



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 $\Delta n < 50/R$, 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

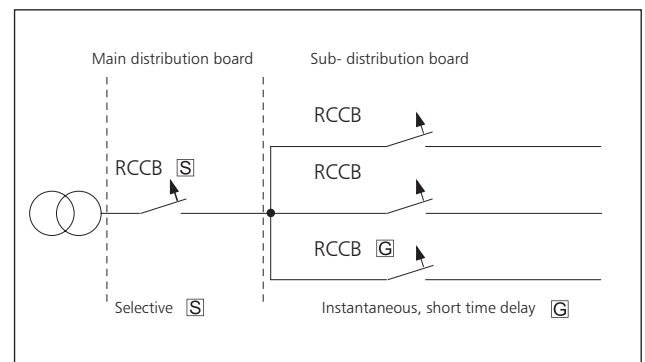
It ensures any tripping at least 10ms.

Selective


It ensures total discrimination with a nonselective RCD placed downstream.

1.3 Approvals and certificates

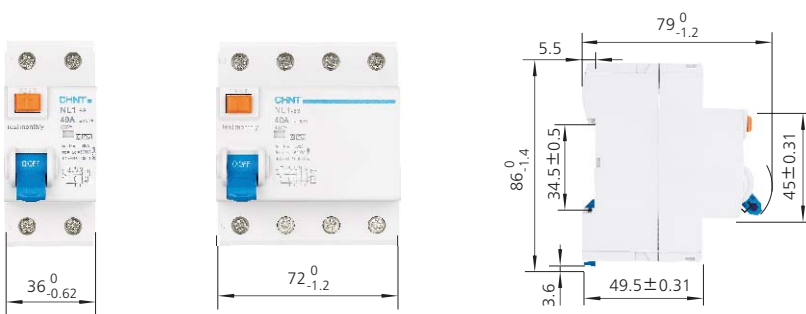
Detailed information, please refer to Certificates Table on the last page.



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 I _n	A	25, 40, 63, 80, 100	
	Poles		2P, 4P	
	Rated voltage U _e	V	230/400~240/415	
	Rated sensitivity I _{Δn}	A	0.01 for 25A, 0.03, 0.1, 0.3	
	Insulation voltage U _i	V	500	
	Rated residual making and breaking capacity I _{Δm}			500 (I _n =25A/40A), 1000(I _n =80A/100A)
				630 (I _n =63A)
	Short-circuit current I _{nc} =I _{Δc}	A	6000/10000	
	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	2.5	
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 temperature	℃	-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)



Test Verification of Conformity

On the basis of the referenced test report(s), the sample(s) of the below product has been found to comply with the relevant harmonized standard(s) to the directive(s) listed on this verification at the time the tests were carried out.

The manufacturer may indicate compliance to said directive(s) by signing a DoC himself and applying the CE-marking to products identical to the tested sample(s). In addition, the manufacturer shall file and keep the documentation according to the rules of the applicable directive(s) and shall consider changes of the standard(s) if relevant. Additional requirements may be applicable such as additional directives or local laws.

Applicant Name & Address	: Zhejiang chint Electrics Co.,Ltd. No.1, Chint Road, Chint Industrial Zone, North Baixiang, Yueqing, Zhejiang Province, P.R.China
Manufacturer Name & Address	: Zhejiang chint Electrics Co.,Ltd. No.1, Chint Road, Chint Industrial Zone, North Baixiang, Yueqing, Zhejiang Province, P.R.China
Product(s) Tested	: Circuit-breakers for overcurrent protection
Ratings and principal characteristics	: Un= 240V~2(1P+N), 415V~4(3P+N) In= 25, 40, 63A 2(1P+N):I Δ n= 0,01(only for In= 25A), 0,03, 0,1, 0,3A, 4(3P+N):I Δ n= 0,03, 0,1, 0,3A, type A and AC, Im=I Δ m=500A(In=25,40A),630A(In=63A)
Model(s)	: NL1-63
Brand name	: CHINT
Relevant Standard(s) / Specification(s) / Directive(s)	: EN61543: 1995/+A11: 2003/+A12: 2005/+A2:2006 the EMC directive (2004/108/EC)
Verification Issuing Office Name & Address	: Intertek Testing Services Shanghai Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China
Verification Number	: SH11080730-V1
Report Number(s)	: JSH007060308-001/A1

NOTE 1: This verification is part of the full test report(s) and should be read in conjunction with it.


This Verification is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to copy or distribute this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this Verification are relevant only to the sample tested. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.



Jonny Jing
Manager
Sep 8, 2011

Test Verification of Conformity

On the basis of the referenced test report(s), sample(s) of the below product have been found to comply with the harmonized standards and Directives listed on this verification at the time the tests were carried out. Other standards and Directives may be relevant to the product.

Once all product relevant  mark directives are verified in compliance, the manufacturer may indicate compliance by signing a Declaration of Conformity themselves and applying the mark to product identical to the test sample(s) if the product complies with all relevant CE mark Directives requirements.

Applicant Name & Address	: Zhejiang chint Electrics Co.,Ltd. No.1, Chint Road, Chint Industrial Zone, North Baixiang, Yueqing, Zhejiang Province, P.R.China
Manufacturing site Name & Address	: Same as applicant
Product(s) Tested	: Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCB's)
Ratings and principal characteristics	: $U_n = 240V\sim(1P+N), 415V\sim(3P+N)$; $I_n = 25, 40, 63A$; $I_{\Delta n} = 0,01(\text{only for } I_n = 25A, 1P+N), 0,03, 0,1, 0,3A$; type A and AC; $I_{nc} = I_{\Delta c} = 6kA \& 10kA$, $I_m = I_{\Delta m} = 500A(I_n = 25,40A)$, $630A(I_n = 63A)$
Model(s)	: NL1- ₆₃
Brand name	: CHINT
Relevant Standard(s) / Specification(s) / Directive(s)	: EN 61008-1: 2012 EN 61008-2-1:1994 + A11:1998 the Low Voltage Directive 2006/95/EC
Verification Issuing Office Name & Address	: Intertek Testing Services Shanghai Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China
Verification Number	: 130901588SHA-V1
Report Number(s)	: 130901588SHA-001, -002

NOTE 1: This verification is part of the full test report(s) and should be read in conjunction with it.

This Verification is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to copy or distribute this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this Verification are relevant only to the sample tested. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.



Oliver Wei
Manager
December 17, 2013

Test Verification of Conformity

On the basis of the referenced test report(s), the sample(s) of the below product has been found to comply with the relevant harmonized standard(s) to the directive(s) listed on this verification at the time the tests were carried out.

The manufacturer may indicate compliance to only the said directives by signing a DoC himself and may affix the CE marking to products identical to the tested sample(s) if the product complies with all CE marking directives that has the product in their scope. In addition, the manufacturer shall file and keep the documentation according to the rules of the applicable directive(s) and shall consider changes of the standards as they may occur. Additional requirements, additional directives and local laws may be applicable.

Applicant Name & Address : Zhejiang chint Electrics Co.,Ltd.
No.1, Chint Road, Chint Industrial Zone, North Baixiang,
Yueqing, Zhejiang Province, P.R.China

Manufacturer Name & Address : Same as applicant

Product(s) Tested : Circuit-breakers for overcurrent protection

Ratings and principal characteristics : $U_e = 240V \sim 2P(1P+N), 415V \sim 4P(3P+N)$
 $I_n = 25, 40, 63, 80, 100A$
 $I_{\Delta n} = 0,01(\text{only for } 1P+N, I_n = 25A), 0,03, 0,1, 0,3A, \text{ type A and AC}$
 $I_n = 63, 80, 100A(\text{for type S})$
 $I_{\Delta n} = 0,1, 0,3A, \text{ type A and AC}$
 $I_{nc} = I_{\Delta c} = 10000A$

Model(s) : NL1-100

Brand name : CHINT

Relevant Standard(s) / Specification(s) / Directive(s) : EN 61008-1:2004+A11:2007+ A12:2009
EN 61008-2-1:1994 and A11
the Low Voltage Directive 2006/95/EC

Verification Issuing Office Name & Address : Intertek Testing Services Shanghai
Building No.86, 1198 Qinzhou Road (North), Shanghai
200233, China

Verification Number : SH11080731-V1

Report Number(s) : SH11080731-001, 002

NOTE 1: This verification is part of the full test report(s) and should be read in conjunction with it.

This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification programme.



Oliver Wei
Manager
October 27, 2011