

RESIDUAL CURRENT DEVICES

DS202CR

RCBO protecting 2 phases
in only 2 modules



- RCBO 2P in 2M
- DTI on window to identify earth fault trips
- For connection with cables up to 35mm²
- 10kA breaking capacity up to 40A

DS202CR RCBO series combines overcurrent (short circuit and overload) and earth fault protection in 2 protected poles: it is particularly suitable in low voltage systems connected to the 230 V two-phase distribution network, such as naval applications, where it is particularly appreciated for its small size in the final distribution systems.

It is also used in IT network systems where the neutral is not distributed for the protection of single-phase appliances powered with 400/230 V transformers. DS202CR, 2 poles protected in 2 modules, can be used in large industrial plants, residential applications, mobile and also old installations where the neutral cable is not always clearly identified, providing an error-proof solution.

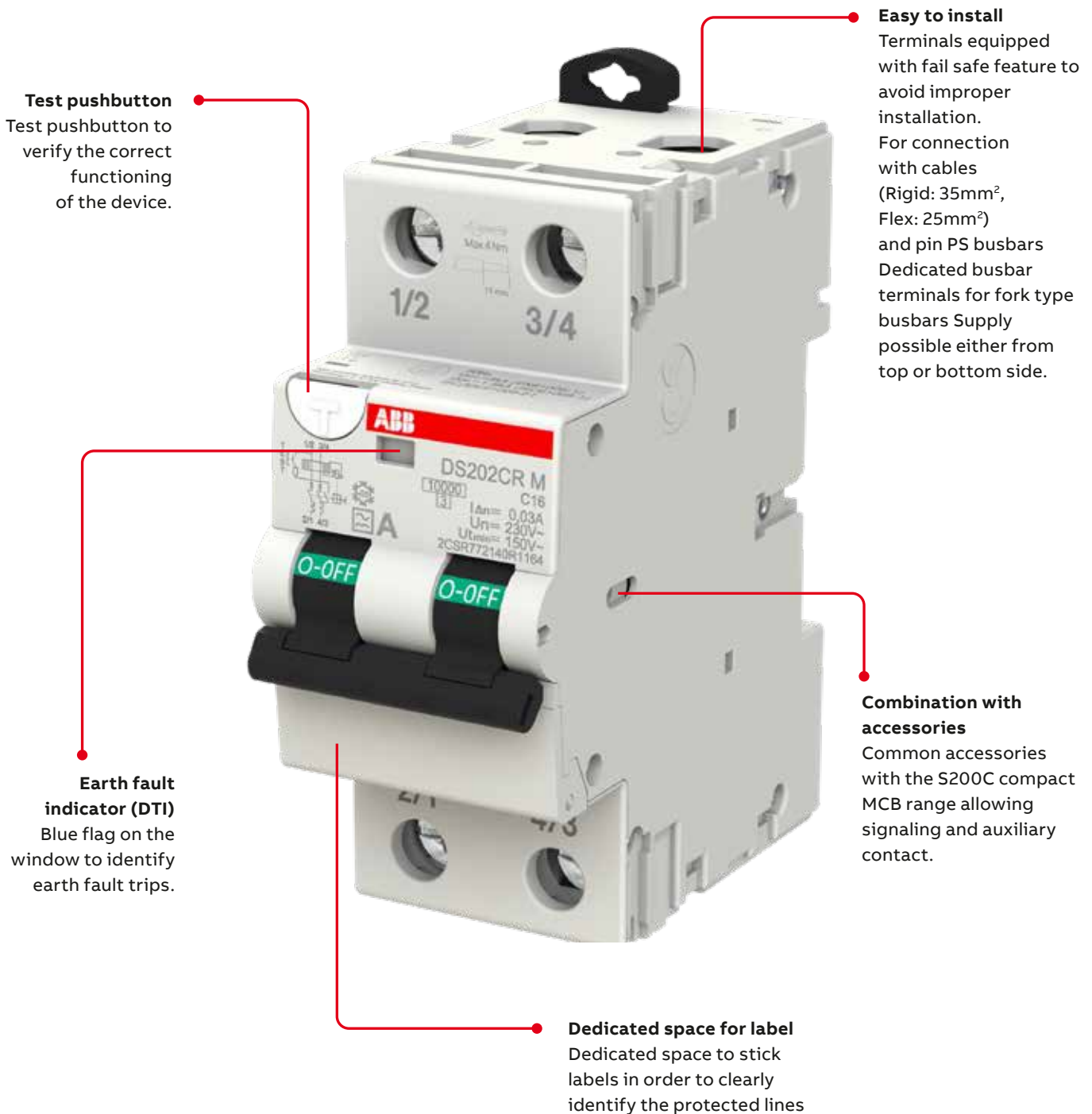
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DS202CR

The details make the difference.

A new range designed to ensure efficiency and protection.





**ABB products and systems deliver
better energy efficiency,
better use of space,
effective automation,
greater safety and improved comfort.**

DS202CR

Technical datasheet

			DS202CR	DS202CR M	DS202CR M 110V	
Standards			IEC/EN 61009-1; IEC/EN 61009-2-1		IEC 61009-1; IEC 61009-2-1	
Electrical features	Type (wave form of the earth leakage sensed)		A	A, APR	A	
	Number of poles		2P	2P	2P	
	Rated current I _n		A	6 ≤ I _n ≤ 40	6 ≤ I _n ≤ 40	
	Rated sensitivity I _{Δn}		A	0.03-0.3	0.01-0.03-0.3	0.03
	Rated voltage U _e		V	230	230	110
	Insulation voltage U _i		V	440	440	440
	Overvoltage category			III	III	III
	Pollution degree			3	3	3
	Operating voltage of circuit test U _t		V	117 (150 for 30 mA) - 254	117 (150 for 30 mA) - 254	93-135
	Rated frequency		Hz	50	50	50/60
	Rated breaking capacity acc. to IEC/EN 61009-1	I _{cn}	A	6000	10000	10000
	Rated breaking capacity acc. to IEC/EN 60947-2 (only referring to short circuit test)	ultimate I _{cu}	kA	10	10	10
		service I _{cs}	kA	6	7.5	7.5
	Rated residual breaking capacity I _{Δm} (EN 61009-1)		kA	3	3	3
	Rated impulse withstand voltage (1.2/50) U _{imp}		kV	4	4	4
	Dielectric test voltage at ind. freq. for 1 min.		kV	2.5	2.5	2.5
	Thermomagnetic release characteristic			B, C	B, C	C
	Surge current resistance (wave 8/20)		A	250 for A version; 3000 for APR version		
Mechanical features	Toggle			black sealable in ON-OFF position		
	Contact position indication			CPI on toggle (green/red)		
	Earth fault trip indication			on window (blue)		
	Electrical life		ops.	10000	10000	10000
	Mechanical life		ops.	20000	20000	20000
	Protection degree acc. to EN 60529	housing		IP4X	IP4X	IP4X
		terminals		IP2X	IP2X	IP2X
	Environmental conditions (damp heat) acc. to IEC/EN 60068-2-30		°C/RH	28 cycles with 55°C/90-96% and 25°C/95-100%		
	Reference temperature for setting of thermal element		°C	30	30	30
	Ambient temperature (with daily average ≤ +35 °C)		°C	-25...+55	-25...+55	-25...+55
	Storage temperature		°C	-40...+70	-40...+70	-40...+70
	Installation	Terminal type	top		failsafe cage terminal	
bottom				failsafe cage terminal		
Terminal size top/bottom for cables		mm ²	25/25 flexible; 35/35 rigid	25/25 flexible; 35/35 rigid	25/25 flexible; 35/35 rigid	
Terminal size top/bottom for busbar		mm ²	10/10	10/10	10/10	
Tightening torque top/bottom		Nm	4	4	4	
Mounting			on DIN rail EN 60715 (35 mm) by means of fast clip device			
Mounting position			Any	Any	Any	
Connection			from top and bottom	from top and bottom	from top and bottom	
Dimensions and weight	Dimensions (H x D x W)		mm	86 x 72 x 36	86 x 72 x 36	86 x 72 x 36
	Weight		g	220	220	220
Combination with auxiliary elements	Combinable with:	auxiliary contact	yes	yes	yes	
		signal contact / auxiliary contact	yes	yes	yes	

DS202CR

Ordering codes



DS202CR

DS202CR A type, B characteristic

Function: protection of end user single-phase circuits against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I_{\Delta n}=30$ mA).

Application: residential, commercial, industrial.

Standard: IEC/EN 61009-1; IEC/EN 61009-2-1

$I_{cn} = 6\,000$ A

Number of poles	Rated residual current $I_{\Delta n}$ mA	Rated current I_n A	Bbn 402290 EAN	Order details		Price 1 piece	Weight 1 piece kg	Pack unit pc.
				Type code	Order code			
2	30	6	3033660	DS202CR B6 A30	2CSR752140R1065		0,245	1
		10	3033684	DS202CR B10 A30	2CSR752140R1105		0,245	1
		13	3033707	DS202CR B13 A30	2CSR752140R1135		0,245	1
		16	3033721	DS202CR B16 A30	2CSR752140R1165		0,245	1
		20	3033745	DS202CR B20 A30	2CSR752140R1205		0,245	1
		25	3033769	DS202CR B25 A30	2CSR752140R1255		0,245	1
		32	3033783	DS202CR B32 A30	2CSR752140R1325		0,245	1
		40	3033806	DS202CR B40 A30	2CSR752140R1405		0,245	1
	300	6	3033820	DS202CR B6 A300	2CSR752140R3065		0,245	1
		10	3033844	DS202CR B10 A300	2CSR752140R3105		0,245	1
		13	3033868	DS202CR B13 A300	2CSR752140R3135		0,245	1
		16	3033882	DS202CR B16 A300	2CSR752140R3165		0,245	1
		20	3033905	DS202CR B20 A300	2CSR752140R3205		0,245	1
		25	3033929	DS202CR B25 A300	2CSR752140R3255		0,245	1
		32	3033943	DS202CR B32 A300	2CSR752140R3325		0,245	1
		40	3033967	DS202CR B40 A300	2CSR752140R3405		0,245	1

DS202CR

Ordering codes



DS202CR

DS202CR A type, C characteristic

Function: protection of end user single-phase circuits against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I_{\Delta n}=30$ mA).

Application: residential, commercial, industrial.

Standard: IEC/EN 61009-1; IEC/EN 61009-2-1

$I_{cn} = 6\,000$ A

Number of poles	Rated residual current $I_{\Delta n}$ mA	Rated current I_n A	Bbn 402290 EAN	Order details		Price 1 piece	Weight 1 piece kg	Pack unit pc.
				Type code	Order code			
2	30	6	3033653	DS202CR C6 A30	2CSR752140R1064		0,245	1
		10	3033677	DS202CR C10 A30	2CSR752140R1104		0,245	1
		13	3033691	DS202CR C13 A30	2CSR752140R1134		0,245	1
		16	3033714	DS202CR C16 A30	2CSR752140R1164		0,245	1
		20	3033738	DS202CR C20 A30	2CSR752140R1204		0,245	1
		25	3033752	DS202CR C25 A30	2CSR752140R1254		0,245	1
		32	3033776	DS202CR C32 A30	2CSR752140R1324		0,245	1
		40	3033790	DS202CR C40 A30	2CSR752140R1404		0,245	1
	300	6	3033813	DS202CR C6 A300	2CSR752140R3064		0,245	1
		10	3033837	DS202CR C10 A300	2CSR752140R3104		0,245	1
		13	3033851	DS202CR C13 A300	2CSR752140R3134		0,245	1
		16	3033875	DS202CR C16 A300	2CSR752140R3164		0,245	1
		20	3033899	DS202CR C20 A300	2CSR752140R3204		0,245	1
		25	3033912	DS202CR C25 A300	2CSR752140R3254		0,245	1
		32	3033936	DS202CR C32 A300	2CSR752140R3324		0,245	1
		40	3033950	DS202CR C40 A300	2CSR752140R3404		0,245	1

DS202CR

Ordering codes



DS202CR M

DS202CR M A type, B characteristic

Function: protection of end user single-phase circuits against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I_{\Delta n}=30$ mA).

Application: residential, commercial, industrial.

Standard: IEC/EN 61009-1; IEC/EN 61009-2-1

$I_{cn} = 10\,000$ A

Number of poles	Rated residual current $I_{\Delta n}$ mA	Rated current I_n A	Bbn 402290 EAN	Order details		Price 1 piece	Weight 1 piece kg	Pack unit pc.
				Type code	Order code			
2	10	10	3034292	DS202CR M B10 A10	2CSR772140R0105		0,245	1
		13	3034315	DS202CR M B13 A10	2CSR772140R0135		0,245	1
		16	3034339	DS202CR M B16 A10	2CSR772140R0165		0,245	1
	30	6	3034377	DS202CR M B6 A30	2CSR772140R1065		0,245	1
		10	3034414	DS202CR M B10 A30	2CSR772140R1105		0,245	1
		13	3034452	DS202CR M B13 A30	2CSR772140R1135		0,245	1
		16	3034490	DS202CR M B16 A30	2CSR772140R1165		0,245	1
		20	3034537	DS202CR M B20 A30	2CSR772140R1205		0,245	1
		25	3034575	DS202CR M B25 A30	2CSR772140R1255		0,245	1
		32	3034612	DS202CR M B32 A30	2CSR772140R1325		0,245	1
		40	3034636	DS202CR M B40 A30	2CSR772140R1405		0,245	1
	300	6	3034650	DS202CR M B6 A300	2CSR772140R3065		0,245	1
		10	3034674	DS202CR M B10 A300	2CSR772140R3105		0,245	1
		13	3034698	DS202CR M B13 A300	2CSR772140R3135		0,245	1
		16	3034711	DS202CR M B16 A300	2CSR772140R3165		0,245	1
		20	3034735	DS202CR M B20 A300	2CSR772140R3205		0,245	1
		25	3034759	DS202CR M B25 A300	2CSR772140R3255		0,245	1
		32	3034773	DS202CR M B32 A300	2CSR772140R3325		0,245	1
		40	3034797	DS202CR M B40 A300	2CSR772140R3405		0,245	1

DS202CR

Ordering codes



DS202CR M

DS202CR M A type, C characteristic

Function: protection of end user single-phase circuits against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I_{\Delta n}=30\text{ mA}$).

Application: residential, commercial, industrial.

Standard: IEC/EN 61009-1; IEC/EN 61009-2-1

$I_{cn} = 10\,000\text{ A}$

Number of poles	Rated residual current $I_{\Delta n}\text{ mA}$	Rated current $I_n\text{ A}$	Bbn 402290 EAN	Order details		Price 1 piece	Weight 1 piece kg	Pack unit pc.
				Type code	Order code			
2	10	13	3034308	DS202CR M C13 A10	2CSR772140R0134		0,245	1
		16	3034322	DS202CR M C16 A10	2CSR772140R0164		0,245	1
	30	6	3034360	DS202CR M C6 A30	2CSR772140R1064		0,245	1
		10	3034407	DS202CR M C10 A30	2CSR772140R1104		0,245	1
		13	3034445	DS202CR M C13 A30	2CSR772140R1134		0,245	1
		16	3034483	DS202CR M C16 A30	2CSR772140R1164		0,245	1
		20	3034520	DS202CR M C20 A30	2CSR772140R1204		0,245	1
		25	3034568	DS202CR M C25 A30	2CSR772140R1254		0,245	1
		32	3034605	DS202CR M C32 A30	2CSR772140R1324		0,245	1
		40	3034629	DS202CR M C40 A30	2CSR772140R1404		0,245	1
	300	6	3034643	DS202CR M C6 A300	2CSR772140R3064		0,245	1
		10	3034667	DS202CR M C10 A300	2CSR772140R3104		0,245	1
		13	3034681	DS202CR M C13 A300	2CSR772140R3134		0,245	1
		16	3034704	DS202CR M C16 A300	2CSR772140R3164		0,245	1
		20	3034728	DS202CR M C20 A300	2CSR772140R3204		0,245	1
		25	3034742	DS202CR M C25 A300	2CSR772140R3254		0,245	1
		32	3034766	DS202CR M C32 A300	2CSR772140R3324		0,245	1
		40	3034780	DS202CR M C40 A300	2CSR772140R3404		0,245	1

DS202CR

Ordering codes



DS202CR M APR

DS202CR M APR type, B characteristic

Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents, providing an optimal compromise between safety and continuity of service, thanks to the resistance to unwanted tripping; protection against indirect contact and additional protection against direct contact ($I_{\Delta n}=30$ mA).

Application: residential, commercial, industrial.

Standard: IEC/EN 61009-1; IEC/EN 61009-2-1

$I_{cn} = 10\,000$ A

Number of poles	Rated residual current $I_{\Delta n}$ mA	Rated current I_n A	Bbn 402290 EAN	Order details		Price 1 piece	Weight 1 piece kg	Pack unit pc.
				Type code	Order code			
2	30	6	3035206	DS202CR M B6 APR30	2CSR772440R1065		0,245	1
		10	3035220	DS202CR M B10 APR30	2CSR772440R1105		0,245	1
		13	3035244	DS202CR M B13 APR30	2CSR772440R1135		0,245	1
		16	3035268	DS202CR M B16 APR30	2CSR772440R1165		0,245	1
		20	3035282	DS202CR M B20 APR30	2CSR772440R1205		0,245	1
		25	3035305	DS202CR M B25 APR30	2CSR772440R1255		0,245	1
		32	3035329	DS202CR M B32 APR30	2CSR772440R1325		0,245	1
		40	3035343	DS202CR M B40 APR30	2CSR772440R1405		0,245	1
	300	6	3035350	DS202CR M B6 APR300	2CSR772440R3065		0,245	1
		10	3035367	DS202CR M B10 APR300	2CSR772440R3105		0,245	1
		13	3035374	DS202CR M B13 APR300	2CSR772440R3135		0,245	1
		16	3035381	DS202CR M B16 APR300	2CSR772440R3165		0,245	1
		20	3035398	DS202CR M B20 APR300	2CSR772440R3205		0,245	1
		25	3035404	DS202CR M B25 APR300	2CSR772440R3255		0,245	1
		32	3035411	DS202CR M B32 APR300	2CSR772440R3325		0,245	1
		40	3035428	DS202CR M B40 APR300	2CSR772440R3405		0,245	1

DS202CR

Ordering codes



DS202CR M APR

DS202CR M APR type, C characteristic

Function: protection of end user single-phase circuits against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I_{\Delta n}=30$ mA).

Application: residential, commercial, industrial.

Standard: IEC/EN 61009-1; IEC/EN 61009-2-1

$I_{cn} = 10\,000$ A

Number of poles	Rated residual current $I_{\Delta n}$ mA	Rated current I_n A	Bbn 402290 EAN	Order details		Price 1 piece	Weight 1 piece kg	Pack unit pc.
				Type code	Order code			
2	30	6	3035190	DS202CR M C6 APR30	2CSR772440R1064		0,245	1
		10	3035213	DS202CR M C10 APR30	2CSR772440R1104		0,245	1
		13	3035237	DS202CR M C13 APR30	2CSR772440R1134		0,245	1
		16	3035251	DS202CR M C16 APR30	2CSR772440R1164		0,245	1
		20	3035275	DS202CR M C20 APR30	2CSR772440R1204		0,245	1
		25	3035299	DS202CR M C25 APR30	2CSR772440R1254		0,245	1
		32	3035312	DS202CR M C32 APR30	2CSR772440R1324		0,245	1
		40	3035336	DS202CR M C40 APR30	2CSR772440R1404		0,245	1

DS202CR

Ordering codes



DS202CR M 110V

DS202CR M 110V A type, C characteristic

Function: protection of end user single-phase circuits against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I\Delta n = 30 \text{ mA}$).

This particular series of devices has the minimum operating voltage of test button of 93V and it is suitable for 110 V applications.

Application: marine.

Standard: IEC 61009-1; IEC 61009-2-1

Icn = 10 000 A

Number of poles	Rated residual current $I\Delta n \text{ mA}$	Rated current $I_n \text{ A}$	Bbn 402290 EAN	Order details		Price 1 piece	Weight 1 piece kg	Pack unit pc.
				Type code	Order code			
2	30	6	3035060	DS202CRM C6 A30 110V	2CSR772199R1064		0,245	1
		10	3035077	DS202CRM C10 A30 110V	2CSR772199R1104		0,245	1
		13	3035084	DS202CRM C13 A30 110V	2CSR772199R1134		0,245	1
		16	3035107	DS202CRM C16 A30 110V	2CSR772199R1164		0,245	1
		20	3035114	DS202CRM C20 A30 110V	2CSR772199R1204		0,245	1
		25	3035121	DS202CRM C25 A30 110V	2CSR772199R1254		0,245	1
		32	3035138	DS202CRM C32 A30 110V	2CSR772199R1324		0,245	1
		40	3035145	DS202CRM C40 A30 110V	2CSR772199R1404		0,245	1

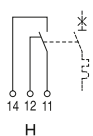
DS202CR

Accessories

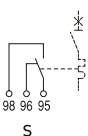


G2C

G2C-S



H



S

G2C: Auxiliary and signal contact

Auxiliary (H):

Provides the status of the protection device, OPEN/CLOSED.

Auxiliary or signal (S/H):

This device can act as an auxiliary contact (function H) or as a signal contact (function S).

The user can change the function at the moment of installation.

Used as signal contact (function S) it provides the information about the automatic tripping of the protection devices: overload or short-circuit for MCBs, earth leakage tripping for RCDs.

- Test button on the front to simulate the function (acting as a function H or S)
- Reset button for the contacts (function S)
- Tripping signal on the front (function S)
- Version with golden contacts, available for low current as well as low voltage applications.

Mounting:

on the left or right, up to 4 G2C units

Performances

Product standard	IEC/EN 62019
Change-over contacts	1
Rated current I_n (A)	5
Rated voltage AC U_n (V)	240
Minimum application voltage	24 V AC/DC; 12 V AC/DC for version with golden contacts
Minimum application current	10 mA AC; 200 mA DC -- 2 mA AC; 25 mA DC for version with golden contacts
Electrical endurance (operations)	10000
Terminal capacity flexible/rigid cable (mm ²)	0.75...2.5 / 1...2.5
Terminal capacity for two rigid cables (mm ²)	2 × 1.5
Dimension [D×W×H] (mm)	69 × 8.7 × 92
Net weight (g)	70
Tightening torque (Nm)	0.5

Ordering code

Type	EAN	Order details		Weight 1 piece kg	Pack unit pc.
		Type code	Order code		
Auxiliary (H)	4053546046427	G2C-H6 L+R	2CDS200931R0001	0.07	1
Auxiliary or signal (S/H)	4053546046434	G2C-S/H6 L+R	2CDS200932R0001	0.07	1
Auxiliary or signal golden contact (S/H G)	4053546046441	G2C-S/H6 L+R KL	2CDS200932R0011	0.07	1

DS202CR

Busbars

Busbars available for the connection with DS202CR series

Busbars

No. of Pins	Phases	mm ²	Bbn 405354	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	
12	2	10	6054347	BR-S2/12/10	2CDL824001R1012	0,026	10
56	2	16	6054361	BR-S2/56/16	2CDL824001R1656	0,241	20
10	2	10	6054323	BR-S2/10/10H	2CDL824001R1010	0,026	10
46	2	16	6054354	BR-S2/46/16H	2CDL824001R1646	0,241	20
12	4	10	6054453	BR-S4/12/10	2CDL844001R1012	0,026	5
54	4	10	6054460	BR-S4/54/10	2CDL844001R1054	0,241	15
54	4	16	6054477	BR-S4/54/16	2CDL844001R1654	0,241	15

End Caps

No. of Pins	Phases	mm ²	Bbn 405354	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	
		10/16	6046717	BB-END 2.1	2CDL800001R0021	0,001	10
		16	6046731	BB-END 3.2	2CDL800001R0030	0,001	10
		10/16	6046823	BB-END 4.1	2CDL800001R0040	0,001	10

Feeder terminal

No. of Pins	Phases	mm ²	Bbn 405354	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	
		25	6062366	BR-FS 25/14	2CDL800001R2514	0,018	30

Schock protection caps

No. of Pins	Phases	mm ²	Bbn 405354	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	
			6062403	BR-BS	2CDL800001R0051	0,018	10

DS202CR

Additional technical features

Power loss

I_n (A)	2P (W)
6	3.0
10	3.3
13	3.8
15	3.9
16	4.2
20	5.0
25	6.2
32	7.6
40	8.9

Influent of adjacent devices

Number of devices	K
2 or 3	0.9
4 or 5	0.8
6 to 9	0.7
> 10	0.6

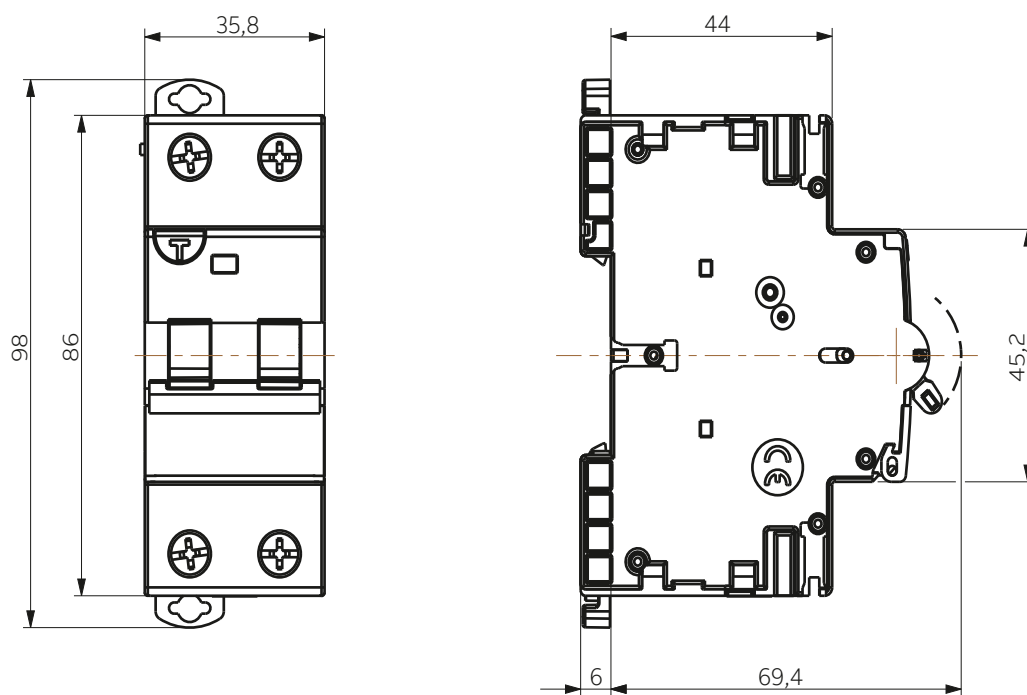


DS202CR

Dimensions

Overall dimensions

All measurements in mm



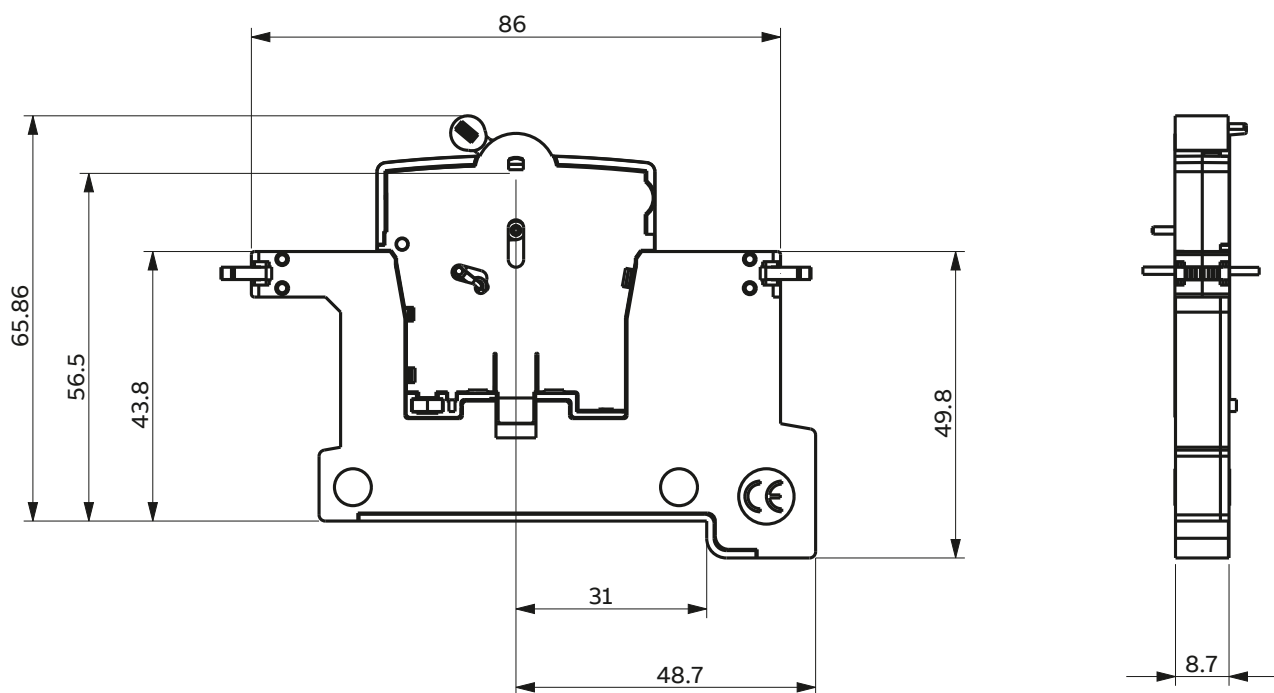


DS202CR

Dimensions of G2C Accessories



Auxiliary contact



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ABB Group

Electrification business

Smart Buildings business line

www.abb.com/lowvoltage

www.abb.com/buildings

Note:

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