

Technical Data

Line Protection

- Miniature Circuit Breakers (MCB)
- Residual Current Devices (RCD)
- Isolators
- Switch-disconnectors

Power and productivity
for a better world™

MCBs

Product Overview



SH201



SH202



S282UC

SH200

The new SH200 MCBs can be used in domestic, commercial and industrial applications for protection against over-current and short circuit.

New Enhancement

Optimized connection terminal

The new terminal makes it possible to connect lines with and without wire end sleeves up to a cross section of 35mm^2. The integrated pressure plate serves as protection against damage to flexible lines.

Laser printing

Laser printing ensures a clean typeface with high contrast. This ensures a clear readability. It is resistant to scratches, abrasion and solvents, making it absolutely non-forgeable.

Improved DIN rail mounting

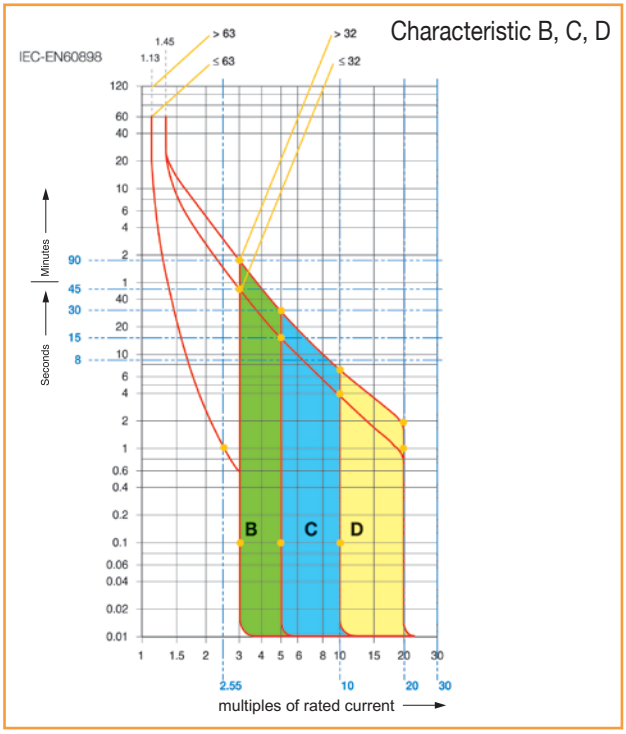
The new plastic lug on the back of the devices prevents them from becoming displaced on the DIN rail in all mounting positions. In the multi-pole miniature circuit breakers this is achieved by using an additional spring in the fastening clip.

S280UC

The S280UC MCB's can be used up to 220V DC for single pole (17.5mm) or up to 440V DC for double pole (35mm) with series connections of 2 poles. This enhanced DC performance is in addition to the AC performance.

They differ from the standard devices in that they are fitted with a permanent magnet which assists in the forced extinguishing of the arc. It is therefore important that care is taken to observe the correct polarity and current flow direction when connecting these breakers.

Tripping Curve



MCBs

Technical Data







Type	SH200	S200M	S280UC
Standards	IEC60898	IEC/EN60898, IEC/EN60947-2	IEC/EN60947-2
Pole	1, 2, 3, 4		1, 2, 3 (for type C)
Tripping Characteristics	B, C, D	B, C, D	B, C
Tripping Type	Electro-Magnetic Type		
Rated breaking capacity Icu	6kA	10kA (1 - 63A)	6kA (0.5 - 32A) 4.5kA (40 - 63A)
Rated current In	6 - 63A	6 - 63A	6 - 25A (for type B) 0.5 - 63A (for type C)
Rated voltage AC single pole Un	230V		230V
AC multi-pole Un	400V		400V
DC single pole Un	-		220V
DC multi-pole Un	-		400V
Frequency Hz	50 - 60		
Mechanical Life no. of operation	20,000		
Electrical Life no. of operation	10,000		
Protection degree Terminals	IP2X		
Housing	IP4X		
Ambient temperature			
Operating Temperature °C	-25...+55		
Storage Temperature °C	-40...+70		
Tropicalization			
constant climate conditions [°C/RH]	23/83, 40/93, 55/20		
variable climate conditions [°C/RH]	25/95, 40/95		
Terminal Size mm^2	0.75 - 35		0.75 - 25
Tightening Torque Nm	2		2.5

MCBs - SH200

Order Information



SH201



SH202



SH203

Type Designation

SH 201 M - C 10

- 10 — Rated Current (A) : 6, 10, 16, 20, 25, 32, 40, 50, 63
- C — Tripping Characteristic : B, C, D
- M — Breaking Capacity : M = 10kA, Blank = 6kA
- 201 — No. of poles : 1, 2, 3, 4
- S200 — Series : S200
- SH — Model : SH

Characteristic B

Rated current (A)	Breaking capacity (kA)	SH200-B			
		1 Pole	2 Poles	3 Poles	4 Poles
6	6	SH201-B6	SH202-B6	SH203-B6	SH204-B6
10		SH201-B10	SH202-B10	SH203-B10	SH204-B10
16		SH201-B16	SH202-B16	SH203-B16	SH204-B16
20		SH201-B20	SH202-B20	SH203-B20	SH204-B20
25		SH201-B25	SH202-B25	SH203-B25	SH204-B25
32		SH201-B32	SH202-B32	SH203-B32	SH204-B32
40		SH201-B40	SH202-B40	SH203-B40	SH204-B40
50		SH201-B50	SH202-B50	SH203-B50	SH204-B50
63		SH201-B63	SH202-B63	SH203-B63	SH204-B63

Characteristic C

Rated current (A)	Breaking capacity (kA)	SH200-C			
		1 Pole	2 Poles	3 Poles	4 Poles
6	6	SH201-C6	SH202-C6	SH203-C6	SH204-C6
10		SH201-C10	SH202-C10	SH203-C10	SH204-C10
16		SH201-C16	SH202-C16	SH203-C16	SH204-C16
20		SH201-C20	SH202-C20	SH203-C20	SH204-C20
25		SH201-C25	SH202-C25	SH203-C25	SH204-C25
32		SH201-C32	SH202-C32	SH203-C32	SH204-C32
40		SH201-C40	SH202-C40	SH203-C40	SH204-C40
50		SH201-C50	SH202-C50	SH203-C50	SH204-C50
63		SH201-C63	SH202-C63	SH203-C63	SH204-C63

Characteristic D

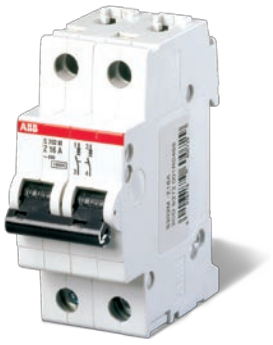
Rated current (A)	Breaking capacity (kA)	SH200-D			
		1 Pole	2 Poles	3 Poles	4 Poles
6	6	SH201-D6	SH202-D6	SH203-D6	SH204-D6
10		SH201-D10	SH202-D10	SH203-D10	SH204-D10
16		SH201-D16	SH202-D16	SH203-D16	SH204-D16
20		SH201-D20	SH202-D20	SH203-D20	SH204-D20
25		SH201-D25	SH202-D25	SH203-D25	SH204-D25
32		SH201-D32	SH202-D32	SH203D32	SH204-D32
40		SH201-D40	SH202-D40	SH203-D40	SH204-D40
50		SH201-D50	SH202-D50	SH203-D50	SH204-D50
63		SH201-D63	SH202-D63	SH203-D63	SH204-D63

MCBs - S200M

Order Information



S201M



S202M



S203M

Characteristic B

Rated current	Breaking capacity	S200M-B			
(A)	(kA)	1 Pole	2 Poles	3 Poles	4 Poles
6	10	S201M-B6	S202M-B6	S203M-B6	S204M-B6
10		S201M-B10	S202M-B10	S203M-B10	S204M-B10
16		S201M-B16	S202M-B16	S203M-B16	S204M-B16
20		S201M-B20	S202M-B20	S203M-B20	S204M-B20
25		S201M-B25	S202M-B25	S203M-B25	S204M-B25
32		S201M-B32	S202M-B32	S203M-B32	S204M-B32
40		S201M-B40	S202M-B40	S203M-B40	S204M-B40
50		S201M-B50	S202M-B50	S203M-B50	S204M-B50
63		S201M-B63	S202M-B63	S203M-B63	S204M-B63

Characteristic C

Rated current	Breaking capacity	S200M-C			
(A)	(kA)	1 Pole	2 Poles	3 Poles	4 Poles
6	10	S201M-C6	S202M-C6	S203M-C6	S204M-C6
10		S201M-C10	S202M-C10	S203M-C10	S204M-C10
16		S201M-C16	S202M-C16	S203M-C16	S204M-C16
20		S201M-C20	S202M-C20	S203M-C20	S204M-C20
25		S201M-C25	S202M-C25	S203M-C25	S204M-C25
32		S201M-C32	S202M-C32	S203M-C32	S204M-C32
40		S201M-C40	S202M-C40	S203M-C40	S204M-C40
50		S201M-C50	S202M-C50	S203M-C50	S204MC50
63		S201M-C63	S202M-C63	S203M-C63	S204M-C63

Characteristic D

Rated current	Breaking capacity	S200M-D			
(A)	(kA)	1 Pole	2 Poles	3 Poles	4 Poles
6	10	S201M-D6	S202M-D6	S203M-D6	S204M-D6
10		S201M-D10	S202M-D10	S203M-D10	S204M-D10
16		S201M-D16	S202M-D16	S203M-D16	S204M-D16
20		S201M-D20	S202M-D20	S203M-D20	S204M-D20
25		S201M-D25	S202M-D25	S203M-D25	S204M-D25
32		S201M-D32	S202M-D32	S203M-D32	S204M-D32
40		S201M-D40	S202M-D40	S203M-D40	S204M-D40
50		S201M-D50	S202M-D50	S203M-D50	S204M-D50
63		S201M-D63	S202M-D63	S203M-D63	S204M-D63

MCBs

Order Information



S281UC



S282UC

Characteristic B

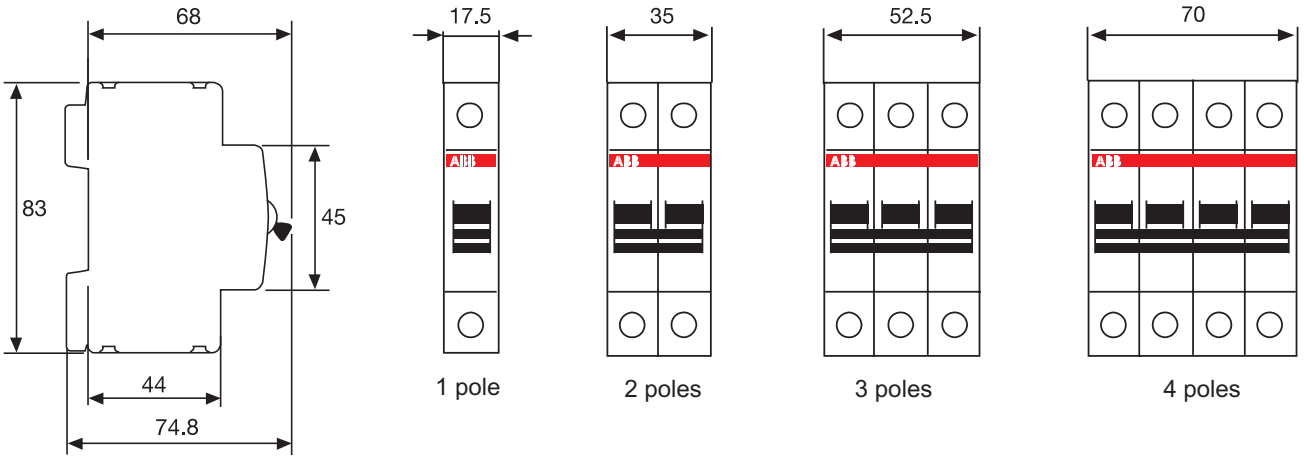
Rated current (A)	Breaking capacity (kA)	S280UC-B	
		1 Pole	2 Poles
6	6	S281UC-B6	S282UC-B6
10		S281UC-B10	S282UC-B10
16		S281UC-B16	S282UC-B16
20		S281UC-B20	S282UC-B20
25		S281UC-B25	S282UC-B25

Characteristic C

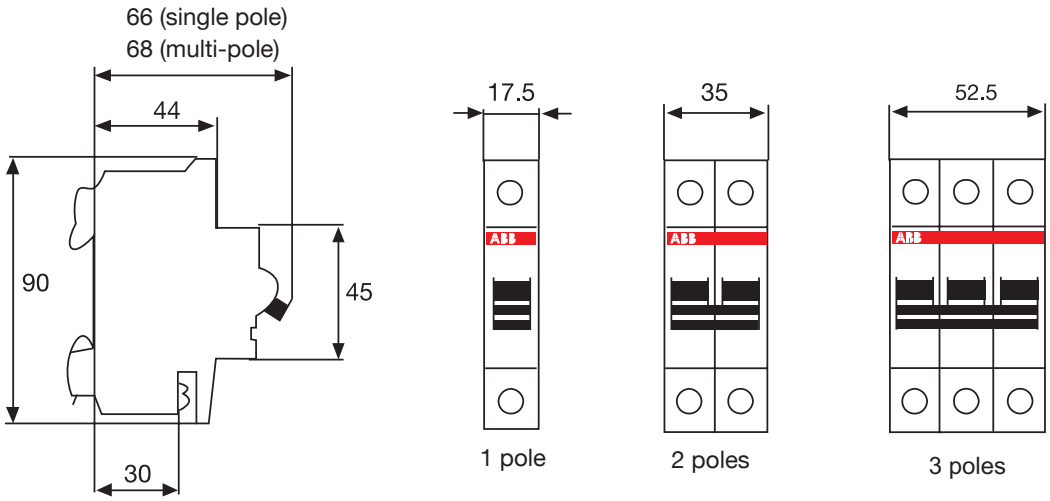
Rated current (A)	Breaking capacity (kA)	S280UC-C		
		1 Pole	2 Poles	3 Poles
0.5	6	S281UC-C0.5	S282UC-C0.5	S283UC-C0.5
1		S281UC-C1	S282UC-C1	S283UC-C1
1.6		S281UC-C1.6	S282UC-C1.6	S283UC-C1.6
2		S281UC-C2	S282UC-C2	S283UC-C2
3		S281UC-C3	S282UC-C3	S283UC-C3
4		S281UC-C4	S282UC-C4	S283UC-C4
6		S281UC-C6	S282UC-C6	S283UC-C6
8		S281UC-C8	S282UC-C8	S283UC-C8
10		S281UC-C10	S282UC-C10	S283UC-C10
16		S281UC-C16	S282UC-C16	S283UC-C16
20		S281UC-C20	S282UC-C20	S283UC-C20
25		S281UC-C25	S282UC-C25	S283UC-C25
32		S281UC-C32	S282UC-C32	S283UC-C32
40	4.5	S281UC-C40	S282UC-C40	S283UC-C40
50		S281UC-C50	S282UC-C50	S283UC-C50
63		S281UC-C63	S282UC-C63	S283UC-C63

MCBs
Dimensions (mm)

SH200 / S200M



S280UC



Residual Current Devices (RCD)

Product Overview

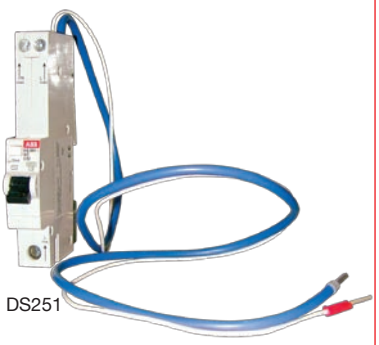


GSH201

The “Earthed Fault Current” is the flow of electricity from the power supply leaking towards the earth, under faulty electrical condition. Its degree of danger depends on the amount of leakage and the surrounding conditions.

Users of leaking equipment may get electrical shock. If this current persists for a long time, fire hazard may be caused. A residual current operated circuit breaker can be installed on the distribution system in order to detect the leakage and cut off the circuit before any damaged occurs.

ABB’s offer both residual current operated breaker with (the RCBO) and without (the RCCB) integral over-current protection. Both breakers employ zero current transformer (ZCT) and permanent electro-magnet or electronic tripping mechanism, giving a high sensitivity for detecting and cutting off faulty current.



DS251

GSH201 - electronic RCBO

The earthed protection devices GS200 series protects users against leakage current. The series adopts Italy designed residual current detection circuit with high electromagnetic compatibility (EMC). The devices comply to the international IEC61009 standard.

DS251 & DS271 - electronic RCBO

Besides protection against earthed faults, the DS251 & DS271 series electronic RCBO also protect the single-phase circuits from overloading or short circuit.



DS201

DS201 - electromagnetic RCBO

The new residual current circuit-breakers with over current protection are a technologically advanced and comprehensive range, as concerns size, tripping characteristics, breaking capacity and accessories. The new RCBOs are integrated in the System pro *M* compact range, with the identical profile that lends a coordinated and streamlined look to the installation.



FH202

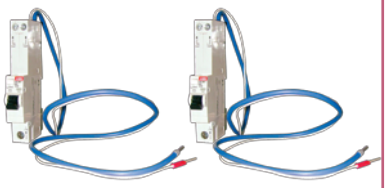
FH200 and F200 - RCCB

RCCBs are only sensitive to current leakage to earth. They must be used in series with an MCB or fuse which protects them from the potentially damaging thermal and dynamic stresses of any overcurrents.

These devices are used in systems already equipped with MCBs which preferably limit the specific energy passing through, also acting as the main disconnecting switches upstream of any derived MCBs (e.g. domestic consumer unit).

Residual Current Devices (RCD)

Technical Data



Type	GSH201	DS251	DS271	DS201	FH200 / F200
Standards	IEC61009	IEC61009, BSEN 61009-2-2		IEC61009	IEC/EN61008
Pole	1P + N	1P + N	1P + N	1P + N	2, 4
Tripping Characteristics	B, C, D	C	B, C	C	-
Tripping Type	Electronic Type			Electro-Magnetic Type	
Rated breaking capacity Icu	6kA	6kA	10kA	6kA, 10kA	-
Rated current In	6 - 63A	6 - 32A	6 - 32A	6 - 40A	25 - 63A (FH200) 80 - 100A (F200)
Rated voltage Un / AC	230V	230 / 240V	230 / 240V	230V	230 / 400V
Type	AC	AC	AC	AC	AC
Rated sensitivity mA	30	30	10, 30, 100, 300 (for type C)	30	30, 100, 300
Frequency Hz	50 - 60				
Mechanical Life no. of operation	20,000				
Protection degree Terminals Housing	 IP2X IP4X				
Ambient temperature Operating Temperature °C Storage Temperature °C	 -25...+55 -40...+70	 -25...+55 -25...+70		 -25...+55 -35...+70	
Tropicalization (IEC 60068-2) constant climate conditions [°C/RH] variable climate conditions [°C/RH]	 23/83, 40/93, 55/20 25/95, 40/93				
Terminal Size mm^2	0.75 - 35	1 - 25 (Line side) 1 - 10 (Load side)		1 - 16	1 - 25
Tightening Torque Nm	2	2 (Line side) 1.2 (Load side)		2	

Residual Current Devices (RCD)

Order Information

Type Designation

GSH 20 1 AC - B 10 / 0.03

- 10 / 0.03 — Rated residual current : 30mA
- 10 — Rated current : 6 - 63A
- B — Tripping Characteristics : B, C, D
- AC — Tripping Time : AC - Instantaneous
- 1 — Pole : 1 + NA
- 20 — Series : S200
- GSH — Model : GSH (Electronic Type) DS (Electro-magnetic Type)



GSH201

GSH201 (RCBO)

Rated current (A)	Rated residual current (mA)	AC Type (1 Pole + N)		
		6kA (B characteristic)	6kA (C characteristic)	6kA (D characteristic)
6	30	GSH201 AC-B6/0.03	GSH201 AC-C6/0.03	GSH201 AC-D6/0.03
10		GSH201 AC-B10/0.03	GSH201 AC-C10/0.03	GSH201 AC-D10/0.03
16		GSH201 AC-B16/0.03	GSH201 AC-C16/0.03	GSH201 AC-D16/0.03
20		GSH201 AC-B20/0.03	GSH201 AC-C20/0.03	GSH201 AC-D20/0.03
25		GSH201 AC-B25/0.03	GSH201 AC-C25/0.03	GSH201 AC-D25/0.03
32		GSH201 AC-B32/0.03	GSH201 AC-C32/0.03	GSH201 AC-D32/0.03
40		GSH201 AC-B40/0.03	GSH201 AC-C40/0.03	GSH201 AC-D40/0.03
50		GSH201 AC-B50/0.03	GSH201 AC-C50/0.03	GSH201 AC-D50/0.03
63		GSH201 AC-B63/0.03	GSH201 AC-C63/0.03	GSH201 AC-D63/0.03



DS201

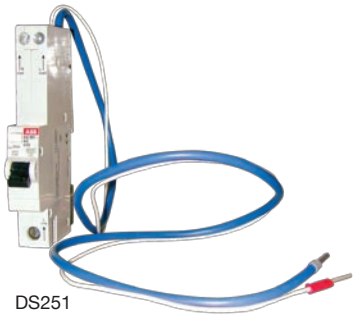
DS201 (RCBO)

C Characteristic

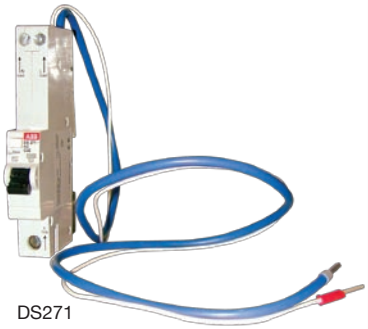
Rated current (A)	Rated residual current (mA)	AC Type (1 Pole + N)	
		6kA (DS201)	10kA (DS201M)
6	30	DS201 C6 AC30	DS201 M C6 AC30
10		DS201 C10 AC30	DS201 M C10 AC30
16		DS201 C16 AC30	DS201 M C16 AC30
20		DS201 C20 AC30	DS201 M C20 AC30
25		DS201 C25 AC30	DS201 M C25 AC30
32		DS201 C32 AC30	DS201 M C32 AC30
40		DS201 C40 AC30	DS201 M C40 AC30

Residual Current Devices (RCD)

Order Information



DS251



DS271

DS251 (RCBO) AC Type

C Characteristic

Rated current (A)	Breaking Capacity (kA)	Rated residual current (mA)	1 Pole + N
6	6	30	DS251 AC-C6 / 0.03
10			DS251 AC-C10 / 0.03
16			DS251 AC-C16 / 0.03
20			DS251 AC-C20 / 0.03
25			DS251 AC-C25 / 0.03
32			DS251 AC-C32 / 0.03

DS271 (RCBO) AC Type

B Characteristic

Rated current (A)	Breaking Capacity (kA)	Rated residual current (mA)	1 Pole + N
6	10	10	DS271 AC-B6 / 0.01
10			DS271 AC-B10 / 0.01
16			DS271 AC-B16 / 0.01
20			DS271 AC-B20 / 0.01
25			DS271 AC-B25 / 0.01
32			DS271 AC-B32 / 0.01
6		30	DS271 AC-B6 / 0.03
10			DS271 AC-B10 / 0.03
16			DS271 AC-B16 / 0.03
20			DS271 AC-B20 / 0.03
25			DS271 AC-B25 / 0.03
32			DS271 AC-B32 / 0.03
6		100	DS271 AC-B6 / 0.1
10			DS271 AC-B10 / 0.1
16			DS271 AC-B16 / 0.1
20			DS271 AC-B20 / 0.1
25			DS271 AC-B25 / 0.1
32			DS271 AC-B32 / 0.1

C Characteristic

Rated current (A)	Breaking Capacity (kA)	Rated residual current (mA)	1 Pole + N
6	10	10	DS271 AC-C6 / 0.01
10			DS271 AC-C10 / 0.01
16			DS271 AC-C16 / 0.01
20			DS271 AC-C20 / 0.01
25			DS271 AC-C25 / 0.01
32			DS271 AC-C32 / 0.01
6		30	DS271 AC-C6 / 0.03
10			DS271 AC-C10 / 0.03
16			DS271 AC-C16 / 0.03
20			DS271 AC-C20 / 0.03
25			DS271 AC-C25 / 0.03
32			DS271 AC-C32 / 0.03
6		100	DS271 AC-C6 / 0.1
10			DS271 AC-C10 / 0.1
16			DS271 AC-C16 / 0.1
20			DS271 AC-C20 / 0.1
25			DS271 AC-C25 / 0.1
32			DS271 AC-C32 / 0.1
6		300	DS271 AC-C6 / 0.3
10			DS271 AC-C10 / 0.3
16			DS271 AC-C16 / 0.3
20			DS271 AC-C20 / 0.3
25			DS271 AC-C25 / 0.3
32			DS271 AC-C32 / 0.3

Residual Current Devices (RCD)

Order Information



FH202

FH200 (RCCB)

Rated current (A)	Rated residual current (mA)	AC Type	
		2 Poles	4 Poles
25	30	FH202 AC-25 / 0.03	FH204 AC-25 / 0.03
40		FH202 AC-40 / 0.03	FH204 AC-40 / 0.03
63		FH202 AC-63 / 0.03	FH204 AC-63 / 0.03
25	100	FH202 AC-25 / 0.1	FH204 AC-25 / 0.1
40		FH202 AC-40 / 0.1	FH204 AC-40 / 0.1
63		FH202 AC-63 / 0.1	FH204 AC-63 / 0.1
25	300	FH202 AC-25 / 0.3	FH204 AC-25 / 0.3
40		FH202 AC-40 / 0.3	FH204 AC-40 / 0.3
63		FH202 AC-63 / 0.3	FH204 AC-63 / 0.3



F202

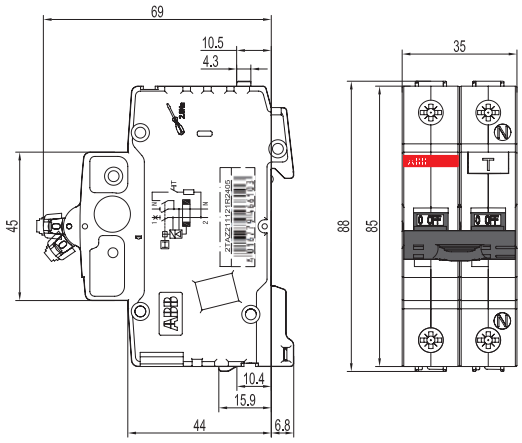
F200 (RCCB)

Rated current (A)	Rated residual current (mA)	AC Type	
		2 Poles	4 Poles
80	30	F202 AC-80 / 0.03	F204 AC-80 / 0.03
100		F202 AC-100 / 0.03	F204 AC-100 / 0.03
80	100	F202 AC-80 / 0.1	F204 AC-80 / 0.1
100		F202 AC-100 / 0.1	F204 AC-100 / 0.1
80	300	F202 AC-80 / 0.3	F204 AC-80 / 0.3
100		F202 AC-100 / 0.3	F204 AC-100 / 0.3

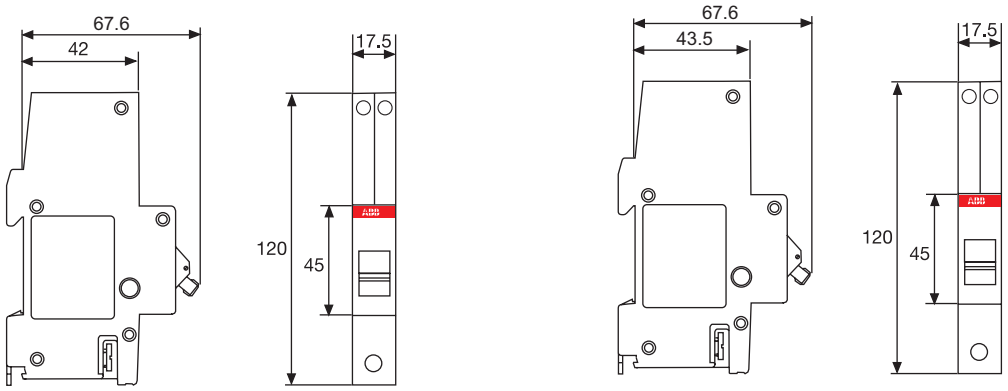
Residual Current Devices (RCD)

Dimensions (mm)

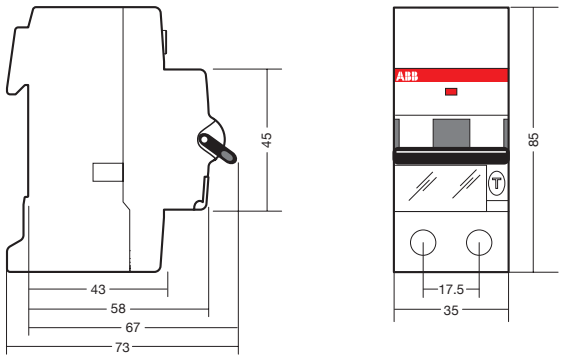
GSH201



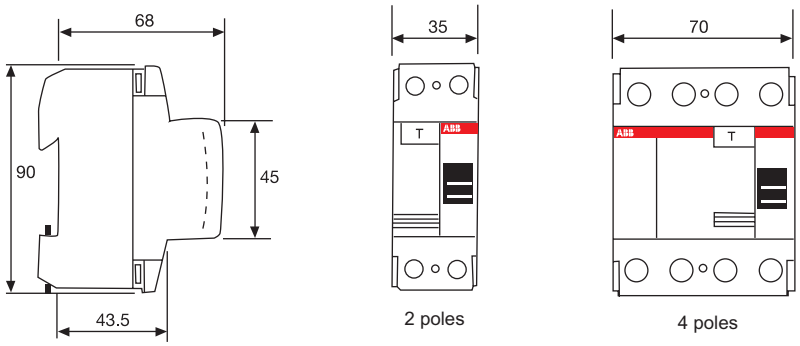
DS251 / DS271



DS201 - DS202C



FH200 / F200



Isolators and Switch-disconnectors

Product Overview



E202



OT160



OT200

Isolator – E200

- Forced opening and suitable for use as main switch.
- High short circuit withstanding capacity.
- Optimal protection against unintentional touch of live parts.
- Dual-function terminals
- Quick mounting clip, lockable in open position.
- The switch-isolators are equipped with dual-function terminals which enable simultaneous connection of conductors and busbar.
- Cross-/ slotted-head screws size 2, system Pozidriv, enable easy, reliable and time-saving wiring.
- Facility for sealing or padlocking in closed or isolated position.
- Internal connection of switching mechanisms ensures simultaneous switching even without toggle linkage.

Switch-disconnector – OT

- Uniquely short current path enable a small sized contact construction.
- Quick-make and quick-break operation features and two contact points.
- User-friendly and flexible, full AC-23A current rating for all the voltage up to 690V.
- Mountable on DIN rails or base plates and on the door, both by snap-on and screw fitting.

Technical Data

Type	E200	OT160	OT200
Standard	IEC60439-3		
Rated short-time Icw withstand current	20 In 1s	4 kA 1s	8 kA 1s
Rated short current capacity Icm	15 In	12 kA	30 kA
Rated current In	63 - 125 A	160 A	200 A
Rated Operational current AC22A/AC23A 400V [A/A]	-	200 / 135	200 / 200

Ordering Information

E200

Rated current	E200		
(A)	2 Poles	3 Poles	4 Poles
63	E202 / 63r	E203 / 63r	E204 / 63r
80	E202 / 80r	E203 / 80r	E204 / 80r
100	E202 / 100r	E203 / 100r	E204 / 100r
125	E202 / 125r	E203 / 125r	E204/ 125r

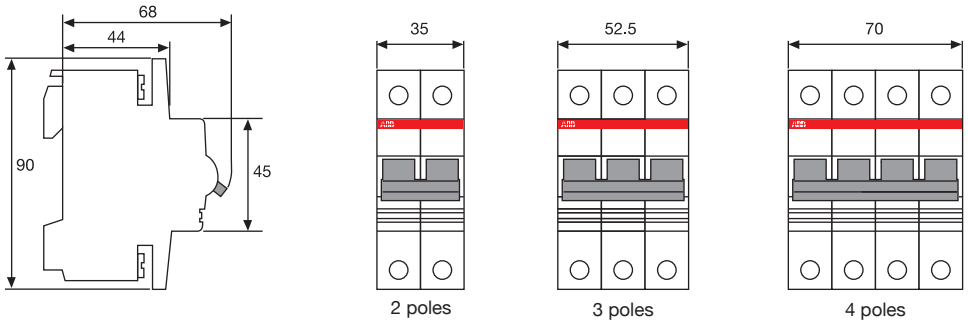
OT

Rated current	OT	
(A)	3 Poles	4 Poles
160	OT160E3	OT160E4
200	OT200E30P	OT200E40P

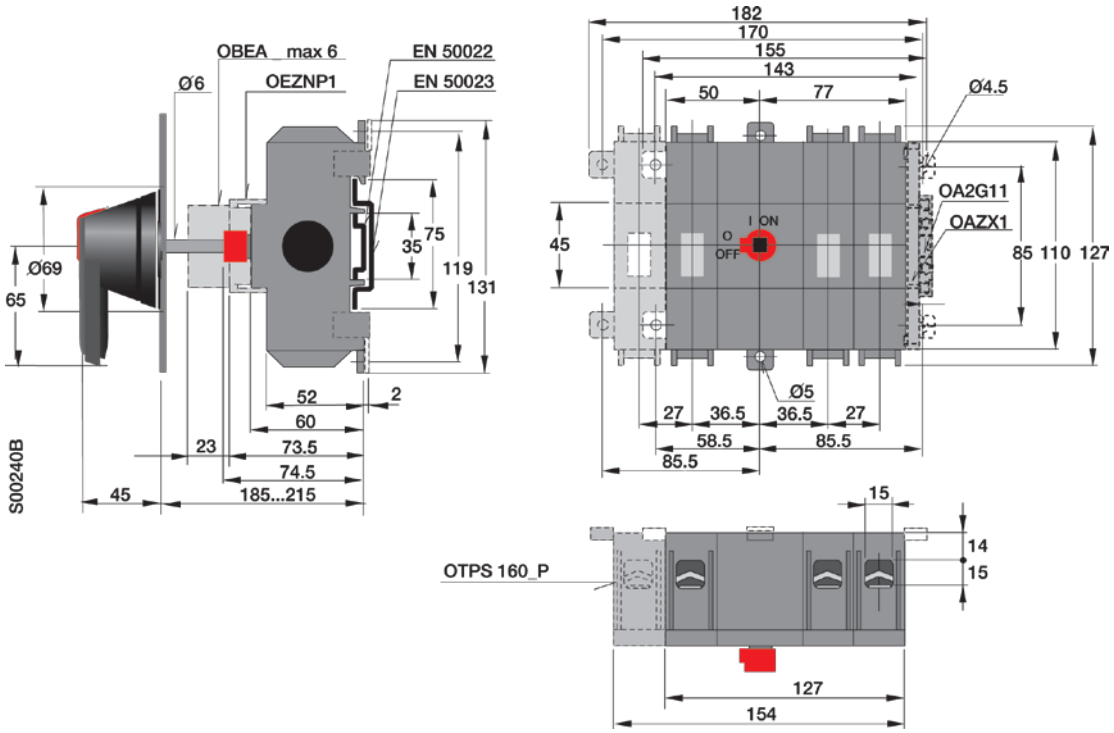
Isolators and Switch-disconnectors

Dimensions (mm)

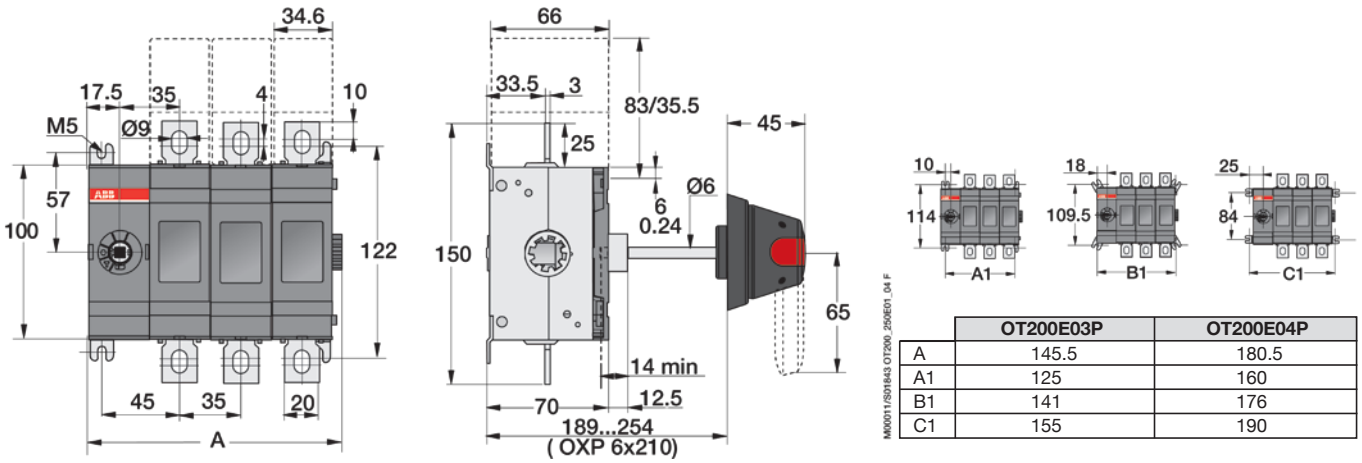
E200



OT160



OT200



	OT200E03P	OT200E04P
A	145.5	180.5
A1	125	160
B1	141	176
C1	155	190

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1SXE420001L0202 09-2011
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