



Spectra EZ

Moulded Case Circuit Breakers
10A - 800A



GE imagination at work

Index

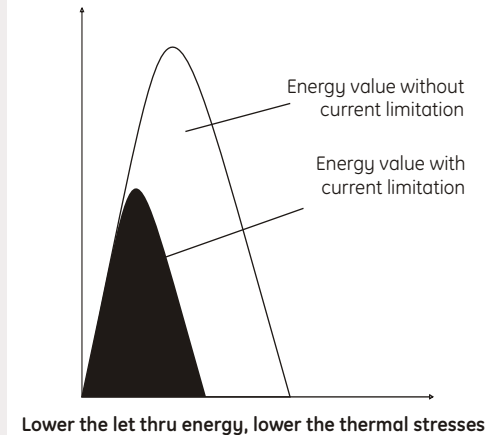
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Spectra EZ

The new comprehensive range of MCCBs from GE offering overload and short circuit protection with thermal magnetic release, has been one of the most eagerly awaited products in the market. For an electrical installation, the need for reliable and safe power supply at an economical cost makes the introduction of the **Spectra EZ** range just the perfect thing to meet modern power needs. The application of **Spectra EZ** ranges from protection of capacitors, transformers, generators to industrial plants, OEMs, buildings and other commercial infrastructure projects.

The **Spectra EZ** incorporates a current limiting feature ensuring a high breaking capacity, faster fault clearance and low let thru energy resulting in reduced electro-dynamic forces and thermal stresses. When a high fault current flows through the MCCB, the contact design, through the reversal of current ensures immediate separation of the contacts even before protection release acts. This early tripping of MCCB prevents the damage to the equipment, switchgear, conductors and ensures high life of entire system. The body of the MCCB is made of unique glass reinforced polyester which has high arc and thermal withstand, resistance to tracking and mechanical strength. The **Spectra EZ** range MCCBs are quick make and break, independent manual type with trip free features. The MCCB can be mounted vertically or horizontally 90° either side in a vertical plane.

Effect of Current Limiting Device On a Short Circuit In an AC network



Spectra EZ range conforms to IEC 60947-2 or IS 13947-2 and are suitable for Utilisation A category.

The range starts from 10A to 800A in TP and FP pole version in various breaking capacities 18kA, 25kA, 36kA and 50kA to suit versatile applications in both AC and DC networks.

Entire range comprises of 6 frame sizes.

Frame 1 – 10A to 63A

Frame 2 – 16A to 100A

Frame 3 – 100A to 225A

Frame 4 – 250A to 400A

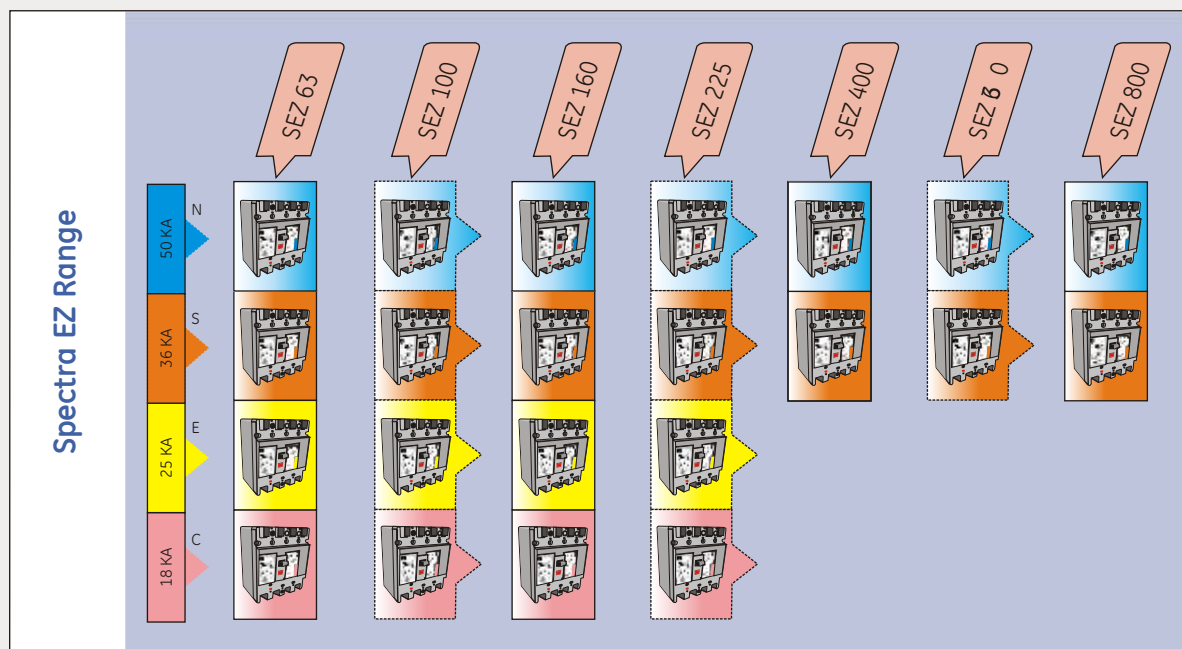
Frame 5 – 630A

Frame 6 – 800A



Technical Specifications

Frame	1	2	3	4	5	6
Type	SEZ 63	SEZ 100	SEZ 225	SEZ 400	SEZ 630	SEZ 800
Sub Frame Type	L / M	L / M	L / M	L	L	L
Number of Poles	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4
Reference Temperature	40°C	40°C	40°C	40°C	40°C	40°C
Short Circuit Setting	10In	10In	10In	10In	10In	10In
Overload Setting	Fix	Fix	Fix	Fix	Fix	Fix
Rated Current In Amps	10, 16, 20, 32, 40, 50, 63	16, 20, 25, 32, 40, 50, 63, 80, 100	125, 160, 200, 225	250, 400	630	800
Rated Insulation Voltage Ui (Volts)	500	660	660	660	660	660
Rated Operational Voltage Ue (Volts)	415	415	415	415	415	415
Ultimate Breaking Capacity Icu (KA rms) at 415V AC	18, 25, 36, 50	18, 25, 36, 50	18, 25, 36, 50	36, 50	36, 50	36, 50
Service Breaking Capacity Ics (KA rms) at 415V AC	18, 18, 36, 36	18, 18, 36, 36	18, 25, 25, 36	36, 36	36, 36	36, 36
Mech/Elect. Life Op.	10000/5000	10000/5000	10000/5000	10000/4000	8000/3000	8000/2000



Accessories

The site serviceable internal accessories of the breaker:

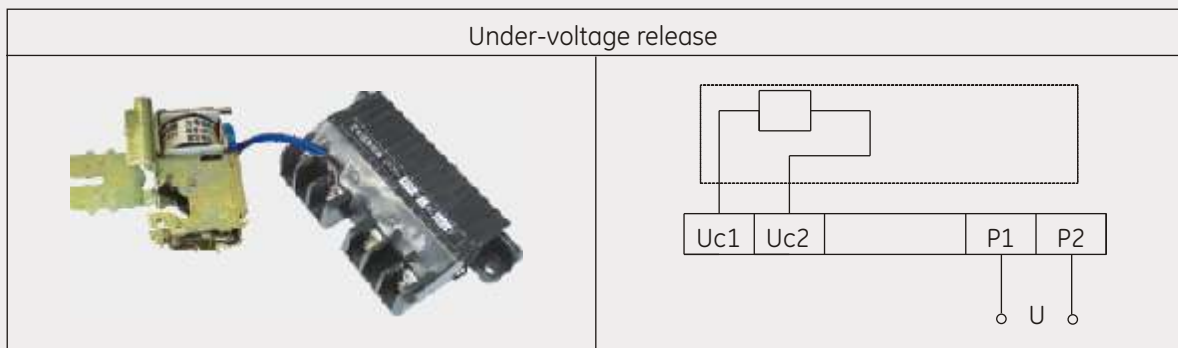
1. Under-voltage release:

The feature:

1. Below the voltage of 35%-70% of the rated voltage, the under-voltage release will trip the breaker.
2. In the range of 85%-110% of the rated voltage release, the breaker can be closed satisfactorily.
3. In case of the operation voltage less than 35% of the rated voltage, the under-voltage release will prevent the breaker from closing.

Voltage rating: AC230V; AC415V

Wiring diagram



Note: The under-voltage release should be energized in advanced, otherwise the breaker can trip and requires resetting of breaker.

2. Shunt release:

The feature:

The shunt release trips the breaker reliably when the operation voltage is 70%-110% of the rated control voltage.

Voltage rating: AC230V; AC415V; DC220V; DC24V

Wiring diagram



Accessories

3. Auxiliary contact

The auxiliary contact is a change-over switch, status of which changes with the status of breaker.

Working state and wiring diagram of the auxiliary contact are shown below.

The breaker status	The auxiliary contact status	Outline	The wiring diagram
When the breaker is in "off" state			
When the breaker is in "on" state			

Rated current of Auxiliary contact:

Frame	Conventional thermal current I_{th} (A)	Rated Operational current I_e (A)	
		AC415V	DC220V
$\geq 400A$	6	3	0.2
$\leq 225A$	3	0.4	0.15

4. Alarm contact:

When circuit breaker normally makes and breaks, alarm contact does not operate. When the breaker trips on fault sensed by release the alarm contact operates and after the circuit breaker is operated again, the alarm contact returns to the original state.

Working state and wiring diagram of the alarm contact:

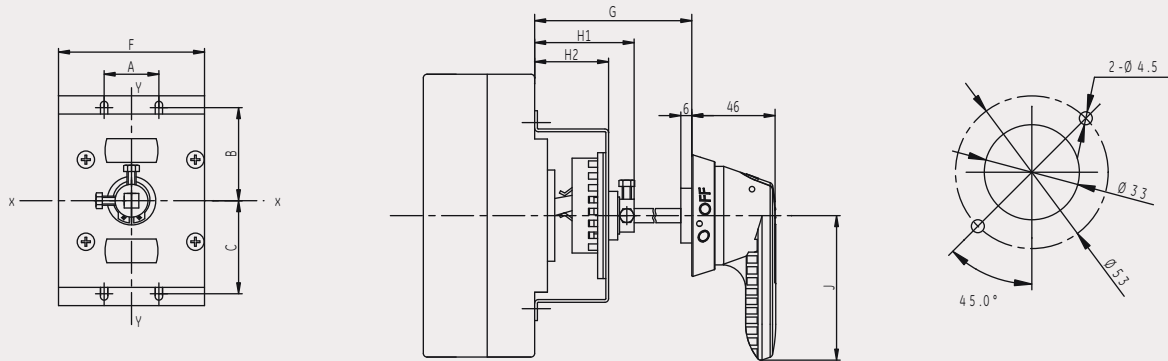
The breaker status	The alarm contact status	Outline	The wiring diagram
When the breaker is in "off" or "on" state			
When the breaker is in "trip status or (alarming)" state			



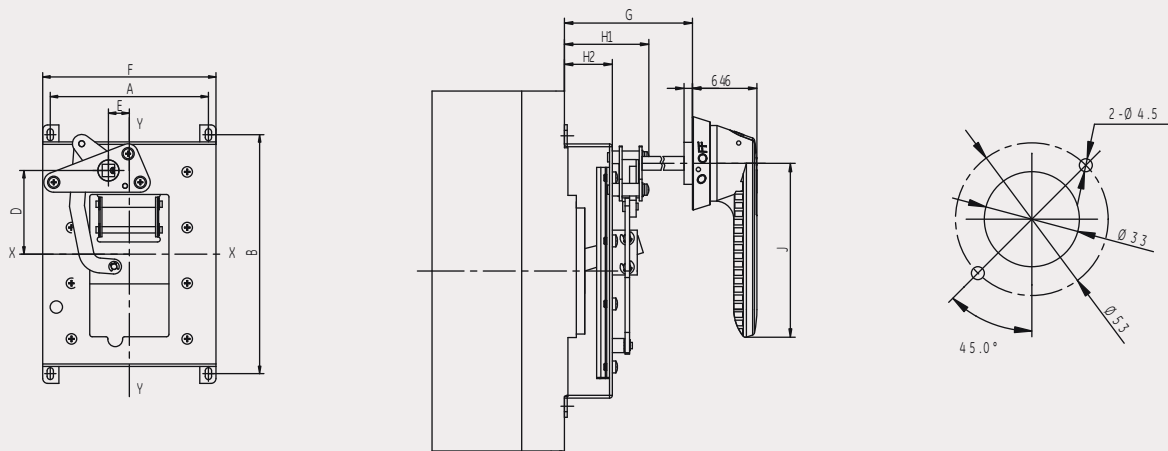
Accessories

Door Operating Mechanism (Rotary Handle)

For Spectra EZ63/100/225



For Spectra EZ250/400/630/800



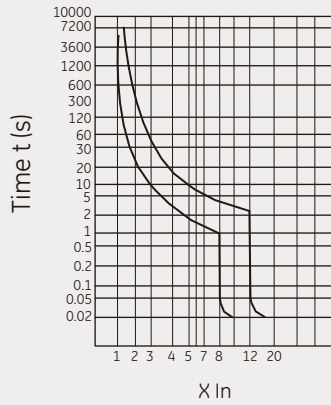
Note:

1. X-X, Y-Y is the center of the MCCB's length and width.
2. Distance from the handle center to hinge of panel door isn't less than 100mm.

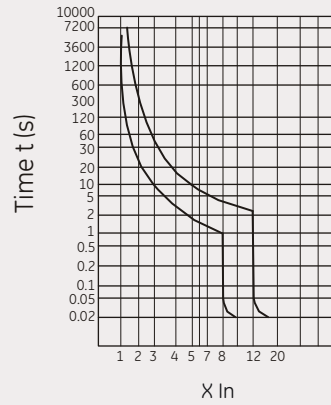
Suitable for MCCB Type	A	B	C	D	E	F	G	H1	H2	J
SEZ63	25	48.5	51.5	--	-	76.5	173	53	39	65
SEZ100	30	52	52	--	-	80	172.5	52.5	38.5	65/80
SEZ225	35	72	72	--	-	90	177	57	43	65/80
SEZ400/3	128	194	--	68	15	140	180	60	34	90/125
SEZ400/4	186	194	--	68	15	198	188	68	42	125
SEZ630/3	168	200	--	66	15	180	180	60	34	125
SEZ630/4	226	200	--	63.5	15	150	190	70	44	125
SEZ800/3	198	243	--	69	15	210	188	68	42	125
SEZ800/4	268	243	-	69	15	280	188	68	42	125



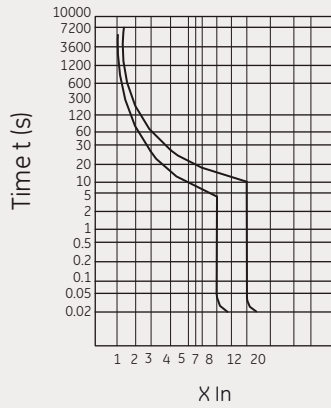
Tripping I-t Characteristics



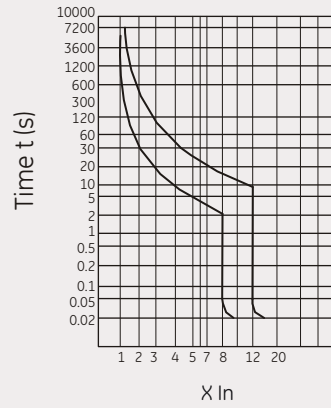
Spectra EZ 63 (10-63A)



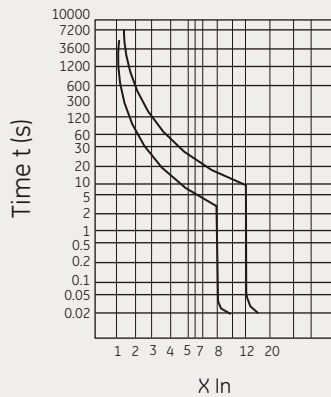
Spectra EZ 100 (16-32A)



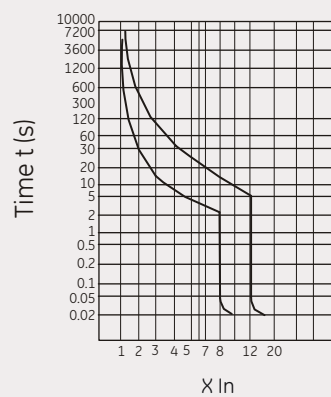
Spectra EZ 100 (40-100A)



Spectra EZ 225



Spectra EZ 400

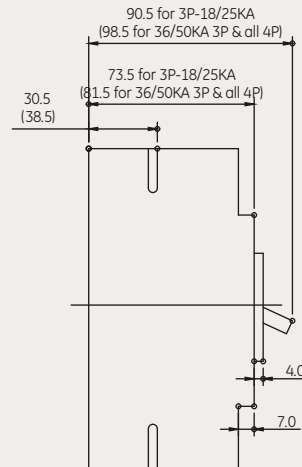
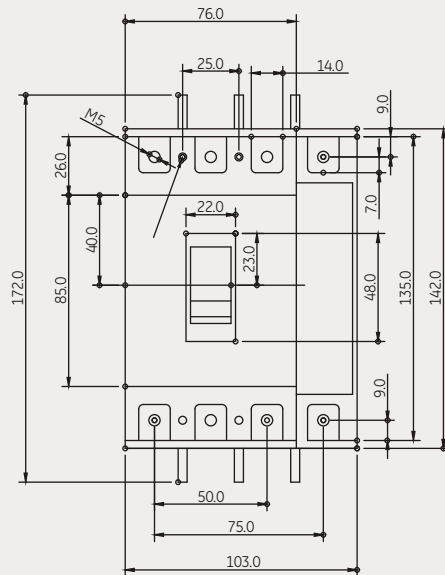


Spectra EZ 630/800A



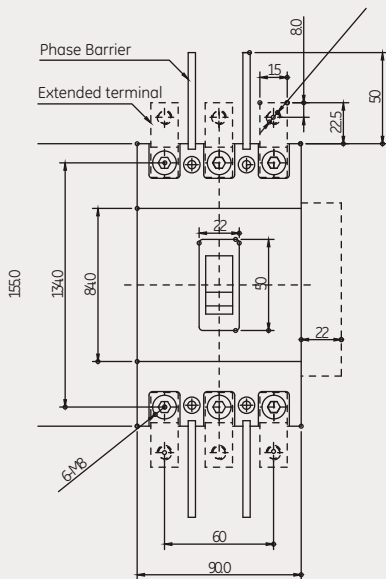
Dimensions

Dimensional Details of Spectra EZ63, 3P/4P

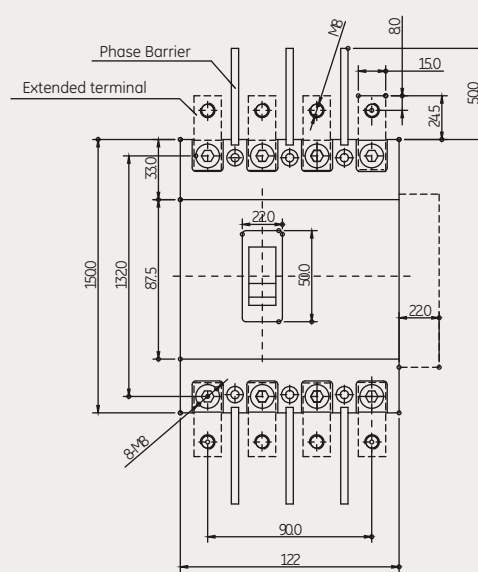


L-18/25kA 3P
M-36/50kA 3P, All 4P

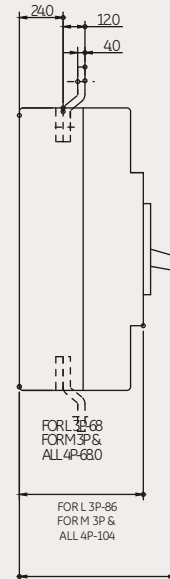
Dimensional Details of Spectra EZ100, 3P/4P



3Pole



4Pole



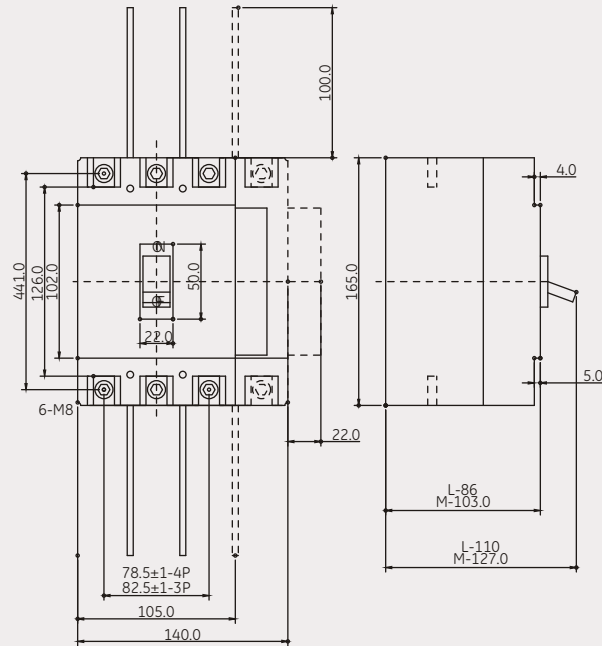
L-18/25kA 3P
M-36/50kA 3P, All 4P

* Extended terminals/spreaders shown are optional.



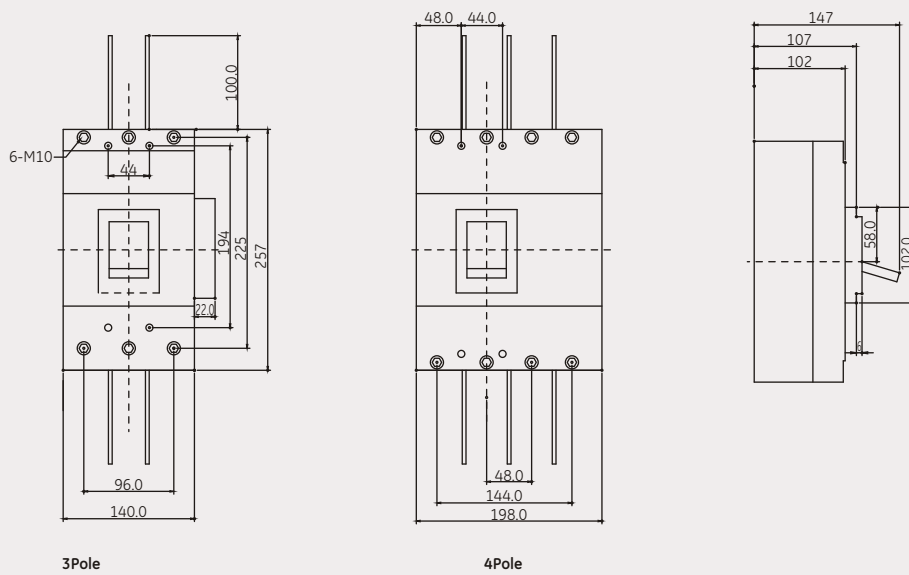
Dimensions

Dimensional Details of Spectra EZ225, 3P/4P



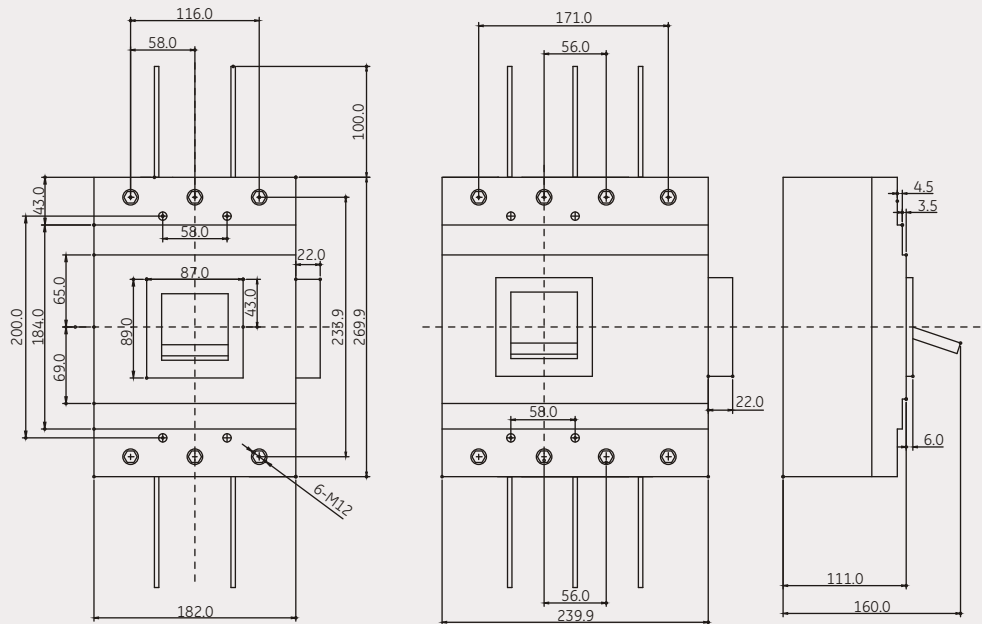
L-18/25kA 3P
M-36/50kA 3P, All 4P

Dimensional Details of Spectra EZ400, 3P/4P

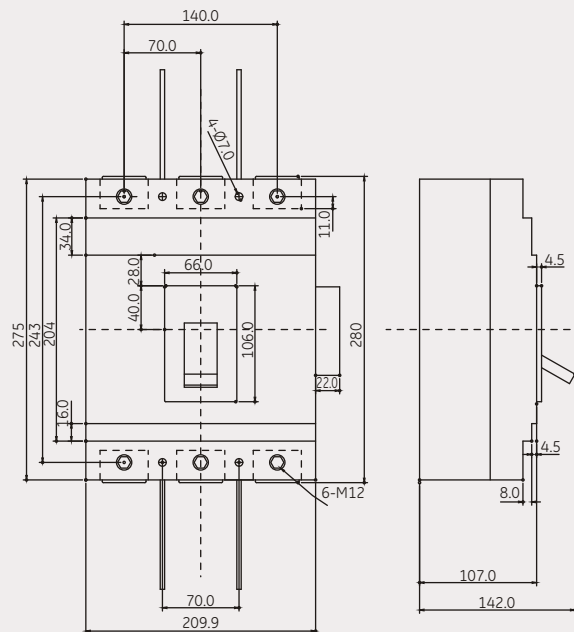


Dimensions

Dimensional Details of Spectra EZ630, 3P/4P

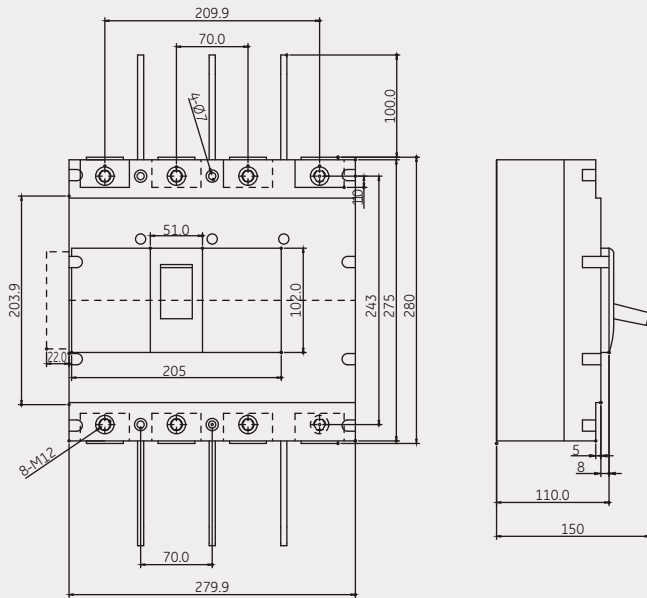


Dimensional Details of Spectra EZ800A, 3P

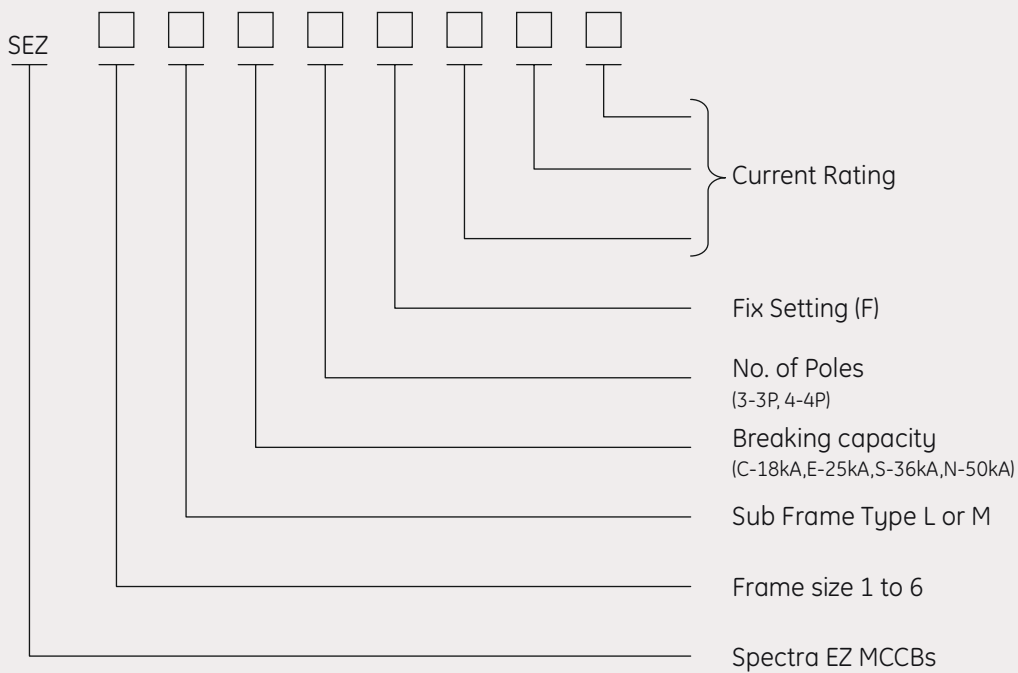


Dimensions

Dimensional Details of Spectra EZ800A, 4P



Codification of Spectra EZ MCCBs



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