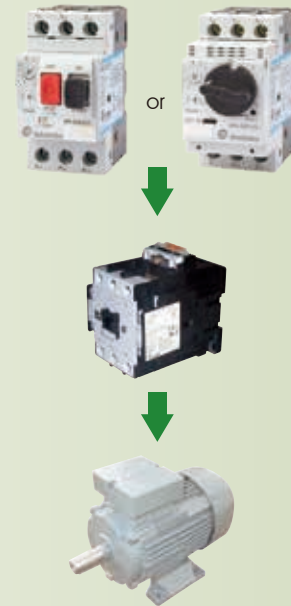
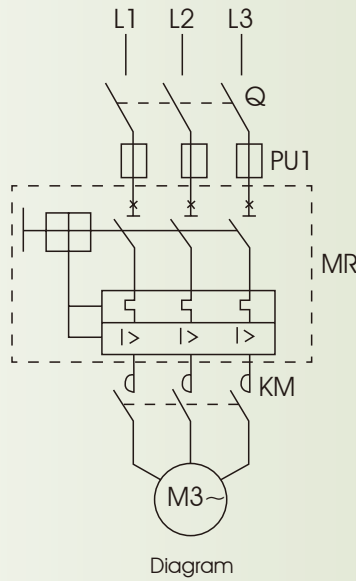


# MANUAL MOTOR STARTER



## Function

- ◆ Phase-failure protection
- ◆ Short circuit protection
- ◆ Overload protection
- ◆ Frequent operation
- ◆ Disconnect switch

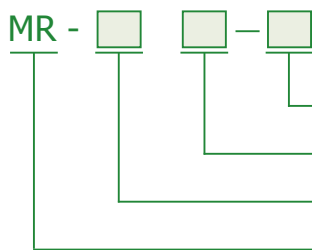


## Feature



- ◆ Standard: IEC 60947-2  
IEC 60947-4
- ◆ 50% Less wiring: MCCB+Contactor+TOR → MMS+Contactor
- ◆ Compact size: save 57% space
- ◆ Green design: Recyclable plastic, no cadmium connection, RoHs
- ◆ Tool free installation: 35mm Din-rail mounting

## Type designation

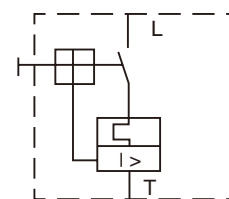
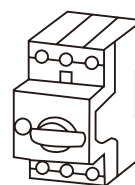



Rated current (A): 0.16~65  
 Type: S: Toggle; R: Rotary  
 Frame size (AF): 32, 65  
 Basic type: MMS

## Environment condition

- ◆ Storage temp: -25°C ~ 55°C
- ◆ Operation temp: -5°C ~ 40°C
- ◆ Maximum operation altitude: 2000M

## The main technical parameters



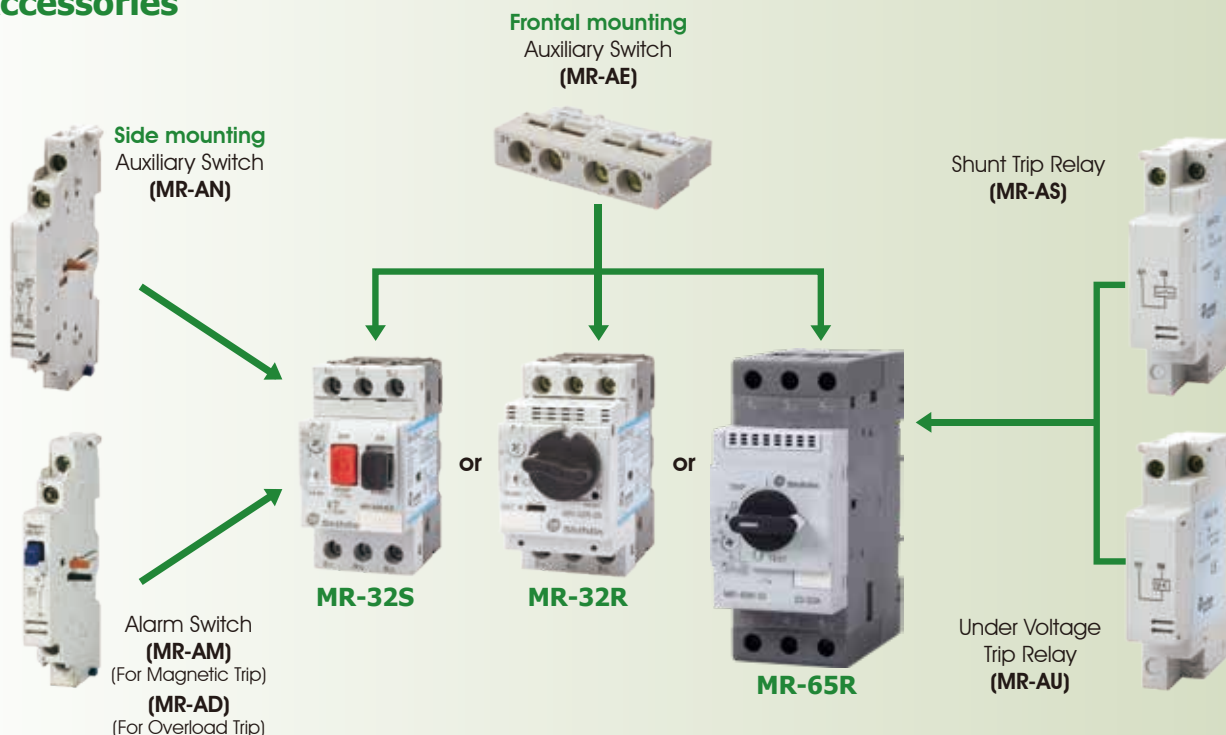
Power factor AC-3		Rated current	Overload adjustable range	Tripping current (A)	Type	
220V (kW)	400V (kW)	I <sub>n</sub> (A)	I <sub>e</sub> (A) 	I <sub>d</sub> ± 20%	Button	Rotary
—	—	0.16	0.1-0.16	1.92	MR-32S-0.16	MR-32R-0.16
—	—	0.25	0.16-0.25	3	MR-32S-0.25	MR-32R-0.25
—	—	0.4	0.25-0.4	4.8	MR-32S-0.4	MR-32R-0.4
—	—	0.63	0.4-0.63	7.56	MR-32S-0.63	MR-32R-0.63
—	—	1	0.63-1	12	MR-32S-1	MR-32R-1
—	0.37	1.6	1-1.6	19.2	MR-32S-1.6	MR-32R-1.6
0.37	0.75	2.5	1.6-2.5	30	MR-32S-2.5	MR-32R-2.5
0.55	1.5	4	2.5-4	48	MR-32S-4	MR-32R-4
1.1	2.2	6.3	4-6.3	75.6	MR-32S-6.3	MR-32R-6.3
2.2	4	10	6-10	120	MR-32S-10	MR-32R-10
2.2	5.5	14	9-14	168	MR-32S-14	MR-32R-14
3.7	7.5	18	13-18	216	MR-32S-18	MR-32R-18
5.5	11	23	17-23	276	MR-32S-23	MR-32R-23
5.5	11	25	20-25	300	MR-32S-25	MR-32R-25
7.5	15	32	24-32	384	MR-32S-32	MR-32R-32
3	5.5	13	9-13	182	—	MR-65R-13
4	7.5	18	12-18	252	—	MR-65R-18
5.5	11	25	17-25	350	—	MR-65R-25
7.5	15	32	23-32	448	—	MR-65R-32
7.5	18.5	40	30-40	560	—	MR-65R-40
11	22	50	37-50	700	—	MR-65R-50
15	30	65	48-65	910	—	MR-65R-65







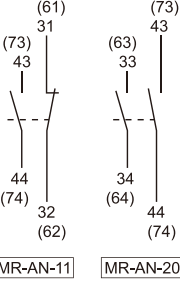
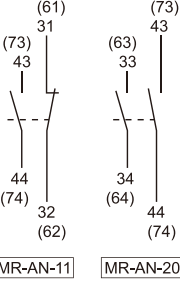

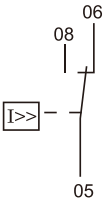






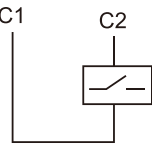

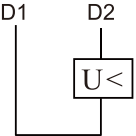
## Rated breaking capacity (kAIC)

- ◆ In: Rated current (A)
- ◆ Icu: Rated ultimate short-circuit breaking capacity
- ◆ Ics: Rated service short-circuit breaking capacity
- ◆ Standard: IEC/ EN 60947-2

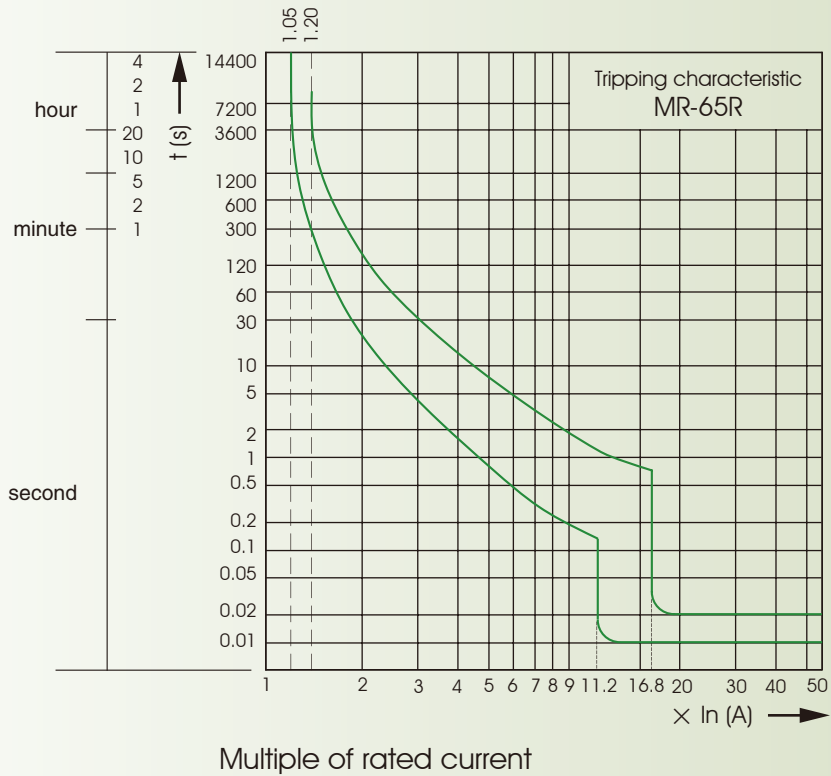
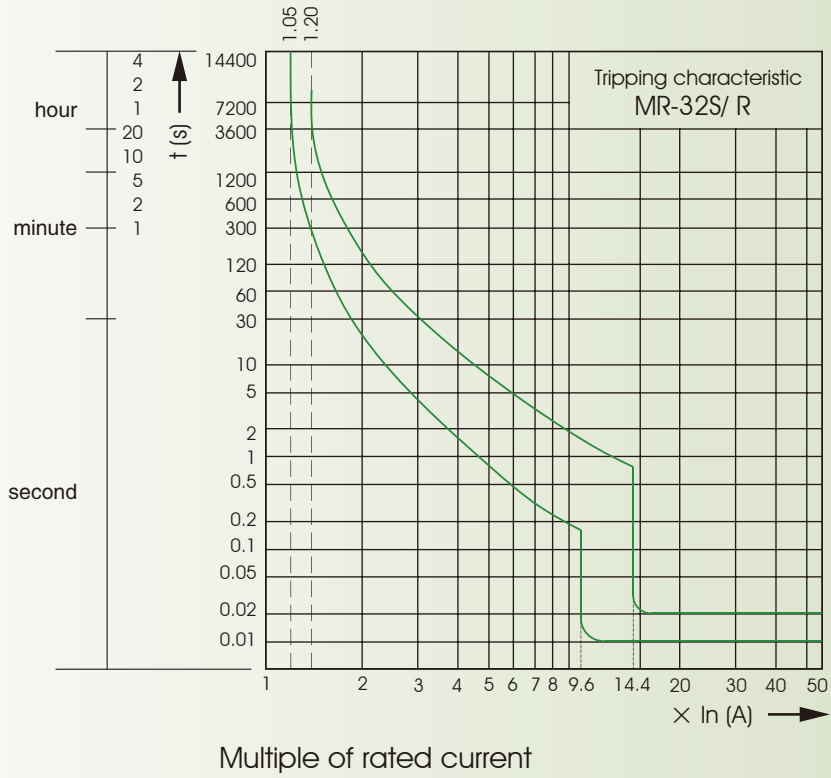
Frame size AF	In A	230/240V		400/415V		440V		500V		690V	
		Icu kA	Ics kA	Icu kA	Ics kA	Icu kA	Ics kA	Icu kA	Ics kA	Icu kA	Ics kA
32	0.16	100	100	100	100	100	100	80	80	80	80
	0.25	100	100	100	100	100	100	80	80	80	80
	0.4	100	100	100	100	100	100	80	80	80	80
	0.63	100	100	100	100	100	100	80	80	80	80
	1	100	100	100	100	100	100	80	80	80	80
	1.6	100	100	100	100	100	100	80	80	80	80
	2.5	100	100	100	100	100	100	80	80	3	2.25
	4	100	100	100	100	100	100	80	80	3	2.25
	6.3	100	100	100	100	50	50	50	50	3	2.25
	10	100	100	100	100	15	15	10	10	3	2.25
	14	100	100	15	7.5	8	4	6	4.5	3	2.25
	18	100	100	15	7.5	8	4	6	4.5	3	2.25
	23	50	50	15	6	6	3	4	3	3	2.25
	25	50	50	15	6	6	3	4	3	3	2.25
32	50	50	10	5	6	3	4	3	3	2.25	
65	13	100	100	100	100	50	50	12	6	6	3
	18	100	100	100	100	50	50	12	6	6	3
	25	100	100	100	100	50	50	12	6	6	3
	32	100	100	100	100	50	50	12	6	6	3
	40	100	100	50	50	50	50	12	6	6	3
	50	100	100	50	50	50	50	12	6	6	3
	65	100	100	50	50	50	50	12	6	6	3

## Accessories

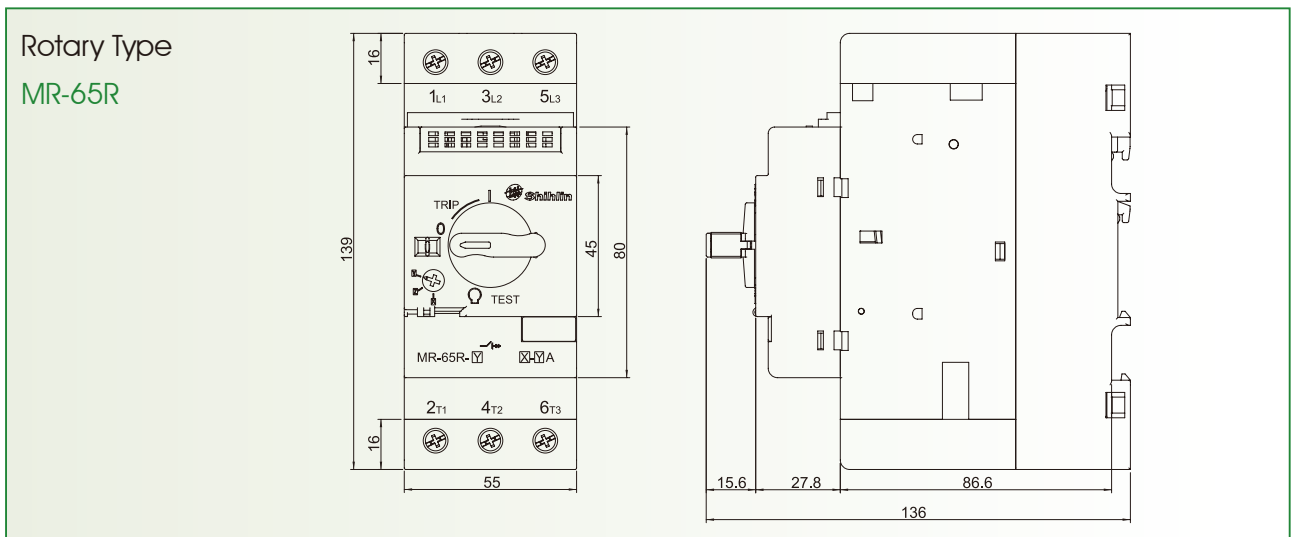
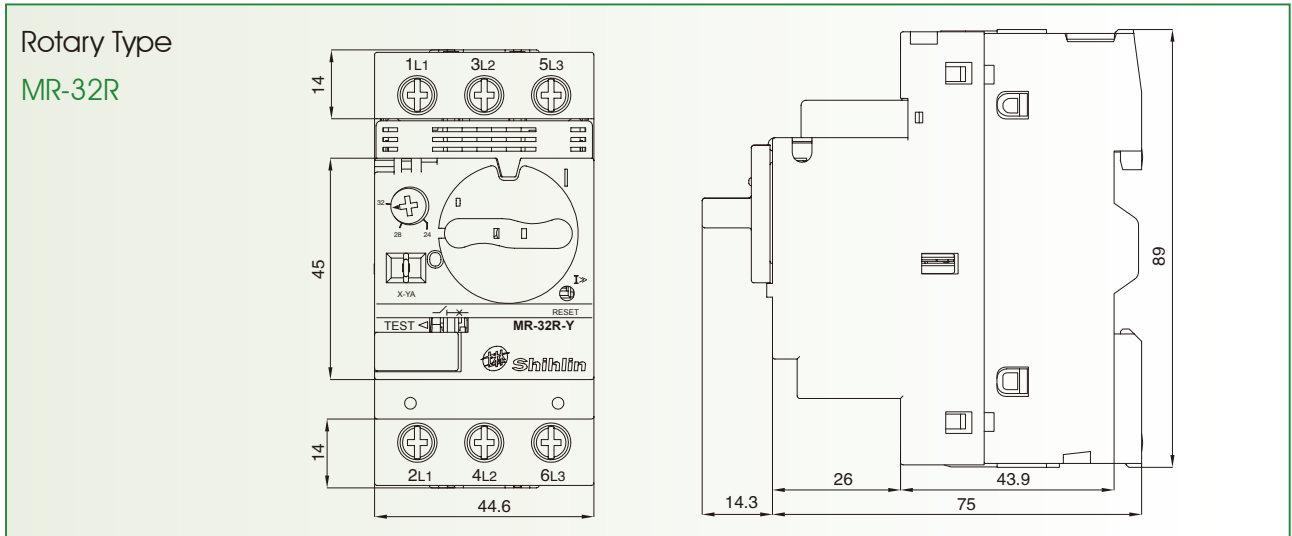
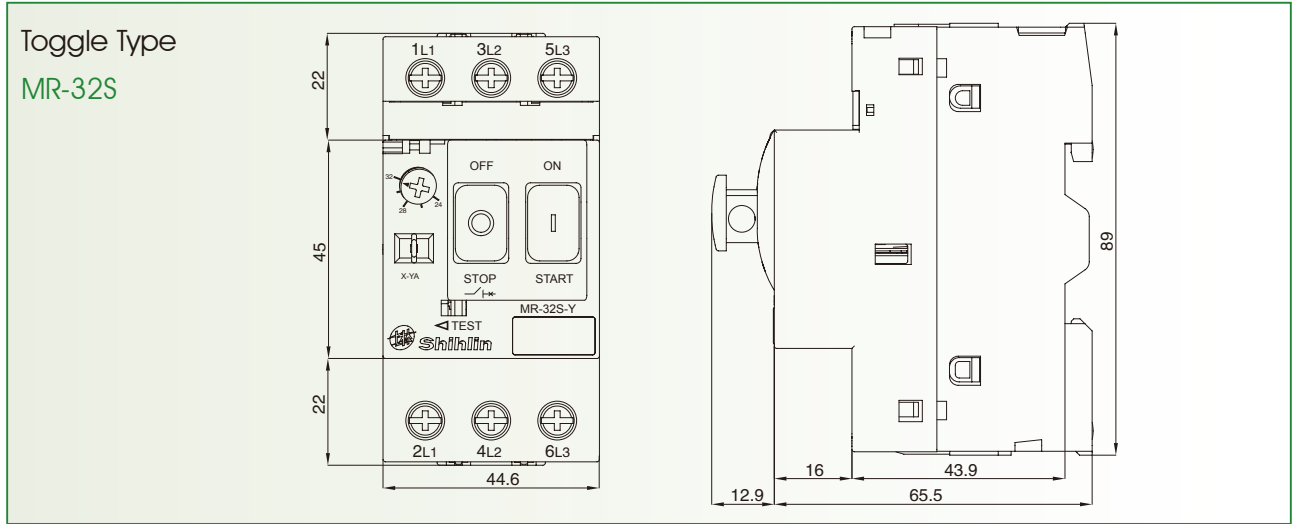


Accessory	Model	Electrical Diagram	Contact	Specifications			
				Ui (AC/V)	Ue (V)	Ie (A)	VA
<b>Auxiliary Switch</b> <b>Front Mounting</b> 	MR-AE-11	21  22 13  14	1NO 1NC	250	240	2.5	120
	MR-AE-20	23  24 13  14	2NO				
<b>Auxiliary Switch</b> <b>Side Mounting</b> 	MR-AN-11		1NO 1NC	690	690	6	720
	MR-AN-20		2NO				
<b>Auxiliary Switch</b> <b>Side Mounting</b> 	MR-AM-11	Rearm RESET 	C/O Common Port	690	240	2.5	72
<b>Failure Alarm</b> <b>Side Mounting</b> 	MR-AD0110		Failure Contact: NC Auxiliary Contact: NO	690	240	2.5 (95-96& 97-98) Failure Contact	72
	MR-AD0101		Failure Contact: NC Auxiliary Contact: NC				
	MR-AD1010		Failure Contact: NO Auxiliary Contact: NO	690	690	6 (51-52& 53-54) Auxiliary Contact	720
	MR-AD1001		Failure Contact: NO Auxiliary Contact: NC				
<b>Shunt Trip Relay</b> 	MR-AS110		Uc = 110V, 50/60Hz				
	MR-AS220		Uc = 220V, 50/60Hz				
	MR-AS380		Uc = 380V, 50/60Hz				
<b>Under Voltage Trip Relay</b> 	MR-AU110		Uc = 110V, 50Hz				
	MR-AU220		Uc = 220V, 50Hz				
	MR-AU380		Uc = 380V, 50Hz Uc = 440V, 60Hz				
	MR-AU110T		Uc = 110V, 60Hz				
	MR-AU220T		Uc = 220V, 60Hz				
	MR-AU380T		Uc = 380V, 60Hz				

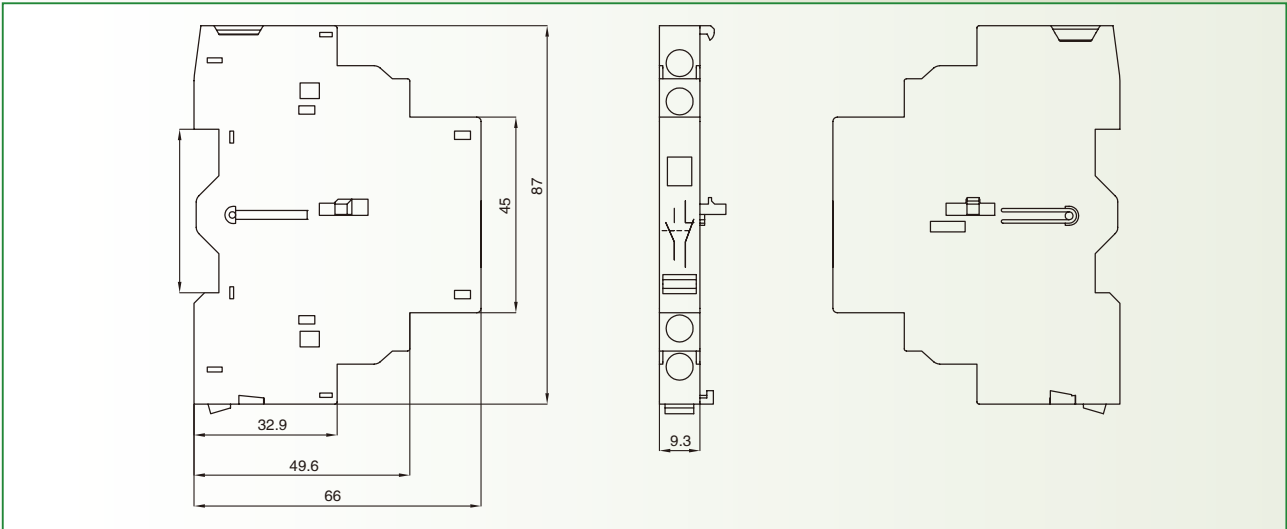
### Characteristic Curve



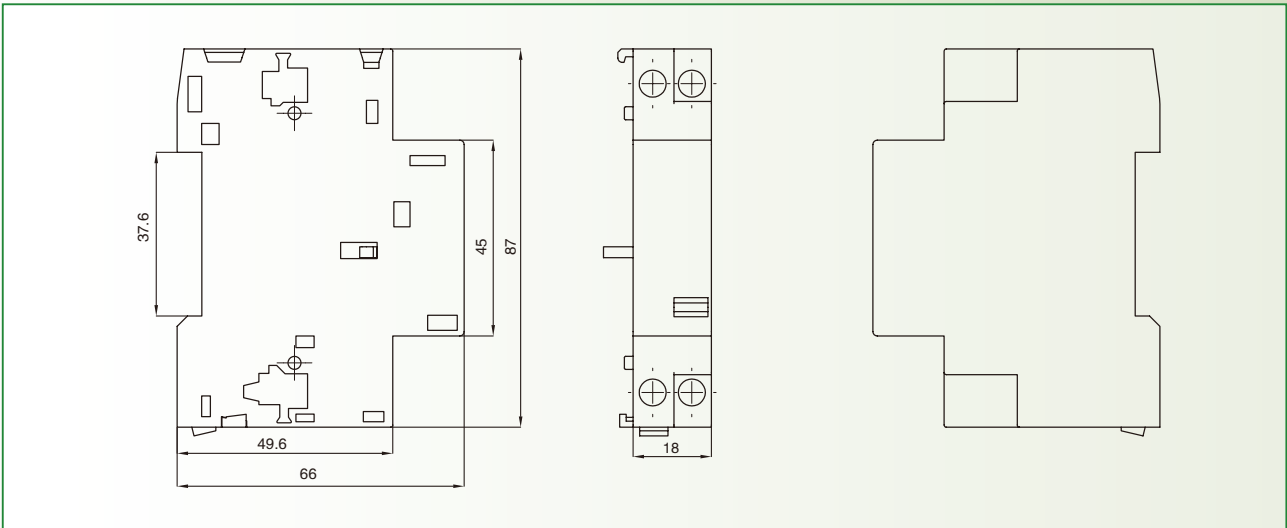
Dimension



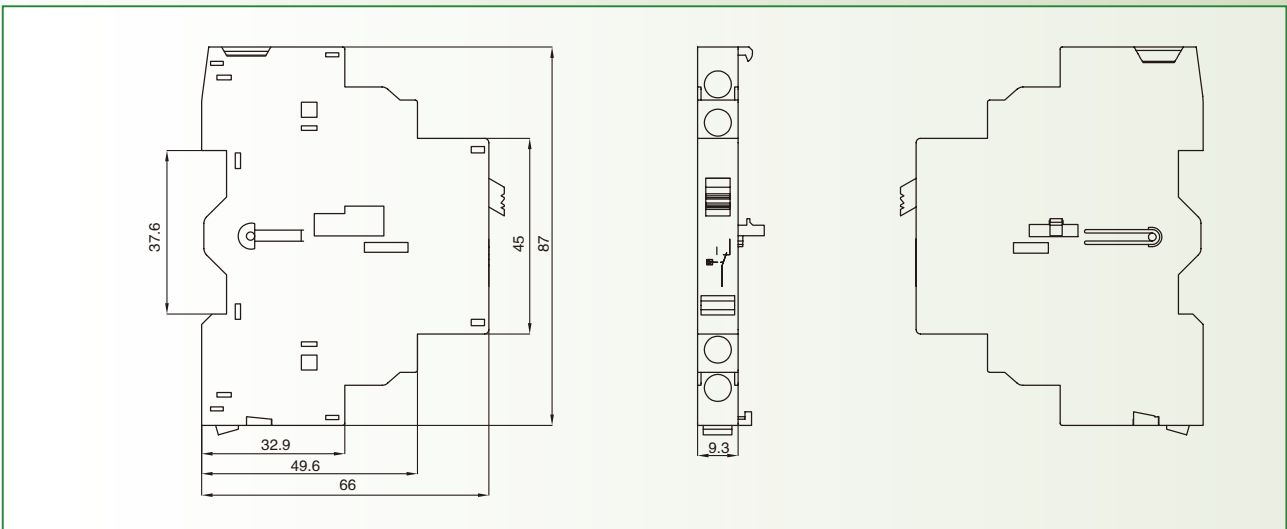
◆ Side mounting: Auxiliary Switch



◆ Side mounting: Shunt Trip/ UVT



◆ Side mounting: Alarm Switch







# SHIHLIN ELECTRIC & ENGINEERING

MOTOR CONTROL (CONTACTOR/ MS/ MMS), CIRCUIT BREAKER (MCCB/ ELCB/ EMCCB/ MCB), AIR CIRCUIT BREAKER, AUTOMATIC TRANSFER SWITCHES (Panel Board Type/ Residential Unit Use), SURGE PROTECTIVE DEVICE, LOW VOLTAGE POWER CAPACITORS, SMART METER, INVERTER



## **Breaker & switchgears overseas sales dept.**

3F, No.9, Sec. 1, Chang-an E. Rd., Zhongshan Dist., Taipei City 10441, Taiwan  
T. +886-2-2541-9822 F. +886-2-2581-2665  
e-mail. b.export@seec.com.tw  
<http://circuit-breaker.seec.com.tw>

## **Headquarters**

16F, No.88, Sec. 6, Zhongshan N. Rd., Shilin Dist., Taipei City 11155, Taiwan  
T. +886-2-2834-2662 F. +886-2-2836-6187  
<http://www.seec.com.tw>

Distributor

B180430E.MMS-OB