Miniature circuit breaker SZ200

- Solution for residential and commercial applications
- Family feeling in system Pro *M* compact offer
- Combination with accessories

ABB is the world's leading provider of products for electrical installation in buildings. A comprehensive domain knowledge, global experience and continuous innovation enable us to provide optimal solutions for residential, commercial as well as industrial environments. Our solutions help to make your buildings safer, more energy efficient and equipped for the future.

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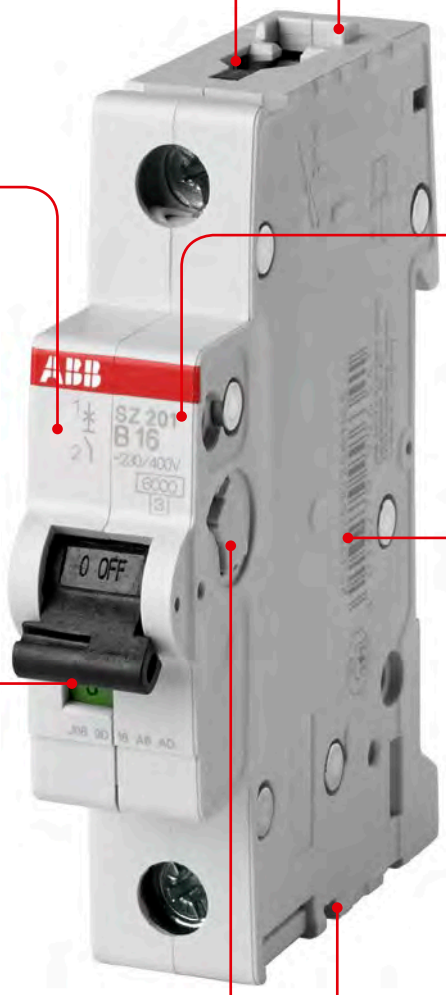
Miniature circuit breaker SZ200
Product overview

Double slots for supply either with cables and busbars

IP 20 terminals – Safe against finger contact



Electrical diagram laser printed on the front side of the product

Main technical data laser printed on the front side of the product

Bar Code laser printed on the lateral side of the product for a quick identification

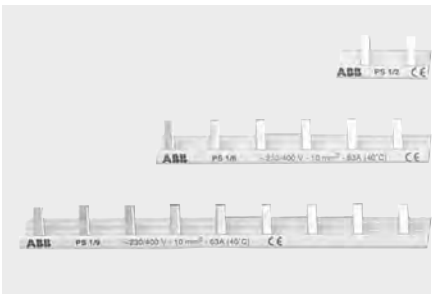
Contact position indicator (CPI) to always know the status of the contacts

Platform suitable for compatibility with System Pro *M* compact accessories

Maximum compatibility
ABB Sure!

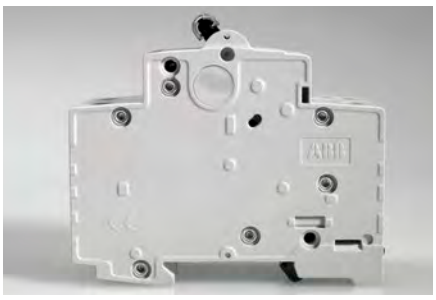
Double Slots
Two slots available for connection with wires with a cross-section up to 35 mm^2 and busbars (10 mm^2)

Contact position Indication (CPI)
CPI to know the status of the contact independently from the toggle position (Red/Closed, Green/Opened), saving time during maintenance operations



Busbars
Wide set of busbars for connection from top and bottom

Easy to replace
Possibility to replace a device in a battery without removing the other ones



High quality material
The thermoplastic materials used, improve the device stability and do not contain halogen, avoiding environment contamination.Plastic material can be recycled.

Miniature Circuit Breaker SZ200 6000

B tripping char

Function:
protection and control of the circuits against overloads and short-circuits; protection for people and large length cables in TN and IT systems.

Applications:
Residential and commercial applications

Standard
IEC/EN 60898-1

Rated short-circuit breaking capacity
Icn = 6 kA


2CDC021059S0012

SZ201

N. poles	Rated Current In A	Type Code	Order Code	Weight 1 piece Kg
1	6	SZ201-B6	2CDS251025R0065	0,115
	10	SZ201-B10	2CDS251025R0105	0,115
	13	SZ201-B13	2CDS251025R0135	0,115
	16	SZ201-B16	2CDS251025R1165	0,115
	20 [1)]	SZ201-B20	2CDS251025R0205	0,115
	25	SZ201-B25	2CDS251025R0255	0,115
	32 [2)]	SZ201-B32	2CDS251025R0325	0,115
	40 [3)]	SZ201-B40	2CDS251025R0405	0,115
	50	SZ201-B50	2CDS251025R0505	0,115
	63	SZ201-B63	2CDS251025R0635	0,115


2CDC021175S0010

SZ203

N. poles	Rated Current In A	Type Code	Order Code	Weight 1 piece Kg
3	6	SZ203-B6	2CDS253025R0065	0,345
	10	SZ203-B10	2CDS253025R0105	0,345
	13	SZ203-B13	2CDS253025R0135	0,345
	16	SZ203-B16	2CDS253025R0165	0,345
	20 [1)]	SZ203-B20	2CDS253025R0205	0,345
	25	SZ203-B25	2CDS253025R0255	0,345
	32 [2)]	SZ203-B32	2CDS253025R0325	0,345
	40 [3)]	SZ203-B40	2CDS253025R0405	0,345
	50	SZ203-B50	2CDS253025R0505	0,345
	63	SZ203-B63	2CDS253025R0635	0,345

1) suitable for flow-type heaters 12 kW
2) suitable for flow-type heaters 18 kW
3) suitable for flow-type heaters 21, 24 and 27 kW

Miniature Circuit Breaker SZ200 6000

C tripping char

SZ201

N. poles	Rated Current In A	Type Code	Order Code	Weight 1 piece Kg
1	6	SZ201-C6	2CDS251025R0064	0,115
	10	SZ201-C10	2CDS251025R0104	0,115
	13	SZ201-C13	2CDS251025R0134	0,115
	16	SZ201-C16	2CDS251025R0164	0,115
	20	SZ201-C20	2CDS251025R0204	0,115
	25	SZ201-C25	2CDS251025R0254	0,115
	32	SZ201-C32	2CDS251025R0324	0,115
	40	SZ201-C40	2CDS251025R0404	0,115
	50	SZ201-C50	2CDS251025R0504	0,115
	63	SZ201-C63	2CDS251025R0634	0,115

SZ203

N. poles	Rated Current In A	Type Code	Order Code	Weight 1 piece Kg
3	6	SZ203-C6	2CDS253025R0064	0,345
	10	SZ203-C10	2CDS253025R0104	0,345
	13	SZ203-C13	2CDS253025R0134	0,345
	16	SZ203-C16	2CDS253025R0164	0,345
	20	SZ203-C20	2CDS253025R0204	0,345
	25	SZ203-C25	2CDS253025R0254	0,345
	32	SZ203-C32	2CDS253025R0324	0,345
	40	SZ203-C40	2CDS253025R0404	0,345
	50	SZ203-C50	2CDS253025R0504	0,345
	63	SZ203-C63	2CDS253025R0634	0,345

Busbar

N° of modules	mm²	Phase sequence	Type	Ordering number	End Caps
12	10	L1-L1....	PS1/12	2CDL210001R1012	to contain
60	10	L1-L1....	PS1/60	2CDL210001R1060	PS-END 0
12	10	L1-L2-L3-L1....	PS3/12	2CDL230001R1012	to contain
60	10	L1-L2-L3-L1....	PS3/60	2CDL230001R1060	PS-END
12	10	L1-L2-L3-N-L1-L2-L3-L1...	PS3/12FI	2CDL230002R1012	to contain

Busbar and Caps

	Type	Ordering number
	PS-END 0	2CDL200001R0004
	PS-END	2CDL200001R0001

Technical data

SZ200

General data		
Standards		EN 60898-1
Poles		1P, 3P
Tripping characteristics		B, C
Rated current In	A	6…63 A
Rated frequency f	Hz	50/60 Hz
Rated insulation voltage Ui acc. To IEC/EN 60664-1	V	440 V AC
Overvoltage category		III
Pollution degree		3
Data according to EN 60898-1		
Rated operational voltage Un	V	1P: 230/400 V AC 3P: 400 V AC
Max. power frequency recovery voltage Umax AC	V	1P: 253 V AC 3P: 440 V AC
Min. operating voltage	V	12 V AC
Rated short-circuit breaking capacity Icn	kA	6 kA
Energy limitation Class		3
Rated impulse withstand voltage Uimp (1.2/50µs)	kV	4 kV (test voltage 6.2 kV at sea level, 5 kV at 2,000 m)
Dielectric test voltage	kV	2 kV (50/60 Hz, 1 min.)
Reference temperature for tripping characteristics	°C	B: 30°C
Electrical endurance	ops.	In < 32 A: 20 000 ops (AC), In ≥ 32 A: 10 000 ops (AC); 1 000 ops. (DC); (1 cycle 2 s - ON, 13 s - OFF, In ≤ 32 A), (1 cycle 2 s - ON, 28 s - OFF, In > 32 A)

Mechanical Data		
Housing		Insulation group II, RAL 7035
Toggle		Insulation group II, black, sealable
Contact position indication		Marking on the lever (I ON/0 OFF), "Real CPI" (Red ON/green OFF)
Protection degree acc. to EN 60529		IP20*, IP40 in enclosure with cover
Mechanical endurance	ops.	20000 ops.
Shock resistance acc. to IEC/EN 60068-2-27		25 g - 2 shocks - 13 ms
Vibration resistance acc. to IEC/EN 60068-2-6		28 cycles with 55°C/90-96% and 25°C/95-100%
Environmental conditions (damp heat cyclic) acc. to IEC/EN 60068-2-30	°C/RH	28 Cycles with 55 °C/90-96% and 25 °C/95-100%; RH = Relative Humidity
Ambient temperature	°C	–25… +55°C
Storage temperature	°C	-40… +70°C

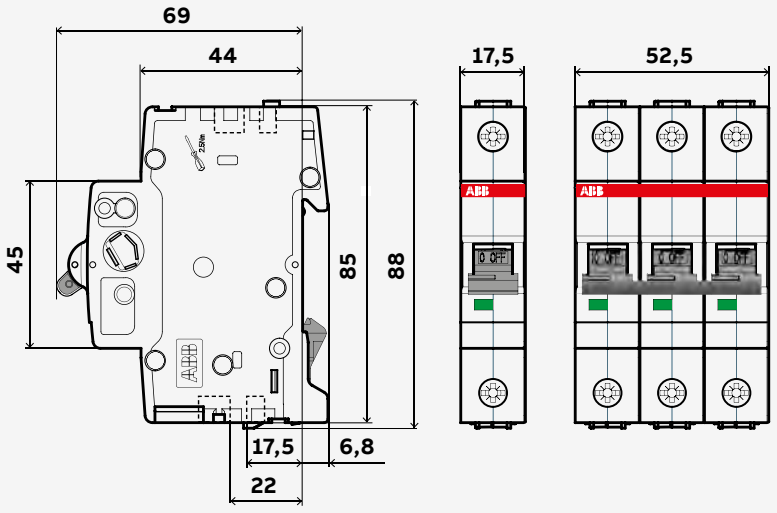
*Also fulfilling the requirements acc. to the protection degree IPXXB

SZ200

Installation			
Terminal			Failsafe bi-directional cylinder-lift terminal
Cross-section of conductors (top/bottom)	rigid	mm²	35 mm² / 35 mm²
	flexible	mm²	25 mm² / 25 mm²
		AWG	18 – 4 AWG
Cross-section of busbars (top/bottom)		mm²	10 mm² / 10 mm²
Torque		N·m	2,8 N·m
Screwdriver			No. 2 Pozidrive
Mounting			On DIN rail 35 mm acc. to EN 60715 by fast clip
Mounting position			any
Supply			optional

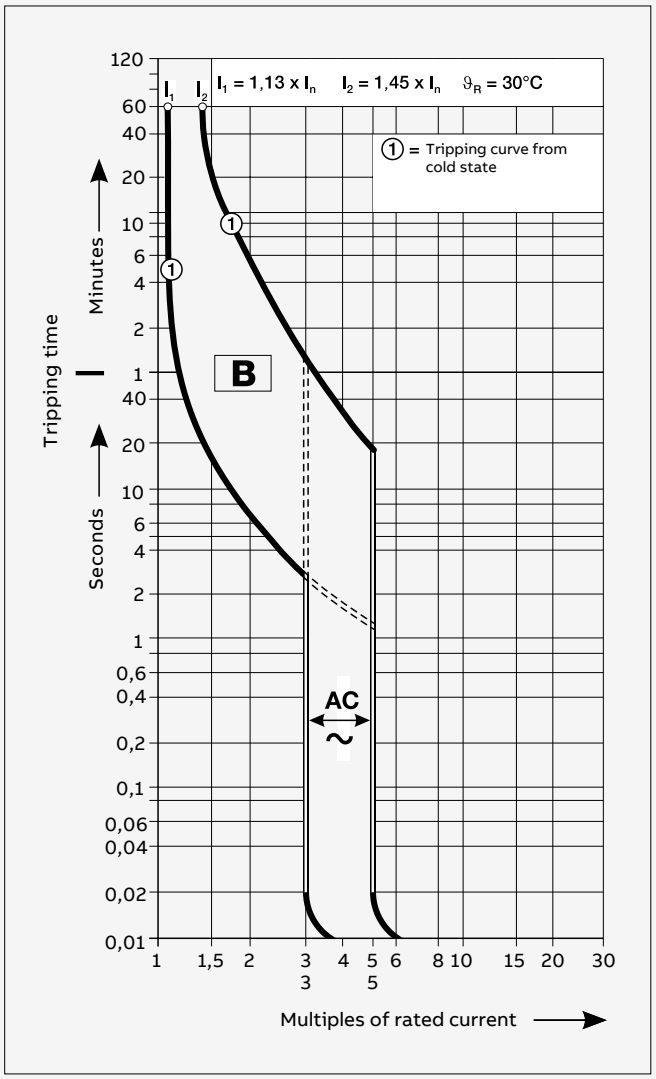
Dimensions and weight		
Mounting dimensions acc. to DIN 43880		Mounting dimension 1
Pole dimensions (H x D x W)	mm	88 × 69 × 17,5 mm
Pole weight approx.	g	cca 115 g
Combination with auxiliary elements		
Auxiliary contact		Yes
Signal contact		Yes
Dielectric trigger (trigger with auxiliary current)		Yes
Support Trigger		Yes
Motor control		Yes
Built-in auxiliary switch		Yes

Dimensions



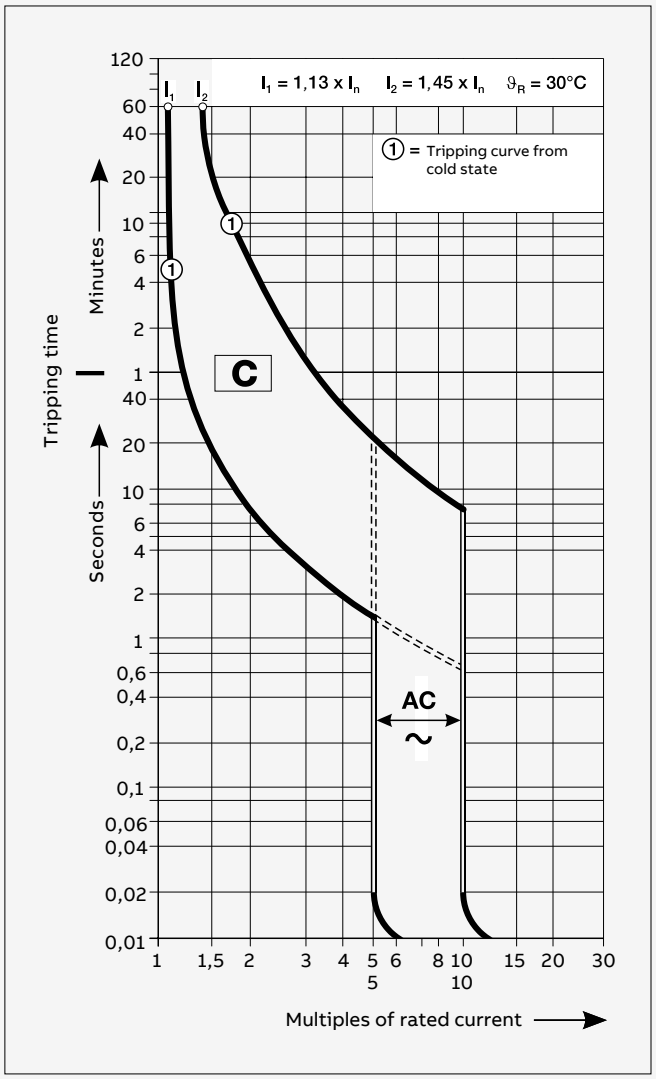
SZ200 tripping characteristics

Characteristics B



Standard
In= 6 ... 63 A

Characteristics C



Standard
In= 6 ... 63 A

SZ200 Technical characteristics

Derating of load capability of MCBs

Derating of MCBs load capability takes into consideration 2 factors: ambient temperature and influence of adjacent devices. The rules to obtain the effective value of In are the following:

Deviating ambient temperature:
The rated value of the current of the miniature circuit-breaker SZ200 refers to a temperature of 30 °C.

The following tables contain the derating of load capability of SZ200 MCB with temperature from -40 °C to 70 °C for the curves B and C.

Max. operating current depending on the ambient temperature of a circuit-breaker in load circuit of characteristics type B, C.

Tripping Characteristics	Rated Current In, A	Maximum operating current at ambient temperature T, °C											
		-40	-30	-20	-10	0	10	20	30	40	50	60	70
B,C	6	7.26	7.08	6.90	6.72	6.54	6.36	6.18	6.00	5.82	5.64	5.46	5.28
	10	12.10	11.80	11.20	11.20	10.90	10.60	10.30	10.00	9.70	9.40	9.10	8.80
	13	15.70	15.30	15.00	14.60	14.20	13.80	13.40	13.00	12.60	12.20	11.80	11.40
	16	19.40	18.90	18.40	17.90	17.40	17.00	16.50	16.00	15.50	15.00	14.60	14.10
	20	24.20	23.60	23.00	22.40	21.80	21.20	20.60	20.00	19.40	18.80	18.20	17.60
	25	30.30	29.50	28.80	28.00	27.30	26.50	25.80	25.00	24.30	23.50	22.80	22.00
	32	38.70	37.80	36.80	35.80	34.90	33.90	33.00	32.00	31.00	30.10	29.10	28.20
	40	48.40	47.20	46.00	44.80	43.60	42.40	41.20	40.00	38.80	37.60	36.40	35.30
	50	60.50	59.00	57.50	56.00	54.50	53.00	51.50	50.00	48.50	47.00	45.50	44.00
	63	76.20	74.30	72.50	70.60	68.70	66.80	64.90	63.00	61.10	59.20	57.30	55.40

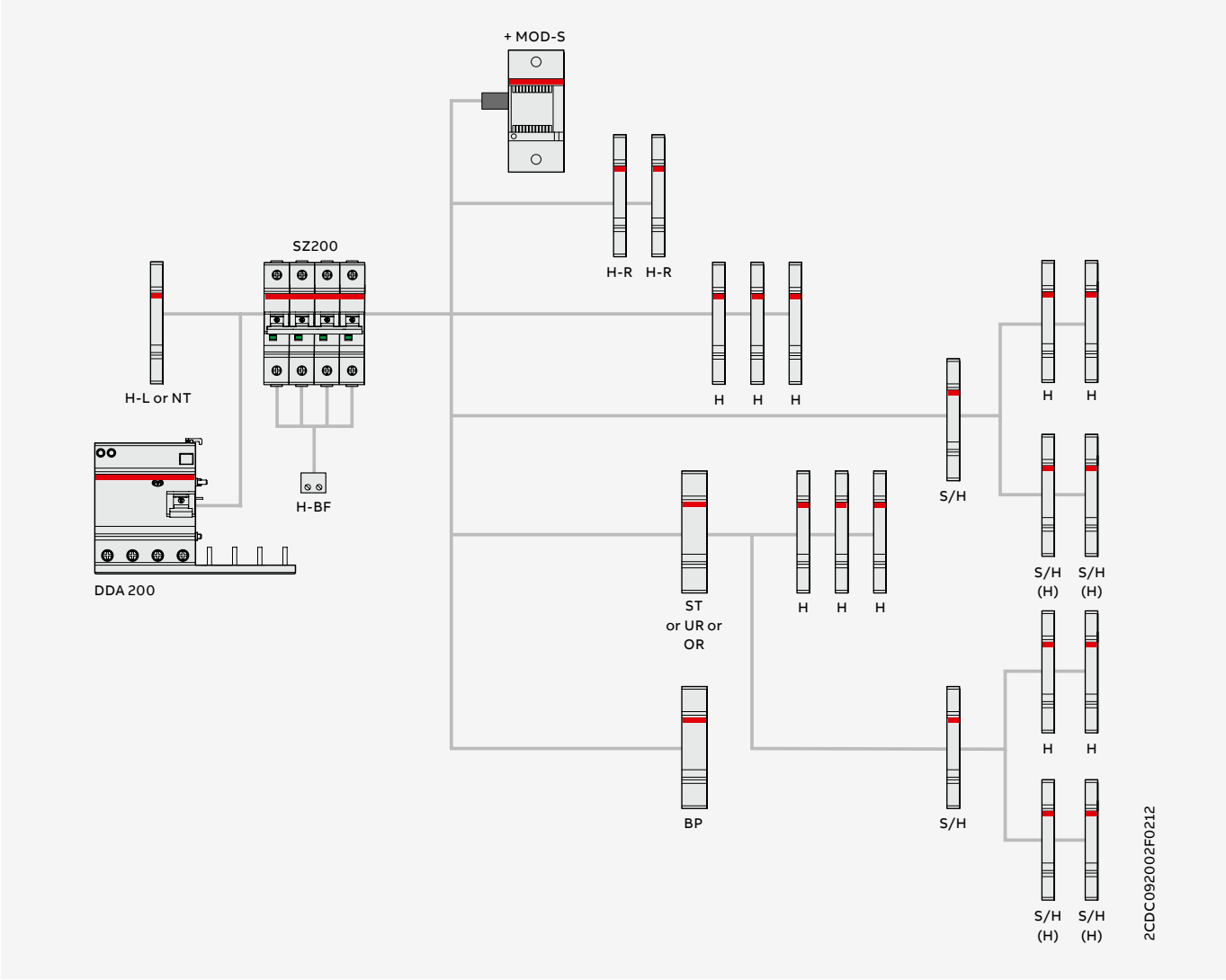
MCBs internal resistance, power loss and max. permissible earth-fault loop impedance

Internal resistance and power loss per pole Internal resistance in mΩ per pole in cold state, power loss in W per pole at rated current

Type	Rate Current In	Device series	
		B, C	
	A	mΩ	W
SZ200	6	55	2,0
	10	19	2,1
	13	14	2,3
	16	8,5	2,5
	20	6,25	2,5
	25	5,0	3,2
	32	3,6	3,7
	40	3,0	4,8
	50	1,3	3,25
	63	1,2	4,8

Accessories for SZ200 6000

Accessories scheme



H	Auxiliary contact	S2C-H6R
H-R	Auxiliary contact with the right-hand mount	S2C-H6-...R
S/H	Signal/Auxiliary Contact	S2C-S/H6R
S/H (H)	Signal/auxiliary contact used as auxiliary contact	S2C-S/H6R
ST	Tripping coil for circuit breaker SZ200	S2C-A...
UR	Support Trigger	S2C-UA
OR	Surge Trigger	S2C-OVP
H-L	Auxiliary contact for SZ200 Circuit breaker, left side mount	S2C-H...L
H-BF	Auxiliary contact for circuit breaker, bottom side fastening (1 for each circuit breaker)	S2C-H01/S2C-H10
BP	Mechanical equipping (Equipment)	S2C-BP
NT	Switching zero conductor	S2C-Nt

Notes

Notes

ABB
Electrification Business
Smart Buildings Business Line

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abb.com/lowvoltage

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