

EU	Sweden	Finland	Ukraine	Russia

## NB1L Residual Current Operated Circuit Breaker with over-current protection (Magnetic)

### 1. General

#### 1.1 Application

- Personnel and fire protection
- Cable and line protection against overload and short-circuits

#### 1.2 General rules for choosing RCBO:

##### a. Rated residual operating current

$I_{n} = 30 \text{ mA}$ : additional protection in the case of direct contact

$I_{n} = 300 \text{ mA}$ : preventative fire protection in the case of ground fault currents

##### b. Tripping class

AC class – Tripping is ensured for sinusoidal, alternating currents, whether they be quickly applied or slowly increase.

A class – Tripping is ensured for sinusoidal, alternating residual currents as well as for pulsed DC residual currents, whether they be quickly applied or slowly increase.

##### c. Tripping curve

B curve (3-5  $I_n$ ) protection and control of the circuits against overloads and short-circuits; protection for people and big length cables in TN and IT systems.

C curve (5-10  $I_n$ ) protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.



### 2. Ordering Information

#### 2.1 Combined



➔ 1~ 40A, A Type,  $I_{cn} = 6000A$ , 36mm



$I_n$ (A)	$I_n$ (mA)	Order Code	
		Curve B	Curve C
		RoHS	RoHS
1	30	982383	982407
2	30	982384	982408
3	30	982385	982409
4	30	982386	982410
6	30	982387	982411
10	30	982388	982412
13	30	982389	982413
16	30	982390	982414
20	30	982391	982415
25	30	982392	982416
32	30	982393	982417
40	30	982394	982418



➔ 1~ 40A, A Type, Icn= 10000A, 54mm



In (A)	I n (mA)	Order Code	
		Curve B	Curve C
		RoHS	RoHS
1	30	982443	982467
2	30	982444	982468
3	30	982445	982469
4	30	982446	982470
6	30	982447	982471
10	30	982448	982472
13	30	982449	982473
16	30	982450	982474
20	30	982451	982475
25	30	982452	982476
32	30	982453	982477
40	30	982454	982478

2.2 MCB+ add-on RCD black

➔ 1~ 40A, AC type, Icn= 6000A

1P+ N



In (A)	I n (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	30	60	142001	983290	142166	971948
1	100	60	142002	983291	142167	971949
1	300	60	142003	983292	142168	971950
2	30	60	142004	983293	142169	971951
2	100	60	142005	983294	142170	971952
2	300	60	142006	983295	142171	971953
3	30	60	142007	983296	142172	971954
3	100	60	142008	983297	142173	971955
3	300	60	142009	983298	142174	971956
4	30	60	142010	983299	142175	971957
4	100	60	142011	983300	142176	971958
4	300	60	142012	983301	142177	971959
6	30	60	142013	983302	142178	971960
6	100	60	142014	983303	142179	971961
6	300	60	142015	983304	142180	971962



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
10	30	60	142016	983305	142181	971963
10	100	60	142017	983306	142182	971964
10	300	60	142018	983307	142183	971965
16	30	60	142019	983308	142184	971966
16	100	60	142020	983309	142185	971967
16	300	60	142021	983310	142186	971968
20	30	60	142022	983311	142187	971969
20	100	60	142023	983312	142188	971970
20	300	60	142024	983313	142189	971971
25	30	60	142025	983314	142190	971972
25	100	60	142026	983315	142191	971973
25	300	60	142027	983316	142192	971974
32	30	60	142028	983317	142193	971975
32	100	60	142029	983318	142194	971976
32	300	60	142030	983319	142195	971977
40	30	60	142031	983320	142196	971978
40	100	60	142032	983321	142197	971979
40	300	60	142033	983322	142198	971980

2P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	30	48	142034	983323	142199	971981
1	100	48	142035	983324	142200	971982
1	300	48	142036	983325	142201	971983
2	30	48	142037	983326	142202	971984
2	100	48	142038	983327	142203	971985
2	300	48	142039	983328	142204	971986
3	30	48	142040	983329	142205	971987
3	100	48	142041	983330	142206	971988
3	300	48	142042	983331	142207	971989
4	30	48	142043	983332	142208	971990
4	100	48	142044	983333	142209	971991
4	300	48	142045	983334	142210	971992
6	30	48	142046	983335	142211	971993
6	100	48	142047	983336	142212	971994
6	300	48	142048	983337	142213	971995
10	30	48	142049	983338	142214	971996
10	100	48	142050	983339	142215	971997
10	300	48	142051	983340	142216	971998



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
16	30	48	142052	983341	142217	971999
16	100	48	142053	983342	142218	972000
16	300	48	142054	983343	142219	972001
20	30	48	142055	983344	142220	972002
20	100	48	142056	983345	142221	972003
20	300	48	142057	983346	142222	972004
25	30	48	142058	983347	142223	972005
25	100	48	142059	983348	142224	972006
25	300	48	142060	983349	142225	972007
32	30	48	142061	983350	142226	972008
32	100	48	142062	983351	142227	972009
32	300	48	142063	983352	142228	972010
40	30	48	142064	983353	142229	972011
40	100	48	142065	983354	142230	972012
40	300	48	142066	983355	142231	972013

3P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	30	24	142067	983356	142232	972014
1	100	24	142068	983357	142233	972015
1	300	24	142069	983358	142234	972016
2	30	24	142070	983359	142235	972017
2	100	24	142071	983360	142236	972018
2	300	24	142072	983361	142237	972019
3	30	24	142073	983362	142238	972020
3	100	24	142074	983363	142239	972021
3	300	24	142075	983364	142240	972022
4	30	24	142076	983365	142241	972023
4	100	24	142077	983366	142242	972024
4	300	24	142078	983367	142243	972025
6	30	24	142079	983368	142244	972026
6	100	24	142080	983369	142245	972027
6	300	24	142081	983370	142246	972028
10	30	24	142082	983371	142247	972029
10	100	24	142083	983372	142248	972030
10	300	24	142084	983373	142249	972031
16	30	24	142085	983374	142250	972032
16	100	24	142086	983375	142251	972033



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
16	300	24	142087	983376	142252	972034
20	30	24	142088	983377	142253	972035
20	100	24	142089	983378	142254	972036
20	300	24	142090	983379	142255	972037
25	30	24	142091	983380	142256	972038
25	100	24	142092	983381	142257	972039
25	300	24	142093	983382	142258	972040
32	30	24	142094	983383	142259	972041
32	100	24	142095	983384	142260	972042
32	300	24	142096	983385	142261	972043
40	30	24	142097	983386	142262	972044
40	100	24	142098	983387	142263	972045
40	300	24	142099	983388	142264	972046

### 3P+ N



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	30	24	142100	983389	142265	972047
1	100	24	142101	983390	142266	972048
1	300	24	142102	983391	142267	972049
2	30	24	142103	983392	142268	972050
2	100	24	142104	983393	142269	972051
2	300	24	142105	983394	142270	972052
3	30	24	142106	983395	142271	972053
3	100	24	142107	983396	142272	972054
3	300	24	142108	983397	142273	972055
4	30	24	142109	983398	142274	972056
4	100	24	142110	983399	142275	972057
4	300	24	142111	983400	142276	972058
6	30	24	142112	983401	142277	972059
6	100	24	142113	983402	142278	972060
6	300	24	142114	983403	142279	972061
10	30	24	142115	983404	142280	972062
10	100	24	142116	983405	142281	972063
10	300	24	142117	983406	142282	972064
16	30	24	142118	983407	142283	972065
16	100	24	142119	983408	142284	972066
16	300	24	142120	983409	142285	972067



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
20	30	24	142121	983410	142286	972068
20	100	24	142122	983411	142287	972069
20	300	24	142123	983412	142288	972070
25	30	24	142124	983413	142289	972071
25	100	24	142125	983414	142290	972072
25	300	24	142126	983415	142291	972073
32	30	24	142127	983416	142292	972074
32	100	24	142128	983417	142293	972075
32	300	24	142129	983418	142294	972076
40	30	24	142130	983419	142295	972077
40	100	24	142131	983420	142296	972078
40	300	24	142132	983421	142297	972079

4P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	30	24	142133	983422	142298	972080
1	100	24	142134	983423	142299	972081
1	300	24	142135	983424	142300	972082
2	30	24	142136	983425	142301	972083
2	100	24	142137	983426	142302	972084
2	300	24	142138	983427	142303	972085
3	30	24	142139	983428	142304	972086
3	100	24	142140	983429	142305	972087
3	300	24	142141	983430	142306	972088
4	30	24	142142	983431	142307	972089
4	100	24	142143	983432	142308	972090
4	300	24	142144	983433	142309	972091
6	30	24	142145	983434	142310	972092
6	100	24	142146	983435	142311	972093
6	300	24	142147	983436	142312	972094
10	30	24	142148	983437	142313	972095
10	100	24	142149	983438	142314	972096
10	300	24	142150	983439	142315	972097
16	30	24	142151	983440	142316	972098
16	100	24	142152	983441	142317	972099
16	300	24	142153	983442	142318	972100
20	30	24	142154	983443	142319	972101
20	100	24	142155	983444	142320	972102
20	300	24	142156	983445	142321	972103



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
20	30	24	142121	983410	142286	972068
20	100	24	142122	983411	142287	972069
20	300	24	142123	983412	142288	972070
25	30	24	142124	983413	142289	972071
25	100	24	142125	983414	142290	972072
25	300	24	142126	983415	142291	972073
32	30	24	142127	983416	142292	972074
32	100	24	142128	983417	142293	972075
32	300	24	142129	983418	142294	972076
40	30	24	142130	983419	142295	972077
40	100	24	142131	983420	142296	972078
40	300	24	142132	983421	142297	972079

→ 1~ 40A, A type, I<sub>cn</sub>= 6000A  
1P+ N



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	60	146001	983455	146166	983620
1	100	60	146002	983456	146167	983621
1	300	60	146003	983457	146168	983622
2	30	60	146004	983458	146169	983623
2	100	60	146005	983459	146170	983624
2	300	60	146006	983460	146171	983625
3	30	60	146007	983461	146172	983626
3	100	60	146008	983462	146173	983627
3	300	60	146009	983463	146174	983628
4	30	60	146010	983464	146175	983629
4	100	60	146011	983465	146176	983630
4	300	60	146012	983466	146177	983631
6	30	60	146013	983467	146178	983632
6	100	60	146014	983468	146179	983633
6	300	60	146015	983469	146180	983634
10	30	60	146016	983470	146181	983635
10	100	60	146017	983471	146182	983636
10	300	60	146018	983472	146183	983637
16	30	60	146019	983473	146184	983638
16	100	60	146020	983474	146185	983639
16	300	60	146021	983475	146186	983640
20	30	60	146022	983476	146187	983641



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
20	100	60	146023	983477	146188	983642
20	300	60	146024	983478	146189	983643
25	30	60	146025	983479	146190	983644
25	100	60	146026	983480	146191	983645
25	300	60	146027	983481	146192	983646
32	30	60	146028	983482	146193	983647
32	100	60	146029	983483	146194	983648
32	300	60	146030	983484	146195	983649
40	30	60	146031	983485	146196	983650
40	100	60	146032	983486	146197	983651
40	300	60	146033	983487	146198	983652
1	30	-	-	982383	-	982407
2	30	-	-	982384	-	982408
3	30	-	-	982385	-	982409
4	30	-	-	982386	-	982410
6	30	-	-	982387	-	982411
10	30	-	-	982388	-	982412
13	30	-	-	982389	-	982413
16	30	-	-	982390	-	982414
20	30	-	-	982391	-	982415
25	30	-	-	982392	-	982416
32	30	-	-	982393	-	982417
40	30	-	-	982394	-	982418

**2P**


In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	48	146034	983488	146199	983653
1	100	48	146035	983489	146200	983654
1	300	48	146036	983490	146201	983655
2	30	48	146037	983491	146202	983656
2	100	48	146038	983492	146203	983657
2	300	48	146039	983493	146204	983658
3	30	48	146040	983494	146205	983659
3	100	48	146041	983495	146206	983660
3	300	48	146042	983496	146207	983661
4	30	48	146043	983497	146208	983662
4	100	48	146044	983498	146209	983663
4	300	48	146045	983499	146210	983664





In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
6	300	48	146046	983500	146211	983665
6	30	48	146047	983501	146212	983666
6	100	48	146048	983502	146213	983667
10	300	48	146049	983503	146214	983668
10	30	48	146050	983504	146215	983669
10	100	48	146051	983505	146216	983670
16	300	48	146052	983506	146217	983671
16	30	48	146053	983507	146218	983672
16	100	48	146054	983508	146219	983673
20	300	48	146055	983509	146220	983674
20	30	48	146056	983510	146221	983675
20	100	48	146057	983511	146222	983676
25	300	48	146058	983512	146223	983677
25	300	48	146059	983513	146224	983678
25	30	48	146060	983514	146225	983679
32	100	48	146061	983515	146226	983680
32	300	48	146062	983516	146227	983681
32	300	48	146063	983517	146228	983682
40	30	48	146064	983518	146229	983683
40	100	48	146065	983519	146230	983684
40	300	48	146066	983520	146231	983685

3P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	24	146067	983521	146232	983686
1	100	24	146068	983522	146233	983687
1	300	24	146069	983523	146234	983688
2	30	24	146070	983524	146235	983689
2	100	24	146071	983525	146236	983690
2	300	24	146072	983526	146237	983691
3	30	24	146073	983527	146238	983692
3	100	24	146074	983528	146239	983693
3	300	24	146075	983529	146240	983694
4	30	24	146076	983530	146241	983695
4	100	24	146077	983531	146242	983696
4	300	24	146078	983532	146243	983697
6	30	24	146079	983533	146244	983698
6	100	24	146080	983534	146245	983699
6	300	24	146081	983535	146246	983700



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
10	30	24	146082	983536	146247	983701
10	100	24	146083	983537	146248	983702
10	300	24	146084	983538	146249	983703
16	30	24	146085	983539	146250	983704
16	100	24	146086	983540	146251	983705
16	300	24	146087	983541	146252	983706
20	30	24	146088	983542	146253	983707
20	100	24	146089	983543	146254	983708
20	300	24	146090	983544	146255	983709
25	30	24	146091	983545	146256	983710
25	100	24	146092	983546	146257	983711
25	300	24	146093	983547	146258	983712
32	30	24	146094	983548	146259	983713
32	100	24	146095	983549	146260	983714
32	300	24	146096	983550	146261	983715
40	30	24	146097	983551	146262	983716
40	100	24	146098	983552	146263	983717
40	300	24	146099	983553	146264	983718

3P+ N



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	24	146100	983554	146265	983719
1	100	24	146101	983555	146266	983720
1	300	24	146102	983556	146267	983721
2	30	24	146103	983557	146268	983722
2	100	24	146104	983558	146269	983723
2	300	24	146105	983559	146270	983724
3	30	24	146106	983560	146271	983725
3	100	24	146107	983561	146272	983726
3	300	24	146108	983562	146273	983727
4	30	24	146109	983563	146274	983728
4	100	24	146110	983564	146275	983729
4	300	24	146111	983565	146276	983730
6	30	24	146112	983566	146277	983731
6	100	24	146113	983567	146278	983732
6	300	24	146114	983568	146279	983733
10	30	24	146115	983569	146280	983734
10	100	24	146116	983570	146281	983735
10	300	24	146117	983571	146282	983736



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
16	30	24	146118	983572	146283	983737
16	100	24	146119	983573	146284	983738
16	300	24	146120	983574	146285	983739
20	30	24	146121	983575	146286	983740
20	100	24	146122	983576	146287	983741
20	300	24	146123	983577	146288	983742
25	30	24	146124	983578	146289	983743
25	100	24	146125	983579	146290	983744
25	300	24	146126	983580	146291	983745
32	30	24	146127	983581	146292	983746
32	100	24	146128	983582	146293	983747
32	300	24	146129	983583	146294	983748
40	30	24	146130	983584	146295	983749
40	100	24	146131	983585	146296	983750
40	300	24	146132	983586	146297	983751

4P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	24	146133	983587	146298	983752
1	100	24	146134	983588	146299	983753
1	300	24	146135	983589	146300	983754
2	30	24	146136	983590	146301	983755
2	100	24	146137	983591	146302	983756
2	300	24	146138	983592	146303	983757
3	30	24	146139	983593	146304	983758
3	100	24	146140	983594	146305	983759
3	300	24	146141	983595	146306	983760
4	30	24	146142	983596	146307	983761
4	100	24	146143	983597	146308	983762
4	300	24	146144	983598	146309	983763
6	30	24	146145	983599	146310	983764
6	100	24	146146	983600	146311	983765
6	300	24	146147	983601	146312	983766
10	30	24	146148	983602	146313	983767
10	100	24	146149	983603	146314	983768
10	300	24	146150	983604	146315	983769
16	30	24	146151	983605	146316	983770
16	100	24	146152	983606	146317	983771



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
16	300	24	146153	983607	146318	983772
20	30	24	146154	983608	146319	983773
20	100	24	146155	983609	146320	983774
20	300	24	146156	983610	146321	983775
25	30	24	146157	983611	146322	983776
25	100	24	146158	983612	146323	983777
25	300	24	146159	983613	146324	983778
32	30	24	146160	983614	146325	983779
32	100	24	146161	983615	146326	983780
32	300	24	146162	983616	146327	983781
40	30	24	146163	983617	146328	983782
40	100	24	146164	983618	146329	983783
40	300	24	146165	983619	146330	983784



➔ 1~ 40A, A type, I<sub>cn</sub>= 10000A

1P+ N



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	60	146501	982479	146681	982674
1	100	60	146502	982480	146682	982675
1	300	60	146503	982481	146683	982676
2	30	60	146504	982482	146684	982677
2	100	60	146505	982483	146685	982678
2	300	60	146506	982484	146686	982679
3	30	60	146507	982485	146687	982680
3	100	60	146508	982486	146688	982681
3	300	60	146509	982487	146689	982682
4	30	60	146510	982488	146690	982683
4	100	60	146511	982489	146691	982684
4	300	60	146512	982490	146692	982685
6	30	60	146513	982491	146693	982686
6	100	60	146514	982492	146694	982687
6	300	60	146515	982493	146695	982688
8	30	60	190001	982494	190016	982689
8	100	60	190002	982495	190017	982690
8	300	60	190003	982496	190018	982691



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
10	30	60	146516	982497	146696	982692
10	100	60	146517	982498	146697	982693
10	300	60	146518	982499	146698	982694
13	30	60	146519	982500	146699	982695
13	100	60	146520	982501	146700	982696
13	300	60	146521	982502	146701	982697
16	30	60	146522	982503	146702	982698
16	100	60	146523	982504	146703	982699
16	300	60	146524	982505	146704	982700
20	30	60	146525	982506	146705	982701
20	100	60	146526	982507	146706	982702
20	300	60	146527	982508	146707	982703
25	30	60	146528	982509	146708	982704
25	100	60	146529	982510	146709	982705
25	300	60	146530	982511	146710	982706
32	30	60	146531	982512	146711	982707
32	100	60	146532	982513	146712	982708
32	300	60	146533	982514	146713	982709
40	30	60	146534	982515	146714	982710
40	100	60	146535	982516	146715	982711
40	300	60	146536	982517	146716	982712

2P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	48	146537	982518	146717	982713
1	100	48	146538	982519	146718	982714
1	300	48	146539	982520	146719	982715
2	30	48	146540	982521	146720	982716
2	100	48	146541	982522	146721	982717
2	300	48	146542	982523	146722	982718
3	30	48	146543	982524	146723	982719
3	100	48	146544	982525	146724	982720
3	300	48	146545	982526	146725	982721
4	30	48	146546	982527	146726	982722
4	100	48	146547	982528	146727	982723
4	300	48	146548	982529	146728	982724
6	30	48	146549	982530	146729	982725
6	100	48	146550	982531	146730	982726



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
6	300	48	146551	982532	146731	982727
8	30	48	190004	982533	190019	982728
8	100	48	190005	982534	190020	982729
8	300	48	190006	982535	190021	982730
10	30	48	146552	982536	146732	982731
10	100	48	146553	982537	146733	982732
10	300	48	146554	982538	146734	982733
13	30	48	146555	982539	146735	982734
13	100	48	146556	982540	146736	982735
13	300	48	146557	982541	146737	982736
16	30	48	146558	982542	146738	982737
16	100	48	146559	982543	146739	982738
16	300	48	146560	982544	146740	982739
20	30	48	146561	982545	146741	982740
20	100	48	146562	982546	146742	982741
20	300	48	146563	982547	146743	982742
25	30	48	146564	982548	146744	982743
25	100	48	146565	982549	146745	982744
25	300	48	146566	982550	146746	982745
32	30	48	146567	982551	146747	982746
32	100	48	146568	982552	146748	982747
32	300	48	146569	982553	146749	982748
40	30	48	146570	982554	146750	982749
40	100	48	146571	982555	146751	982750
40	300	48	146572	982556	146752	982751
1				982443		982467
2				982444		982468
3				982445		982469
4				982446		982470
6				982447		982471
10				982448		982472
13				982449		982473
16				982450		982474
20				982451		982475
25				982452		982476
32				982453		982477
40				982454		982478

3P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	24	146573	982557	146753	982752
1	100	24	146574	982558	146754	982753
1	300	24	146575	982559	146755	982754
2	30	24	146576	982560	146756	982755
2	100	24	146577	982561	146757	982756
2	300	24	146578	982562	146758	982757
3	30	24	146579	982563	146759	982758
3	100	24	146580	982564	146760	982759
3	300	24	146581	982565	146761	982760
4	30	24	146582	982566	146762	982761
4	100	24	146583	982567	146763	982762
4	300	24	146584	982568	146764	982763
6	30	24	146585	982569	146765	982764
6	100	24	146586	982570	146766	982765
6	300	24	146587	982571	146767	982766
8	30	24	146588	982572	146768	982767
8	100	24	146589	982573	146769	982768
8	300	24	146590	982574	146770	982769
10	30	24	146591	982575	146771	982770
10	100	24	146592	982576	146772	982771
10	300	24	146593	982577	146773	982772
13	30	24	146594	982578	146774	982773
13	100	24	146595	982579	146775	982774
13	300	24	146596	982580	146776	982775
16	30	24	146597	982581	146777	982776
16	100	24	146598	982582	146778	982777
16	300	24	146599	982583	146779	982778
20	30	24	146600	982584	146780	982779
20	100	24	146601	982585	146781	982780
20	300	24	146602	982586	146782	982781
25	30	24	146603	982587	146783	982782
25	100	24	146604	982588	146784	982783
25	300	24	146605	982589	146785	982784
32	30	24	146606	982590	146786	982785
32	100	24	146607	982591	146787	982786
32	300	24	146608	982592	146788	982787
40	30	24	146609	982593	146789	982788
40	100	24	146610	982594	146790	982789
40	300	24	146611	982595	146791	982780

3P+ N



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	24	146609	982596	146789	982791
1	100	24	146610	982597	146790	982792
1	300	24	146611	982598	146791	982793
2	30	24	146612	982599	146792	982794
2	100	24	146613	982600	146793	982795
2	300	24	146614	982601	146794	982796
3	30	24	146615	982602	146795	982797
3	100	24	146616	982603	146796	982798
3	300	24	146617	982604	146797	982799
4	30	24	146618	982605	146798	982800
4	100	24	146619	982606	146799	982801
4	300	24	146620	982607	146800	982802
6	30	24	146621	982608	146801	982803
6	100	24	146622	982609	146802	982804
6	300	24	146623	982610	146803	982805
8	30	24	190010	982611	190025	982806
8	100	24	190011	982612	190026	982807
8	300	24	190012	982613	190027	982808
10	30	24	146624	982614	146804	982809
10	100	24	146625	982615	146805	982810
10	300	24	146626	982616	146806	982811
13	30	24	146627	982617	146807	982812
13	100	24	146628	982618	146808	982813
13	300	24	146629	982619	146809	982814
16	30	24	146630	982620	146810	982815
16	100	24	146631	982621	146811	982816
16	300	24	146632	982622	146812	982817
20	30	24	146633	982623	146813	982818
20	100	24	146634	982624	146814	982819
20	300	24	146635	982625	146815	982820
25	30	24	146636	982626	146816	982821
25	100	24	146637	982627	146817	982822
25	300	24	146638	982628	146818	982823
32	30	24	146639	982629	146819	982824
32	100	24	146640	982630	146820	982825
32	300	24	146641	982631	146821	982826
40	30	24	146642	982632	146822	982827
40	100	24	146643	982633	146823	982828
40	300	24	146644	982634	146824	982829



4P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	24	146645	982635	146825	982830
1	100	24	146646	982636	146826	982831
1	300	24	146647	982637	146827	982832
2	30	24	146648	982638	146828	982833
2	100	24	146649	982639	146829	982834
2	300	24	146650	982640	146830	982835
3	30	24	146651	982641	146831	982836
3	100	24	146652	982642	146832	982837
3	300	24	146653	982643	146833	982838
4	30	24	146654	982644	146834	982839
4	100	24	146655	982645	146835	982840
4	300	24	146656	982646	146836	982841
6	30	24	146657	982647	146837	982842
6	100	24	146658	982648	146838	982843
6	300	24	146659	982649	146839	982844
8	30	24	190013	982650	190028	982845
8	100	24	190014	982651	190029	982846
8	300	24	190015	982652	190030	982847
10	30	24	146660	982653	146840	982848
10	100	24	146661	982654	146841	982849
10	300	24	146662	982655	146842	982850
13	30	24	146663	982656	146843	982851
13	100	24	146664	982657	146844	982852
13	300	24	146665	982658	146845	982853
16	30	24	146666	982659	146846	982854
16	100	24	146667	982660	146847	982855
16	300	24	146668	982661	146848	982856
20	30	24	146669	982662	146849	982857
20	100	24	146670	982663	146850	982858
20	300	24	146671	982664	146851	982859
25	30	24	146672	982665	146852	982860
25	100	24	146673	982666	146853	982861
25	300	24	146674	982667	146854	982862
32	30	24	146675	982668	146855	982863
32	100	24	146676	982669	146856	982864
32	300	24	146677	982670	146857	982865
40	30	24	146678	982671	146858	982866
40	100	24	146679	982672	146859	982867
40	300	24	146680	982673	146860	982868

➔ 1 ~ 40A, AC type, I<sub>cn</sub>= 10000A

1P+ N



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	60	146861	982869	147041	983064
1	100	60	146862	982870	147042	983065
1	300	60	146863	982871	147043	983066
2	30	60	146864	982872	147044	983067
2	100	60	146865	982873	147045	983068
2	300	60	146866	982874	147046	983069
3	30	60	146867	982875	147047	983070
3	100	60	146868	982876	147048	983071
3	300	60	146869	982877	147049	983072
4	30	60	146870	982878	147050	983073
4	100	60	146871	982879	147051	983074
4	300	60	146872	982880	147052	983075
6	30	60	146873	982881	147053	983076
6	100	60	146874	982882	147054	983077
6	300	60	146875	982883	147055	983078
8	30	60	190032	982884	190047	983079
8	100	60	190033	982885	190048	983080
8	300	60	190034	982886	190049	983081
10	30	60	146876	982887	147056	983082
10	100	60	146877	982888	147057	983083
10	300	60	146878	982889	147058	983084
13	30	60	146879	982890	147059	983085
13	100	60	146880	982891	147060	983086
13	300	60	146881	982892	147061	983087
16	30	60	146882	982893	147062	983088
16	100	60	146883	982894	147063	983089
16	300	60	146884	982895	147064	983090
20	30	60	146885	982896	147065	983091
20	100	60	146886	982897	147066	983092
20	300	60	146887	982898	147067	983093
25	30	60	146888	982899	147068	983094
25	100	60	146889	982900	147069	983095
25	300	60	146890	982901	147070	983096
32	30	60	146891	982902	147071	983097
32	100	60	146892	982903	147072	983098
32	300	60	146893	982904	147073	983099
40	30	60	146894	982905	147074	983100
40	100	60	146895	982906	147075	983101
40	300	60	146896	982907	147076	983102

2P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	48	146897	982908	147077	983103
1	100	48	146898	982909	147078	983104
1	300	48	146899	982910	147079	983105
2	30	48	146900	982911	147080	983106
2	100	48	146901	982912	147081	983107
2	300	48	146902	982913	147082	983108
3	30	48	146903	982914	147083	983109
3	100	48	146904	982915	147084	983110
3	300	48	146905	982916	147085	983111
4	30	48	146906	982917	147086	983112
4	100	48	146907	982918	147087	983113
4	300	48	146908	982919	147088	983114
6	30	48	146909	982920	147089	983115
6	100	48	146910	982921	147090	983116
6	300	48	146911	982922	147091	983117
8	30	48	190035	982923	190050	983118
8	100	48	190036	982924	190051	983119
8	300	48	190037	982925	190052	983120
10	30	48	146912	982926	147092	983121
10	100	48	146913	982927	147093	983122
10	300	48	146914	982928	147094	983123
13	30	48	146915	982929	147095	983124
13	100	48	146916	982930	147096	983125
13	300	48	146917	982931	147097	983126
16	30	48	146918	982932	147098	983127
16	100	48	146919	982933	147099	983128
16	300	48	146920	982934	147100	983129
20	30	48	146921	982935	147101	983130
20	100	48	146922	982936	147102	983131
20	300	48	146923	982937	147103	983132
25	30	48	146924	982938	147104	983133
25	100	48	146925	982939	147105	983134
25	300	48	146926	982940	147106	983135
32	30	48	146927	982941	147107	983136
32	100	48	146928	982942	147108	983137
32	300	48	146929	982943	147109	983138
40	30	48	146930	982944	147110	983139
40	100	48	146931	982945	147111	983140
40	300	48	146932	982946	147112	983141

3P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	24	146933	982947	147113	983142
1	100	24	146934	982948	147114	983143
1	300	24	146935	982949	147115	983144
2	30	24	146936	982950	147116	983145
2	100	24	146937	982951	147117	983146
2	300	24	146938	982952	147118	983147
3	30	24	146939	982953	147119	983148
3	100	24	146940	982954	147120	983149
3	300	24	146941	982955	147121	983150
4	30	24	146942	982956	147122	983151
4	100	24	146943	982957	147123	983152
4	300	24	146944	982958	147124	983153
6	30	24	146945	982959	147125	983154
6	100	24	146946	982960	147126	983155
6	300	24	146947	982961	147127	983156
8	30	24	190038	982962	190053	983157
8	100	24	190039	982963	190054	983158
8	300	24	190040	982964	190055	983159
10	30	24	146948	982965	147128	983160
10	100	24	146949	982966	147129	983161
10	300	24	146950	982967	147130	983162
13	30	24	146951	982968	147131	983163
13	100	24	146952	982969	147132	983164
13	300	24	146953	982970	147133	983165
16	30	24	146954	982971	147134	983166
16	100	24	146955	982972	147135	983167
16	300	24	146956	982973	147136	983168
20	30	24	146957	982974	147137	983169
20	100	24	146958	982975	147138	983170
20	300	24	146959	982976	147139	983171
25	30	24	146960	982977	147140	983172
25	100	24	146961	982978	147141	983173
25	300	24	146962	982979	147142	983174
32	30	24	146963	982980	147143	983175
32	100	24	146964	982981	147144	983176
32	300	24	146965	982982	147145	983177
40	30	24	146966	982983	147146	983178
40	100	24	146967	982984	147147	983179
40	300	24	146968	982985	147148	983180

3P+ N



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	24	146969	982986	147149	983181
1	100	24	146970	982987	147150	983182
1	300	24	146971	982988	147151	983183
2	30	24	146972	982989	147152	983184
2	100	24	146973	982990	147153	983185
2	300	24	146974	982991	147154	983186
3	30	24	146975	982992	147155	983187
3	100	24	146976	982993	147156	983188
3	300	24	146977	982994	147157	983189
4	30	24	146978	982995	147158	983190
4	100	24	146979	982996	147159	983191
4	300	24	146980	982997	147160	983192
6	30	24	146981	982998	147161	983193
6	100	24	146982	982999	147162	983194
6	300	24	146983	983000	147163	983195
8	30	24	190041	983001	190056	983196
8	100	24	190042	983002	190057	983197
8	300	24	190043	983003	190058	983198
10	30	24	146984	983004	147164	983199
10	100	24	146985	983005	147165	983200
10	300	24	146986	983006	147166	983201
13	30	24	146987	983007	147167	983202
13	100	24	146988	983008	147168	983203
13	300	24	146989	983009	147169	983204
16	30	24	146990	983010	147170	983205
16	100	24	146991	983011	147171	983206
16	300	24	146992	983012	147172	983207
20	30	24	146993	983013	147173	983208
20	100	24	146994	983014	147174	983209
20	300	24	146995	983015	147175	983210
25	30	24	146996	983016	147176	983211
25	100	24	146997	983017	147177	983212
25	300	24	146998	983018	147178	983213
32	30	24	146999	983019	147179	983214
32	100	24	147000	983020	147180	983215
32	300	24	147001	983021	147181	983216
40	30	24	147002	983022	147182	983217
40	100	24	147003	983023	147183	983218
40	300	24	147004	983024	147184	983219

4P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code			
			Curve B		Curve C	
			Standard	RoHS	Standard	RoHS
1	300	24	147005	983025	147185	983220
1	100	24	147006	983026	147186	983221
1	300	24	147007	983027	147187	983222
2	30	24	147008	983028	147188	983223
2	100	24	147009	983029	147189	983224
2	300	24	147010	983030	147190	983225
3	30	24	147011	983031	147191	983226
3	100	24	147012	983032	147192	983227
3	300	24	147013	983033	147193	983228
4	30	24	147014	983034	147194	983229
4	100	24	147015	983035	147195	983230
4	300	24	147016	983036	147196	983231
6	30	24	147017	983037	147197	983232
6	100	24	147018	983038	147198	983233
6	300	24	147019	983039	147199	983234
8	30	24	190044	983040	190059	983235
8	100	24	190045	983041	190060	983236
8	300	24	190046	983042	190061	983237
10	30	24	147020	983043	147200	983238
10	100	24	147021	983044	147201	983239
10	300	24	147022	983045	147202	983240
13	30	24	147023	983046	147203	983241
13	100	24	147024	983047	147204	983242
13	300	24	147025	983048	147205	983243
16	30	24	147026	983049	147206	983244
16	100	24	147027	983050	147207	983245
16	300	24	147028	983051	147208	983246
20	30	24	147029	983052	147209	983247
20	100	24	147030	983053	147210	983248
20	300	24	147031	983054	147211	983249
25	30	24	147032	983055	147212	983250
25	100	24	147033	983056	147213	983251
25	300	24	147034	983057	147214	983252
32	30	24	147035	983058	147215	983253
32	100	24	147036	983059	147216	983254
32	300	24	147037	983060	147217	983255
40	30	24	147038	983061	147218	983256
40	100	24	147039	983062	147219	983257
40	300	24	147040	983063	147220	983258

→ 50- 63A, AC type, I<sub>cn</sub>= 6000A

1P+ N



In (A)	I <sub>n</sub> (mA)	CTN	Order Code	
			Curve C	
			Standard	RoHS
50	30	60	142531	972113
50	100	60	142532	972114
50	300	60	142533	972115
63	30	60	142534	972116
63	100	60	142535	972117
63	300	60	142536	972118

2P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code	
			Curve C	
			Standard	RoHS
50	30	48	142537	972119
50	100	48	142538	972120
50	300	48	142539	972121
63	30	48	142540	972122
63	100	48	142541	972123
63	300	48	142542	972124

3P



In (A)	I <sub>n</sub> (mA)	CTN	Order Code	
			Curve C	
			Standard	RoHS
50	30	24	142543	972125
50	100	24	142544	972126
50	300	24	142545	972127
63	30	24	142546	972128
63	100	24	142547	972129
63	300	24	142548	972130

3P+ N



In (A)	I <sub>n</sub> (mA)	CTN	Order Code	
			Curve C	
			Standard	RoHS
50	30	24	142549	972131
50	100	24	142550	972132
50	300	24	142551	972133
63	30	24	142552	972134
63	100	24	142553	972135
63	300	24	142554	972136

4P



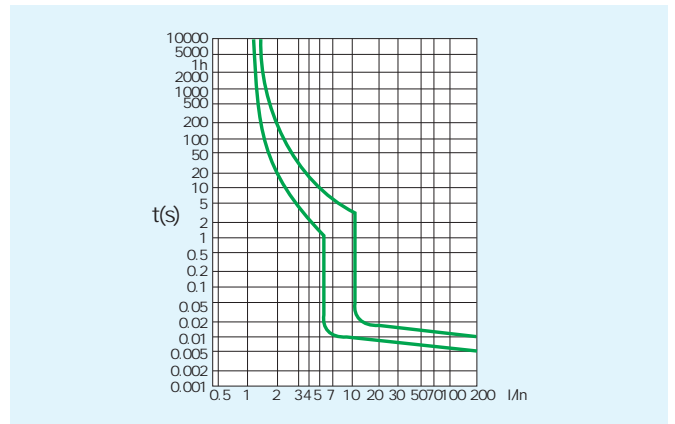
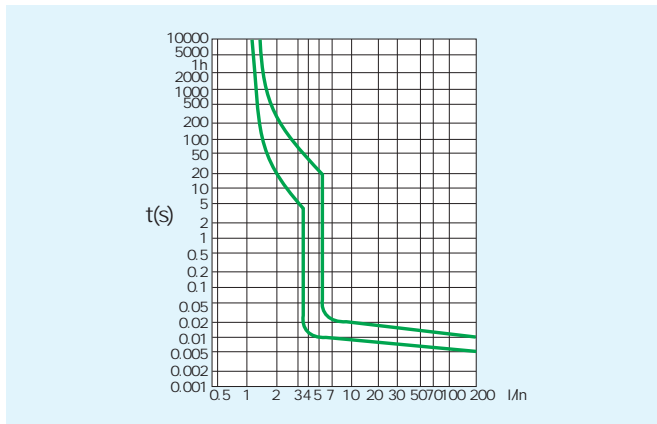
In (A)	I <sub>n</sub> (mA)	CTN	Order Code	
			Curve C	
			Standard	RoHS
50	30	24	142555	972137
50	100	24	142556	972138
50	300	24	142557	972139
63	30	24	142558	972140
63	100	24	142559	972141
63	300	24	142560	972142

### 3. Technical Data

#### 3.1 Curves

B Curve

C Curve



#### 3.2

Standard		IEC/EN 60898-1		
Electrical features	Type (wave form of the earth leakage sensed)	AC, A		
	Thermo-magnetic release characteristic	B, C		
	Rated current in	A	MCB+ add-on RCD block	1, 2, 3, 4, 6, 10, 13, 16, 20, 25, 32, 40, 50, 63
			Combined	1, 2, 3, 4, 6, 10, 13, 16, 20, 25, 32, 40
	Poles	A	MCB+ add-on RCD block	1P+ N, 2P, 3P, 3P+ N, 4P
			Combined	1P+ N, 2P
	Rated voltage Ue	V	230/400	
	Rated sensitivity I <sub>n</sub>	A	MCB+ add-on RCD block	0.03, 0.1, 0.3
			Combined	0.03
	Rated residual making and breaking capacity	A	500 (In 40A)	
			630 (In 40A)	
	I <sub>m</sub>			
	Rated short-circuit capacity I <sub>cn</sub>	A	6,000/10,000	
	Break time under I <sub>n</sub>	s	0.1	
	Rated frequency	Hz	50/60	
Rated impulse withstand voltage (1.2/50)U <sub>imp</sub>	V	6,000		
Dielectric TEST voltage at ind. Freq. for 1min	kV	2		
Insulation voltage U <sub>i</sub>		500		
Pollution degree		2		
Mechanical features	Electrical life	2,000		
	Mechanical life	2,000		
	Contact position indicator	Yes		
	Protection degree	IP20		
	Ambient temperature (with daily average 35 °C)	-5...+ 40 (Special application please refer to P62 for temperature compensation correction)		
	Storage temperature	-25...+ 70		



Standard		IEC/EN 60898-1	
Installation	Terminal connection type		Cable/U-type busbar/Pin-type busbar
	Terminal size top/bottom for cable	mm <sup>2</sup>	25
		AWG	18-3
	Terminal size top/bottom for busbar	mm <sup>2</sup>	25
		AWG	18-3
	Tightening torque	N*m	2
		In-lbs	18
Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device	
Connection		From top and bottom (for combined type)	
		From top (MCB+ add-on RCD block)	

### 3.3 Temperature derating

Temperature	-10	0	10	20	30	40	50	60
Temperature compensation coefficient of rated current	1.20	1.15	1.10	1.05	1.00	0.95	0.90	0.85

## 4. Overall and Mounting Dimensions (mm)

### 4.1 MCB+add-on RCD block

Overall and Mounting Dimensions

