

RCBO DSH201R

Data sheet



DSH201R is a 1P+N electromechanical RCBO in 4.5kA breaking capacity, dedicated for Russian market for residential applications. In only two modules width the series offers a complete protection against short-circuits, overload and earth fault currents.

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01 DSH201R: residual current circuit breaker with overcurrent protection

DSH201R is a 1P+N RCBO compliant to product standard IEC/EN 61009 with the following main technical features:

- Breaking capacity 4.5 kA
- Type AC
- Sensitivity 30 mA
- Tripping characteristics C
- Rated current from 6 to 40 A

It is the perfect solution for installation in residential applications.

Application benefits

- Easy cross-wiring and easy installation with PSH busbars (also PS busbars are accepted).
- Supply possible both from top and bottom side: 25 mm² cage terminals with fail safe feature to avoid improper installation.
- Family feeling in the System pro M compact® range.
- Easy troubleshooting and reduced downtime for maintenance operations thanks to the earth fault indicator: blue flag on the toggle.
- Product Made in Italy, with the indication molded on the side.
RFid tag on the product side to authenticate the product.

RCBO DSH201R

Technical data



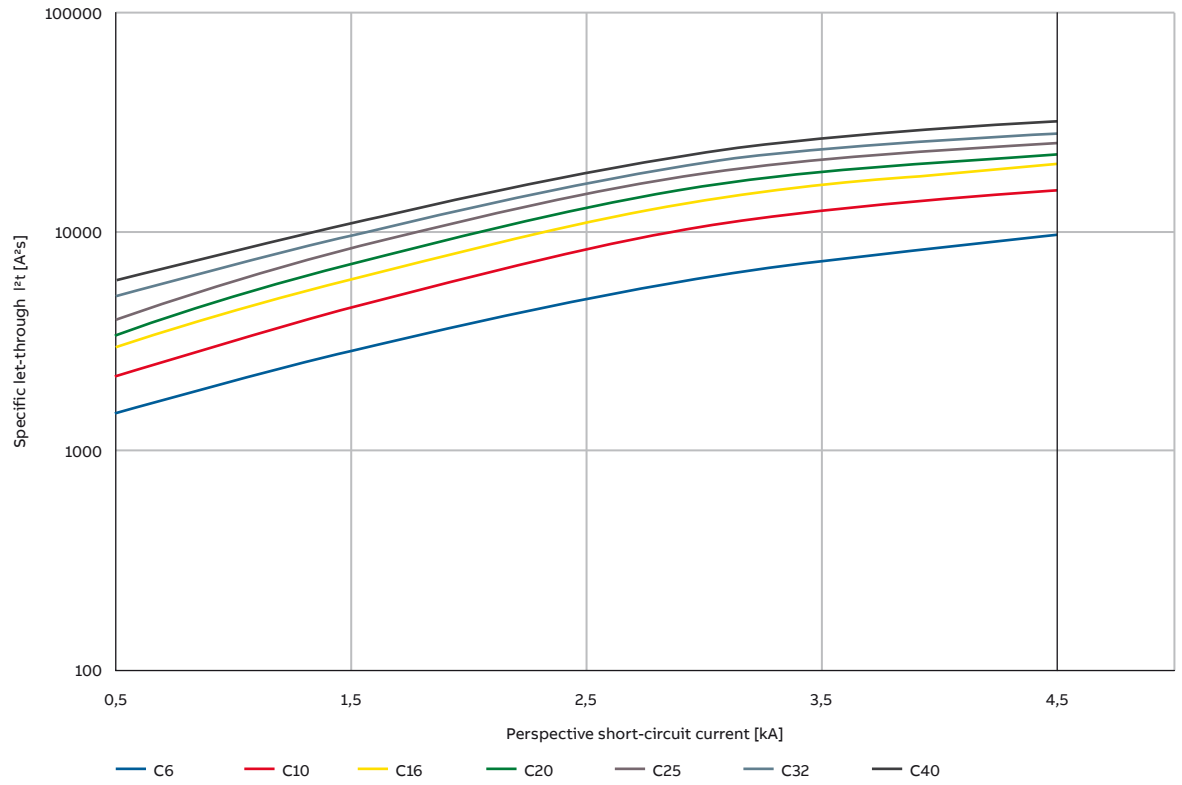
DSH201R

		DSH201R		
	Standards	IEC/EN 61009-1; IEC/EN 61009-2-1		
Electrical features	Type (wave form of the earth leakage sensed)	AC		
	Number of poles	1P + N		
	Rated current I_n	A	$6 \leq I_n \leq 40$	
	Rated sensitivity $I_{\Delta n}$	A	0.03	
	Rated voltage U_e	V	230	
	Insulation voltage U_i	V	500 V AC	
	Oversoltage category	III		
	Pollution degree	2		
	Operating voltage of circuit test U_t	V	170 - 254	
	Rated frequency	Hz	50	
	Rated breaking capacity acc. to IEC/EN 61009-1	I_{cn}	A	4500
	Rated breaking capacity acc. to IEC/EN 60947-2 (only referring to short circuit test)	ultimate I_{cu}	kA	6
		service I_{cs}	kA	4.5
	Rated residual breaking capacity $I_{\Delta m}$ according to EN/IEC 61009-1	A	3000	
	Rated impulse withstand voltage (1.2/50) U_{imp}	kV	4 kV	
	Dielectric test voltage at ind. freq. for 1 min.	kV	2.5 kV (50 / 60Hz, 1 min.)	
	Thermomagnetic release characteristic	$C: 5 I_n \leq I_n \leq 10 I_n$	■	
	Energy limiting class acc. to EN 61009-1	3		
	Mechanical features	Housing	Insulation group I - II, RAL 7035	
Toggle		Insulation group II, Black RAL 9005, sealable in ON-OFF positions		
Earth fault trip indication		Blue flag on toggle		
Electrical life		operations	10000	
Mechanical life		operations	20000	
Protection degree acc. to EN 60529		housing	IP4X	
		terminals	IP2X	
Shock resistance acc. to IEC/EN 60068-2-27		25 g - 2 shocks - 13 ms		
Vibration resistance acc. to IEC/EN 60068-2-6		0.1 mm or 1 g - 20 cycles at 5...150...5 Hz		
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	
Ambient temperature (with daily average $\leq +35$ °C)		°C	-25...+55	
Storage temperature		°C	-40...+70	
Installation		Terminal type	top / bottom	cage terminal with integrated failsafe
	Terminal size for cables	top / bottom	mm ²	25/25
	Tightening torque	top / bottom	Nm	2
	Stripping length of the cable		mm	12.5
	Mounting	on DIN rail EN 60715 (35 mm) by means of mounting clip		
	Mounting position	Any		
	Supply from	Top/Bottom terminals		
Dimensions and weight	Dimensions (H x D x W)	mm	85 x 69 x 35	
	Weight	g	182	

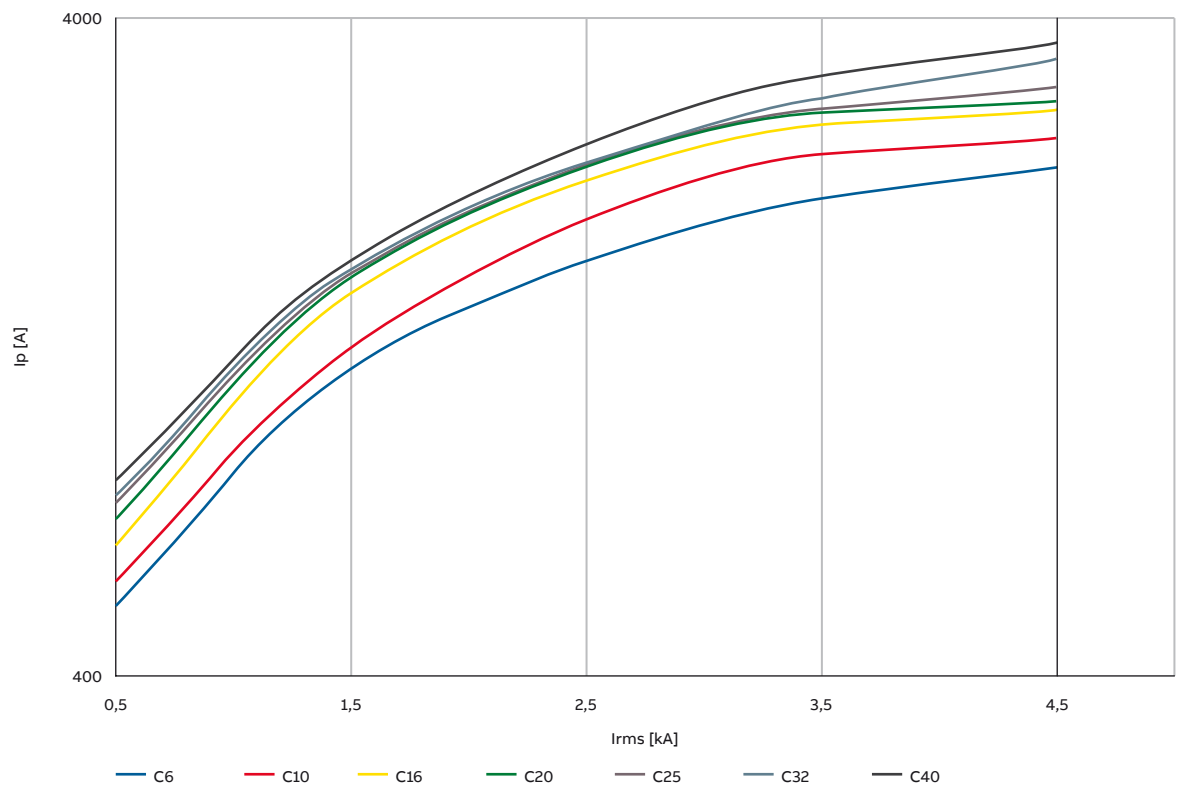
RCBO DSH201R

Technical data

Specific let-through energy I^2t DSH201R - Characteristic C

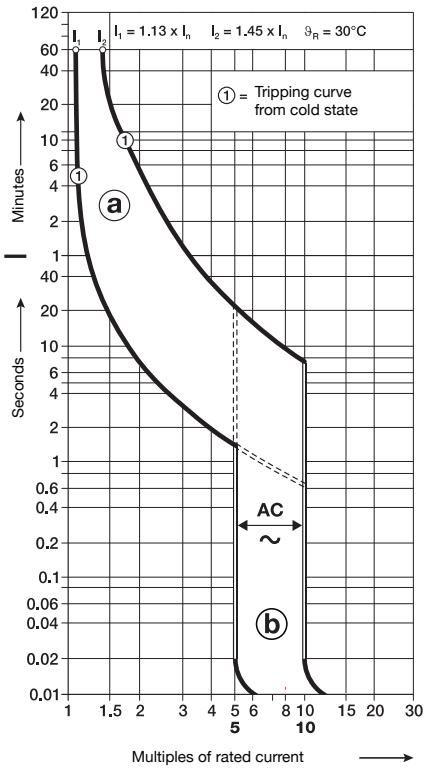


I_{peak} DSH201R - Characteristic C



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 Technical data

Tripping characteristics C
 IEC/EN 61009-1



- a: thermal trip
- b: electromagnetic trip

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Technical data

Performance in altitude

Elevation [m]	2000	3000	4000	5000	6000
Rated Current [A]	1 x I _n	0.96 x I _n	0.94 x I _n	0.92 x I _n	0.90 x I _n
Rated Voltage [V]	1 x U _n	0.877 x U _n	0.775 x U _n	0.676 x U _n	0.588 x U _n

Derating in temperature

Max operating current depending on the ambient temperature (daily average $\leq +35\text{ °C}$) of characteristics type B and C.

I _n (A)	Temperature (°C)									
	-25	-20	-10	0	10	20	30	40	50	55
6	8.8	8.4	7.7	7.3	7.0	6.4	6.0	5.5	5.3	5.1
10	13.5	13.0	12.1	11.5	11.0	10.6	10.0	9.4	9.0	8.8
16	19.0	18.6	18.1	17.5	17.0	16.4	16.0	15.3	14.8	14.5
20	24.0	23.5	22.7	22.0	21.4	20.7	20.0	19.1	18.5	18.3
25	27.9	27.5	27.1	26.6	26.0	25.3	25.0	24.3	23.6	23.4
32	36.8	36.2	35.4	34.8	34.0	32.9	32.0	31.3	30.5	30.0
40	44.8	44.6	44.0	43.4	42.1	41.0	40.0	39.0	38.1	37.9

Influence of adjacent devices

Number of devices	1	3	5	7	9
Correction factor	1	0.9	0.85	0.81	0.8

Voltage Drop, power loss, internal resistance, own consumption

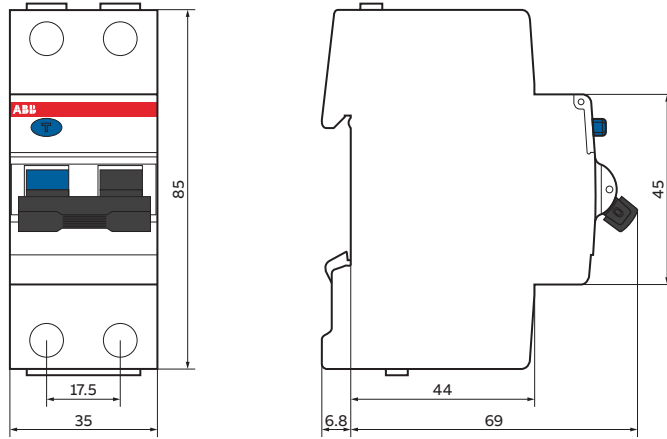
I _n (A)	Voltage drop (mV)	Power loss (W)	Int. res. (mΩ)
6	400	2.4	67
10	180	1.8	18
16	205	3.3	13
20	180	3.6	9
25	220	5.5	9
32	200	6.4	6
40	125	5.0	3

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Dimensions and connections

Overall dimensions DSH201R

All measurements in mm



Main connection

