

DATA SHEET

F200 B Type



Cutting-edge features: safety, service continuity, compactness, integration. These are the characteristics of the F200 B RCCBs (residual current circuit breakers), the state-of-the-art technology by ABB which has been providing the best solutions for residential, commercial and industrial installations for over 120 years.

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F202 B and F204 B:
residual current
circuit breakers

Type B RCCBs can be adapted perfectly to all types of installation requirements and application fields.

F200 B is compliant to product standard IEC/EN 61008 and EN 62423 and features the following main technical characteristics:

- Rated current: from 16 A to 125 A
- Sensitivity: 30, 300 and 500 mA
- Operating temperature: -25 °C to +70 °C (for system up to 32 A)
- Pollution degree 3 (for 16–63 A devices, 30–300 mA)

Applications benefits:

- Terminals equipped with fail safe feature to avoid improper installation
- Supply possible both from top and bottom and in parallel with cables and busbars thanks to terminals composed by two different seats: a front seat for 25 mm² cables and a back seat for 10 mm² busbars
- Compact solution with just 2 Pole devices in 2 DIN Module
- Compatible with a wide range of accessories with lots of different functions
- Great performance over time thanks to high immunity against unwanted tripping and robustness to operating environment
- Certified quality and compliance to worldwide product standard

RCCBs

F 200 series - B type technical features

		F200 B Type		F200 B Type high ratings				
		F202 B 16-63 A		F204 B 25-63 A		F204 B 80-125 A		
Standards		IEC/EN 61008-1, IEC/EN 61008-2-1, EN 62423						
Electrical features	Type (wave form of the earth leakage sensed)	B		B, B-S		B		
	Poles	2P		4P		4P		
	Rated current I_n	A	16, 25, 40, 63	25, 40, 63		80, 125		
	Rated sensitivity $I_{\Delta n}$	A	0,03 - 0,3	0,03 - 0,3 - 0,5		0,03 - 0,3 - 0,5		
	Rated voltage U_e	V AC	230	230/400		230/400		
	Insulation voltage U_i	V	440	440 - 500 ¹		400		
	Operating voltage of circuit test U_t	IEC/EN	V	110 - 253 V AC 170 - 253 V AC (30 mA)	110 - 253 V AC 170 - 253 V AC (30 mA)		150 - 250 V AC (80 A) 200 - 250 V AC (80 A, 30 mA) 200 - 440 V AC (125 A) 250 - 440 V AC (125A, 30 mA)	
	Min. operating voltage for detecting Type A/AC/F residual currents	V AC	0	0		0		
	Min. operating voltage for detecting Type B residual currents	V AC	50	50		50		
	Rated frequency	Hz	50/60	50/60		50		
	Frequency range of residual current	kHz	2	2		100		
	Rated conditional short-circuit current $I_{nc}=I_A^3$	SCPD - fuse gG/gL 100 A	kA	10	10		10 (fuse gG 125 A)	
	Rated residual breaking capacity $I_{\Delta n}=I_m$		kA	1	1		125 A: 1,25 80 A: 1	
	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	
	Overvoltage category			III, disconnecter abilities				
	Surge current resistance (wave 8/20)	A		3.000	3.000 - 5.000 (B S)		3.000 - 5.000 (B S)	
	Maximum electronic consumption	W		0,3	1,2 (3,5 ¹)			
	Mechanical features	Toggle	Blue sealable in ON-OFF					
		Contact position indicator (CPI)	yes		yes		yes	
Electrical life		10.000		10.000		2.000		
Mechanical life		20.000		20.000		5.000		
Protection degree		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%					
Ambient temperature		IEC	°C	-25...+70 (for system current ≤ 32 A) ⁴ -25...+65 for system current = 40 A ⁴ -25...+50 for system current = 63 A ⁴ For other system current see derating table			-25...+40 ⁵	
Storage temperature			°C	40...+70				
Installation		Terminal Type	Failsafe bi-directional cylinder-lift terminal at top and bottom (shock protected) (cage for $I_n > 63 A$) ²					
	Min/Max Terminal size top/bottom for cable	IEC	Mm ²	1 - 25	1 - 25		50	
	Terminal size top/bottom for busbar	IEC	Mm ²	10/10	10/10			
	Tightening torque	IEC	Nm	2,8			3	
	Tool	Flat tip PZ2						
	Mounting	Any position on DIN rail EN 60715 (35 mm) by means of fast clip device						
	Supply	Top/bottom						
	Withdrawal from busbar	It is possible without using any tools only from the bottom					no	
Dimensions and weight	Dimensions (H x D x W)	2P	Mm	85 x 69 x 35	85 x 69 x 70		85 x 69,5 x 72	
	Weight	2P	g	200	380		460	
Combination with auxiliary elements ¹	Combinable with:							
	auxiliary contact	yes		yes		no		
	signal contact/auxiliary switch	yes		yes		yes		
	motor operating device	yes		yes		no		
	shunt trip	yes		yes		no		
undervoltage release	yes		yes		no			

¹ 500 mA devices

² Prior to connection of aluminium conductors (≥ 4 mm²) ensure that their contact points are cleaned, brushed and coated with grease

³ For S750-E 63 A, S750DR-E/K 100 A and other SCPD back up coordination values are available.

⁴ Costant temperature.

⁵ With daily average < 35°C.

RCCBs

F 200 series - B type   



F202 B



F204 B

F200 B Type from 16 to 63 A

Number of poles	Rated residual current $I_{\Delta n}$ mA	Rated current I_n A	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
				Type code	Order code		
2	30	16	341154	F202 B-16/0,03	2CSF202568R1160	0,220	1
		25	341253	F202 B-25/0,03	2CSF202568R1250	0,220	1
		40	341352	F202 B-40/0,03	2CSF202568R1400	0,220	1
		63	341154	F202 B-63/0,03	2CSF202568R1630	0,220	1
	300	16	341451	F202 B-16/0,3	2CSF202568R3160	0,220	1
		25	341550	F202 B-25/0,3	2CSF202568R3250	0,220	1
4	30	40	341659	F202 B-40/0,3	2CSF202568R3400	0,220	1
		63	341758	F202 B-63/0,3	2CSF202568R3630	0,220	1
		25	341857	F204 B-25/0,03	2CSF204568R1250	0,380	1
		40	341956	F204 B-40/0,03	2CSF204568R1400	0,380	1
	300	63	342052	F204 B-63/0,03	2CSF204568R1630	0,380	1
		25	342151	F204 B-25/0,3	2CSF204568R3250	0,380	1
		40	342250	F204 B-40/0,3	2CSF204568R3400	0,380	1
	300 S	63	342359	F204 B-63/0,3	2CSF204568R3630	0,380	1
		40	342458	F204 B S-40/0,3	2CSF204868R3400	0,380	1
		63	342557	F204 B S-63/0,3	2CSF204868R3630	0,380	1
		40	776932	F204 B-40/0,5 ²	2CSF204592R4400	0,380	1
	500	63	347637	F204 B-63/0,5 ²	2CSF204592R4630	0,380	1
40		357834	F204 B S-40/0,5 ²	2CSF204892R4400	0,380	1	
500 S	63	347538	F204 B S-63/0,5 ²	2CSF204892R4630	0,380	1	
	25	356356	F202 B-25/0,03 U	2CSF202568U1250	0,220	48	
4	30	25	356158	F204 B-25/0,03 U	2CSF204568U1250	0,380	24
		40	355953	F204 B-40/0,03 U	2CSF204568U1400	0,380	24
		63	356059	F204 B-63/0,03 U	2CSF204568U1630	0,380	24
	300	63	356257	F204 B-63/0,3 U	2CSF204568U3630	0,380	24

F200 B Type high ratings

Number of poles	Rated residual current $I_{\Delta n}$ mA	Rated current I_n A	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
				Type code	Order code		
4	30	80	988601	F204B-80/0,03 ²	2CSF204501R1800	0,46	1
		125	988700	F204B-125/0,03L ^{1,2}	2CSF204523R1950	0,46	1
	300	80	989103	F204B-80/0,3 ²	2CSF204501R3800	0,46	1
		125	989202	F204B-125/0,3L ^{1,2}	2CSF204523R3950	0,46	1
	300 S	125	989509	F204BS-125/0,3L ^{1,2}	2CSF204823R3950	0,46	1
	500	125	730439	F204B-125/0,5L ^{1,2}	2CSF204523R4950	0,46	1
	500 S	125	731238	F204BS-125/0,5L ^{1,2}	2CSF204823R4950	0,46	1



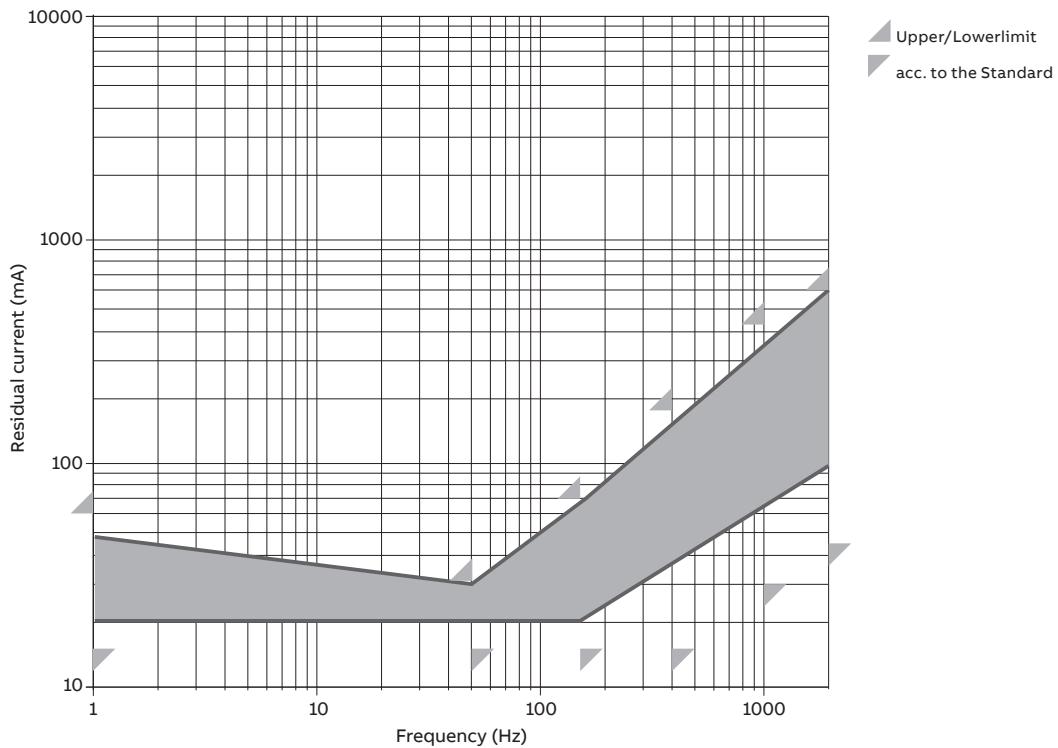
F204 B 80, 125 A

¹ Left-sided neutral pole
² No-self-diagnostics

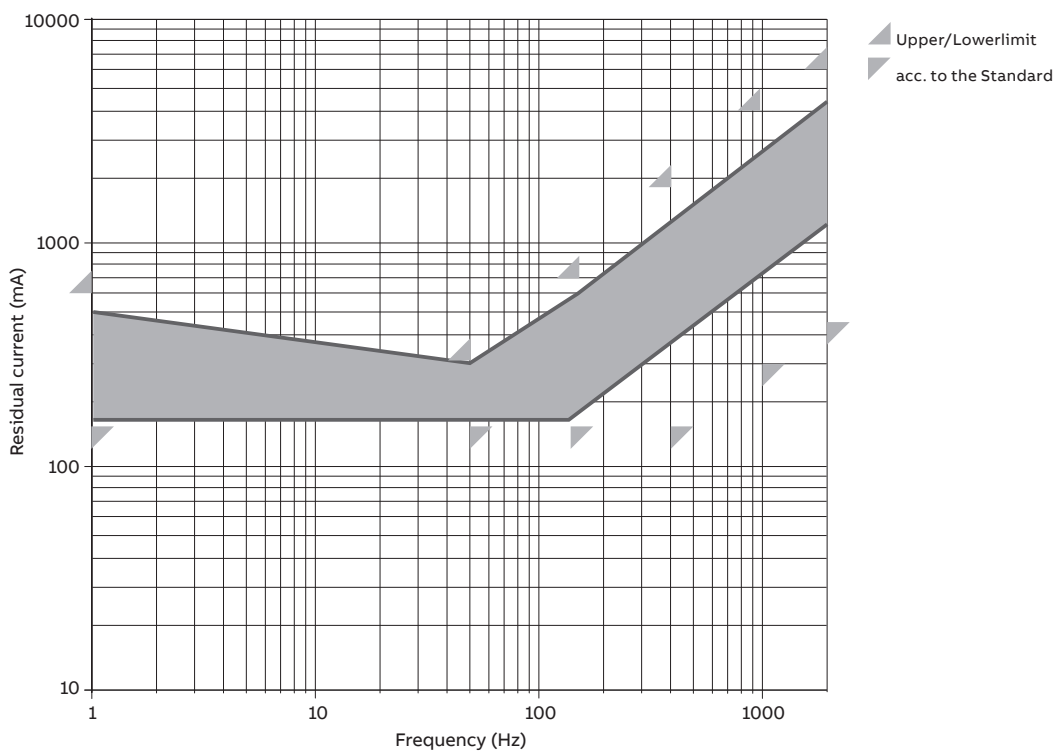
F200 B Type from 16 to 63 A

Residual current tripping thresholds according to frequency

F200 B 30 mA

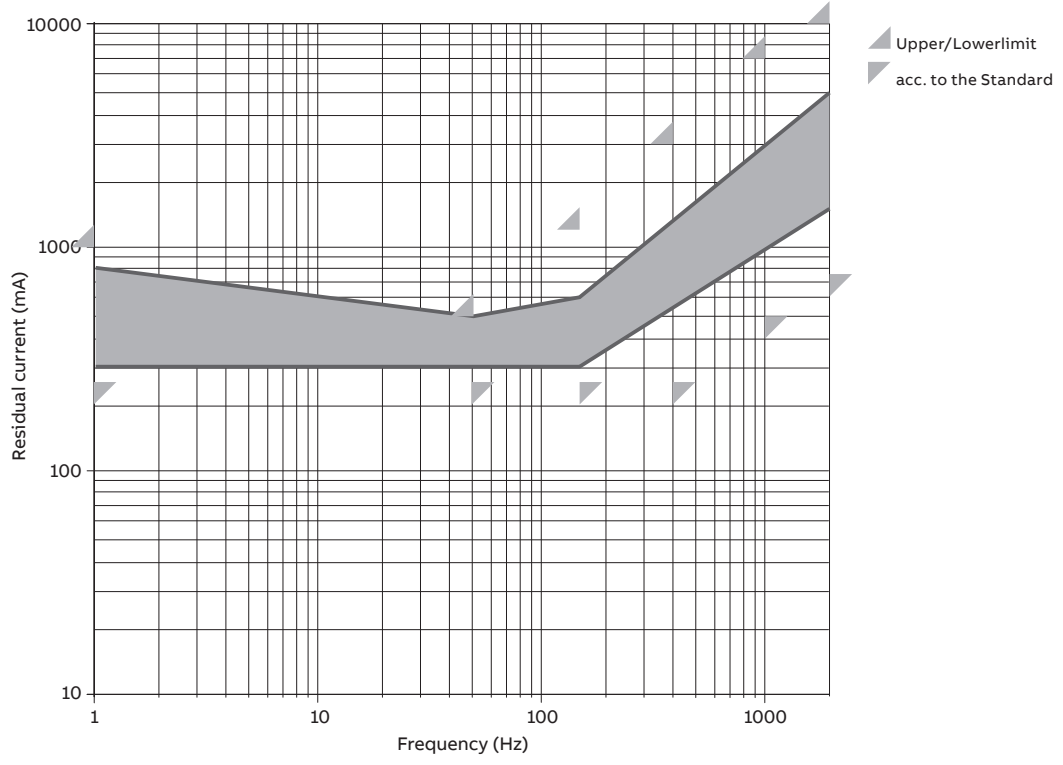


F200 B 300 mA



F200 B TYPE DATA SHEET

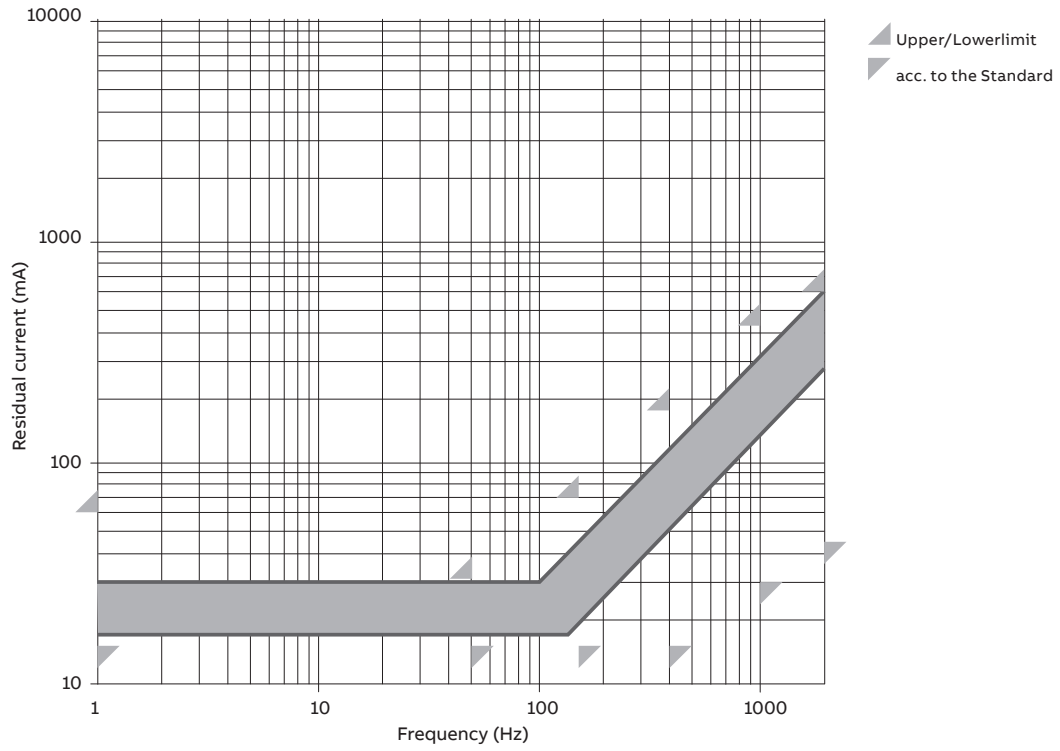
F200 B 500 mA



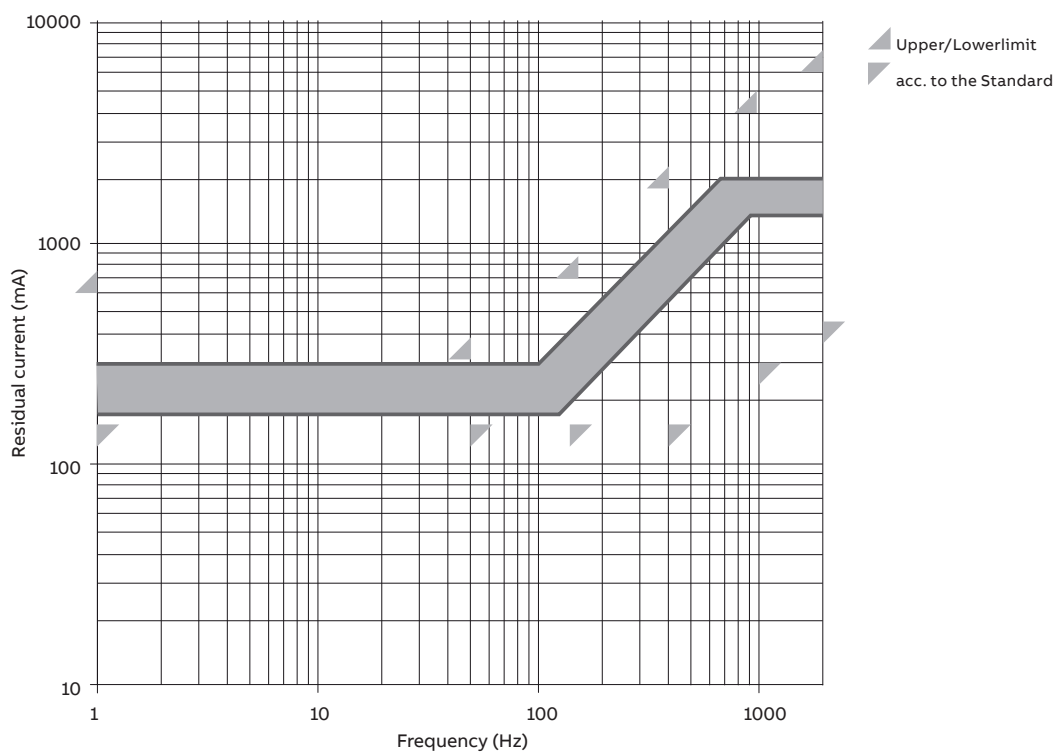
F200 B high ratings

Residual current tripping thresholds according to frequency

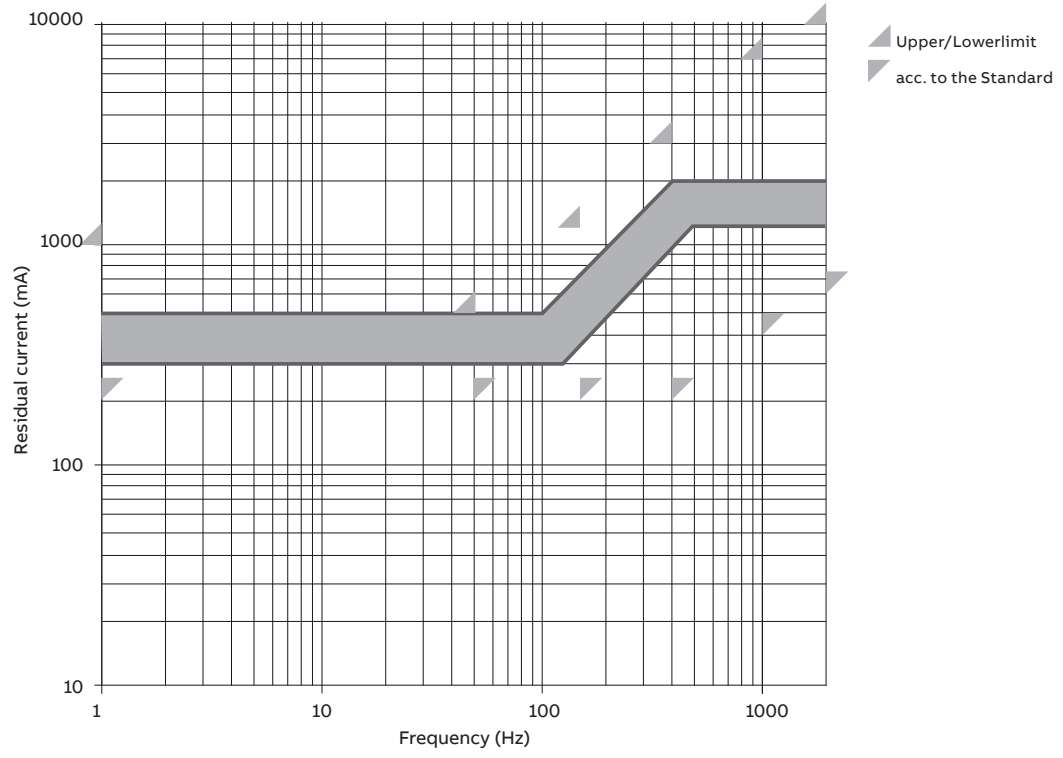
F204 B 30 mA



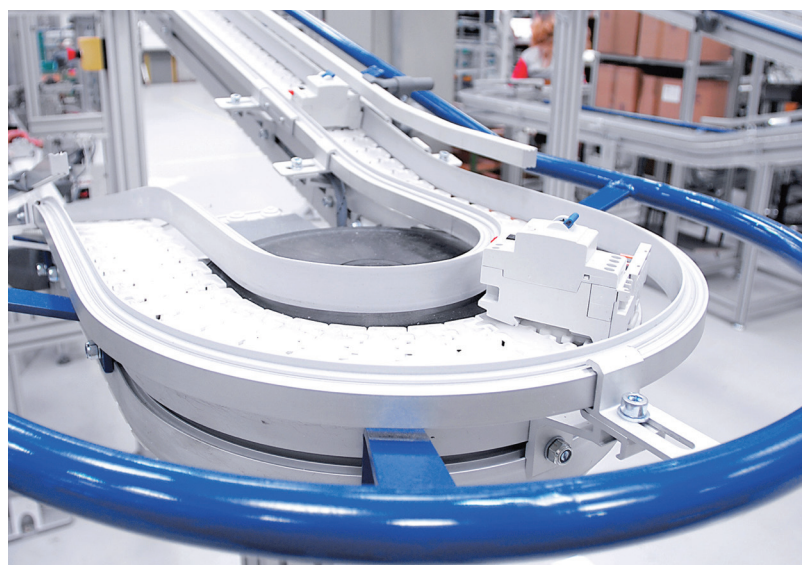
F204 B 300 mA



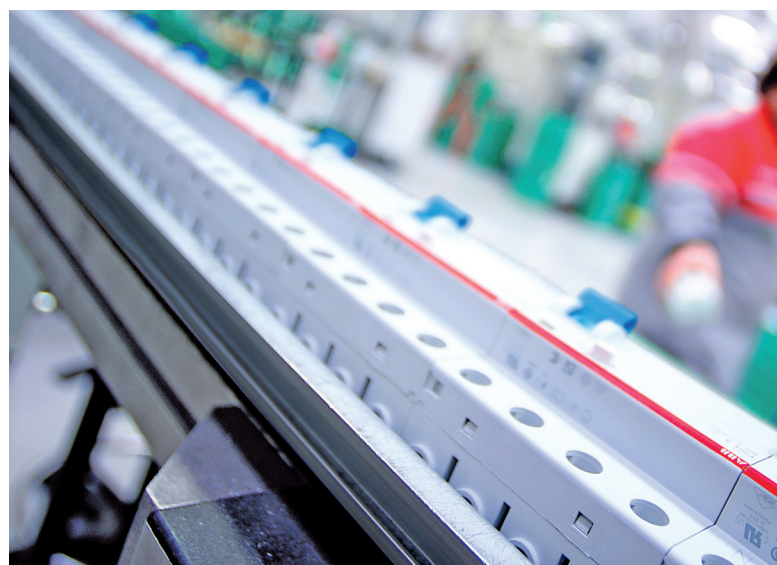
F204 B 500 mA



F200 B TYPE DATA SHEET



02



03

02 03
Production line of the
RCCB F200 Type B

Tripping times

Tripping times					
Type	Fault currents	Tripping time at			
	Alternating currents	1 x I Δ n	2 x I Δ n	5 x I Δ n	500 A
	Pulsating DC currents	1,4 x I Δ n	2 x 1,4 x I Δ n	5 x 1,4 x I Δ n	500 A
	Smooth DC currents	2 x I Δ n	2 x 2 x I Δ n	5 x 2 x I Δ n	500 A
	Standard or short-time delay	Max. 0,3 s	Max. 0,15 s	Max. 0,04 s	Max. 0,04 s
	Selectiv S	0,13 - 0,5 s	0,06 - 0,2 s	0,05 - 0,15 s	0,04 - 0,15 s

Power Loss Values

Power Loss [W]	I _n [A]	Per Pole	Total
F202 B	16	0,26	0,82
	25	0,65	1,58
	40	1,65	3,60
	63	4,14	8,58
F204 B	25	0,74	3,43
	40	1,92	6,95 (9,26*)
	63	4,80	15,6 (17,9*)
	80	3,5	14
F204 B	125	7,5	34,8

* 500 mA devices

Derating in temperature for F200 B series

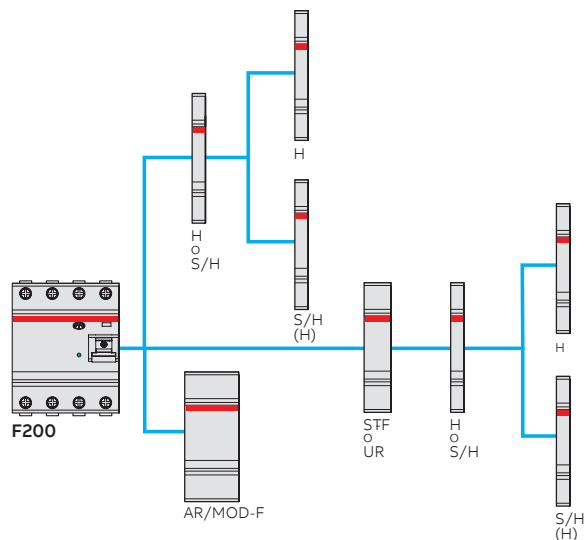
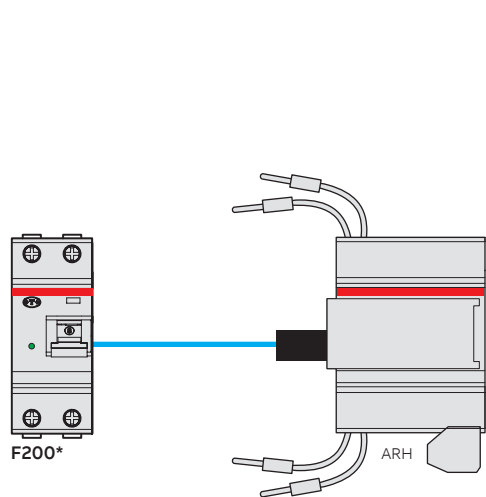
Max operating current depending on permanent ambient temperature of the residual current circuit breaker.

I _n (A)	Temperature (°C)				
	-25...50	55	60	65	70
16A	16	16	16	16	16
25A	25	25	25	25	25
40A	40	40	40	40	32
63A	63	55	48	40	32

Auxiliary elements and accessories for MCBs and RCDs

Selection tables

F200 B Type from 16 to 63 A

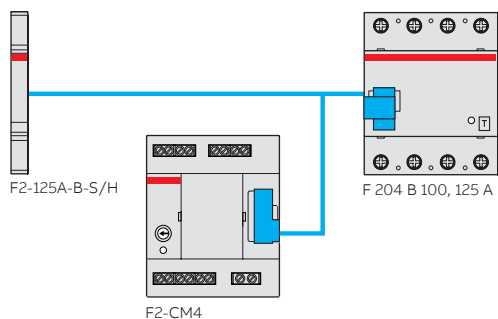


ARH	Home automatic resetting unit	F2C-ARH
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* F202 30 mA or 100 mA (depending on ARH model), max 63 A

H	Auxiliary contact	S2C-H6R
H-R	Auxiliary contact	S2C-H6-...R
S/H	Signal/Auxiliary contact	S2C-S/H6R
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
UR	Undervoltage release	S2C-UA
AR	Auto reclosing unit	F2C-ARI
MOD-F	Motor operating device	F2C-CM
ST-F	Shunt trip for F 200 RCCB	F2C-A

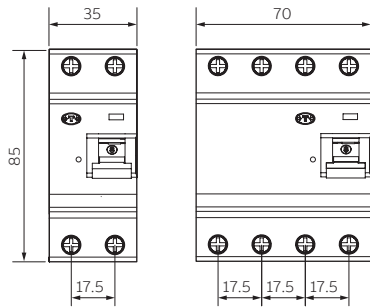
F200 B high ratings



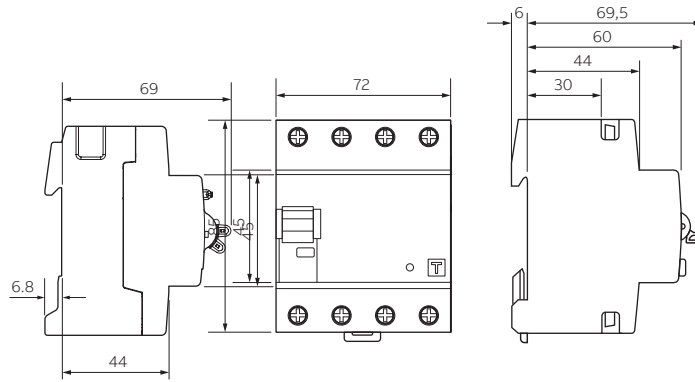
F2-125A-B-S/H	Signal/Auxiliary contact
F2-CM4-MOD	

Overall dimensions and wiring diagrams

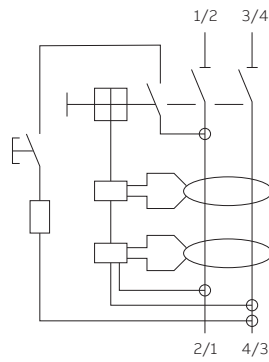
F200 B Type from 16 to 63 A
All measurements in mm



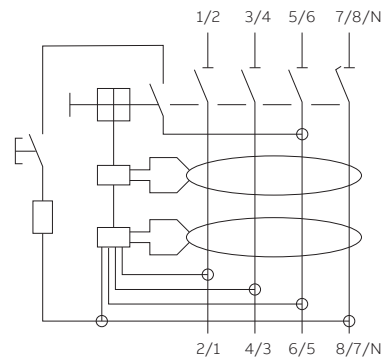
F200 B high ratings



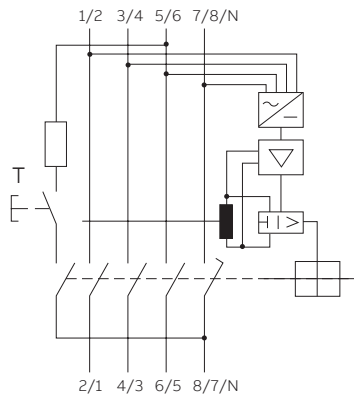
F202 B16 - 63A



F204 B25 - 63A



F204 B 80A



F204 125A Neutral left

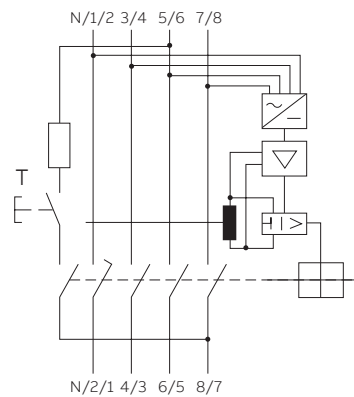


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