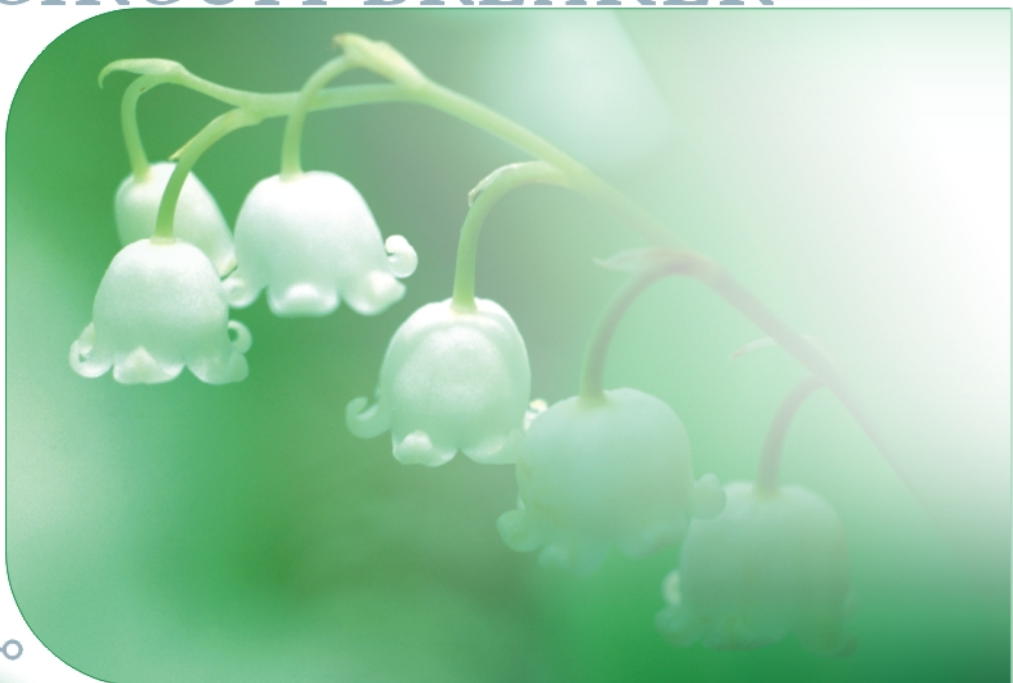


# E

## RESIDUAL CURRENT CIRCUIT BREAKER



## • APPLICATION

F362 Residual Current Circuit Breaker without over current protection conforms to the standards of GB16916.1, IEC1008, BS4293 etc. It is used in the circuits of AC 50~60Hz, single phase 230V(220V), three phases 400V (380V) in industrial & mining enterprises, commercial buildings and housing for protection of personal electric shock hazard and electric equipment and for unfrequent switchover of circuits under normal conditions.

## • SPECIFICATION

Type and specification	Rated current	Rated voltage	Rated operating current	Residual operating current range	Rated conditional short circuit current	Mechanical life
F360	2 Poles 16A, 25A 32A, 40A 63A, 80A 100A	AC 230V	0.03A 0.1A 0.3A	$0.5I\Delta n \sim I\Delta n$	3000A to 6000A	10000
	4 Poles 16A, 25A 32A, 40A 63A, 80A 100A	AC 400V	0.03A 0.1A 0.3A	$0.5I\Delta n \sim I\Delta n$	3000A to 6000A	10000



F362



F364

## ID RESIDUAL CURRENT CIRCUIT BREAKER

## • SPECIFICATION

Type	width in mod. of 9mm	rat (A)	sens. (mA) 50Hz	cat.No CEE27 ID 240V	BS4293 RCCB 240V
2P	4	16	10		23081
			10	23008	23082
			30	23009	23083
			300	23011	23086
		40	30	23014	23088
			100	23015	
			300	23016	23090
			500	23017	
		63	30	23018	23093
			100		23094
			300	23021	23095
			300	23028	
			500	23022	
			500	23029	
		80	30		23097
			100		23098
			100		23111
			300	23030	23100
			300	23032	
			500	23026	
4P	8	25	500	23033	
			30		23101
			100		23102
			300	23034	23103
		40	300	23035	23116
			30	23038	23188
			300	23040	23121
			30	23042	23123
		63	100	15176	
			300	23045	23125
			300	23062	
			500	23046	
			500	23063	
		80	30	23047	23128
			100	15177	23129
			300	23049	23130
			300	23066	23146
		100	500	23067	
			300	23054	
			300	23069	
			300	23056	
			300	23059	



ID 2P



ID 4P

## • APPLICATION

The Residual Current Device(RCD) NFIN is in conformity with the standards of IEC1008, VDE 0664, CEE27 and BS4293.

It can cut off the fault circuit immediately on the occasion of shock hazard or earth leakage of trunk line. Thus it is suitable to avoid the shock hazard and fire caused by earth leakage.

NFIN RCD is mainly suitable for using in varieties of plants, enterprises, buildings, constructions, commerce, guesthouses and families. It can used in circuits up to single phase 240V, three phases 415V, 50 or 60Hz.



NFIN 2P



NFIN 4P



FIN 2P



FIN 4P

## • SPECIFICATION

Type	NFIN25	NFIN40	NFIN63	NFIN100
Rated current In (A)	25	40	63	100
Rated operating current for earth leakage IΔn(A)	0.03, 0.1, 0.3, 0.5		0.1, 0.3, 0.5	
Rated non-operating current for earth leakage IΔn(A)	0.5IΔn			
Voltage Un(V)	240(220)V		415(380)V	
Pole	2, 4			

## • MAIN TECHNICAL DATA

Operating time(second)	$I\Delta n$	$2I\Delta n$	$0.25A$ (or $5I\Delta n$ )
	0.2	0.1	0.04
Limited value of non-operating current for balance load or unbalance load	$2I_n$		
In minimum value of rated making and breaking capacity	$I_n=25$	$I_n=40$	$I_n=63$
Rated conditional short circuit current $I_{nc}$ (A)	200	300	400
Endurance(time)	1500	2000	3000
	4000		

## FIN RESIDUAL CURRENT DEVICE

## • APPLICATION

The Residual Current Device(RCD) FIN is in conformity with the standards of VDE 0664, CEE27 and BS4293.

It can cut off the fault circuit immediately on the occasion of shock hazard or earth leakage of trunk line. Thus it is suitable to avoid the shock hazard and fire caused by earth leakage.

FIN ELCB is mainly suitable for varieties of plants, enterprises, buildings, constructions, commerce, hotels and families. It can used in circuits up to single phase 240V, three phases 415V, 50 or 60Hz.

## • MAIN TECHNICAL DATA

Type	FIN25	FIN40	FIN63	FIN100
Rated current In (A)	25	40	63	100
Rated operating current for earth leakage IΔn(A)	0.03, 0.1, 0.3, 0.5		0.1, 0.3, 0.5	
Rated non-operating current for earth leakage IΔn(A)	0.5IΔn			
Voltage Un(V)	240(220)V		415(380)V	
Pole	2, 4			
Operating time(second)	IΔn	2IΔn	0.25A(or 5IΔn)	
	0.2	0.1	0.04	
Limited value of non-operating current for balance load or unbalance load	2In			
In minimum value of rated making and breaking capacity	In=25	In=40	In=63	
	200	300	400	
Rated conditional short circuit current Inc(A)	1500	2000	3000	
Endurance(times)	4000			

## DESCRIPTION

To open a circuit automatically in case of an earth leakage fault between phase and earth or neutral greater or equal to 10mA, 30mA, 100mA, 300mA or 500mA. It is used in domestic, commercial and industrial installations.

## EARTH FAULT INDICATOR

Mechanical indicator appearing on the front face of the RCCB is to be differed between tripping and off position yellow-tripped.

## NUISANCE TRIPPING

All the RCCBs are protected against transient voltages (lightening, line disturbance) and transient currents (from high capacitive circuits) DC sensitive RCCBs or time delay devices are available, please consult us you also have the possibility to install the following accessories: electrical cover kit, locking kit.



MYL 2P



MYL 4P



MYLD B5



MYLD B5

Sensitivity	Pole	Current rating	cat. ref.	
High sensitivity: 10mA	2	16A	CC216B	
	2	25A	CC225B	
30mA	2	16A	CD216B	
	2	25A	CD225B	
	2	40A	CD240B	
	2	63A	CD263B	
	2	80A	CD280B	
	2	100A	CD284B	
	4	25A	CD425B	
	4	40A	CD440B	
	4	63A	CD463B	
	4	80A	CD480B	
Medium sensitivity: 100mA	2	25A	CE225B	
	2	40A	CE240B	
	2	63A	CE263B	
	2	80A	CE280B	
	2	100A	CE284B	
	4	25A	CE425B	
	4	40A	CE440B	
	4	63A	CE463B	
	4	80A	CE480B	
Low sensitivity: 300mA	4	100A	CE484B	
	2	25A	CF225B	
	2	40A	CF240B	
	2	63A	CF263B	
	2	80A	CF280B	
	2	100A	CF284B	
	4	25A	CF425B	
	4	40A	CF440B	
	4	63A	CF463B	
	2	80A	CF480B	
	2	100A	CF484B	
Low sensitivity: 500mA	2	25A	CG225B	
	2	40A	CG240B	
	2	63A	CG263B	
	2	80A	CG280B	
	2	100A	CG284B	
	4	25A	CG425B	
	4	40A	CG440B	
	4	63A	CG463B	
	4	80A	CG480B	
	4	100A	CG484B	
Terminal cover kit:	For RRCBs2	16 to 63A	10 sets	CZ005
(1 se-2 covers)	For RRCBs2	16 to 63A	10 sets	CZ006
	For RRCBs2	80 to 100A	10 sets	CZ007
	For RRCBs2	80 to 100A	10 sets	CZ008



## • APPLICATION

The RCD is in conformity with the standards of IEC1008, GB16916 and BS EN61008.

The RCD can cut off the fault circuit immediately on the occasion of shock hazard or earth leakage of trunk, thus it is suitable to avoid the shock hazard and fire caused by earthleakage.

The RCD is mainly suitable for using in variety of plants and enterprises, building construction, commerce, guesthouses and families. It can be used in circuits up to single phase 230V, three phases 400V 50Hz or 60Hz, RCD is not suitable for using on DC pulse system.



F7L 2P



F7 4P



L7 2P



L7 4P

## • TECHNICAL DATA

- Standard: IEC61008, GB16916, EN61008
- Rated voltage (Un): 2 poles: 230V AC  
4 poles: 400V AC
- Rated current (In): 16, 25, 40, 63A
- Rated residual operating current (IΔn): 30, 100, 300, 500mA
- Rated residual non-operating current (IΔno): 0.5 IΔn
- Residual current off-time: ≤0.1s
- Minimum value of rated making and breaking capacity (Im): 1kA
- Rated conditional short-circuit current (Inc): In=25, 40A Inc=1500A  
In=63A Inc=3000A
- Endurance: on load: No less than 4000cycles  
off load: No less than 20000cycles

## L7 RESIDUAL CURRENT DEVICE

### • TECHNICAL DATA

Design according to	ICE 1008 (EN 61008)
Tripping time	undelayed
	min. 10 ms delay min. 40 ms delay with selective disconnecting function
Rated voltage	230/400V; 50Hz
Rated tripping current	10, 30, 100, 300, 500mA
Sensitivity	AC and pulsating DC
Rated short	10kA with 63A gL back-up fuse
Circuit strength	10kA with 80A gL (F7-80 and -863) 6kA (rated current 63A) with 63A gL
Maximum back-up fuse for	63A gL
Short circuit protection	80A gL (F7-80 and -863)
Maximum back-up fuse for	45A gL (F7-25 and -40A)
Overload protection	40A gL (F7-80A)
Resistance to climatic conditions	according to IEC 1008
Degree of protection	built-in switch IP 40
Electrical life.	≥4000 operating cycles
Mechanical life.	≥20000 operating cycles

### • TECHNICAL DATA

Frame size	45mm
Socket size	80mm
Device width	35mm (2mod.), 70mm (4mod.)
Mounting	quick fastening with 2 lock-in Positions on DIN rail En50022
Upper and lower terminals	open mouthed lift terminals
Terminal protection	finger and hand touch safe, VBG 5, OVE-EN 6
Terminal capacity	1--- 25mm <sup>2</sup>
Busbar thickness	0.8 - 2mm

## • APPLICATION

Series 5SM1 earth leakage breakers apply to in AC circuit of frequency of 50 Hz, rated voltage up to 415V, rated current up to 80A. It is mainly used as an indirect contact protection for human. It also can be used to prevent against the fire danger caused by earth fault current owing to equipment insulation damage. When the protective measures of the electric shock are out of work, the RCCB whose rated residual operating current less than 30mA can as the supplementary protection for in direct contact, but it can't be used as the sole direct contact protection.

## • PRODUCT FEATURES

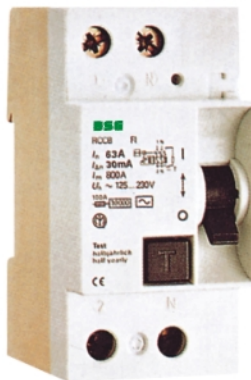
1. Series 5SM1 Leakage Breakers are the protector for pure electromagnetic current operation.
2. The operation function is unrelated to circuit voltage, but operation is reliable.
3. It can be reliably operated on the loss of phase or neutral.
4. The capacity of resisting electromagnetic interference is strong.

## • MAIN TECHNICAL DATA

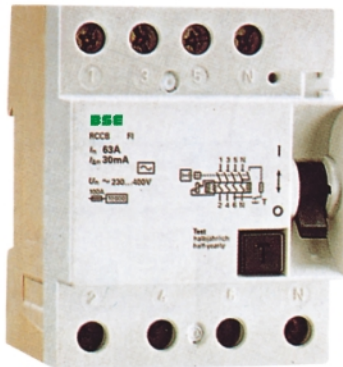
Type	Un (V)	Hz	Im I $\Delta$ m	Inc I $\Delta$ m	In A	I $\Delta$ n mA	I $\Delta$ no mA	The maximum of break-time(s)				
								I $\Delta$ N	2I $\Delta$ N	5I $\Delta$ N	0.25A	500A
2P	240	50, 60	500A (In $\geq$ 50A 10In) (In> 50A)	6000A	6,10, 16,25, 32,40 50,63, 80	30	15	0.2	0.1	-	0.04	0.04
						50	25	0.2	0.1	-	0.04	0.04
						75	40	0.2	0.1	-	0.04	0.04
						100	50	0.2	0.1	0.04	-	0.04
						300	150	0.2	0.1	0.04	0.04	0.04
						500	250	0.2	0.1	0.04	0.04	0.04
4P	415	50, 60	500A (In $\geq$ 50A 10In) (In> 50A)	6000A	6,10, 16,25, 32,40 50,63, 80	30	15	0.2	0.1	-	0.04	0.04
						50	25	0.2	0.1	-	0.04	0.04
						75	40	0.2	0.1	-	0.04	0.04
						100	50	0.2	0.1	0.04	-	0.04
						300	150	0.2	0.1	0.04	0.04	0.04
						500	250	0.2	0.1	0.04	0.04	0.04



2P 40A

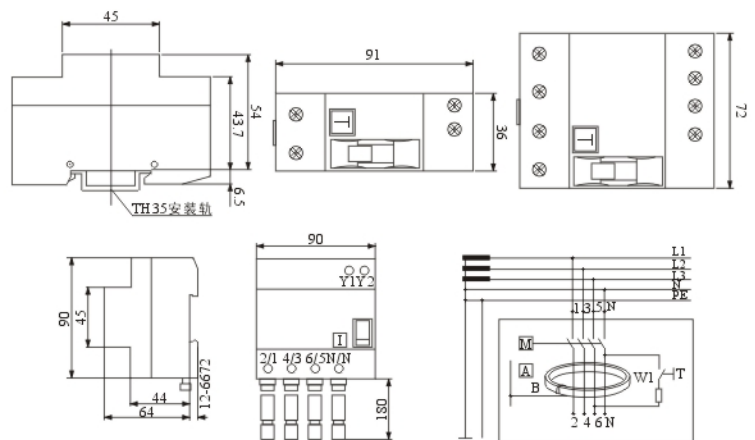


2P 63A



4P 63A

## • DIMENSION AND MOUNTING



## • APPLICATION

The Residual Current Device (RCD) F1 is in conformity with the standards of IEC1008, VDE 0664, CEE27 and BS4293.

It can cut off the fault circuit immediately on the occasion of shock hazard or earth leakage of trunk line, thus it is suitable to avoid the shock hazard and fire caused by earth leakage.

F1 RCD is mainly suitable for using in varieties of plants, enterprises, buildings, constructions, commerce, guesthouses and families. It can be used in circuit up to single phase 240V, three phases 415V, 50 or 60Hz.



F1-4P



C-F



BV-D 2P



BV-D 4P

## BV-D RESIDUAL CURRENT DEVICE

### • TECHNICAL DATA

Design according to	ICE 61008 (EN 61008)
Tripping time	undelayed
	min. 10 ms delay min. 40 ms delay with selective disconnecting function
Rated voltage	230/400V; 50Hz
Rated tripping current	10, 30, 100, 300, 500mA
Sensitivity	AC and pulsating DC
Rated short	10kA with 63A gL back-up fuse
Circuit strength	10kA with 80A gL (F7-80 and -863) 6kA (rated current 63A) with 63A gL
Maximum back-up fuse for	63A gL
Short circuit protection	80A gL (F7-80 and -863)
Maximum back-up fuse for	45A gL (F7-25 and -40A)
Overload protection	40A gL (F7-80A)
Resistance to climatic conditions	according to IEC 1008
Degree of protection	built-in switch IP 40
Electrical life.	≥4000 operating cycles
Mechanical life.	≥20000 operating cycles

### • TECHNICAL DATA

Frame size	45mm
Socket size	80mm
Device width	35mm (2mod.), 70mm (4mod.)
Mounting	quick fastening with 2 lock-in Positions on DIN rail En50022
Upper and lower terminals	open mouthed lift terminals
Terminal protection	finger and hand touch safe, VBG 5, OVE-EN 6
Terminal capacity	1--- 25mm <sup>2</sup>
Busbar thickness	0.8 - 2mm



AJR-2P



AJR-4P

## • APPLICATION

The AJR residual current devices provides 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 10mA, 30mA, 100mA, 300mA or 500mA.

## • SPECIFICATIONS

Compliance with standard BS4293; 1983 or CEE27;

Current rated: 16A to 100A;

2 poles: 240V

minimum voltage: 102V AC,

maximum voltage: 264V AC,

4 poles: 415V

minimum voltage(ph/N): 102V AC;

maximum voltage(ph/N): 415V AC,

## • THE RESIDUAL EQUAL TO THE BREAKING TIME IN CASE OF UNDERLINE VALUE

$I_n(A)$	$I\Delta n(A)$	$I\Delta n(A)$	$2I\Delta n(A)$	$5I\Delta n(A)$	500
25, 40, 63	0.03, 0.1, 0.3	0.3	0.15	0.04	0.04 Max. breaking time

## • MECHANICAL AND ELECTRICAL LIFE

$I_n(A)$	Running operation cycles On operation cycles	OFF operation cycles	Operation frequency (times/hour)
25	4500	10000	240
40, 63	4500	10000	120



## PG230 PG430 EARTH LEAKAGE CIRCUIT BREAKER

## • APPLICATION

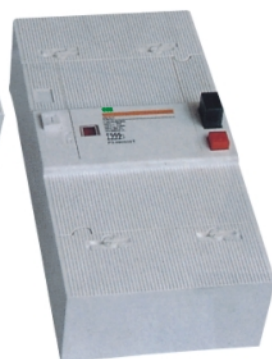
PG230 & PG430 earth leakage circuit breakers, the rated current is adjustable from 10A up to 60A. User can select suitable current for better protection against overload and short circuit. The products comply with NFC1450.

## • SPECIFICATIONS

Type	PG230	PG430
Poles	2P	4P
Rated voltage (V)	250V/440V	
Rated current (A)	10, 15, 20, 30, 45, 50, 60A adjustable	
Leakage motion current (mA)	300mA, 500mA	300mA, 500mA
Leakage dead current (mA)	150mA, 250mA	150mA, 250mA
Standard	NFC 61450	



PG230



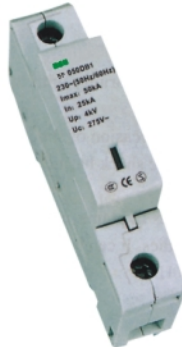
PG430



## • APPLICATION

BP surging protector (hereinafter referred to as protector) is up to the standard of IEC 61643. It is mainly applied to limiting amplitude value of transion overvoltage, absorbing, consuming, discharging surging current energy in the electric wiring of AC 50Hz or 60Hz, rated working voltage 230V, surging through flow capacity not more than 50A. It is used in the occasion of higher type of overvoltage which can make the protected electrical component transfer from one type of overvoltage to another lower type of overvoltage. It is adapted for composing combined electrical equipment with other module terminal electrical equipment so that it can increase installation types and expand range of use, or further step down overvoltage on using terminals to protect TV set, hi-fi sound and such kinds of electrical appliances or the facilities like computer, microcomputer.

Protector applies to power utilization for household and the similar places, facilities for in putting circuit in the thunder direct stroke or protecting from the damage of the surging current caused by outdoor arrester.



BP 1P



BP 2P

## • TECHNICAL PARAMETER

	class B	class C	class D
Reaction timer (tr)	<100ns	<25ns	<25ns
Protection voltage level (Up)	<4KV	<1.3KV	<1KV
Max persistent working voltage (Ue)	275 VAC	275 VAC	275 VAC
Norminal discharge current (In)	25KA (10/350) $\mu$ s	10KA, 1.5KA (8/20) $\mu$ s	2.5KA, 5KA (8/20) $\mu$ s
Max discharge current (Imax)	50KA (8/80) $\mu$ s	30KA, 40KA (8/20) $\mu$ s	5KA, 10KA (8/20) $\mu$ s
Max reserve protection fuse	250A gl	125A gl	63A gl
Short circuit tolerance	10KA	10KA	10KA
Working ambient temperature range	-40℃~70℃	-40℃~70℃	-40℃~70℃
Class of protection	IP40	IP40	IP40