

CE	S	N	FI	EC	005	PC	RCC
EU	Sweden	Spain	Finland	Czech	Ukraine	Russia	South Africa

NL1 Residual Current Operated Circuit Breaker without over-current protection (Magnetic)

1. General

1.1 Application:

For protection against risk of fire due to live to earth fault where fault current is insufficient to cause over-current protection device to operate.

For protection against risk of shock from indirect contact with equipment suffering a live to earth fault.

For protection against shock in potentially hazardous environment. As supplementary protection against shock from directly touching 'Live' parts.

Note: an RCCB must not be used as the sole means of protection against touching live parts.

1.2 General rules for choosing RCCB:

a. Rated residual operating current

10mA – to give a high degree of protection against electric shock in a hazardous environment situation where supplementary protection against shock from accidental direct contact is required.

30mA – to give a high degree of protection against electric shock in a situation where supplementary protection against shock from accidental direct contact is required when it must be able to trip within 40 milliseconds when a fault current of 150mA is detected.

100mA – to give a degree of protection against electric shock due to indirect contact situation.

300mA – to give overall protection against risk of fire from electrical faults in wiring etc, only where sufficient current (typically less than 500mA) may cause incandescence of metal parts in suitable circumstances and in consideration that installed over current devices would require far in excess of 300mA to operate.

b. Tripping class

AC class – Tripping is ensured for sinusoidal, alternating currents, whether they be quickly applied or slowly increase.

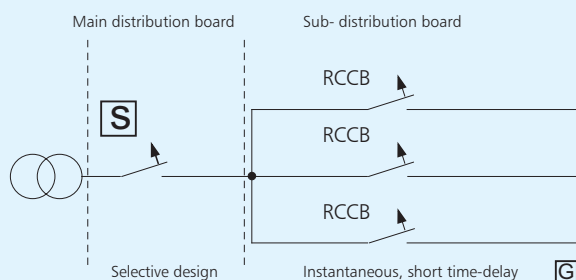
A class – Tripping is ensured for sinusoidal, alternating residual currents as well as for pulsed DC residual currents, whether they be quickly applied or slowly increase.

S class – Be used as upstream group switch for selective tripping contrary to a downstream standard RCCB


c. Residual current protective devices normally has an instantaneous tripping operation. This means that a series connection of this type of residual current protective devices does not provide selective tripping in the event of a fault. In order to achieve selectivity for a series connection of residual current protective devices, both the tripping time and the rated residual current of series-connected devices must be time graded. Selective residual current protective devices has a tripping delay.

The table below shows the time grading options available for residual current protective devices for selective tripping in series connection with devices without time delay and with short-time delay

1.3 Detailed certificates information, please refer to Certificates Table on P153.



3. Technical features

	Standard		IEC/EN 61008-1
Electrical features	Type (wave form of the earth leakage sensed)		AC, A, AC~S, A~S
	Rated current I_n	A	25, 40, 63, 80, 100
	Poles		2P, 4P
	Rated voltage U_e	V	230/400
	Rated sensitivity $I_{\Delta n}$	A	0.03, 0.1, 0.3
	Insulation voltage U_i	V	500
	Rated residual making and breaking capacity $I_{\Delta m}$	A	500 ($I_n=25A/40A$)
			630 ($I_n=63A$)
	Short-circuit current $I_{nc}=I_{\Delta c}$	A	6000/10000
	SCPD fuse	A	 10000
	break time under $I_{\Delta n}$	S	≤ 0.1
	Rated frequency	Hz	50/60
	Rated impulse withstand voltage(1.2/50) U_{imp}	V	6000
	Dielectric test voltage at ind. Freq. for 1 min	kV	2.5
Mechanical features	Pollution degree		2
	Electrical life		2, 000
	Mechanical life		2, 000
	Fault current indicator		Yes
	Protection degree		IP50
	Ambient temperature (with daily average $\leq 35^\circ\text{C}$)	$^\circ\text{C}$	-5...+40
	Storage temperature	$^\circ\text{C}$	-25...+70
Installation	Terminal connection type		Cable/U-type busbar/Pin-type busbar
	Terminal size top/bottom for cable	mm^2	25
		AWG	18-3
	Terminal size top/bottom for busbar	mm^2	25
		AWG	18-3
	Tightening torque	N*m	2.5
		In-lbs.	22
Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device	
Connection		From top and bottom	

4. Overall and Mounting Dimensions (mm)

Overall and Mounting Dimensions

