

SGM3 series MCCB



Characters

Standards

- IEC60907-2/GB14048.2 Low voltage breakers

Pollution Grade

- Grade 3 while operating in industrial environment under IEC60947-1 and 60664-1 standard

Anti-Humidity&Heat Ability

- Dry cold, dry heat, wet heat

Ambient Temperature

- SGM3 series MCCB can work continuously in normal environment and ambient temperature of -5°C to 40°C
- When ambient working temperature $>40^{\circ}\text{C}$ (motor protection $>60^{\circ}\text{C}$), should follow to temperature reduced capacity coefficient or contact us

Altitude

- Normal installing altitude: $\leq 2000\text{m}$
- If installing altitude $>2000\text{m}$, must consider the dielectric strength changes and the temperature drops that can follow to altitude reduced capacity coefficient or contact us

Humidity

Normal working conditions:

- When ambient air temperature is $+40^{\circ}\text{C}$, the relative humidity of atmosphere can not $>50\%$. If the temperature is low, it can work in relative high humidity
- The monthly average relative humidity is 90% for wettest month
- Should consider the performance influence of condensation on the product surface

Reliable Contact Indication with Isolation Function

All SGM3 series MCCB strictly measure up to all the isolation terms under IEC60947-2 standard

- Isolation position matches to O(OFF)
- Only when the contact is truly open, the operating handle can indicated to "OFF"
- To turn the handle or electric operation mechanism will not influence the reliability of contact indication system
- The mechanical reliability of contact indication system
- No leakage current
- Overvoltage withstand capacity between input and output terminals

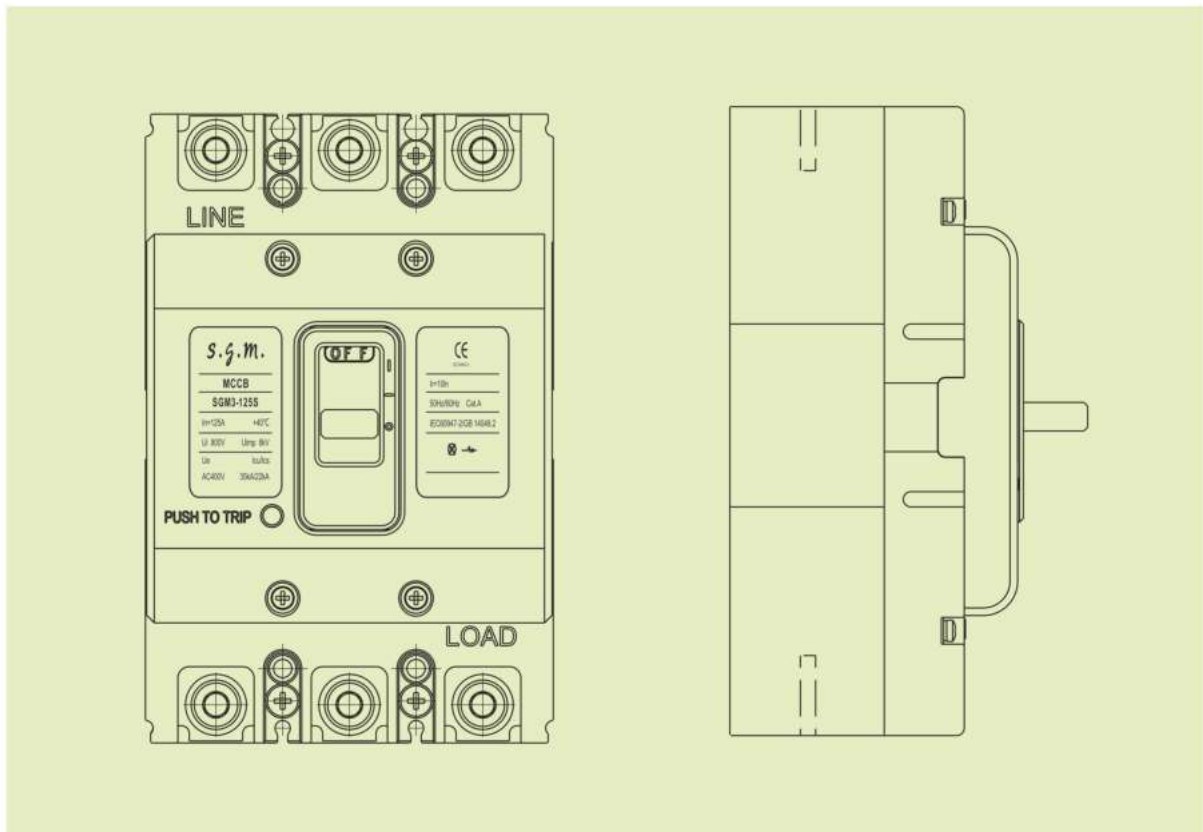
IP Grade

- Circuit breaker body : IP20
- Circuit breaker installed in cabinet: with toggle handle : IP40
with electric operation mechanism : IP40

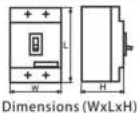
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Label and outline Introduction

Brand name	S.g.m.	CE IEC 60947-2	Certification
Product name	MCCB	$I_r=10I_n$	Short circuit protection trip current
Type specification	SGM3-125S	50Hz/60Hz Cat.A	Frequency and category
Current	$I_n=125A$ $+40^\circ C$	IEC60947-2/GB 14048.2	Standards
Base temperature			Isolated symbols
Insulation voltage	U_i 800V U_{imp} 8kV		
Impulse withstand voltage	U_e I_{cu}/I_{cs}		
Short-circuit breaking capacity	AC400V 35kA/22kA		



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Technical Specification											
Frame		RGM3-125	RGM3-250			RGM3-400			RGM3-630		
Rated Operated Voltage Ue (V)		400/415	400/415/690			400/415/690			400/415/690		
Rated Insulation Voltage Ui (V)		800	800			800			800		
Rated Impulse Withstand Voltage Uimp(kV)		8	8			8			8		
Rated Current In(A)		10-125	100-250			200-400			400/500/630		
Pole(3P,4P-A/B)		3/4	3/4			3/4			3/4		
		S	S	F	N	S	F	N	S	F	N
Icu(kA)	50/60HZ AC 400/415V	35	35	50	70	50	70	85	50	70	85
	50/60HZ AC 690V	-	-	-	15	-	-	20	-	-	20
Rated short-circuit breaking capacity	50/60HZ AC 400/415V	22	22	30	42	30	42	51	30	42	51
	50/60HZ AC 690V	-	-	-	8	-	-	10	-	-	10
Mechanical durability	Maintenance	40000	40000			20000			20000		
	No maintenance	20000	20000			10000			10000		
Electrical durability	AC 400/415V	8000	8000			7500			7500		
Protection type	Power distribution	■	■			■			■		
	Motor	■	■			■			■		
Type of trip unit	Thermal-magnetic	■	■			■			■		
	Single magnetic	■	■			■			■		
Connection	Front connection	■	■			■			■		
	Rear connection	■	■			■			■		
	Pulg-in front connection	■	■			-			-		
	Plug-in rear connection	■	■			■			■		
	Drawout connection	-	-			-			-		
Accessories	UVT	■	■			■			■		
	SHT	■	■			■			■		
	AL	■	■			■			■		
	AX (10N10FF)		■			■			■		
	AX (20N20FF)		■			■			■		
	Extension terminals	■	■			■			■		
	AC remote operation	-	-			-			-		
	AC/DC remote operation		■			■			■		
	Round direct rotary	■	■			■			■		
	Square direct rotary	■	■			■			■		
	Round extended rotary	■	■			■			■		
Square extended rotary	■	■			■			■			
Interphase barriers	■	■			■			■			
Acc installation		■	■			■			■		
Isolated function		■	■			■			■		
Caterory		A	A			A			A		
 Dimensions (WxLxH)	3P (mm)	75x130x68	107x165x76	107x165x88	142x257x107.5			142x257x107.5			
	4P (mm)	100x130x68	142x165x76	142x165x88	184x257x107.5			184x257x107.5			

Remark:

- SGM3-63/100/125AF, <40A, Minimum protection current 400A ; >= 40A, 10/12In
- 100A, F/N type, Minimum current >= 40A
- 4 pole N phase has A and B types:
A Type: No trip ass'y in N phase, keep N phase connecting, no operating with other 3 phases
B Type: No trip ass'y in N phase, operating with other 3 phases

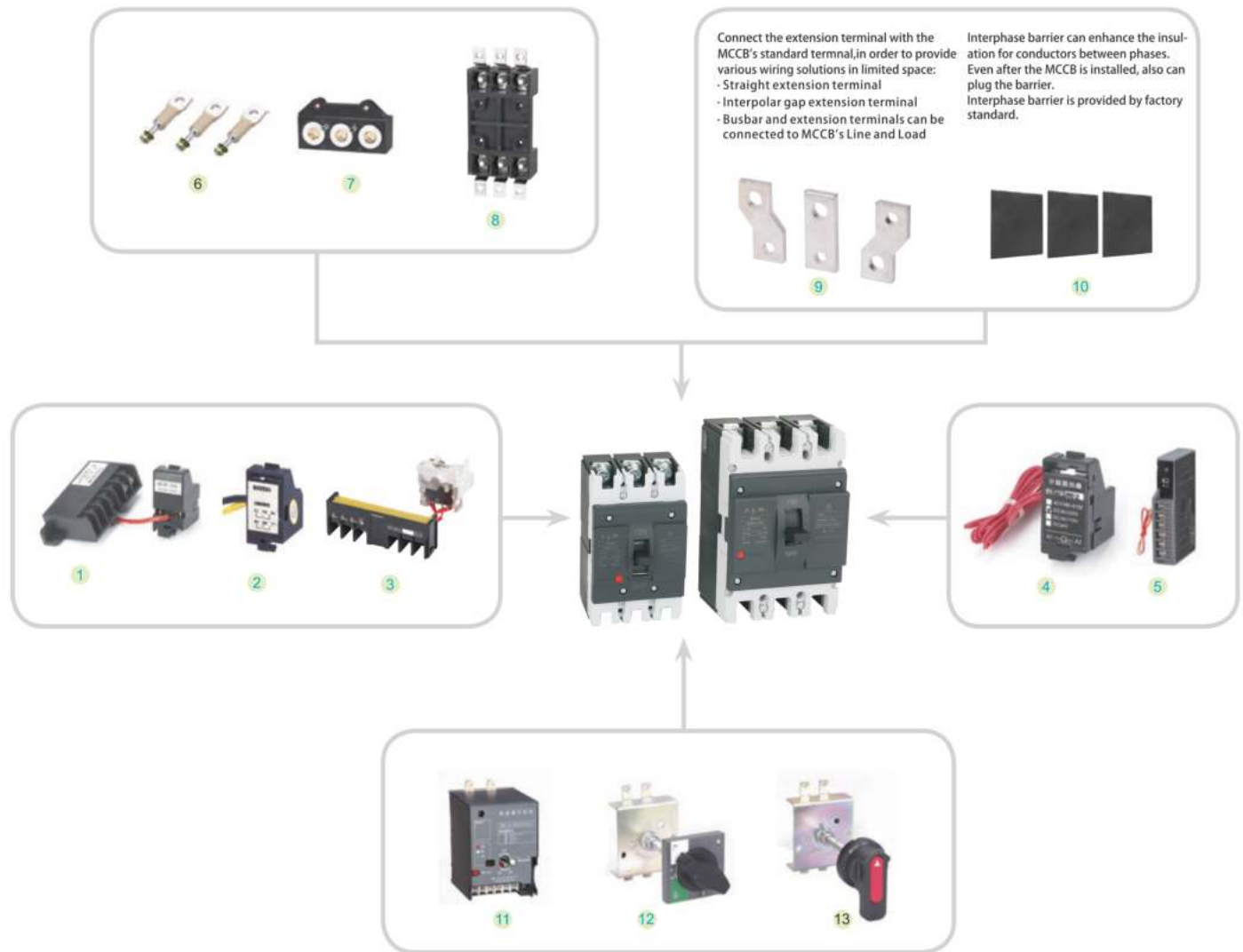
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Accessories

Accessories List

Internal acc: Shunt trip, Under voltage release, Auxiliary switch, Alarm switch, Aux/AI switch
Leakage current alarm module

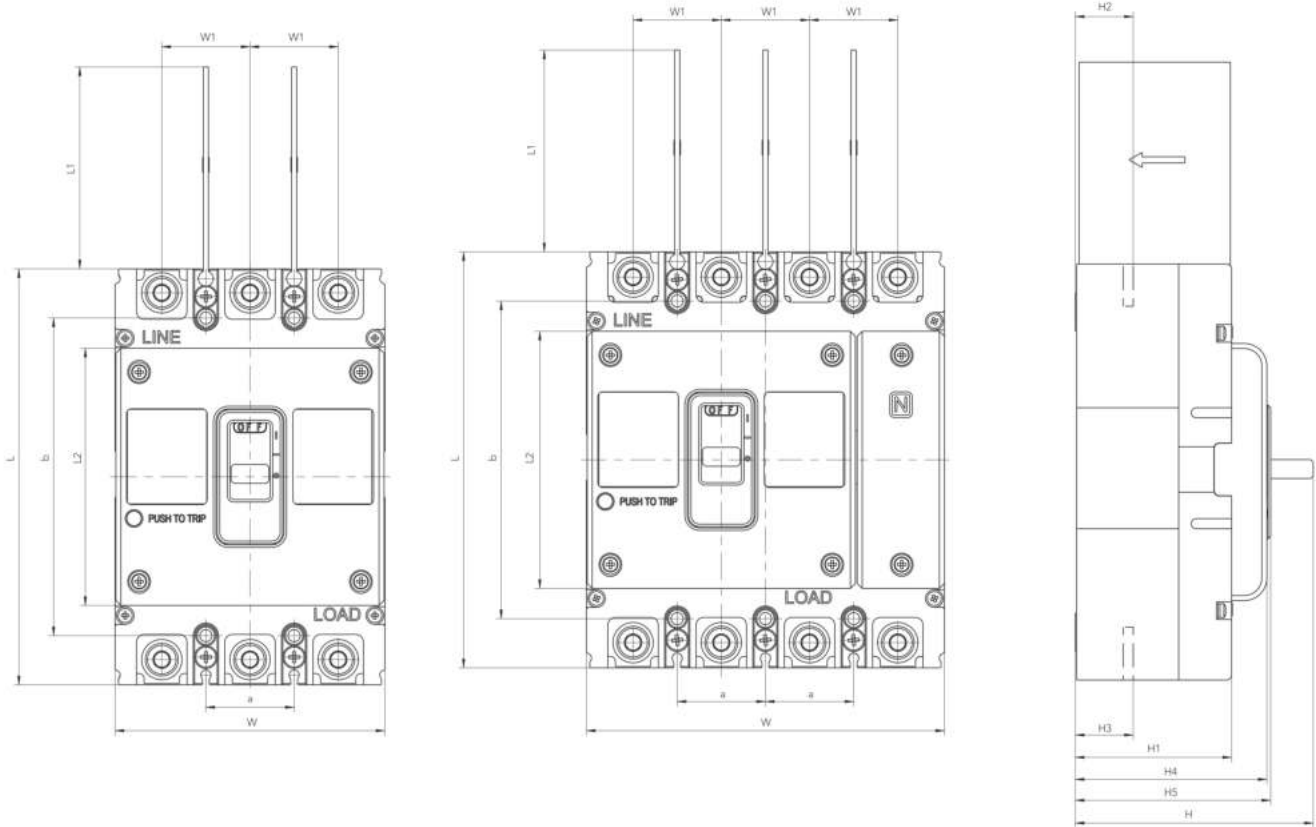
External acc: Fixed rear acc , Plug-in acc, Draw out acc, Interphase barriers, Terminal extensions
Rotary handle, Remote operation



1	Under voltage release(UVR)	6	Fixed rear connection	11	Remote operation
2	Auxiliary switch(AX)	7	Plug-in rear connection	12	Square direct rotary handle
3	Alarm switch(AL)	8	Plug-in front connection	13	Round direct rotary handle
4	Shunt trip(SHT)	9	Extension terminals		
5	Leakage current alarm module	10	Interphase barriers		

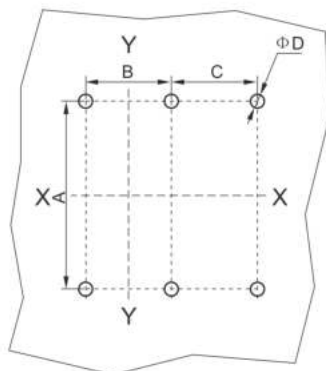
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Dimensions



Frame	Pole	Dimensions												
		L	L1	L2	W	W1	H	H1	H2	H3	H4	H5	a	b
125	3P	130	50	83	75	25	81.5	56	24	24	68	70.5	25	111
	100													
250	3P	165	80	102	107	35	94.5	62	23	23	76	77.5	35	126
	142													
400	3P	257	104.5	150	140	48	145.9	96.2	36	36/36.5	107.5	112.5	44	215
	184													
630	3P	257	104.5	150	140	48	145.9	96.2	38	39	107.5	112.5	44	215
	184													

Mounting on plate



Frame	Pole	A	B	C	D
125	3P	111	25	/	4.5
	4P			25	
250	3P	126	35	/	5.5
	4P			35	
400	3P	215	44	/	6.5
	4P			/	
630	3P	215	44	/	6.5
	4P			/	