

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.

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 IΔn < 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

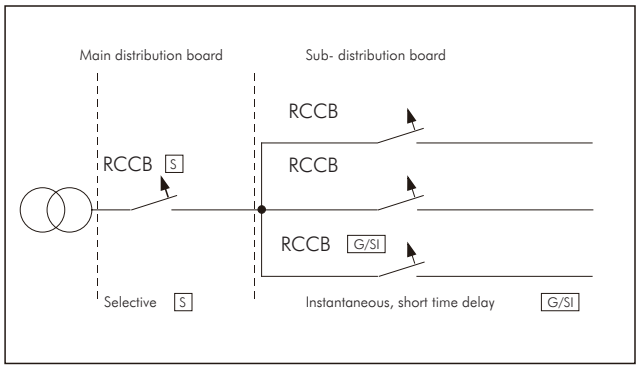
It ensures any tripping at least 10ms.

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,A-SI	AC,A	AC-S,A-S	F
	Rated current In	A	16, 25, 32, 40, 63	16, 25, 32, 40, 63	80,100	63,80,100	25,40,63
	Poles		1P+N, 3P+N				
	Rated voltage Ue	V	230/400~240/415, 110/127 (1P+N)		230/400~240/415		
	Rated sensitivity I △n	A	0.01for1P+N 25A, 0.03, 0.1, 0.3, 0.5	0.03, 0.1, 0.3	0.03, 0.1, 0.3	0.1, 0.3	0.03, 0.1, 0.3
	Insulation voltage Ui	V	500				
	Rated residual making and breaking capacity I △m	A	500 (In=25A/40A)	500 (In=25A/40A)	1000 (In=80A/100A)	1000(In=63A/80A/100A)	500 (In=25A/40A)
			630 (In=63A)	630 (In=63A)			630 (In=63A)
	Short-circuit current Inc=I △c	A	6000/10000				10000
	SCPD fuse	A	10000				
	break time under I △n	s	≤0.1(Normal type), 10ms~300ms(G/SI type).		≤0.3(Normal type)	150ms~500ms(S type)	≤0.1(Normal type)
	Rated frequency	Hz	50/60				
	Rated impulse withstand voltage(1.2/50) Uimp	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℃)	℃	-25...+40				
	Storage temperation	℃	-25...+70				
Installation	Terminal connection type		Cable/U-type busbar/Pin-type busbar				
	Terminal size top/bottom for cable	mm^2	25/35				
		AWG	18-3/18-2				
	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)





