1. Datasheet

NBH8 Miniature Circuit Breaker

1. General

1.1 Function

protection of circuits against short-circuit currents,
protection of circuits against overload currents,
switch,isolation.

1.2 Selection

Technical data of the network at the point considered:
the earthing systems (TNS, TNC),
short-circuit current at the circuit-breaker installation point,
which must always be less than the breaking capacity of
this device,network normal voltage.
Tripping curves:
B curve (3-5In)
protection for people and big length cables in TN and IT
systems.
C curve (5-10In)
protection for resistive and inductive loads with low inrush
current.

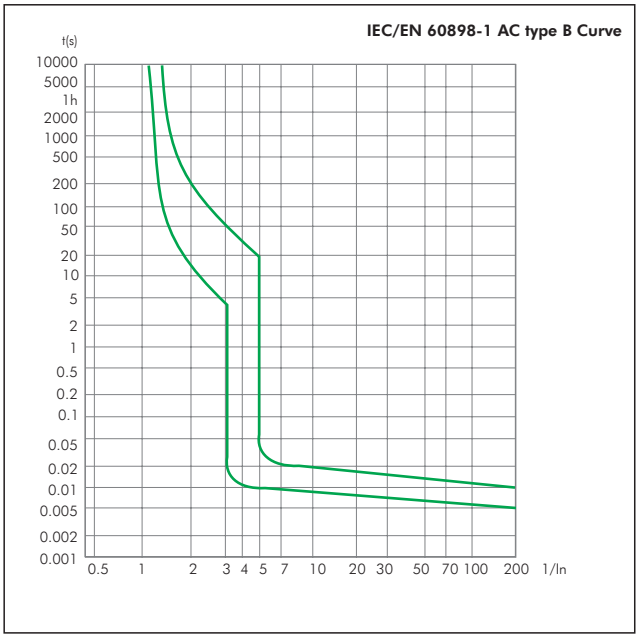
1.3 Approvals and certificates

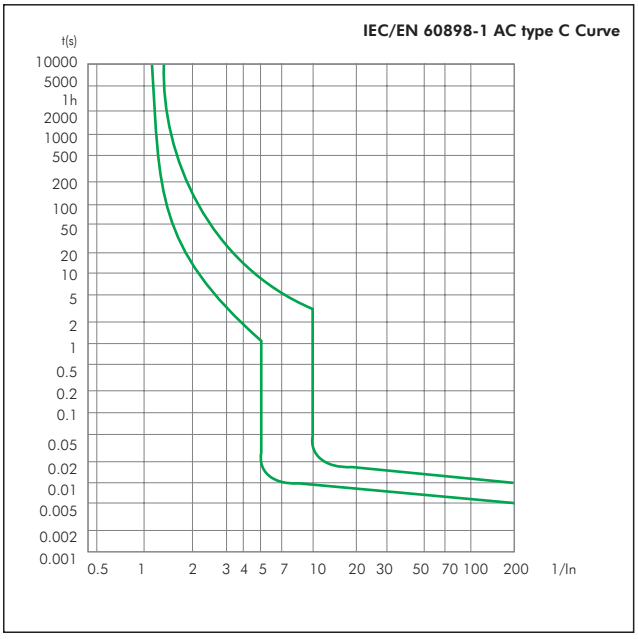
Detailed information, please refer to Certificates Table
on the last page.

CE KEMA EUR VDE Intertek EAC RCC RoHS REACH

2.Technical data

2.1 Curves





2.2

	Standard		IEC/EN 60898-1
Electrical features	Rated current In	A	1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40
	Poles		1P+N
	Rated voltage Ue	V	230/240
	Insulation voltage Ui	V	500
	Rated frequency	Hz	50/60
	Rated breaking capacity	A	4500/6000
	Rated impulse withstand voltage(1.2/50) Uimp	V	4000
	Dielectric test voltage at ind. Freq. for 1 min	kV	2
	Pollution degree		2
	Energy limiting class		3
Mechanical features	Electrical life		10, 000
	Mechanical life		20, 000
	Contact position indicator		Yes
	Protection degree		IP20
	Reference temperature for setting of thermal element	℃	30
	Ambient temperature (with daily average≤35℃)	℃	-5...+40
	Storage temperation	℃	-25...+70
Installation	Terminal connection type		Cable/Pin-type busbar
	Terminal size top/bottom for cable	mm2	16
		AWG	18-5
	Terminal size top/bottom for busbar	mm2	10
		AWG	18-8
	Tightening torque	N·m	2
		In-lbs.	18
	Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device
	Connection		From top or bottom
Combination with accessories	Auxiliary contact		Yes
	Shunt release		Yes
	Under voltage release		Yes
	Alarm contant		Yes

2.3 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℃

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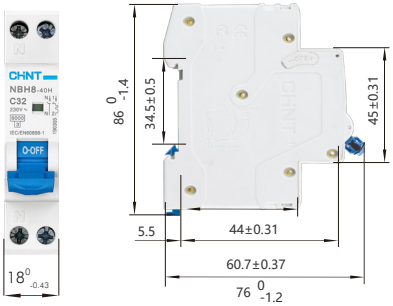
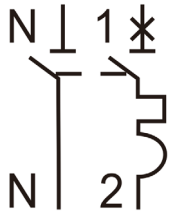
In/Rated current (A)	Current correction value under different ambient temperature										
	-25℃	-20℃	-10℃	0℃	10℃	20℃	30℃	40℃	50℃	60℃	70℃
1	1.28	12.5	1.19	1.13	1.08	1.03	1	0.97	0.91	0.86	0.8
2	2.56	2.5	2.38	2.26	2.16	2.06	2	1.94	1.82	1.72	1.6
3	3.84	3.75	3.57	3.39	3.24	3.09	3	2.97	2.73	2.58	2.4
4	5.12	5	4.76	4.52	4.32	4.12	4	3.88	3.64	3.44	3.2
6	7.68	7.5	7.14	6.78	6.48	6.18	6	5.82	5.46	5.16	4.8
10	12.8	12.5	11.9	11.3	10.8	10.3	10	9.7	9.1	8.6	8
16	20.5	20	19.0	18.1	17.3	16.5	16	15.5	14.6	13.8	12.8
20	25.6	25	23.8	22.6	21.6	20.6	20	19.4	18.2	17.2	16
25	32	31.3	29.8	28.3	27	25.8	25	24.3	22.8	21.5	20
32	39.1	38.3	36.8	35.3	34	32.8	32	31.3	30	28.7	27.2
40	47.8	46.8	45.2	43.6	42.2	40.8	40	39.3	38	36.7	35.2

3. Overall and mounting dimensions (mm)



NBH8-40	H	1P+N	C	16	6kA
Frame	**Breaking capacity code**	**Poles**	**Curve**	**Current(In)**	**Breaking capacity**
NBH8-40	Blank: 4.5kA H: 6kA	1P+N	B C	1A~40A	4.5kA 6kA

Diagram	Curve	Poles	In(A)	Icu(kA)	Ue(V)	Description	Code
	B	1P+N	1	4.5	230/240	NBH8-40 1P+N B1 4.5kA	190219
	B	1P+N	2	4.5	230/240	NBH8-40 1P+N B2 4.5kA	190220
	B	1P+N	3	4.5	230/240	NBH8-40 1P+N B3 4.5kA	190221
	B	1P+N	4	4.5	230/240	NBH8-40 1P+N B4 4.5kA	190222
	B	1P+N	6	4.5	230/240	NBH8-40 1P+N B6 4.5kA	190223
	B	1P+N	10	4.5	230/240	NBH8-40 1P+N B10 4.5kA	190224
	B	1P+N	16	4.5	230/240	NBH8-40 1P+N B16 4.5kA	190225
	B	1P+N	20	4.5	230/240	NBH8-40 1P+N B20 4.5kA	190226
	B	1P+N	25	4.5	230/240	NBH8-40 1P+N B25 4.5kA	190227
	B	1P+N	32	4.5	230/240	NBH8-40 1P+N B32 4.5kA	190228
	B	1P+N	40	4.5	230/240	NBH8-40 1P+N B40 4.5kA	190229
	C	1P+N	1	4.5	230/240	NBH8-40 1P+N C1 4.5kA	190230
	C	1P+N	2	4.5	230/240	NBH8-40 1P+N C2 4.5kA	190231
	C	1P+N	3	4.5	230/240	NBH8-40 1P+N C3 4.5kA	190232
	C	1P+N	4	4.5	230/240	NBH8-40 1P+N C4 4.5kA	190233
	C	1P+N	6	4.5	230/240	NBH8-40 1P+N C6 4.5kA	190234
	C	1P+N	10	4.5	230/240	NBH8-40 1P+N C10 4.5kA	190235
	C	1P+N	16	4.5	230/240	NBH8-40 1P+N C16 4.5kA	190236
	C	1P+N	20	4.5	230/240	NBH8-40 1P+N C20 4.5kA	190237
	C	1P+N	25	4.5	230/240	NBH8-40 1P+N C25 4.5kA	190238
	C	1P+N	32	4.5	230/240	NBH8-40 1P+N C32 4.5kA	190239
	C	1P+N	40	4.5	230/240	NBH8-40 1P+N C40 4.5kA	190240

Diagram	Curve	Poles	In(A)	Icu(kA)	Ue(V)	Description	Code
	B	1P+N	1	6	230/240	NBH8-40H 1P+N B1 6kA	190241
	B	1P+N	2	6	230/240	NBH8-40H 1P+N B2 6kA	190242
	B	1P+N	3	6	230/240	NBH8-40H 1P+N B3 6kA	190243
	B	1P+N	4	6	230/240	NBH8-40H 1P+N B4 6kA	190244
	B	1P+N	6	6	230/240	NBH8-40H 1P+N B6 6kA	190245
	B	1P+N	10	6	230/240	NBH8-40H 1P+N B10 6kA	190246
	B	1P+N	16	6	230/240	NBH8-40H 1P+N B16 6kA	190247
	B	1P+N	20	6	230/240	NBH8-40H 1P+N B20 6kA	190248
	B	1P+N	25	6	230/240	NBH8-40H 1P+N B25 6kA	190249
	B	1P+N	32	6	230/240	NBH8-40H 1P+N B32 6kA	190250
	B	1P+N	40	6	230/240	NBH8-40H 1P+N B40 6kA	190251
	C	1P+N	1	6	230/240	NBH8-40H 1P+N C1 6kA	190252
	C	1P+N	2	6	230/240	NBH8-40H 1P+N C2 6kA	190253
	C	1P+N	3	6	230/240	NBH8-40H 1P+N C3 6kA	190254
	C	1P+N	4	6	230/240	NBH8-40H 1P+N C4 6kA	190255
	C	1P+N	6	6	230/240	NBH8-40H 1P+N C6 6kA	190256
	C	1P+N	10	6	230/240	NBH8-40H 1P+N C10 6kA	190257
	C	1P+N	16	6	230/240	NBH8-40H 1P+N C16 6kA	190258
	C	1P+N	20	6	230/240	NBH8-40H 1P+N C20 6kA	190259
	C	1P+N	25	6	230/240	NBH8-40H 1P+N C25 6kA	190260
	C	1P+N	32	6	230/240	NBH8-40H 1P+N C32 6kA	190261
	C	1P+N	40	6	230/240	NBH8-40H 1P+N C40 6kA	190262