermal, Fixed Magnet
ATU*	Adj. Thermal, Magnet
MCS	Molded Case Switch
DSU	Disconnect Switch (NA Type Only)

*400 AF is available only for FTU, FMU, ATU types.

Rated current

60 A
:
400 A

Poles

3P	3-pole
4P	4-pole

UL standard

UL	UL 489
-	IEC

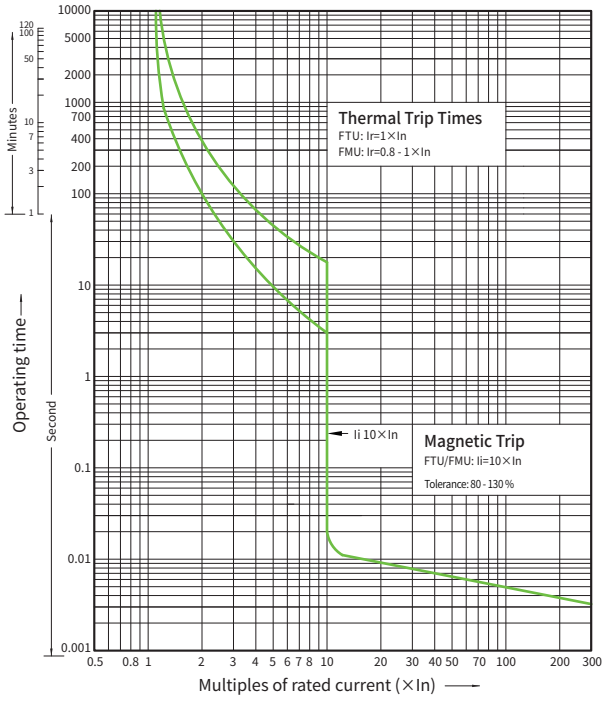
Temperature derating

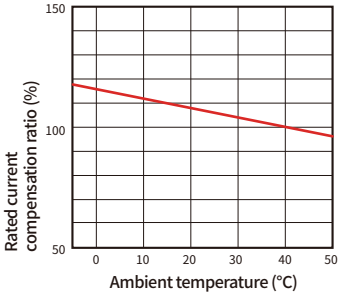
Type	Rated current (A)	Derating current (A)		Compensated rated current in accordance with ambient temperature (A)															
				50 °F (10 °C)		68 °F (20 °C)		86 °F (30 °C)		104 °F (40 °C)		113 °F (45 °C)		122 °F (50 °C)		140 °F (60 °C)		158 °F (70 °C)	
UTV250	60	60	100 %	60	100 %	60	100 %	60	100 %	60	100 %	59	98 %	57	95 %	53	89 %	50	83 %
	80	80	100 %	80	100 %	80	100 %	80	100 %	80	100 %	78	98 %	76	95 %	71	89 %	66	83 %
	100	100	100 %	100	100 %	100	100 %	100	100 %	100	100 %	98	98 %	95	95 %	89	89 %	83	83 %
	150	150	100 %	150	100 %	150	100 %	150	100 %	150	100 %	146	97 %	141	94 %	132	88 %	123	82 %
	200	200	100 %	200	100 %	200	100 %	200	100 %	200	100 %	196	98 %	190	95 %	178	89 %	166	83 %
	250	250	100 %	250	100 %	250	100 %	250	100 %	250	100 %	243	97 %	235	94 %	220	88 %	205	82 %
UTV400	320	320	100 %	320	100 %	320	100 %	320	100 %	320	100 %	310	98 %	301	95 %	282	89 %	262	83 %
	400	400	100 %	400	100 %	400	100 %	400	100 %	400	100 %	388	97 %	376	94 %	352	88 %	328	82 %

Characteristic Curve

UTV250 MCCB

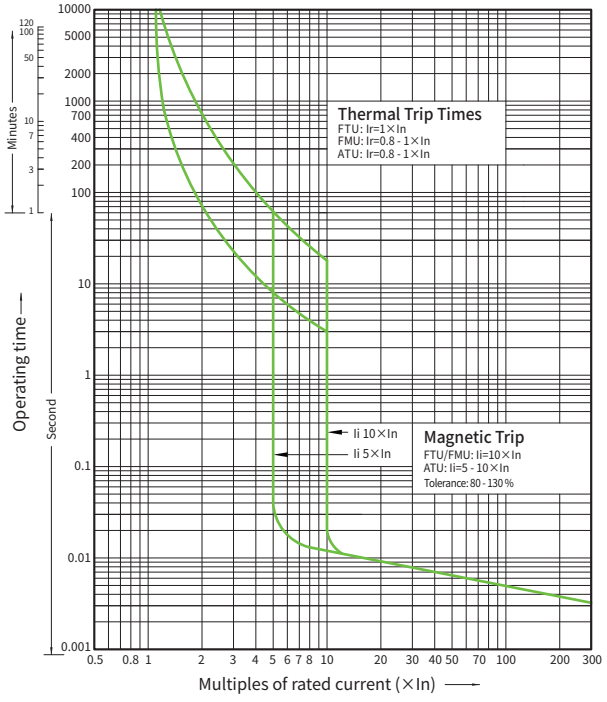
FTU
FMU
60 - 80 A

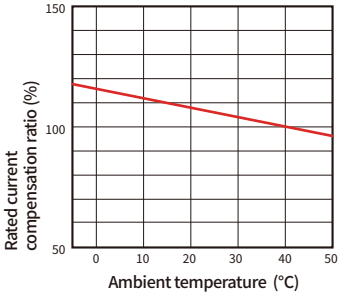




UTV250 MCCB

FTU
FMU
ATU
100 - 250 A

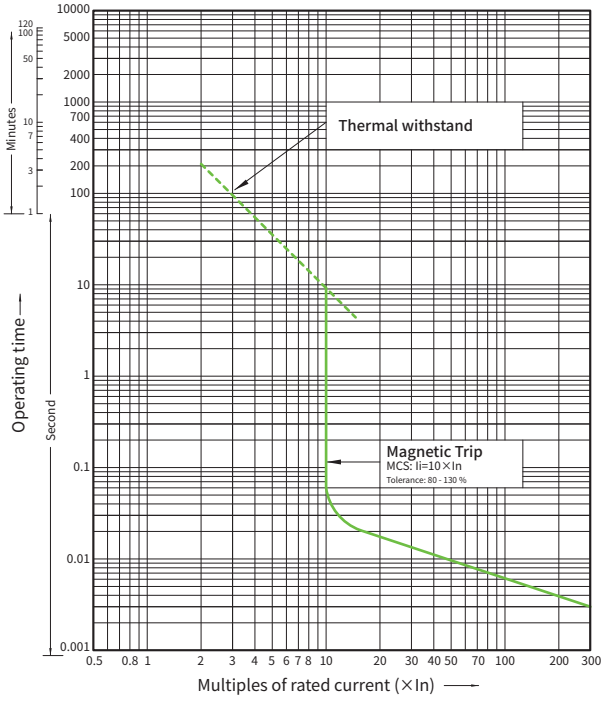


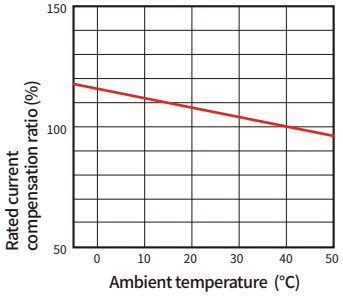


Characteristic curve

UTV250 MCS

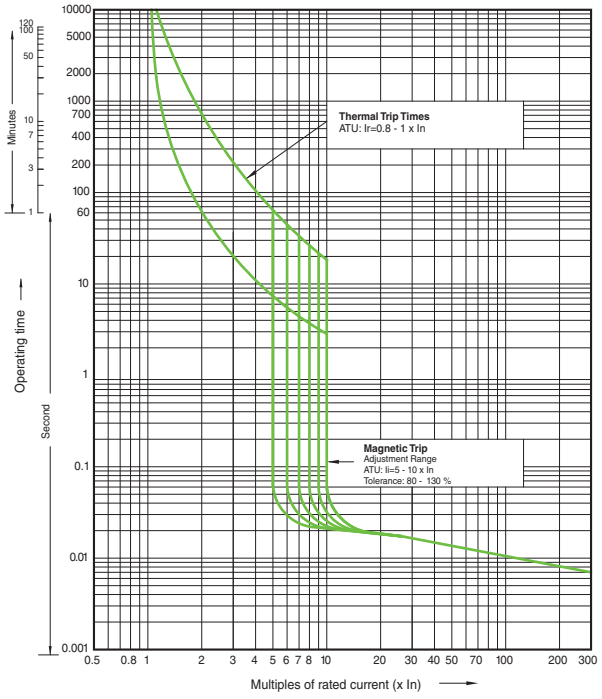
60 - 250 A

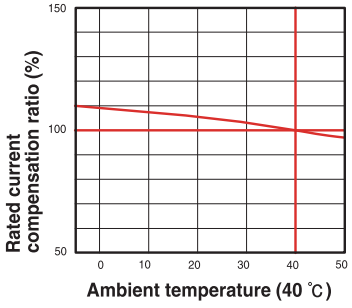




UTV400 MCCB

ATU
300 - 400 A



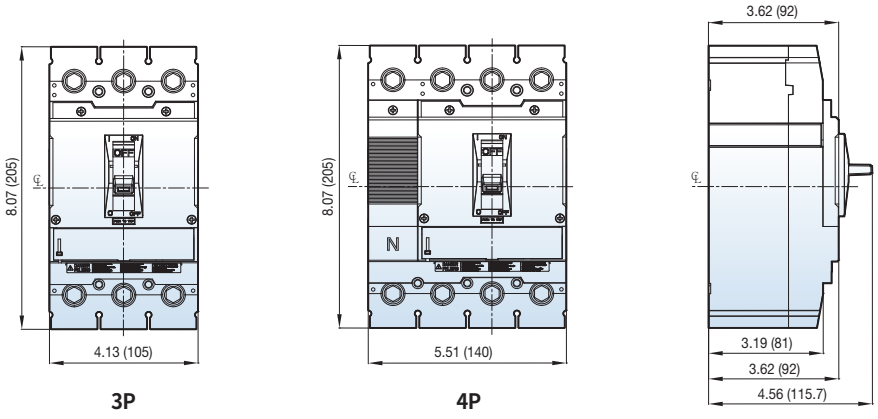


Rating UTV400	ATU		
	2P/3P	Rating Range (0.8 - 1 x In)	MAG Trip (80 % - 120 %) (5 - 10 x In)
320	○	256 - 320 A	1600 - 3200 A
400	○	320 - 400 A	2000 - 4000 A

Dimensions

UTV250

[Unit: inch (mm)]



3P 4P

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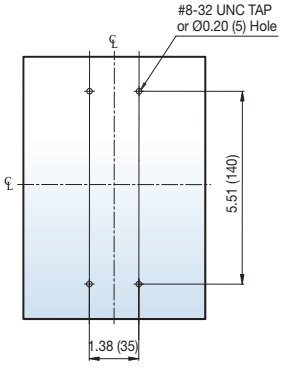

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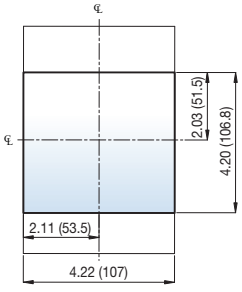
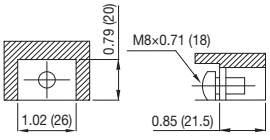
3P



Terminal section



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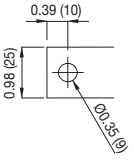

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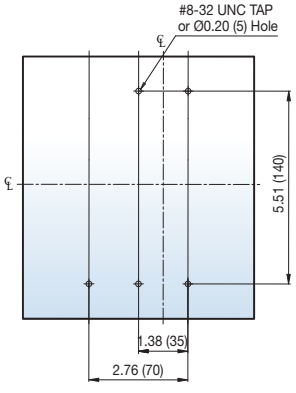

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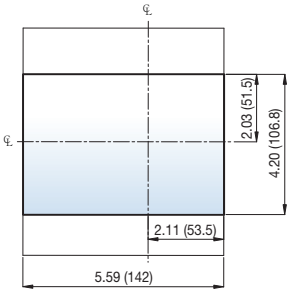
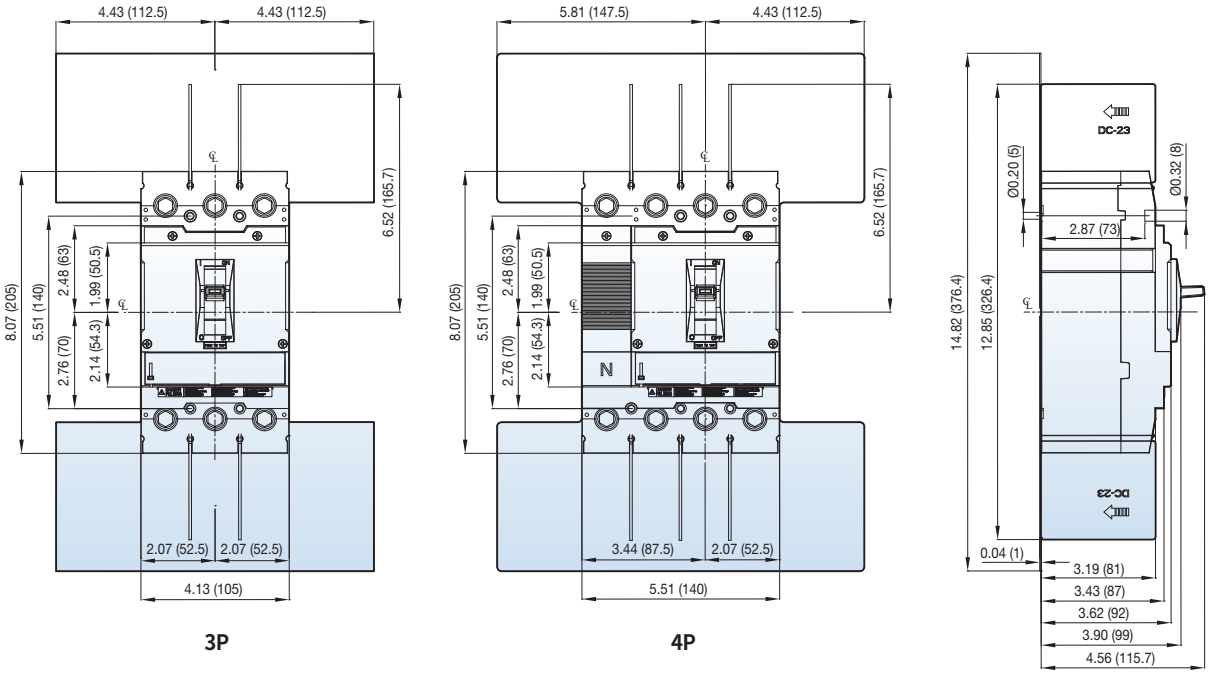


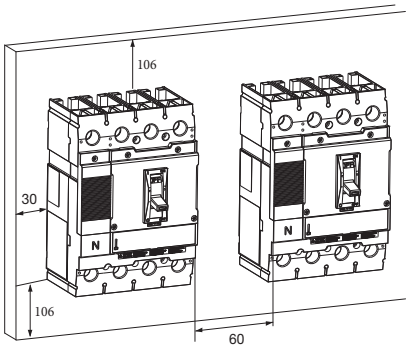
UTV250

[Unit: inch (mm)]



<Required insulation and separation distances>

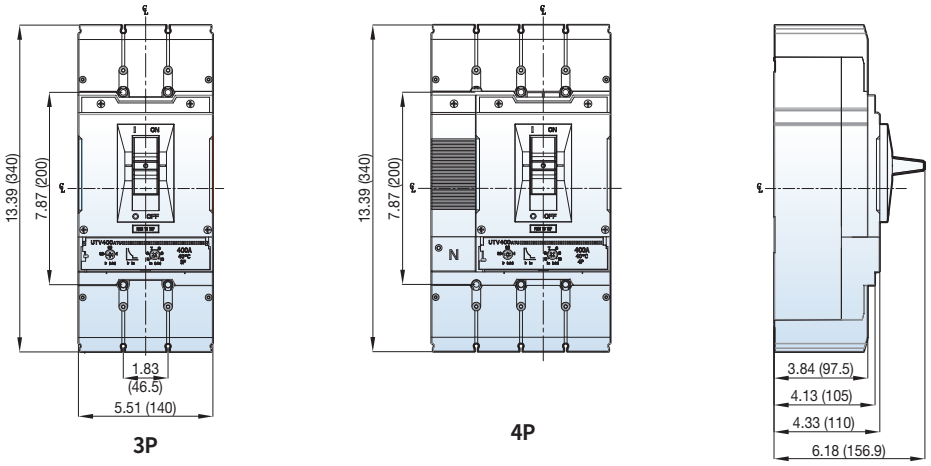
- One side: 1.18 in (30 mm) or more
- Top and bottom: 4.17 in (106 mm) or more
- Between products: 2.36 in (60 mm) or more



Dimensions

UTV400

[Unit: inch (mm)]



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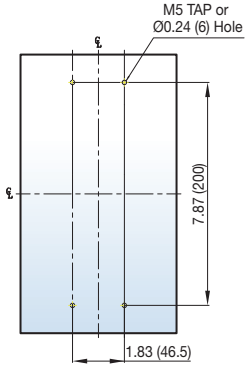

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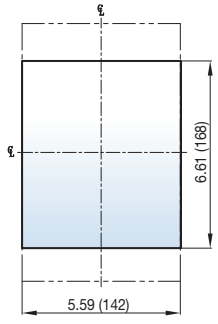
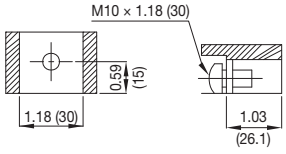
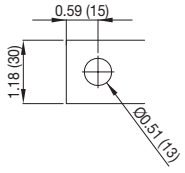


Terminal section



Conductor



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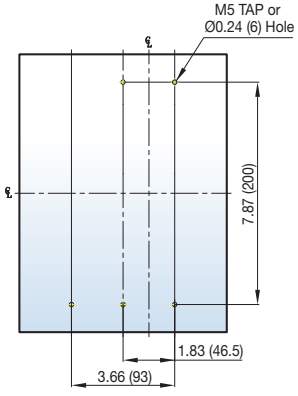

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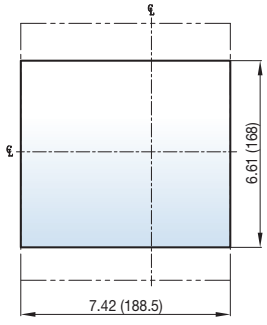
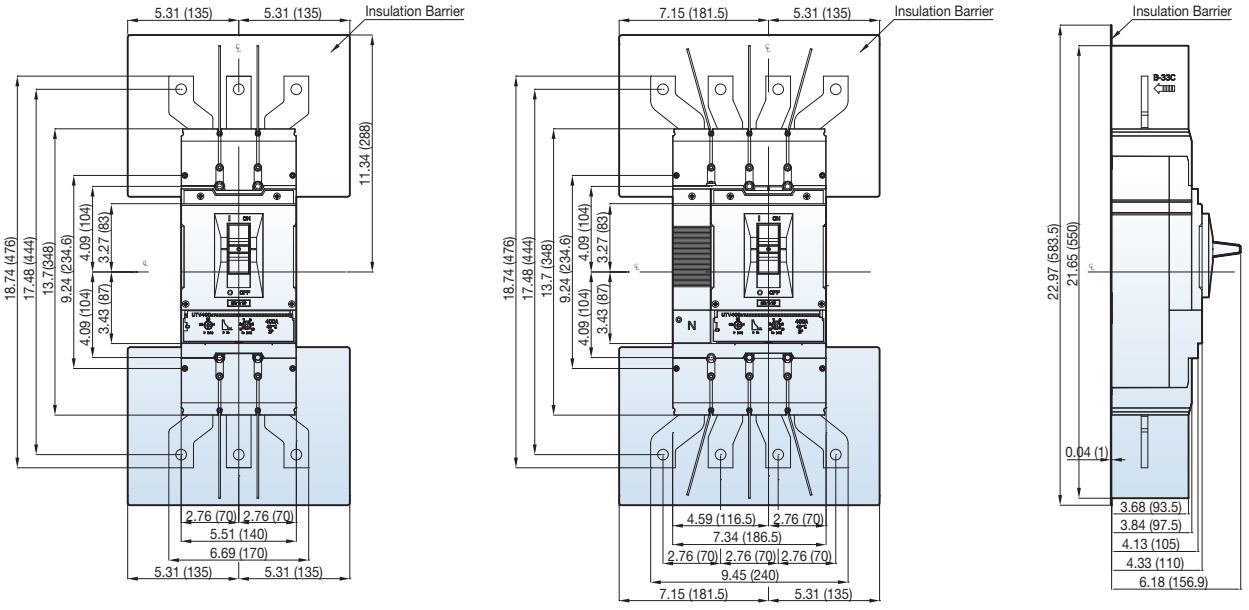


UTV400

[Unit: inch (mm)]



3P 4P

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