



## 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.

##### Tripping sensitivity

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 - 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.



RCC

SAA



### 2. Ordering information

I $\Delta$ c=6000A

★ NL1-63, 2P



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			A Type	AC Type
25	30	90	972165	972174
25	100	90	972166	972175
25	300	90	972167	972176
40	30	90	972168	972177
40	100	90	972169	972178
40	300	90	972170	972179
63	30	90	972171	972180
63	100	90	972172	972181
63	300	90	972173	972182

I $\Delta$ c=6000A

★ NL1-63, 4P



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			A Type	AC Type
25	30	45	972183	972192
25	100	45	972184	972193
25	300	45	972185	972194
40	30	45	972186	972195
40	100	45	972187	972196
40	300	45	972188	972197
63	30	45	972189	972198
63	100	45	972190	972199
63	300	45	972191	972200

I $\Delta$ c=10000A

★ NL1-63, 2P



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			A Type	AC Type
25	30	90	984889	984904
25	100	90	984890	984905
25	300	90	984891	984906
40	30	90	984892	984907
40	100	90	984893	984908
40	300	90	984894	984909
63	30	90	984895	984910
63	100	90	984896	984911
63	300	90	984897	984912

I $\Delta$ c=10000A

★ NL1-63, 4P



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			A Type	AC Type
25	30	45	984919	984934
25	100	45	984920	984935
25	300	45	984921	984936
40	30	45	984922	984937
40	100	45	984923	984938
40	300	45	984924	984939
63	30	45	984925	984940
63	100	45	984926	984941
63	300	45	984927	984942

$I_{\Delta c}=6000A$

★ NL1-63, 2P

G



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			A-G Type	AC-G Type
25	30	90	986478	986442
25	100	90	986480	986444
25	300	90	986482	986446
40	30	90	986484	986448
40	100	90	986486	986450
40	300	90	986488	986452
63	30	90	986490	986454
63	100	90	986492	986456
63	300	90	986494	986458

$I_{\Delta c}=6000A$

★ NL1-63, 4P

G



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			A-G Type	AC-G Type
25	30	45	986496	986460
25	100	45	986498	986462
25	300	45	986500	986464
40	30	45	986502	986466
40	100	45	986504	986468
40	300	45	986506	986470
63	30	45	986508	986472
63	100	45	986510	986474
63	300	45	986512	986476

$I_{\Delta c}=10000A$

★ NL1-100, 2P

S



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			A-S Type	AC-S Type
63	100	90	985555	985541
63	300	90	985556	985542
80	100	90	985557	985543
80	300	90	985558	985544
100	100	90	985559	985545
100	300	90	985560	985546

$I_{\Delta c}=10000A$


★ NL1-100, 4P

S

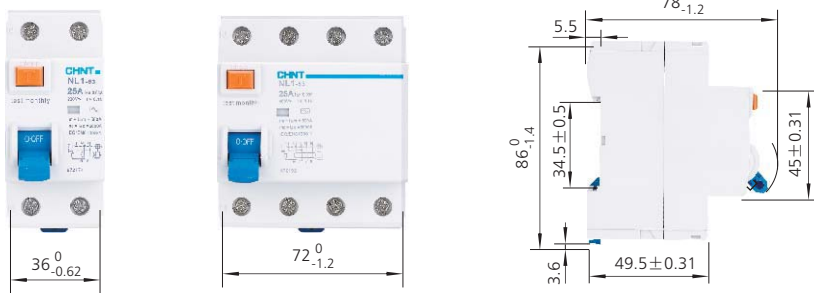


In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			A-S Type	AC-S Type
63	100	45	985561	985547
63	300	45	985562	985548
80	100	45	985563	985549
80	300	45	985564	985550
100	100	45	985565	985551
100	300	45	985566	985552

### 3. 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
	Rated current $I_n$	A	25, 40, 63, 80, 100
	Poles		2P, 4P
	Rated voltage $U_e$	V	230/400~240/415
	Rated sensitivity $I_{\Delta n}$	A	0.03, 0.1, 0.3
	Insulation voltage $U_i$	V	500
	Rated residual making and breaking capacity $I_{\Delta m}$	A	500 ( $I_n=25A/40A$ ), 1000( $I_n=30A/100A$ )
	Short-circuit current $I_{nc}=I_{\Delta c}$	A	630 ( $I_n=63A$ )
	SCPD fuse	A	 10000
	break time under $I_{\Delta n}$	S	$\leq 0.1$ (Normal type), 10ms~30ms(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
	Mechanical features	Pollution degree	
Electrical life			2, 000
Mechanical life			2, 000
Fault current indicator			Yes
Protection degree			IP20
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 <sup>2</sup>	25/35
		AWG	18-3/18-2
	Terminal size top/bottom for busbar	mm <sup>2</sup>	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	

### 4. Overall and mounting dimensions (mm)



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