



## DZ158LE Residual Current Operated Circuit Breaker

### 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:
  - $I\Delta n \leq 30 \text{ mA}$ : additional protection in the case of direct contact
  - $I\Delta n \leq 300 \text{ mA}$ : preventative fire protection in the case of ground fault currents
  - AC class – Tripping is ensured for sinusoidal, alternating currents, whether they be quickly applied or slowly increase.
- 1.3 Detailed certificates information, please refer to Certificates Table on P151.

2. Ordering Information

★ DZ158LE, 1P+N



★ DZ158LE, 2P



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			Standard	RoHS
63	30	54	145401	970013
63	100	54	145402	970014
63	300	54	145403	970015
80	30	54	145404	970016
80	100	54	145405	970017
80	300	54	145406	970018
100	30	54	145407	970019
100	100	54	145408	970020
100	300	54	145409	970021

In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			Standard	RoHS
63	30	36	145410	970022
63	100	36	145411	970023
63	300	36	145412	970024
80	30	36	145413	970025
80	100	36	145414	970026
80	300	36	145415	970027
100	30	36	145416	970028
100	100	36	145417	970029
100	300	36	145418	970030

★ DZ158LE, 3P



★ DZ158LE, 3P+N



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			Standard	RoHS
63	30	27	145419	970031
63	100	27	145420	970032
63	300	27	145421	970033
80	30	27	145422	970034
80	100	27	145423	970035
80	300	27	145424	970036
100	30	27	145425	970037
100	100	27	145426	970038
100	300	27	145427	970039

In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			Standard	RoHS
63	30	27	145428	970040
63	100	27	145429	970041
63	300	27	145430	970042
80	30	27	145431	970043
80	100	27	145432	970044
80	300	27	145433	970045
100	30	27	145434	970046
100	100	27	145435	970047
100	300	27	145436	970048

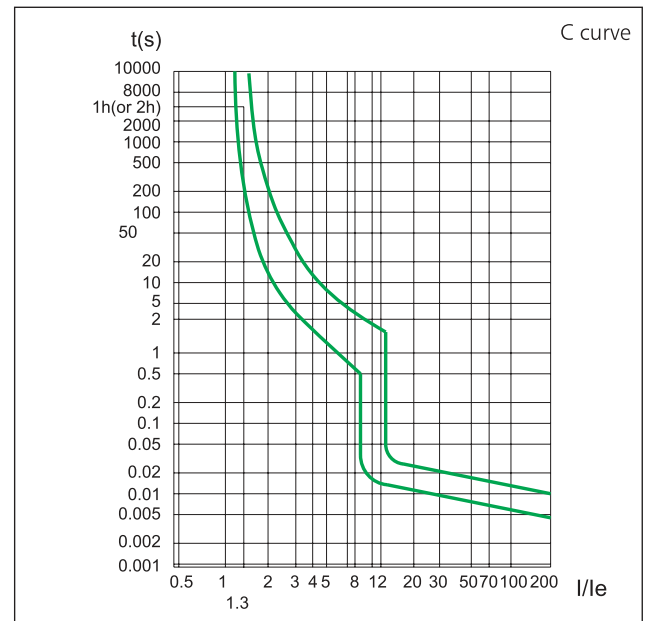
★ DZ158LE, 4P



In (A)	I $\Delta$ n (mA)	CTN	Order Code	
			Standard	RoHS
63	30	18	145437	970049
63	100	18	145438	970050
63	300	18	145439	970051
80	30	18	145440	970052
80	100	18	145441	970053
80	300	18	145442	970054
100	30	18	145443	970055
100	100	18	145444	970056
100	300	18	145445	970057

### 3. Technical Information

#### 3.1 Curves



#### 3.2

	Standard		IEC/EN 60947-2
Electrical features	Type (wave form of the earth leakage sensed)		AC
	Thermo-magnetic release characteristic		8-12In
	Rated current In	A	63, 80, 100
	Poles		1P+N, 2P, 3P, 3P+N, 4P
	Rated voltage Ue	V	230/400
	Rated sensitivity I $\Delta$ n	A	0.03, 0.1, 0.3
	Rated residual making and breaking capacity I $\Delta$ m	A	2,000
	Rated short-circuit capacity Icn	A	6,000
	Break time under I $\Delta$ n	s	≤0.1
	Rated frequency	Hz	50/60
Mechanical features	Rated impulse withstand voltage (1.2/50)Uimp	V	6,000
	Dielectric TEST voltage at ind. Freq. for 1min	kV	2.5
	Insulation voltage Ui	V	500
	Pollution degree		3
	Electrical life		1,500
	Mechanical life		8,500
	Contact position indicator		Yes
Installation	Ambient temperature (with daily average ≤35°C)	°C	-5...+40 (Special application please refer to P71 for temperature compensation correction)
	Storage temperature	°C	-25...+70
Installation	Terminal connection type		Cable/Pin-type busbar
	Terminal size top/bottom for cable	mm <sup>2</sup>	50
		AWG	18-1/0
	Terminal size top/bottom for busbar	mm <sup>2</sup>	50
		AWG	18-1/0
	Tightening torque	N*m	3.5
	In-lbs.	31	
Mounting Connection			On DIN rail EN 60715 (35mm) by means of fast clip device From top

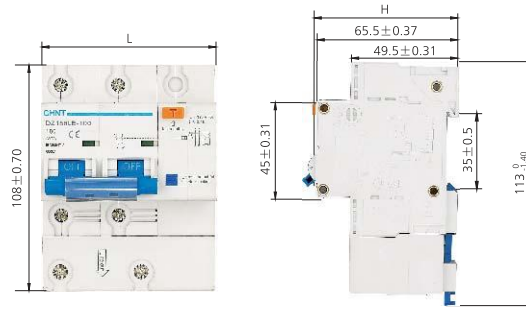
3.2 Temperature derating

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.

**The reference temperature is 30°C**

Rated current In (A)	Temperature compensation coefficient under various operational temperature								
	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	55°C	60°C
63	1.28	1.21	1.14	1.07	1.00	0.994	0.87	0.85	0.82
80	1.22	1.16	1.11	1.05	1.00	0.95	0.91	0.88	0.86
100	1.22	1.16	1.11	1.05	1.00	0.95	0.91	0.88	0.86

4. Overall and Mounting Dimensions (mm)



Number of poles	1P+N	2P	3P	3P+N	4P
L (mm)	54 <sup>0</sup> <sub>-0.74</sub>	81 <sup>0</sup> <sub>-0.87</sub>	108 <sup>0</sup> <sub>-1.40</sub>	108 <sup>0</sup> <sub>-1.40</sub>	135 <sup>0</sup> <sub>-1.60</sub>
H (mm)	72 <sup>0</sup> <sub>-1.20</sub>	77 <sup>0</sup> <sub>-1.20</sub>	77 <sup>0</sup> <sub>-1.20</sub>	77 <sup>0</sup> <sub>-1.20</sub>	77 <sup>0</sup> <sub>-1.20</sub>