



HAVELLS

Moulded Case Circuit Breaker HIM & Loadline



Essential for **Today**, Potential for **Tomorrow**

Advanced Breaking Performance and Various Selectivity

- Product Range: 16 A - 800 A in 5 Frame (AF) Sizes
- High breaking capacity up to 85 kA with $I_{cs}=100\% I_{cu}$
- Thermal Adjustability in entire range
- Rated Insulation Voltage, $U_i = 1000\text{ V}$
- Rated Operational Voltage, $U_e = 690\text{ V}$
- Impulse Withstand Voltage, $U_{imp} = 8\text{ kV}$
- Standardized Height of Products by Frame (AF)

Dimensions in (mm)

100 AF (16-100A)



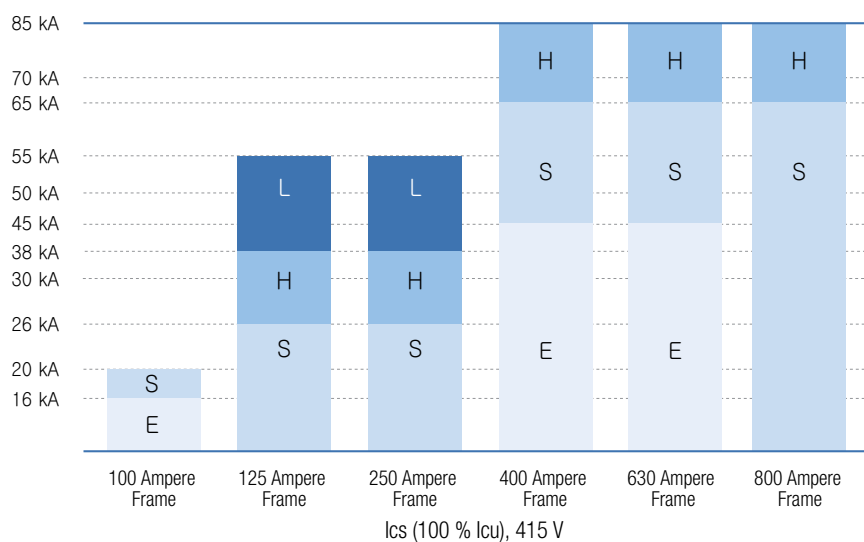
125 AF (16-125A)



250 AF (150-250A)



Rated Short-Circuit Current by AF, (Ics = 100 % Icu)



400 AF (300-400A)



630AF (500-630A)
800 AF (700-800A)



Technical Information

MCCB (HIM Series): 16A-800A

Rated Insulation Voltage, U_i	1,000 V
Rated Operational Voltage, U_e	690 V
Impulse Withstand Voltage, U_{imp}	8 kV
Protective Function	Overload, short-circuit and instantaneous protection
Suitability for Isolation	Yes
Utilization Category	A
Pollution Degree	3
Reference Standard	IEC 60947-1 & 2



Model			SI Unit	HIM100		HIM125				HIM250		
Frame (AF)				100		125				250		
Pole (P)				2, 3, 4 ¹⁾		2, 3, 4 ¹⁾				3, 4 ¹⁾		
Rated current, at 40 °C			A	16, 20, 25, 32, 40, 50, 63, 80, 100		16, 20, 25, 32, 40, 50, 63, 80, 100, 125				150, 160, 200, 225, 250		
Rated short-circuit breaking capacity [Icu] (kA rms)	Recognition code for order			E	S	S	H	L	E	S	H	L
	AC660 V / 690 V			2.5	5	7.5	8	10	7.5	8	8	10
	AC480 V / 500 V			7.5	10	14	26	35	14	20	26	35
	AC440 V / 460 V			16	20	26	38	55	20	26	38	55
	AC380 V / 415 V			16	20	26	38	55	20	26	38	55
	AC220 V / 240 V			35	50	65	85	100	50	65	85	100
DC250 V (2P)				5	10	15	20	30	10	15	20	30
Service breaking capacity [Ics = % Icu]				100	100	100	100	100	100	100	100	100
Endurance (Durability)	Mechanical			30,000		30,000				25,000		
	Electrical			10,000		10,000				10,000		
Trip Device												
Thermal magnetic	Long time [LT]	Fixed		(1.0) x In		(1.0) x In				(1.0) x In		
		Adjustable		(0.8 - 0.9 - 1.0) x In		(0.8 - 0.9 - 1.0) x In				(0.8 - 0.9 - 1.0) x In		
	Instantaneous [INST]			16 - 32 A: 400 A, 40 - 100 A: 10 x In		16 - 32 A: 400 A, 40 - 125 A: 10 x In				10 x In		
Accessory												
Internal	Auxiliary switch		AUX	●		●			●			
	Alarm switch		ALT	●		●			●			
	Shunt trip		SHT	●		●			●			
	Undervoltage trip		UVT	●		●			●			
	Auxiliary + Alarm Switch		AXT	●		●			●			
External	Rotary handle	Front contact	TFG	●		●			●			
		Extended	TFH	●		●			●			
	Motor operator		MOT	●		●			●			
	Mechanical interlock		MIF	●		●			●			
	Padlock device		PLD	●		●			●			
	Din Rail Adaptor		DRA	●		●			●			
	Terminal cover		TCF	●		-			-			
	Phase barrier		TQQ	●		●			●			
	Terminal extensions		TBB	-		-			●			

• 4 pole arrangement: Basic specification is R-S-T-N

Approvals and Certifications



HIM Series MCCB has acquired the certification from the TEST Agency registered in STL

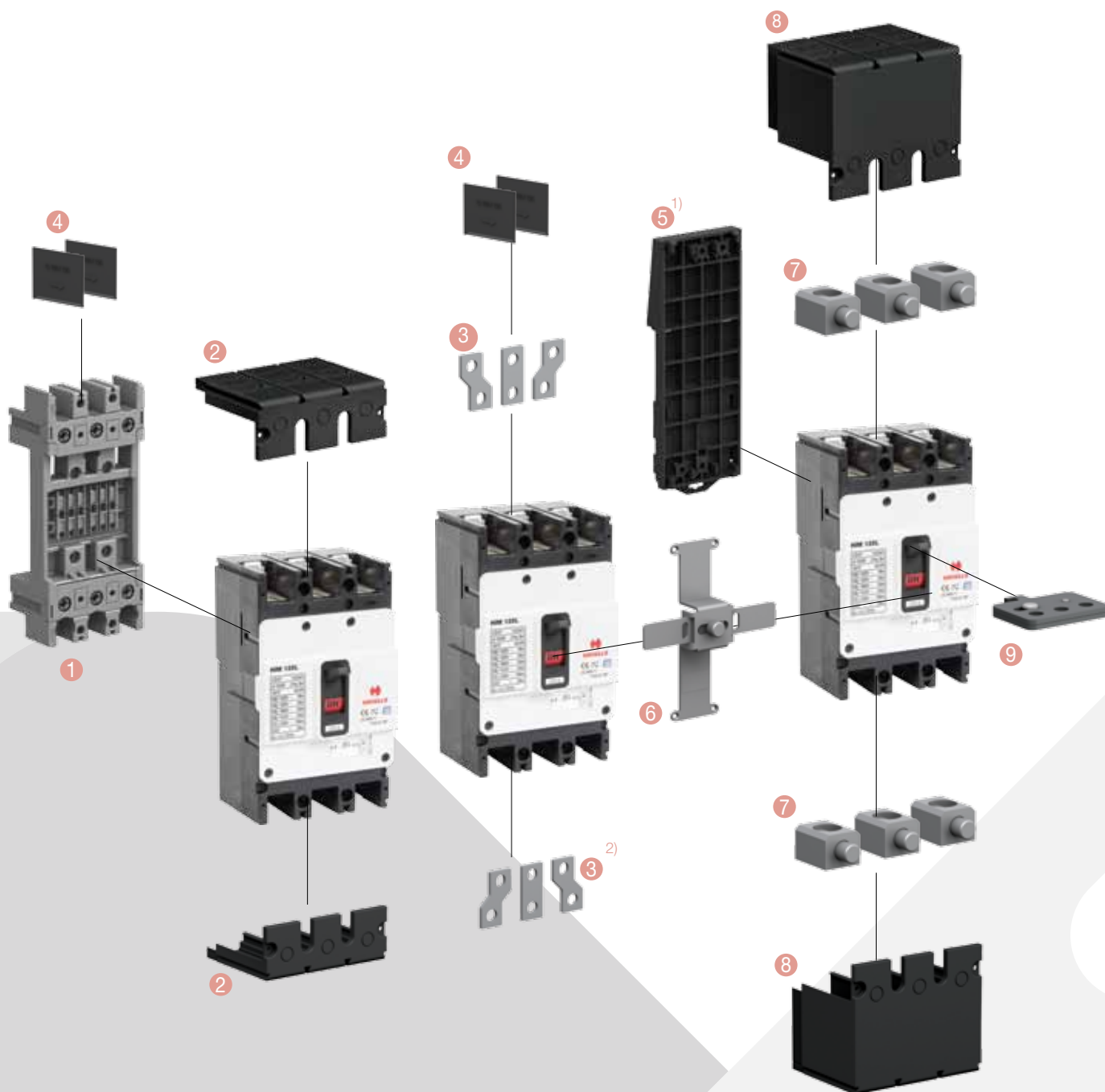
- CB certification (DEKRA)
- Safety certification scheme for electrical applications
- KS (Korean industrial standards)
- Marine approvals (8's classifications)

Vibration/Shock Withstand Test Certification Acquisition

HIM Series MCCB has acquired the vibration/shock withstand test certification in accordance with IEC 60068-2-6 standard which is the required level of IACS, international vessel inspection institute.

Model			SI Unit	HIM400			HIM 630			HIM800	
Frame (AF)				400			630			800	
Pole (P)				3, 4 ¹⁾			3, 4 ¹⁾			3, 4 ¹⁾	
Rated current, at 40 °C			A	300, 350, 400			500, 630			700, 800	
Rated short-circuit breaking capacity [Icu] (kA rms)	Recognition code for order			E	S	H	E	S	H	S	H
	AC660 V / 690 V			5	8	10	5	8	10	8	10
	AC480 V / 500 V			18	35	50	25	45	50	45	50
	AC440 V / 460 V			38	50	70	38	50	70	50	70
	AC380 V / 415 V			45	65	85	45	65	85	65	85
	AC220 V / 240 V			50	75	100	50	75	100	75	100
DC250 V (2P)			20	25	40	20	25	40	25	40	
Service breaking capacity [Ics = % Icu]				100	100	100	100	100	100	100	100
Endurance (Durability)	Mechanical			4,000			2,500			2,500	
	Electrical			1,000			1,000			500	
Trip Device											
Thermal magnetic	Long time [LT]	Fixed		(1.0) x In			(1.0) x In			(1.0) x In	
		Adjustable		(0.63 - 0.8 - 1.0) x In			(0.63 - 0.8 - 1.0) x In			(0.63 - 0.8 - 1.0) x In	
	Instantaneous [INST]			10 x In			10 x In			10 x In	
Accessory											
Internal	Auxiliary switch		AUX	●			●			●	
	Alarm switch		ALT	●			●			●	
	Shunt trip		SHT	●			●			●	
	Undervoltage trip		UVT	●			●			●	
	Auxiliary + Alarm Switch		AXT	-			-			-	
External	Rotary handle	Front contact	TFG	●			●			●	
		Extended	TFH	●			●			●	
	Motor operator		MOT	●			●			●	
	Mechanical interlock		MIF	●			●			●	
	Pad Lock device		PLD	●			●			●	
	Din Rail Adaptor		DRA	-			-			-	
	Terminal cover		TCF	●			●			●	
	Phase barrier		TQQ	●			●			●	
	Terminal extentions		TBB	●			●			●	
Installation and Dimensions											
Connection/Installation		Front connection		Terminal Screw			Terminal Screw, Terminal Busbar			Terminal screw, Terminal busbar	
		Rear connection		Horizontal/Vertical wiring			Horizontal/Vertical wiring			Horizontal/Vertical wiring	
Dimensions (mm)		W (2/3/4P)		140/140/184 (mm)			210/210/280 (mm)			210/210/280 (mm)	
		H		257 (mm)			280 (mm)			280 (mm)	
		D		110 (mm)			110 (mm)			110 (mm)	
Weight (kg)		2/3/4P		4/4.5/5.4 (kg)			8.7/9.5/12.5 (kg)			8.7/9.5/12.5 (kg)	

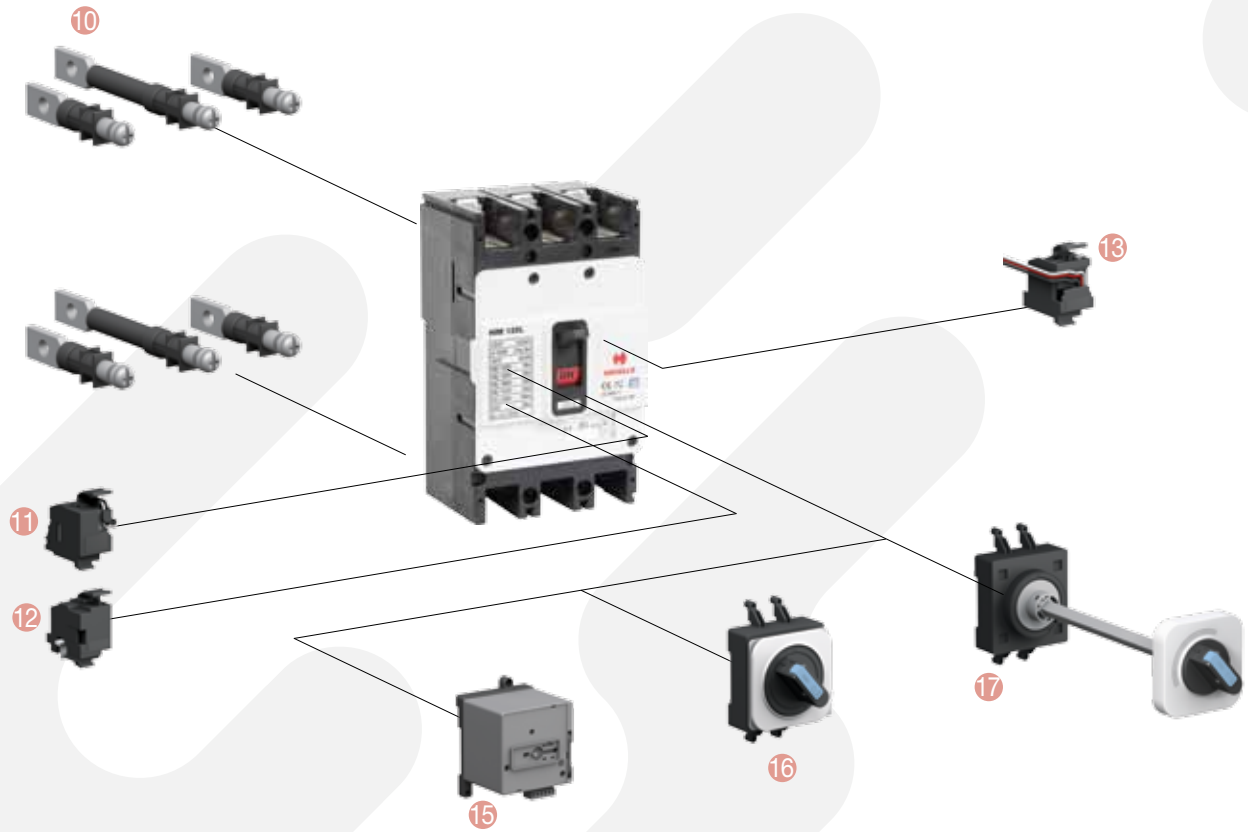
Accessories



- 1) DIN rail adaptor (DRA): HIM 100 only
2) Busbar (TBB): HIM 250 only

HIM Series MCCB

- | | | |
|------------------------------------|-------------------------|------------------------------|
| 1) Plug in Devices | 4) Insulation Barrier | 7) Lug Terminal |
| 2) Terminal Cover for Plug-In Type | 5) DIN Rail Adaptor | 8) Terminal Cover |
| 3) Busbar | 6) Mechanical Interlock | 9) Padlock for Rotary Handle |

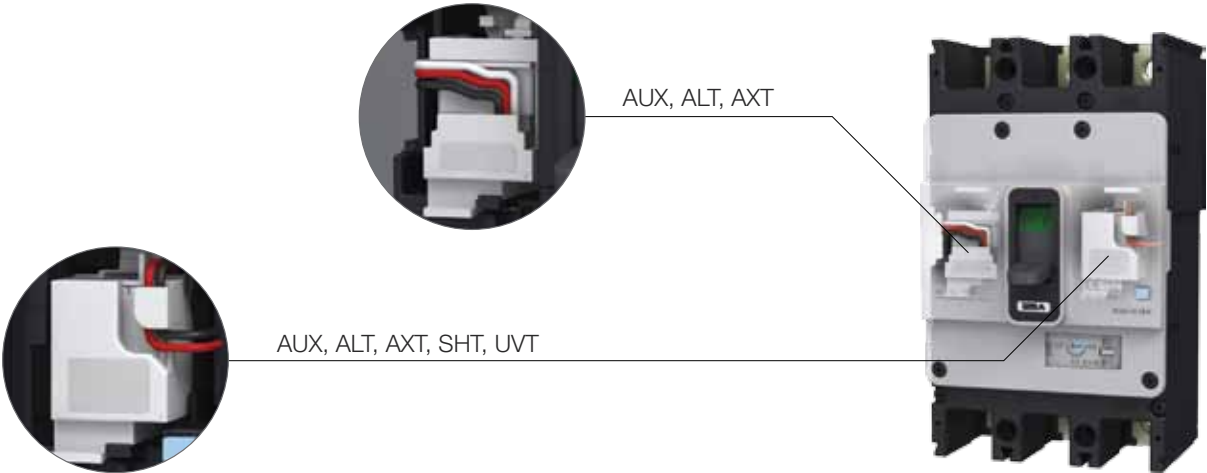


- 10 Rear Connection Terminal
- 11 Shunt Trip Coil
- 12 Undervoltage Trip Coil

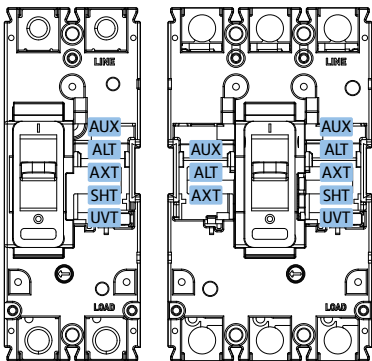
- 13 Auxiliary Switch
- 14 Trip Alarm Switch
- 15 Motor Operator

- 16 Direct Rotary Handle
- 17 Extended Rotary Handle

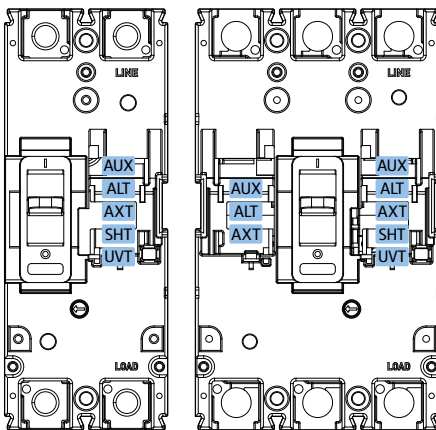
Internal Accessories



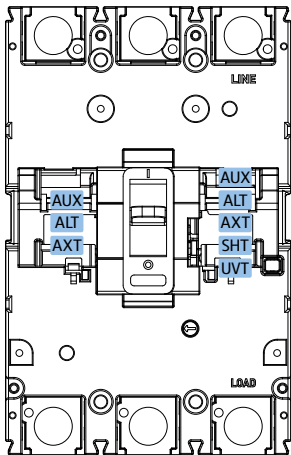
HIM100



HIM125



HIM250



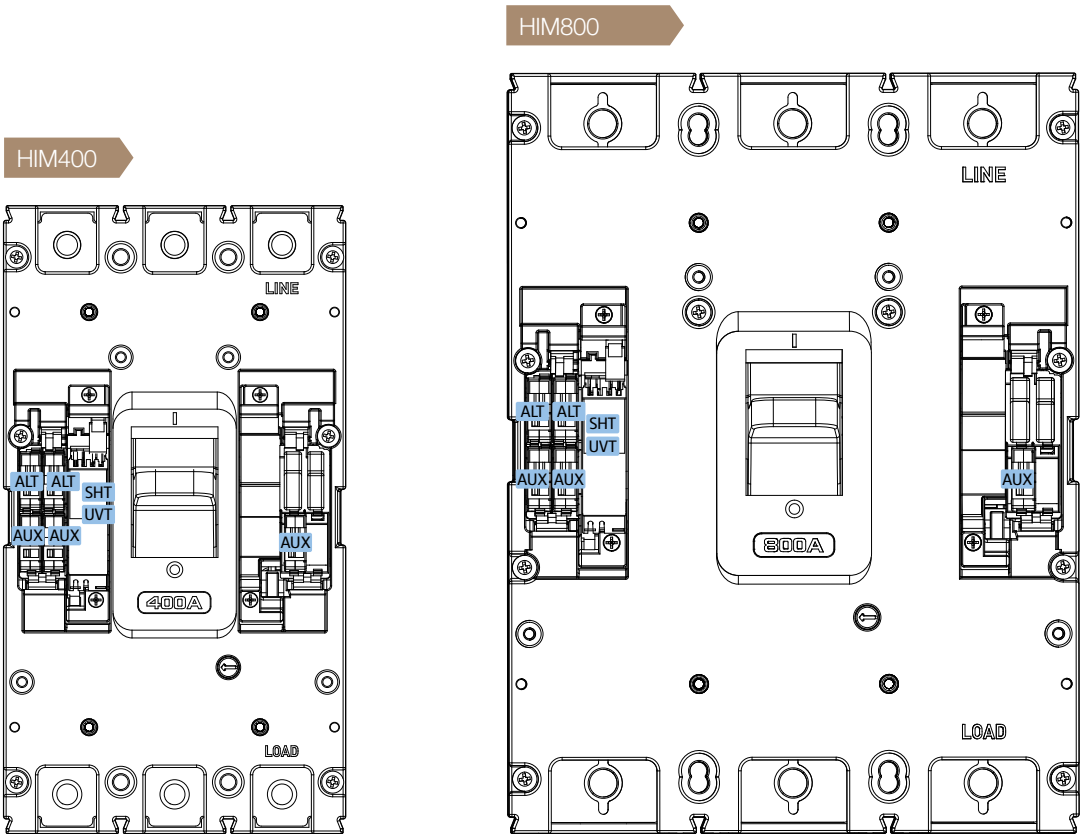
Combinations of Internal Accessories (250 A or less)

Type	Pole	AUX	ALT	SHT	UVT	AXT	AUX	AUX	SHT	UVT	SHT	UVT	SHT	UVT
		ALT	ALT	AUX	AUX	ALT	ALT	ALT	AUX	AUX	ALT	ALT	AXT	AXT
HIM100 HIM125	2													
HIM100 HIM125 HIM250	3/4													

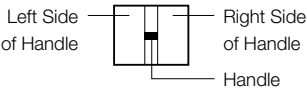
● AUX: Auxiliary switch □ / ALT: Alarm switch ■ / SHT: Shunt trip ▨ / UVT: Under-voltage trip ▩ / AXT: Auxiliary alarm switch □■

Installation of Internal Accessories

- Auxiliary switch (AUX)
- Alarm switch (ALT)
- Auxiliary + Alarm switch (AXT)
- Shunt trip (SHT)
- Undervoltage trip (UVT)



Combinations of Internal Accessories (above 250 A)



Type	Pole	AUX	ALT	SHT	UVT	AUX	SHT	UVT	SHT	UVT	SHT	UVT
						ALT	AUX	AUX	ALT	ALT	AUX	AUX
						ALT	AUX	AUX	ALT	ALT	ALT	ALT
HIM400	2/3/4											
HIM630, 800	2/3 4RSTN											
HIM630, 800	4NRST											

• AUX: Auxiliary switch / ALT: Alarm switch / SHT: Shunt trip / UVT: Under-voltage trip

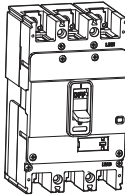
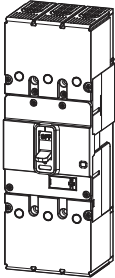
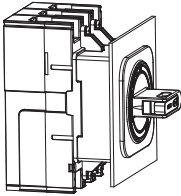
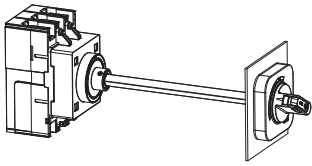
Accessories for HIM Series Moulded Case Circuit Breakers

Description	HIM 100 Frame	HIM 125 Frame	HIM 250 Frame	HIM 400 Frame	HIM 630 Frame	HIM 800 Frame
Shunt Trip						
24 Vdc	•	•	•	•	•	•
48 Vdc	•	•	•			
60 Vdc	•	•	•			
100 Vdc - 120 Vdc	•	•	•			
125 Vdc	•	•	•			
100 Vdc - 125 Vdc				•	•	•
100 Vac - 120 Vac / 200 Vac - 250 Vac	•	•	•	•	•	•
Under Voltage Release						
24 Vdc	•	•	•	•	•	•
48 Vdc	•	•	•			
100 Vdc - 110 Vdc	•	•	•			
100 Vac - 120 Vac / 200 Vac - 230 Vac	•	•	•	•	•	•
380 Vac - 415 Vac	•	•	•	•	•	•
Rotary Handle - Direct Mounting	•	•	•	•	•	•
Rotary Handle - Door Mounting	•	•	•	•	•	•
Auxiliary Contact (250 Vac / 250 Vdc) (450 Vac / 250 Vdc)						
1-Changeover	•	•	•	•	•	•
2-Changeover	•	•	•			
Alarm Switch - (Left side only)	•	•	•	•	•	•
Alarm Switch - (Right side only)	•	•	•			
Auxiliary + Alarm Switch - Left / Right side only	•	•	•			
Mechanical Interlock						
2 Pole	•	•				
3 Pole / 4 Pole (N-R-S-T)	•	•	•	•	•	•
Motor Operator						
24 Vdc	•	•	•	•	•	•
110 Vac / Vdc / 240 Vac / Vdc	•	•	•	•	•	•
Pad Lock Device	•	•	•	•	•	•
Auxiliary Handle				•	•	•
Terminals - Standard Type						
3 Pole (Set of 3)			•		•	•
4 Pole (Set of 4)			•		•	•
Terminals - Extended Type						
3 Pole (Set of 3)	POR	POR	•	•		
4 Pole (Set of 4)	POR	POR	•	•		
Terminal Cover - Short Type						
2 Pole	•	•				
3 Pole / 4 Pole	•	•	•	•	•	•
Terminal Cover - Long Type						
2 Pole	•	•				
3 Pole / 4 Pole	•	•	•	•	•	•
Phase Barrier						
2 Pole (Set of 1)	•	•	•			
3 Pole (Set of 2) / 4 Pole (Set of 3)	•	•	•	•	•	•
DIN Rail Adaptor	•					

Technical Information

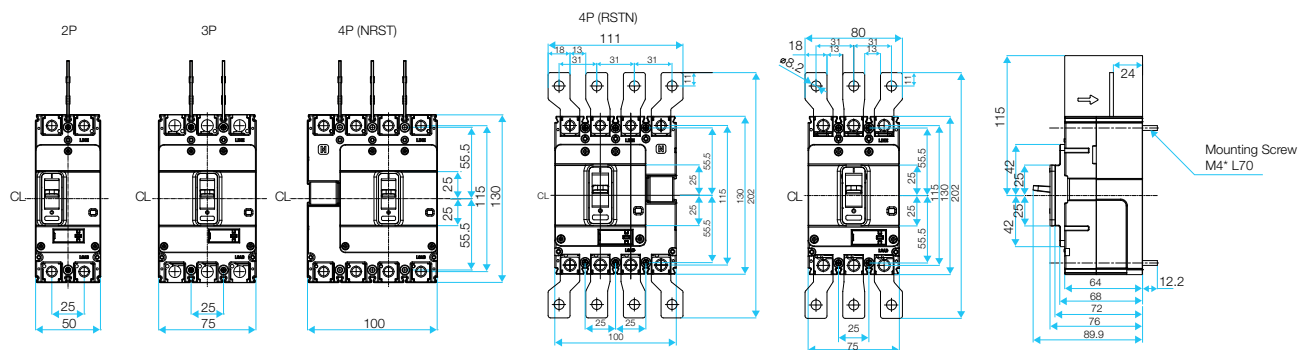
Degree of Protection

By stipulating the IP degree of MCCB based on IEC 60529 standard, the IP degree is changed according to the product condition.

Condition	Circuit Breaker	Circuit Breaker + Terminal Cover	Circuit Breaker + Terminal Cover + Rotary Handle (Front Contact)	Circuit Breaker + Terminal Cover + Rotary Handle (Extended)
Exteriors				
Degree of protection	IP20	IP40	IP40	IP40

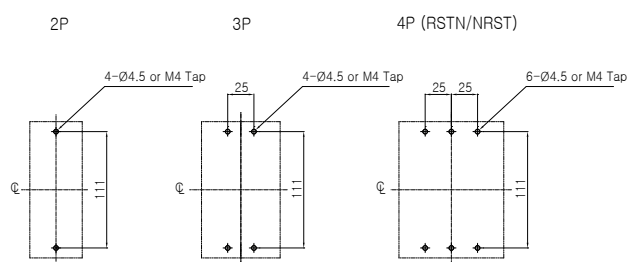
Front Connection Type HIM 100

Dimension (in mm)

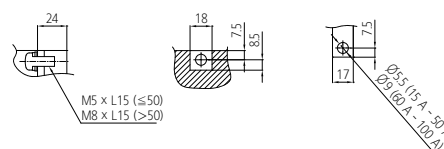


- Insulation barriers for line side are provided as basic option.

Dimensions for Mounting Body



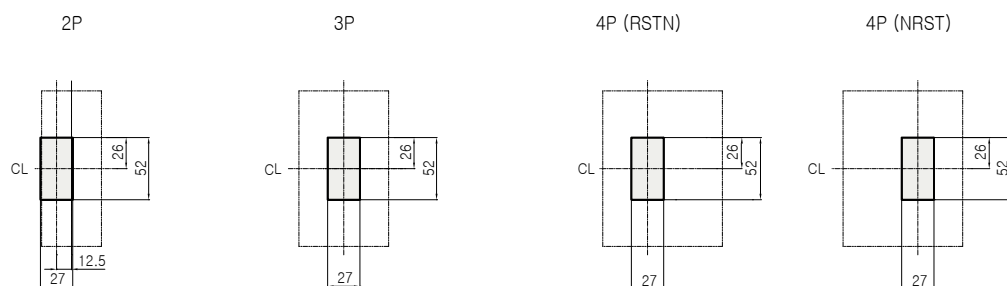
Terminal/Connection Bus Dimension



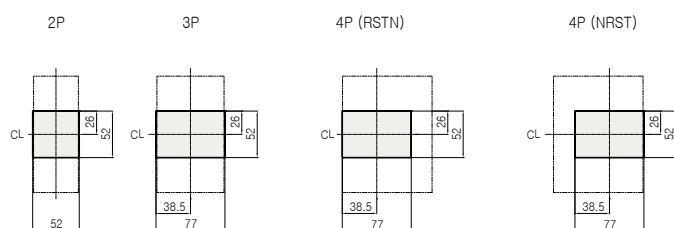
100AF

Specification of Mounting Screw: M4 x L70 P/W
Specification of Terminal Screw: (Less than 50 A) M5 x L15 P/W P/W
(Excess than 50 A) M8 x L15 S/W P/W

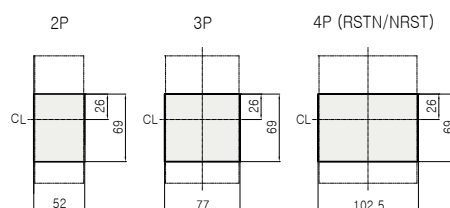
Panel Cover Cutting Dimensions for Handle



Panel Cover Cutting Dimensions for Handle/Test Button

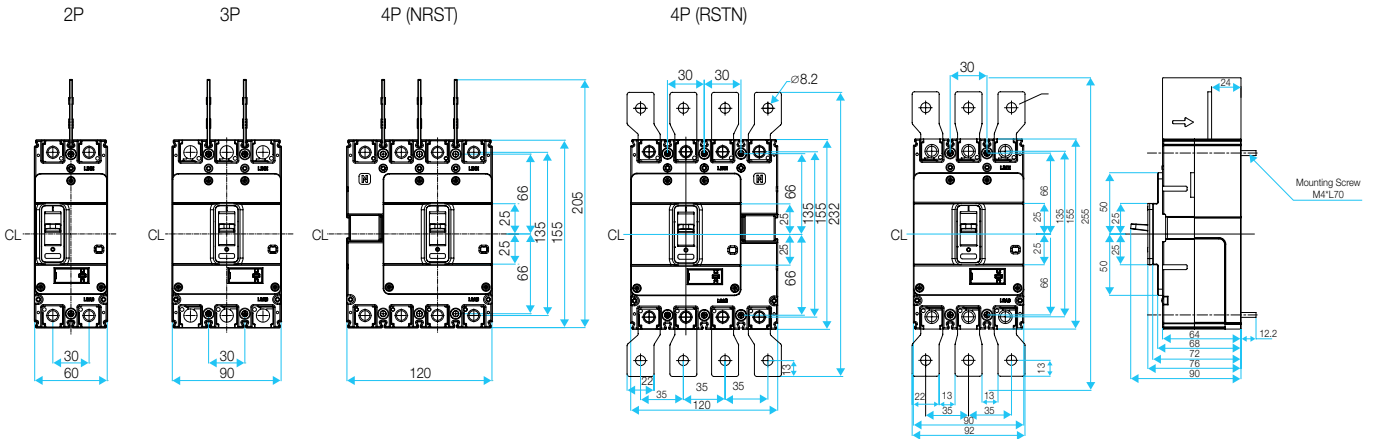


Panel Cover Cutting Dimensions for Handle/Trip Unit



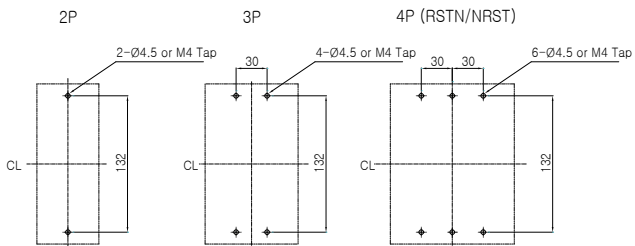
Front Connection Type HIM 125

Dimension (in mm)

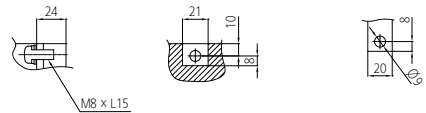


- Insulation barriers for line side are provided as basic option.

Dimensions for Mounting Body



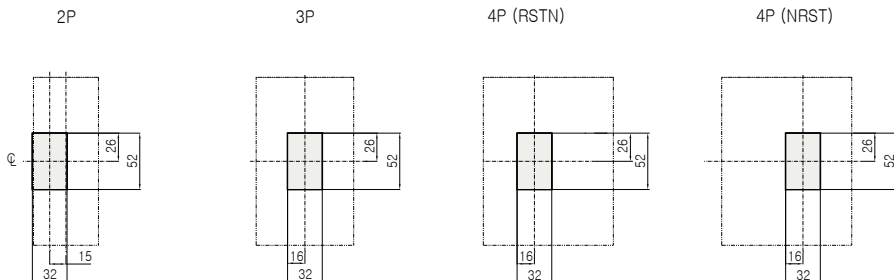
Terminal/Connection Bus Dimension



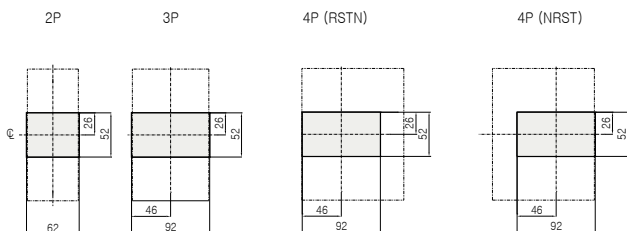
125AF

Specification of Mounting Screw: M4 x L70 P/W
Specification of Terminal Screw: M8 x L15 S/W P/W

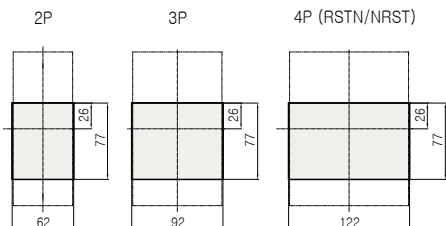
Panel Cover Cutting Dimensions for Handle



Panel Cover Cutting Dimensions for Handle/Test Button



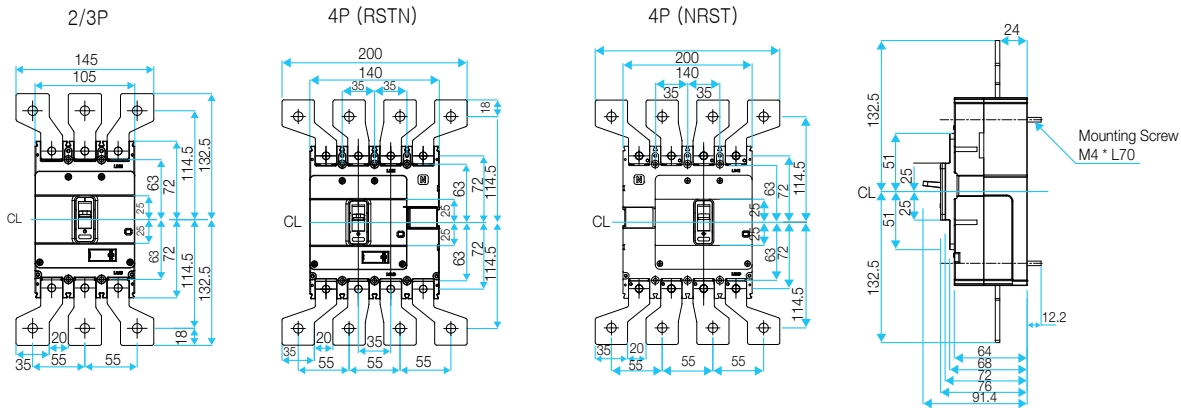
Panel Cover Cutting Dimensions for Handle/Trip Unit



Front Connection Type HIM 250

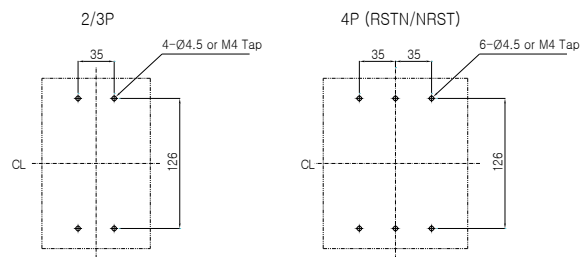


Dimension (in mm)

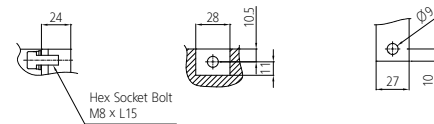


- Insulation barriers for line side are provided as basic option.

Dimensions for Mounting Body



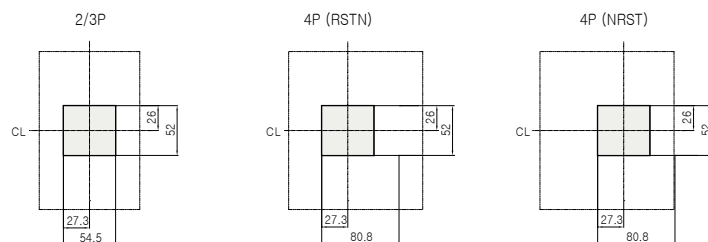
Terminal/Connection Bus Dimension



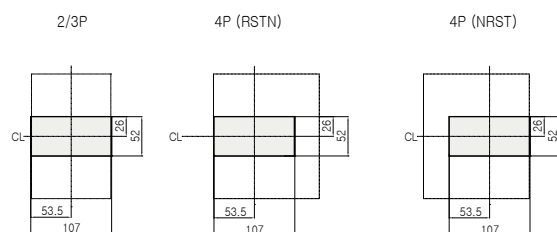
250AF

Specification of Mounting Screw: M4 x L70 PW
Specification of Terminal Screw: Hex Socket Bolt M8 x L15 SW PW

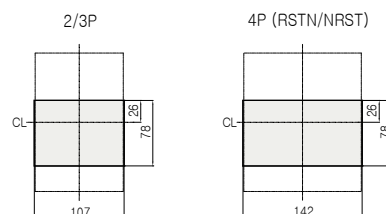
Panel Cover Cutting Dimensions for Handle

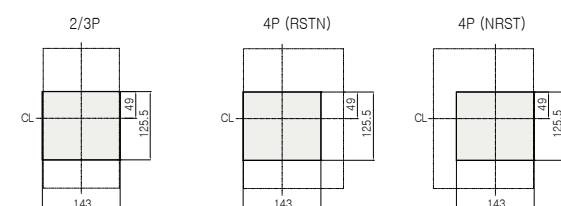


Panel Cover Cutting Dimensions for Handle/Test Button



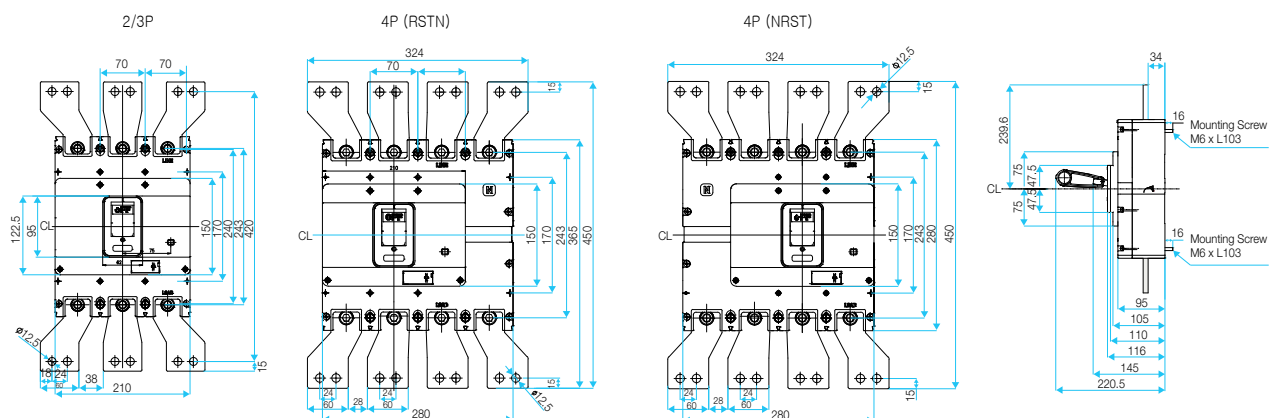
Panel Cover Cutting Dimensions for Handle/Trip Unit





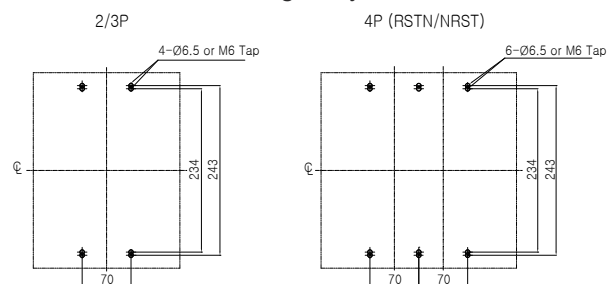
Front Connection Type HIM 800

Dimension (in mm)

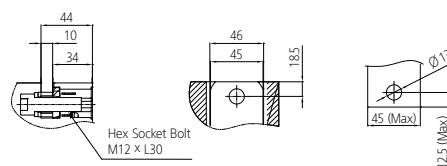


- Insulation barriers for line side are provided as basic option.

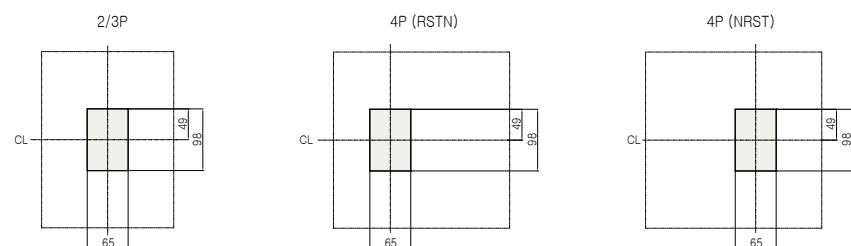
Dimensions for Mounting Body



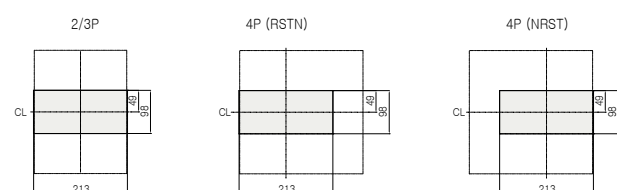
Terminal/Connection Bus Dimension



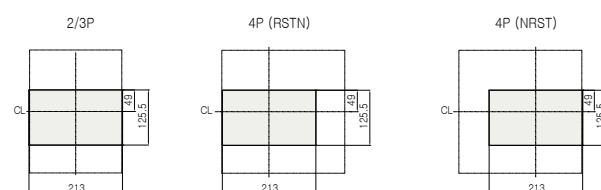
Panel Cover Cutting Dimensions for Handle



Panel Cover Cutting Dimensions for Handle/Test Button

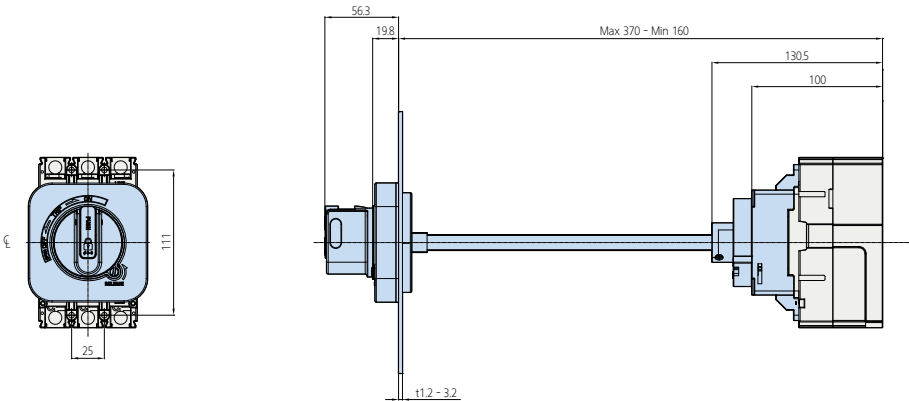


Panel Cover Cutting Dimensions for Handle/Trip Unit

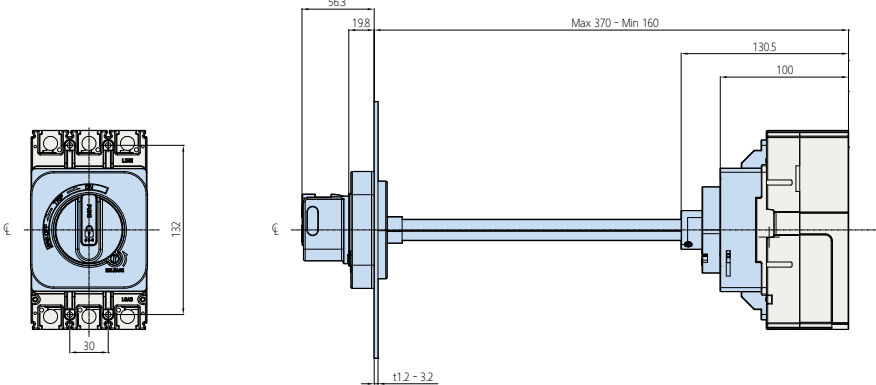


Extended Rotary Handle - HIM 100

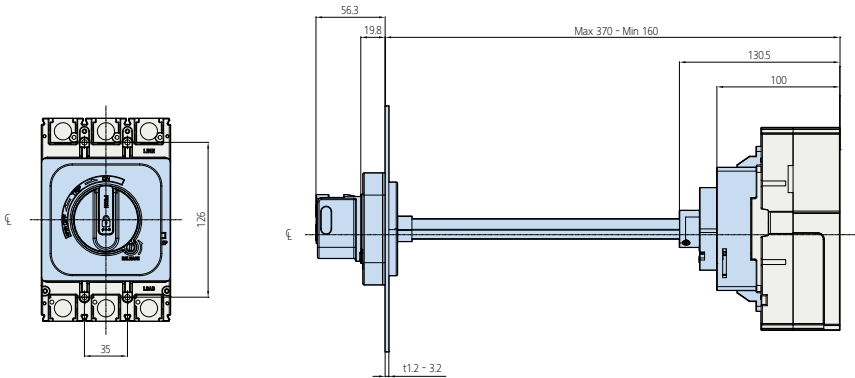
Dimension (in mm)



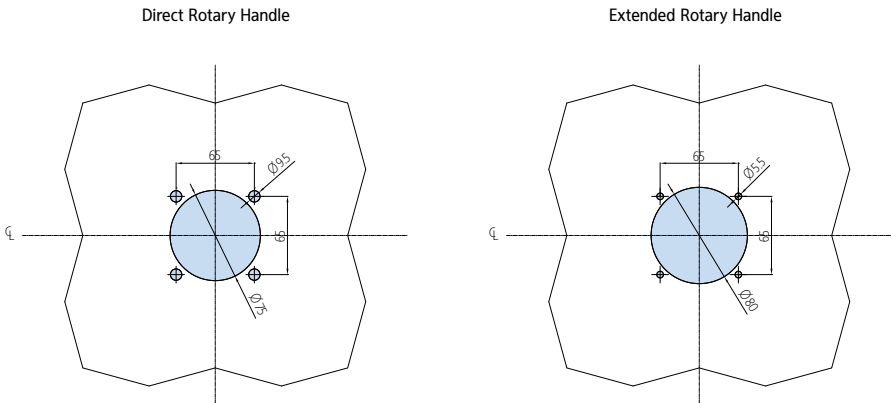
Extended Rotary Handle - HIM 125



Extended Rotary Handle - HIM 250

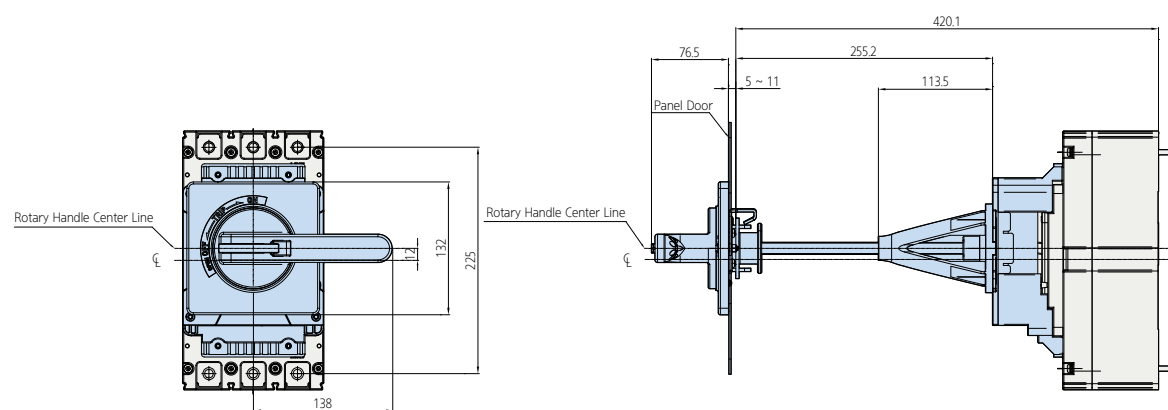


Dimensions for Mounting Body (HIM 100 - HIM 250)

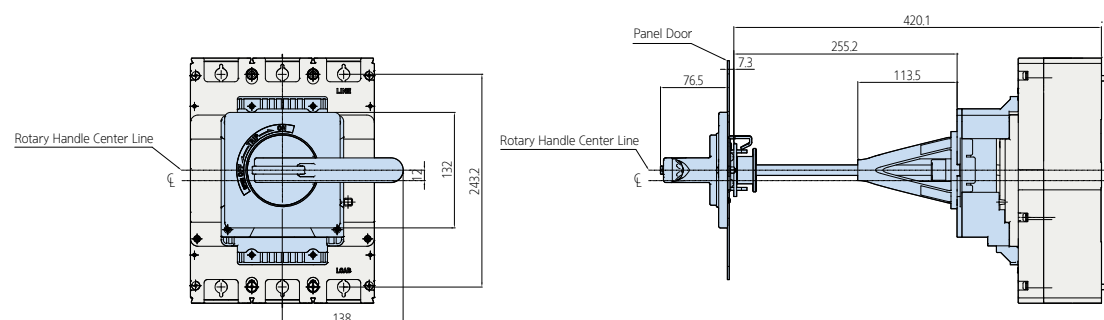


Extended Rotary Handle - HIM 400

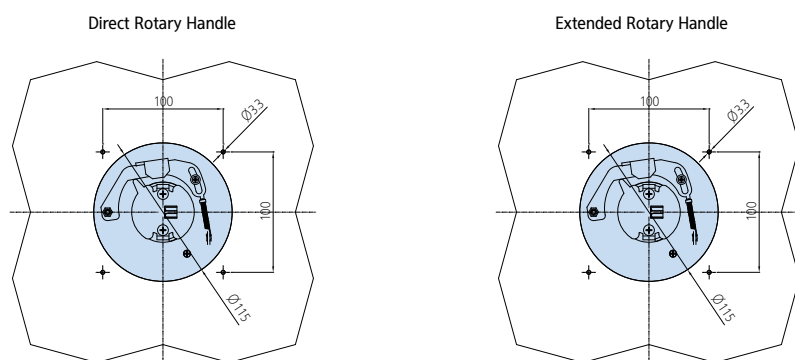
Dimension (in mm)



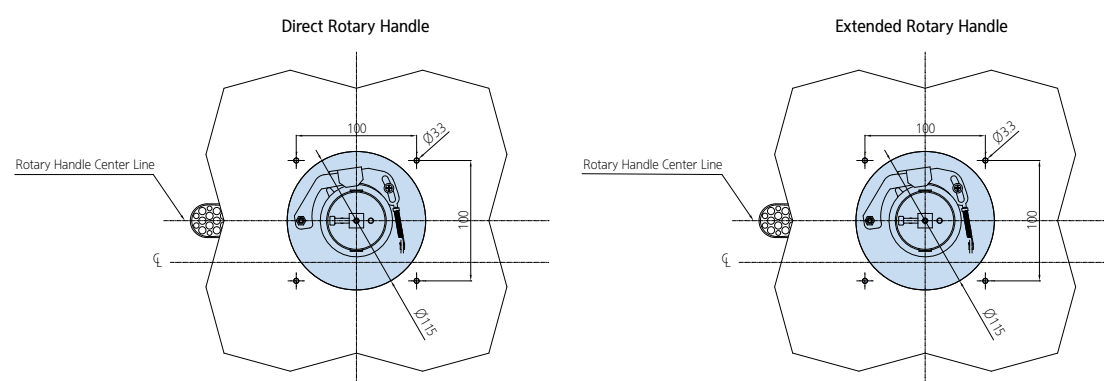
Extended Rotary Handle - HIM 800



Dimensions for Mounting Body - HIM 400

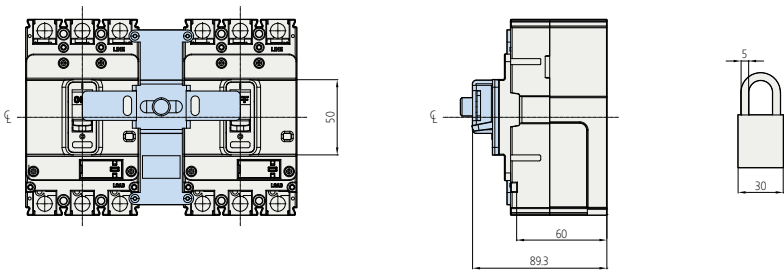


Dimensions for Mounting Body - HIM 800

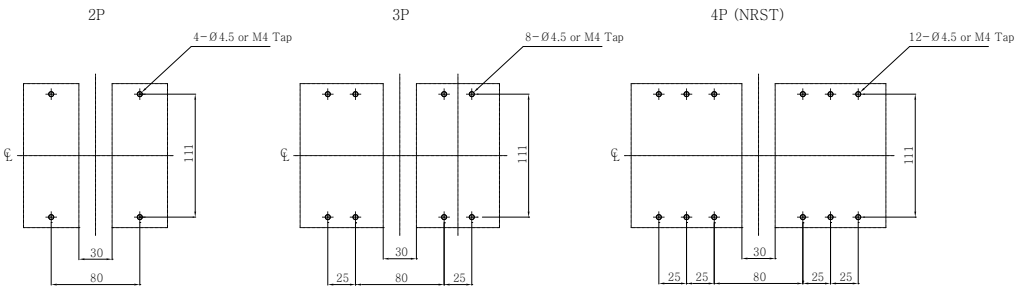


Mechanical Interlock HIM 100

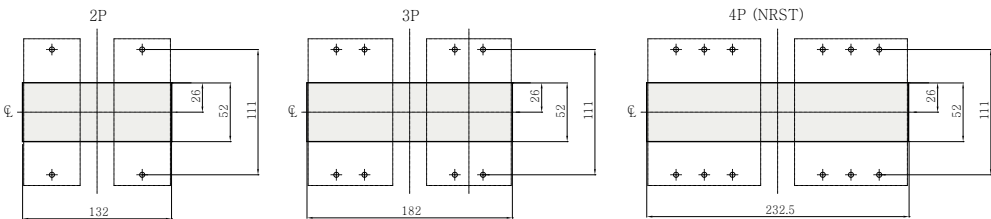
Dimension (in mm)



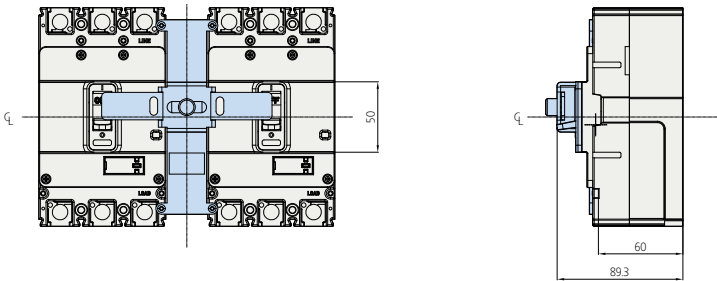
Dimensions for Mounting Body



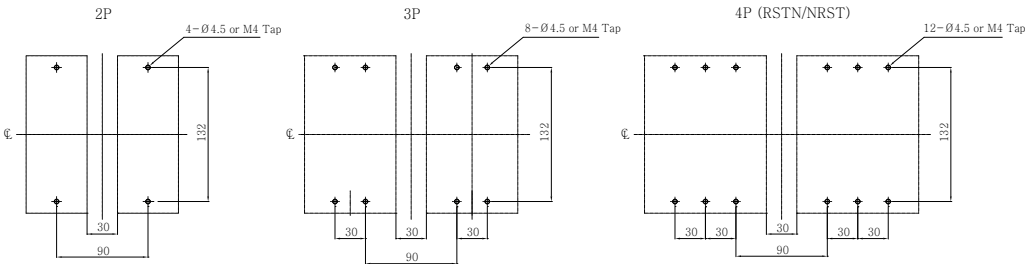
Panel Cover Cutting Dimension



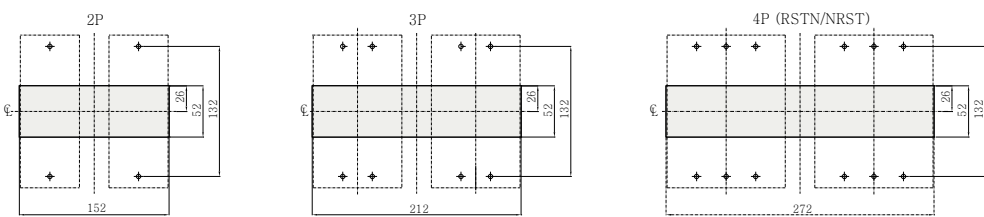
Mechanical Interlock HIM 125



Dimensions for Mounting Body

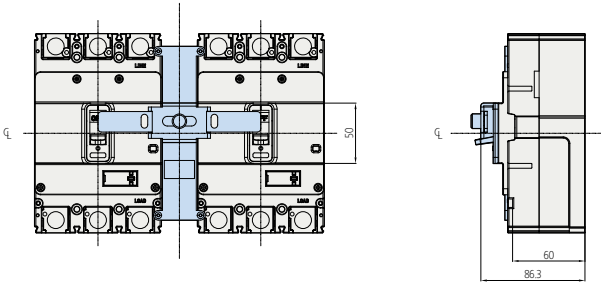


Panel Cover Cutting Dimension

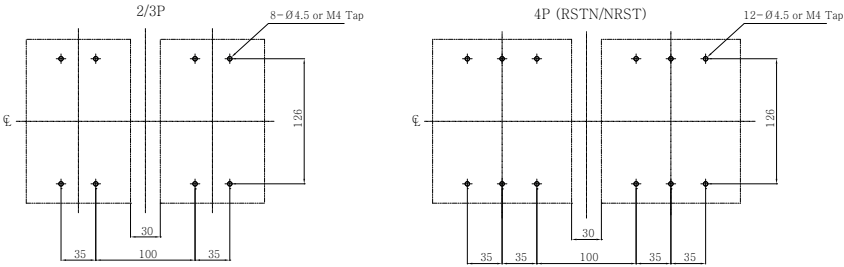


Mechanical Interlock HIM 250

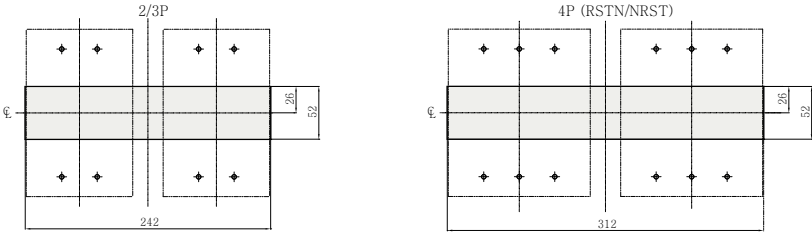
Dimension (in mm)



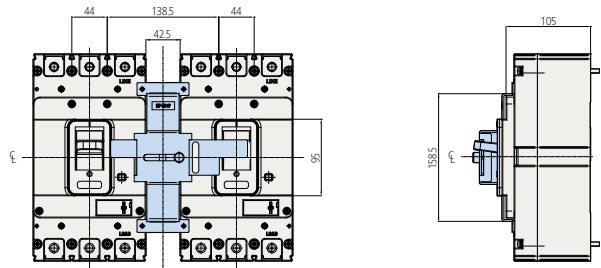
Dimensions for Mounting Body



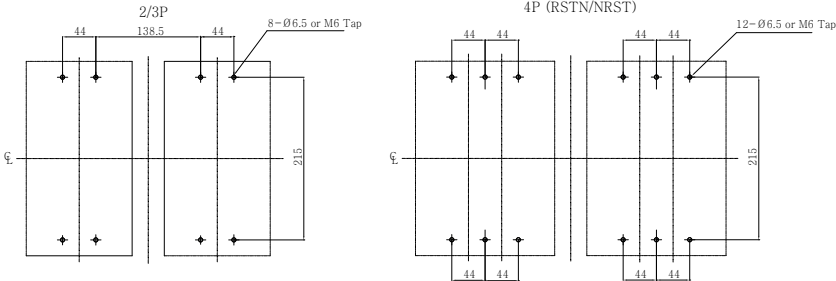
Panel Cover Cutting Dimension



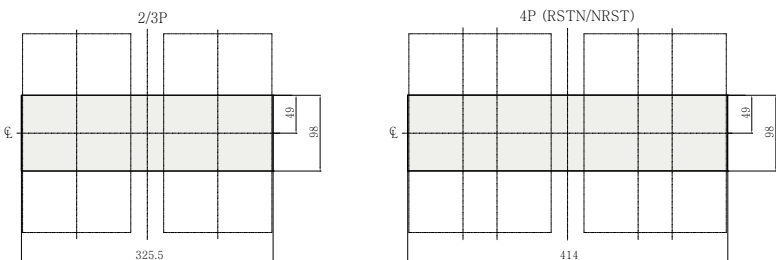
Mechanical Interlock HIM 400



Dimensions for Mounting Body

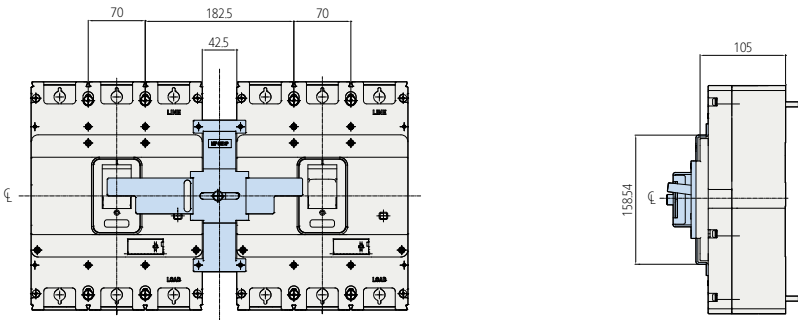


Panel Cover Cutting Dimension

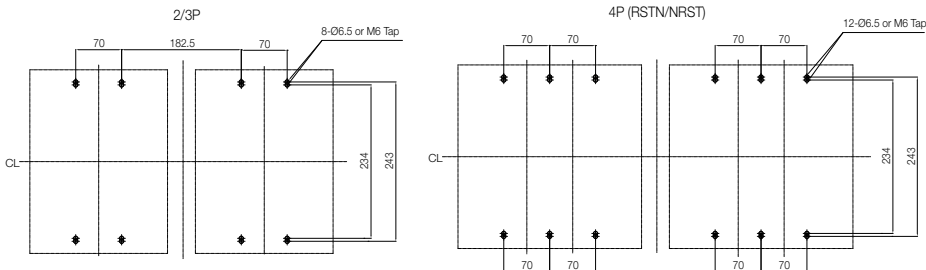


Mechanical Interlock HIM 800

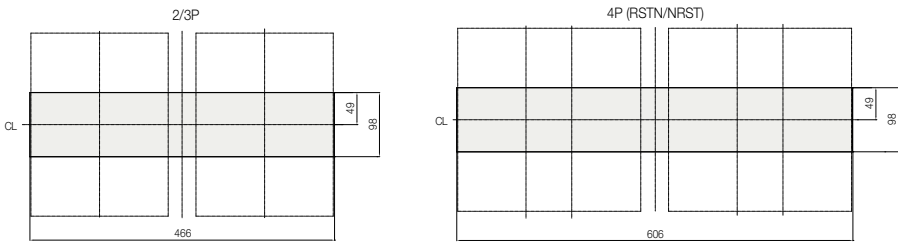
Dimension (in mm)



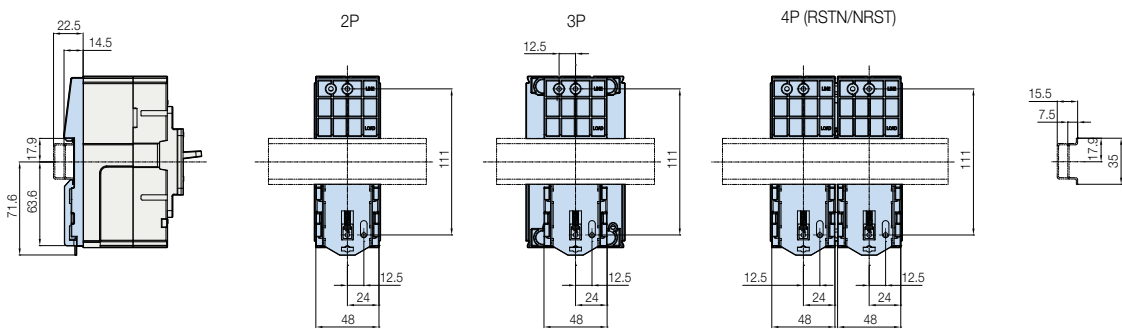
Dimensions for Mounting Body



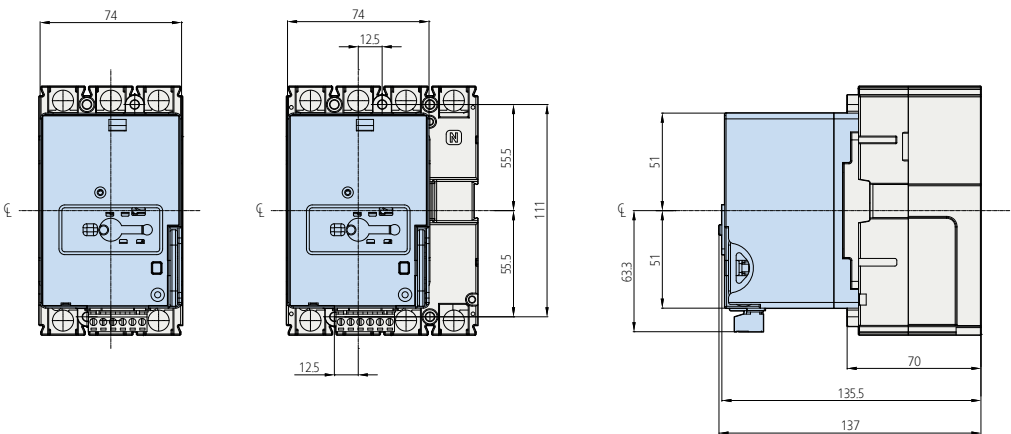
Panel Cover Cutting Dimension



DIN Rail Adaptor - DIN Rail Mounting Hole



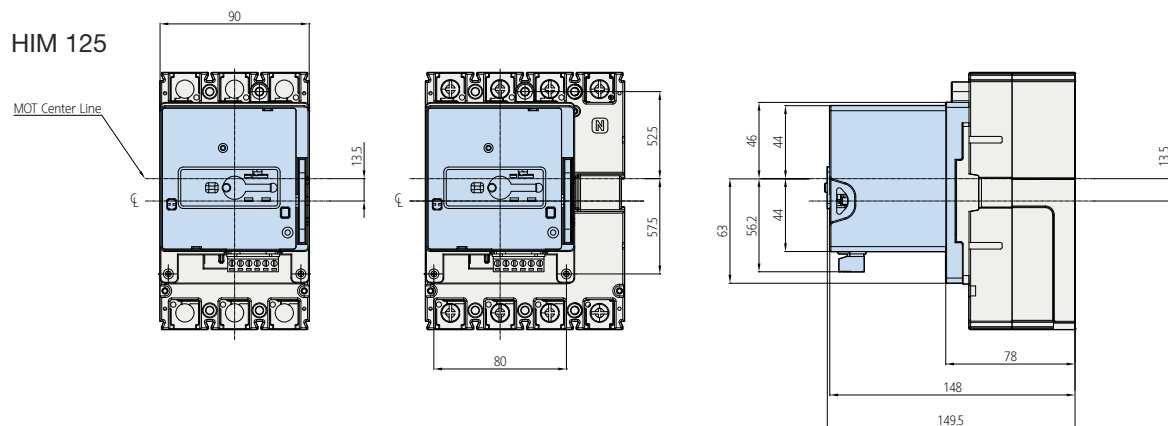
Motor Operator HIM 100



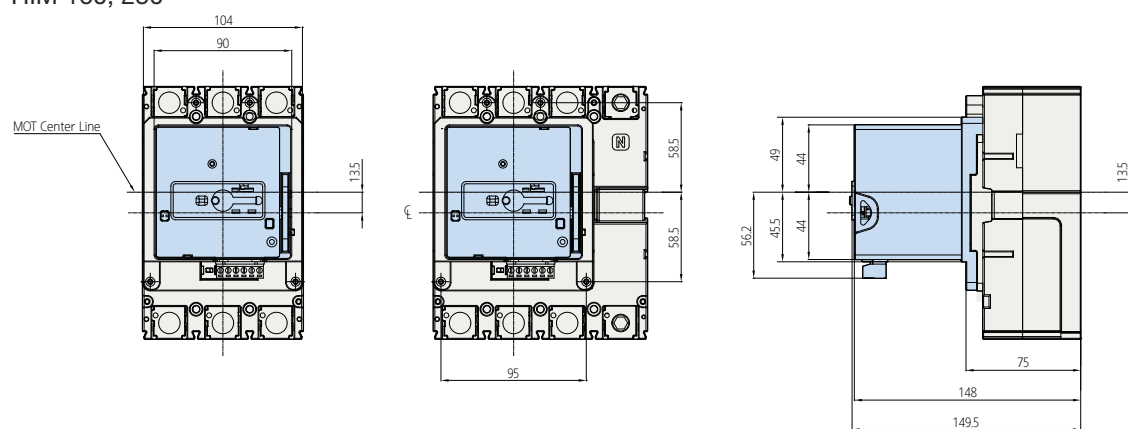
Dimension (in mm)

HIM series

HIM 125

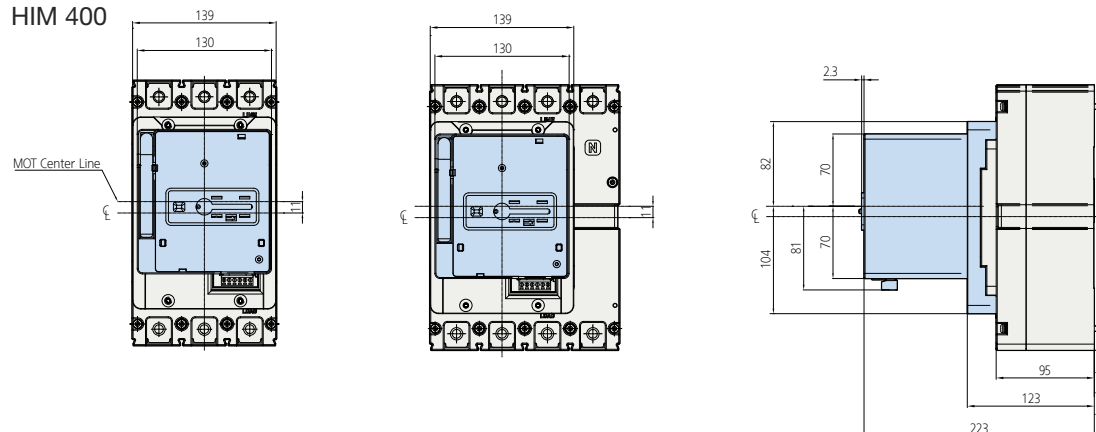


HIM 160, 250

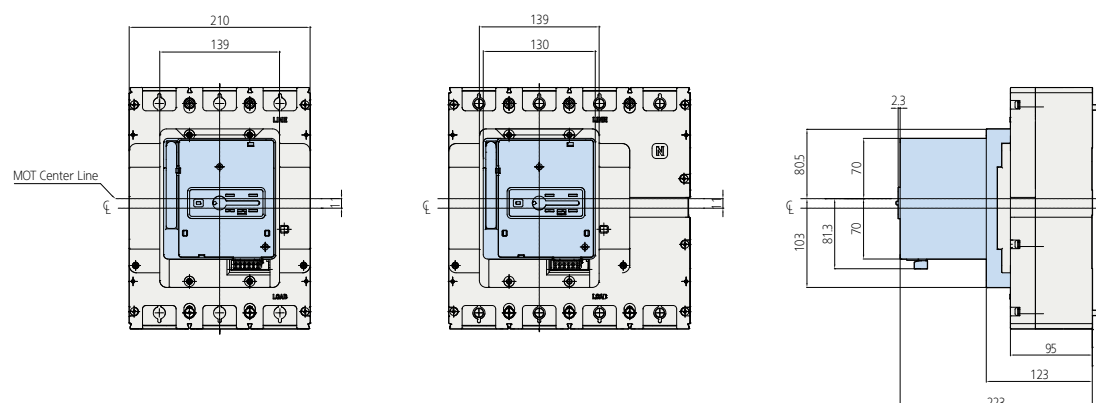


Motor Operator

HIM 400



HIM 630, 800



Certifications

Molded Case Circuit Breakers (MCCB)

Type		Approvals			CB Certificates
Certificate		Safety Certi	KS	IEC (CE)	DEKRA
Mark					
Country		KOREA	KOREA	EUROPE	NETHERLANDS
HIM100	E	•	•	•	•
	S	•	•	•	•
HIM125	S	•	•	•	•
	H	•	•	•	•
HIM250	L	•	•	•	•
	S	•	•	•	•
	H	•	•	•	•
HIM400	L	•	•	•	•
	E	•	•	•	•
	S	•	•	•	•
HIM630	H	•	•	•	•
	E	•	•	•	•
	S	•	•	•	•
HIM800	H	•	•	•	•
	S	•	•	•	•

Marine Certifications

Type		Approvals							
Certificate		KR	LR	BV	ABS	DNV•GL	RS	RINA	ClassNK
Mark									
National Certification		KOREA	U.K	FRANCE	U.S.A	GERMANY	RUSSIA	ITALY	JAPAN
HIM100	E	•	•	•	•	•	•	•	•
	S	•	•	•	•	•	•	•	•
HIM125	S	•	•	•	•	•	•	•	•
	H	•	•	•	•	•	•	•	•
	L	•	•	•	•	•	•	•	•
HIM250	S	•	•	•	•	•	•	•	•
	H	•	•	•	•	•	•	•	•
	L	•	•	•	•	•	•	•	•
HIM400	E	•	•	•	•	•	•	•	•
	S	•	•	•	•	•	•	•	•
	H	•	•	•	•	•	•	•	•
HIM630	E	•	•	•	•	•	•	•	•
	S	•	•	•	•	•	•	•	•
	H	•	•	•	•	•	•	•	•
HIM800	S	•	•	•	•	•	•	•	•
	H	•	•	•	•	•	•	•	•

MCCB

Moulded Case Circuit Breakers



Features:

- Wide range : 16 A to 1600 A (AC)
- Compact dimensions
- Adjustable thermal setting (70-100%) I_n .
- Adjustable magnetic setting (5-10 times / 4-10 times) I_n .
- In 4P wSN version, neutral makes first and breaks last
- Uniform front escutcheon plate
- Positive dolly position indication
- Wide range of accessories

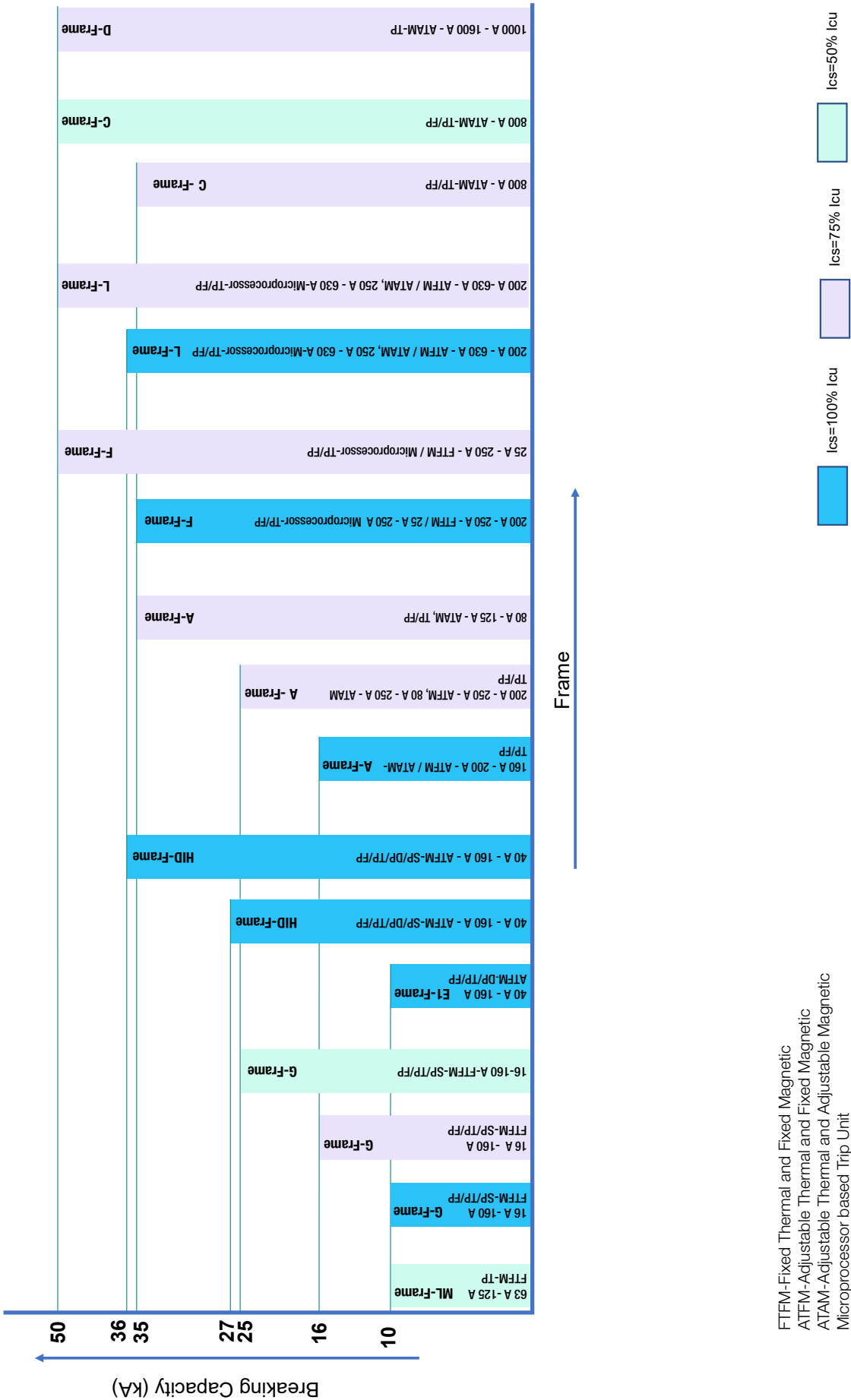
Range :

16 A to 1600 A in single pole, double pole, three pole and four pole with switched neutral execution.

Specification :

Conforms to IS / IEC: 60947-2

Load Line (TMTU/ Microprocessor) + HID MCCB



FTFM-Fixed Thermal and Fixed Magnetic
ATFM-Adjustable Thermal and Fixed Magnetic
ATAM-Adjustable Thermal and Adjustable Magnetic
Microprocessor based Trip Unit

Technical Information

G-Frame

Standard conformity	:	IEC 60947-2 / IS:13947-2
Rated operational voltage	:	415 Vac
Rated Insulation Voltage	:	750 Vac
Type of release	:	Thermal Magnetic
Utilisation Category	:	A
Rated frequency	:	50 Hz / 60 Hz
Ambient Temperature	:	40 °C (50 °C on request)
Operating altitude	:	2000 m
Humidity	:	0 - 90%
Rated impulse voltage	:	6 kV (1P) 8 kV (3P/4P)



Frame	SI Unit	GS		GN		GH	
No. of Poles		1P	3P / 4P wSN	1P	3P / 4P wSN	1P	3P / 4P wSN
Standard current range / rating (In)	A	16-160*	16-160*	16-160*	16-160*	16-160*	16-160*
Thermal release setting		Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Magnetic release setting for current rating :							
16 A - 32 A	A	800	800	800	800	800	800
40 A - 50 A	A	800	800	800	800	800	800
63 A - 80 A	A	800	800	800	800	800	800
100 A - 160 A	A	1000	1000	1000	1000	1000	1000
Rated short circuit making capacity							
(Peak) I _{cm} at 415 Vac	kA	17†	17	32†	32	52.5†	52.5
Rated ultimate short circuit breaking capacity (I _{cu}), kA							
(at different voltages)	240 V	10	16	16	25	25	40
	415 V	-	10	-	16	-	25
	440 V	-	10	-	14	-	16
	500 V	-	7.5	-	10	-	12
I _{cs} = % I _{cu}		100%	100%	75%	75%	50%	50%
Weight SP	kg	0.35		0.35		0.35	
TP	kg	-	0.93	-	0.93	-	0.93
4P wSN	kg	-	1.2	-	1.2	-	1.2
Terminal capacity (cable)	mm ²	70	70	70	70	70	70
Bus bar (width)	mm	10	10	10	10	10	10
Recommended Torque	Nm	2.5	2.5	2.5	2.5	2.5	2.5
Internal Accessories							
Trip Alarm Contact (Factory fitted)		-	•	-	•	-	•
Auxiliary Switch (1 C/O or 2C/O)		-	•	-	•	-	•
Shunt Trip		-	•	-	•	-	•
Under Voltage Release		-	•	-	•	-	•
External Accessories							
Earth Fault Relay		-	•	-	•	-	•
Rotary Handle - Direct, Extended		-	•	-	•	-	•
Extended Terminals (above 63 A)		+	+	+	+	+	+
Dolly Extension		-	-	-	-	-	-
Phase Barriers		+	+	+	+	+	+
Terminal Shrouds		-	•	-	•	-	•
Dolly pad locking Device		-	•	-	•	-	•

* Current Ratings - 16 A, 20 A, 25 A, 32 A, 40 A, 50 A, 63 A, 80 A, 100 A, 125 A, 150 A, 160 A

• Available, - Not Available, + Supplied alongwith the MCCB as standard.

Δ Available in single pole

† At 240 V

1P - Single Pole

3P - Three Pole

4P wSN - Four Pole with Switched Neutral

Technical Information

AA-Frame (TAMF)

Standard conformity	:	IEC 60947-2 / IS:13947-2
Rated operational voltage	:	415 Vac
Rated Insulation Voltage	:	750 Vac
Type of release	:	Thermal Magnetic
Utilisation Category	:	A
Rated frequency	:	50 Hz / 60 Hz
Ambient Temperature	:	40 °C (50 °C on request)
Operating altitude	:	2000 m
Humidity	:	0 - 90%
Rated impulse voltage	:	6 kV (1P) 8 kV (3P/4P)



Frame	SI Unit	AAS		AAN	
No. of Poles		1P	3P / 4P wSN	1P	3P / 4P wSN
Standard current range / ratings (In)	A	25-125	160-250	25-125	160-250
Thermal release setting (Adjustable)		70-100% of In		70-100% of In	
Magnetic release setting for current rating :					
25 A - 63 A		400 A	400 A	400 A	400 A
80 A - 125 A		800 A	800 A	800 A	800 A
160 A - 250 A		1600 A	1600 A	1600 A	1600 A
50 A -125 A AM Frame		-	-	-	-
160 A -250 A AM Frame		-	-	-	-
Rated short circuit making capacity (Peak) I cm	kA	52.5†	32	52.5†	52.5
Rated ultimate short circuit breaking					
capacity (Icu), kA	240 V	16	25	25	40
(at different voltages)	415 V	-	16	-	25
	440 V	-	16	-	25
	500 V	-	12	-	18
Ics = % Icu	%	100%	100%	75%	75%
Weight SP (Single Pole)	kg	0.7	-	0.7	-
TP (Triple Pole)	kg	-	1.8	-	1.8
FPwSN (Four Pole Switched Neutral)	kg	-	2.4	-	2.4
Terminal capacity (Cable)	mm²	70 (upto 100 A) / 150 (125 A - 250 A)		70 (upto 100 A) / 150 (125 A - 250 A)	
(Bus bar width)	mm	25 (125 A - 250 A)		25 (125 A - 250 A)	
Recommended Torque	Nm	10	10	10	10
Internal Accessories					
Auxiliary Switch (1 C/O or 2C/O)		-	•	-	•
Shunt Trip		-	•	-	•
Under Voltage Release		-	•	-	•
Trip Alarm Contact (1 C/O) (Factory Fitted)		-	•	-	•
External Accessories					
Earth Fault Relay		-	•	-	•
Rotary Handle - Direct, Extended		-	•	-	•
Extended Terminals (80 A & Above)		+	+	+	+
Dolly Extension		-	-	-	-
Phase Barriers		+	+	+	+
Terminal Shrouds		•	•	•	•
Dolly pad locking Device		•	•	•	•

* Current Ratings - 25 A, 32 A, 40 A, 50 A, 63 A, 80 A, 100 A, 125 A, 160 A, 200 A, 250 A

• Available, - Not Available, + Supplied along with the MCCB above 63 A

† At 240 V

1P - Single Pole

3P - Three Pole

4P wSN - Four Pole with Switched Neutral

Technical Information

A Frame (TAMA) MCCB

Standard conformity	:	IEC 60947-2 / IS:13947-2
Rated operational voltage	:	415 Vac
Rated Insulation Voltage	:	750 Vac
Type of release	:	Thermal Magnetic
Utilisation Category	:	A
Rated frequency	:	50 Hz / 60 Hz
Ambient Temperature	:	40 °C (50 °C on request)
Operating altitude	:	2000 m
Humidity	:	0 - 90%
Rated impulse voltage	:	8 kV



Frame	SI Unit	AS		AN	
No. of Poles		3P / 4P wSN	3P / 4P wSN	3P / 4P wSN	3P / 4P wSN
Current range, (I _n) at 40°C	A	80-125*	160-250	80-125	160-250*
Rated operational voltage	V	415	415	415	415
Rated insulation voltage	V	750	750	750	750
Rated frequency	Hz	50	50	50	50
Thermal release setting (Adjustable)		70-100% of I _n	70-100% of I _n	70-100% of I _n	70-100% of I _n
Magnetic release setting (Adjustable)		560 A - 800 A	1120 A - 1600 A	560 A - 800 A	1120 A - 1600 A
Rated ultimate short circuit breaking capacity (I _{cu})	kA	25	16	35	25
I _{cs} = % I _{cu}		75%	100%	75%	75%
Accessories					
Auxiliary Switch (1 C/O or 2C/O)		•	•	•	•
Shunt Trip		•	•	•	•
Under Voltage Release		•	•	•	•
Trip Alarm Contact (1 C/O) (Factory fitted)		•	•	•	•
Earth Fault Relay		•	•	•	•
Rotary Handle - Direct, Extended		•	•	•	•
Dolly pad locking Device		•	•	•	•

Note: Phase barriers & extended terminals supplied with MCCB as standard, • Available

Havells new **A frame MCCBs** with **adjustable thermal and magnetic release** are designed and manufactured to world class standard in accordance to IS / IEC 60947-2 Standard. The user friendly MCCBs provide accurate and reliable protection against overload and short circuit.

Current Rating: 80 A - 250 A

Execution: 3 pole & 4 pole with switched neutral

Breaking Capacity: 16 kA, 25 kA & 35 kA

- Compact size and light weight
- Adjustable thermal and magnetic release
- Precise and reliable overload and short circuit protection

Technical Information

F-Frame

Standard conformity	:	IEC 60947-2 / IS:13947-2
Rated operational voltage	:	415 Vac
Rated Insulation Voltage	:	750 Vac
Type of release	:	Thermomagnetic
Utilisation Category	:	A
Rated frequency	:	50 Hz / 60 Hz
Ambient Temperature	:	40 °C (55 °C on request)
Operating altitude	:	2000 m
Humidity	:	0 - 90%
Rated impulse voltage	:	8 kV



Frame	SI Unit	FN	FH
No. of Poles		3P / 4P wSN	3P / 4P wSN
Standard Current ratings (I _n)	A	160-250*	160-250*
Thermal release setting		Fixed	Fixed
Magnetic release setting for current rating		Fixed	Fixed
	160 A - 250 A	1600 A	1600 A
Rated short circuit making capacity (Peak) I _{cm} kA		73.5	105
Rated ultimate short circuit breaking capacity (I _{cu}), kA			
(at different voltages)	240 V	50	70
	380 V	35	50
	415 V	35	50
	500 V	25	35
I _{cs} = % I _{cu}	%	100	75
Weight TP (Triple Pole) / FPwSN	kg	2.9 / 3.8	2.9 / 3.8
Terminal Type		M8	M8
Terminal capacity (Cable)	mm ²	185	185
(Bus bar width)	mm	18	18
Internal Accessories			
Auxiliary Switch (1 C/O or 2C/O)		•	•
Shunt Trip		•	•
Under Voltage Release		•	•
Trip Alarm contact (1 C/O) (Factory fitted)		•	•
External Accessories			
Earth Fault Relay		•	•
Rotary Handle - Extended		•	•
Extended Terminals (80 A & Above)		+	+
Dolly Extension		-	-
Phase Barriers		+	+
Terminal Shrouds (only in 3P MCCB)		•	•
Dolly pad locking Device		•	•

* Current Ratings - 25 A, 32 A, 40 A, 50 A, 63 A, 80 A, 100 A, 125 A, 160 A, 200 A, 250 A

• Available, - Not Available, + Supplied alongwith the MCCB above 63A.

Factory Fitted

3P - Three Pole

4P wSN - Four Pole with Switched Neutral

Technical Information

L-Frame

Ref. Standard	:	IS / IEC 60947-2
Rated operational Voltage	:	415 Vac
Rated insulation Voltage	:	750 Vac
Rated impulse Voltage	:	8 kV
Type of Release	:	Thermal Magnetic
Utilisation category	:	A
Rated frequency	:	50 Hz / 60 Hz
Operating altitude	:	2000 m
Humidity	:	0 - 90%
Suitability of Isolation	:	Yes



Frame	SI Unit	LS	LN
No. of Poles		3P / 4P wSN	3P / 4P wSN
Standard Current Ratings (In)	A	200, 250, 320, 400, 500, 630	200, 250, 320, 400, 500, 630
Thermal release setting (Adjustable)		80-100% In	80-100% In
Magnetic release setting (Fixed)			
250 A - 400 A		4000 A	4000 A
500 A - 630 A		6300 A	6300 A
Magnetic release setting (Adjustable)			
250 A - 400 A		2000 A - 4000 A	2000 A - 4000 A
500 A - 630 A		2500 A - 6300 A	2500 A - 6300 A
Rated S.C. Making Capacity at 415 V (Icm)	kA	75.6	105
Rated Ultimate S.C breaking capacity (Icu) at 240 V	kA	50	65
415 V	kA	36	50
500 V	kA	25	35
Rated Service S.C Breaking Capacity at 415 V, Ics = % Icu	%	100	75
Weight			
Three Pole (3P)	kg	5.6	5.6
Four Pole with Switched Neutral (4P wSN)	kg	7	7
Terminal capacity (Max.)	mm ²	1 x 240 (250 A-400 A) 2 x 185 (500 A-630 A)	1 x 240 (250 A-400 A) 2 x 185 (500 A-630 A)
Bus bar width	mm	30	30
Overall dimension			
Three Pole (3P) (W x H x D)	mm	140 x 254 x 110	140 x 254 x 110
Four Pole with Switched Neutral (4P wSN) (W x H x D)	mm	186 x 254 x 110	186 x 254 x 110
Internal Accessories #			
Auxillary Switch (1C/O or 2C/O)		•	•
Shunt Trip (bulit-in auxillary switch)		•	•
Under Voltage Release		•	•
Trip Alarm Contact (Factory fitted)		•	•
External Accessories			
Rotary Handle - Extended		•	•
Extended Terminals		•	•
Terminal Shroud		•	•
Phase Barriers		•	•
Dolly pad locking device		•	•
Earth Fault Relay		•	•

• Available

Only 2 accessories at a time can be fitted in the MCCB

3P - Three Pole

4P wSN - Four Pole with Switched Neutral

3P - Three Pole

Technical Information

CN / CH - Frame

Standard conformity	:	IEC 60947-2 / IS:13947-2
Rated operational voltage	:	415 Vac
Rated Insulation Voltage	:	750 Vac
Type of release	:	Thermomagnetic
Utilisation Category	:	A
Rated frequency	:	50 Hz / 60 Hz
Ambient Temperature	:	40 °C (55 °C on request)
Operating altitude	:	2000 m
Humidity	:	0 - 90%
Rated impulse voltage	:	8 kV



Frame	SI Unit	CN	CH
No. of Poles		3P/4P wSN	3P/4P wSN
Standard current ratings (In)	A	800*	800*
Thermal release setting (Adjustable)		70-100% of In	70-100% of In
Magnetic release setting		Adjustable	Adjustable
400 A - 800 A CN / CH Frame		4 - 10 times In	4 - 10 times In
Rated short circuit making capacity (Peak) Icm	kA	73.5	105
Rated ultimate short circuit breaking capacity(Icu), kA	240 V	50	70
(at different voltages)	380 V	35	50
	415 V	35	50
	500 V	25	35
Ics = % Icu		75%	50%
Weight TP (Triple Pole)	kg	9.2	9.2
FP wSN (Four Pole with Switched Neutral)	kg	11.6	11.6
Terminal capacity (Cable)	mm ²	-	-
(Busbar width)	mm	40	40
Internal Accessories			
Auxiliary Switch (1 C/O or 2 C/O)		•	•
Shunt Trip		•	•
Under Voltage Release		•	•
Trip Alarm Contact (1 C/O) # Factory Filled		•	•
External Accessories			
Earth Fault Relay		•	•
Rotary Handle - Extended		•	•
Extended Terminals		+	•
Dolly Extension		•	•
Phase Barriers		+	-
Terminal Shrouds		-	-
Dolly pad locking Device		•	•

* Current Ratings - 160 A, 200 A, 250 A, 315 A, 400 A, 500 A, 630 A, 800 A, 1000 A, 1250 A, 1600 A.

• Available, - Not Available, + Supplied alongwith the MCCB as standard.

** Terminals at Front

Terminals at back / rear

3P - Three Pole

4P wSN - Four Pole with Switched Neutral

Technical Information (DC MCCBs)

GN / AN / CH - Frame

DC MCCBs

Standard conformity	: IEC 60947-2 / IS:13947-2
Rated operational voltage	: 250 Vdc
Rated Insulation Voltage	: 690 Vdc
Type of release	: Thermomagnetic
Utilisation Category	: A
Ambient Temperature	: 40 °C
Operating altitude	: 2000 m
Humidity	: 0-90%



Frame	SI Unit	GN	AAN	CH
No. of Poles		3P / 4P wSN	3P / 4P wSN	3P / 4P wSN
Standard current ratings In	A	25-125*	160-250*	800*
Thermal release setting		Fixed	Adjustable (70-100% of In)	Adjustable (70-100% of In)
Magnetic release setting for current rating :				
25 - 50 A GN Frame		800 A	-	-
63 - 80 A GN Frame		800 A	-	-
100 - 125 A GN Frame		1000 A	-	-
160 - 200 A AN Frame		-	1600 A	-
160 - 315 A CH Frame		-	-	5 - 10 times In
400 - 800 A CH Frame		-	-	4 - 10 times In
Rated ultimate short circuit breaking capacity (Icu), at 250 Vdc	kA	5	10	20
Ics = % Icu		75%	75%	50%
Weight	kg	0.93	1.8	9.2
Terminal capacity (Cable)	mm ²	70	70 (upto 100 A) / 150 (125 A - 250 A)	-
(Busbar width)	mm	10	25	40
Recommended Torque	Nm	2.5	10	-
Internal Accessories				
Auxiliary Switch (1 C/O or 2 C/O)		•	•	•
Shunt Trip		•	•	•
External Accessories				
Earth Fault Relay		•	•	•
Rotary Handle		•	•	•
Back Studs		-	•	•
Extended Terminals		+	+	+
Dolly Extension		-	-	+
Phase Barriers		+	+	+
Terminal Shrouds		•	•	-
Dolly pad locking Device		•	•	•

* Current Ratings - 25 A, 32 A, 40 A, 50 A, 63 A, 80 A, 100 A, 125 A, 160 A, 200 A, 250 A, 315 A, 400 A, 500 A, 630 A, 800 A, 1000 A, 1250 A, 1600 A.
• Available, - Not Available, + Supplied alongwith the MCCB as standard. ** Terminals at Front, # Terminals at Rear.

Loadline DC MCCBs

DC MCCBs are available in three pole version from 25 A-1600 A with breaking capacity of 5 kA, 10 kA & 20 kA. The selection of the circuit breaker for DC applications depends on these criteria :-

• Rated current of the equipment. • Rated voltage, which determines the number of poles in series for breaking. For voltages upto 250 Vdc, two poles of the breaker are connected in series to form the positive pole and the third pole to be used as a negative pole or three poles can be used in series. • The maximum short-circuit current at the point of installation, which determines the breaking capacity. • The (L/R) ratio for the application should be ≤ 15 ms • In D Frame Rear Terminals are available in place of Back Studs

Accessories for **Loadline** Moulded Case Circuit Breakers

Loadline
Moulded Case Circuit Breaker

Description	'G' / 'ML' Frame	'A' Frame	'L' Frame	'F' Frame	'C' Frame
Shunt Trip					
100 Vac - 110 Vac	●	●	●	●	●
220 Vac - 240 Vac	●	●	●	●	●
380 Vac - 415 Vac	●	●	●	●	●
Under Voltage Release					
110 Vac - 120 Vac	●	●	●	●	●
220 Vac - 240Vac	●	●	●	●	●
380 Vac - 440 Vac	●	●	●	●	●
Auxiliary Contact (250Vac/250Vdc) (450Vac/250Vdc)					
1-Changeover	●	●	●	●	●
2-Changeover	●	●	●	●	●
Rotary Handle					
Direct mounting	●	●	●	●	●
Door Mounting	●	●	●	●	●
Trip Alarm Contact (Factory Fitted)					
	●	●	●	●	●

Earth Fault Relay for MCCBs

Sl. No.	MCCBs Current Range (A)	Per Unit LP (₹)
1	25 A- 100 A	●
2	125 A- 200 A	●
3	250 A- 400 A	●
4	500 A- 800 A	●

- The above prices are inclusive of CBCT.

** For operating the Earth Fault Relay a Shunt trip or an UVR has to be used.

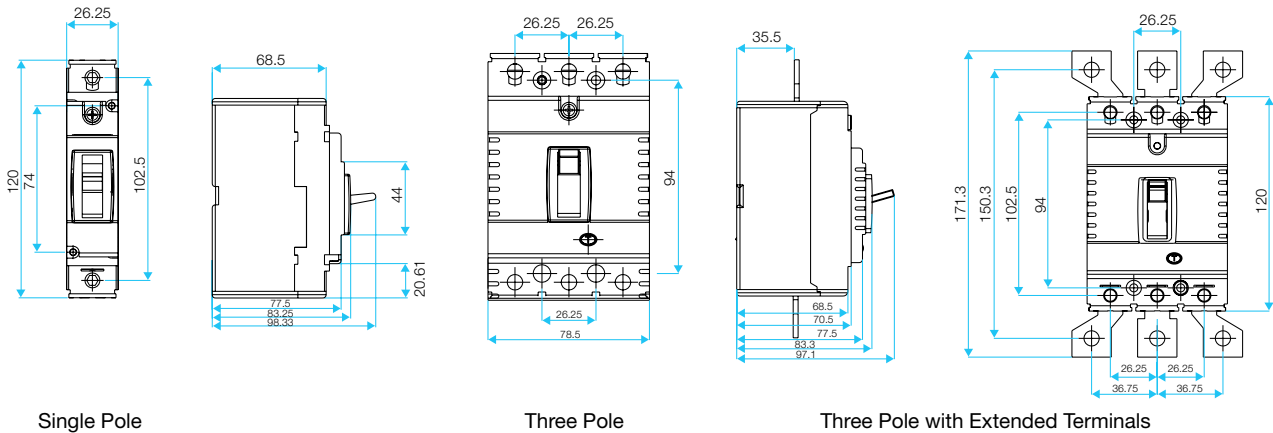
Note : *For operating Shunt Trip for G Frame, a separate auxiliary switch would be required in which case one c/o. will be used with the shunt trip, leaving one c/o. free for use. Door mounting clamps for G & AA Frame are supplied free of cost on request basis.

Note : Following additional accessories are available on request :

- Terminal Shrouds for G, A, F frame
- Dolly Pad Lock for G, A, F, C & L frame
- Factory fitted Castell Lock available in C and D frame
- \$ - Back Studs (Price on Request)
- * - Factory Fitted only
- # - Replace '#' with rating

G Frame

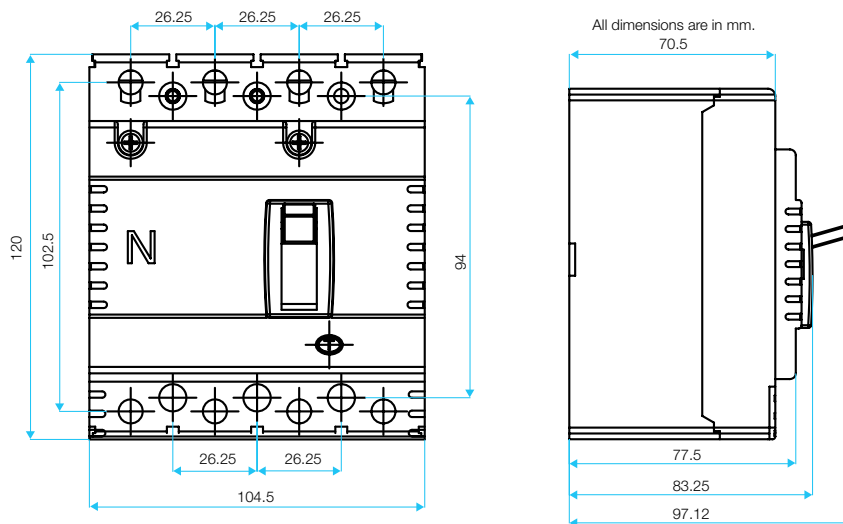
Dimension (in mm)



Single Pole

Three Pole

Three Pole with Extended Terminals



Four Pole with Switched Neutral

All dimensions are in mm.

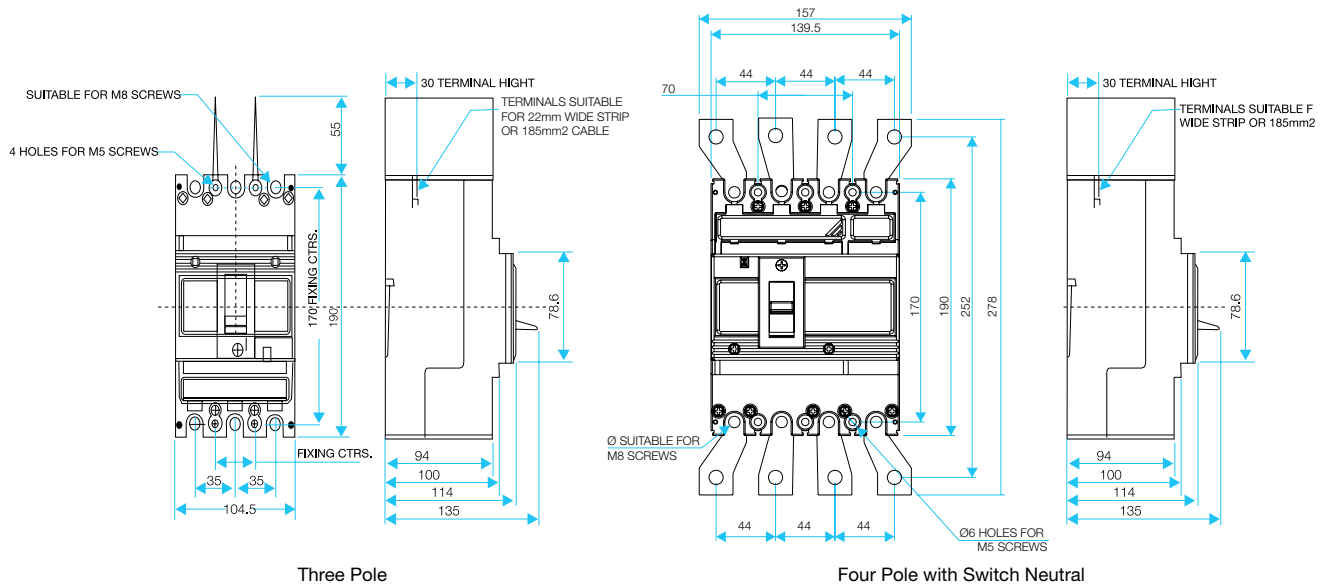
[illegible]

- ## AA Frame

Three Pole with Extended Terminals

F Frame

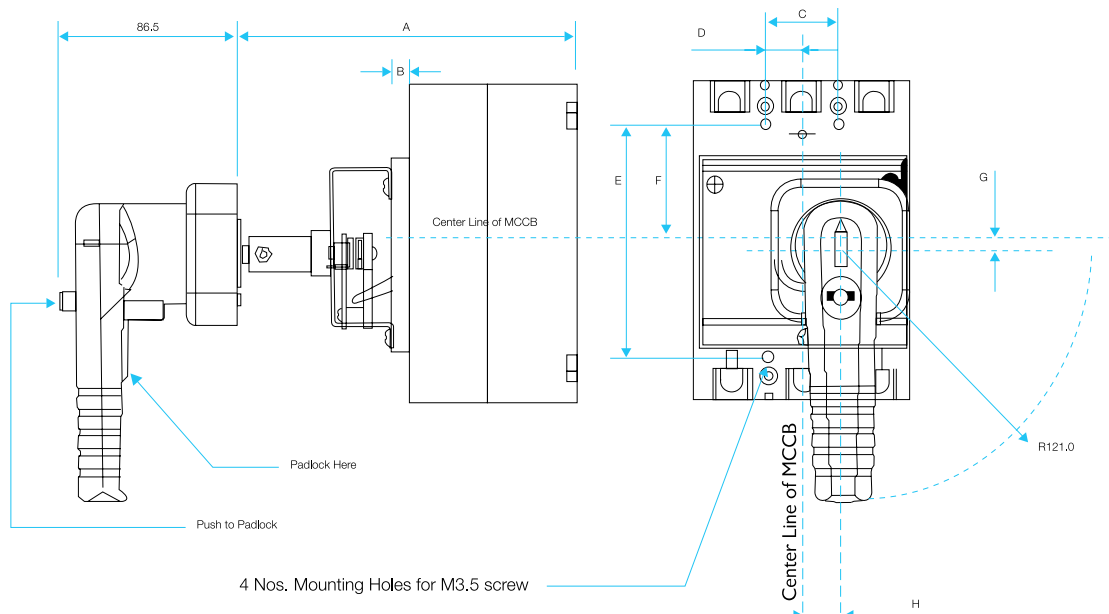
Dimension (in mm)



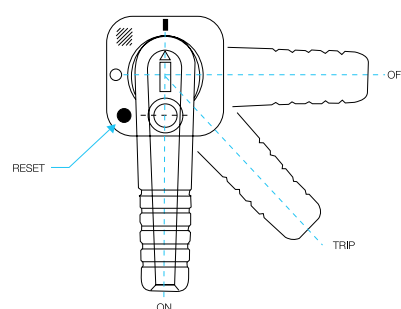
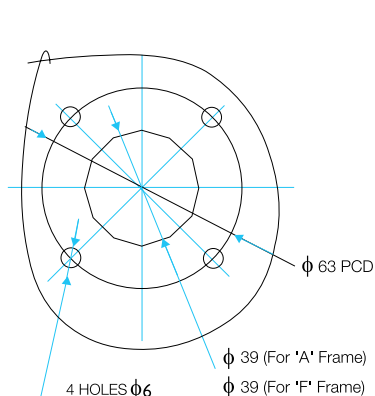
Dimension (in mm)

Rotary Handle

Handle Fixin Details - 'F' Frame



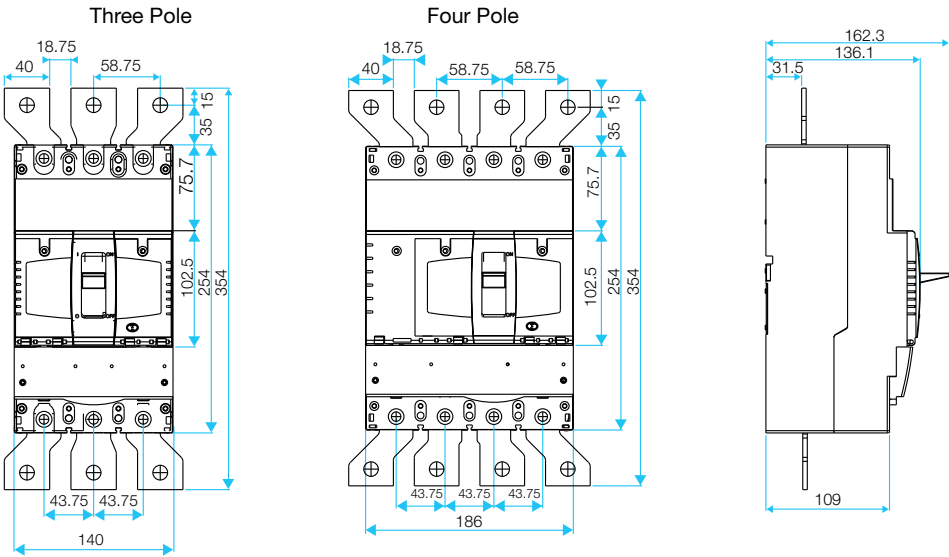
S. No.	Frame	A	B	C	D	E	F	G	H
1	F	190.0	4.25	35.0	17.5	170.0	85.0	3.75	15.0



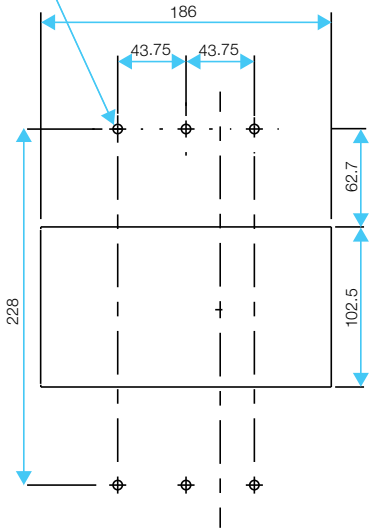
- I - MCCB ON
- O - MCCB OFF
- Trip - (In between I and O positions) MCCB tripped by release or push to trip
- To re-close the MCCB move the handle towards position 'RESET' first till MCCB resets and then switch to position - 'I'.

LS / LN Frame Accessories

Dimension (in mm)

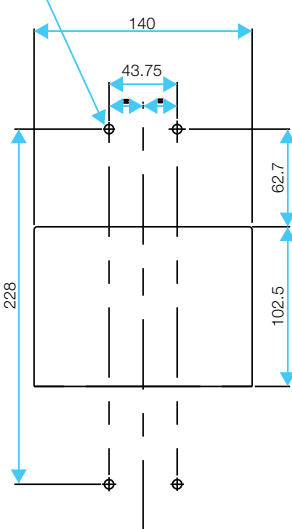


SUITABLE FOR
6-M5X120 SCREW



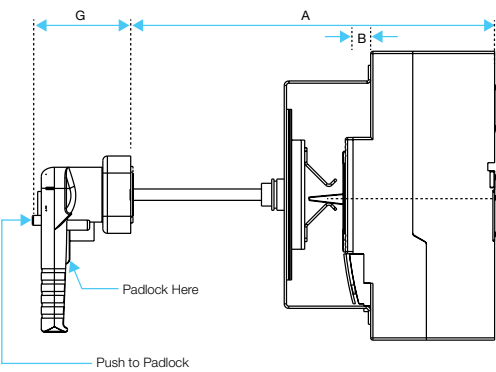
MOUNTING & DOOR CUT OUT DETAILS
(Four Pole)

SUITABLE FOR
4-M5X120 SCREW

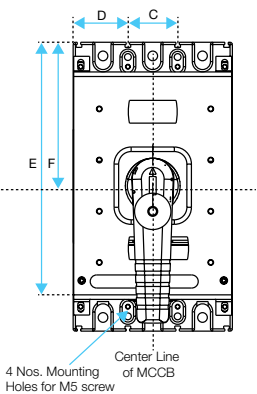


MOUNTING & DOOR CUT OUT DETAILS
(Three Pole)

Dimension (in mm)



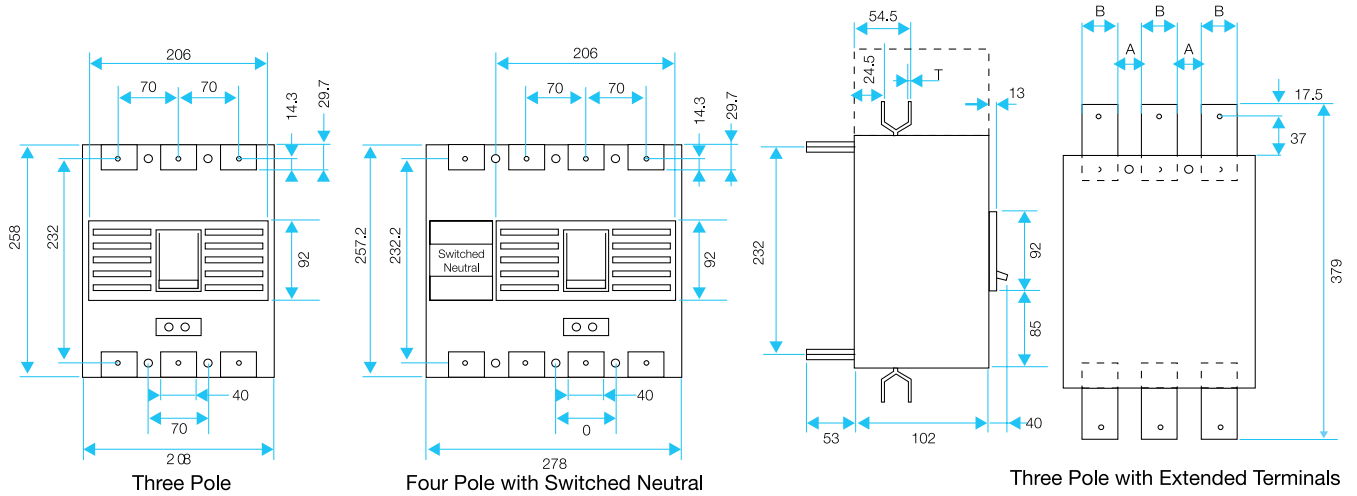
Rotary Handle



Frame	A	B	C	D	E	F	G
L	415.0	6.8	43.75	21.87	211.0	104.5	86.5

CN/CH Frame MCCBs

Dimension (in mm)

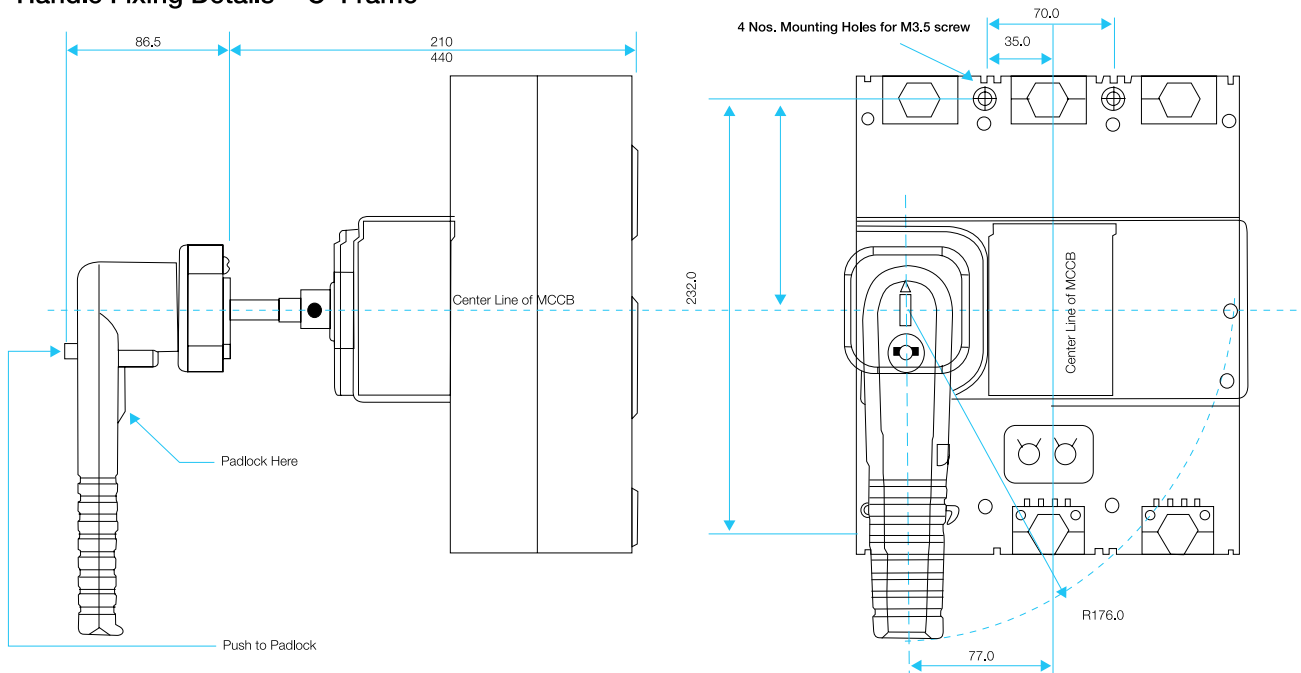


S. No.	Frame	A	B	T
1	16 - 250A	40	30	5
2	315 - 400A	20	50	5
3	500 - 800A	20	50	6

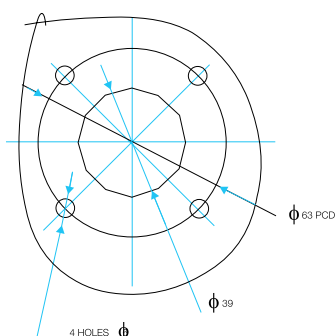
Dimension (in mm)

Rotary Handle

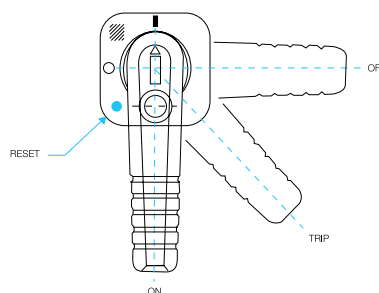
Handle Fixing Details - 'C' Frame



Door Cut-Out



Rotary Handle Position



- I - MCCB ON
- O - MCCB OFF
- Trip - (In between I and O positions) MCCB tripped by release or push to trip
- To re-close the MCCB move the handle towards position 'RESET' first till MCCB resets and then switch to position - 'I'.

MCCB

Digital Moulded Case Circuit Breakers

Features:

- True RMS sensing-accurate and close protection.
- High repeat accuracy-reliable protection.
- Flexibility through multiple adjustment option-versatility and closer protection.
- Time delay on overload and short-circuit faults-suitable for discrimination.
- Built in adjustable electronic overload sensing (40% to 110% of I_n).
- Built in adjustable short-circuit current sensing (600% to 1000% of I_r).
- Built in operation-check function with Field Testing Provision.
- Accurate setting by use of DIP switches, ensuring reliable system protection/co-ordination.)

Range :

25 A to 630 A in three pole and four pole execution.

Specification :

IS / IEC : 60947-1 & 2



Technical Information

Standard conformity	:	IEC 60947-2 / IS13947-2
Rated operational voltage	:	415 Vac
Rated Insulation Voltage	:	750 Vac
Type of release	:	Microprocessor Based Electronic Release
Utilisation Category	:	A
Rated frequency	:	50 Hz / 60 Hz
Operating altitude	:	2000 m
Humidity	:	0 - 90%
Rated impulse voltage	:	8 kV



Frame	SI Unit	FEN	FEH
No. of Poles		3, 4	3, 4
Standard Current ratings (In)	A	25, 40, 63, 100, 125, 160, 200, 250	
Rated ultimate short circuit breaking capacity (Icu),	kA		
	380 V	40	50
	415 V	35	50
Rated service short circuit Breaking Capacity (% of Icu)	(Ics)	100%	75%
Rated short circuit Making capacity (Peak), Icm	kA	73.5	105
Weight TP (Triple Pole)	kg	3.4	3.4
FP (Four Pole)		4	4
Terminal Type Cable		M8	M8
Terminal capacity (Cable)	mm ²	185	185
(Bus bar width)	mm	18	18
Internal Accessories #			
Auxiliary Switch	(1 C/O or 2C/O)	•	•
Shunt Trip (built-in auxiliary contact)		•	•
Under Voltage Release		•	•
Trip Alarm Contact (Factory fitted)	(1 C/O)	•	•
External Accessories			
Earth Fault Relay		•	•
Rotary Handle		•	•
Extended Terminals (above 63 A)		+	+
Phase Barriers		+	+
Terminal Shrouds		•	•
Dolly pad locking Device		•	•
Field Test Unit		•	•
Characteristics of Microprocessor Based Release			
Overload Current I1	xIn (A)	0.4-1.1 in steps of 0.1©	0.4-1.1 in steps of 0.1©
Overload Time Delay t1	s	1, 5, 10, 15, 20, 25, 30, 35	1, 5, 10, 15, 20, 25, 30, 35
Short Circuit Current Setting I2	xI1 (A)	6-9 in steps of 1	6-9 in steps of 1
Short Circuit Time Delay t2	ms	25, 50, 100, 200	25, 50, 100, 200
Instantaneous Pick up Threshold	xI1 (A)	10 times	10 times
Ground Fault Current Ig (4-pole only)	xI1 (A)	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7 (with function block feature)	
Ground Fault Trip Time Tg (4-pole only)	s	0.1, 0.2, 0.4, 0.6, 0.8, 1.0, 3.0, 5.0	
Field Test Switch		•	•
Auxiliary Power Module for Field Testing		•	•

• Available, + Supplied alongwith the MCCB above 63 A

only one accessory can be fitted in the MCCB

© At 1.1 time In for max. 2 hours only

Technical Information

Standard conformity	:	IS/IEC 60947 – 2
Rated operational voltage	:	415 Vac
Rated Insulation Voltage	:	750 Vac
Type of release	:	Microprocessor Based Electronic Release
Utilisation Category	:	A
Rated frequency	:	50 Hz / 60 Hz
Operating altitude	:	2000 m
Humidity	:	0 - 95%
Rated impulse voltage	:	8 kV



Frame	SI Unit	LES	LEN
No. of Poles		3P / 4P wSN	
Standard Current Ratings, I_n	A	250, 320, 400, 500, 630	
Microprocessor Release	LSI	•	•
	LSIG	•	•
Rated S.C Making Capacity at 415 V I_{cm}	kA	75.6	105
Rated Ultimate S.C Breaking Capacity (I_{cu}), at	kA	50	65
		415 V	50
		500 V	35
Rated Service S.C Breaking Capacity at 415 V $I_{cs} = \% I_{cu}$	%	100	75
Weight 3P	kg	7	7
4P wSN	kg	9	9
Terminal Capacity (Cable)	sq. mm	1 x 240 (upto 400 A)	1 x 240 (upto 400 A)
		2 x 185 (500 A-630 A)	2 x 185 (500 A-630 A)
(Bus bar width)	mm	30	30
Overall Dimension (W x H x D)	TP	140 x 254 x 110	140 x 254 x 110
	FP wSN	186 x 254 x 110	186 x 254 x 110
Internal Accessories			
Auxiliary Switch (1 C/O or 2 C/O)		•	•
Shunt Trip		•	•
Under Voltage Release		•	•
Trip Alarm Contact (Factory fitted)		•	•
External Accessories			
Rotary Handle - Extended		•	•
Extended Terminals		•	•
Dolly Extension		•	•
Phase Barriers		•	•
Terminal Shroud		•	•
Dolly Pad Locking Device		•	•
Earth Fault Relay		•	•
Characteristics of Microprocessor Release			
Overload Current, I_r	I_n (A)	0.4 – 1.0 in steps of 0.1	
Overload Time Delay, t_r	s	3, 4, 6, 8, 10, 12, 16, 18	
Short Circuit Current Setting, I_s	I_r (A)	2, 2.5, 3, 4, 6	
Short Circuit Time Delay, t_s	s	0.05, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1	
Instantaneous Short Circuit Current Setting, I_i	I_n (A)	2 – 8 in steps of 2	
Pre-Trip Indication, I_p	I_r	0.6, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95, 1	
Ground Fault Current, I_g (in 4P wSN only)	I_n (A)	0.2 – 0.8 in steps of 0.1	

• Available

LSI - Long Delay, Short Delay & Instantaneous

LSIG - Long Delay, Short Delay, Instantaneous & Ground Fault

3 P - Three Pole

4 P wSN - Four Pole with Switched Neutral

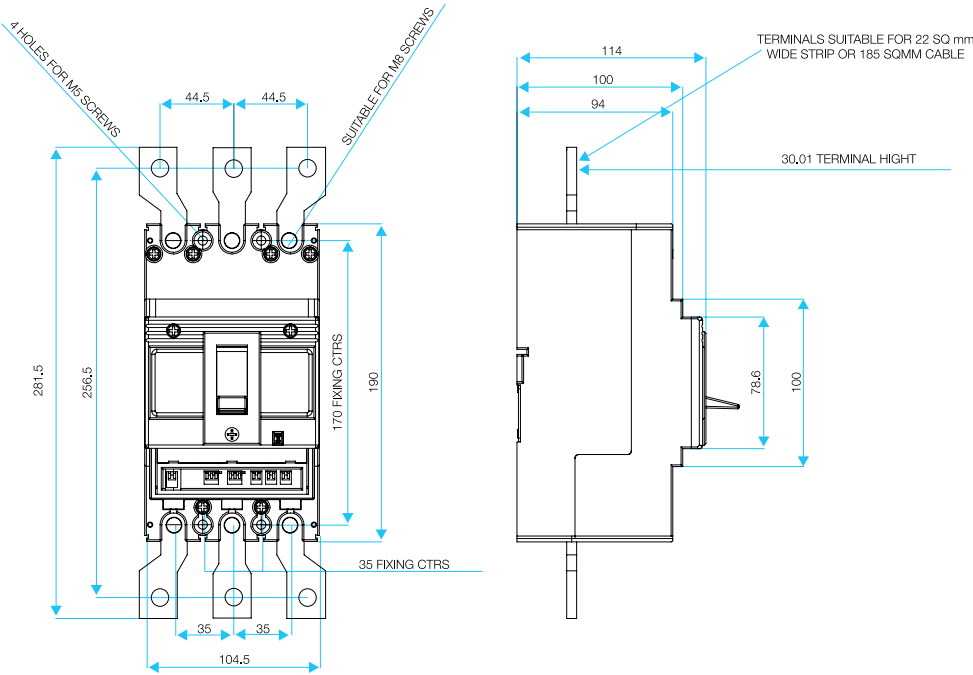
Accessories for **Loadline** Moulded Case Circuit Breakers

Description	'A' Frame	'L' Frame	'F' Frame
Shunt Trip			
100 Vac - 110 Vac	●	●	●
220 Vac - 240 Vac	●	●	●
380 Vac - 415 Vac	●	●	●
Under Voltage Release			
110 Vac - 120 Vac	●	●	●
220 Vac - 240Vac	●	●	●
380 Vac - 440 Vac	●	●	●

Description	'A' Frame	'L' Frame	'F' Frame
Auxiliary Contact (250Vac/250Vdc) (450Vac/250Vdc)			
1-Changeover	●	●	●
2-Changeover	●	●	●
Rotary Handle			
Direct mounting	●		
Door Mounting	●	●	●
Trip Alarm Contact (Factory Fitted)			
	●	●	●

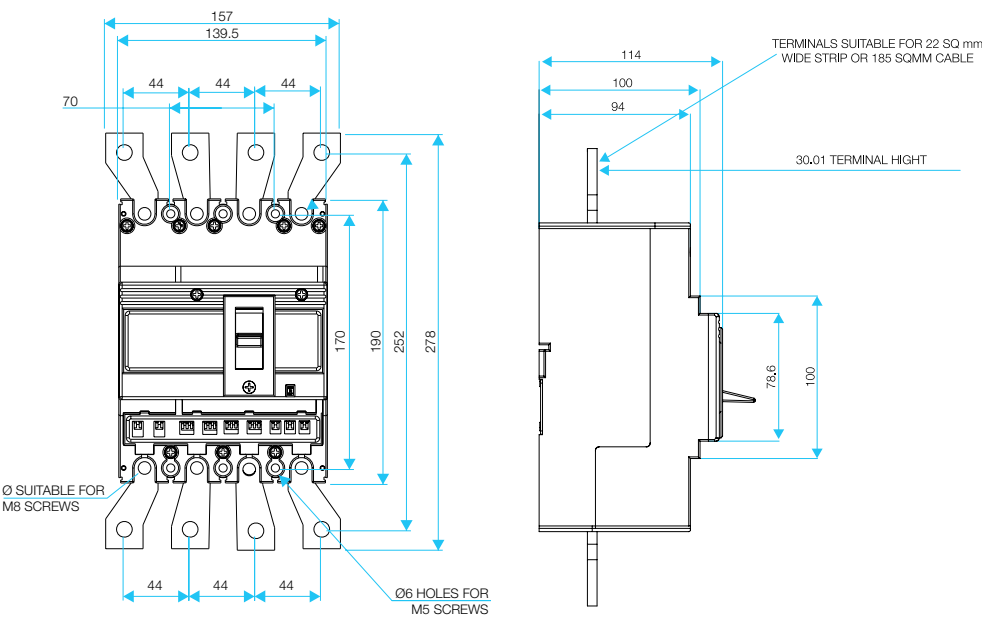
F Frame - Three Pole With Extended Terminal

Dimension (in mm)



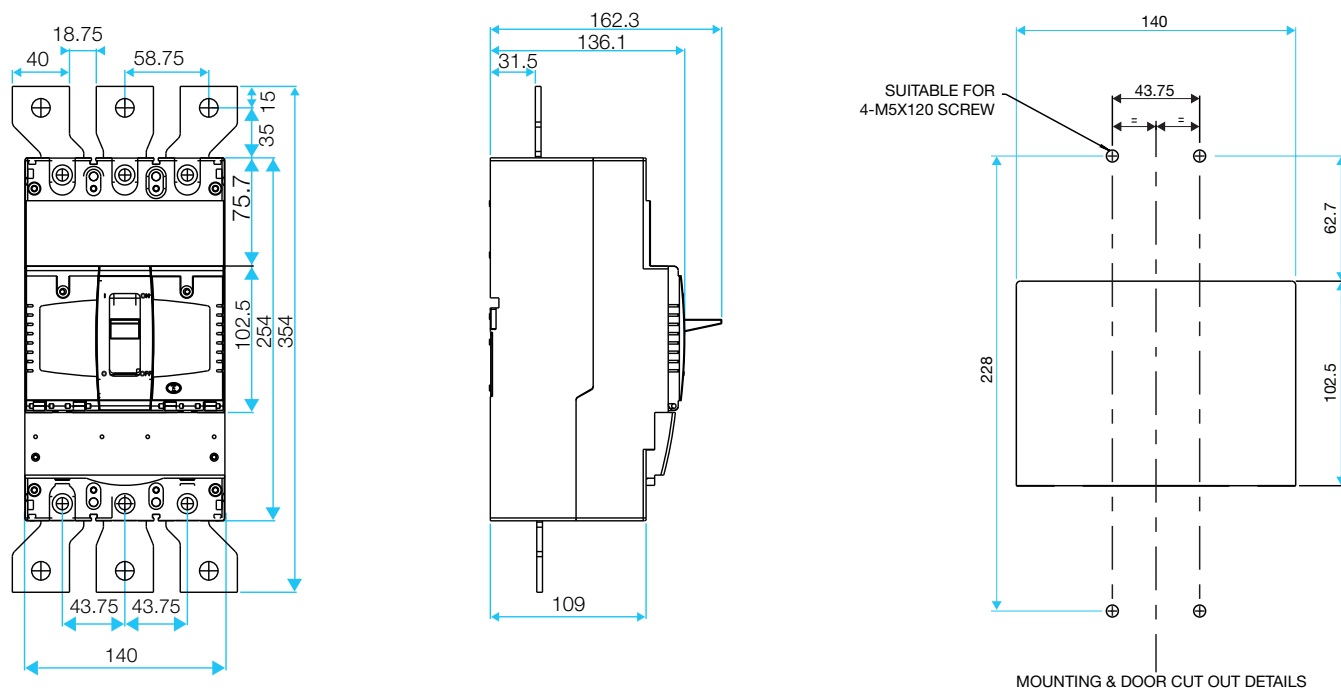
F Frame - Four Pole With Extended Terminal

Dimension (in mm)



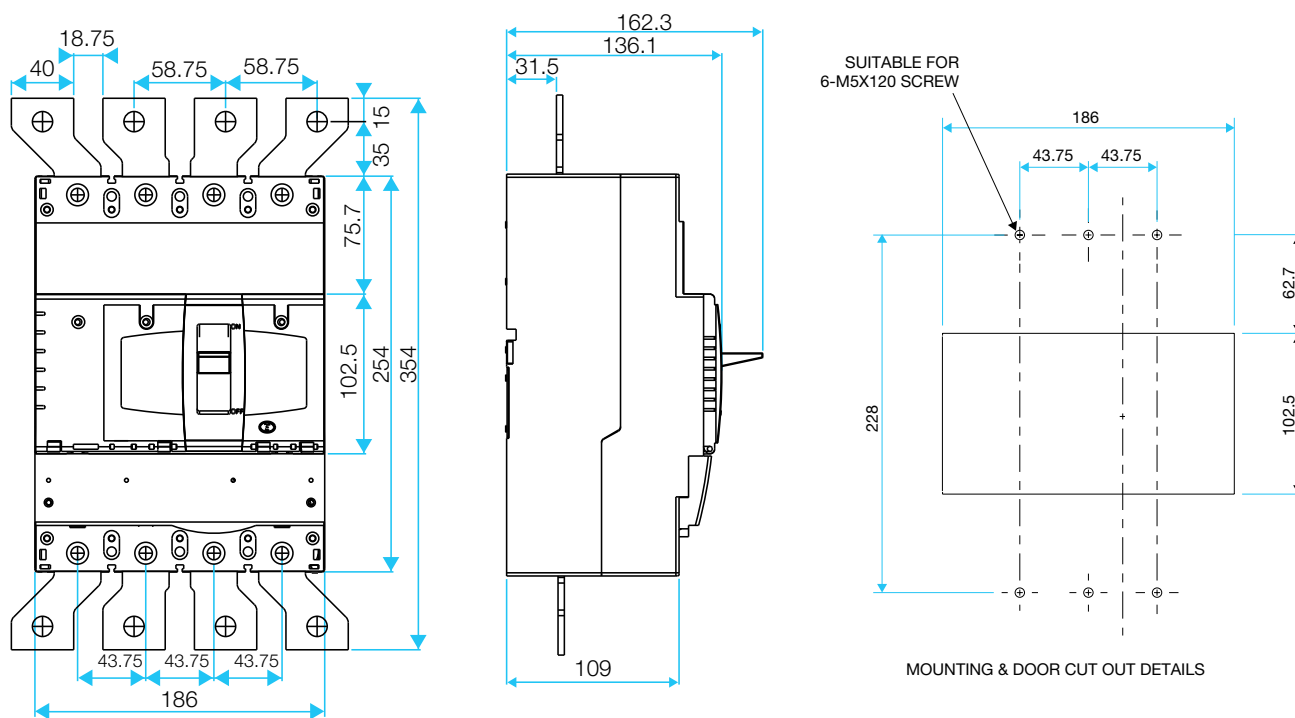
L Frame - Three Pole with extended terminals

Dimension (in mm)



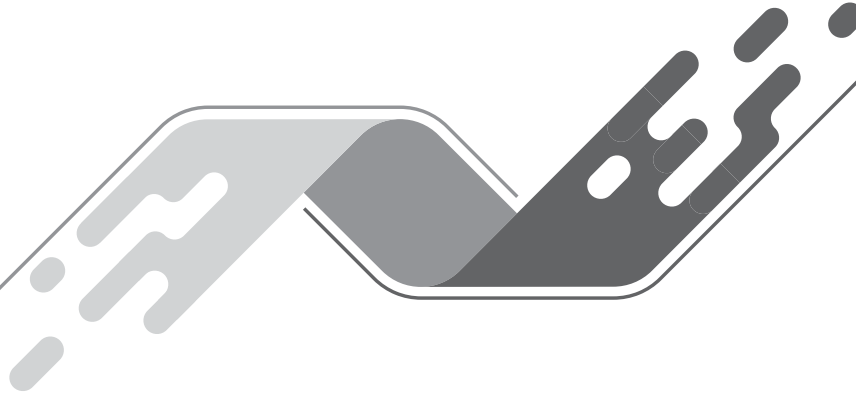
L Frame - FP wSN with extended terminals

Dimension (in mm)



HID Series

Moulded Case Circuit Breakers



Range:

- Rating: 40 A to 160 A
- Execution: 1P, 2P, 3P & 4P
- Breaking Capacity: 27 kA & 36 kA
- $I_{cs} = I_{cu} = 100\%$
- Thermal Adjustable (70 to 100% of I_n)

Range :

16 A to 1600 A in 7 frame sizes in single pole, double pole, three pole and four pole with switched neutral execution.

Specification :

IS / IEC : 60947-1 & 2



Technical Information

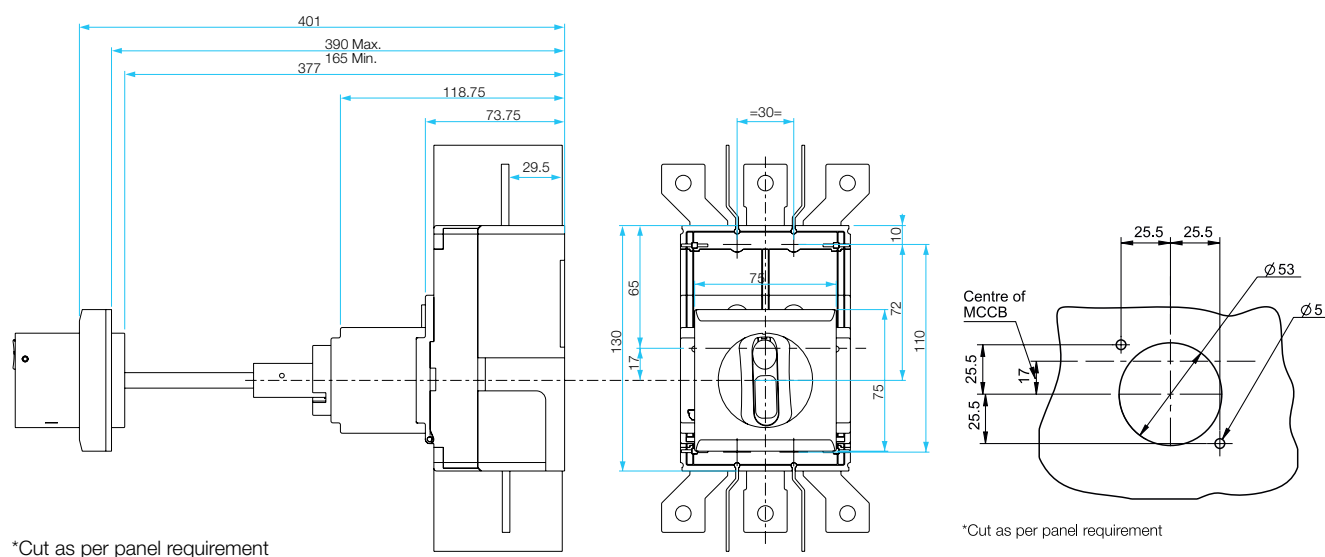


HID Series (Frame 1)

Frame	SI Unit	HID (Frame 1) - D	HID (Frame 1) - E
No. of Poles		1P / 2P / 3P / 4P	
Standard current rating (I _n)	A	40 A, 50 A, 63 A, 80 A, 100 A, 125 A, 160 A	
Rated operational voltage	V	415 Vac (1P @ 240 Vac)	
Rated impulse voltage	kV	8 kV	
Rated Insulation Voltage	V	800 Vac	
Rated frequency	Hz	50 Hz / 60 Hz	
Ambient temp	°C	40 °C (50 °C on request)	
Utilisation Category	A / B	A	
Operating altitude	m	2000 m	
Type of release		Thermomagnetic	
Thermal release setting (Adjustable)		70-100% of I _n (in 3P & 4P only)	
Magnetic release setting (Fixed)		12 times of I _n	
Rated ultimate short circuit breaking capacity (I _{cu})	kA	27 kA	36 kA
Rated Service short circuit breaking capacity (I _{cs})		27 kA	36 kA
Weight			
1P	kg	0.37 kg	
2P		0.75 kg	
3P		1.1 kg	
4P		1.5 kg	
Dimensions (W X H X D)			
1P	mm	(37 X 130 X 73.8) mm	
2P		(67 X 130 X 73.8) mm	
3P		(90 X 130 X 73.8) mm	
4P		(120 X 130 X 73.8) mm	

Accessories Dimensions & Mounting Details

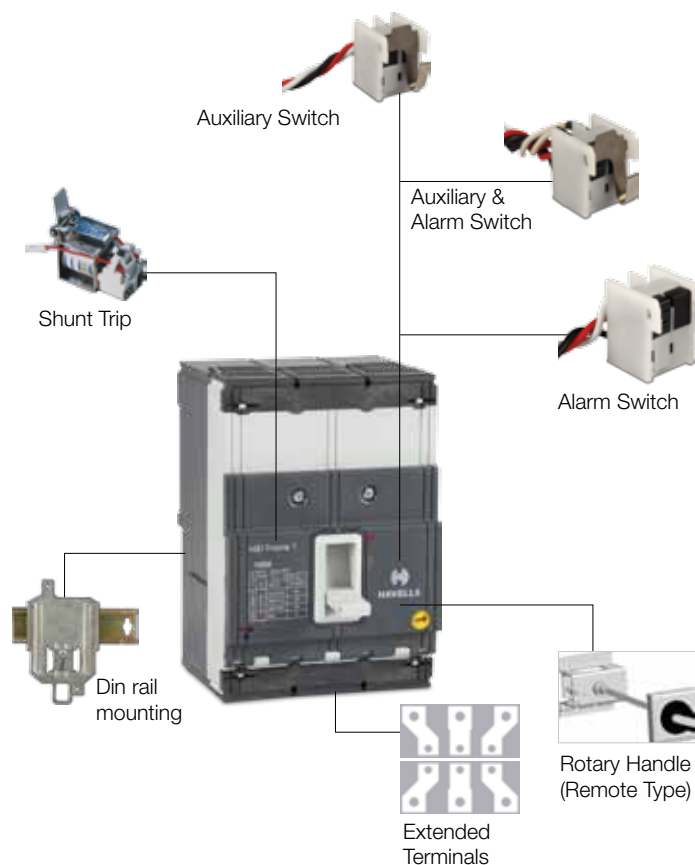
Rotary Handle (Remote Type)



Accessories

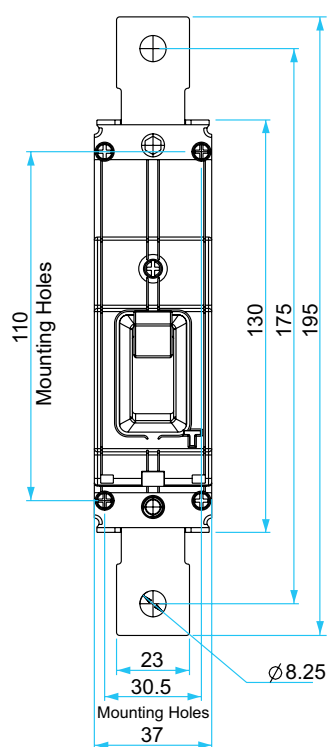
HID series

Description	E1 / HID Frame
Shunt Trip	
100 Vac - 110 Vac	●
220 Vac - 240 Vac	●
380 Vac - 415 Vac	●
Auxiliary Contact (250 Vac / 250 Vdc) (450 Vac / 250 Vdc)	
1-Changeover	●
2-Changeover	●
Rotary Handle	
Direct mounting	
Door Mounting	●
Trip Alarm Contact (Factory Fitted)	
	●

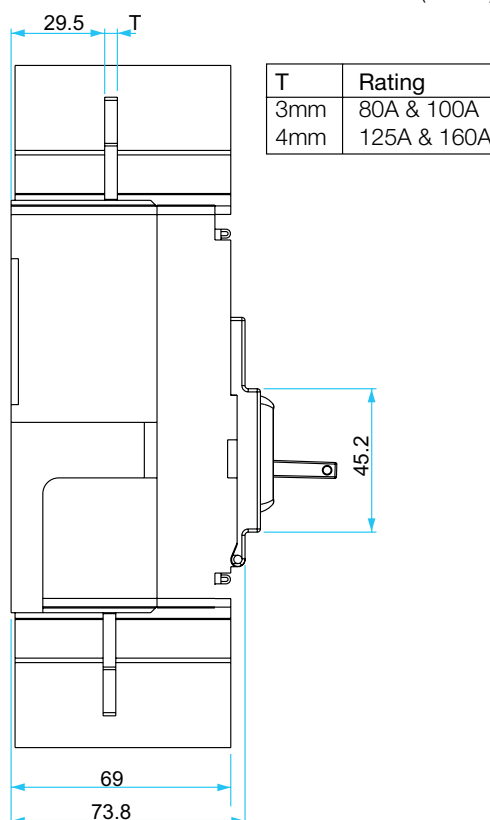


Outline Dimensions & Mounting Details

Dimension (in mm)

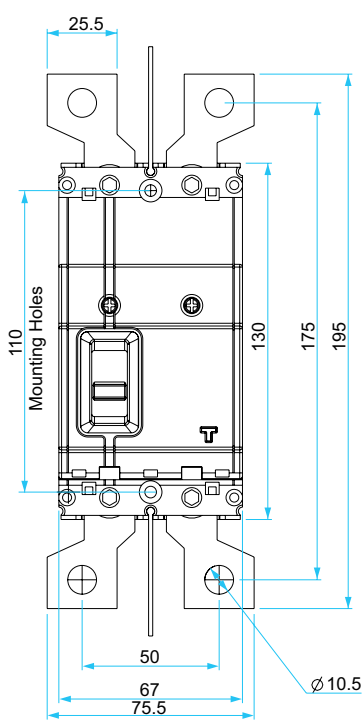


Single Pole

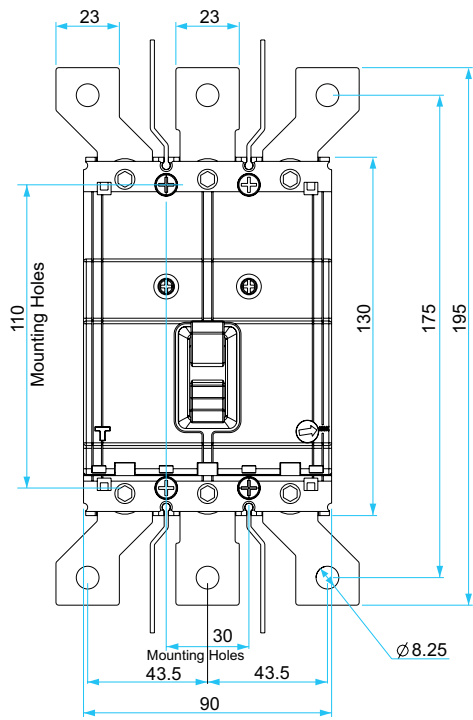


Outline Dimensions & Mounting Details

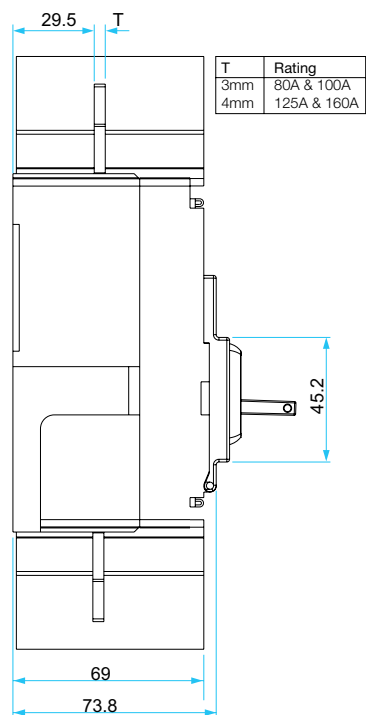
Dimension (in mm)



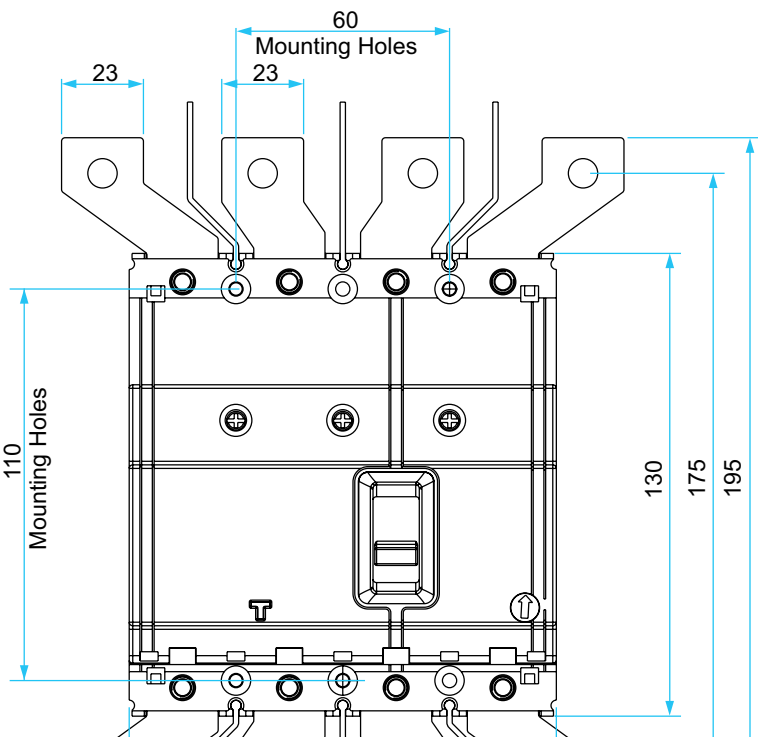
Double Pole



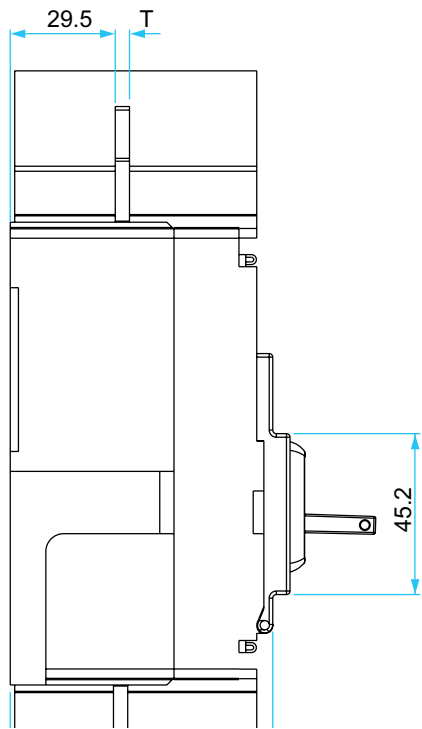
Three Pole



T	Rating
3mm	80A & 100A
4mm	125A & 160A



Four Pole



Other Products

ACB



Loadline & HIM MCCB Series



ST-Dx



Instaprime & Instaline ATS



APFC Panel



Power Capacitor



Active Harmonic Filter



Load Bank



HGS Controlgear



Submersible & Motor Starter



Euroload Changeover Switch



Switch Disconnecter Fuse



NORTH - REGIONAL OFFICE: Corporate Office: QRG Towers, 2D, Sector-126, Expressway, Noida-201304, Tel: 0120-3331000, Delhi: 011-47676700, 23888200, Chandigarh: 0172-4232400-401, Dehradun: 0135-6670202, Haldwani: 05946-222935/222933, Noida / Haryana: 0120-3331000, Ludhiana: 0161-4676000/24, Amritsar: 0183-5202400/401, Jammu: 0191-2478330, 2479330, Sri Nagar: 0194-2459248, Jaipur: 0141-4211000, 4211011, Jodhpur: 9214201640/41, Lucknow: 0522- 4921600/4921649, Kanpur: 0512-6710400

EAST - REGIONAL OFFICE: Kolkata: ICC Tower, 5th Floor, 4 India Exchange Place, Kolkata-700001, Tel: 033-40129851/52, Bhubaneswar: 0674-6668101/102/103/104, Guwahati: 0361-2458923, 2134521, Siliguri: 0353-2525907, Ranchi: 0651-2244861, 2244862, 2244864, 2244868, 2244869, Jamshedpur: 0657-6542492, 09234369436, Patna: 0612-2207221, 2207222, 2207223, 2655518

WEST - REGIONAL OFFICE: 1271, Solitaire Corporate Park, Bldg. No. 12, 7th Floor, Andheri - Ghatkopar Link Road, Chakala, Andheri (East), Mumbai- 400093.

Tel: 022 - 67298600-602, Ahmedabad: 079-40061111, 40060738/740, Indore: 0731-4219444/4219422, 0731-2572340, Rajkot: 0281-2481112, 2921212, Nagpur: 0712-2240932, 2242692, 2242699 Pune: 020-26056175-76, Raipur: 0771-4243400/01, Surat: 0261-2350137, 9979890137, Jabalpur: 0761-4064491, Bhopal: 0755-4271544, 0755-4011025,

SOUTH - REGIONAL OFFICE: Chennai: Sigapi Achi Building, No. 18 / 3, 6th Floor, Rukmani Lakshmi Pathy Road, Egmore, Chennai-600008, Tel: 044-42280600, 605, Bangalore: 080-49075000, Coimbatore: 0422-4550200/282, Hyderabad: 040-27533372, 27533355, 27533632, Cochin: 0484-4099000, Calicut: 0495-4019193/4/5, Trivandrum: 0471-4015323, Vizag: 0891-6514339, Vijayawada: 0866-2546161/62/67/68/69, Madurai: 0452-4267000, Hubli: 0836-4248660, Trichy: 0431-4041005/06

Representative Offices: • Goa • Solapur • Gwalior • Kathmandu • Bhopal • Kolapur • Vadodara

Actual products may vary in colour, design, description and colour combination etc. Although every effort has been made to ensure accuracy in the compilation of the technical detail within this publication. Specifications & performance data are constantly changing.

"Copyright Subsists. Imitation of trade dress, graphics and color scheme of this document is a punishable offence."

Scan the QR Code
to download
Havells mCatalogue



Havells India Ltd.

Corp Office: QRG Towers, 2D, Sector-126, Expressway, Noida-201304 (U.P.)

Ph. +91-120-3331000, Email: marketing@havells.com, www.havells.com

Customer Care No.: 08045 77 1313

Join us on Facebook at www.facebook.com/havells and share your ways to save planet!

CIN - L31900DL1983PLC016304

