

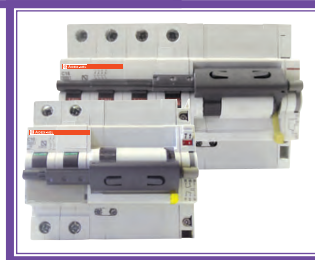
NIRAPOD 1

High performance circuit breaker

mcb and combined mcb with remote controls

LV Distribution Products

2 - 63A



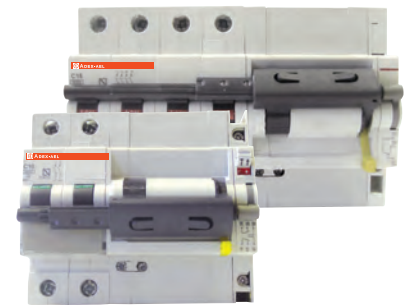
NIRAPOD 1

Mini motorized circuit breaker

The mini-series of motorized circuit breakers operates both locally & with remote control. The mini-series circuit breakers are rated maximum up to 63A and have 2-pole and 4-pole versions. It gives protection against short-circuit and overloads. Also used as a breaking element. Includes auxiliary contacts for indicating overload status.

After a disconnection from short-circuit, overload or manual disconnection, the overload switch may be connected again using an electrical order with the sequence

"CONNECTION (I) - DISCONNECTION (O)"



In (A)	2 Poles				4 Poles			
	Curve C		Curve D		Curve C		Curve D	
	Type	Code	Type	Code	Type	Code	Type	Code
6	mini-MCC-E62/6A	MC-P20110	mini-MCD-E62/6A	MC-P20130	mini-MCC-E62/6A	MC-P20120	mini-MCD-E62/6A	MC-P20140
10	mini-MCC-E62/10A	MC-P20111	mini-MCD-E62/10A	MC-P20131	mini-MCC-E62/10A	MC-P20121	mini-MCD-E62/10A	MC-P20141
16	mini-MCC-E62/16A	MC-P20112	mini-MCD-E62/16A	MC-P20132	mini-MCC-E62/16A	MC-P20122	mini-MCD-E62/16A	MC-P20142
20	mini-MCC-E62/20A	MC-P20113	mini-MCD-E62/20A	MC-P20133	mini-MCC-E62/20A	MC-P20123	mini-MCD-E62/20A	MC-P20143
25	mini-MCC-E62/25A	MC-P20114	mini-MCD-E62/25A	MC-P20134	mini-MCC-E62/25A	MC-P20124	mini-MCD-E62/25A	MC-P20144
32	mini-MCC-E62/32A	MC-P20115	mini-MCD-E62/32A	MC-P20135	mini-MCC-E62/32A	MC-P20125	mini-MCD-E62/32A	MC-P20145
40	mini-MCC-E62/40A	MC-P20116	mini-MCD-E62/40A	MC-P20136	mini-MCC-E62/40A	MC-P20126	mini-MCD-E62/40A	MC-P20146
50	mini-MCC-E62/50A	MC-P20117	mini-MCD-E62/50A	MC-P20137	mini-MCC-E62/50A	MC-P20127	mini-MCD-E62/50A	MC-P20147
63	mini-MCC-E62/63A	MC-P20118	mini-MCD-E62/63A	MC-P20138	mini-MCC-E62/63A	MC-P20128	mini-MCD-E62/63A	MC-P20148

FEATURES

	2 Poles	4 Poles
Overload		
Rating I_n (A)	6-10-16-20-25-32-40-50-63	
Number de Poles	2	4
Rated cut off power	10 kA	
Characteristic curve	C or D according to type	
Rated operating voltage	240 / 415 V a.c.	
Operating frequency range	50...60 Hz	
Operating temperature	-25 ... +55 °C	
Storage temperature	-55 ... +55 °C	



FEATURES


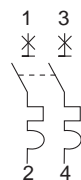
	2 Poles	4 Poles
Motor		
Rated voltage	230 V a.c.	
Minimum voltage	210 V a.c.	
Activation impulse	50 ms	
Deactivation impulse	50 ms	
Mechanical features		
Mounting	Panel (base + pluggable base)	
Dimensions	3 Poles: 81 x 130 x 185	
Mechanical life	4 Poles 108 x 130 x 185	
Weight	According to type	
Protection degree	IP 40 (DIN 40050)	
Standards	IEC 947-2, IEC 60898	


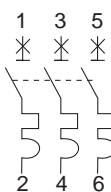
NIRAPOD 1 Miniature circuit breakers


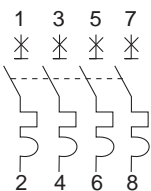
Model: X60H

IEC 947-2 : 10KA

type	width in mod. of 9 mm	rat. (A)		Product ref.	Product ref.
				B curve	C curve
 1P  1 protected pole	3	2	3605102	3615102	
		6	3605106	3615106	
		10	3605110	3615110	
		16	3605116	3615116	
		20	3605120	3615120	
		25	3605125	3615125	
		32	3605132	3615132	
		40	3605140	3615140	
		50	3605150	3615150	
		63	3605163	3615163	

 2P  2 protected poles	6	2	3605202	3615202
		6	3605206	3615206
		10	3605210	3615210
		16	3605216	3615216
		20	3605220	3615220
		25	3605225	3615225
		32	3605232	3615232
		40	3605240	3615240
		50	3605250	3615250
		63	3605263	3615263

 3P  3 protected pole	9	2	3605302	3615302
		6	3605306	3615306
		10	3605310	3615310
		16	3605316	3615316
		20	3605320	3615320
		25	3605325	3615325
		32	3605332	3615332
		40	3605340	3615340
		50	3605350	3615350
		63	3605363	3615363

 4P  4 protected poles	12	2	3605402	3615402
		6	3605406	3615406
		10	3605410	3615410
		16	3605416	3615416
		20	3605420	3615420
		25	3605425	3615425
		32	3605432	3615432
		40	3605440	3615440
		50	3605450	3615450
		63	3605463	3615463

Application:

- control and protection of circuits against overloads and short-short-circuits in industrial distribution system.

Technical data:

- current rating:** 2 to 63A at 40 °C.
 - voltage rating :** 240/415 V AC.
 - breaking capacity:** 10kA to IEC 947.2 (Icu) and BS 4752 (O-CO sequence)
- | rat.
(A) | type | volt.
(V) | breaking
capacity (A) |
|-------------|----------|--------------|--------------------------|
| 10 to | 1P | 230/240 | 10000 |
| 63A | 2, 3, 4P | 230/240 | 20000 |
| | 2, 3, 4P | 400/415 | 10000 |

- positive contact indication
- fast closing
- tripping characteristics:**
 - B type :** magnetic setting between 3 and 5In
 - C type :** magnetic setting between 5 and 10In
- number of operating cycles (O-C) : 20000.
- tropicalization :** treatment 2 (relative humidity 95% at 55 °C).
- weight (g):**

type	1P	2P	3P	4P
	180	360	540	720
- connections :** tunnel terminals for rigid cables up to:
 - 25 mm² for rating ≤ 25A
 - 35 mm² for rating ≤ 63A

NIRAPOD 1

Residual current circuit breaker (rccb)

10/30/100/300/500mA

100/300 mA time delayed

Application:

The rccb residual current devices provide the functions of isolation, switching and earth leakage protection of electrical circuits.

They have a residual current operated electromechanical release which operates without any auxiliary source of supply to open a circuit automatically in the case of an earth leakage fault between phase and earth greater than or equal to a threshold of 10, 30, 100, 300 or 500 mA.

■ rccb time-delayed versions

- 100 mA : provides discrimination with down stream 10mA and 30 mA sensitivity instantaneous residual current devices.
- 300 mA : provides discrimination with down stream 30mA and 100 mA sensitivity instantaneous residual current devices.

Technical data

■ unwanted tripping

All rccb incorporate a filtering device preventing the risks of unwanted tripping due to transient voltages (lightning, line disturbances on other equipment and transient currents (from high capacitive circuits).

■ isolation and switching

■ **positive contact indication :** in accordance with 15th Edition of the IEE wiring regulations (Regs 537-5, 537-9).

■ **trip indication on the front face by red flag.**

■ **compliance with standards**

rcd: BS 4293: 1983 or CEE 27

■ **current ratings: 16A to 100A.**

■ voltage ratings:

2 poles: 240V AC +10 -20%

4 poles: 415V AC +10 -20%

■ sensitivities (non-adjustable)

■ **operating temperature: -5 to +60 °C**
(-25°C : consult us).

■ connections

tunnel terminals for cables up to 35 mm²


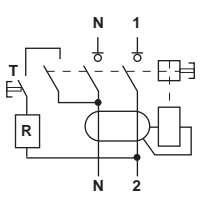
■ **number of operating cycles (on load)**
20 000 cycles (O-C).


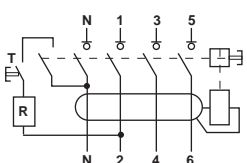
■ **tropicalization: treatment 2**
(relative humidity 95% at 55 °C).

■ weight (g)

2P 230

4P 450


	type	width in mod. of 9 mm	rat. (A)	sens. (mA) 50 Hz	BS4293 240V Cat. No
 	2P		25	10	366213
			30	366214	
			300	366216	
			40	30	366231
			300	366236	
			300 (S)	366237	
			63	30	366241
			100	366243	
			300	366246	
			300 (S)	366247	
			80	30	366249
			100	366251	
			300	366253	
			300 (S)	366254	
			100	30	366259
			100	366261	
300	366262				
300 (S)	366263				

	type	width in mod. of 9 mm	rat. (A)	sens. (mA) 50 Hz	BS4293 415V Cat. No
 	4P		25	30	366414
			300	366416	
			40	30	366431
			100	366433	
			300	366436	
			300(S)	366437	
			500	366438	
			63	30	366441
			100	366443	
			300	366446	
			300 (S)	366447	
			80	300	366453
			300 S	366456	
			100	300	366462
			300 S	366463	


NIRAPOD 1 Miniature circuit breakers

Model: X60N


IEC 947-2 : 6KA

Type	Width in mod. of 9 mm	In (A)		Product ref.	
		B curve	C curve	B curve	C curve
 1P 1 2	2	2	3604102	3614102	
		6	3604106	3614106	
		10	3604110	3614110	
		16	3604116	3614116	
		20	3604120	3614120	
		25	3604125	3614125	
		32	3604132	3614132	
		40	3604140	3614140	
		50	3604150	3614150	
		63	3604163	3614163	


1 protected pole

 2P 1 3 2 4	4	2	3604202	3614202
		6	3604206	3614206
		10	3604210	3614210
		16	3604216	3614216
		20	3604220	3614220
		25	3604225	3614225
		32	3604232	3614232
		40	3604240	3614240
		50	3604250	3614250
		63	3604263	3614263

2 protected poles

 3P 1 3 5 2 4 6	6	2	3604302	3614302
		6	3604306	3614306
		10	3604310	3614310
		16	3604316	3614316
		20	3604320	3614320
		25	3604325	3614325
		32	3604332	3614332
		40	3604340	3614340
		50	3604350	3614350
		63	3604363	3614363

3 protected pole

 4P 1 3 5 7 2 4 6 8	6	2	3604402	3614402
		6	3604406	3614406
		10	3604410	3614410
		16	3604416	3614416
		20	3604420	3614420
		25	3604425	3614425
		32	3604432	3614432
		40	3604440	3614440
		50	3604450	3614450
		63	3604463	3614463

4 protected poles

Function:

Adex circuit breaker combines the following functions :

- protection of circuit against short-circuit current.
- protection of circuit against overload current.
- controls.

Application:

Specially suitable for residential /commercial and industrial installations.

Technical data:

- current rating : 2-63A
- voltage rating : 230/400V ~
- breaking capacity : 6kA to IEC 947-2
- number of operating cycles (O-C) : 20000
- tripping characteristics : B & C curve

connection: Tunnel terminals for cables up to 25mm²
installation: standard 35 mm DIN rail mounted.

Bitoron- 400

LV power distribution system

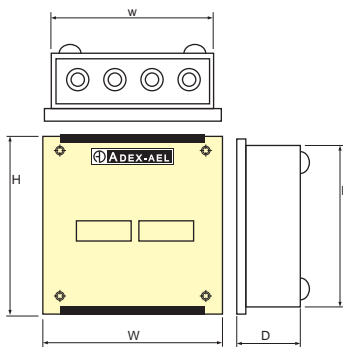


Specifications

- bitoron - 400 flush/surface mounting modular enclosures compliance with IEC 60439-1
- bitoron-400 enclosures are made of 1.6 mm sheet metal anti-rust conditioning phosphatized & thermal polymerized polyester-epoxy powder paint or thermal stove enamel paint coated
- detachable gland plates(top & Bottom) for incoming and outgoing cables
- painting colour bitoron beige (others on request)
- DIN rail, neutral link earth bar and busbar
- 1, 2, 3, 4 poles breaker rating 2 to 63 A
- MCB's can be fitted conveniently at site on DIN rail
- suitable for use on 240/415V, 50/60Hz system
- degree of protection IP31
- 1 front plate with holes for circuit breaker's knob
- single door with lock

bitoron 400-D

suitable for 1/2 poles mcb



No of rows	No of mcb	Dimension W x H x D	Part No.
1	1P-12	230x200x96	407-232009-00A

NIRAPOD 1

Remote controlled circuit breaker

The **combin-P** or **combin-T** are circuit breakers which combine overload functions with contactor functions in the same equipment.

The **combin-T** version also includes two auxiliary contacts which show the status of the remote control input and the overload input.

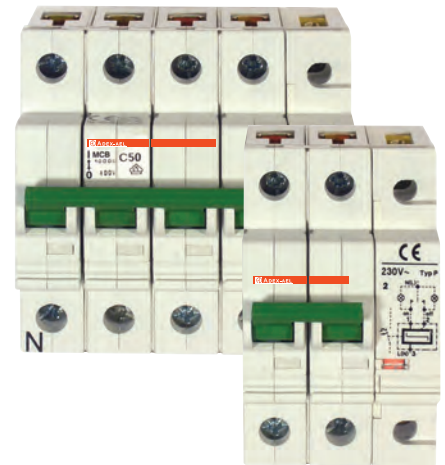
Both the **combin-P** and the **combin-T** version include an ordinary contact to indicate a trip from an overload device or from the manual action of the circuit breaker.

There are two trip conditions for the circuit breaker:

- Tripping from overheating, delayed, (overload protection)
- Rapid tripping, electromagnetic (protection against short-circuiting)

Remote-control operates on the same contacts as the overload device. It guarantees disconnection for any event by remote control after manual or overload device tripping. The remote control operates electro-magnetically, applying a control voltage lasting 20 ms, to the ON terminals (Terminals 1-3) and OFF terminals (Terminals 2-3).

It includes an optical displays of the system status (red = ON, green = OFF), regardless of the cause of the trip.



In (A)	2 Poles				4 Poles			
	Combin - P		Combin - T		Combin - P		Combin -T	
	Type	Code	Type	Code	Type	Code	Type	Code
6	Combin-PC-2P/6A	RC-P20210	Combin-TC-2P/6A	RC-P20310	-	-	-	-
10	Combin-PC-2P/10A	RC-P20211	Combin-TC-2P/10A	RC-P20311	Combin-PC-3P+N/10A	RC-P20221	Combin-TC-3P+N/10A	RC-P20321
16	Combin-PC-2P/16A	RC-P20213	Combin-TC-2P/16A	RC-P20313	Combin-PC-3P+N/16A	RC-P20223	Combin-TC-3P+N/16A	RC-P20323
20	Combin-PC-2P/20A	RC-P20214	Combin-TC-2P/20A	RC-P20314	Combin-PC-3P+N/20A	RC-P20224	Combin-TC-3P+N/20A	RC-P20324
25	Combin-PC-2P/25A	RC-P20215	Combin-TC-2P/25A	RC-P20315	Combin-PC-3P+N/25A	RC-P20225	Combin-TC-3P+N/25A	RC-P20325
32	Combin-PC-2P/32A	RC-P20216	Combin-TC-2P/32A	RC-P20316	Combin-PC-3P+N/32A	RC-P20226	Combin-TC-3P+N/32A	RC-P20326
40	Combin-PC-2P/40A	RC-P20217	Combin-TC-2P/40A	RC-P20317	Combin-PC-3P+N/40A	RC-P20227	Combin-TC-3P+N/40A	RC-P20327
50	Combin-PC-2P/50A	RC-P20218	Combin-TC-2P/50A	RC-P20318	Combin-PC-3P+N/50A	RC-P20228	Combin-TC-3P+N/50A	RC-P20328
63	Combin-PC-2P/63A	RC-P20219	Combin-TC-2P/63A	RC-P20319	Combin-PC-3P+N/63A	RC-P20229	Combin-TC-3P+N/63A	RC-P20329

FEATURES

	2 Poles	4 Poles
Overload		
Rating I_n (A)	6-10-16-20-25-32-40-50-63	
Rated cut off power (IEC 947-2)	6...16 A: 20 kA	20...63 A: 15 kA
Characteristic curve	C or D according to type	
Rated operating voltage	230 / 400 V a.c.	
Operating frequency range	50...60 Hz	
Operating temperature	- 25 ... +55 °C	
Storage temperature	- 40 ... +70 °C	

FEATURES

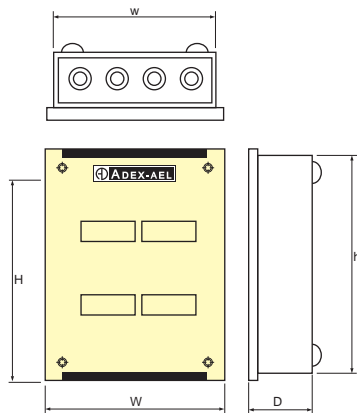
	2 Poles	4 Poles
Motor		
Rated voltage	230 V a.c.	
Activation impulse	< 20 ms	
Deactivation impulse	< 20 ms	
Mechanical features		
Mounting	DIN rail	
Dimensions	3 modules	5 modules
Mechanical life	20 000 operations	
Weight	375 g	615 g
Protection degree	IP 20 (DIN 40050)	
Standards	IEC 947-2, IEC 60898	

Bitoron- 400

LV power distribution system

bitoron 400-F

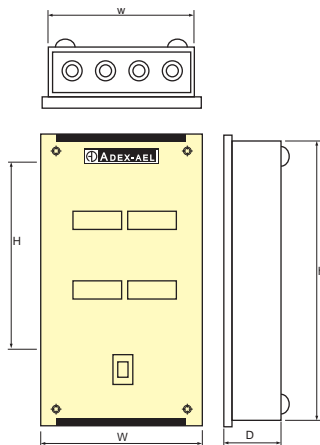
suitable for 1/2/3 poles mcb



No of rows	No of mcb	Dimension W x H x D	Part No.
1	1P-12	400x200x96	407-402009-00A
2	1P-24	400x400x96	407-404009-00A

bitoron 400-M

suitable for mccb as incomer
& 1/2/3 poles mcb as outgoer



Type of Incomer mccb	Vert. mod for incomer of 50mm	No of rows	No of mcb	Dimension W x H x D	Part No.
362437-100A	6	1	1P-12	400x500x125	407-402011-00A
362441-160A	6	2	1P-24	400x700x125	407-404011-00A
362445-200A	6	3	1P-36	400x900x125	407-406011-00A

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