



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

1. General

1.1 Function

- Control electric circuits.
- Protect people against indirect contacts and additional protection against direct contacts.
- Protect installations against fire hazard due to insulation faults.
- Residual current circuit breakers are used in housing, tertiary sector and industry.

1.2 Selection

Detectable wave form

AC class

Tripping is ensured for slowly increasing sinusoidal AC residual currents.

A class

Tripping is ensured for sinusoidal AC residual currents and for pulsed DC residual currents, whether applied suddenly or increasing slowly.

S, G/SI class

Tripping is ensured not only for sinusoidal AC residual currents but also for pulsed DC residual currents whether applied suddenly or increasing slowly. S, G/SI type with filters against spurious tripping caused by harmonics and transient surges. With the impact of 8/20us surge 3000A, this high immunity RCCB will still be in stable status.

F class

Tripping is ensured for alternating residual sinusoidal at the rated frequency, pulsating direct residual currents and composite residual currents

Tripping sensitivity

- 10mA - precision instrument leakage protection and bathroom use.
- 30mA - additional protection against direct contact.
- 100mA - co-ordinated with the earth system according to the formula $I\Delta n < 50/R$, to provide protection against indirect contacts;
- 300mA/500mA - protection against indirect contacts, as well as fire hazard.

Tripping time

Instantaneous

It ensures instantaneous tripping (without time-delay).

Short time delay [G/SI]

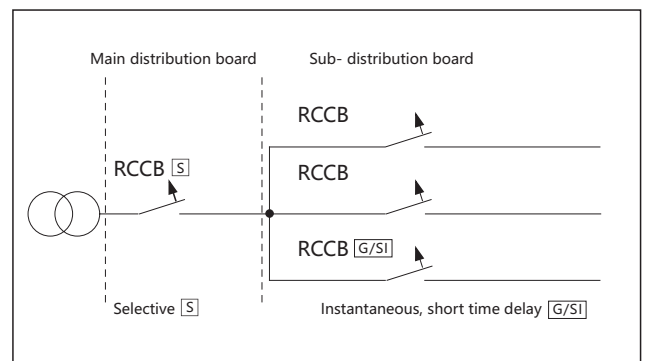
It ensures any tripping at least 10ms.

Selective [S]


It ensures total discrimination with a nonselective RCD placed downstream.

1.3 Approvals and certificates

Detailed information, please refer to Certificates Table on the last page.



2. Technical data

	Standard		IEC/EN 61008-1	IEC/EN 62423 & IEC/EN 61008-1
Electrical features	Type (wave form of the earth leakage sensed)		AC, A, AC-G, A-G, AC-S, A-S, A-SI	F
	Rated current I _n	A	25, 40, 63, 80, 100	25,40,63
	Poles		2P, 4P	
	Rated voltage U _e	V	230/400~240/415	
	Rated sensitivity I _{Δn}	A	0.01 for 2p 25A,0.03,0.1,0.3,0.5	0.03,0.1,0.3
	Insulation voltage U _i	V	500	
	Rated residual making and breaking capacity I _{Δm}	A	500 (I _n =25A/40A), 800(I _n =80A,1000(I _n =100A)) 630 (I _n =63A)	
	Short-circuit current Inc=I _{Δc}	A	6000/10000	10000
	SCPD fuse	A	 10000	
	break time under I _{Δn}	s	≤0.1(Normal type), 10ms~300ms(G type). 150ms~500ms(S type)	
	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	
	Pollution degree		2	
Mechanical features	Electrical life		2, 000	
	Mechanical life		2, 000	
	Fault current indicator		Yes	
	Protection degree		IP20	
	Ambient temperature (with daily average≤35°C)	°C	-5...+40	
	Storage temperature	°C	-25...+70	
Installation	Terminal connection type		Cable/U-type busbar/Pin-type busbar	
	Terminal size top/bottom for cable	mm ²	25/35	
		AWG	18-4/18-2	
	Terminal size top/bottom for busbar	mm ²	10/16	
		AWG	18-8/18-5	
	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		

3. Overall and mounting dimensions (mm)

