CHINT ELECTRIC

# 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.

**A-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.A 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 - protection against indirect contacts, as well as fire hazard.

**Tripping time**

**Instantaneous**

It ensures instantaneous tripping (without time-delay).

**Short time delay** G

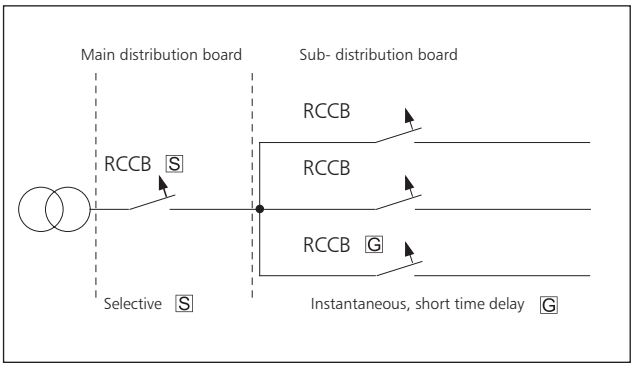
It ensures any tripping at least 10ms.

**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 |
|---|---|---|---|
| Electrical features | Type (wave form of the earth leakage sensed) | | AC, A, AC-G, A-G, AC-S, A-S, A-SI |
| | Rated current In | A | 25, 40, 63, 80, 100 |
| | Poles | | 2P, 4P |
| | Rated voltage Ue | V | 230/400~240/415 |
| | Rated sensitivity I△n | A | 0.01 for 25A, 0.03, 0.1, 0.3 |
| | Insulation voltage Ui | V | 500 |
| | Rated residual making and breaking capacity I△m | A | 500 (In=25A/40A), 1000(In=80A/100A) |
| | | | 630 (In=63A) |
| | Short-circuit current Inc=I△c | A | 6000/10000 |
| | SCPD fuse | A | 10000 |
| | break time under I△n | 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) Uimp | V | 6000 |
| | Dielectric test voltage at ind. Freq. for 1 min | kV | 2.5 |
| | 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℃) | ℃ | -5...+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)