

**ONESTO**

[www.onesto.cn](http://www.onesto.cn)

**ONESTO ELECTRIC Co., Ltd.**

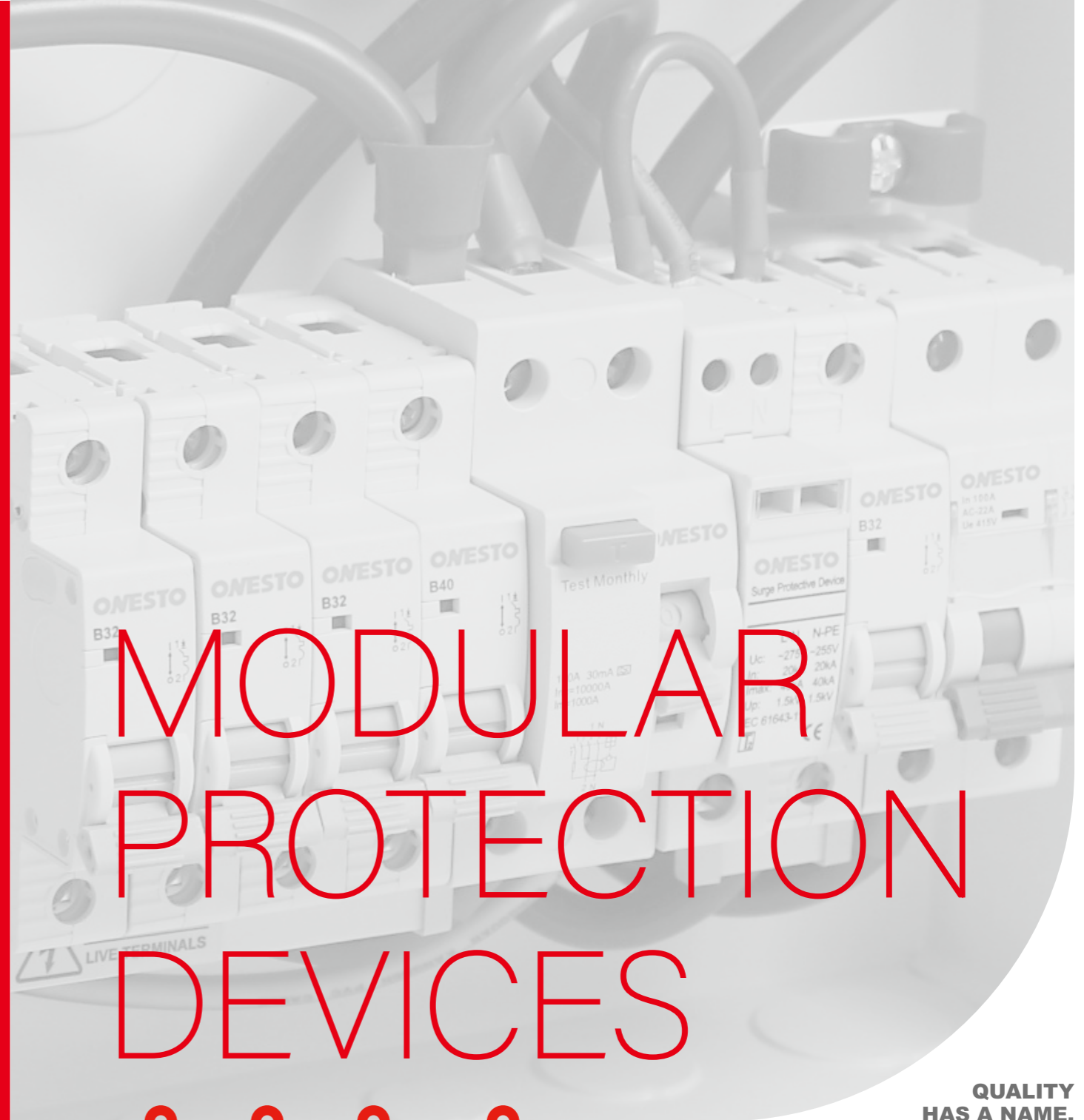
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2023.2.10



# MODULAR PROTECTION DEVICES

**QUALITY  
HAS A NAME.**

- MINI CIRCUIT BREAKER
- RESIDUAL CURRENT DEVICES
- DISTRIBUTION BOARDS
- ENCLOSURES

## 2023-2024

**ONESTO**



## Company Profile

As an active player in electrical manufacturing industry over 19 years, **ONESTO** is committed to providing quality assured products for application in power distribution, industrial control and new energy etc.

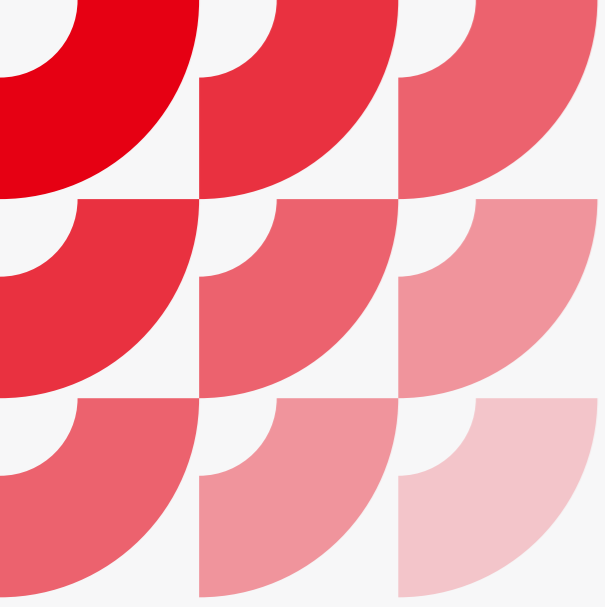
**ONESTO** is a name of quality that focuses on customer's safety and satisfaction. The company is operated under ISO9001:2015 Quality Management System. All the products are manufactured in conformity with BS,EN,IEC international standards and acquired CE,CB,UKCA,SAA,TUV,MEEI,Semko, KEMA-KEUR certificates.

**ONESTO** is undertaking intelligent manufacturing. The factory set up advance automated assembly and testing production line to secure high precision parts dimension, accurate automated assembly, outstanding technical performance and efficient production capacity. Onesto introduced advance ERP system to achieve full quality tracing for each step of raw material incoming, production process and delivery.

**ONESTO** always pursues constant product innovation to offer customers with comprehensive selection for commercial, industrial, residential project where quality is essential. Onesto owns independent intellectual property rights for its product range including domestic and international patents.

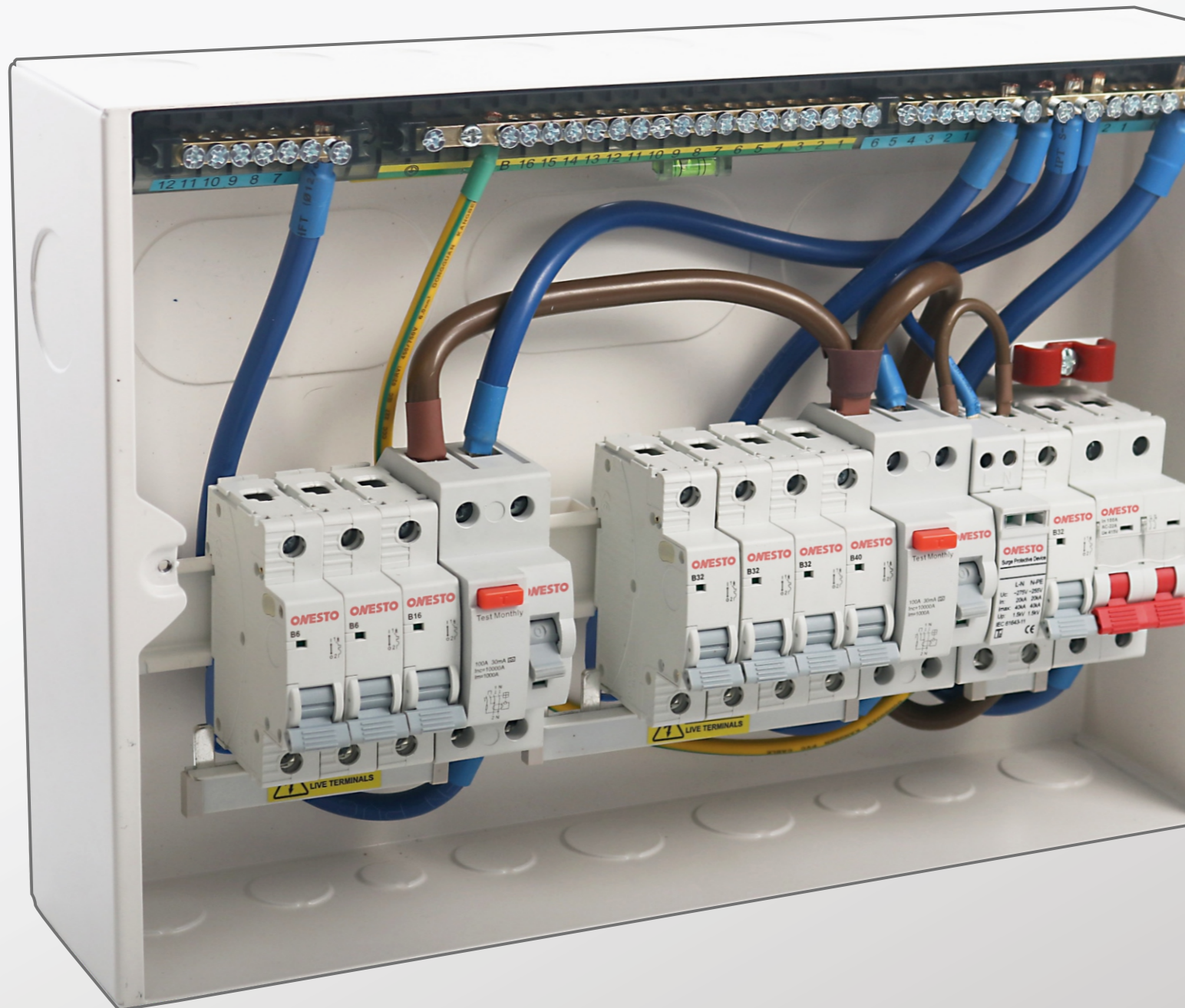
Today, customers over 60 countries are benefited from **ONESTO** products and solution for its reliable protection of electrical systems. As a well recognized partner with renowned companies around the world, **ONESTO** is ready to create new value and competitive advantages with partners for mutual continuously development.





**ONESTO**<sup>®</sup>

QUALITY  
HAS A NAME.



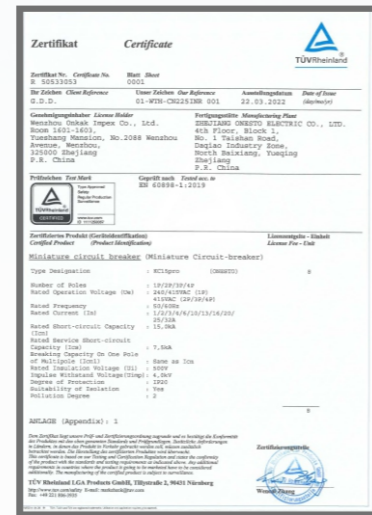
**Mini Circuit Breaker**

**Residual Current  
Devices**

**Distribution Board**

## Certification

All products are type tested in accredited laboratory and awarded with CE, CB, UKCA, SAA, TUV, MEEI, Semko, KEMA-KEUR certificates.



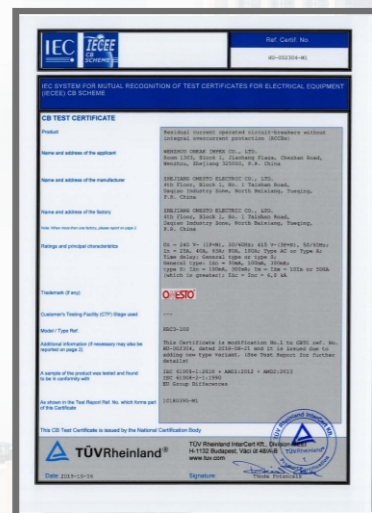
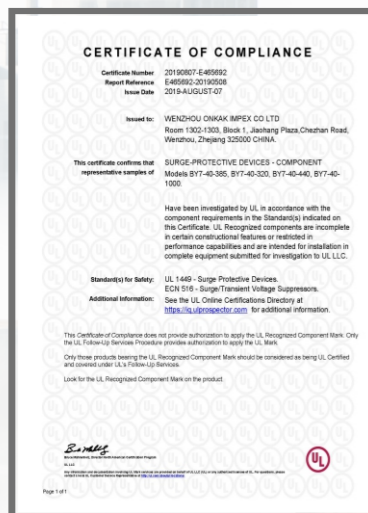
## Qualification

Onesto is honoured with High-tech Enterprise certificate. The factory is operated under ISO9001 quality management system.



## R&D

Patent approval from domestic and international authorities is a result of continuous independent innovation



MCB UK Patent

Distribution Box UK Patent

MCB Saudi Patent

# ONESTO

<b>CONTENT</b>	<b>Page</b>
● Mini Circuit Breaker	01-08
● Switch Disconnecter	09-10
● Changeover Switch	10-11
● LED indicator	12
● Impulse Relay & Modular Contactors	13-22
● MCB Accessories	23-26
● Characteristics/Dimensions	27-30
● RCBO	31-34
● AFDD	35
● Electromagnetic leakage circuit breaker	36
● RCD for EV charging	37
● Type B Residual Current Devices	38
● Residual Current Devices	39-40
● DC & AC Surge Arrester	41-42
● Transformers, Buzzers and bells	43
● Timer Switches	44
● Multifunction Time Relays	45-46
● Staircase Time Relay	47
● Electronic Load Shed Relay	48
● Automatic Changeover Switch	49-50
● Basbar/Mounting Rails	51-52
● Characteristics/Dimensions	53-54

<b>CONTENT</b>	<b>Page</b>
● Consumer Unit of Flush and Surface Type	56
● Row Type MCB Distribution Board	56
● TPN MCB Distribution Board	57-58
● Distribution Board	59
● Row Type Modular Enclosure	59
● IP65 Distribution Board	60
● Pan Assembly with Complete Busbar	61
● Dimensions	62-66
● IP65 Metal Enclosure	68
● IP66 Stainless Steel Enclosure	68
● IP55 Enclosure with Glazed Door	69
● IP55 Enclosure with Inner Doors	69
● IP55 Enclosure with Modular Chassis	70
● Lifting Lugs & Locks	71
● Floor-standing Cabinets	72-74

**KC3e**

Thermal magnetic mcbs up to 63A



310 27                      310 87                      311 51                      312 13

No.of pole: 1P,2P,3P,4P  
 Rated voltage: 240V/415V AC  
 Rated current: 1-63A  
 Rated frequency: 50/60Hz  
 Tripping curve: B,C,D  
 Rated insulation voltage: 415V  
 Rated impulse withstand voltage: 4kV  
 Rated short-circuit breaking capacity: 3000A  
 Comply with IEC60898-1

**Single pole -240/415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
12	310 01	310 21	310 41	1A	120
12	310 02	310 22	310 42	2A	120
12	310 03	310 23	310 43	3A	120
12	310 04	310 24	310 44	4A	120
12	310 05	310 25	310 45	6A	120
12	310 06	310 26	310 46	10A	120
12	310 07	310 27	310 47	16A	120
12	310 08	310 28	310 48	20A	120
12	310 09	310 29	310 49	25A	120
12	310 10	310 30	310 50	32A	120
12	310 11	310 31	310 51	40A	120
12	310 12	310 32	310 52	50A	120
12	310 13	310 33	310 53	63A	120

**3 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
4	311 21	311 41	311 61	1A	40
4	311 22	311 42	311 62	2A	40
4	311 23	311 43	311 63	3A	40
4	311 24	311 44	311 64	4A	40
4	311 25	311 45	311 65	6A	40
4	311 26	311 46	311 66	10A	40
4	311 27	311 47	311 67	16A	40
4	311 28	311 48	311 68	20A	40
4	311 29	311 49	311 69	25A	40
4	311 30	311 50	311 70	32A	40
4	311 31	311 51	311 71	40A	40
4	311 32	311 52	311 72	50A	40
4	311 33	311 53	311 73	63A	40

**Double pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
6	310 61	310 81	311 01	1A	60
6	310 62	310 82	311 02	2A	60
6	310 63	310 83	311 03	3A	60
6	310 64	310 84	311 04	4A	60
6	310 65	310 85	311 05	6A	60
6	310 66	310 86	311 06	10A	60
6	310 67	310 87	311 07	16A	60
6	310 68	310 88	311 08	20A	60
6	310 69	310 89	311 09	25A	60
6	310 70	310 90	311 10	32A	60
6	310 71	310 91	311 11	40A	60
6	310 72	310 92	311 12	50A	60
6	310 73	310 93	311 13	63A	60

**4 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
3	311 81	312 01	312 21	1A	30
3	311 82	312 02	312 22	2A	30
3	311 83	312 03	312 23	3A	30
3	311 84	312 04	312 24	4A	30
3	311 85	312 05	312 25	6A	30
3	311 86	312 06	312 26	10A	30
3	311 87	312 07	312 27	16A	30
3	311 88	312 08	312 28	20A	30
3	311 89	312 09	312 29	25A	30
3	311 90	312 10	312 30	32A	30
3	311 91	312 11	312 31	40A	30
3	311 92	312 12	312 32	50A	30
3	311 93	312 13	312 33	63A	30



**KC3-H**

Thermal magnetic mcbs up to 63A



410 30                      410 93                      411 53                      412 13

No.of pole: 1P,2P,3P,4P  
 Rated voltage: 240V/415V AC  
 Rated current: 1-63A  
 Rated frequency: 50/60Hz  
 Tripping curve: B,C,D  
 Rated insulation voltage: 415V  
 Rated impulse withstand voltage: 4kV  
 Rated short-circuit breaking capacity: 4500A  
 Comply with IEC60898-1

**Single pole -240/415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
12	410 01	410 21	410 41	1A	120
12	410 02	410 22	410 42	2A	120
12	410 03	410 23	410 43	3A	120
12	410 04	410 24	410 44	4A	120
12	410 05	410 25	410 45	6A	120
12	410 06	410 26	410 46	10A	120
12	410 07	410 27	410 47	16A	120
12	410 08	410 28	410 48	20A	120
12	410 09	410 29	410 49	25A	120
12	410 10	410 30	410 50	32A	120
12	410 11	410 31	410 51	40A	120
12	410 12	410 32	410 52	50A	120
12	410 13	410 33	410 53	63A	120

**3 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
4	411 21	411 41	411 61	1A	40
4	411 22	411 42	411 62	2A	40
4	411 23	411 43	411 63	3A	40
4	411 24	411 44	411 64	4A	40
4	411 25	411 45	411 65	6A	40
4	411 26	411 46	411 66	10A	40
4	411 27	411 47	411 67	16A	40
4	411 28	411 48	411 68	20A	40
4	411 29	411 49	411 69	25A	40
4	411 30	411 50	411 70	32A	40
4	411 31	411 51	411 71	40A	40
4	411 32	411 52	411 72	50A	40
4	411 33	411 53	411 73	63A	40

**Double pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
6	410 61	410 81	411 01	1A	60
6	410 62	410 82	411 02	2A	60
6	410 63	410 83	411 03	3A	60
6	410 64	410 84	411 04	4A	60
6	410 65	410 85	411 05	6A	60
6	410 66	410 86	411 06	10A	60
6	410 67	410 87	411 07	16A	60
6	410 68	410 88	411 08	20A	60
6	410 69	410 89	411 09	25A	60
6	410 70	410 90	411 10	32A	60
6	410 71	410 91	411 11	40A	60
6	410 72	410 92	411 12	50A	60
6	410 73	410 93	411 13	63A	60

**4 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
3	411 81	412 01	412 21	1A	30
3	411 82	412 02	412 22	2A	30
3	411 83	412 03	412 23	3A	30
3	411 84	412 04	412 24	4A	30
3	411 85	412 05	412 25	6A	30
3	411 86	412 06	412 26	10A	30
3	411 87	412 07	412 27	16A	30
3	411 88	412 08	412 28	20A	30
3	411 89	412 09	412 29	25A	30
3	411 90	412 10	412 30	32A	30
3	411 91	412 11	412 31	40A	30
3	411 92	412 12	412 32	50A	30
3	411 93	412 13	412 33	63A	30



**KC6e**

Thermal magnetic mcbs up to 63A



710 28

710 88

711 48

712 08

No. of pole: 1P,2P,3P,4P  
 Rated voltage: 240V/415V AC  
 Rated current: 1-63A  
 Rated frequency: 50/60Hz  
 Tripping curve: B,C,D  
 Rated insulation voltage: 415V  
 Rated impulse withstand voltage: 4kV  
 Rated short-circuit breaking capacity: 6000A  
 Comply with IEC60898-1

**Single pole -240/415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
12	710 01	710 21	710 41	1A	120
12	710 02	710 22	710 42	2A	120
12	710 03	710 23	710 43	3A	120
12	710 04	710 24	710 44	4A	120
12	710 05	710 25	710 45	6A	120
12	710 06	710 26	710 46	10A	120
12	710 07	710 27	710 47	16A	120
12	710 08	710 28	710 48	20A	120
12	710 09	710 29	710 49	25A	120
12	710 10	710 30	710 50	32A	120
12	710 11	710 31	710 51	40A	120
12	710 12	710 32	710 52	50A	120
12	710 13	710 33	710 53	63A	120

**3 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
4	711 21	711 41	711 61	1A	40
4	711 22	711 42	711 62	2A	40
4	711 23	711 43	711 63	3A	40
4	711 24	711 44	711 64	4A	40
4	711 25	711 45	711 65	6A	40
4	711 26	711 46	711 66	10A	40
4	711 27	711 47	711 67	16A	40
4	711 28	711 48	711 68	20A	40
4	711 29	711 49	711 69	25A	40
4	711 30	711 50	711 70	32A	40
4	711 31	711 51	711 71	40A	40
4	711 32	711 52	711 72	50A	40
4	711 33	711 53	711 73	63A	40

**Double pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
6	710 61	710 81	711 01	1A	60
6	710 62	710 82	711 02	2A	60
6	710 63	710 83	711 03	3A	60
6	710 64	710 84	711 04	4A	60
6	710 65	710 85	711 05	6A	60
6	710 66	710 86	711 06	10A	60
6	710 67	710 87	711 07	16A	60
6	710 68	710 88	711 08	20A	60
6	710 69	710 89	711 09	25A	60
6	710 70	710 90	711 10	32A	60
6	710 71	710 91	711 11	40A	60
6	710 72	710 92	711 12	50A	60
6	710 73	710 93	711 13	63A	60

**4 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
3	711 81	712 01	712 21	1A	30
3	711 82	712 02	712 22	2A	30
3	711 83	712 03	712 23	3A	30
3	711 84	712 04	712 24	4A	30
3	711 85	712 05	712 25	6A	30
3	711 86	712 06	712 26	10A	30
3	711 87	712 07	712 27	16A	30
3	711 88	712 08	712 28	20A	30
3	711 89	712 09	712 29	25A	30
3	711 90	712 10	712 30	32A	30
3	711 91	712 11	712 31	40A	30
3	711 92	712 12	712 32	50A	30
3	711 93	712 13	712 33	63A	30

**KC6-K**

Thermal magnetic mcbs up to 63A



210 31

210 91

211 51

212 12

No. of pole: 1P,2P,3P,4P  
 Rated voltage: 240V/415V AC  
 Rated current: 1-63A  
 Rated frequency: 50/60Hz  
 Tripping curve: B,C,D  
 Rated insulation voltage: 415V  
 Rated impulse withstand voltage: 4kV  
 Rated short-circuit breaking capacity: 6000A  
 Comply with IEC60898-1

**Single pole -240/415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
12	210 01	210 21	210 41	1A	120
12	210 02	210 22	210 42	2A	120
12	210 03	210 23	210 43	3A	120
12	210 04	210 24	210 44	4A	120
12	210 05	210 25	210 45	6A	120
12	210 06	210 26	210 46	10A	120
12	210 07	210 27	210 47	16A	120
12	210 08	210 28	210 48	20A	120
12	210 09	210 29	210 49	25A	120
12	210 10	210 30	210 50	32A	120
12	210 11	210 31	210 51	40A	120
12	210 12	210 32	210 52	50A	120
12	210 13	210 33	210 53	63A	120

**3 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
4	211 21	211 41	211 61	1A	40
4	211 22	211 42	211 62	2A	40
4	211 23	211 43	211 63	3A	40
4	211 24	211 44	211 64	4A	40
4	211 25	211 45	211 65	6A	40
4	211 26	211 46	211 66	10A	40
4	211 27	211 47	211 67	16A	40
4	211 28	211 48	211 68	20A	40
4	211 29	211 49	211 69	25A	40
4	211 30	211 50	211 70	32A	40
4	211 31	211 51	211 71	40A	40
4	211 32	211 52	211 72	50A	40
4	211 33	211 53	211 73	63A	40

**Double pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
6	210 61	210 81	211 01	1A	60
6	210 62	210 82	211 02	2A	60
6	210 63	210 83	211 03	3A	60
6	210 64	210 84	211 04	4A	60
6	210 65	210 85	211 05	6A	60
6	210 66	210 86	211 06	10A	60
6	210 67	210 87	211 07	16A	60
6	210 68	210 88	211 08	20A	60
6	210 69	210 89	211 09	25A	60
6	210 70	210 90	211 10	32A	60
6	210 71	210 91	211 11	40A	60
6	210 72	210 92	211 12	50A	60
6	210 73	210 93	211 13	63A	60

**4 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
3	211 81	212 01	212 21	1A	30
3	211 82	212 02	212 22	2A	30
3	211 83	212 03	212 23	3A	30
3	211 84	212 04	212 24	4A	30
3	211 85	212 05	212 25	6A	30
3	211 86	212 06	212 26	10A	30
3	211 87	212 07	212 27	16A	30
3	211 88	212 08	212 28	20A	30
3	211 89	212 09	212 29	25A	30
3	211 90	212 10	212 30	32A	30
3	211 91	212 11	212 31	40A	30
3	211 92	212 12	212 32	50A	30
3	211 93	212 13	212 33	63A	30



Dimensions(p.28-30)  
 Electrical characteristics(p.27)

**KC6pro**

Thermal magnetic mcbs up to 63A



313 26

313 86

314 46

315 06

No. of pole: 1P,2P,3P,4P  
 Rated voltage: 240V/415V AC  
 Rated current: 1-63A  
 Rated frequency: 50/60Hz  
 Tripping curve: B,C,D  
 Rated insulation voltage: 415V  
 Rated impulse withstand voltage: 4kV  
 Rated short-circuit breaking capacity: 6000A  
 Comply with IEC60898-1

**Single pole -240/415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
12	313 01	313 21	313 41	1A	120
12	313 02	313 22	313 42	2A	120
12	313 03	313 23	313 43	3A	120
12	313 04	313 24	313 44	4A	120
12	313 05	313 25	313 45	6A	120
12	313 06	313 26	313 46	10A	120
12	313 07	313 27	313 47	16A	120
12	313 08	313 28	313 48	20A	120
12	313 09	313 29	313 49	25A	120
12	313 10	313 30	313 50	32A	120
12	313 11	313 31	313 51	40A	120
12	313 12	313 32	313 52	50A	120
12	313 13	313 33	313 53	63A	120

**Double pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
6	313 61	313 81	314 01	1A	60
6	313 62	313 82	314 02	2A	60
6	313 63	313 83	314 03	3A	60
6	313 64	313 84	314 04	4A	60
6	313 65	313 85	314 05	6A	60
6	313 66	313 86	314 06	10A	60
6	313 67	313 87	314 07	16A	60
6	313 68	313 88	314 08	20A	60
6	313 69	313 89	314 09	25A	60
6	313 70	313 90	314 10	32A	60
6	313 71	313 91	314 11	40A	60
6	313 72	313 92	314 12	50A	60
6	313 73	313 93	314 13	63A	60

**3 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
4	314 21	314 41	314 61	1A	40
4	314 22	314 42	314 62	2A	40
4	314 23	314 43	314 63	3A	40
4	314 24	314 44	314 64	4A	40
4	314 25	314 45	314 65	6A	40
4	314 26	314 46	314 66	10A	40
4	314 27	314 47	314 67	16A	40
4	314 28	314 48	314 68	20A	40
4	314 29	314 49	314 69	25A	40
4	314 30	314 50	314 70	32A	40
4	314 31	314 51	314 71	40A	40
4	314 32	314 52	314 72	50A	40
4	314 33	314 53	314 73	63A	40

**4 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
3	314 81	315 01	315 21	1A	30
3	314 82	315 02	315 22	2A	30
3	314 83	315 03	315 23	3A	30
3	314 84	315 04	315 24	4A	30
3	314 85	315 05	315 25	6A	30
3	314 86	315 06	315 26	10A	30
3	314 87	315 07	315 27	16A	30
3	314 88	315 08	315 28	20A	30
3	314 89	315 09	315 29	25A	30
3	314 90	315 10	315 30	32A	30
3	314 91	315 11	315 31	40A	30
3	314 92	315 12	315 32	50A	30
3	314 93	315 13	315 33	63A	30

**CERTIFICATIONS OBTAINED**



**KC10pro**

Thermal magnetic mcbs up to 63A



316 26

316 86

317 46

318 06

No. of pole: 1P,2P,3P,4P  
 Rated voltage: 240V/415V AC  
 Rated current: 1-63A  
 Rated frequency: 50/60Hz  
 Tripping curve: B,C,D  
 Rated insulation voltage: 415V  
 Rated impulse withstand voltage: 4kV  
 Rated short-circuit breaking capacity: 10000A  
 Comply with IEC60898-1

**Single pole -240/415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
12	316 01	316 21	316 41	1A	120
12	316 02	316 22	316 42	2A	120
12	316 03	316 23	316 43	3A	120
12	316 04	316 24	316 44	4A	120
12	316 05	316 25	316 45	6A	120
12	316 06	316 26	316 46	10A	120
12	316 07	316 27	316 47	16A	120
12	316 08	316 28	316 48	20A	120
12	316 09	316 29	316 49	25A	120
12	316 10	316 30	316 50	32A	120
12	316 11	316 31	316 51	40A	120
12	316 12	316 32	316 52	50A	120
12	316 13	316 33	316 53	63A	120

**Double pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
6	316 61	316 81	317 01	1A	60
6	316 62	316 82	317 02	2A	60
6	316 63	316 83	317 03	3A	60
6	316 64	316 84	317 04	4A	60
6	316 65	316 85	317 05	6A	60
6	316 66	316 86	317 06	10A	60
6	316 67	316 87	317 07	16A	60
6	316 68	316 88	317 08	20A	60
6	316 69	316 89	317 09	25A	60
6	316 70	316 90	317 10	32A	60
6	316 71	316 91	317 11	40A	60
6	316 72	316 92	317 12	50A	60
6	316 73	316 93	317 13	63A	60

**CERTIFICATIONS OBTAINED**





**KC15pro**

Thermal magnetic mcbs up to 32A



512 70                      513 30                      513 87                      514 47

No. of pole: 1P,2P,3P,4P  
 Rated voltage: 240V/415V AC  
 Rated current: 1-32A  
 Rated frequency: 50/60Hz  
 Tripping curve: B,C,D  
 Rated insulation voltage: 415V  
 Rated impulse withstand voltage: 4kV  
 Rated short-circuit breaking capacity: 15000A  
 Comply with IEC60898-1

**Single pole -240/415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
12	512 41	512 61	512 81	1A	120
12	512 42	512 62	512 82	2A	120
12	512 43	512 63	512 83	3A	120
12	512 44	512 64	512 84	4A	120
12	512 45	512 65	512 85	6A	120
12	512 46	512 66	512 86	10A	120
12	512 47	512 67	512 87	16A	120
12	512 48	512 68	512 88	20A	120
12	512 49	512 69	512 89	25A	120
12	512 50	512 70	512 90	32A	120

**Double pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
6	513 01	513 21	513 41	1A	60
6	513 02	513 22	513 42	2A	60
6	513 03	513 23	513 43	3A	60
6	513 04	513 24	513 44	4A	60
6	513 05	513 25	513 45	6A	60
6	513 06	513 26	513 46	10A	60
6	513 07	513 27	513 47	16A	60
6	513 08	513 28	513 48	20A	60
6	513 09	513 29	513 49	25A	60
6	513 10	513 30	513 50	32A	60

**3 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
4	513 61	513 81	514 01	1A	40
4	513 62	513 82	514 02	2A	40
4	513 63	513 83	514 03	3A	40
4	513 64	513 84	514 04	4A	40
4	513 65	513 85	514 05	6A	40
4	513 66	513 86	514 06	10A	40
4	513 67	513 87	514 07	16A	40
4	513 68	513 88	514 08	20A	40
4	513 69	513 89	514 09	25A	40
4	513 70	513 90	514 10	32A	40

**4 pole -415V~**

Pack	Cat.nos.			Description	Carton Qty
	B curve	C curve	D curve		
3	514 21	514 41	514 61	1A	30
3	514 22	514 42	514 62	2A	30
3	514 23	514 43	514 63	3A	30
3	514 24	514 44	514 64	4A	30
3	514 25	514 45	514 65	6A	30
3	514 26	514 46	514 66	10A	30
3	514 27	514 47	514 67	16A	30
3	514 28	514 48	514 68	20A	30
3	514 29	514 49	514 69	25A	30
3	514 30	514 50	514 70	32A	30



**KC10-125**

High breaking capacity thermal magnetic mcbs up to 125A



013 41

No. of pole: 1P,2P,3P,4P  
 Rated voltage: 230V/400V AC  
 Rated current: 63-125A  
 Rated frequency: 50Hz  
 Rated insulation voltage: 690V  
 Rated impulse withstand voltage: 6kV  
 Rated short-circuit breaking capacity: 10000A  
 Comply with IEC/EN 60947-2

**Single pole -230V**

Pack	Cat.nos.		Description	Carton Qty
	C curve	D curve		
12	013 41	013 51	63A	120
12	013 42	013 52	80A	120
12	013 43	013 53	100A	120
12	013 44	013 54	125A	120

**Double pole -400V**

Pack	Cat.nos.		Description	Carton Qty
	C curve	D curve		
6	013 61	013 71	63A	60
6	013 62	013 72	80A	60
6	013 63	013 73	100A	60
6	013 64	013 74	125A	60

**3 pole -400V**

Pack	Cat.nos.		Description	Carton Qty
	C curve	D curve		
4	013 81	013 91	63A	40
4	013 82	013 92	80A	40
4	013 83	013 93	100A	40
4	013 84	013 94	125A	40

**3 pole+N-400V**

Pack	Cat.nos.		Description	Carton Qty
	C curve	D curve		
3	014 01	014 11	63A	30
3	014 02	014 12	80A	30
3	014 03	014 13	100A	30
3	014 04	014 14	125A	30

**4 pole -400V**

Pack	Cat.nos.		Description	Carton Qty
	C curve	D curve		
3	014 21	014 31	63A	30
3	014 22	014 32	80A	30
3	014 23	014 33	100A	30
3	014 24	014 34	125A	30



**KCN**

Thermal magnetic mcbs up to 32A



018 66                      113 39

No. of pole: 1P+N  
 Rated voltage: 240V~  
 Rated current: 1-32A  
 Rated frequency: 50/60Hz  
 Tripping curve: B,C  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 4kV  
 Rated short-circuit breaking capacity: 4500A  
 Comply with IEC/EN 60947-2, IEC/EN60898-1

**Single-pole with switchable neutral (KCN-T)**

Pack	Cat.nos.		Description	Carton Qty
	B curve	C curve		
12	018 61	018 71	1A	120
12	018 62	018 72	2A	120
12	018 63	018 73	4A	120
12	018 64	018 74	6A	120
12	018 65	018 75	10A	120
12	018 66	018 76	16A	120
12	018 67	018 77	20A	120
12	018 68	018 78	25A	120
12	018 69	018 79	32A	120

**Single-pole with switchable neutral (KCNpro)**

Pack	Cat.nos.		Description	Carton Qty
	B curve	C curve		
12	113 21	113 31	1A	120
12	113 22	113 32	2A	120
12	113 23	113 33	4A	120
12	113 24	113 34	6A	120
12	113 25	113 35	10A	120
12	113 26	113 36	16A	120
12	113 27	113 37	20A	120
12	113 28	113 38	25A	120
12	113 29	113 39	32A	120
12	113 30	113 40	40A	120

**KCM-N**

Switch disconnecter up to 125A



217 55

No. of pole: 1P,2P,3P,4P  
 Rated voltage: 240V/415V AC  
 Rated current: 40-125A  
 Rated frequency: 50/60Hz  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 6kV  
 Utilization category: AC 22A  
 Comply with IEC/EN 60947-1, IEC/EN 60947-3

**Single pole-240V**

Pack	Cat.nos.	Description	Carton Qty
12	217 41	40A	120
12	217 42	50A	120
12	217 43	63A	120
12	217 44	80A	120
12	217 45	100A	120
12	217 46	125A	120

**Double pole-415V**

Pack	Cat.nos.	Description	Carton Qty
6	217 51	40A	60
6	217 52	50A	60
6	217 53	63A	60
6	217 54	80A	60
6	217 55	100A	60
6	217 56	125A	60

**3 pole-415V**

Pack	Cat.nos.	Description	Carton Qty
4	217 61	40A	40
4	217 62	50A	40
4	217 63	63A	40
4	217 64	80A	40
4	217 65	100A	40
4	217 66	125A	40

**4 pole-415V**

Pack	Cat.nos.	Description	Carton Qty
3	217 71	40A	30
3	217 72	50A	30
3	217 73	63A	30
3	217 74	80A	30
3	217 75	100A	30
3	217 76	125A	30

**KCM-H**

Switch disconnecter (Isolator) 125A-250A



016 01



016 03

No. of pole: 1P,2P,3P  
 Rated current(A): 125,160,250  
 Rated voltage: 230/415V AC  
 Rated frequency: 50/60Hz  
 Rated short-circuit making capacity: 3kA  
 Rated withstand current :3kA within 1sec  
 Electro-mechanical endurance: 10000 cycles  
 Connection capacity : Rigid conductor 50mm<sup>2</sup> and up  
 Comply with IEC/EN 60947-3

Pack	Cat.nos.	Description
6	016 01	125A/1POL
3	016 02	125A/2POL
1	016 03	125A/3POL
6	016 04	160A/1POL
3	016 05	160A/2POL
1	016 06	160A/3POL
6	016 07	250A/1POL
3	016 08	250A/2POL
1	016 09	250A/3POL

**KCM2-32**

Switch disconnecter up to 32A



016 11

No. of pole: 1P,2P,3P,4P  
 Rated voltage: 230V/400V AC  
 Rated current: 32A  
 Rated frequency: 50/60Hz  
 Rated insulation voltage: 415V  
 Rated impulse withstand voltage: 4kV  
 Utilization category: AC 22A  
 With safety locking ring  
 Comply with IEC/EN 60947-3

**230/400V**

Pack	Cat.nos.	Pole	Description	Carton Qty
12	016 11	1	32A	120
12	016 12	2	32A	120
12	016 13	3	32A	120
12	016 14	4	32A	120

**MCS**

Modular changeover switch up to 40A



015 32



015 72

No. of pole: 2P,4P  
 Rated voltage: 400V  
 Rated current(A): 25,40A  
 Rated frequency: 50/60Hz  
 Rated impulse withstand voltage: 4kV  
 Front operation with three stable positions I-O-II  
 Complies with IEC/EN 60947-3

**Double pole-400V**

Pack	Cat.nos.	Type	Rated Current	Carton Qty
6	015 31	MCS225	25A	60
6	015 32	MCS240	40A	60

**4 pole-400V**

Pack	Cat.nos.	Type	Rated Current	Carton Qty
3	015 71	MCS425	25A	30
3	015 72	MCS440	40A	30

**MCS**

Modular changeover switch up to 63A



115 31

115 41

No. of pole: 2P,4P  
 Rated voltage: 400V  
 Rated current(A): 40-63A  
 Rated frequency: 50/60Hz  
 Rated impulse withstand voltage: 4kV  
 Front operation with three stable positions I-O-II  
 Utilization category: AC 21A  
 Complies with IEC/EN 60947-3

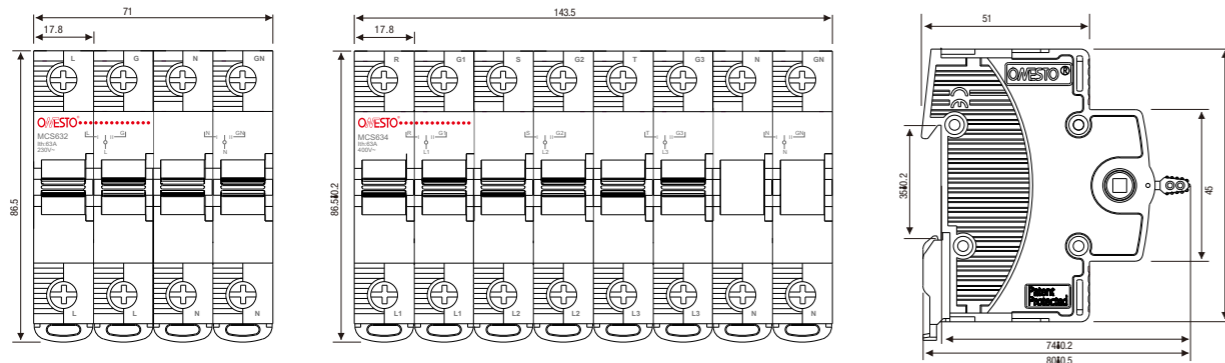
**Double pole-230V**

Pack	Cat.nos.	Type	Description	Carton Qty
3	115 31	MCS402	40A	30
3	115 32	MCS502	50A	30
3	115 33	MCS632	63A	30

**4 pole-400V**

Pack	Cat.nos.	Type	Description	Carton Qty
1	115 41	MCS404	40A	15
1	115 42	MCS504	50A	15
1	115 43	MCS634	63A	15

**Dimensions(mm)**



**KCI-B**

Din rail type LED indicator 230V~



018 84

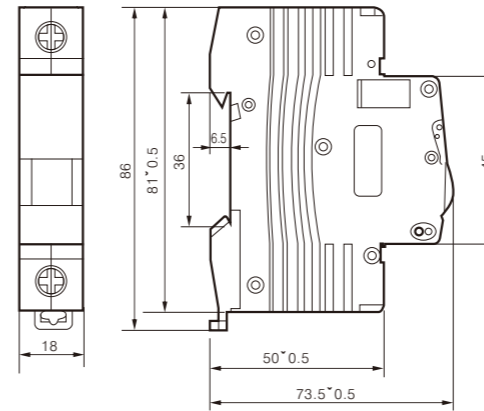
018 82

018 83

**18mm Module**

Pack	Cat.nos.	Color	No. of modules	Carton Qty
12	018 81	Green	1	120
12	018 82	Red	1	120
12	018 83	Yellow	1	120
12	018 84	Blue	1	120
12	018 85	White	1	120

**Dimension (mm)**



**KCI-1L & KCI-3L**

Din rail type LED indicator 230V~



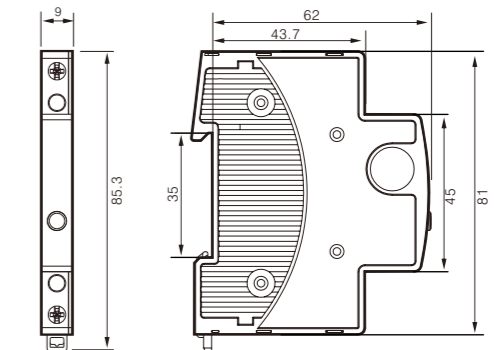
018 88

018 80

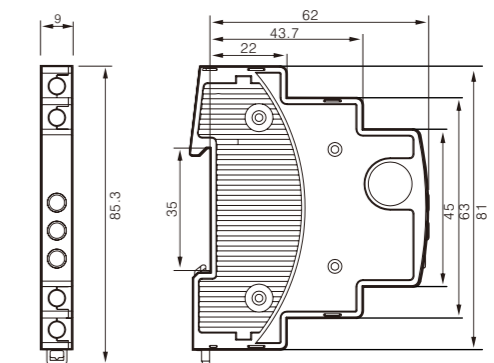
**9mm Module**

Pack	Cat.nos.	Color	No. of modules	Carton Qty
23	018 86	Green	1	230
23	018 87	Red	1	230
23	018 88	Yellow	1	230
23	018 89	Blue	1	230
23	018 90	White	1	230
23	018 80	Green/Red/Yellow	1	230

**KCI-1L**



**KCI-3L**





270 45

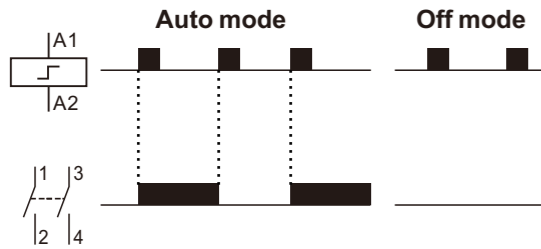
**MIR-16**

The impulse relay is used for switching of lighting and electric heating devices with very low power consumption. It switches between two stable positions when the control circuit is triggered by an impulse from controlling pushbuttons. Each impulse energizes the circuit to reverse the position of relay pole.

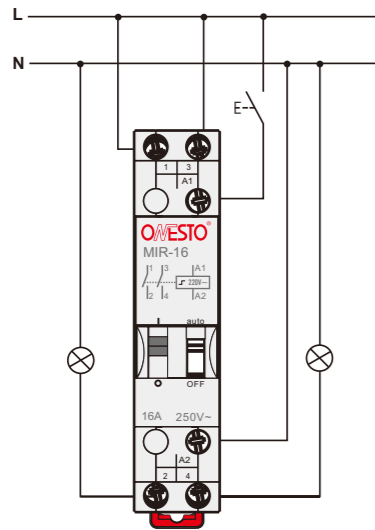
**Features**

- Impulse or manual control from different locations.
- Front handle provides direct manual operation.
- Remote or local control is selectable by Auto and Off switch.
- Contact status is visible through position of front handle.
- Vertical or horizontal mounting on 35mm Din Rail.
- Low power consumption for energy saving.

**Function Diagram**



**Typical Connection**



270 60



270 55



270 85



270 80

**MIR-16 1 Module**

Type	Cat.nos.	Rated Current	Control Voltage		Contacts	Module	Carton Qty
			AC	DC			
MIR-1610	270 41	16A	12V	6V	1NO	1	120
MIR-1610	270 42	16A	24V	12V	1NO	1	120
MIR-1610	270 43	16A	48V	24V	1NO	1	120
MIR-1610	270 44	16A	130V	48V	1NO	1	120
MIR-1610	270 45	16A	230V	110V	1NO	1	120
MIR-1611	270 46	16A	12V	6V	1NO+1NC	1	120
MIR-1611	270 47	16A	24V	12V	1NO+1NC	1	120
MIR-1611	270 48	16A	48V	24V	1NO+1NC	1	120
MIR-1611	270 49	16A	130V	48V	1NO+1NC	1	120
MIR-1611	270 50	16A	230V	110V	1NO+1NC	1	120
MIR-1620	270 51	16A	12V	6V	2NO	1	120
MIR-1620	270 52	16A	24V	12V	2NO	1	120
MIR-1620	270 53	16A	48V	24V	2NO	1	120
MIR-1620	270 54	16A	130V	48V	2NO	1	120
MIR-1620	270 55	16A	230V	110V	2NO	1	120
MIR-161C	270 56	16A	12V	6V	1CO	1	120
MIR-161C	270 57	16A	24V	12V	1CO	1	120
MIR-161C	270 58	16A	48V	24V	1CO	1	120
MIR-161C	270 59	16A	130V	48V	1CO	1	120
MIR-161C	270 60	16A	230V	110V	1CO	1	120

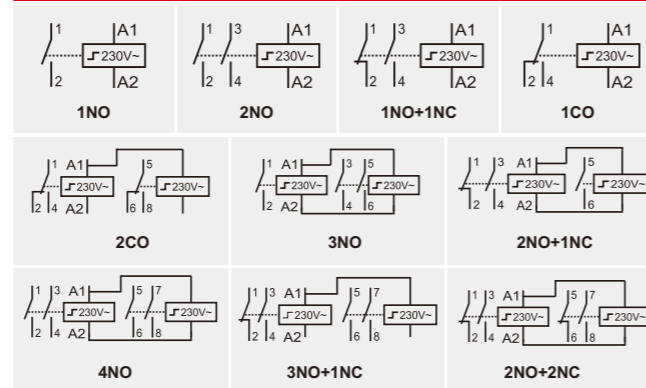
**MIR-16 2 Module**

Type	Cat.nos.	Rated Current	Control Voltage		Contacts	Module	Carton Qty
			AC	DC			
MIR-1630	270 61	16A	12V	6V	3NO	2	60
MIR-1630	270 62	16A	24V	12V	3NO	2	60
MIR-1630	270 63	16A	48V	24V	3NO	2	60
MIR-1630	270 64	16A	130V	48V	3NO	2	60
MIR-1630	270 65	16A	230V	110V	3NO	2	60
MIR-1621	270 66	16A	12V	6V	2NO+1NC	2	60
MIR-1621	270 67	16A	24V	12V	2NO+1NC	2	60
MIR-1621	270 68	16A	48V	24V	2NO+1NC	2	60
MIR-1621	270 69	16A	130V	48V	2NO+1NC	2	60
MIR-1621	270 70	16A	230V	110V	2NO+1NC	2	60
MIR-1640	270 71	16A	12V	6V	4NO	2	60
MIR-1640	270 72	16A	24V	12V	4NO	2	60
MIR-1640	270 73	16A	48V	24V	4NO	2	60
MIR-1640	270 74	16A	130V	48V	4NO	2	60
MIR-1640	270 75	16A	230V	110V	4NO	2	60
MIR-1631	270 76	16A	12V	6V	3NO+1NC	2	60
MIR-1631	270 77	16A	24V	12V	3NO+1NC	2	60
MIR-1631	270 78	16A	48V	24V	3NO+1NC	2	60
MIR-1631	270 79	16A	130V	48V	3NO+1NC	2	60
MIR-1631	270 80	16A	230V	110V	3NO+1NC	2	60
MIR-1622	270 81	16A	12V	6V	2NO+2NC	2	60
MIR-1622	270 82	16A	24V	12V	2NO+2NC	2	60
MIR-1622	270 83	16A	48V	24V	2NO+2NC	2	60
MIR-1622	270 84	16A	130V	48V	2NO+2NC	2	60
MIR-1622	270 85	16A	230V	110V	2NO+2NC	2	60
MIR-162C	270 86	16A	12V	6V	2CO	2	60
MIR-162C	270 87	16A	24V	12V	2CO	2	60
MIR-162C	270 88	16A	48V	24V	2CO	2	60
MIR-162C	270 89	16A	130V	48V	2CO	2	60
MIR-162C	270 90	16A	230V	110V	2CO	2	60

**Technical data**

Type	MIR-16
<b>Main circuit</b>	
Supply voltage	250V AC
Frequency	50/60Hz
<b>Control circuit</b>	
Supply voltage tolerance	85% to 110%
Power consumption	19VA
Duration of impulse time	≥50ms
Max. number of impulse per hour	300
<b>Output circuit</b>	
Max. operation voltage	250V AC
Max. Operation current	16A
Mechanical lifetime	1 x 10 <sup>5</sup>
Electrical lifetime	1 x 10 <sup>6</sup>
<b>Types of load (230V AC)</b>	
Incandescent	1600W (Max)
Low voltage halogen	1600W (Max)
Fluorescent lamp with electronic ballast	1550W (Max)
Compact fluorescent lamp with external ballast	1450W (Max)
Electric heating device	3.6kW (Max)
<b>General data</b>	
Rated insulation voltage	440V AC
Rated impulse withstand voltage	6kV
Operation Temperature	-20 to 55°C
Storage Temperature	-40 to 70°C
Relative humidity	≤90% RH
Maximum pollution degree	3
Overvoltage category	IV
Max.diameter of inlet wire	4mm <sup>2</sup>
Tightening torque	1Nm
Mounting position	Vertical / Horizontal
Mounting	TH35 DIN rail mounting (35x7.5mm)
Degree of protection	Enclosure : IP40 Terminal : IP20
Dimension (H x W x D)	86x18x71mm
Standard	IEC/EN 60669-2-2

**Circuit Diagram**



**MC1**

Modular contactors



No. of pole: 1P, 2P  
 Rated voltage: 250V/ 400V AC  
 Rated current: 50/60Hz  
 Control circuit voltage: 24V/110V/230V  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 4kV  
 Utilization category: AC-7a/ AC-7b  
 Comply with IEC/EN61095

**MC1 1 Module-18mm 1P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
12	129 01	MC1-16	24V	1NO	16A	6A	120
12	129 02	MC1-16	24V	1NC	16A	6A	120
12	129 03	MC1-16	110V	1NO	16A	6A	120
12	129 04	MC1-16	110V	1NC	16A	6A	120
12	129 05	MC1-16	230V	1NO	16A	6A	120
12	129 06	MC1-16	230V	1NC	16A	6A	120
12	129 07	MC1-20	24V	1NO	20A	7A	120
12	129 08	MC1-20	24V	1NC	20A	7A	120
12	129 09	MC1-20	110V	1NO	20A	7A	120
12	129 10	MC1-20	110V	1NC	20A	7A	120
12	129 11	MC1-20	230V	1NO	20A	7A	120
12	129 12	MC1-20	230V	1NC	20A	7A	120
12	129 13	MC1-25	24V	1NO	25A	9A	120
12	129 14	MC1-25	24V	1NC	25A	9A	120
12	129 15	MC1-25	110V	1NO	25A	9A	120
12	129 16	MC1-25	110V	1NC	25A	9A	120
12	129 17	MC1-25	230V	1NO	25A	9A	120
12	129 18	MC1-25	230V	1NC	25A	9A	120

**MC1 1 Module-18mm 2P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
12	129 21	MC1-16	24V	2NO	16A	6A	120
12	129 22	MC1-16	24V	1NO+1NC	16A	6A	120
12	129 23	MC1-16	24V	2NC	16A	6A	120
12	129 24	MC1-16	110V	2NO	16A	6A	120
12	129 25	MC1-16	110V	1NO+1NC	16A	6A	120
12	129 26	MC1-16	110V	2NC	16A	6A	120
12	129 27	MC1-16	230V	2NO	16A	6A	120
12	129 28	MC1-16	230V	1NO+1NC	16A	6A	120
12	129 29	MC1-16	230V	2NC	16A	6A	120
12	129 30	MC1-20	24V	2NO	20A	7A	120
12	129 31	MC1-20	24V	1NO+1NC	20A	7A	120
12	129 32	MC1-20	24V	2NC	20A	7A	120
12	129 33	MC1-20	110V	2NO	20A	7A	120
12	129 34	MC1-20	110V	1NO+1NC	20A	7A	120
12	129 35	MC1-20	110V	2NC	20A	7A	120
12	129 36	MC1-20	230V	2NO	20A	7A	120
12	129 37	MC1-20	230V	1NO+1NC	20A	7A	120
12	129 38	MC1-20	230V	2NC	20A	7A	120
12	129 39	MC1-25	24V	2NO	25A	9A	120
12	129 40	MC1-25	24V	1NO+1NC	25A	9A	120
12	129 41	MC1-25	24V	2NC	25A	9A	120
12	129 42	MC1-25	110V	2NO	25A	9A	120
12	129 43	MC1-25	110V	1NO+1NC	25A	9A	120
12	129 44	MC1-25	110V	2NC	25A	9A	120
12	129 45	MC1-25	230V	2NO	25A	9A	120
12	129 46	MC1-25	230V	1NO+1NC	25A	9A	120
12	129 47	MC1-25	230V	2NC	25A	9A	120

**MC2**

Modular contactors



No. of pole: 3P, 4P  
 Rated voltage: 250V/ 400V AC  
 Rated current: 50/60Hz  
 Control circuit voltage: 24V/110V/230V  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 4kV  
 Utilization category: AC-7a/ AC-7b  
 Comply with IEC/EN61095

**MC2 2 Module-36mm 3P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
6	229 01	MC2-16	24V	3NO	16A	6A	60
6	229 02	MC2-16	24V	3NC	16A	6A	60
6	229 91	MC2-16	24V	2NO+1NC	16A	6A	60
6	229 03	MC2-16	110V	3NO	16A	6A	60
6	229 04	MC2-16	110V	3NC	16A	6A	60
6	229 92	MC2-16	110V	2NO+1NC	16A	6A	60
6	229 05	MC2-16	230V	3NO	16A	6A	60
6	229 06	MC2-16	230V	3NC	16A	6A	60
6	229 93	MC2-16	230V	2NO+1NC	16A	6A	60
6	229 07	MC2-20	24V	3NO	20A	7A	60
6	229 08	MC2-20	24V	3NC	20A	7A	60
6	229 94	MC2-20	24V	2NO+1NC	20A	7A	60
6	229 09	MC2-20	110V	3NO	20A	7A	60
6	229 10	MC2-20	110V	3NC	20A	7A	60
6	229 95	MC2-20	110V	2NO+1NC	20A	7A	60
6	229 11	MC2-20	230V	3NO	20A	7A	60
6	229 12	MC2-20	230V	3NC	20A	7A	60
6	229 96	MC2-20	230V	2NO+1NC	20A	7A	60
6	229 13	MC2-25	24V	3NO	25A	9A	60
6	229 14	MC2-25	24V	3NC	25A	9A	60
6	229 97	MC2-25	24V	2NO+1NC	25A	9A	60
6	229 15	MC2-25	110V	3NO	25A	9A	60
6	229 16	MC2-25	110V	3NC	25A	9A	60
6	229 98	MC2-25	110V	2NO+1NC	25A	9A	60
6	229 17	MC2-25	230V	3NO	25A	9A	60
6	229 18	MC2-25	230V	3NC	25A	9A	60
6	229 99	MC2-25	230V	2NO+1NC	25A	9A	60

**MC2 2 Module-36mm 4P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
6	229 21	MC2-16	24V	4NO	16A	6A	60
6	229 22	MC2-16	24V	4NC	16A	6A	60
6	229 23	MC2-16	24V	2NO+2NC	16A	6A	60
6	229 24	MC2-16	24V	3NO+1NC	16A	6A	60
6	229 25	MC2-16	110V	4NO	16A	6A	60
6	229 26	MC2-16	110V	4NC	16A	6A	60
6	229 27	MC2-16	110V	2NO+2NC	16A	6A	60
6	229 28	MC2-16	110V	3NO+1NC	16A	6A	60
6	229 29	MC2-16	230V	4NO	16A	6A	60
6	229 30	MC2-16	230V	4NC	16A	6A	60
6	229 31	MC2-16	230V	2NO+2NC	16A	6A	60
6	229 32	MC2-16	230V	3NO+1NC	16A	6A	60
6	229 33	MC2-20	24V	4NO	20A	7A	60
6	229 34	MC2-20	24V	4NC	20A	7A	60
6	229 35	MC2-20	24V	2NO+2NC	20A	7A	60
6	229 36	MC2-20	24V	3NO+1NC	20A	7A	60
6	229 37	MC2-20	110V	4NO	20A	7A	60
6	229 38	MC2-20	110V	4NC	20A	7A	60
6	229 39	MC2-20	110V	2NO+2NC	20A	7A	60
6	229 40	MC2-20	110V	3NO+1NC	20A	7A	60
6	229 41	MC2-20	230V	4NO	20A	7A	60
6	229 42	MC2-20	230V	4NC	20A	7A	60
6	229 43	MC2-20	230V	2NO+2NC	20A	7A	60
6	229 44	MC2-20	230V	3NO+1NC	20A	7A	60
6	229 45	MC2-25	24V	4NO	25A	9A	60
6	229 46	MC2-25	24V	4NC	25A	9A	60
6	229 47	MC2-25	24V	2NO+2NC	25A	9A	60
6	229 48	MC2-25	24V	3NO+1NC	25A	9A	60
6	229 49	MC2-25	110V	4NO	25A	9A	60
6	229 50	MC2-25	110V	4NC	25A	9A	60
6	229 51	MC2-25	110V	2NO+2NC	25A	9A	60
6	229 52	MC2-25	110V	3NO+1NC	25A	9A	60
6	229 53	MC2-25	230V	4NO	25A	9A	60
6	229 54	MC2-25	230V	4NC	25A	9A	60
6	229 55	MC2-25	230V	2NO+2NC	25A	9A	60
6	229 56	MC2-25	230V	3NO+1NC	25A	9A	60

**MC2**

Modular contactors



No. of pole: 2P  
 Rated voltage: 250V/ 400V AC  
 Rated current: 50/60Hz  
 Control circuit voltage: 24V/110V/230V  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 4kV  
 Utilization category: AC-7a/ AC-7b  
 Comply with IEC/EN61095

**MC2 2 Module-36mm 2P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
6	229 61	MC2-32	24V	2NO	32A	12A	60
6	229 62	MC2-32	24V	1NO+1NC	32A	12A	60
6	229 63	MC2-32	24V	2NC	32A	12A	60
6	229 64	MC2-32	110V	2NO	32A	12A	60
6	229 65	MC2-32	110V	1NO+1NC	32A	12A	60
6	229 66	MC2-32	110V	2NC	32A	12A	60
6	229 67	MC2-32	230V	2NO	32A	12A	60
6	229 68	MC2-32	230V	1NO+1NC	32A	12A	60
6	229 69	MC2-32	230V	2NC	32A	12A	60
6	229 70	MC2-40	24V	2NO	40A	18A	60
6	229 71	MC2-40	24V	1NO+1NC	40A	18A	60
6	229 72	MC2-40	24V	2NC	40A	18A	60
6	229 73	MC2-40	110V	2NO	40A	18A	60
6	229 74	MC2-40	110V	1NO+1NC	40A	18A	60
6	229 75	MC2-40	110V	2NC	40A	18A	60
6	229 76	MC2-40	230V	2NO	40A	18A	60
6	229 77	MC2-40	230V	1NO+1NC	40A	18A	60
6	229 78	MC2-40	230V	2NC	40A	18A	60
6	229 79	MC2-63	24V	2NO	63A	25A	60
6	229 80	MC2-63	24V	1NO+1NC	63A	25A	60
6	229 81	MC2-63	24V	2NC	63A	25A	60
6	229 82	MC2-63	110V	2NO	63A	25A	60
6	229 83	MC2-63	110V	1NO+1NC	63A	25A	60
6	229 84	MC2-63	110V	2NC	63A	25A	60
6	229 85	MC2-63	230V	2NO	63A	25A	60
6	229 86	MC2-63	230V	1NO+1NC	63A	25A	60
6	229 87	MC2-63	230V	2NC	63A	25A	60



**MC3**

Modular contactors



No. of pole: 3P, 4P  
 Rated voltage: 250V/ 400V AC  
 Rated current: 50/60Hz  
 Control circuit voltage: 24V/110V/230V  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 4kV  
 Utilization category: AC-7a/ AC-7b  
 Comply with IEC/EN61095

**MC3 3 Module-54mm 3P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
4	329 01	MC3-32	24V	3NO	32A	12A	40
4	329 02	MC3-32	24V	3NC	32A	12A	40
4	329 03	MC3-32	110V	3NO	32A	12A	40
4	329 04	MC3-32	110V	3NC	32A	12A	40
4	329 05	MC3-32	230V	3NO	32A	12A	40
4	329 06	MC3-32	230V	3NC	32A	12A	40
4	329 07	MC3-40	24V	3NO	40A	18A	40
4	329 08	MC3-40	24V	3NC	40A	18A	40
4	329 09	MC3-40	110V	3NO	40A	18A	40
4	329 10	MC3-40	110V	3NC	40A	18A	40
4	329 11	MC3-40	230V	3NO	40A	18A	40
4	329 12	MC3-40	230V	3NC	40A	18A	40
4	329 13	MC3-63	24V	3NO	63A	25A	40
4	329 14	MC3-63	24V	3NC	63A	25A	40
4	329 15	MC3-63	110V	3NO	63A	25A	40
4	329 16	MC3-63	110V	3NC	63A	25A	40
4	329 17	MC3-63	230V	3NO	63A	25A	40
4	329 18	MC3-63	230V	3NC	63A	25A	40



**MC1**

Modular contactors



No. of pole: 1P, 2P  
 Rated voltage: 250V/ 400V AC  
 Rated current: 50/60Hz  
 Control circuit voltage: 24V/110V/230V  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 4kV  
 Utilization category: AC-7a/ AC-7b  
 Comply with IEC/EN61095

**MC1 1 Module-18mm 1P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
12	429 01	MC1-16M	24V	1NO	16A	6A	120
12	429 02	MC1-16M	24V	1NC	16A	6A	120
12	429 03	MC1-16M	110V	1NO	16A	6A	120
12	429 04	MC1-16M	110V	1NC	16A	6A	120
12	429 05	MC1-16M	230V	1NO	16A	6A	120
12	429 06	MC1-16M	230V	1NC	16A	6A	120
12	429 07	MC1-20M	24V	1NO	20A	7A	120
12	429 08	MC1-20M	24V	1NC	20A	7A	120
12	429 09	MC1-20M	110V	1NO	20A	7A	120
12	429 10	MC1-20M	110V	1NC	20A	7A	120
12	429 11	MC1-20M	230V	1NO	20A	7A	120
12	429 12	MC1-20M	230V	1NC	20A	7A	120
12	429 13	MC1-25M	24V	1NO	25A	9A	120
12	429 14	MC1-25M	24V	1NC	25A	9A	120
12	429 15	MC1-25M	110V	1NO	25A	9A	120
12	429 16	MC1-25M	110V	1NC	25A	9A	120
12	429 17	MC1-25M	230V	1NO	25A	9A	120
12	429 18	MC1-25M	230V	1NC	25A	9A	120

**MC1 1 Module-18mm 2P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
12	429 21	MC1-16M	24V	2NO	16A	6A	120
12	429 22	MC1-16M	24V	1NO+1NC	16A	6A	120
12	429 23	MC1-16M	24V	2NC	16A	6A	120
12	429 24	MC1-16M	110V	2NO	16A	6A	120
12	429 25	MC1-16M	110V	1NO+1NC	16A	6A	120
12	429 26	MC1-16M	110V	2NC	16A	6A	120
12	429 27	MC1-16M	230V	2NO	16A	6A	120
12	429 28	MC1-16M	230V	1NO+1NC	16A	6A	120
12	429 29	MC1-16M	230V	2NC	16A	6A	120
12	429 30	MC1-20M	24V	2NO	20A	7A	120
12	429 31	MC1-20M	24V	1NO+1NC	20A	7A	120
12	429 32	MC1-20M	24V	2NC	20A	7A	120
12	429 33	MC1-20M	110V	2NO	20A	7A	120
12	429 34	MC1-20M	110V	1NO+1NC	20A	7A	120
12	429 35	MC1-20M	110V	2NC	20A	7A	120
12	429 36	MC1-20M	230V	2NO	20A	7A	120
12	429 37	MC1-20M	230V	1NO+1NC	20A	7A	120
12	429 38	MC1-20M	230V	2NC	20A	7A	120
12	429 39	MC1-25M	24V	2NO	25A	9A	120
12	429 40	MC1-25M	24V	1NO+1NC	25A	9A	120
12	429 41	MC1-25M	24V	2NC	25A	9A	120
12	429 42	MC1-25M	110V	2NO	25A	9A	120
12	429 43	MC1-25M	110V	1NO+1NC	25A	9A	120
12	429 44	MC1-25M	110V	2NC	25A	9A	120
12	429 45	MC1-25M	230V	2NO	25A	9A	120
12	429 46	MC1-25M	230V	1NO+1NC	25A	9A	120
12	429 47	MC1-25M	230V	2NC	25A	9A	120

**MC2**

Modular contactors



No. of pole: 3P, 4P  
 Rated voltage: 250V/ 400V AC  
 Rated current: 50/60Hz  
 Control circuit voltage: 24V/110V/230V  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 4kV  
 Utilization category: AC-7a/ AC-7b  
 Comply with IEC/EN61095

**MC2 2 Module-36mm 3P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
6	529 01	MC2-16M	24V	3NO	16A	6A	60
6	529 02	MC2-16M	24V	3NC	16A	6A	60
6	529 91	MC2-16M	24V	2NO+1NC	16A	6A	60
6	529 03	MC2-16M	110V	3NO	16A	6A	60
6	529 04	MC2-16M	110V	3NC	16A	6A	60
6	529 92	MC2-16M	110V	2NO+1NC	16A	6A	60
6	529 05	MC2-16M	230V	3NO	16A	6A	60
6	529 06	MC2-16M	230V	3NC	16A	6A	60
6	529 93	MC2-16M	230V	2NO+1NC	16A	6A	60
6	529 07	MC2-20M	24V	3NO	20A	7A	60
6	529 08	MC2-20M	24V	3NC	20A	7A	60
6	529 94	MC2-20M	24V	2NO+1NC	20A	7A	60
6	529 09	MC2-20M	110V	3NO	20A	7A	60
6	529 10	MC2-20M	110V	3NC	20A	7A	60
6	529 95	MC2-20M	110V	2NO+1NC	20A	7A	60
6	529 11	MC2-20M	230V	3NO	20A	7A	60
6	529 12	MC2-20M	230V	3NC	20A	7A	60
6	529 96	MC2-20M	230V	2NO+1NC	20A	7A	60
6	529 13	MC2-25M	24V	3NO	25A	9A	60
6	529 14	MC2-25M	24V	3NC	25A	9A	60
6	529 97	MC2-25M	24V	2NO+1NC	25A	9A	60
6	529 15	MC2-25M	110V	3NO	25A	9A	60
6	529 16	MC2-25M	110V	3NC	25A	9A	60
6	529 98	MC2-25M	110V	2NO+1NC	25A	9A	60
6	529 17	MC2-25M	230V	3NO	25A	9A	60
6	529 18	MC2-25M	230V	3NC	25A	9A	60
6	529 99	MC2-25M	230V	2NO+1NC	25A	9A	60

**MC2 2 Module-36mm 4P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
6	529 21	MC2-16M	24V	4NO	16A	6A	60
6	529 22	MC2-16M	24V	4NC	16A	6A	60
6	529 23	MC2-16M	24V	2NO+2NC	16A	6A	60
6	529 24	MC2-16M	24V	3NO+1NC	16A	6A	60
6	529 25	MC2-16M	110V	4NO	16A	6A	60
6	529 26	MC2-16M	110V	4NC	16A	6A	60
6	529 27	MC2-16M	110V	2NO+2NC	16A	6A	60
6	529 28	MC2-16M	110V	3NO+1NC	16A	6A	60
6	529 29	MC2-16M	230V	4NO	16A	6A	60
6	529 30	MC2-16M	230V	4NC	16A	6A	60
6	529 31	MC2-16M	230V	2NO+2NC	16A	6A	60
6	529 32	MC2-16M	230V	3NO+1NC	16A	6A	60
6	529 33	MC2-20M	24V	4NO	20A	7A	60
6	529 34	MC2-20M	24V	4NC	20A	7A	60
6	529 35	MC2-20M	24V	2NO+2NC	20A	7A	60
6	529 36	MC2-20M	24V	3NO+1NC	20A	7A	60
6	529 37	MC2-20M	110V	4NO	20A	7A	60
6	429 38	MC2-20M	110V	4NC	20A	7A	60
6	529 39	MC2-20M	110V	2NO+2NC	20A	7A	60
6	529 40	MC2-20M	110V	3NO+1NC	20A	7A	60
6	529 41	MC2-20M	230V	4NO	20A	7A	60
6	529 42	MC2-20M	230V	4NC	20A	7A	60
6	529 43	MC2-20M	230V	2NO+2NC	20A	7A	60
6	529 44	MC2-20M	230V	3NO+1NC	20A	7A	60
6	529 45	MC2-25M	24V	4NO	25A	9A	60
6	529 46	MC2-25M	24V	4NC	25A	9A	60
6	529 47	MC2-25M	24V	2NO+2NC	25A	9A	60
6	429 48	MC2-25M	24V	3NO+1NC	25A	9A	60
6	529 49	MC2-25M	110V	4NO	25A	9A	60
6	529 50	MC2-25M	110V	4NC	25A	9A	60
6	529 51	MC2-25M	110V	2NO+2NC	25A	9A	60
6	529 52	MC2-25M	110V	3NO+1NC	25A	9A	60
6	529 53	MC2-25M	230V	4NO	25A	9A	60
6	529 54	MC2-25M	230V	4NC	25A	9A	60
6	529 55	MC2-25M	230V	2NO+2NC	25A	9A	60
6	529 56	MC2-25M	230V	3NO+1NC	25A	9A	60

**MC2**

Modular contactors



No. of pole: 2P  
 Rated voltage: 250V/ 400V AC  
 Rated current: 50/60Hz  
 Control circuit voltage: 24V/110V/230V  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 4kV  
 Utilization category: AC-7a/ AC-7b  
 Comply with IEC/EN61095

**MC2 2 Module-36mm 2P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
6	529 61	MC2-32M	24V	2NO	32A	12A	60
6	529 62	MC2-32M	24V	1NO+1NC	32A	12A	60
6	529 63	MC2-32M	24V	2NC	32A	12A	60
6	529 64	MC2-32M	110V	2NO	32A	12A	60
6	529 65	MC2-32M	110V	1NO+1NC	32A	12A	60
6	529 66	MC2-32M	110V	2NC	32A	12A	60
6	529 67	MC2-32M	230V	2NO	32A	12A	60
6	529 68	MC2-32M	230V	1NO+1NC	32A	12A	60
6	529 69	MC2-32M	230V	2NC	32A	12A	60
6	529 70	MC2-40M	24V	2NO	40A	18A	60
6	529 71	MC2-40M	24V	1NO+1NC	40A	18A	60
6	529 72	MC2-40M	24V	2NC	40A	18A	60
6	529 73	MC2-40M	110V	2NO	40A	18A	60
6	529 74	MC2-40M	110V	1NO+1NC	40A	18A	60
6	529 75	MC2-40M	110V	2NC	40A	18A	60
6	529 76	MC2-40M	230V	2NO	40A	18A	60
6	529 77	MC2-40M	230V	1NO+1NC	40A	18A	60
6	529 78	MC2-40M	230V	2NC	40A	18A	60
6	529 79	MC2-63M	24V	2NO	63A	25A	60
6	529 80	MC2-63M	24V	1NO+1NC	63A	25A	60
6	529 81	MC2-63M	24V	2NC	63A	25A	60
6	529 82	MC2-63M	110V	2NO	63A	25A	60
6	529 83	MC2-63M	110V	1NO+1NC	63A	25A	60
6	529 84	MC2-63M	110V	2NC	63A	25A	60
6	529 85	MC2-63M	230V	2NO	63A	25A	60
6	529 86	MC2-63M	230V	1NO+1NC	63A	25A	60
6	529 87	MC2-63M	230V	2NC	63A	25A	60



**MC3**

Modular contactors



No. of pole: 3P, 4P  
 Rated voltage: 250V/ 400V AC  
 Rated current: 50/60Hz  
 Control circuit voltage: 24V/110V/230V  
 Rated insulation voltage: 500V  
 Rated impulse withstand voltage: 4kV  
 Utilization category: AC-7a/ AC-7b  
 Comply with IEC/EN61095

**MC3 3 Module-54mm 3P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
4	629 01	MC3-32M	24V	3NO	32A	12A	40
4	629 02	MC3-32M	24V	3NC	32A	12A	40
4	629 03	MC3-32M	110V	3NO	32A	12A	40
4	629 04	MC3-32M	110V	3NC	32A	12A	40
4	629 05	MC3-32M	230V	3NO	32A	12A	40
4	629 06	MC3-32M	230V	3NC	32A	12A	40
4	629 07	MC3-40M	24V	3NO	40A	18A	40
4	629 08	MC3-40M	24V	3NC	40A	18A	40
4	629 09	MC3-40M	110V	3NO	40A	18A	40
4	629 10	MC3-40M	110V	3NC	40A	18A	40
4	629 11	MC3-40M	230V	3NO	40A	18A	40
4	629 12	MC3-40M	230V	3NC	40A	18A	40
4	629 13	MC3-63M	24V	3NO	63A	25A	40
4	629 14	MC3-63M	24V	3NC	63A	25A	40
4	629 15	MC3-63M	110V	3NO	63A	25A	40
4	629 16	MC3-63M	110V	3NC	63A	25A	40
4	629 17	MC3-63M	230V	3NO	63A	25A	40
4	629 18	MC3-63M	230V	3NC	63A	25A	40



**MC3 3 Module-54mm 4P**

Pack	Cat.nos.	Type	AC Control Voltage	Contacts	Rating		Carton Qty
					AC-7a	AC-7b	
4	629 21	MC3-32M	24V	4NO	32A	12A	40
4	629 22	MC3-32M	24V	4NC	32A	12A	40
4	629 23	MC3-32M	24V	2NO+2NC	32A	12A	40
4	629 24	MC3-32M	24V	3NO+1NC	32A	12A	40
4	629 25	MC3-32M	110V	4NO	32A	12A	40
4	629 26	MC3-32M	110V	4NC	32A	12A	40
4	629 27	MC3-32M	110V	2NO+2NC	32A	12A	40
4	629 28	MC3-32M	110V	3NO+1NC	32A	12A	40
4	629 29	MC3-32M	230V	4NO	32A	12A	40
4	629 30	MC3-32M	230V	4NC	32A	12A	40
4	629 31	MC3-32M	230V	2NO+2NC	32A	12A	40
4	629 32	MC3-32M	230V	3NO+1NC	32A	12A	40
4	629 33	MC3-40M	24V	4NO	40A	18A	40
4	629 34	MC3-40M	24V	4NC	40A	18A	40
4	629 35	MC3-40M	24V	2NO+2NC	40A	18A	40
4	629 36	MC3-40M	24V	3NO+1NC	40A	18A	40
4	629 37	MC3-40M	110V	4NO	40A	18A	40
4	629 38	MC3-40M	110V	4NC	40A	18A	40
4	629 39	MC3-40M	110V	2NO+2NC	40A	18A	40
4	629 40	MC3-40M	110V	3NO+1NC	40A	18A	40
4	629 41	MC3-40M	230V	4NO	40A	18A	40
4	629 42	MC3-40M	230V	4NC	40A	18A	40
4	629 43	MC3-40M	230V	2NO+2NC	40A	18A	40
4	629 44	MC3-40M	230V	3NO+1NC	40A	18A	40
4	629 45	MC3-63M	24V	4NO	63A	25A	40
4	629 46	MC3-63M	24V	4NC	63A	25A	40
4	629 47	MC3-63M	24V	2NO+2NC	63A	25A	40
4	629 48	MC3-63M	24V	3NO+1NC	63A	25A	40
4	629 49	MC3-63M	110V	4NO	63A	25A	40
4	629 50	MC3-63M	110V	4NC	63A	25A	40
4	629 51	MC3-63M	110V	2NO+2NC	63A	25A	40
4	629 52	MC3-63M	110V	3NO+1NC	63A	25A	40
4	629 53	MC3-63M	230V	4NO	63A	25A	40
4	629 54	MC3-63M	230V	4NC	63A	25A	40
4	629 55	MC3-63M	230V	2NO+2NC	63A	25A	40
4	629 56	MC3-63M	230V	3NO+1NC	63A	25A	40



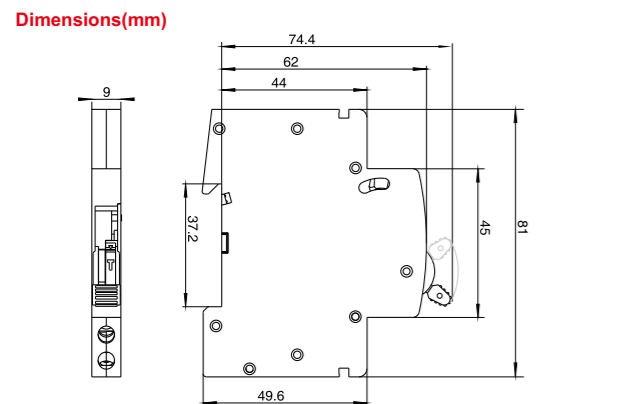
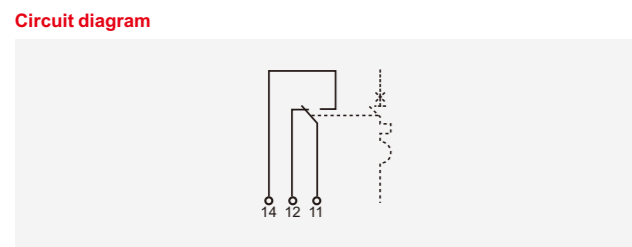
**AX**  
Auxiliary contact



**Function**  
Indicate the contact position of MCB, when it was tripped manually or by a failure.

Pack	Cat.nos.	Type	Description	Carton Qty
20	319 01	AX	1NO / NC	200

Type	AX
Rated voltage	240 V AC
Rated frequency	50/60 Hz
Rated current	6 A
Contact configuration	1NO / NC
Utilization category	AC12 6A/240V AC , 3A /415V AC DC12 6A/24V DC , 3A /48V DC , 2A /60V DC ,1A /130V DC
Rated insulation voltage	500 V AC
Electrical endurance	6000
Terminal capacity	max 2.5 mm <sup>2</sup>
Tightening torque	max 1.0 Nm
Protection degree	IP20
Dimensions (H x D x W)	81 x 70.4x 9 mm
Net weight	34 g
Compatible MCB	KC6pro , KC10pro , KC15pro
Mounting position	Left or right side of MCB
Standard conformity	IEC/EN 60947-5-1



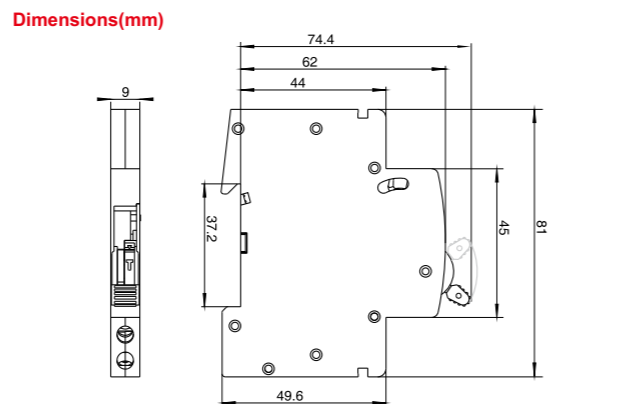
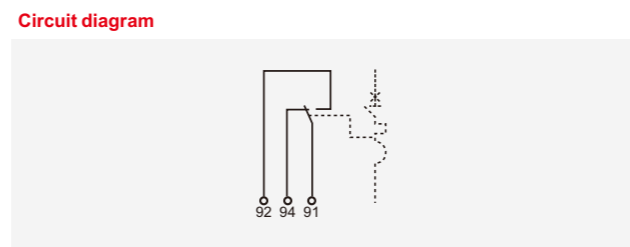
**AL**  
Alarm contact



**Function**  
Indicate the tripping of MCB when it was caused by a failure, not for manual operation. The signal can be activated by Test button.

Pack	Cat.nos.	Type	Description	Carton Qty
20	319 05	AL	1NO / NC	200

Type	AL
Rated voltage	240 V AC
Rated frequency	50/60 Hz
Rated current	6 A
Contact configuration	1NO / NC
Utilization category	AC12 6A/240V AC , 3A /415V AC DC12 6A/24V DC , 3A /48V DC , 2A /60V DC ,1A /130V DC
Rated insulation voltage	500 V AC
Electrical endurance	6000
Terminal capacity	max 2.5 mm <sup>2</sup>
Tightening torque	max 1.0 Nm
Protection degree	IP20
Dimensions (H x D x W)	81 x 70.4x 9 mm
Net weight	34 g
Compatible MCB	KC6pro , KC10pro , KC15pro
Mounting position	Left or right side of MCB
Standard conformity	IEC/EN 60947-5-1



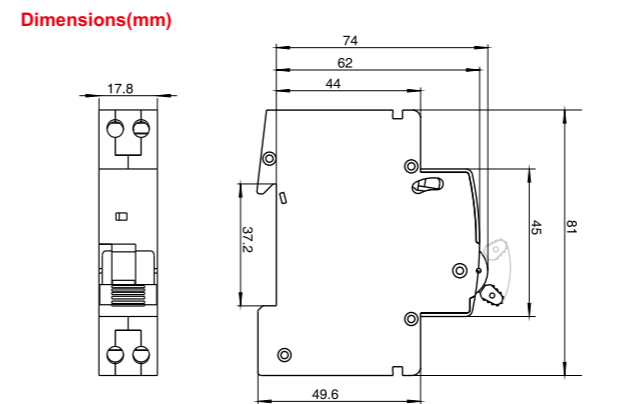
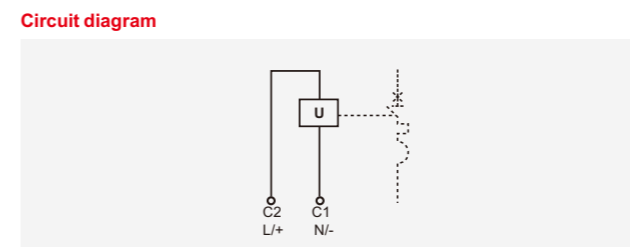
**ST**  
Shunt trip



**Function**  
Remote trip of the MCB.

Pack	Cat.nos.	Type	Description	Carton Qty
10	319 11	ST230	110V~400V AC /110~130V DC	100
10	319 12	ST24	24V~60V DC	100

Type	ST
Rated voltage(Ue)	110V~400V AC / 110~130V DC / 24V~60V DC
Frequency	50/60 Hz
Operational voltage range	70%~110% of Ue
Coil resistance	120 Ω
Terminal capacity	max 6 mm <sup>2</sup>
Tightening torque	0.8 N · m
Dimensions (H x D x W)	81 x 70.4x 17.8 mm
Net weight	61 g
Electrical endurance	4000
Wiring connection type	Bottom
Compatible MCB	KC6pro , KC10pro , KC15pro
Mounting position	Left or right side of MCB
Standard conformity	IEC/EN 60947-1



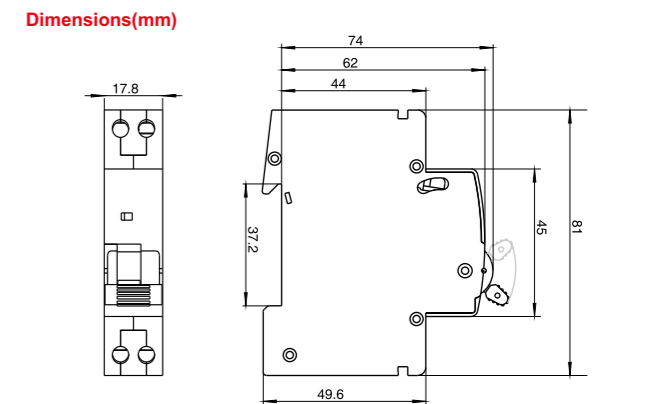
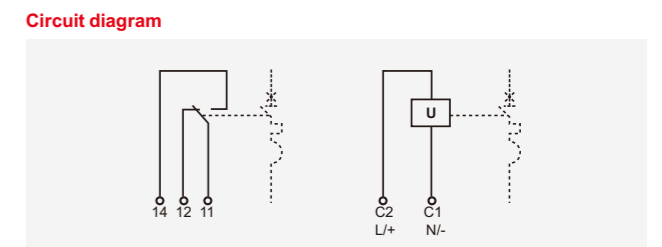
**STX**  
Shunt trip with auxiliary contact



**Function**  
Remote trip of the MCB, with indication of contact position.

Pack	Cat.nos.	Type	Description	Carton Qty
10	319 15	STX230	110V~400V AC /110~130V DC	100
10	319 16	STX24	24V~60V DC	100

Type	STX
Rated voltage(Ue)	110V~400V AC / 110~130V DC / 24V~60V DC
Frequency	50/60 Hz
Rated current	6 A
Contact configuration	1NO / NC
Operational voltage range	70%~110% of Ue
Coil resistance	120 Ω
Terminal capacity	max 6 mm <sup>2</sup>
Tightening torque	0.8 N · m
Dimensions (H x D x W)	81 x 70.4x 17.8 mm
Net weight	69 g
Electrical endurance	4000
Wiring connection type	Bottom
Compatible MCB	KC6pro , KC10pro , KC15pro
Mounting position	Left or right side of MCB
Standard conformity	IEC/EN 60947-1 , IEC/EN 60947-5-1



**OVR**  
Overvoltage release



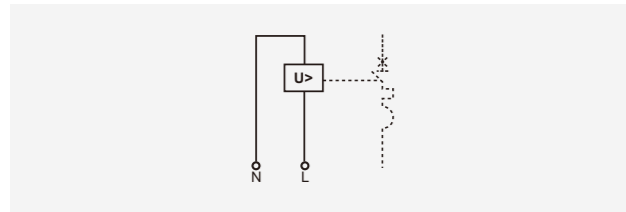
**Function**  
Trip the MCB in case the voltage increases to the threshold value.

Pack	Cat.nos.	Type	Description	Carton Qty
10	319 21	OVR	230V AC , Single phase	100

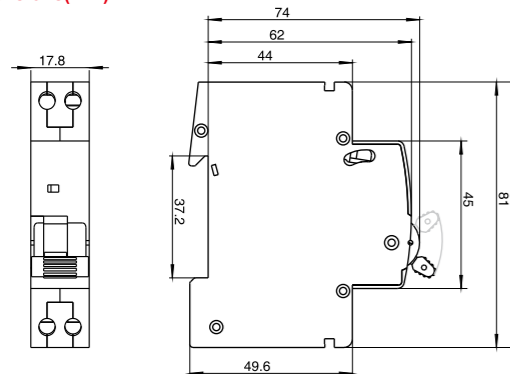
**Technical data**

Type	OVR
Rated voltage	230V AC
Frequency	50/60 Hz
Duration of impulse command	max 10ms
Overvoltage tripping threshold	280V±5%
Dimensions (H x D x W)	81 x 70.4x 17.8 mm
Net weight	58 g
Electrical endurance	4000
Wiring connection type	Bottom
Compatible MCB	KC6pro , KC10pro , KC15pro
Mounting position	Left or right side of MCB
Standard conformity	IEC/EN 60947-1

**Circuit diagram**



**Dimensions(mm)**



**UVR**  
Undervoltage release



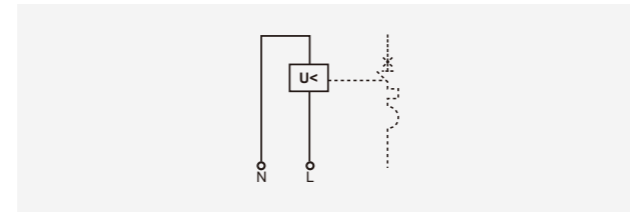
**Function**  
Trip the MCB in case the voltage drops to the threshold value.

Pack	Cat.nos.	Type	Description	Carton Qty
10	319 25	UVR	230V AC , Single phase	100

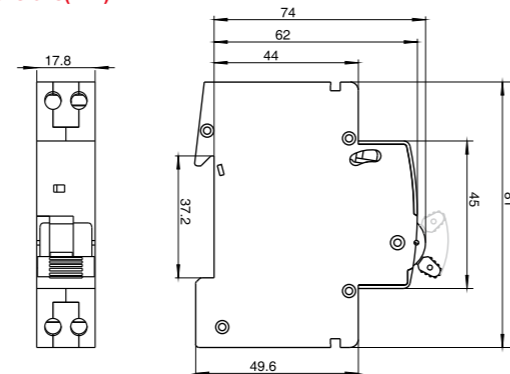
**Technical data**

Type	UVR
Rated voltage	230V AC
Frequency	50/60 Hz
Duration of impulse command	max 10ms
Undervoltage tripping threshold	170V±5%
Dimensions (H x D x W)	81 x 70.4x 17.8 mm
Net weight	58 g
Electrical endurance	4000
Wiring connection type	Bottom
Compatible MCB	KC6pro , KC10pro , KC15pro
Mounting position	Left or right side of MCB
Standard conformity	IEC/EN 60947-1

**Circuit diagram**



**Dimensions(mm)**



**DVR**  
Undervoltage and overvoltage release



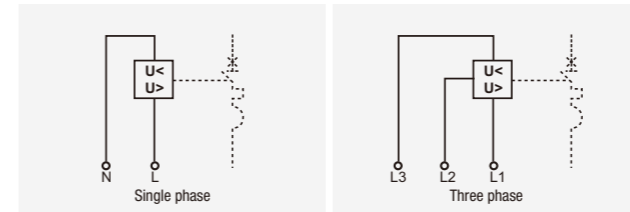
**Function**  
Trip the MCB in case the voltage drops or increases to the threshold value.

Pack	Cat.nos.	Type	Description	Carton Qty
10	319 31	DVR1	230V AC , Single phase	100
10	319 32	DVR3	400V AC , Three phase	100

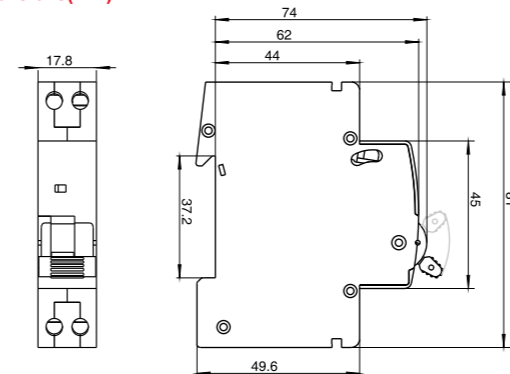
**Technical data**

Type	DVR	
Phase	Single phase	Three phase
Rated voltage	230V AC	400V AC
Frequency	50/60 Hz	
Duration of impulse command	max 10ms	
Undervoltage tripping threshold	170V ±5%	300V ±5%
Overvoltage tripping threshold	280V ±5%	460V ±5%
Dimensions (H x D x W)	81 x 70.4x 17.8 mm	
Net weight	58 g	
Electrical endurance	4000	
Wiring connection type	Bottom	
Compatible MCB	KC6pro , KC10pro , KC15pro	
Mounting position	Left or right side of MCB	
Standard conformity	IEC/EN 60947-1	

**Circuit diagram**



**Dimensions(mm)**



**Performance of circuit breakers**

KC series including 3KA, 6KA, 10KA MCBS

IEC Standards covering Low Voltage Circuit Breakers provide the user with a better assurance of quality and performance by taking into account the actual operating conditions of the breaker. New definitions and symbols have been introduced which should be committed to memory. Some of those most frequently used are:

- U<sub>e</sub>: rated service voltage
- U<sub>i</sub>: rated insulation voltage (> U<sub>emax</sub>)
- U<sub>imp</sub>: rated impulse withstand
- I<sub>cm</sub>: rated short circuit making capacity
- I<sub>cn</sub>: rated short circuit capacity
- I<sub>cs</sub>: rated service short circuit breaking capacity
- I<sub>cu</sub>: rated ultimate short circuit breaking capacity
- I<sub>n</sub>: rated residual operating current (often called residual sensitivity)
- I<sub>n</sub>: rated current = maximum value of current used for the temperature rise test
- t: trip delay of residual current devices

In addition IEC60947-2 sets out to provide a greater degree of safety to the uninstructed users of circuit breakers. It is interesting to note that the description "miniature circuit breaker" or MCB is not used at all in this standard, but no doubt both manufacturers and users will continue to call circuit breakers complying with IEC60947-2 miniature circuit breakers or MCBS for some time to come.

The scope of this standard is limited to air break circuit breakers for operation at 50Hz or 60Hz, having a rated current not exceeding 125A and a rated short-circuit capacity not exceeding 25kA.

A rated service short-circuit breaking capacity I<sub>cs</sub> is also included which is equal to the rated short-circuit capacity I<sub>cn</sub> for short-circuit capacity values up to and including 6kA, and 50% of I<sub>cn</sub> above 6kA with a minimum value of 7.5kA. As the circuit-breakers covered by this standard are intended for household and similar uses, I<sub>cs</sub> is of academic interest only. The circuit-breakers capacity of a MCB (I<sub>cn</sub>) is the alternating component of the prospective current expressed by its r.m.s. value, which the MCB is designed to make, carry for its opening time and to break under specified conditions. I<sub>cn</sub> is shown on the MCB label in a rectangular box without the suffix "A" and is the value

Which is used for application purposes. I<sub>cn</sub> (of short-circuit current at the point of application) You will see from the curves that the inverse time / current characteristic which provides overload protection is the same on all three. This is because the international IEC60947-2 Standard requires the breaker to carry 1.05 times the rated current without tripping for at least one hour and when the test current is increased to 1.3 times the rated current, it must trip within one hour, and again from cold if the current is increased to 2 times the rated current the breaker must trip between 1 and 120 seconds. The inverse time delay characteristic of all MCBS claiming compliance with IEC60947-2 must operate within these limits.

The difference between the three types of characteristic curves designated "B", "C" and "D" concerns only the magnetic instantaneous trip which provides short-circuit protection.

For type "B" the breaker must trip between the limits of 3 to 5 times rated current

For type "C" the breaker must trip between the limits of 8 to 12 times rated current and

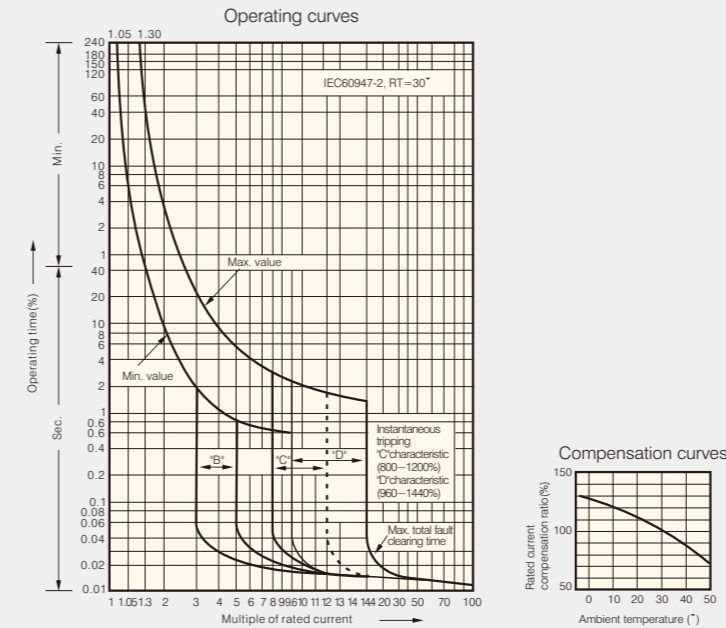
For type "D" the breaker must trip between the limits of 9.6 to 14.4 times rated current.

Often manufacturers publish their MCB tripping characteristics showing the limits set by the standard and guarantee that any breaker that you purchase will operate within these limits. So great care should be taken when working with characteristic curves showing lower and higher limits - on no account should you take a mean point for application design purposes.

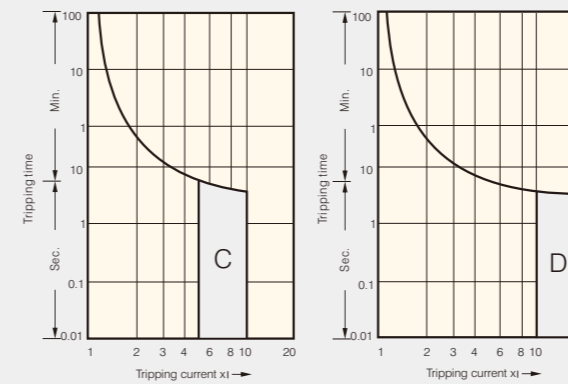
For cable protection applications you should take the maximum tripping time and some manufacturers publish single line characteristic curves which show the maximum tripping time. If the design problem is nuisance tripping then the minimum tripping time should be used and for desk top co-ordination studies, both lower and upper limits have to be taken into account.

Electrical characteristics	References							
Type	KCN	KC3e	KC3-H	KC6-K	KC6pro	KC10pro	KC15pro	KC10-125
Pole	1P+N	1P,2P,3P,4P	1P,2P,3P,4P	1P,2P,3P,4P	1P,2P,3P,4P	1P,2P,3P,4P	1P,2P,3P,4P	1P,2P,3P,4P
Tripping characteristics	B,C	B,C,D	B,C,D	B,C,D	B,C,D	B,C,D	B,C,D	C,D
Rated operational voltage U <sub>e</sub> (V)	240	240/415	240/415	240/415	240/415	240/415	240/415	240/415
Nominal current	6-32A	1-63A	1-63A	1-63A	1-63A	1-63A	1-32A	63-125A
Breaking capacity to IEC 60947-2	4.5kA	3kA	4.5kA	6kA	6kA	10kA	15kA	10kA
Rated insulation voltage U <sub>i</sub> (V)	240V	415V	415V	415V	415V	415V	415V	690V
Rated impulse voltage U <sub>imp</sub> (kV)	4000V	4000V	4000V	4000V	4000V	4000V	4000V	6000V
Overvoltage category	-	-	-	-	-	-	-	A
Energy limiting class	Class 3	Class 3	Class 3	Class 3	Class 3	Class 3	Class 3	Class 3
Protection degree	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Electrical endurance	4000 cycles	4000 cycles	4000 cycles	4000 cycles	4000 cycles	4000 cycles	4000 cycles	4000 cycles
Ambient temperature	-5° to +40°	-5° to +40°	-5° to +40°	-5° to +40°	-5° to +40°	-5° to +40°	-5° to +40°	-5° to +40°
Terminal capacity (max)	16 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>	25 mm <sup>2</sup>	16 mm <sup>2</sup>	50 mm <sup>2</sup>

**MCBS tripping curves**



**KC10-125 tripping current**

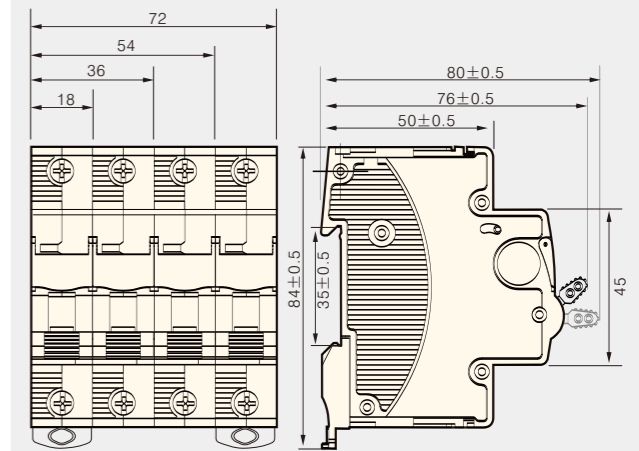


**Influence of ambient temperature on nominal currents**

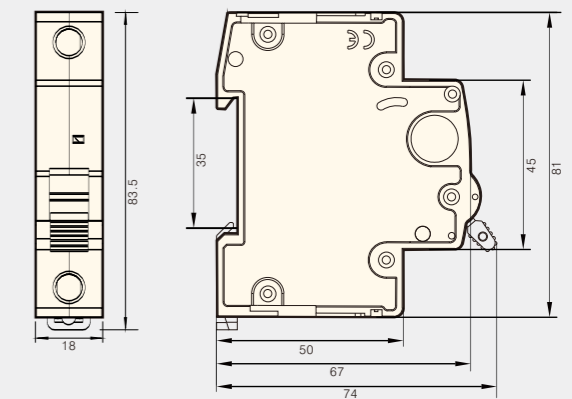
Nominal current of MCB(A)	Internal resistance (mohm)	Power loss (W)	Max. impedance of impedance loop(Ohm)			Thermal correction of nominal currents				
			Character			Ambient temperature				
			B	C	D	20°C	30°C	40°C	50°C	60°C
1	1215.69	1.24	46.20	25.70	14.40	1.05	1	0.95	0.90	0.85
2	343.28	1.38	21.60	12.02	6.73	2.08	2	1.92	1.84	1.74
3	128.09	1.15	16.90	9.40	5.26	3.18	3	2.82	2.61	2.37
4	105.53	1.68	10.68	5.94	3.33	4.24	4	3.76	3.52	3.24
6	29.22	1.08	7.14	3.97	2.22	6.24	6	5.76	5.52	5.30
10	14.49	1.55	3.87	2.15	1.21	10.60	10	9.30	8.60	7.80
16	10.00	2.56	2.24	1.25	0.70	16.80	16	15.20	14.20	13.30
20	8.02	3.32	1.55	0.86	0.48	21.00	20	19.00	17.80	16.80
25	3.11	2.00	2.43	1.35	0.76	26.20	25	23.70	22.20	20.70
32	3.05	3.17	1.27	0.71	0.40	33.50	32	30.40	28.40	27.50
40	2.16	3.40	0.60	0.33	0.19	42.00	40	38.00	35.60	33.20
50	1.65	4.20	0.71	0.39	0.22	52.50	50	47.40	44.00	40.50
63	1.68	6.30	0.47	0.32	0.15	66.20	63	58.00	54.20	49.20

**Dimensions**

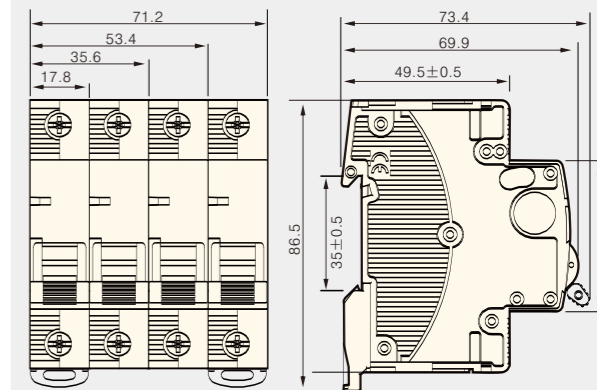
KC6-K, KC3e

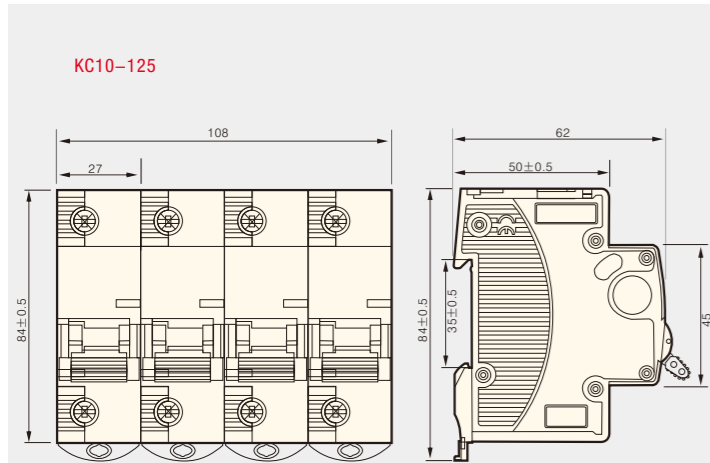


KC3-H



KC6pro, KC10pro & KC15pro





**KCM switch disconnectors**

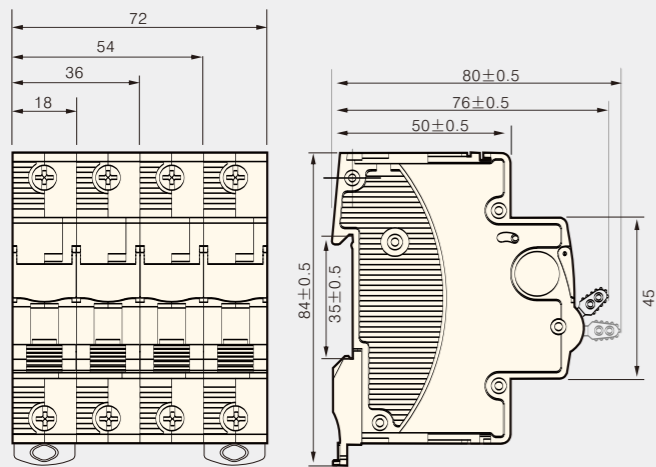
**Electrical characteristics**

Thermal rating(Ih)	16-32A	40-63A	100-125A
Connection	flexible 1.5 to 16mm <sup>2</sup> rigid	1.5 to 25mm <sup>2</sup> 1.5 to 35mm <sup>2</sup>	6 to 35mm <sup>2</sup> 4 to 50mm <sup>2</sup>
Isolating voltage(Ui)	240/415V~	240/415V~	240/415V~
Impulse withstand voltage(Uimp)	4kV	4kV	4kV
Short-circuit withstand capacity	1kA,1S	1kA,1S	2kA,1S
Operating category	AC 22A <sup>(1)</sup>	AC 22A <sup>(1)</sup>	AC 22A <sup>(1)</sup>
No. of electrical operations	10 000	10 000	10 000
Protection index	IP 2x wired	IP 2x wired	IP 2x (>20mm <sup>2</sup> )

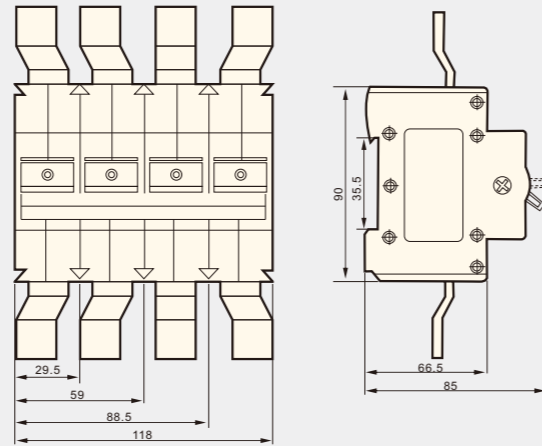
(1) list conditions according to IEC 60947-3 AC 22A; combined motor/resistor breaking

**Dimensions**

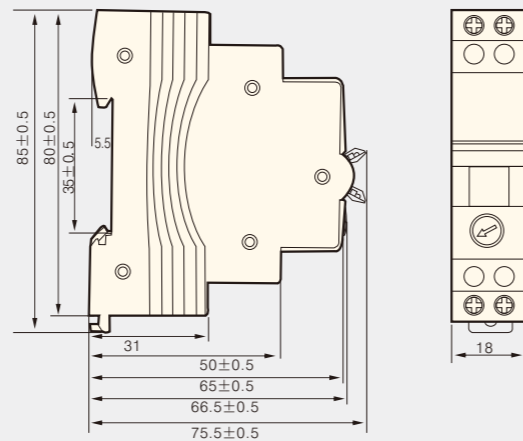
**KCM-N**



**KCM-H:**



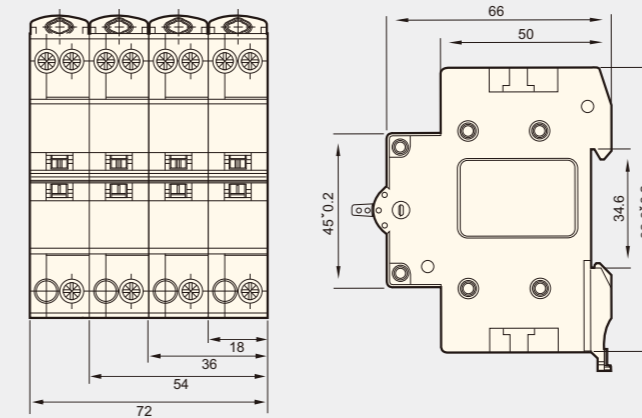
**KCM2-32:**



**MCS - Modular Changeover Switch**

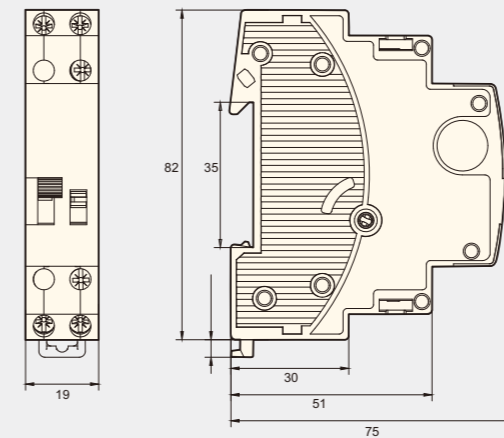
Type	MCS225	MCS240	MCS425	MCS440
Standard		IEC60947-3		
Isolating voltage(Ui)	240/415V AC			
Impulse withstand voltage(Uimp)	4kV			
Short-circuit withstand capacity	500A,1S			
Operating category	AC-22			
Ambient temperature	-5°C to +40°C			
Storage temperature	-25°C to +50°C			
Breaking capacity in short-circuit (low)	800A			
No. of mechanical operations	10000			
No. of electrical operations	1500			
Protection index	IP20			

**MCS:**



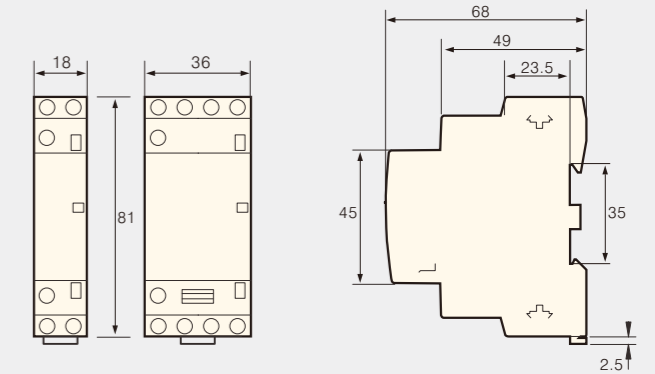
**IMPULSE RELAY**

**MIR-16**

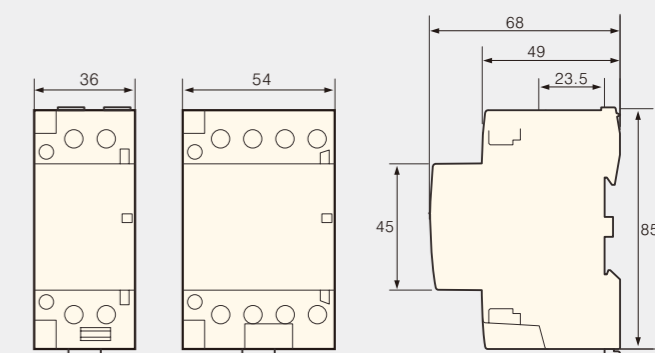


**Automatic Type**

**MC1**

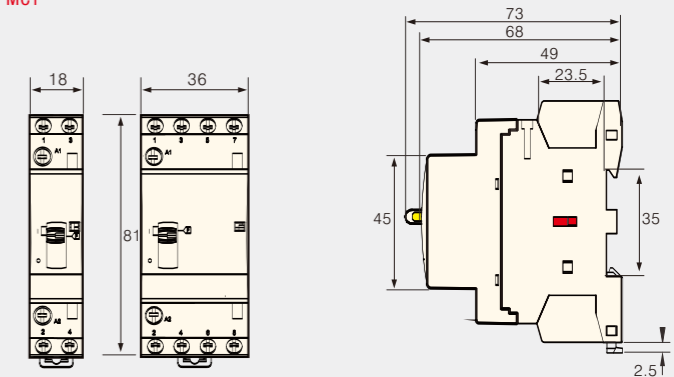


**MC2 & MC3**

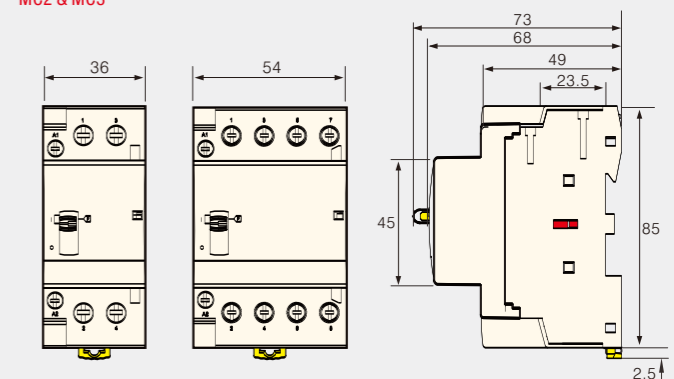


**Manual Type**

**MC1**



**MC2 & MC3**



**KRCS2<sub>pro</sub>**

One module RCBO up to 40A  
AC and A type



124 10

No. of pole: 1P+N  
Rated voltage: 240V AC  
Rated current: 6-40A  
Rated frequency: 50/60Hz  
Tripping curve: B,C,D  
Rated short-circuit current: 6000A  
Operating characteristic: AC and A type  
Rated residual operating current: 10,30mA  
Comply with IEC/EN61009-1

Single pole+Neutral-240V AC type

Pack	Cat.nos.			Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve	D curve			
1	124 00	124 11	124 21	6A	10mA	60
1	124 01	124 12	124 22	10A	10mA	60
1	124 02	124 13	124 23	16A	10mA	60
1	124 03	124 14	124 24	20A	10mA	60
1	124 04	124 15	124 25	6A	30mA	60
1	124 05	124 16	124 26	10A	30mA	60
1	124 06	124 17	124 27	16A	30mA	60
1	124 07	124 18	124 28	20A	30mA	60
1	124 08	124 19	124 29	25A	30mA	60
1	124 09	124 10	124 30	32A	30mA	60
1	124 10	124 20	124 31	40A	30mA	60

Single pole+Neutral -240V A type

Pack	Cat.nos.			Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve	D curve			
1	124 41	124 61	124 81	6A	10mA	60
1	124 42	124 62	124 82	10A	10mA	60
1	124 43	124 63	124 83	16A	10mA	60
1	124 44	124 64	124 84	20A	10mA	60
1	124 45	124 65	124 85	6A	30mA	60
1	124 46	124 66	124 86	10A	30mA	60
1	124 47	124 67	124 87	16A	30mA	60
1	124 48	124 68	124 88	20A	30mA	60
1	124 49	124 69	124 89	25A	30mA	60
1	124 50	124 70	124 90	32A	30mA	60
1	124 51	124 71	124 91	40A	30mA	60

**KRC2-N**

Two module RCBO up to 40A



023 74

No. of pole: 1P+N  
Rated voltage: 230/240V AC  
Rated current: 6-40A  
Rated frequency: 50/60Hz  
Tripping curve: B,C  
Rated short-circuit current: 6000A  
Operating characteristic: AC type  
Rated residual operating current: 10,30,100,300mA  
Comply with IEC/EN61009-1

Single pole+Neutral-230/240V AC type

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve			
1	023 41	023 71	6A	10mA	60
1	023 42	023 72	10A	10mA	60
1	023 43	023 73	16A	10mA	60
1	023 44	023 74	20A	10mA	60
1	023 45	023 75	6A	30mA	60
1	023 46	023 76	10A	30mA	60
1	023 47	023 77	16A	30mA	60
1	023 48	023 78	20A	30mA	60
1	023 49	023 79	25A	30mA	60
1	023 50	023 80	32A	30mA	60
1	023 51	023 81	40A	30mA	60
1	023 52	023 82	6A	100mA	60
1	023 53	023 83	10A	100mA	60
1	023 54	023 84	16A	100mA	60
1	023 55	023 85	20A	100mA	60
1	023 56	023 86	25A	100mA	60
1	023 57	023 87	32A	100mA	60
1	023 58	023 88	40A	100mA	60
1	023 59	023 89	6A	300mA	60
1	023 60	023 90	10A	300mA	60
1	023 61	023 91	16A	300mA	60
1	023 62	023 92	20A	300mA	60
1	023 63	023 93	25A	300mA	60
1	023 64	023 94	32A	300mA	60
1	023 65	023 95	40A	300mA	60

**KRCS6pro**

One module RCBO up to 50A  
AC and A type



122 07

No.of pole: 1P+N  
Rated voltage: 230/240V AC  
Rated current: 6-50A  
Rated frequency: 50/60Hz  
Tripping curve: B,C  
Rated short-circuit current: 6000A  
Operating characteristic: AC and A type  
Rated residual operating current: 30,100,300mA  
Comply with IEC/EN61009-1

Single pole+Neutral -230/240V AC type

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve			
1	121 81	122 05	6A	30mA	60
1	121 82	122 06	10A	30mA	60
1	121 83	122 07	16A	30mA	60
1	121 84	122 08	20A	30mA	60
1	121 85	122 09	25A	30mA	60
1	121 86	122 10	32A	30mA	60
1	121 87	122 11	40A	30mA	60
1	121 88	122 12	50A	30mA	60
1	121 89	122 13	6A	100mA	60
1	121 90	122 14	10A	100mA	60
1	121 91	122 15	16A	100mA	60
1	121 92	122 16	20A	100mA	60
1	121 93	122 17	25A	100mA	60
1	121 94	122 18	32A	100mA	60
1	121 95	122 19	40A	100mA	60
1	121 96	122 20	50A	100mA	60
1	121 97	122 21	6A	300mA	60
1	121 98	122 22	10A	300mA	60
1	121 99	122 23	16A	300mA	60
1	122 00	122 24	20A	300mA	60
1	122 01	122 25	25A	300mA	60
1	122 02	122 26	32A	300mA	60
1	122 03	122 27	40A	300mA	60
1	122 04	122 28	50A	300mA	60

Single pole+Neutral -230/240V A type

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve			
1	125 61	125 91	6A	30mA	60
1	125 62	125 92	10A	30mA	60
1	125 63	125 93	16A	30mA	60
1	125 64	125 94	20A	30mA	60
1	125 65	125 95	25A	30mA	60
1	125 66	125 96	32A	30mA	60
1	125 67	125 97	40A	30mA	60
1	125 68	125 98	50A	30mA	60
1	125 69	125 99	6A	100mA	60
1	125 70	126 00	10A	100mA	60
1	125 71	126 01	16A	100mA	60
1	125 72	126 02	20A	100mA	60
1	125 73	126 03	25A	100mA	60
1	125 74	126 04	32A	100mA	60
1	125 75	126 05	40A	100mA	60
1	125 76	126 06	50A	100mA	60
1	125 77	126 07	6A	300mA	60
1	125 78	126 08	10A	300mA	60
1	125 79	126 09	16A	300mA	60
1	125 80	126 10	20A	300mA	60
1	125 81	126 11	25A	300mA	60
1	125 82	126 12	32A	300mA	60
1	125 83	126 13	40A	300mA	60
1	125 84	126 14	50A	300mA	60



**KRCS10pro**

One module RCBO up to 50A  
AC and A type



125 33

No.of pole: 1P+N  
Rated voltage: 230/240V AC  
Rated current: 6-50A  
Rated frequency: 50/60Hz  
Tripping curve: B,C  
Rated short-circuit current: 10000A  
Operating characteristic: AC and A type  
Rated residual operating current: 30,100,300mA  
Comply with IEC/EN61009-1

Single pole+Neutral -230/240V AC type

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve			
1	125 01	125 31	6A	30mA	60
1	125 02	125 32	10A	30mA	60
1	125 03	125 33	16A	30mA	60
1	125 04	125 34	20A	30mA	60
1	125 05	125 35	25A	30mA	60
1	125 06	125 36	32A	30mA	60
1	125 07	125 37	40A	30mA	60
1	125 08	125 38	50A	30mA	60
1	125 09	125 39	6A	100mA	60
1	125 10	125 40	10A	100mA	60
1	125 11	125 41	16A	100mA	60
1	125 12	125 42	20A	100mA	60
1	125 13	125 43	25A	100mA	60
1	125 14	125 44	32A	100mA	60
1	125 15	125 45	40A	100mA	60
1	125 16	125 46	50A	100mA	60
1	125 17	125 47	6A	300mA	60
1	125 18	125 48	10A	300mA	60
1	125 19	125 49	16A	300mA	60
1	125 20	125 50	20A	300mA	60
1	125 21	125 51	25A	300mA	60
1	125 22	125 52	32A	300mA	60
1	125 23	125 53	40A	300mA	60
1	125 24	125 54	50A	300mA	60

Single pole+Neutral -230/240V A type

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve			
1	125 61	125 91	6A	30mA	60
1	125 62	125 92	10A	30mA	60
1	125 63	125 93	16A	30mA	60
1	125 64	125 94	20A	30mA	60
1	125 65	125 95	25A	30mA	60
1	125 66	125 96	32A	30mA	60
1	125 67	125 97	40A	30mA	60
1	125 68	125 98	50A	30mA	60
1	125 69	125 99	6A	100mA	60
1	125 70	126 00	10A	100mA	60
1	125 71	126 01	16A	100mA	60
1	125 72	126 02	20A	100mA	60
1	125 73	126 03	25A	100mA	60
1	125 74	126 04	32A	100mA	60
1	125 75	126 05	40A	100mA	60
1	125 76	126 06	50A	100mA	60
1	125 77	126 07	6A	300mA	60
1	125 78	126 08	10A	300mA	60
1	125 79	126 09	16A	300mA	60
1	125 80	126 10	20A	300mA	60
1	125 81	126 11	25A	300mA	60
1	125 82	126 12	32A	300mA	60
1	125 83	126 13	40A	300mA	60
1	125 84	126 14	50A	300mA	60



**ARC FAULT DETECTION DEVICE WITH INTEGRATED RCBO**



**KAD6L**

The KAD6L series arc fault detection device with integrated RCBO is designed for detection of serial arc faults, parallel arc faults and earth arc faults which may lead to fire accidents. The device will disconnect the circuit when detect an arc fault probably caused by damaged insulation, aging of breakage of cable, loose connection, improper electric installation etc., thus to reduce or avoid fires. With integrated RCBO, the device provides maximum protection in electric installation

**PROTECTION RANGE**

Short circuits , Overload, Earth arc faults, Earth fault currents, Overvoltage >275V, Parallel arc faults ≥75A, Serial arc faults ≥2.5A

**Led indication for fault monitoring**

LED Color	Blinks/sec.	Signal duration	Cause of the tripping
Red	steady	steady	Short circuits, Overload, Earth fault currents
Red	1	10 secs	Series Arcing Fault or Parallel Arcing Fault
Red	2	10 secs	Overvoltage(U>275Vac)
Red	5	continuous	Internal Self-Test

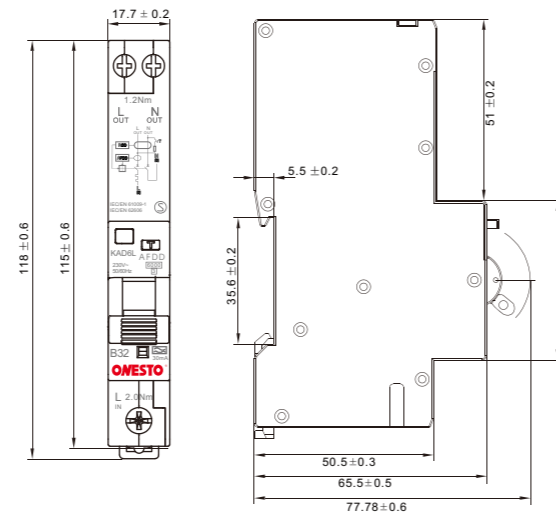
**Single pole+Neutral -240V A type**

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve			
1	222 29	222 53	6A	30mA	60
1	222 30	222 54	10A	30mA	60
1	222 31	222 55	13A	30mA	60
1	222 32	222 56	16A	30mA	60
1	222 33	222 57	20A	30mA	60
1	222 34	222 58	25A	30mA	60
1	222 35	222 59	32A	30mA	60
1	222 36	222 60	40A	30mA	60

**Technical data**

Model	KAD6L
Type	A
Rated current	6-40A
Poles	1P+N
Rated voltage	240V AC
Rated frequency	50 / 60Hz
Rated sensitivity	30mA
Tripping curve	B,C
Break time under	6kA
Rated peak withstand voltage Uimp	4kV
Electrical life	4,000
Mechanical life	10,000
Device height	114mm
Device width	18mm
Terminal protection	finger and hand touch safe
Terminal capacity	1-25mm <sup>2</sup>
Busbar thickness	0.8-2mm
Degree of protection switch	IP20
Degree of protection, built-in	IP20
Tripping temperature	-25°C to +40°C
Storage and transport temperature	-35°C to +60°C
Comply with	IEC/EN 62606 , IEC/EN 61009-1

**Dimensions(mm)**



**ELECTROMAGNETIC LEAKAGE CIRCUIT BREAKER**



123 76

323 76

**KRCO2**

The electromagnetic leakage protection circuit breaker with overcurrent protection has the functions of short circuit protection, overload protection and leakage protection, and is applicable to the circuit with AC 50/60Hz, rated voltage of 230V and rated current of 40A. When personal electric shock or grid leakage current exceeds the specified value, the leakage protection circuit breaker can cut off the fault circuit in a very short time to protect the safety of personal and electrical equipment.

**APPLICATIONS**

Low voltage power distribution system in industries, commerce, civil buildings, communications, electric vehicle charging and other fields.

**Single pole+Neutral -230/240V AC type**

Pack	Cat.nos.			Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve	D curve			
1	123 41	123 71	122 61	6A	30mA	60
1	123 42	123 72	122 62	10A	30mA	60
1	123 43	123 73	122 63	16A	30mA	60
1	123 44	123 74	122 64	20A	30mA	60
1	123 45	123 75	122 65	25A	30mA	60
1	123 46	123 76	122 66	32A	30mA	60
1	123 47	123 77	122 67	40A	30mA	60
1	123 48	123 78	122 68	6A	100mA	60
1	123 49	123 79	122 69	10A	100mA	60
1	123 50	123 80	122 70	16A	100mA	60
1	123 51	123 81	122 71	20A	100mA	60
1	123 52	123 82	122 72	25A	100mA	60
1	123 53	123 83	122 73	32A	100mA	60
1	123 54	123 84	122 74	40A	100mA	60
1	123 55	123 85	122 75	6A	300mA	60
1	123 56	123 86	122 76	10A	300mA	60
1	123 57	123 87	122 77	16A	300mA	60
1	123 58	123 88	122 78	20A	300mA	60
1	123 59	123 89	122 79	25A	300mA	60
1	123 60	123 90	122 80	32A	300mA	60
1	123 61	123 91	122 81	40A	300mA	60

**Single pole+Neutral -230/240V A type**

Pack	Cat.nos.			Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve	D curve			
1	223 41	223 71	222 61	6A	30mA	60
1	223 42	223 72	222 62	10A	30mA	60
1	223 43	223 73	222 63	16A	30mA	60
1	223 44	223 74	222 64	20A	30mA	60
1	223 45	223 75	222 65	25A	30mA	60
1	223 46	223 76	222 66	32A	30mA	60
1	223 47	223 77	222 67	40A	30mA	60
1	223 48	223 78	222 68	6A	100mA	60
1	223 49	223 79	222 69	10A	100mA	60
1	223 50	223 80	222 70	16A	100mA	60
1	223 51	223 81	222 71	20A	100mA	60
1	223 52	223 82	222 72	25A	100mA	60
1	223 53	223 83	222 73	32A	100mA	60
1	223 54	223 84	222 74	40A	100mA	60
1	223 55	223 85	222 75	6A	300mA	60
1	223 56	223 86	222 76	10A	300mA	60
1	223 57	223 87	222 77	16A	300mA	60
1	223 58	223 88	222 78	20A	300mA	60
1	223 59	223 89	222 79	25A	300mA	60
1	223 60	223 90	222 80	32A	300mA	60
1	223 61	223 91	222 81	40A	300mA	60

**Theer pole+Neutral -400/415V AC type**

Pack	Cat.nos.			Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve	D curve			
1	323 41	323 71	322 61	6A	30mA	30
1	323 42	323 72	322 62	10A	30mA	30
1	323 43	323 73	322 63	16A	30mA	30
1	323 44	323 74	322 64	20A	30mA	30
1	323 45	323 75	322 65	25A	30mA	30
1	323 46	323 76	322 66	32A	30mA	30
1	323 47	323 77	322 67	6A	100mA	30
1	323 48	323 78	322 68	10A	100mA	30
1	323 49	323 79	322 69	15A	100mA	30
1	323 50	323 80	322 70	20A	100mA	30
1	323 51	323 81	322 71	25A	100mA	30
1	323 52	323 82	322 72	32A	100mA	30
1	323 53	323 83	322 73	6A	300mA	30
1	323 54	323 84	322 74	10A	300mA	30
1	323 55	323 85	322 75	16A	300mA	30
1	323 56	323 86	322 76	20A	300mA	30
1	323 57	323 87	322 77	25A	300mA	30
1	323 58	323 88	322 78	32A	300mA	30

**Theer pole+Neutral -400/415V type**

Pack	Cat.nos.			Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve	D curve			
1	423 41	423 71	422 61	6A	30mA	30
1	423 42	423 72	422 62	10A	30mA	30
1	423 43	423 73	422 63	16A	30mA	30
1	423 44	423 74	422 64	20A	30mA	30
1	423 45	423 75	422 65	25A	30mA	30
1	423 46	423 76	422 66	32A	30mA	30
1	423 47	423 77	422 67	6A	100mA	30
1	423 48	423 78	422 68	10A	100mA	30
1	423 49	423 79	422 69	15A	100mA	30
1	423 50	423 80	422 70	20A	100mA	30
1	423 51	423 81	422 71	25A	100mA	30
1	423 52	423 82	422 72	32A	100mA	30
1	423 53	423 83	422 73	6A	300mA	30
1	423 54	423 84	422 74	10A	300mA	30
1	423 55	423 85	422 75	16A	300mA	30
1	423 56	423 86	422 76	20A	300mA	30
1	423 57	423 87	422 77	25A	300mA	30
1	423 58	423 88	422 78	32A	300mA	30



127 43

127 53

**KRC3-EV**

This item is designed specially for protection of electric vehicle charging with detection of type A fault current and smooth DC current higher than 6mA. It prevents the upstream RCDs from failing to trip in case DC current flowing in the circuit is greater than 6mA and ensures the electric system is under well protection.

**SENSITIVE**

- AC residual currents and pulsating DC residual current (Type A)  $i_{\Delta n}$  30mA
- Smooth DC residual current  $i_{\Delta n}$  6mA

**APPLICATION**

- For installation and protection of electric vehicle charging station

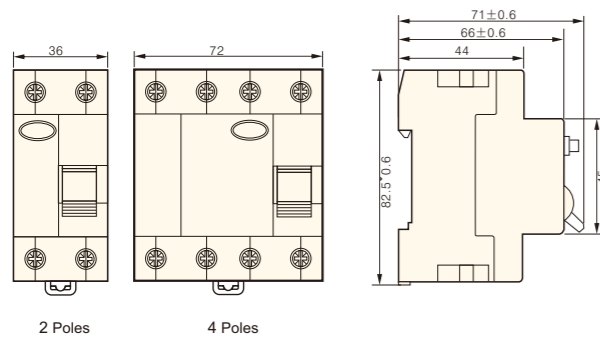
**1P+N 240V~**

Pack	Cat.nos.	Description Rat(A)	Sensitivity		Carton Qty
			Type A	Type B	
1	127 41	25A	30mA	6mA	60
1	127 42	40A	30mA	6mA	60
1	127 43	63A	30mA	6mA	60

**3P+N 415V~**

Pack	Cat.nos.	Description Rat(A)	Sensitivity		Carton Qty
			Type A	Type B	
1	127 51	25A	30mA	6mA	30
1	127 52	40A	30mA	6mA	30
1	127 53	63A	30mA	6mA	30

**Dimensions(mm)**



**Technical data**

Model	KRC3-EV
Type (waveform of the earth leakage current)	A
Rated current	25, 40, 63A
Poles	1P+N      3P+N
Rated voltage	230/240V~      400/415V~
Rated frequency	50 / 60Hz
Rated residual current $I_{\Delta n}$	30mA
DC tripping threshold	6mA
Insulation voltage	500V
Min. Contact opening	4mm
Rated opening capacity $I_m$	500A or 10In(which is greater)
Minimum operating voltage	80V
Rated impulse withstand voltage	4kV
Short circuit current	6kA
Break time under	$\leq 0.1s$
Dielectric test voltage at ind. Freq. for 1 min	2.5kV
Pollution degree	2
Electrical life	2, 000
Mechanical life	10,000
Fault current indicator	Yes
Protection degree	IP20
Ambient temperature	-25 to 40°C
Storage temperature	-30 to 70°C
Terminal connection type	Cable / busbar
Terminal size top/bottom for cable	1-16mm <sup>2</sup>
Terminal size top/bottom for busbar	10/16mm <sup>2</sup>
Tightening torque	2.5 Nm
Mounting	On DIN rail EN 60715 (35mm)
Standards	IEC/EN 61008-1, IEC/EN 62955



127 01

127 24

**KRC3B**

Type B RCD is designed for detection of normal AC, pulsating DC, smooth DC and high frequency AC up to 1000Hz. It's used for protection against installations of electronic equipment which may generate above different waveforms of earth leakage current, such as elevators, photovoltaic inverters, medical equipment, UPS devices, electric vehicle charging facilities etc.



**1P+N 240V~**

Pack	Cat.nos.	Description Rat(A)	Sensitivity	Carton Qty
1	127 01	16A	30mA	30
1	127 02	25A	30mA	30
1	127 03	40A	30mA	30
1	127 04	63A	30mA	30
1	127 05	80A	30mA	30
1	127 06	100A	30mA	30
1	127 07	16A	100mA	30
1	127 08	25A	100mA	30
1	127 09	40A	100mA	30
1	127 10	63A	100mA	30
1	127 11	80A	100mA	30
1	127 12	100A	100mA	30
1	127 13	16A	300mA	30
1	127 14	25A	300mA	30
1	127 15	40A	300mA	30
1	127 16	63A	300mA	30
1	127 17	80A	300mA	30
1	127 18	100A	300mA	30

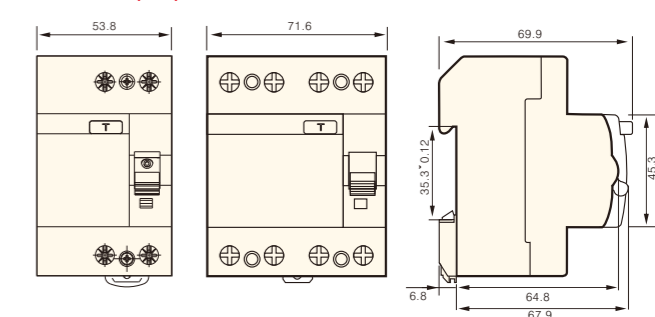
**3P+N 415V~**

Pack	Cat.nos.	Description Rat(A)	Sensitivity	Carton Qty
1	127 21	16A	30mA	30
1	127 22	25A	30mA	30
1	127 23	40A	30mA	30
1	127 24	63A	30mA	30
1	127 25	80A	30mA	30
1	127 26	100A	30mA	30
1	127 27	16A	100mA	30
1	127 28	25A	100mA	30
1	127 29	40A	100mA	30
1	127 30	63A	100mA	30
1	127 31	80A	100mA	30
1	127 32	100A	100mA	30
1	127 33	16A	300mA	30
1	127 34	25A	300mA	30
1	127 35	40A	300mA	30
1	127 36	63A	300mA	30
1	127 37	80A	300mA	30
1	127 38	100A	300mA	30

**Technical data**

Model	KRC3B
Type (waveform of the earth leakage current)	B
Rated current	16, 25, 40, 63, 80, 100A
Poles	1P+N, 3P+N
Rated voltage	230/240V~, 400/415V~
Rated frequency	50 / 60Hz
Rated sensitivity $I_{\Delta n}$	30mA, 100mA, 300mA
Frequency response range	0-1000Hz
Insulation voltage	500V
Rated residual making and breaking capacity	500A (In=16-40A), 630A (In=63A), 800A (In=80A), 1000A (In=100A)
Short circuit current	6kA
Break time under	$\leq 0.1s$
Rated impulse withstand voltage	4kV
Dielectric test voltage at ind. Freq. for 1 min	2.5kV
Pollution degree	2
Electrical life	2, 000
Mechanical life	10,000
Fault current indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to 55°C
Storage temperature	-30°C to 70°C
Terminal connection type	Cable / busbar
Terminal size top/bottom for cable	1-16mm <sup>2</sup>
Terminal size top/bottom for busbar	10/16mm <sup>2</sup>
Tightening torque	2.5 Nm
Mounting	On DIN rail EN 60715 (35mm)
Standards	IEC/EN 61008-1, IEC/EN 62423

**Dimensions(mm)**





**KRCE5**

Two module RCBO up to 40A



022 74

No. of pole: 1P+N  
 Rated voltage: 230/240V AC  
 Rated current: 6-40A  
 Rated frequency: 50/60Hz  
 Tripping curve: B, C  
 Rated short-circuit current: 4500A  
 Operating characteristic: AC type  
 Rated residual operating current: 30mA  
 Comply with IEC/EN61009-1

**KRCE5 230/240V AC type**

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	B curve	C curve			
1	022 61	022 71	6A	30mA	60
1	022 62	022 72	10A	30mA	60
1	022 63	022 73	16A	30mA	60
1	022 64	022 74	20A	30mA	60
1	022 65	022 75	32A	30mA	60
1	022 66	022 76	40A	30mA	60

**KRC3**

Residual current switches type AC and A up to 63A



020 04



020 42

No. of pole: 1P+N, 3P+N  
 Rated voltage: 240/415V AC  
 Rated current: 16-63A  
 Rated frequency: 50/60Hz  
 Rated short-circuit current: 6000A  
 Time delay: general type or type S  
 Operating characteristic: AC and A type  
 Rated residual operating current: 10, 30, 100, 300mA  
 Comply with IEC/EN61008-1, IEC/EN61008-2-1

**Double pole-240V~**

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	AC Type	A Type			
1	020 01	020 21	16A	30mA	60
1	020 02	020 22	25A	30mA	60
1	020 03	020 23	40A	30mA	60
1	020 04	020 24	63A	30mA	60
1	020 05	020 25	16A	100mA	60
1	020 06	020 26	25A	100mA	60
1	020 07	020 27	40A	100mA	60
1	020 08	020 28	63A	100mA	60
1	020 09	020 29	16A	300mA	60
1	020 10	020 30	25A	300mA	60
1	020 11	020 31	40A	300mA	60
1	020 12	020 32	63A	300mA	60
1	020 13	020 33	16A	10mA	60
1	020 14	020 34	25A	10mA	60

**4 pole-415V~**

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	AC Type	A Type			
1	020 41	020 61	16A	30mA	30
1	020 42	020 62	25A	30mA	30
1	020 43	020 63	40A	30mA	30
1	020 44	020 64	63A	30mA	30
1	020 45	020 65	16A	100mA	30
1	020 46	020 66	25A	100mA	30
1	020 47	020 67	40A	100mA	30
1	020 48	020 68	63A	100mA	30
1	020 49	020 69	16A	300mA	30
1	020 50	020 70	25A	300mA	30
1	020 51	020 71	40A	300mA	30
1	020 52	020 72	63A	300mA	30
1	020 53	020 73	16A	10mA	30
1	020 54	020 74	25A	10mA	30



**KRC6N**

Residual current switches type AC and A up to 80A



218 04



218 43

No. of pole: 1P+N, 3P+N  
 Rated voltage: 240/415V AC  
 Rated current: 16-80A  
 Rated frequency: 50/60Hz  
 Rated short-circuit current: 6000A  
 Operating characteristic: AC and A type  
 Rated residual operating current: 30, 100, 300, 500mA  
 Comply with IEC/EN61008-1, IEC/EN61008-2-1

**Double pole-240V~**

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	AC Type	A Type			
1	218 01	218 21	16A	30mA	60
1	218 02	218 22	25A	30mA	60
1	218 03	218 23	40A	30mA	60
1	218 04	218 24	63A	30mA	60
1	218 05	218 25	80A	30mA	60
1	218 06	218 26	25A	100mA	60
1	218 07	218 27	40A	100mA	60
1	218 08	218 28	63A	100mA	60
1	218 09	218 29	80A	100mA	60
1	218 10	218 30	25A	300mA	60
1	218 11	218 31	40A	300mA	60
1	218 12	218 32	63A	300mA	60
1	218 13	218 33	80A	300mA	60

**4 pole-415V~**

Pack	Cat.nos.		Description Rating(A)	Sensitivity	Carton Qty
	AC Type	A Type			
1	218 41	218 71	25A	30mA	30
1	218 42	218 72	40A	30mA	30
1	218 43	218 73	63A	30mA	30
1	218 44	218 74	80A	30mA	30
1	218 45	218 75	25A	100mA	30
1	218 46	218 76	40A	100mA	30
1	218 47	218 77	63A	100mA	30
1	218 48	218 78	80A	100mA	30
1	218 49	218 79	25A	300mA	30
1	218 50	218 80	40A	300mA	30
1	218 51	218 81	63A	300mA	30
1	218 52	218 82	80A	300mA	30
1	218 53	218 83	25A	300mA(s)	30
1	218 54	218 84	40A	300mA(s)	30
1	218 55	218 85	25A	500mA	30
1	218 56	218 86	40A	500mA	30
1	218 57	218 87	63A	500mA	30
1	218 58	218 88	80A	500mA	30



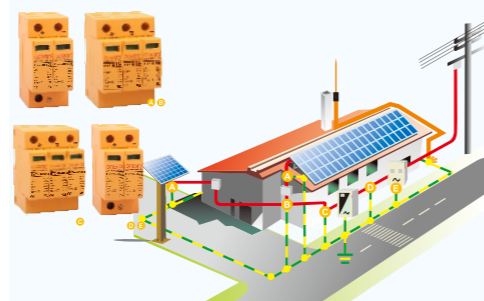
Protective mode for connection with public electricity network



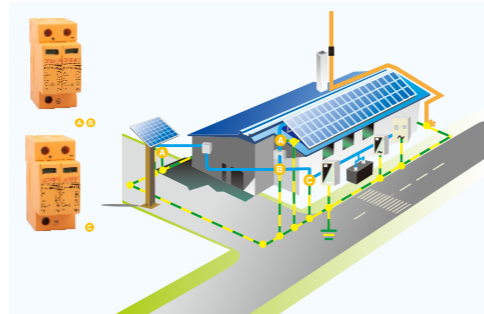
BY7-40/2-800



BY7-40/3-1000



Protective mode for standalone photovoltaic system



Technical data

No. of pole: 1P, 2P, 2+1P, 3P, 3+1P, 4P  
 Rated voltage: 275V, 320V, 385V, 440V AC  
 500V, 600V, 800V, 1000V DC  
 Maximum discharge surge current: 10 kA, 20kA, 40kA, 60kA, 80kA, 100kA  
 Type of network systems: TN-S, TN-C-S, IT, TT, PV  
 Plug-in replacement module with indicator  
 Available with signalling auxiliary  
 DIN rail 35mm installation  
 Comply with IEC61643-11, EN50539-11

Type	BY7-40/2-500	BY7-40/2-600	BY7-40/2-800	BY7-40/2-1000	BY7-40/3-500	BY7-40/3-600	BY7-40/3-800	BY7-40/3-1000	BY7-40/3-1200	BY7-40/3-1500		
Type of network systems	PV											
Maximum continuous voltage	Uc	VDC	500	600	800	1000	500	600	800	1000	1200	1500
Maximum discharge surge current	I <sub>max</sub>	kA	40	40	40	40	40	40	40	40	40	40
Normal discharge current(8/20us)	I <sub>n</sub>	kA	20	20	20	20	20	20	20	20	20	20
Voltage protection level	U <sub>p</sub>	kV	1.8	2.0	2.5	3.5	1.8	2.0	2.5	3.0	4.2	5.0
Protection rating	IP20											
Connection	Screw terminal : 4 to 25mm <sup>2</sup> , by busbar											
Temperature range	-40° +80°											
Disconnection indicator	RED INDICATOR											
Remote signalling of disconnection	optional											
Mounting	symmetrical rail(EN50022/DIN46277-3) 35mm											
Housing material	PA6 UL94-V0											

Type	BY7-60/2-500	BY7-60/2-600	BY7-60/2-800	BY7-60/2-1000	BY7-60/3-500	BY7-60/3-600	BY7-60/3-800	BY7-60/3-1000		
Type of network systems	PV									
Maximum continuous voltage	Uc	VDC	500	600	800	1000	500	600	800	1000
Maximum discharge surge current	I <sub>max</sub>	kA	60	60	60	60	60	60	60	60
Normal discharge current(8/20us)	I <sub>n</sub>	kA	30	30	30	30	30	30	30	30
Voltage protection level	U <sub>p</sub>	kV	2.0	2.5	3.0	3.2	2.0	2.5	3.0	3.2
Protection rating	IP20									
Connection	Screw terminal : 4 to 25mm <sup>2</sup> , by busbar									
Temperature range	-40° +80°									
Disconnection indicator	RED INDICATOR									
Remote signalling of disconnection	optional									
Mounting	symmetrical rail(EN50022/DIN46277-3) 35mm									
Housing material	PA6 UL94-V0									

Type	BY7-80/2-500	BY7-80/2-600	BY7-80/2-800	BY7-80/2-1000	BY7-80/3-500	BY7-80/3-600	BY7-80/3-800	BY7-80/3-1000		
Type of network systems	PV									
Maximum continuous voltage	Uc	VDC	500	600	800	1000	500	600	800	1000
Maximum discharge surge current	I <sub>max</sub>	kA	80	80	80	80	80	80	80	80
Normal discharge current(8/20us)	I <sub>n</sub>	kA	40	40	40	40	40	40	40	40
Voltage protection level	U <sub>p</sub>	kV	2.5	3.0	3.2	3.5	2.5	3.0	3.2	3.5
Protection rating	IP20									
Connection	Screw terminal : 4 to 25mm <sup>2</sup> , by busbar									
Temperature range	-40° +80°									
Disconnection indicator	RED INDICATOR									
Remote signalling of disconnection	optional									
Mounting	symmetrical rail(EN50022/DIN46277-3) 35mm									
Housing material	PA6 UL94-V0									



BY7-20/2-275



BY7-40/1+1-275



BY7-20/4-385



BY7-20/3+1-385

Type	BY7-10/2-275	BY7-10/4-440	BY7-20/2-275	BY7-20/4-440	BY7-40/2-275	BY7-40/4-440	BY7-60/2-275	BY7-60/4-440
Type of network systems	TN-S, TN-C-S, IT							
Maximum continuous voltage	Uc	V	275	440	275	440	275	440
Maximum discharge surge current	I <sub>max</sub>	kA	10	10	20	20	40	40
Normal discharge current(8/20us)	I <sub>n</sub>	kA	5	5	10	10	20	30
Voltage protection level	U <sub>p</sub>	kV	0.8	1.2	1.0	1.5	1.2	1.8
Protection rating	IP20							
Fuse or circuit breaker	Gg	A	10	10	20	32	32	63
Connection	Screw terminal : 4 to 25mm <sup>2</sup> , by busbar							
Temperature range	-40° +80°							
Disconnection indicator	RED INDICATOR							
Remote signalling of disconnection	optional							
Mounting	symmetrical rail(EN50022/DIN46277-3) 35mm							
Housing material	PA6 UL94-V0							

Type	BY7-10/3+1-385	BY7-10/3+1-440	BY7-20/3+1-385	BY7-20/3+1-440	BY7-40/3+1-385	BY7-40/3+1-440	BY7-60/3+1-385	BY7-60/3+1-440
Type of network systems	TT							
Maximum continuous voltage	Uc	V	385	440	385	440	385	440
Maximum discharge surge current	I <sub>max</sub>	kA	10	10	20	20	40	40
Normal discharge current(8/20us)	I <sub>n</sub>	kA	5	5	10	10	20	30
Voltage protection level	U <sub>p</sub>	kV	1.2	1.2	1.0	1.5	1.2	1.8
Protection rating	IP20							
Fuse or circuit breaker	Gg	A	10	10	20	32	32	63
Connection	Screw terminal : 4 to 25mm <sup>2</sup> , by busbar							
Temperature range	-40° +80°							
Disconnection indicator	RED INDICATOR							
Remote signalling of disconnection	optional							
Mounting	symmetrical rail(EN50022/DIN46277-3) 35mm							
Housing material	PA6 UL94-V0							



BY7-80/4-440



BY7-100/3+1-385

Type	BY7-80/2-275	BY7-80/4-440	BY7-100/2-275	BY7-100/4-440	BY7-80/3+1-385	BY7-80/3+1-440	BY7-100/3+1-385	BY7-100/3+1-440
Type of network systems	TN-S, TN-C-S, IT				TT			
Maximum continuous voltage	Uc	V	275	440	275	440	385	440
Maximum discharge surge current	I <sub>max</sub>	kA	80	80	100	100	80	100
Normal discharge current(8/20us)	I <sub>n</sub>	kA	40	40	60	60	40	60
Voltage protection level	U <sub>p</sub>	kV	2.0	2.2	2.0	2.5	2.5	3.0
Protection rating	IP20							
Fuse or circuit breaker	Gg	A	100	100	125	125	100	125
Connection	Screw terminal : 4 to 25mm <sup>2</sup> , by busbar							
Temperature range	-40° +80°							
Disconnection indicator	RED INDICATOR							
Remote signalling of disconnection	Optional							
Mounting	symmetrical rail(EN50022/DIN46277-3) 35mm							
Housing material	PA6 UL94-V0							

**BT16 and KB16**

Transformers, bells



070 01

070 11

Provide separated extra low voltage 8, 12, 24V~  
Conform to IEC/EN 61558-2-8

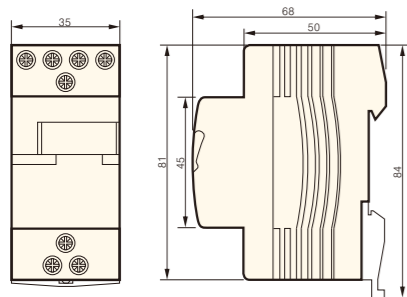
**Bell transformer BT16**

Pack	Cat.nos.	Secondary(v)	Power(VA)	No.of Modules
6	070 01	8	4	2
6	070 02	8-12	8	2

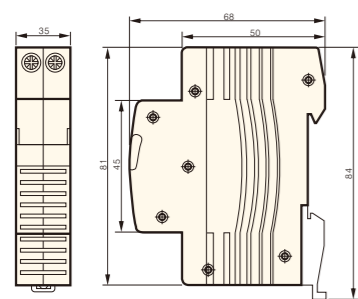
**Bells KB16**

Pack	Cat.nos.	Secondary(v)	Power(VA)	No.of Modules
12	070 11	8/12	5	1
12	070 12	230	6.5	1

**Dimensions:BT16**



**Dimensions:KB16**



**PTS16A and PTS30A**

Programmable time switch with digital display



070 33

070 34

**Description**

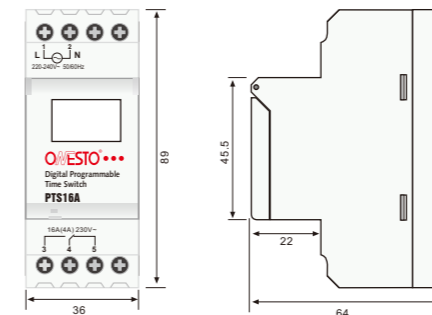
Digital time switch for controlling of electrical installations with daily or weekly programs

**Features**

- Din rail mounting
- Daily or weekly programs
- Real time LCD display
- 16 ON/OFF program settings
- 15 modes of day's selection
- 60 days power off memory
- Minimum setting interval 1minute:
- Multiple function

Type	PTS16A	PTS30A
Cat.no.	070 33	070 34
Rated voltage	220V-240V AC	
Contact rating	16A (4A) 230V AC	30A (8A) 230V AC
Availabe customized voltage	24V , 36V , 48V , 110V AC	
Frequency	50/60Hz	
Programming range	1min to 1 week	
Minimum setting interval	1min	
Time precision	± 0.5s / day at 25j	
Display	LCD	
Operation mode	ON / AUTO / OFF	
Power consumption	<1w	
No. of ON/OFF setting	16	
No. of day's selection	15	
Battery back-up time	60 days	
Ambient temperature	-5 to 55j	
Mounting	DIN RAIL (35x7.5mm)	
Weight	113g	128g
Dimension	89 x 36 x 64mm	

**Dimensions:**



**TS18**

Programmable with analogue dial



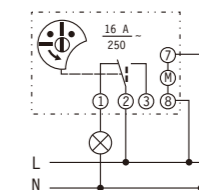
070 52

24hours programmer with 48 segments  
Minimum program time: 30 mins  
Rated voltage: 230V AC  
Rated frequency: 50/60 Hz  
Contact capacity: 16A/250V AC  
Power consumption: 2.5VA  
Electrical endurance: 10<sup>5</sup> cycles  
Mechanical endurance: 10<sup>7</sup> cycles  
Ambient temperature: -20°C to +50°C  
Connection: rigid conductor 6mm<sup>2</sup>

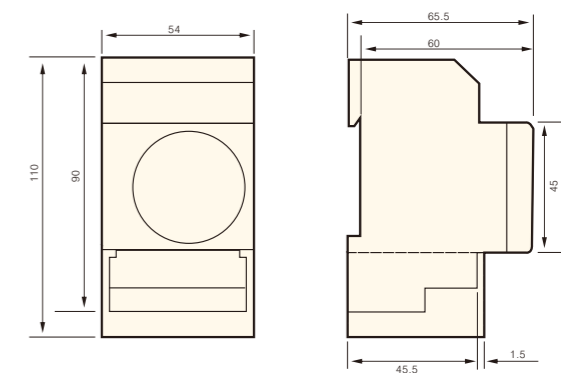
**TS18**

Pack	Cat.nos.	Description
1	070 51	Without working reserve 50Hz
1	070 52	With 100 hour working reserve- 50/60Hz

**Connections:**



**Dimensions:**





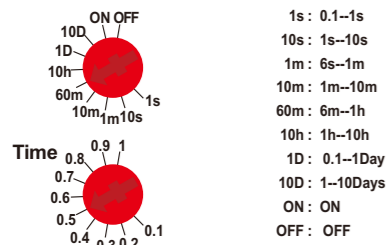
**MTR2N / MTR2F / MTR10M / MTR2AR**

With multiple functions, voltage and time ranges, the MTR series time relays offer cost effective solutions for industrial and domestic applications. Space saving modular design is ideal for installation in distribution cabinet.

**Features**

- One device up to 10 functions
- PWM type switching power supply
- Multivoltage of DC 12V , 24V and AC 24~250V
- 10 time ranges from 0.1s to 10days for selection
- 1 changeover contact with capacity of 16A
- 2 LEDs for power and operation indication
- Enclosure color light grey in RAL 7035
- Modular design with width of 18mm
- TH 35 DIN rail mounting

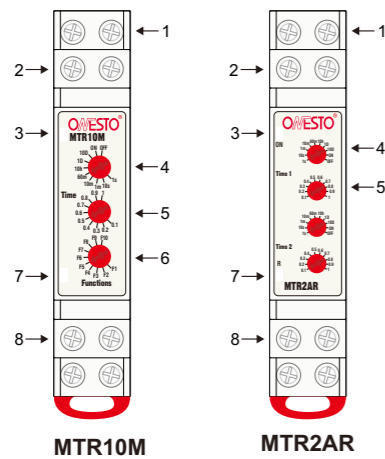
**Time scale range**



- 1s : 0.1-1s
- 10s : 1s-10s
- 1m : 6s-1m
- 10m : 1m-10m
- 60m : 6m-1h
- 10h : 1h-10h
- 1D : 0.1-1Day
- 10D : 1-10Days
- ON : ON
- OFF : OFF

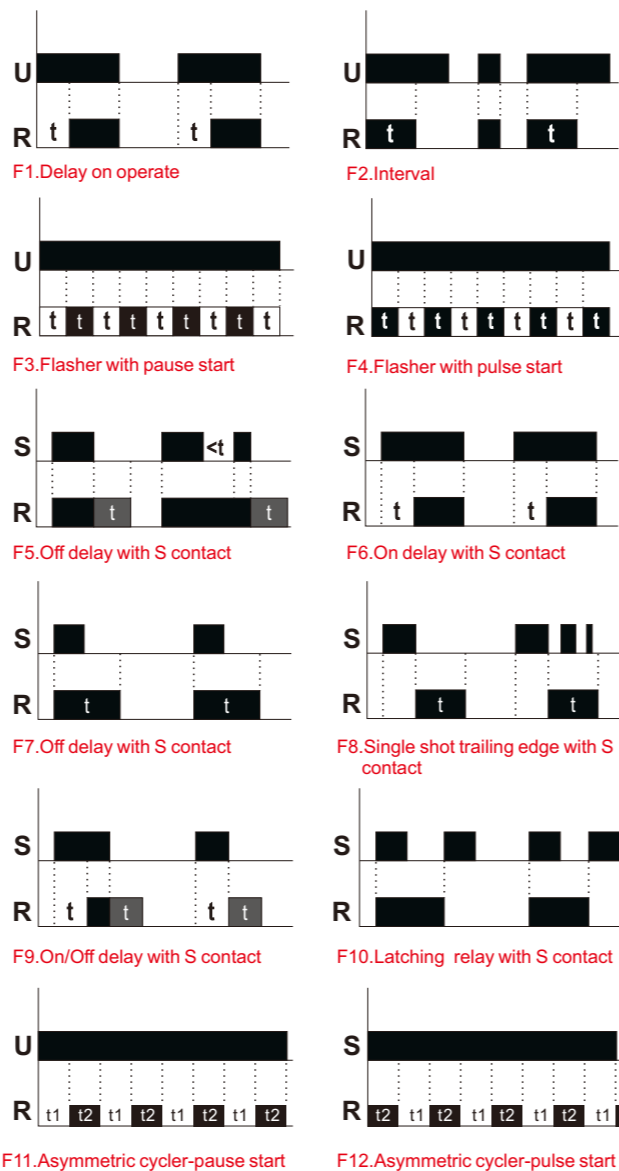
**Panel Description**

1. Power Supply Terminal
2. Control Input Terminal
3. Power Indicator
4. Time Setup
5. Time Multiplier Setup
6. Function Selection
7. Output State Indicator
8. Output Terminal



**Function Diagram**

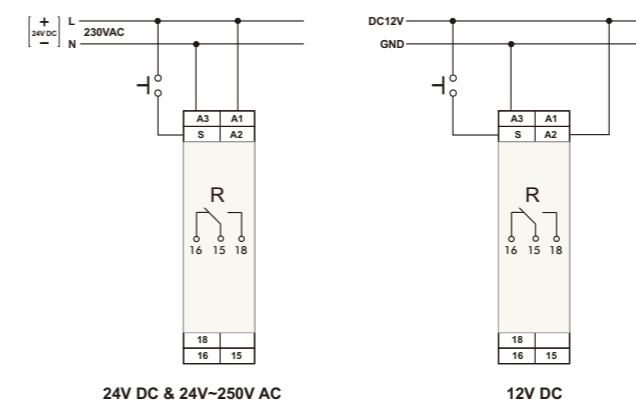
U: Input voltage  
S: control switch  
R: relay contact  
t : setting time



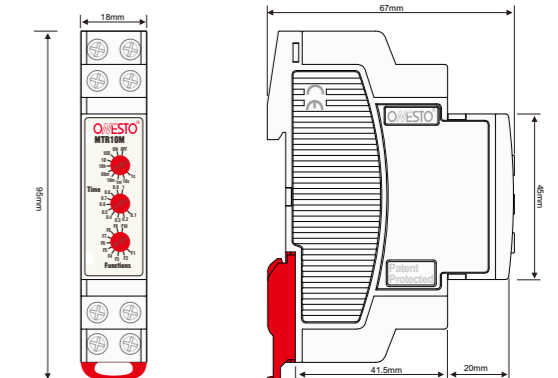
**Technical Data**

Type	MTR2N	MTR2F	MTR10M	MTR2AR
<b>Cat.no.</b>	270 01	270 02	270 03	270 04
<b>Input supply circuit</b>				
Rated supply voltage	12V DC ,24V DC ,24-250V AC			
Rated supply voltage tolerance	-15% to +10%			
Rated Frequency	DC, 50/60Hz			
Power Consumption	0.15W(12V DC) ,0.3W(24V DC) ,0.9VA(24-250V AC)			
Power failure buffering time	±100ms			
<b>Input control circuit</b>				
Rated control voltage	12V DC ,24V DC ,24-250V AC			
Power Consumption	0.15W(12V DC) ,0.3W(24V DC) ,0.9VA(24-250V AC)			
Minimum control time	±15ms			
<b>Timing circuit</b>				
Function Nos.	2	2	10	2
Function code				
F1-Delay on Operate	•	•	•	•
F2-Interval	•	•	•	•
F3-Flasher With Pause Start	•	•	•	•
F4-Flasher With Pulse Start	•	•	•	•
F5-Off Delay(S Contact)	•	•	•	•
F6-On Delay(S Contact)	•	•	•	•
F7-Single Shot(S Contact)	•	•	•	•
F8-Single Shot Trailing Edge(S)	•	•	•	•
F9-On-Off Delay(S Contact)	•	•	•	•
F10-Latching Relay(S Contact)	•	•	•	•
F11-Asymmetric cyler-pulse start	•	•	•	•
F12-Asymmetric cyler-pulse start	•	•	•	•
Time ranges	0.1-1s , 1s-10s , 6s-1m , 1m-10m , 6m-1h , 1h-10h , 0.1-1Day , 1-10Days , ON , OFF			
Recovery time	100ms			
Accuracy within voltage tolerance	±0.01%			
Accuracy within the temperature range	±0.2%			
Operation indication	Supply voltage : green		Relay status : blue	
<b>Output circuits</b>				
Type of output	1 C/O contact, NO/NC			
Rated operation voltage	12V DC ,24V DC ,24-250V AC			
Rated operation current	16A(resistive load at 230V)			
Mechanical lifetime	10 <sup>5</sup>			
Electrical lifetime	30X10 <sup>6</sup>			
<b>General data</b>				
Rated insulation voltage	250V			
Rated impulse withstand voltage	4Kv			
Operation Temperature	-20 to 60°			
Storage Temperature	-20 to 80°			
Relative humidity	±90% RH			
Maximum pollution degree	2			
Overvoltage category	3			
Max.diameter of inlet wire	4mm <sup>2</sup>			
Tightening torque	0.8Nm			
Mounting position	Vertical / Horizontal			
Mounting	TH35 DIN rail mounting (35x7.5mm)			
Degree of protection	Enclosure : IP40		Terminal : IP20	
Dimension (H x W x D)	95x18x67mm			
Weight	80g			
Standards	IEC/EN 60947-5-1			

**Typical Connection**



**Dimension**





270 11

**STR30**

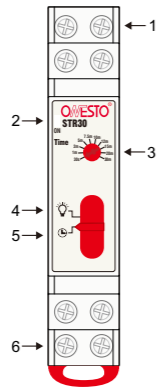
The staircase time relay is used to control lighting devices automatically for the present time on staircases and corridors. It has three wires or four wires connection with max. load of 2000W.

**Features**

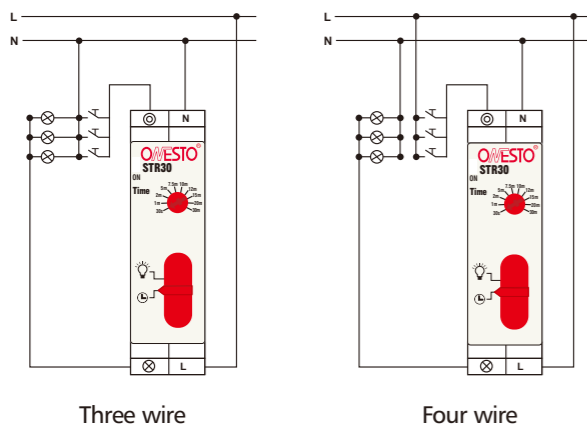
- 10 time ranges from 30s to 30m for selection
- 1 changeover contact with capacity of 16A
- LED indication for power supply
- Enclosure color light grey in RAL 7035
- Modular design with width of 18mm
- TH 35 DIN rail mounting

**Panel Description**

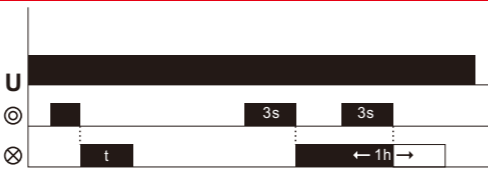
1. Supply Terminal
2. Power Indicator
3. Time Setup
4. Constant Lighting
5. Timed Lighting
6. Output Terminal



**Typical Connection**



**Function Diagram**



Type	STR30
<b>Cat.no.</b>	270 11
<b>Input supply circuit</b>	
Rated supply voltage	230V AC
Rated supply voltage tolerance	-15% to +10%
Rated Frequency	50/60Hz
Power consumption	1.6W Max
<b>Input control circuit</b>	
Rated control voltage	230V AC
Power consumption	0.9VA
Minimum control time	£15ms
<b>Types of load</b>	
Incandescent	2000W (Max)
Halogen	2000W (Max)
Fluorescent	112uF 1000W (Max)
Electronic transformer	2000W (Max)
Compact fluorescent	400W (Max)
<b>Output circuits</b>	
Type of output	1 C/O contact, NO/NC
Rated operation voltage	220-240V AC
Rated operation current	16A
Mechanical lifetime	10 <sup>5</sup>
Electrical lifetime	30X10 <sup>5</sup>
<b>General data</b>	
Time ranges	30s, 1m, 2m, 5m, 7.5m, 10m, 12m, 15m, 20m, 30m
Supply indication	Green
Rated insulation voltage	250V
Rated impulse withstand voltage	4Kv
Operation Temperature	-20 to 60°C
Storage Temperature	-20 to 80°C
Relative humidity	≤90% RH
Maximum pollution degree	2
Overvoltage category	3
Max.diameter of inlet wire	4mm <sup>2</sup>
Tightening torque	0.8Nm
Mounting position	Vertical / Horizontal
Mounting	TH35 DIN rail mounting (35x7.5mm)
Degree of protection	Enclosure : IP40 Terminal : IP20
Dimension (H x W x D)	95x18x67mm
Weight	75g
Standards	IEC/EN 60947-5-1



270 21

270 22

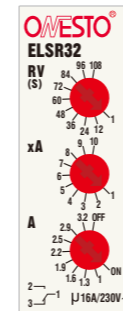
**ELSR32 & ELSR5**

ELSR series shed relay is used to transfer switch the electrical equipments when the set point current is exceeded. It will switch off the non-essential loads to ensure normal working of critical consumer when overload current occurs.

**Feature**

- Manual selection of measuring current from 1A to 32A and restoring time from 1S to 108S.
- 1 CO contact potential free 16A/230V AC. Standby loss 0.98 watt only.
- State-of-the-art hybrid technology combines advantages of non-wearing electronic control with high capacity of special relays.
- The measuring input M1-M2 is electrically isolated from power supply L-N and make contact 1(L)-2/3.
- Measuring current larger than 32A can be adapted by an external measuring transformer.
- Modular device for DIN-EN 60715 TH35 rail mounting.

**Function rotary switches**



**OFF delay RV** can be set with the upper latching rotary switch RV between 1 and 108 secs.

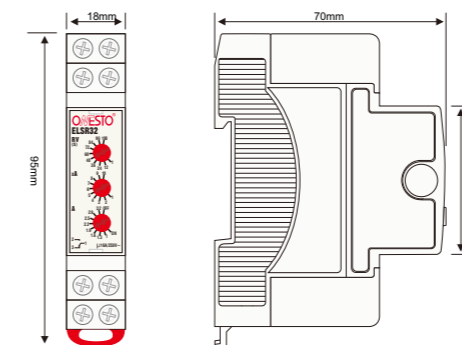
The **multiplier xA** will be set with the middle latching rotary switch xA and offers values between 1 and 10. So currents starting from 1A (basis of 1A and multiplier of 1) can be set.

The **basis of current A** will be set with the lower rotary switch A. the following basic values can be selected: 1A, 1.3A, 1.6A, 1.9A, 2.2A, 2.5A, 2.9A and 3.2A.

When ON is selected, consumer(geyser) switches on and consumer(other) switches off.

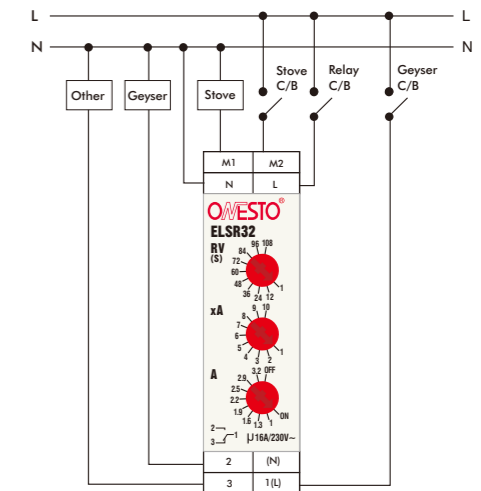
when OFF is selected, consumer(geyser) switches off and consumer(other) switches on.

**Dimension**



Type	ELSR32	ELSR5
<b>Cat.no.</b>	270 21	270 22
Measuring current	1-32A (Adjustable)	5A (Non-adjustable)
Rated switch capacity	16A	
Rated Voltage (Ue)	230VAC	
Rated Frequency	50/60Hz	
Adjustment accuracy	± 3%	
Restoring Time	1 to 108s (Adjustable)	
Standby loss	0.98W	
Load of Incandescent lamp and Halogen Lamp (Max 220W)	3600W	
Load of Fluorescent lamp	1600VA	
Ambient Temperature	-20 to 55°C	
Electrical Life	6000	
Protection Class	IP20	
Mounting	TH35 rail mounting (35x7.5mm)	
Mounting Position	Vertical / Horizontal	
Terminal Capacity	6mm <sup>2</sup>	
Weight	80.7g	
Dimension	95X70X18mm	
Standard conformity	IEC 60947-6 / IEC 60947-3	

**Typical Connection**





270 31

270 32

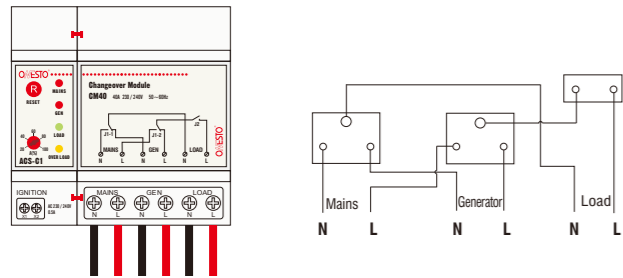
**ACS-C1 CM40 & ACS-C140**

ACS series is an automatic changeover switch between mains supply and backup generator. When mains supply fails, ACS will switch on the generator to provide temporary power for essential circuits. ACS is designed with overload protection so that it provides power only to optional priority circuit.

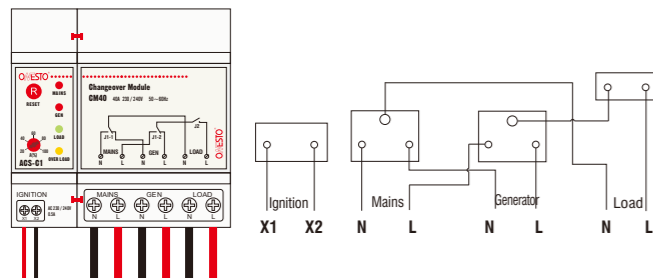
**Features**

- Automatic changeover micro-controller with neutral isolation.
- Built-in SMPS for low energy consumption .
- LED indication for operation status .
- Manual reset for supply restoring in sleep mode.
- Manual current setting from 20% to 100% of rated current.
- Automatic generator on/off ignition.

**Wiring**



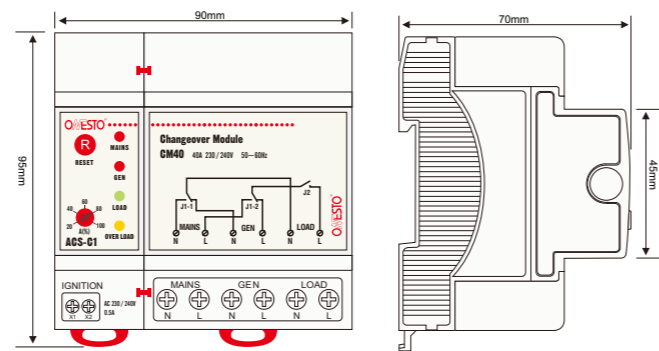
**ACS without Generator on/off controller**



**ACS with Generator on/off controller**

Type	ACS-C1 CM40	ACS-C140
Cat.no.	270 31	270 32
No. of Poles	1P+N	
Rated Current (In)	8-40A (Adjustable) on Mains , 6-30 A (Adjustable) on Generator	40A on Mains (Non-adjustable) , 30 A on Generator (Non-adjustable)
Rated Voltage (Ue)	230VAC	
Rated Frequency	50/60Hz	
Rated insulation voltage	500V	
Restoring Time	10 to 13s	
Dielectric strength	2.0kV	
Utilization Category	AC 21A (IEC 60947-3) / AC 31B (IEC 60947-6)	
Class of Equipment	PC	
Environment	B	
Indication	Main Supply/ Generator/Load/ Overload	
Ambient Temperature	-5 to 55 °C	
Electrical Life	6000	
Rated Impulse Voltage	1.5kV	
Duty	uninterrupted	
Pollution Degree	2	
Conditional Short	3kA Circuit breaking capacity	
Protection Class	IP20	
Mounting	standard mounting DIN RAIL (35x7.5mm)	
Mounting Position	Vertical / Horizontal	
Terminal Capacity	10mm <sup>2</sup>	
Weight	353g	
Standard conformity	IEC 60947-6 / IEC 60947-3	

**Dimension**



270 33

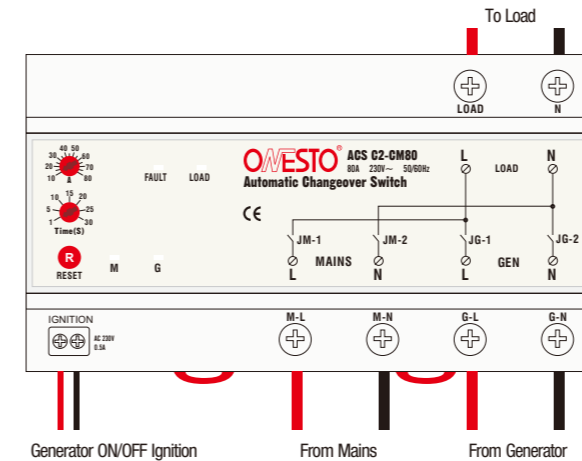


270 34

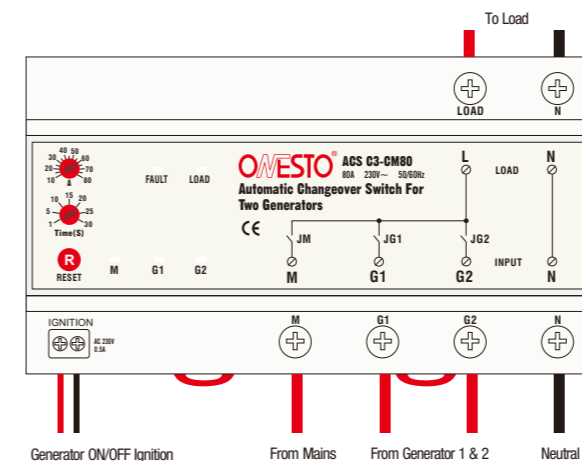
**Features**

- For one or two generators connection
- 10A-80A adjustable current
- 1s-30s adjustable restoring delay time
- Operation status with LED indication
- Automatic Generator ON/OFF ignition
- Reliable operation and durable life

**Wiring**



**ACS C2-CM80**



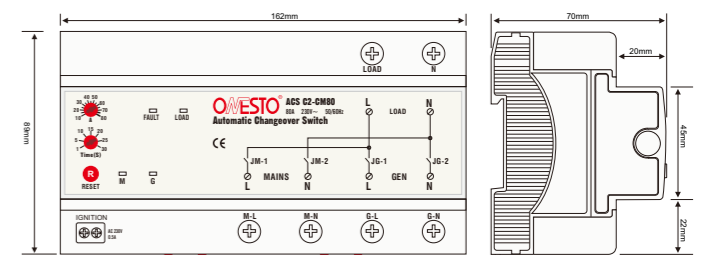
**ACS C3-CM80**

**Discription**

ACS is an automatic changeover switch between Mains supply and backup Generators. When Mains supply fails, ACS will shift the supply on the Generator after 3 seconds to provide temporary power for essential circuits. When the Mains supply resumes, ACS will shift the supply back to Mains after preset time delay.

Type	ACS C2-CM80	ACS C3-CM80
Cat.no.	270 33	270 34
No. of Poles	1P+N	
No. of Generator Connection	1	2
Rated Current	10A-80A Adjustable ( Mains & Generator )	
Rated Voltage	230V AC	
Operating Voltage Range	0.75 – 1.15 of Un	
Rated Frequency	50/60Hz	
Power Consumption	4.5VA , 230V AC	
Rated Insulation Voltage	500V	
Rated Impulse Voltage	1.5kV	
Dielectric Strength	2.0kV	
Duty	Uninterrupted	
LED Indication	Mains: Blue , Generator: Blue , Load: Green , Fault: Red	
Changeover Delay Time	Mains to Generator: 3s , G1 to G2: 3s , Generator to Mains: 1-30s Adjustable	
Changeover Line	Live and Neutral Line	Live Line
Switching Capacity	80A @ 230V AC ( COS φ = 1 ) , 30A with inductive load COS φ = 0.6	
Utilization Category	AC 21A (IEC 60947-3) , AC 31B (IEC 60947-6)	
Ambient Temperature	-5 to 55 °C	
Pollution Degree	2	
Protection Class	IP20	
Mounting	DIN RAIL (35x7.5mm)	
Mounting Position	Horizontal , Vertical	
Weight	725g	670g
Terminal Capacity	16-25mm <sup>2</sup>	
Dimension	162 x 89 x 70mm	
Standard conformity	IEC 60947-6 / IEC 60947-3	

**Dimension**



PRONG & FORK TYPE BUSBARS



019 41



019 47



019 51



019 54

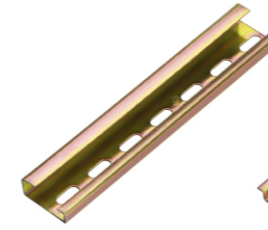
Prong-type busbars 63A 1.5mm thickness

Pack	Cat.nos.	Description	Length	Max. number of devices connected	
20 20	019 41 019 42	Universal single pole+neutral	1row Meter	13 57	
20 20	019 43 019 44	Double pole	1row Meter	6 28	
20 20	019 47 019 48	Triple pole	1row Meter	4 19	
20 20	019 49 019 50	Four pole	1row Meter	3 14	

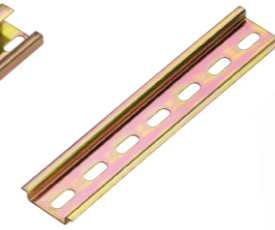
Fork-type busbars 63A 1.5mm thickness

Pack	Cat.nos.	Description	Length	Max. number of devices connected	
20 20	019 51 019 52	Single pole	1row Meter	12 57	
20	019 53	Double pole	Meter	28	
20 20	019 54 019 55	Triple pole	1row Meter	4 19	
20	019 56	Four pole	Meter	14	

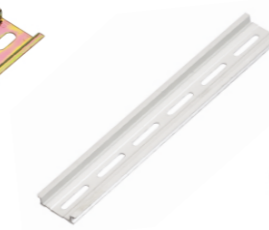
MOUNTING RAILS



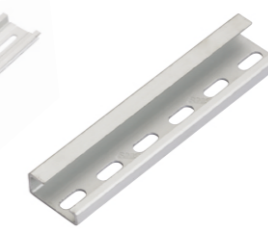
019 65



019 61



019 67



019 77



019 69

Mounting Rails

Pack	Cat.nos.	Description	Treatment	Thickness (mm)	Length	
20 20	019 61 019 62	DR35-7.5 DR35-7.5	Zinc bichromate Zinc bichromate	1 1	1 2	
20 20	019 63 019 64	DR35-7.5 DR35-7.5	Zinc bichromate Zinc bichromate	0.8 0.8	1 2	
20 20	019 65 019 66	DR32-18 DR32-18	Zinc bichromate Zinc bichromate	1.2 1.2	1 2	
20 20	019 67 019 68	DR35-7.5L DR35-7.5L	Aluminium Aluminium	1 1	1 2	
20 20	019 69 019 70	DR35-7.5L DR35-7.5L	Aluminium Aluminium	1.5 1.5	1 2	
20 20	019 71 019 72	DR32-15L DR32-15L	Aluminium Aluminium	1.5 1.5	1 2	
20 20	019 73 019 74	DR25-10L DR25-10L	Aluminium Aluminium	1.0 1.0	1 2	
20 20	019 75 019 76	DR25-7.5L DR25-7.5L	Aluminium Aluminium	1.0 1.0	1 2	
20 20	019 77 019 78	DR32-15L DR32-15L	Aluminium Aluminium	1.2 1.2	1 2	

**Performance of RCDS and RCBOS**

**Residual current devices**

A residual current device(RCCB)is the generic term for a device whichsimultaneously performs the functions of detection of the residual cur-rent,comparison of this value with the rated residual operating value and opening the protected circuit when the residual current exceedsthis value.

For fixed domestic installations and similar applications we have twoTypes:-

- . Residual current operated circuit-breaker without integral overcurrent protection(RCCB's)which should comply with the requirements of EN 61008.
- . Residual current operated circuit-breaker without integral overcurrent protection(RCCBi's)which should comply with the requirements of EN 61009.

Both RCCB's and RCBO's are further divided into types depending on their operating function:-

Type AC For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising. Marked with the symbol. ☒

Type A For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents ,whether suddenly applie dor slowly rising.Marked with the symbol. ☒

Type S For selectivity,with time-delay. Marked with the symbol. ☒

RCCB's must be protected against short-circuits by means of circui tbreakers or fuses.

RCBO's have their own in built short-circuit protection ,up to it's ratedValue.

The drawing opposite shows how a torroid is located around the lineand neutral conductors to measure the magnetic fields created by thecurrent flowing in these conductors.The sum of the magnetic fields setup by these currents(which takes into consideration both the magnitudeand phase relationship of the currents)is detected by the torroid.In a normal healthy circuit the vector sum of the current values addedtogether will be zero .Current flowing to earth,due to a line earth fault,will return via the earth conductor,and regardless of load conditionswill register as a fault.This current flow will give rise to a residual current(Ires)which will be detected by the device.

It is most important that the line and neutral conductors are passed through the torroid,A common cause of nuisance operation is the failureto connect the neutral through the device.

RCCBs work just as well on three phase or three phase and neutral circuits,but when the neutral is distributed it must pass through thetorroid.

RCCBs are not suitable for use on DC systems and unearthed networks.

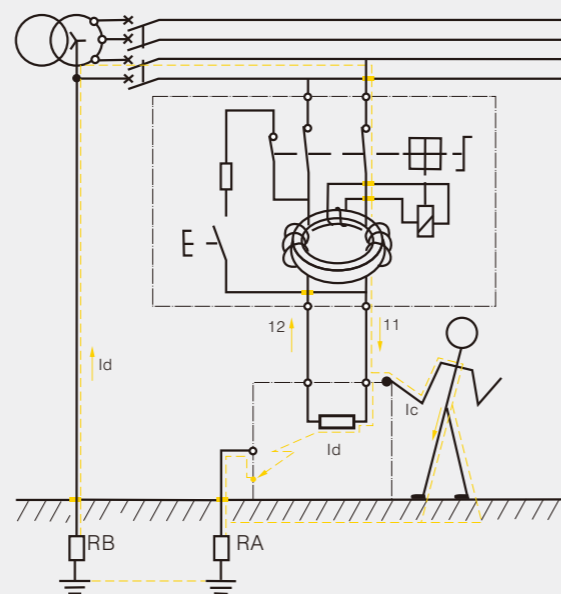
RCCBs can be installed in two ways:

1. whole house protection
- 2.selective protection.

**RCCBs-domestic installation**

Whole house protection is provided typically by a consumer unit where the RCCB device serves as the main switch. Although very popular this suffers form a disadvantage: all circuits are disconnected in theevent of fault. Selective protection can be provided by associating the RCCB with identified high risk circuits by adopting one or more of the following;

**Principle**



Current flowing through torroid in healthy circuit  
 $I_{res} = I_1 - I_2 = 0$   
 Current flowing through torroid in circuit with earth fault I3  
 $I_{res} = I_1 - I_2 + I_3 = I_3$

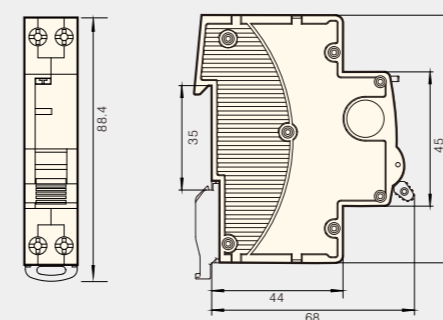
Type AC or Type A

**Electrical characteristics**

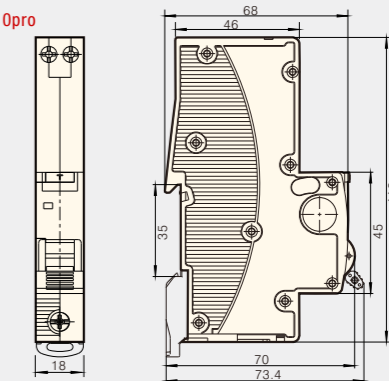
Model	KRCS2 pro	KRCS6pro	KRCS10pro	KRC2-N	KRCE5	KRC3	KRC6N	KRC3-100
Standard	IEC/EN61009-1	IEC/EN61009-1	IEC/EN61009-1	IEC/EN61009-1	IEC/EN61009-1	IEC/EN61008-1	IEC/EN61008-1	IEC/EN61008-1
Protection	Earth leakage and over current	Earth leakage and over current	Earth leakage and over current	Earth leakage and over current	Earth leakage and over current	Earth leakage	Earth leakage	Earth leakage
Time delay	without	without	without	without	without	Type S	Type S	Type S
Rated current,In	6,10,16,20,25,32,40A	6,10,16,20,25,32,40A	6,10,16,20,25,32,40A	6,10,16,20,25,32,40A	6, 10, 16, 20, 32, 40A	16,25,40,63A	16,25,40,63,80A	63,80,100A
Number of poles	1P+N	1P+N	1P+N	1P+N	1P+N	2(1P+N),4(3P+N)pole	2(1P+N),4(3P+N)pole	2(1P+N),4(3P+N)pole
Rated sensitivity currents,I'n	10,30mA	10,30,100,300mA	10,30,100,300mA	10,30,100,300mA	10,30mA	10,30,100,300mA	10,30,100,300mA	30,100,300mA
Rated residual	0.5 X IΔn	0.5 X IΔn	0.5 X IΔn	0.5 X IΔn	0.5 X IΔn	0.5 X IΔn	0.5 X IΔn	0.5 X IΔn
Rated voltages	2pole 4pole 230 / 240VAC	230 / 240VAC	230 / 240VAC	240VAC	240VAC	240VAC	240VAC	240VAC
Residual current off-time at I'n	≥ 0,1s	≥ 0,1s	≥ 0,1s	≥ 0,1s	≥ 0,1s	≥ 0,1s	≥ 0,1s	≥ 0,1s
Rated making capacity,Im	500A for In=6,10,16, 20,25,32A	500A for In=6,10,16, 20,25,32A	500A for In=25,32,40A	500A for In=6,10,16, 20,25,32A	500A for In=25,32,40A	500A for In=25,32,40A 630A for In=63,80A	500A for In=25,32,40A 630A for In=63,80,100A	500A for In=25,32,40A 630A for In=63,80,100A
Rated conditional short-circuit current,Iinc	1500A for In=25,32, 40A	1500A for In=25,32, 40A	1500A for In=25,32,40A	1500A for In=25,32, 40A	1500A for In=25,32,40A	1500A for In=25,32,40A 3000A for In=63A	1500A for In=25,32,40A 3000A for In=63A	1500A for In=25,32,40A 3000A for In=63A
Type of trip	Electro release	Electro release	Electro release	Electro release	Electro release	Electro-magnetec release	Electro-magnetec release	Electro-magnetec release
Type of terminal	Pillar terminal	Pillar terminal	Pillar terminal	Pillar terminal	Pillar terminal	Pillar terminal	Pillar terminal	Pillar terminal
Terminal capacity	Cables up to 35mm <sup>2</sup>	Cables up to 35mm <sup>2</sup>	Cables up to 35mm <sup>2</sup>	Cables up to 35mm <sup>2</sup>	Cables up to 35mm <sup>2</sup>	Cables up to 35mm <sup>2</sup>	Cables up to 35mm <sup>2</sup>	Cables up to 35mm <sup>2</sup>
Installation	35mm DIN rail	35mm DIN rail	35mm DIN rail	35mm DIN rail	35mm DIN rail	35mm DIN rail	35mm DIN rail	35mm DIN rail
Slot size	45mm	45mm	45mm	45mm	45mm	45mm	45mm	45mm

**Dimensions**

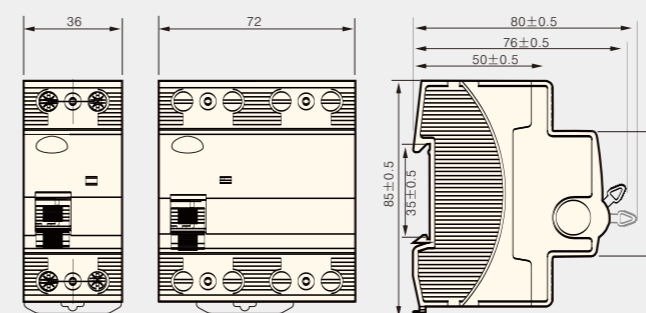
KRCS2pro



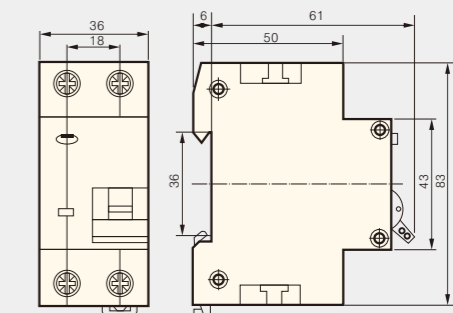
KRCS6pro & KRCS10pro



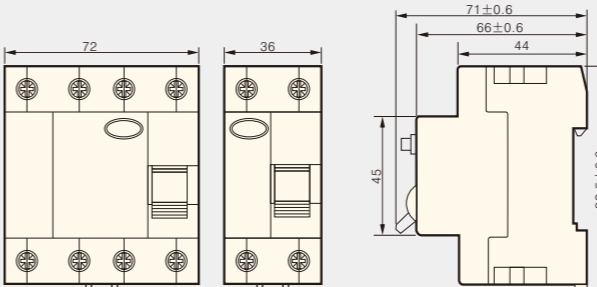
KRC6N



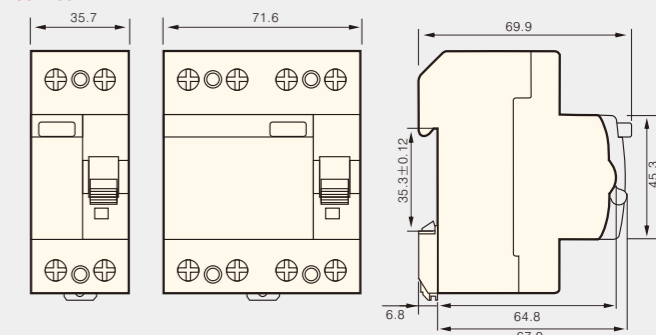
KRCE5:



KRC3:



KRC3-100

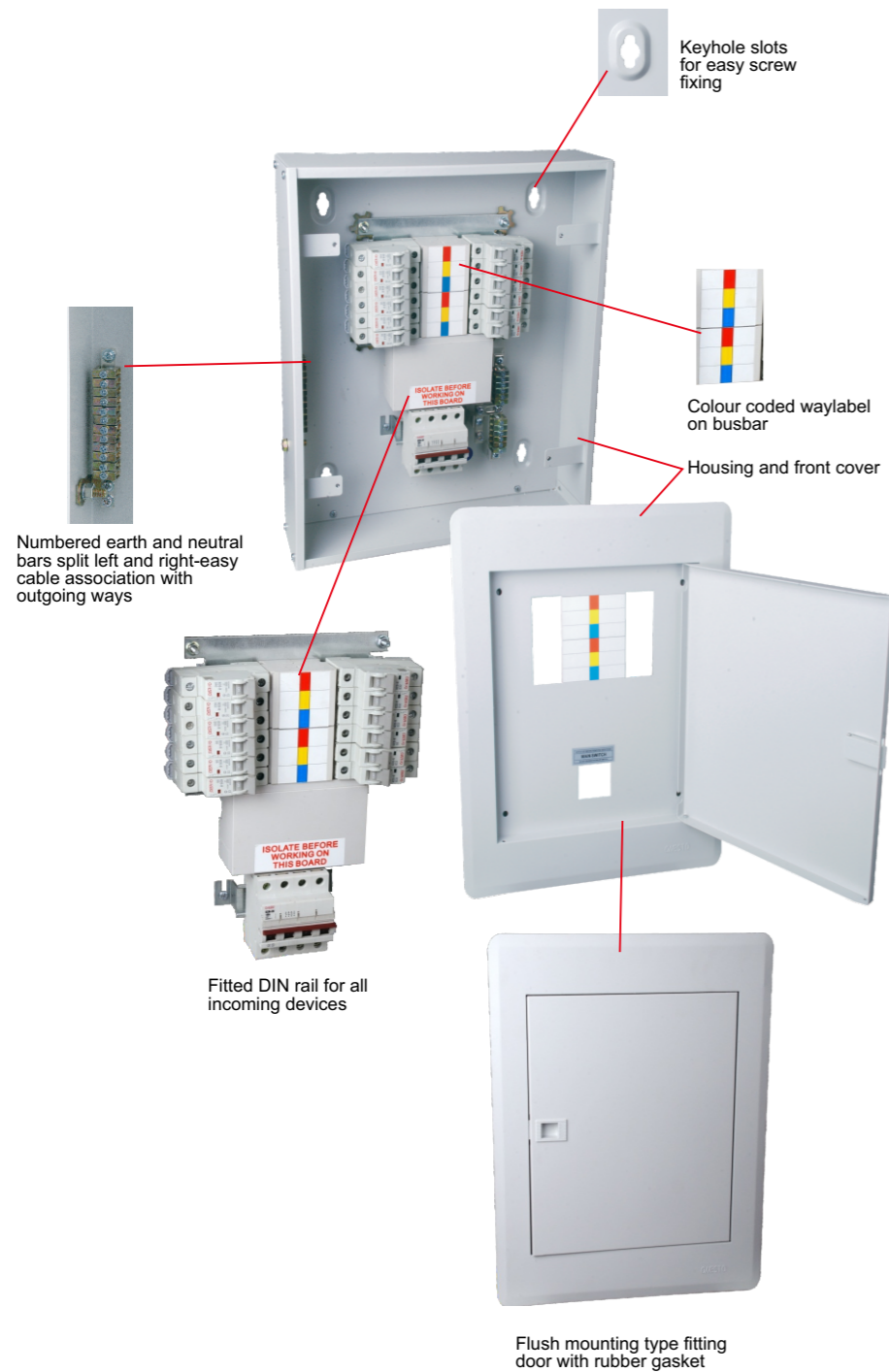




**The best choice in the market**

**Features**

- All distribution boards are supplied complete with pan assembly, neutral bar, earth bar and din rail
- Available in 4, 6, 8, 10, 12, 14, 16 & 18way and more TP outgoing ways
- Clean earth mounting kit provided with every distribution board
- Manufactured from 1.2mm steel for maximum strength
- Raised mounting feet with key hole slots for easy fitting
- Removable two part pan assembly for greater wiring flexibility



**Consumer unit of flush and surface type**



090 13

090 13

Supplied with neutral and earth terminal  
 Made of galvanized steel with 1.2mm thickness  
 Busbar rating:100A  
 Electrostatic powder coated:RAL7035  
 MCB,RCD and ISOLATOR to be ordered separately  
 Conform to standard IEC/EN 61439-3

**Flush mounting type**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	090 01	MCU4F	262x207x102	4
1	090 02	MCU6F	262x242x102	6
1	090 03	MCU8F	262x277x102	8
1	090 04	MCU10F	262x312x102	10
1	090 05	MCU12F	262x347x102	12
1	090 06	MCU14F	262x382x102	14
1	090 07	MCU16F	262x417x102	16
1	090 08	MCU18F	262x452x102	18
1	090 09	MCU20F	262x487x102	20

**Surface mounting type**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	090 11	MCU4S	236.5x182x82	4
1	090 12	MCU6S	236.5x217x82	6
1	090 13	MCU8S	236.5x252x82	8
1	090 14	MCU10S	236.5x287x82	10
1	090 15	MCU12S	236.5x322x82	12
1	090 16	MCU14S	236.5x357x82	14
1	090 17	MCU16S	236.5x392x82	16
1	090 18	MCU18S	236.5x427x82	18
1	090 19	MCU20S	236.5x462x82	20

**Row type MCB distribution board**



091 93

091 93

Supplied with neutral and earth terminal  
 Made of galvanized steel with 1.2mm thickness  
 14 module width  
 Index of protection: IP31 as per IEC 60529  
 Conform to standard IEC/EN 61439-3

**Flush mounting type**

Pack	Cat.nos.	Type	No of row	No of modules	Height (mm)	Width (mm)	Depth (mm)
1	091 91	RDB14F	1	14	330	430	99.5
1	091 92	RDB28F	2	28	480	430	99.5
1	091 93	RDB42F	3	42	630	430	99.5
1	091 94	RDB56F	4	56	780	430	99.5
1	091 95	RDB70F	5	70	930	430	99.5
1	091 96	RDB84F	6	84	1080	430	99.5

**Surface mounting type**

Pack	Cat.nos.	Type	No of row	No of modules	Height (mm)	Width (mm)	Depth (mm)
1	092 01	RDB14S	1	14	307	405	99.5
1	092 02	RDB28S	2	28	457	405	99.5
1	092 03	RDB42S	3	42	607	405	99.5
1	092 04	RDB56S	4	56	757	405	99.5
1	092 05	RDB70S	5	70	907	405	99.5
1	092 06	RDB84S	6	84	1057	405	99.5



**TPN MCB distribution board**



Rated operational voltage: 220VAC,380VAC  
 Rated insulation voltage: 500VAC  
 Rated frequency: 50Hz  
 Rated impulse withstand voltage: 4kV  
 Short-circuit withstand current:18kA-0.2S  
 Degree of protection:IP20  
 Busbar rating:125A,160A,200A for option  
 Supplied with neutral and earth terminal  
 Made of galvanized steel with 1.2mm thickness  
 Conform to standard IEC/EN 61439-3

Rated operational voltage: 220VAC,380VAC  
 Rated insulation voltage: 500VAC  
 Rated frequency: 50Hz  
 Rated impulse withstand voltage: 4kV  
 Short-circuit withstand current:18kA-0.2S  
 Degree of protection:IP20  
 Busbar rating:125A,160A,200A for option  
 Supplied with neutral and earth terminal  
 Made of galvanized steel with 1.2mm thickness  
 Conform to standard IEC/EN 61439-3

**TPN MCB board with main switch incoming-Surface type**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	090 21	TDB112MS	457x405x99.5	4
1	090 22	TDB118MS	511x405x99.5	6
1	090 23	TDB124MS	565x405x99.5	8
1	090 24	TDB130MS	619x405x99.5	10
1	090 25	TDB136MS	673x405x99.5	12
1	090 26	TDB142MS	727x405x99.5	14
1	090 27	TDB148MS	781x405x99.5	16
1	090 28	TDB154MS	835x405x99.5	18
1	090 29	TDB164MS	889x405x99.5	20
1	090 30	TDB166MS	943x405x99.5	22
1	090 31	TDB172MS	997x405x99.5	24

**TPN MCB board with main switch & RCD incoming Surface type  
(for 125A switch)**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	090 41	TDB112RMS	457x405x99.5	4
1	090 42	TDB118RMS	511x405x99.5	6
1	090 43	TDB124RMS	565x405x99.5	8
1	090 44	TDB130RMS	619x405x99.5	10
1	090 45	TDB136RMS	673x405x99.5	12
1	090 46	TDB142RMS	727x405x99.5	14
1	090 47	TDB148RMS	781x405x99.5	16
1	090 48	TDB154RMS	835x405x99.5	18
1	090 49	TDB164RMS	889x405x99.5	20
1	090 50	TDB166RMS	943x405x99.5	22
1	090 51	TDB172RMS	997x405x99.5	24

**TPN MCB board with main switch incoming-Flush type**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	091 21	TDB112MF	480x430x106.5	4
1	091 22	TDB118MF	534x430x106.5	6
1	091 23	TDB124MF	588x430x106.5	8
1	091 24	TDB130MF	642x430x106.5	10
1	091 25	TDB136MF	696x430x106.5	12
1	091 26	TDB142MF	750x430x106.5	14
1	091 27	TDB148MF	804x430x106.5	16
1	091 28	TDB154MF	858x430x106.5	18
1	091 29	TDB164MF	912x430x106.5	20
1	091 30	TDB166MF	966x430x106.5	22
1	091 31	TDB172MF	1020x430x106.5	24

**TPN MCB board with main switch & RCD incoming Flush type  
(for 125A switch)**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	091 41	TDB112RMF	480x430x106.5	4
1	091 42	TDB118RMF	534x430x106.5	6
1	091 43	TDB124RMF	588x430x106.5	8
1	091 44	TDB130RMF	642x430x106.5	10
1	091 45	TDB136RMF	696x430x106.5	12
1	091 46	TDB142RMF	750x430x106.5	14
1	091 47	TDB148RMF	804x430x106.5	16
1	091 48	TDB154RMF	858x430x106.5	18
1	091 49	TDB164RMF	912x430x106.5	20
1	091 50	TDB166RMF	966x430x106.5	22
1	091 51	TDB172RMF	1020x430x106.5	24

**TPN MCB distribution board**



Rated operational voltage: 220VAC,380VAC  
 Rated insulation voltage: 500VAC  
 Rated frequency: 50Hz  
 Rated impulse withstand voltage: 4kV  
 Short-circuit withstand current:18kA-0.2S  
 Degree of protection:IP20  
 Busbar rating:125A,160A,200A for option  
 Supplied with neutral and earth terminal  
 Made of galvanized steel with 1.2mm thickness  
 Conform to standard IEC/EN 61439-3

Rated operational voltage: 220VAC,380VAC  
 Rated insulation voltage: 500VAC  
 Rated frequency: 50Hz  
 Rated impulse withstand voltage: 4kV  
 Short-circuit withstand current:18kA-0.2S  
 Degree of protection:IP20  
 Busbar rating:125A,160A,200A for option  
 Supplied with neutral and earth terminal  
 Made of galvanized steel with 1.2mm thickness  
 Conform to standard IEC/EN 61439-3

**TPN MCB board with main switch & RCD incoming  
Surface type (for 125A switch)-Split bar**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	090 81	TDB022S	619x405x99.5	2+2
1	090 82	TDB042S	673x405x99.5	4+2
1	090 83	TDB044S	727x405x99.5	4+4
1	090 84	TDB062S	727x405x99.5	6+2
1	090 85	TDB064S	781x405x99.5	6+4
1	090 86	TDB066S	835x405x99.5	6+6
1	090 87	TDB084S	835x405x99.5	8+4
1	090 88	TDB086S	889x405x99.5	8+6
1	090 89	TDB088S	943x405x99.5	8+8
1	090 90	TDB124S	943x405x99.5	12+4

**TPN MCB board with MCCB &RCD incoming Surface type**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	090 61	TDB112MMS	673x405x99.5	4
1	090 62	TDB118MMS	727x405x99.5	6
1	090 63	TDB124MMS	781x405x99.5	8
1	090 64	TDB130MMS	835x405x99.5	10
1	090 65	TDB136MMS	889x405x99.5	12
1	090 66	TDB142MMS	943x405x99.5	14
1	090 67	TDB148MMS	997x405x99.5	16
1	090 68	TDB154MMS	1051x405x99.5	18
1	090 69	TDB160MMS	1105x405x99.5	20
1	090 70	TDB166MMS	1159x405x99.5	22
1	090 71	TDB172MMS	1213x405x99.5	24

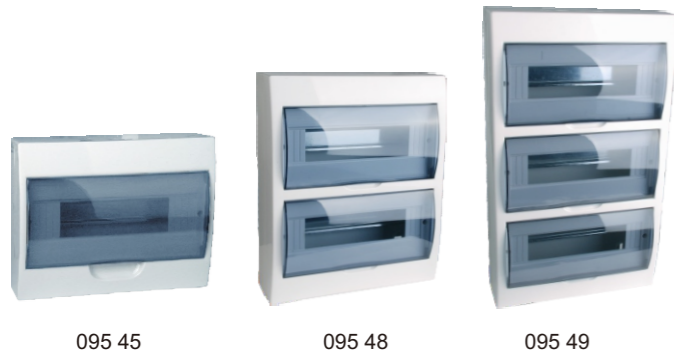
**TPN MCB board with main switch & RCD incoming  
Flush type (for 125A switch)-Split bar**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	091 81	TDB022F	642x430x106.5	2+2
1	091 82	TDB042F	696x430x106.5	4+2
1	091 83	TDB044F	750x430x106.5	4+4
1	091 84	TDB062F	750x430x106.5	6+2
1	091 85	TDB064F	804x430x106.5	6+4
1	091 86	TDB066F	858x430x106.5	6+6
1	091 87	TDB084F	858x430x106.5	8+4
1	091 88	TDB086F	912x430x106.5	8+6
1	091 89	TDB088F	966x430x106.5	8+8
1	091 90	TDB124F	966x430x106.5	12+4

**TPN MCB board with MCCB &RCD incoming Flush type**

Pack	Cat.nos.	Type	Description (HxWxD) Overall with coverdoor	No. of way
1	091 61	TDB112MMF	696x430x106.5	4
1	091 62	TDB118MMF	750x430x106.5	6
1	091 63	TDB124MMF	804x430x106.5	8
1	091 64	TDB130MMF	858x430x106.5	10
1	091 65	TDB136MMF	912x430x106.5	12
1	091 66	TDB142MMF	966x430x106.5	14
1	091 67	TDB148MMF	1020x430x106.5	16
1	091 68	TDB154MMF	1074x430x106.5	18
1	091 69	TDB160MMF	1128x430x106.5	20
1	091 70	TDB166MMF	1182x430x106.5	22
1	091 71	TDB172MMF	1236x430x106.5	24

**Row Type Modular Enclosure**



Body material: plastic PP or ABS  
Transparent cover material: PC  
Protection degree: IP20  
Supplied with neutral and earth terminal  
Conform to standard IEC/EN 61439-3

**Surface mounting type**

Pack	Cat.nos.	Type	Description (HxWxD) mm Overall with coverdoor	No. of module	No. of row
1	095 40	DB3-3W-PS	148x94x85	3	1
1	095 41	DB3-4W-PS	200x111x93	4	1
1	095 42	DB3-6W-PS	200x149x93	6	1
1	095 43	DB3-8W-PS	200x185x93	8	1
1	095 44	DB3-10W-PS	200x221x93	10	1
1	095 45	DB3-12W-PS	200x257x93	12	1
1	095 46	DB3-15W-PS	200x311x93	15	1
1	095 47	DB3-18W-PS	222x363x100	18	1
1	095 48	DB3-24W-PS	328x270x101	24	2
1	095 49	DB3-36W-PS	458x270x103	36	3

**Flush mounting type**

Pack	Cat.nos.	Type	Description (HxWxD) mm Overall with coverdoor	No. of module	No. of row
1	095 50	DB3-3W-PF	148x94x85	3	1
1	095 51	DB3-4W-PF	221x136x90	4	1
1	095 52	DB3-6W-PF	221x172x90	6	1
1	095 53	DB3-8W-PF	221x208x90	8	1
1	095 54	DB3-10W-PF	221x244x90	10	1
1	095 55	DB3-12W-PF	221x280x90	12	1
1	095 56	DB3-15W-PF	221x334x90	15	1
1	095 57	DB3-18W-PF	251x398x99	18	1
1	095 58	DB3-24W-PF	350x300x101	24	2
1	095 59	DB3-36W-PF	480x300x103	36	3

**Distribution Boards**



Flush type  
Body material: ABS  
Transparent cover material: PC  
Protection degree: IP40  
Supplied with neutral and earth terminal  
Conform to standard IEC/EN 61439-3

**Opaque – White**

Pack	Cat.nos.	Type	Description (HxWxD) mm Overall with coverdoor	No. of module	No. of row
1	195 01	DB9-4	160x190x95.5	4	1
1	195 02	DB9-10	268x210x95.5	10	1
1	195 03	DB9-13	322x210x95.5	13	1
1	195 04	DB9-16	376x210x95.5	16	1
1	195 05	DB9-18	412x210x95.5	18	1
1	195 06	DB9-21	466x210x95.5	21	1
1	195 07	DB9-24	520x250x95.5	24	1
1	195 08	DB9-26	322x405x107.5	26	2
1	195 09	DB9-32	376x405x107.5	32	2
1	195 10	DB9-42	466x405x107.5	42	2
1	195 11	DB9-63	483x650x117.5	63	3

**Transparent**

Pack	Cat.nos.	Type	Description (HxWxD) mm Overall with coverdoor	No. of module	No. of row
1	295 01	DB9-4T	160x190x95.5	4	1
1	295 02	DB9-10T	268x210x95.5	10	1
1	295 03	DB9-13T	322x210x95.5	13	1
1	295 04	DB9-16T	376x210x95.5	16	1
1	295 05	DB9-18T	412x210x95.5	18	1
1	295 06	DB9-21T	466x210x95.5	21	1
1	295 07	DB9-24T	520x250x95.5	24	1
1	295 08	DB9-26T	322x405x107.5	26	2
1	295 09	DB9-32T	376x405x107.5	32	2
1	295 10	DB9-42T	466x405x107.5	42	2
1	295 11	DB9-63T	483x650x117.5	63	3

**Opaque – Gold**

Pack	Cat.nos.	Type	Description (HxWxD) mm Overall with coverdoor	No. of module	No. of row
1	395 01	DB9-4G	160x190x95.5	4	1
1	395 02	DB9-10G	268x210x95.5	10	1
1	395 03	DB9-13G	322x210x95.5	13	1
1	395 04	DB9-16G	376x210x95.5	16	1
1	395 05	DB9-18G	412x210x95.5	18	1
1	395 06	DB9-21G	466x210x95.5	21	1
1	395 07	DB9-24G	520x250x15.5	24	1
1	395 08	DB9-26G	322x405x107.5	26	2
1	395 09	DB9-32G	376x405x107.5	32	2
1	395 10	DB9-42G	466x405x107.5	42	2
1	395 11	DB9-63G	483x650x117.5	63	3

**IP65 Distribution Board**



**Features**

- Plug-in din rail for quick mounting.
- Knock-out cable entry on four sides.
- Lockable door with metal key for option.
- Fixing bracket for external wall mounting.
- Reversible door opening from left or right.
- Plug-in PE/N terminal bar for easy wiring.
- Quarter turn screw for quick release of cover.
- Adjustable din rail for perfect fitting of components.
- Detachable blank strip for covering unused position.
- Seal hole between base and cover provides more security.
- PE/N terminal bar can be fitted on top or bottom of the board.
- Made of fire resistant polycarbonate with UV protection.

**IP65 Distribution Board – WDB series**

Type	WDB4	WDB6	WDB9	WDB13	WDB26	WDB39	WDB52
Cat.no.	095 21	095 22	095 23	095 24	095 25	095 26	095 27
Number of module	4	6	9	13	26	39	52
No. of din rail	1	1	1	1	2	3	4
Protection degree (IEC60529)	IP65						
Impact resistance (IEC62262)	Ik08						
Rated insulation voltage	400V AC						
Electrical insulation	Class II						
Material	fire resistant polycarbonate with UV protection						
Body color	RAL 7035						
Ambient temperature	-25°C to +70°C						
Standard conformity	IEC/EN 62208						
Dimensions(HxWxD)mm	146x213x110	179x213x112	233x213x112	305x285x145	305x444x145	305x603x145	305x762x145
Cable entry	Top	3xM20	4xM20, 1xM20/M25	4xM16, 4xM20, 1xM16/M20/M32	4xM16, 4xM20, 2xM16/M20/M25, 1xM20/M25/M32	4xM16, 4xM20, 2xM16/M20/M25, 1xM20/M25/M32	4xM16, 4xM20, 2xM16/M20/M25, 1xM20/M25/M32
	Bottom	3xM20	4xM20, 1xM20/M25	4xM16, 4xM20, 1xM16/M20/M32	4xM16, 4xM20, 2xM16/M20/M25, 1xM20/M25/M32	4xM16, 4xM20, 2xM16/M20/M25, 1xM20/M25/M32	4xM16, 4xM20, 2xM16/M20/M25, 1xM20/M25/M32
	Each side	2xM16/M20	2xM16/M20	2xM16/M20	2xM16/M20	3xM16/M20	4xM16/M20



Multiple size cable entry



Quarter turn cover screw



Durable metal lock with key for option



Detachable blank strip

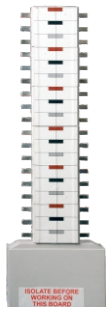


Security seal hole



Fixing bracket

Pan assembly with complete busbar of 125A, 160A, 200A



099 25

Rated operational voltage: 220VAC,380VAC  
 Rated insulation voltage: 500VAC  
 Rated frequency: 50Hz  
 Rated impulse withstand voltage: 4kV  
 Short-circuit withstand current: 18kA-0.2S  
 Busbar rating:125A,160A,200A for option  
 Busbar made of tinned copper  
 Thickness: 2.0mm,2.5mm,3.0mm  
 Conform to standard IEC/EN 61439-3

**Pan assembly with complete busbar of 125A**

Pack	Cat.nos.	Description
1	099 01	4 way 12 branches busbar
1	099 02	6 way 18 branches busbar
1	099 03	8 way 24 branches busbar
1	099 04	10 way 30 branches busbar
1	099 05	12 way 36 branches busbar
1	099 06	14 way 42 branches busbar
1	099 07	16 way 48 branches busbar
1	099 08	18 way 54 branches busbar

**Pan assembly with complete busbar of 160A**

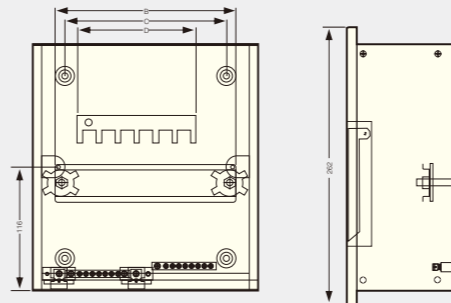
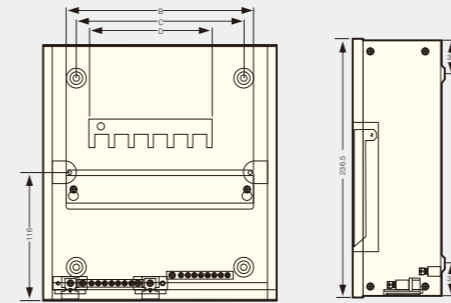
Pack	Cat.nos.	Description
1	099 21	4 way 12 branches busbar
1	099 22	6 way 18 branches busbar
1	099 23	8 way 24 branches busbar
1	099 24	10 way 30 branches busbar
1	099 25	12 way 36 branches busbar
1	099 26	14 way 42 branches busbar
1	099 27	16 way 48 branches busbar
1	099 28	18 way 54 branches busbar

**Pan assembly with complete busbar of 200A**

Pack	Cat.nos.	Description
1	099 11	4 way 12 branches busbar
1	099 12	6 way 18 branches busbar
1	099 13	8 way 24 branches busbar
1	099 14	10 way 30 branches busbar
1	099 15	12 way 36 branches busbar
1	099 16	14 way 42 branches busbar
1	099 17	16 way 48 branches busbar
1	099 18	18 way 54 branches busbar

**Consumer unit of flush and surface type**

Dimensions(mm)



**Flush mounting type**

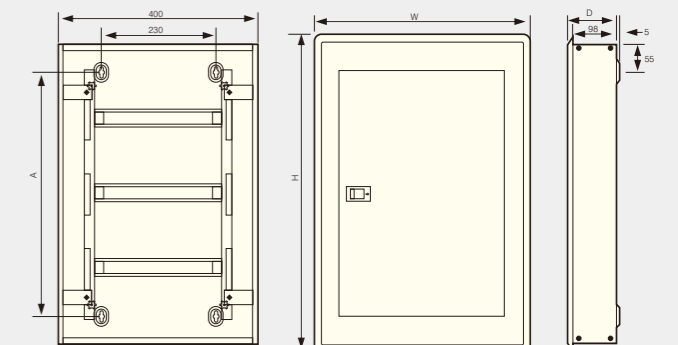
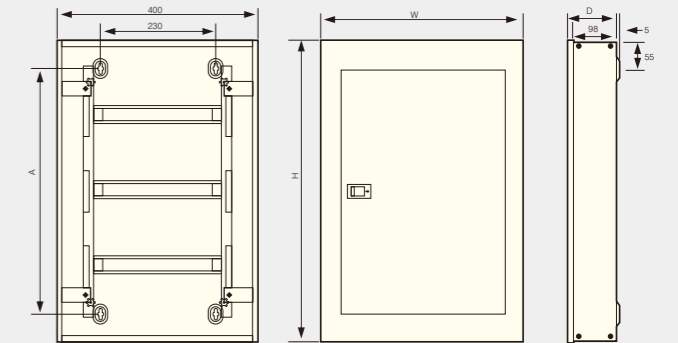
Cat.Nos	Way	A	B	C	D
090 01	4 way	207	134.5	152	76.2
090 02	6 way	242	169.5	177	111.8
090 03	8 way	277	204.5	187	147.4
090 04	10 way	312	239.5	222	183
090 05	12 way	347	274.5	257	218.6
090 06	14 way	382	309.5	292	254.2
090 07	16 way	417	344.5	327	289.8
090 08	18 way	452	379.5	362	325.4

**Surface mounting type**

Cat.Nos	Way	A	B	C	D
090 11	4 way	182	134.5	117	76.2
090 12	6 way	217	169.5	152	111.8
090 13	8 way	252	204.5	187	147.4
090 14	10 way	287	239.5	222	183
090 15	12 way	322	274.5	257	218.6
090 16	14 way	357	309.5	292	254.2
090 17	16 way	392	344.5	327	289.8
090 18	18 way	427	379.5	362	325

**Row type MCB distribution board (14 modules)**

Dimensions(mm)



**Flush mounting type**

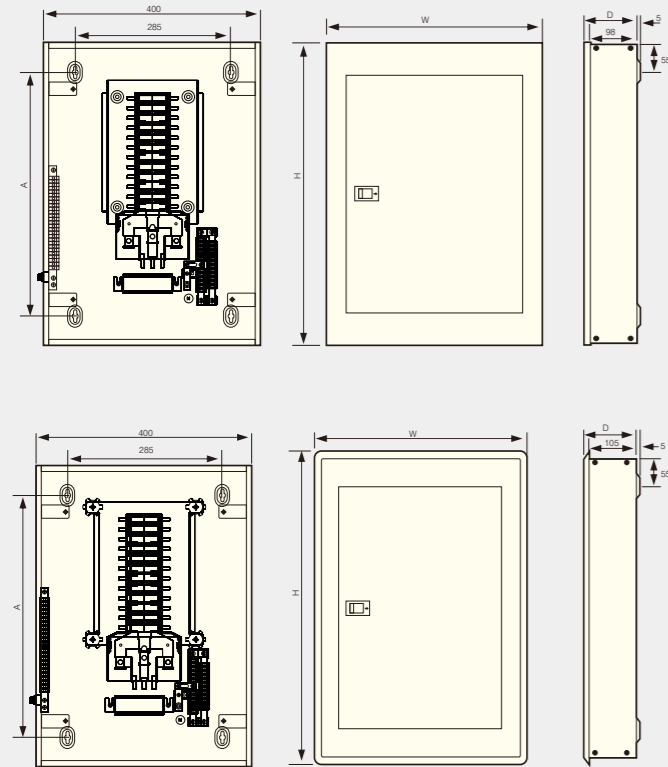
Cat.Nos	No of row	H	W	D	A
091 91	1	330	430	99.5	190
091 92	2	480	430	99.5	340
091 93	3	630	430	99.5	490
091 94	4	780	430	99.5	640
091 95	5	930	430	99.5	790
091 96	6	1080	430	99.5	940

**Surface mounting type**

Cat.Nos	No of row	H	W	D	A
092 01	1	307	405	99.5	190
092 02	2	457	405	99.5	340
092 03	3	607	405	99.5	490
092 04	4	757	405	99.5	640
092 05	5	907	405	99.5	790
092 06	6	1057	405	99.5	940

**TPN MCB board with main switch incoming  
Surface type & Flush type**

Dimensions(mm)



**TPN MCB board with main switch incoming-Surface type**

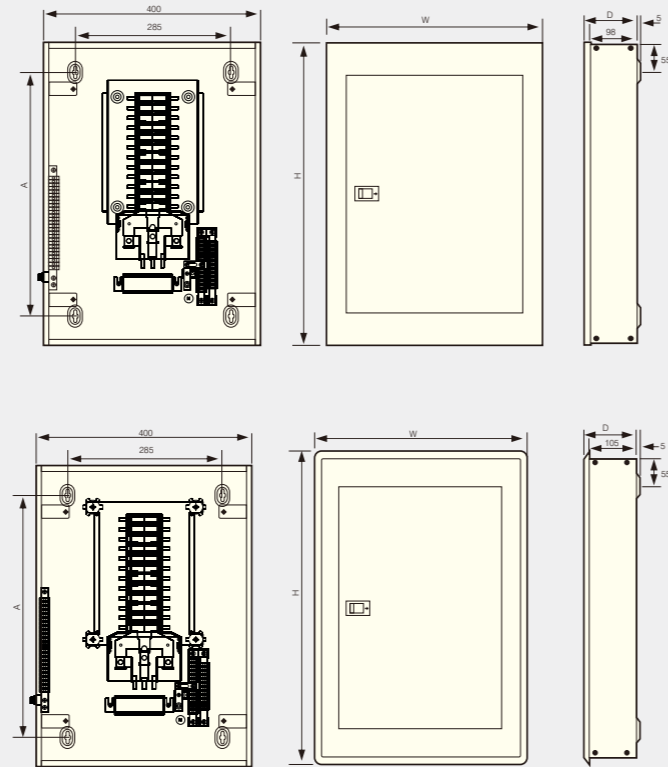
Cat.Nos	Way	H	W	D	A
090 21	4 way	457	405	99.5	340
090 22	6 way	511	405	99.5	394
090 23	8 way	565	405	99.5	448
090 24	10 way	619	405	99.5	502
090 25	12 way	673	405	99.5	556
090 26	14 way	727	405	99.5	610
090 27	16 way	781	405	99.5	664
090 28	18 way	835	405	99.5	718
090 29	20 way	889	405	99.5	772
090 30	22 way	943	405	99.5	826
090 31	24 way	997	405	99.5	880

**TPN MCB board with main switch incoming-Flush type**

Cat.Nos	Way	H	W	D	A
091 21	4 way	480	430	106.5	340
091 22	6 way	534	430	106.5	394
091 23	8 way	588	430	106.5	448
091 24	10 way	642	430	106.5	502
091 25	12 way	696	430	106.5	556
091 26	14 way	750	430	106.5	610
091 27	16 way	804	430	106.5	664
091 28	18 way	858	430	106.5	718
091 29	20 way	912	430	106.5	772
091 30	22 way	966	430	106.5	826
091 31	24 way	1020	430	106.5	880

**TPN MCB board with main switch & RCD incoming  
Surface type & Flush type (for 125A switch)**

Dimensions(mm)



**TPN MCB board with main switch & RCD incoming  
Surface type (for 125A switch)**

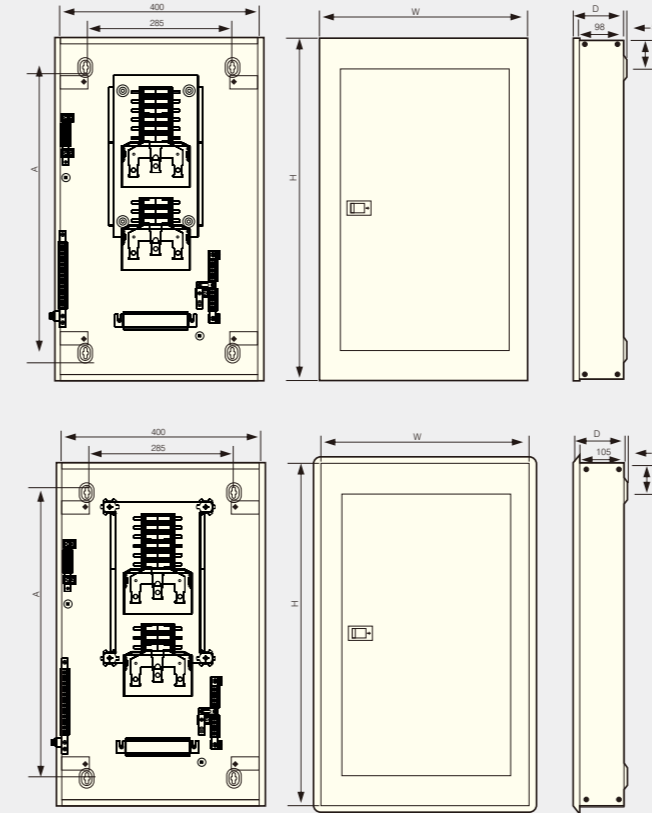
Cat.Nos	Way	H	W	D	A
090 41	4 way	457	405	99.5	340
090 42	6 way	511	405	99.5	394
090 43	8 way	565	405	99.5	448
090 44	10 way	619	405	99.5	502
090 45	12 way	673	405	99.5	556
090 46	14 way	727	405	99.5	610
090 47	16 way	781	405	99.5	664
090 48	18 way	835	405	99.5	718
090 49	20 way	889	405	99.5	772
090 50	22 way	943	405	99.5	826
090 51	24 way	997	405	99.5	880

**TPN MCB board with main switch & RCD incoming  
Flush type (for 125A switch)**

Cat.Nos	Way	H	W	D	A
091 41	4 way	480	430	106.5	340
091 42	6 way	534	430	106.5	394
091 43	8 way	588	430	106.5	448
091 44	10 way	642	430	106.5	502
091 45	12 way	696	430	106.5	556
091 46	14 way	750	430	106.5	610
091 47	16 way	804	430	106.5	664
091 48	18 way	858	430	106.5	718
091 49	20 way	912	430	106.5	772
091 50	22 way	966	430	106.5	826
091 51	24 way	1020	430	106.5	880

**TPN MCB board with main switch & RCD incoming  
Surface type & Flush type (for 125A switch)-Split bar**

Dimensions(mm)



**TPN MCB board with main switch & RCD incoming  
Surface type (for 125A switch)-Split bar**

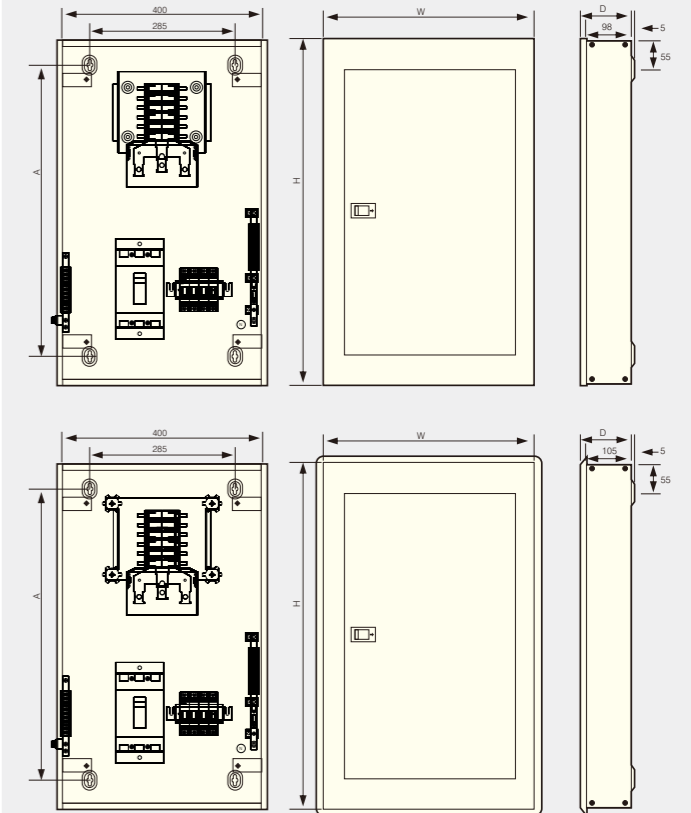
Cat.Nos	Way	H	W	D	A
090 81	2+2	619	405	99.5	502
090 82	4+2	673	405	99.5	556
090 83	4+4	727	405	99.5	610
090 84	6+2	727	405	99.5	610
090 85	6+4	781	405	99.5	664
090 86	6+6	835	405	99.5	718
090 87	8+4	835	405	99.5	718
090 88	8+6	889	405	99.5	772
090 89	8+8	943	405	99.5	826
090 90	12+4	943	405	99.5	826

**TPN MCB board with main switch & RCD incoming  
Flush type (for 125A switch)-Split bar**

Cat.Nos	Way	H	W	D	A
091 81	2+2	642	430	106.5	502
091 82	4+2	696	430	106.5	556
091 83	4+4	750	430	106.5	610
091 84	6+2	750	430	106.5	610
091 85	6+4	804	430	106.5	664
091 86	6+6	858	430	106.5	718
091 87	8+4	858	430	106.5	718
091 88	8+6	912	430	106.5	772
091 89	8+8	966	430	106.5	826
091 90	12+4	966	430	106.5	826

**TPN MCB board with MCCB & RCD incoming  
Surface type & Flush type**

Dimensions(mm)



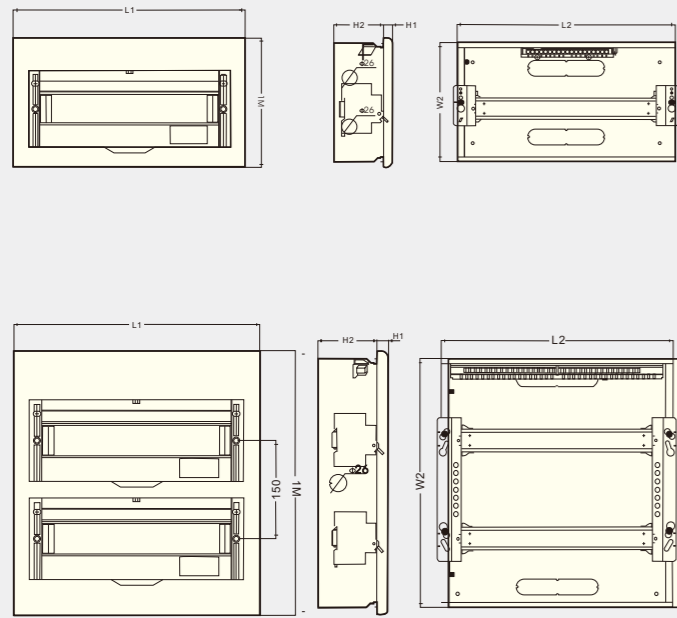
**TPN MCB board with MCCB & RCD incoming Surface type**

Cat.Nos	Way	H	W	D	A
090 61	4 way	673	405	99.5	556
090 62	6 way	727	405	99.5	610
090 63	8 way	781	405	99.5	664
090 64	10 way	835	405	99.5	718
090 65	12 way	889	405	99.5	772
090 66	14 way	943	405	99.5	826
090 67	16 way	997	405	99.5	880
090 68	18 way	1051	405	99.5	934
090 69	20 way	1105	405	99.5	988
090 70	22 way	1159	405	99.5	1042
090 71	24 way	1213	405	99.5	1096

**TPN MCB board with MCCB & RCD incoming Flush type**

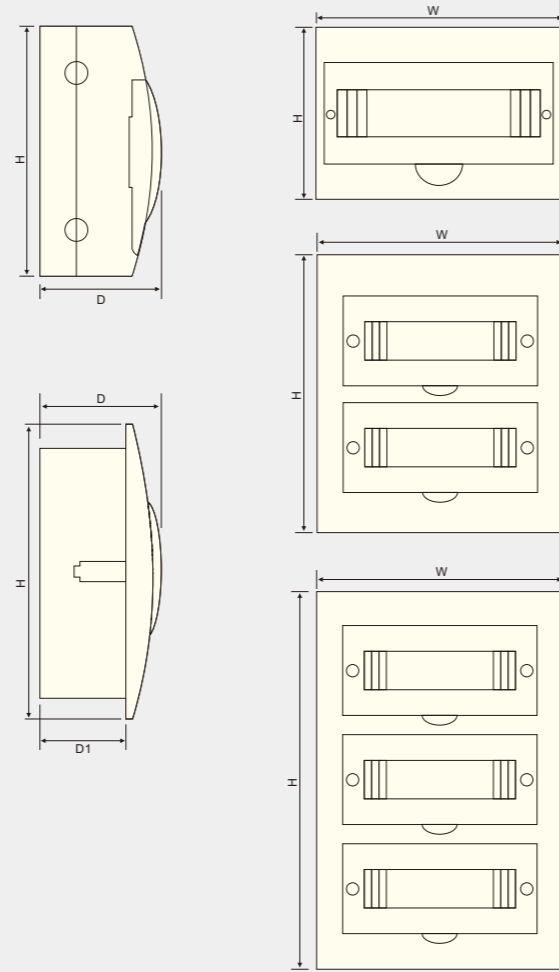
Cat.Nos	Way	H	W	D	A
091 61	4 way	696	430	106.5	556
091 62	6 way	750	430	106.5	610
091 63	8 way	804	430	106.5	664
091 64	10 way	858	430	106.5	718
091 65	12 way	912	430	106.5	772
091 66	14 way	966	430	106.5	826
091 67	16 way	1020	430	106.5	880
091 68	18 way	1074	430	106.5	934
091 69	20 way	1128	430	106.5	988
091 70	22 way	1182	430	106.5	1042
091 71	24 way	1236	430	106.5	1096

**Distribution Boards**  
Dimensions(mm)



Type	No. of way	Dimension(mm)	
		(L1xW1xH1) Overall of cover door	Bottom box L2xW2xH2x thickness of sheet
DB9-4	4	160x190x15.5	138x170x80x0.8
DB9-4T	4	160x190x15.5	138x170x80x0.8
DB9-4G	4	160x190x15.5	138x170x80x0.8
DB9-10	10	268x210x15.5	246x192x80x0.8
DB9-10T	10	268x210x15.5	246x192x80x0.8
DB9-10G	10	268x210x15.5	246x192x80x0.8
DB9-13	13	322x210x15.5	300x192x80x0.8
DB9-13T	13	322x210x15.5	300x192x80x0.8
DB9-13G	13	322x210x15.5	300x192x80x0.8
DB9-16	16	376x210x15.5	354x192x80x0.8
DB9-16T	16	376x210x15.5	354x192x80x0.8
DB9-16G	16	376x210x15.5	354x192x80x0.8
DB9-18	18	412x210x15.5	390x192x80x0.8
DB9-18T	18	412x210x15.5	390x192x80x0.8
DB9-18G	18	412x210x15.5	390x192x80x0.8
DB9-21	21	466x210x15.5	444x192x80x0.8
DB9-21T	21	466x210x15.5	444x192x80x0.8
DB9-21G	21	466x210x15.5	444x192x80x0.8
DB9-24	24	520x250x15.5	498x230x90x1.0
DB9-24T	24	520x250x15.5	498x230x90x1.0
DB9-24G	24	520x250x15.5	498x230x90x1.0
DB9-26	26	322x405x17.5	300x380x90x1.0
DB9-26T	26	322x405x17.5	300x380x90x1.0
DB9-26G	26	322x405x17.5	300x380x90x1.0
DB9-32	32	376x405x17.5	354x380x90x1.0
DB9-32T	32	376x405x17.5	354x380x90x1.0
DB9-32G	32	376x405x17.5	354x380x90x1.0
DB9-42	42	466x405x17.5	444x380x90x1.0
DB9-42T	42	466x405x17.5	444x380x90x1.0
DB9-42G	42	466x405x17.5	444x380x90x1.0
DB9-63	63	483x650x17.5	453x620x100x1.2
DB9-63T	63	483x650x17.5	453x620x100x1.2
DB9-63G	63	483x650x17.5	453x620x100x1.2

**Row Type Modular Enclosure**



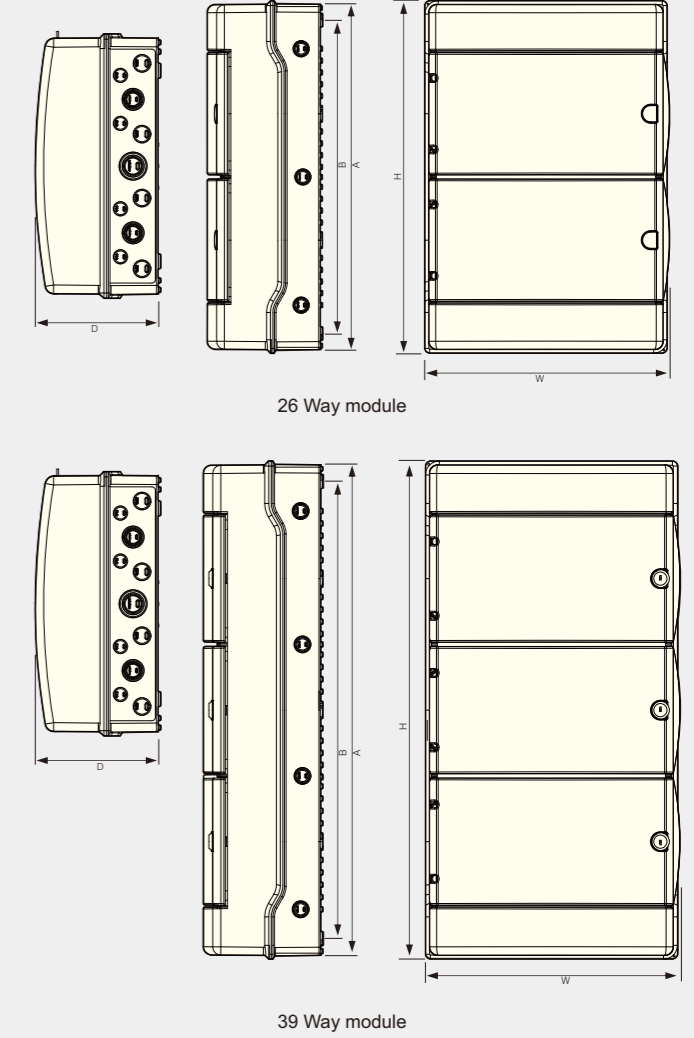
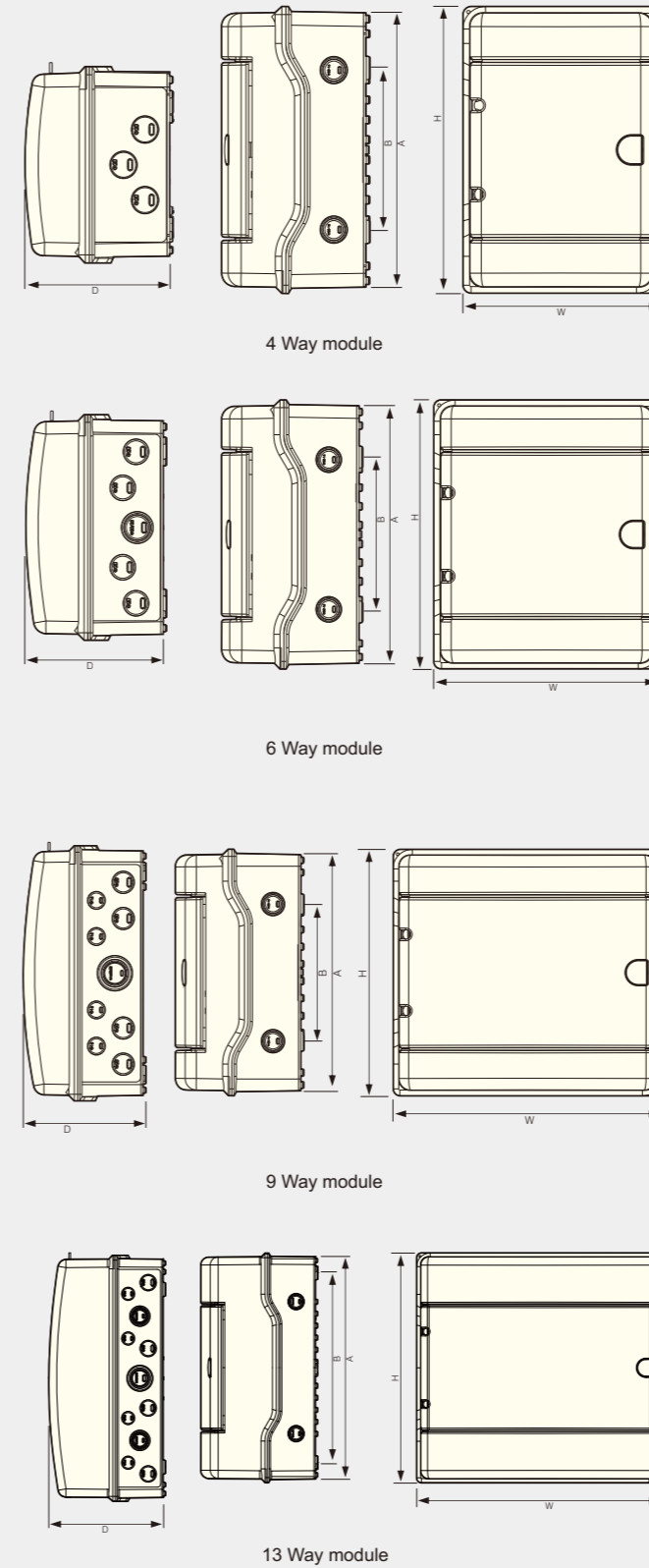
**Surface mounting type (mm)**

Type	No. of module	H	W	D
DB3-3W-PS	3	148	94	85
DB3-4W-PS	4	200	111	93
DB3-6W-PS	6	200	149	93
DB3-8W-PS	8	200	185	93
DB3-10W-PS	10	200	221	93
DB3-12W-PS	12	200	257	93
DB3-15W-PS	15	200	311	93
DB3-18W-PS	18	222	363	100
DB3-24W-PS	24	328	270	101
DB3-36W-PS	36	458	270	103

**Flush mounting type (mm)**

Type	No. of module	H	W	D	D1
DB3-3W-PF	3	148	94	85	61
DB3-4W-PF	4	221	136	90	66
DB3-6W-PF	6	221	172	90	66
DB3-8W-PF	8	221	208	90	66
DB3-10W-PF	10	221	244	90	66
DB3-12W-PF	12	221	280	90	66
DB3-15W-PF	15	221	334	90	66
DB3-18W-PF	18	251	398	90	76
DB3-24W-PF	24	350	300	101	76
DB3-36W-PF	36	480	300	103	76

**IP65 Distribution Board-WDB series**  
Dimensions(mm)



**IP65 Distribution Board-WDB series**

Cat.Nos	Type	Way	H	W	D	A	B
095 21	WDB4	4 way	213	146	110	204	122
095 22	WDB6	6 way	213	179	112	204.3	123
095 23	WDB9	9 way	213	233	112	204.3	118.8
095 24	WDB13	13 way	285	305	145	275.6	235.5
095 25	WDB26	26 way	444	305	145	434.8	394.5
095 26	WDB39	39 way	603	305	145	594.1	554
095 27	WDB52	52 way	762	305	145	753.3	713.3



- Made of electrolysis zinc coated sheet steel.
- Foamed lip around all sides .
- Concealed hinges allowing 120° door opening.
- Standard door lock with wing-shaped handle.
- Earthing studs fitted on door and body.
- Provide with external wall mounting bracket .
- Cable flange opening with gasket on the bottom of box.
- Four wall mounting holes with plastic blanking plugs.
- Powdering with RAL7035

**Characteristics**



**Durable standard locking system**  
Allows opening and closing of the door as many times as required without being forced to eventual changes of the lock. Moreover the standard lock can be replaced by any of the different types of standard locks.



**Reversible door**  
The enclosure allows you to open the door indistinctly to the left or to the right (with an opening angle of more than 120°) as will be required by the location of the enclosure.



**Hermetic gasket by continuous injection**  
Injected with the most advanced technology to ensure the guaranteed protection degree (IP 55).



**Door profiles**  
The enclosure incorporates reinforcing door profiles to fix accessories, made by folding the leaf of the door. This system gives more rigidity. As standard delivery from 500x400mm (included).



**Wall fixing system**  
The design of wall fixing brackets allows the installation of the enclosure at the wall without the need of manipulating inside the enclosure.



**Maximum effective flange opening**  
The flange opening of the Enclosure allows the use of the full enclosure width. Moreover the gasket is directly injected on to the gland plate to avoid loss or deterioration.

**IP65 Metal enclosure**



- Made of electrolysis ZINC-COATED sheet steel.
- Sheet thickness: Body-1.2mm, 1.5mm
- Mounting plate-2.0mm

**IP65 Metal enclosure**

Pack	Cat.nos.	Dimensions(mm)	No of locks	Thickness(mm)	
				Body	MP
1	080 01	H250xW200xD150	1	1.2	2.0
1	080 02	H250xW250xD150	1	1.2	2.0
1	080 03	H300xW200xD150	1	1.2	2.0
1	080 04	H300xW250xD150	1	1.2	2.0
1	080 05	H300xW300xD150	1	1.2	2.0
1	080 06	H400xW300xD150	1	1.2	2.0
1	080 07	H500xW300xD150	1	1.2	2.0
1	080 08	H500xW400xD150	2	1.2	2.0
1	080 09	H600xW400xD150	2	1.5	2.0
1	080 10	H600xW500xD150	2	1.5	2.0
1	080 11	H300xW250xD200	1	1.2	2.0
1	080 12	H300xW300xD200	1	1.2	2.0
1	080 13	H400xW300xD200	1	1.2	2.0
1	080 14	H400xW400xD200	1	1.2	2.0
1	080 15	H500xW300xD200	1	1.2	2.0
1	080 16	H500xW400xD200	2	1.2	2.0
1	080 17	H500xW500xD200	2	1.5	2.0
1	080 18	H600xW400xD200	2	1.5	2.0
1	080 19	H600xW500xD200	2	1.5	2.0
1	080 20	H600xW600xD200	2	1.5	2.0
1	080 21	H700xW500xD200	2	1.5	2.0
1	080 22	H800xW600xD200	2	1.5	2.0
1	080 23	H500xW400xD250	2	1.5	2.0
1	080 24	H500xW500xD250	2	1.5	2.0
1	080 25	H500xW500xD250	2	1.5	2.0
1	080 26	H600xW400xD250	2	1.5	2.0
1	080 27	H600xW500xD250	2	1.5	2.0
1	080 28	H600xW600xD250	2	1.5	2.0
1	080 29	H700xW500xD250	2	1.5	2.0
1	080 30	H800xW600xD250	2	1.5	2.0
1	080 31	H800xW800xD250	2	1.5	2.0
1	080 32	H1000xW600xD250	2	1.5	2.0
1	080 33	H1000xW800xD250	2	1.5	2.0
1	080 34	H600xW400xD300	2	1.5	2.0
1	080 35	H600xW600xD300	2	1.5	2.0
1	080 36	H800xW600xD300	2	1.5	2.0
1	080 37	H800xW800xD300	2	1.5	2.0
1	080 38	H1000xW600xD300	2	1.5	2.0
1	080 39	H1000xW800xD300	2	1.5	2.0
1	080 40	H1200xW800'D300	2	1.5	2.0
1	080 41	H1200xW1000xD300	2	1.5	2.0

**IP66 Stainless steel enclosure**



- Made of single piece stainless steel SUS304
- Polished surface
- Door opening angle over 120°
- Foamed polyurethane gasket around all four sides
- Suitable for use in airport, food industry.

**IP66 Stainless steel enclosure**

Pack	Cat.nos.	Dimensions(mm)	No of locks	Thickness (mm)	
				Body	MP
1	082 01	H250xW200xD150	1	1.2	2.0
1	082 02	H250xW250xD150	1	1.2	2.0
1	082 03	H300xW200xD150	1	1.2	2.0
1	082 04	H300xW250xD150	1	1.2	2.0
1	082 05	H300xW300xD150	1	1.2	2.0
1	082 06	H400xW300xD150	1	1.2	2.0
1	082 07	H500xW300xD150	2	1.2	2.0
1	082 08	H500xW400xD150	2	1.2	2.0
1	082 09	H600xW400xD150	2	1.5	2.0
1	082 10	H600xW500xD150	2	1.5	2.0
1	082 11	H300xW250xD200	2	1.2	2.0
1	082 12	H300xW300xD200	2	1.2	2.0
1	082 13	H400xW300xD200	2	1.2	2.0
1	082 14	H400xW400xD200	2	1.2	2.0
1	082 15	H500xW300xD200	2	1.5	2.0
1	082 16	H500xW400xD200	2	1.5	2.0
1	082 17	H500xW500xD200	2	1.5	2.0
1	082 18	H600xW400xD200	2	1.5	2.0
1	082 19	H600xW500xD200	2	1.5	2.0
1	082 20	H600xW600xD200	2	1.5	2.0
1	082 21	H700xW500xD200	2	1.5	2.0
1	082 22	H800xW600xD200	2	1.5	2.0
1	082 23	H800xW800xD200	2	1.5	2.0
1	082 24	H500xW400xD250	2	1.5	2.0
1	082 25	H500xW500xD250	2	1.5	2.0
1	082 26	H600xW400xD250	2	1.5	2.0
1	082 27	H600xW500xD250	2	1.5	2.0



**IP65 enclosure with glazed door**



- The door of enclosure is made of 3mm transparent acrylic glass with steel frame
- Providing clear view of the components installed inside the enclosure.

**IP 65, with windows**

Pack	Cat.nos.	Dimensions(mm)	No of locks	Thickness(mm)	
				Body	MP
1	081 01	H250xW200xD150	1	1.2	2.0
1	081 02	H250xW250xD150	1	1.2	2.0
1	081 03	H300xW200xD150	1	1.2	2.0
1	081 04	H300xW250xD150	1	1.2	2.0
1	081 05	H300xW300xD150	1	1.2	2.0
1	081 06	H400xW300xD150	1	1.2	2.0
1	081 07	H500xW300xD150	2	1.5	2.0
1	081 08	H500xW400xD150	2	1.5	2.0
1	081 09	H600xW400xD150	2	1.5	2.0
1	081 10	H600xW500xD150	2	1.5	2.0
1	081 11	H300xW250xD200	2	1.2	2.0
1	081 12	H300xW300xD200	2	1.2	2.0
1	081 13	H400xW300xD200	2	1.2	2.0
1	081 14	H400xW400xD200	2	1.2	2.0
1	081 15	H500xW300xD200	2	1.5	2.0
1	081 16	H500xW400xD200	2	1.5	2.0
1	081 17	H500xW500xD200	2	1.5	2.0
1	081 18	H600xW400xD200	2	1.5	2.0
1	081 19	H600xW500xD200	2	1.5	2.0
1	081 20	H600xW600xD200	2	1.5	2.0
1	081 21	H700xW500xD200	2	1.5	2.0
1	081 22	H800xW600xD200	2	1.5	2.0
1	081 23	H800xW800xD200	2	1.5	2.0
1	081 24	H500xW400xD250	2	1.5	2.0
1	081 25	H500xW500xD250	2	1.5	2.0
1	081 26	H600xW400xD250	2	1.5	2.0
1	081 27	H600xW500xD250	2	1.5	2.0
1	081 28	H600xW600xD250	2	1.5	2.0
1	081 29	H700xW500xD250	2	1.5	2.0
1	081 30	H800xW600xD250	2	1.5	2.0
1	081 31	H800xW800xD250	2	1.5	2.0
1	081 32	H1000xW600xD250	2	1.5	2.0
1	081 33	H1000xW800xD250	2	1.5	2.0
1	081 34	H600xW400xD300	2	1.5	2.0
1	081 35	H600xW600xD300	2	1.5	2.0
1	081 36	H800xW600xD300	2	1.5	2.0
1	081 37	H800xW800xD300	2	1.5	2.0
1	081 38	H1000xW600xD300	2	1.5	2.0
1	081 39	H1000xW800xD300	2	1.5	2.0
1	081 40	H1200xW800xD300	2	1.5	2.0
1	081 41	H1200xW1000xD300	2	1.5	2.0

**IP65 enclosure with inner doors**



Pack	Cat.nos.	Description	
		Dimensions(mm) H(height)xW(width)	
1	084 01	400	250
1	084 02	400	300
1	084 03	500	400
1	084 04	600	400
1	084 05	600	600
1	084 06	700	500
1	084 07	800	600
1	084 08	1000	600
1	084 09	1000	800

**IP65 enclosure with modular chassis**



For easy mounting of din-rail component with a maximum height of 68mm.

Pack	Cat.nos.	Description		No of modulars	No of rows
		Dimensions(mm) H(height)xW(width)			
1	083 01	300	250	16	2
1	083 02	400	300	33	3
1	083 03	500	400	48	3
1	083 04	600	400	64	4
1	083 05	600	600	108	4
1	083 06	700	500	110	5
1	083 07	800	600	162	6

**Manufacturing options**



We apply to our standard product to obtain customised standard products according to our customer specifications.

- Enclosures with louver plates
- All kind of special cutting
- Special sizes
- Special paint colours
- Supplying and mounting of accessories
- Double door
- Etc.



**Lifting Lugs**



085 11

085 01

4 lugs of one set with back rests, M12 thread  
2 lugs of one set w/o back rests, M16 thread

Pack	Cat.nos.	Description
1	085 11	M12 Lifting Lugs
1	085 12	M16 Lifting Lugs

**Locks**



085 02

085 03

085 04

Pack	Cat.nos.	Description
1	085 01	DB lock
1	085 02	Stainless steel enclosures lock
1	085 03	Round black plastic enclosures lock
1	085 04	L1 plastic enclosures lock

**Features:**

- In semicompact and slottable versions
- IP55 Protection degree
- 120° door opening
- Up to 2 metres in height
- Different possibilities of linking cabinets together
- Maximum versatility for all kinds of installation
- Wide range of accessories:

- opaque and glazed doors
- Inside doors
- Complete flat or slotted plates
- Partial flat and slotted plates
- Adjustable cable entry
- Supplementary assembly elements
- 100 and 200 millimetres plinth boards



**Semicompact cabinets: Opaque door with plate**

Cat.nos.	Type	Dimensions (mm) (Height X Width X Depth)
087 01	SCO 1806040P	1.800x600x400
087 02	SCO 1806050P	1.800x600x500
087 03	SCO 1806060P	1.800x600x600
087 04	SCO 1808040P	1.800x800x400
087 05	SCO 1808050P	1.800x800x500
087 06	SCO 1808060P	1.800x800x600
087 07	SCO 18010040P	1.800x1.000x400
087 08	SCO 18010050P	1.800x1.000x500
087 09	SCO 18010060P	1.800x1.000x600
087 10	SCO 18012040P	1.800x1.200x400
087 11	SCO 18012050P	1.800x1.200x500
087 12	SCO 18012060P	1.800x1.200x600
087 13	SCO 2006040P	2.000x600x400
087 14	SCO 2006050P	2.000x600x500
087 15	SCO 2006060P	2.000x600x600
087 16	SCO 2006080P	2.000x600x800
087 17	SCO 2008040P	2.000x800x400
087 18	SCO 2008050P	2.000x800x500
087 19	SCO 2008060P	2.000x800x600
087 20	SCO 2008080P	2.000x800x800
087 21	SCO 20010040P	2.000x1.000x400
087 22	SCO 20010050P	2.000x1.000x500
087 23	SCO 20010060P	2.000x1.000x600
087 24	SCO 20010080P	2.000x1.000x800
087 25	SCO 20012040P	2.000x1.200x400
087 26	SCO 20012050P	2.000x1.200x500
087 27	SCO 20012060P	2.000x1.200x600
087 28	SCO 20012080P	2.000x1.200x800

**Semicompact cabinets: glazed door without plate**

Cat.nos.	Type	Dimensions (mm) (Height X Width X Depth)
087 61	SCG 1806040	1.800x600x400
087 62	SCG 1806050	1.800x600x500
087 63	SCG 1806060	1.800x600x600
087 64	SCG 1808040	1.800x800x400
087 65	SCG 1808050	1.800x800x500
087 66	SCG 1808060	1.800x800x600
087 67	SCG 18010040	1.800x1.000x400
087 68	SCG 18010050	1.800x1.000x500
087 69	SCG 18010060	1.800x1.000x600
087 70	SCG 18012040	1.800x1.200x400
087 71	SCG 18012050	1.800x1.200x500
087 72	SCG 18012060	1.800x1.200x600
087 73	SCG 2006040	2.000x600x400
087 74	SCG 2006050	2.000x600x500
087 75	SCG 2006060	2.000x600x600
087 76	SCG 2006080	2.000x600x800
087 77	SCG 2008040	2.000x800x400
087 78	SCG 2008050	2.000x800x500
087 79	SCG 2008060	2.000x800x600
087 80	SCG 2008080	2.000x800x800
087 81	SCG 20010040	2.000x1.000x400
087 82	SCG 20010050	2.000x1.000x500
087 83	SCG 20010060	2.000x1.000x600
087 84	SCG 20010080	2.000x1.000x800
087 85	SCG 20012040	2.000x1.200x400
087 86	SCG 20012050	2.000x1.200x500
087 87	SCG 20012060	2.000x1.200x600
087 88	SCG 20012080	2.000x1.200x800



**Kit1-Vertical Uprights**

Cat.nos.	Type	Cabinet height
086 01	VU180	1.800
086 02	VU200	2.000



**Kit2-Top Part + Bottom Part + Cable Entry's lids**

Cat.nos.	Type	Dimensions (Width X Depth)
086 11	TBL6040	600x400
086 12	TBL6050	600x500
086 13	TBL6060	600x600
086 14	TBL6080	600x800
086 15	TBL8040	800x400
086 16	TBL8050	800x500
086 17	TBL8060	800x600
086 18	TBL8080	800x800
086 19	TBL10040	1.000x400
086 20	TBL10050	1.000x500
086 21	TBL10060	1.000x600
086 22	TBL10080	1.000x800
086 23	TBL12040	1.200x400
086 24	TBL12050	1.200x500
086 25	TBL12060	1.200x600
086 26	TBL12080	1.200x800



**Kit3-Door + Back Panel**

**Opaque door**

Cat.nos.	Type	Dimensions (Height X Width)
086 31	DOP 18060	1.800x600
086 32	DOP 18080	1.800x800
086 33	DOP 180100	1.800x1.000
086 34	DOP 180120	1.800x1.200
086 35	DOP 20060	2.000x600
086 36	DOP 20080	2.000x800
086 37	DOP 200100	2.000x1.000
086 38	DOP 200120	2.000x1.200



**Glazed door**

Cat.nos.	Type	Dimensions (Height X Width)
086 41	DGP 18060	1.800x600
086 42	DGP 18080	1.800x800
086 43	DGP 180100	1.800x1.000
086 44	DGP 180120	1.800x1.200
086 45	DGP 20060	2.000x600
086 46	DGP 20080	2.000x800
086 47	DGP 200100	2.000x1.000
086 48	DGP 200120	2.000x1.200

**Kit4-Side panel**

Cat.nos.	Type	Dimensions (Height X Depth)
086 51	SP 18040	1.800x400
086 52	SP 18050	1.800x500
086 53	SP 18060	1.800x600
086 54	SP 18080	1.800x800
086 55	SP 20040	2.000x400
086 56	SP 20050	2.000x500
086 57	SP 20060	2.000x600
086 58	SP 20080	2.000x800



**Dimensions list, other dimensions also available.**

Heiht X Width X Depth	Heiht X Width X Depth
1.800x600x400	2.000x600x400
1.800x600x500	2.000x600x500
1.800x600x600	2.000x600x600
1.800x800x400	2.000x600x800
1.800x800x500	2.000x800x400
1.800x800x600	2.000x800x500
1.800x1.000x400	2.000x800x600
1.800x1.000x500	2.000x800x800
1.800x1.000x600	2.000x1.000x400
1.800x1.200x400	2.000x1.000x500
1.800x1.200x500	2.000x1.000x600
1.800x1.200x600	2.000x1.000x800
	2.000x1.200x400
	2.000x1.200x500
	2.000x1.200x600
	2.000x1.200x800

**Example for 2000 X 1000 X 800 cabinet**

**Vu200** : Vertical uprights for 2000mm high cabinet

**TBL10080** : Top part+Bottom part+Cable entry's lid for 1000 X 800 (width X depth) cabinet

**DOP200100**: Opaque door +Back panel for 2000X1000 (height X width) cabinet

**SP20080**: Side panel for 2000 X 800(height X depth) cabinet

**Doors**

OPAQUE		GLAZED		INSIDE DOOR		DIMENSIONS (Height X Width)
Type	Cat. nos.	Type	Cat. nos.	Reference	Code	
DO 18060	089 41	DG 18060	089 51	DI 18060	089 61	1800x600
DO 18080	089 42	DG 18080	089 52	DI 18080	089 62	1800x800
DO 180100	089 43	DG 180100	089 53	DI 180100	089 63	1800x1000
DO 180120	089 44	DG 180120	089 54	DI 180120	089 64	1800x1200
DO 20060	089 45	DG 20060	089 55	DI 20060	089 65	2000x600
DO 20080	089 46	DG 20080	089 56	DI 20080	089 66	2000x800
DO 200100	089 47	DG 200100	089 57	DI 200100	089 67	2000x1000
DO 200120	089 48	DG 200120	089 58	DI 200120	089 68	2000x1200

**Mounting Plates**

FLAT		SLOTTED		Dimensions (Height X Width)
Type	Cat. nos.	Type	Cat. nos.	
MPF 18060	088 41	MPS 18060	088 51	1800x600
MPF 18080	088 42	MPS 18080	088 52	1800x800
MPF 180100	088 43	MPS 180100	088 53	1800x1000
MPF 180120	088 44	MPS 180120	088 54	1800x1200
MPF 20060	088 45	MPS 20060	088 55	2000x600
MPF 20080	088 46	MPS 20080	088 56	2000x800
MPF 200100	088 47	MPS 200100	088 57	2000x1000
MPF 200120	088 48	MPS 200120	088 58	2000x1200

PARTIAL FLAT		PARTIAL SLOTTED		Dimensions (Height X Width)
Type	Cat. nos.	Type	Cat. nos.	
MPFP 3040	088 71	MPSP 3040	088 81	300x400
MPFP 3060	088 72	MPSP 3060	088 82	300x600
MPFP 3080	088 73	MPSP 3080	088 83	300x800
MPFP 4040	088 74	MPSP 4040	088 84	400x400
MPFP 4060	088 75	MPSP 4060	088 85	400x600
MPFP 4080	088 76	MPSP 4080	088 86	400x800
MPFP 6040	088 77	MPSP 6040	088 87	600x400
MPFP 6060	088 78	MPSP 6060	088 88	600x600
MPFP 6080	088 79	MPSP 6080	088 89	600x800

**Lids**

HINGED MODULAR		FIXED MODULAR		Modules Number
Type	Cat. nos.	Type	Cat. nos.	
LMH 1560	088 91	LMF 1560	089 01	20
LMH 1580	088 92	LMF 1580	089 02	30
LMH 2060	088 93	LMF 2060	089 03	20
LMH 2080	088 94	LMF 2080	089 04	30
LMH 3060	088 95	LMF 3060	089 05	40
LMH 3080	088 96	LMF 3080	089 06	60
LMH 4060	088 97	LMF 4060	089 07	40
LMH 4080	088 98	LMF 4080	089 08	60

HINGED FLAT		FIXED FLAT		Dimensions (Height X Width)
Type	Cat. nos.	Type	Cat. nos.	
LFH 1560	089 11	LFF 1560	089 21	150x600
LFH 1580	089 12	LFF 1580	089 22	150x800
LFH 2060	089 13	LFF 2060	089 23	200x600
LFH 2080	089 14	LFF 2080	089 24	200x800
LFH 3060	089 15	LFF 3060	089 25	300x600
LFH 3080	089 16	LFF 3080	089 26	300x800
LFH 4060	089 17	LFF 4060	089 27	400x600
LFH 4080	089 18	LFF 4080	089 28	400x800
LFH 6060	089 19	LFF 6060	089 29	600x600
LFH 6080	089 20	LFF 6080	089 30	600x800

**Plinth Boards**

Type	Cat. nos.	Dimensions (Height X Width X Depth)
PB 106040	088 01	100x600x400
PB 106050	088 02	100x600x500
PB 106060	088 03	100x600x600
PB 106080	088 04	100x600x800
PB 108040	088 05	100x800x400
PB 108050	088 06	100x800x500
PB 108060	088 07	100x800x600
PB 108080	088 08	100x800x800
PB 1010040	088 09	100x1000x400
PB 1010050	088 10	100x1000x500
PB 1010060	088 11	100x1000x600
PB 1010080	088 12	100x1000x800
PB 1012040	088 13	100x1200x400
PB 1012050	088 14	100x1200x500
PB 1012060	088 15	100x1200x600
PB 1012080	088 16	100x1200x800
PB 206040	088 17	200x600x400
PB 206050	088 18	200x600x500
PB 206060	088 19	200x600x600
PB 206080	088 20	200x600x800
PB 208040	088 21	200x800x400
PB 208050	088 22	200x800x500
PB 208060	088 23	200x800x600
PB 208080	088 24	200x800x800
PB 2010040	088 25	200x1000x400
PB 2010050	088 26	200x1000x500
PB 2010060	088 27	200x1000x600
PB 2010080	088 28	200x1000x800
PB 2012040	088 29	200x1200x400
PB 2012050	088 30	200x1200x500
PB 2012060	088 31	200x1200x600
PB 2012080	088 32	200x1200x800

