

MCB N8GH

Data Sheet V1.0



The GACIA N8GH in a miniature circuit breaker is a high performance MCB suitable for utility and industrial applications.

The N8GH has a breaking capacity of 10kA, is available in a range of current from 63A up to 125A and in characteristics 4xIn (B-curve), 8xIn (C-curve) or 12xIn (D-curve).

N8GH miniature circuit breaker



RoHS

N8GH is a MCB compliant to product standard IEC/EN 60947 and with the following main technical features

- Breaking capacity 10kA (60947-2)
- Rated current 63A to 125A
- 1p, 2p, 3p, 3p+n, 4p
- Characteristics 4x, 8x, 12x In

Application benefits

- Supply possible from top and bottom
- Pin and fork type busbar connection (above and below) up to 30mm² and cable connection up to 50mm² cables.
- Locking possibility for the handle in off position by attribute
- Family feeling in the GACIA range modular components

MCB N8GH

Technical Data



Type			N8GH
Standards			IEC/EN 60947-2*
Certification			CE
Country of origin			CN
RoHS Compliance Status			Compliant, No Exemption
Number of poles			1p, 2p, 3p, 4p, 3p+n
Rated current	In	A	63, 80, 100, 125A
Rated voltage	Ue	V	230/415
Min. operating voltage		V	12
Max. operating voltage		V	440
Insulation voltage	Ui	V	500 V AC
Overvoltage category			III
Pollution degree			2
Rated frequency		Hz	50 - 60
Rated breaking capacity acc. to IEC/EN 60947-2	Icu	A	15.000
Rated breaking capacity acc. to IEC/EN 60947-2 (only referring to short circuit test)	Ultimate Icu	kA	10
	Service Ics	kA	7.5
Tripping characteristics acc. To IEC/EN 60947-2			4x In – B curve* ² 8x In – C curve* ² 12x In – D curve* ²
Category acc. to IEC/EN 60947-2			A
Rated impulse withstand voltage (1.2/50)	Uimp	kV	6
Dielectric test voltage at ind. freq. for 1 min.			2 kV (50 / 60Hz, 1 min.)
Mechanical features	Housing		Insulation group I - II, RAL 7035
	Toggle		Insulation group II, RAL 5017
	Contact position indication		Green / Red window
	Electrical life	operations	4.000
	Mechanical life	operations	10.000
	Protection degree acc. to EN 60529	housing	IP4X
		terminals	IP2X
	Reference temperature for setting of thermal element	°C	30
	Ambient temperature (with daily average ≤ +35 °C)	°C	-25... +70
	Storage temperature	°C	-40... +70

* IEC/EN 60947-2 certificate and test-report are not available at present, the use of these values is the responsibility of the user
*² comparable to the B,C,D curves according 60898

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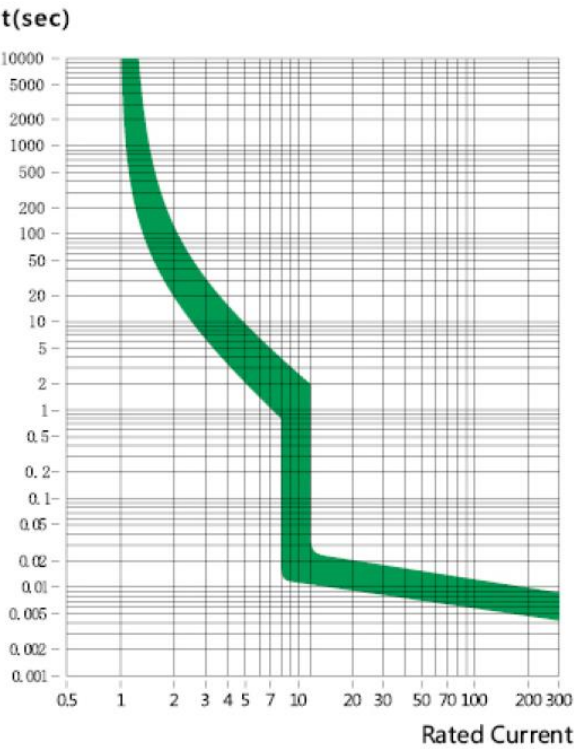
Type			N8GH				
Installation	Terminal type	bottom / top		Twin-purpose terminal (lift / open-mouthed)			
	Terminal size for cables	bottom / top	mm²	50/35			
	Terminal size for PIN busbar	bottom / top	mm²	10/16/30			
	Terminal size for FORK busbar	bottom / top	mm²	M6 - 10/16			
	Solid /stranded wiring			1x 1.5mm² - 50mm² 2 x 1.5mm² - 25mm² *			
	Flexible wires with or without ferrules			1x 1.5mm² - 35mm² 2 x 1.5mm² - 16mm² *			
	Tightening torque	bottom / top		2-3,5Nm (3Nm)			
	Stripping length of the cable			10mm			
	Mounting			on DIN rail EN 60715 (35mm) by means of mounting clip			
	Mounting position			Any			
	Supply from			Top / bottom terminals			
				1p	2p	3p	4p (3p+n)
	Dimensions	Height	mm	81			
mm			27	54	81	108	
mm			72				
Weight		kg	0,18	0,36	0,53	0,70	
Packing A		QTY	pcs	8	4	2	2
		Dimensions (H x W x D)	mm	220 x 88 x 82			
		Weight	kg	1,47 (3p 1,2)			
		Packing B (x A)	QTY	pcs	80	40	20
Dimensions (H x W x D)			mm	425 x 234 x 190			
Weight			kg	15 (3p - 14)			
CN-code			85363030				
Combination with auxiliary elements	Auxiliary contact		NA				
	Alarm contact		NA				
	Shunt trip		NA				
	Auxiliary contact for bottom fitting		NA				
	Undervoltage release		NA				
	Overvoltage release		NA				
	Motor operating device		NA				

* Check local installation rules, this type of connection is not advised. Special add-on terminals are available.

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Tripping Characteristics



Performance in altitude*

Elevation [m]	2000	3000	4000	5000	6000
Rated current [A]	1 x In	0,95 x In	0,92 x In	0,90 x In	0,88 x In
Rated voltage [V]	1 x Un	0,85 x Un	0,75 x Un	0,65 x Un	0,55 x Un

* the MCB is designed for standard level operations, performance information on higher altitude is not available

Influence of adjacent devices

Number of devices	1	2-3	4-5	6-9	≥10
Correction factor	1	0,9	0,8	0,7	0,6

These values are provided by recommendation IEC 61439-1 and standards EN 61439-1. In order to avoid having to use these coefficients there must be good ventilation and the devices must be kept apart using the spacing element article number 2119000010 (0.5 module).

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Derating in temperature *N8GH*

Max operating current depending on the ambient temperature (daily average ≤ +35 °C)

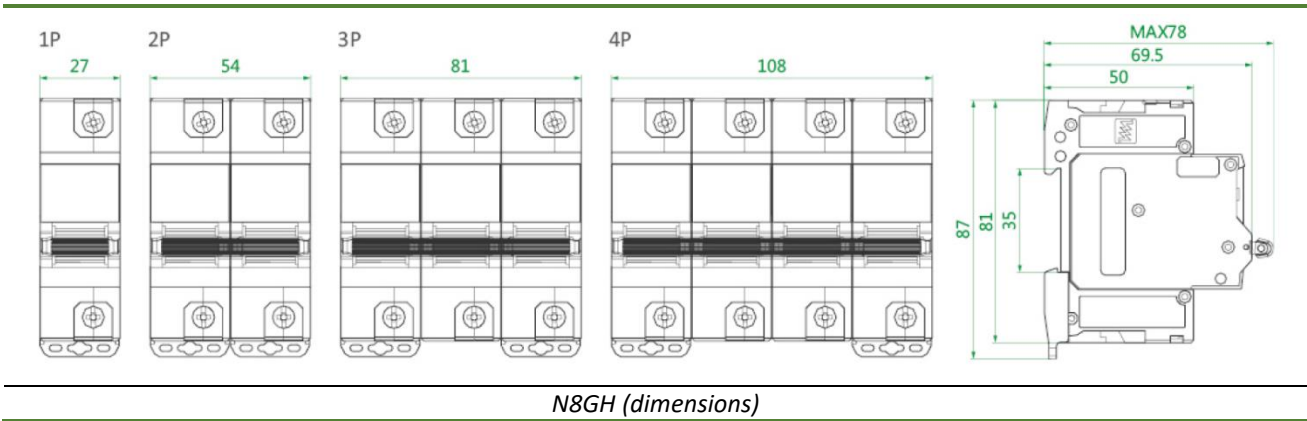
In [A]	Ambient temperature [°C]										
	-30	-20	-10	0	10	20	30	40	50	60	70
63	82,1	79,2	76,3	73,2	70	66,6	63	64,6	58,8	55,4	50,5
80	105,2	103,1	99,1	94,9	90,3	86,7	80	75,8	71,3	67,9	66,3
100	132,6	129,8	124	118,1	113,3	108,2	100	94,2	89,6	85,1	82,2
125	-	-	-	-	-	-	125	-	-	-	-

Power loss N8GH

In [A]	1p	2p	3p	4p	3p+n
63	5,6	11,2	16,8	22,4	22,4
80	6,7	13,4	20,1	26,8	26,8
100	7,7	15,4	23,1	30,8	3,8
125	13,4	26,8	40,2	53,6	53,6

Overall dimensions

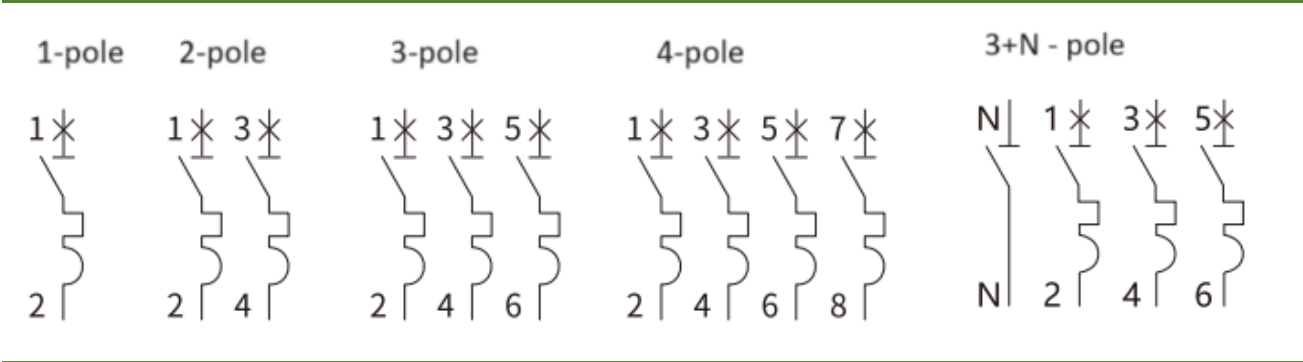
All measurements in mm



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Connection diagram



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Order codes


Char.	Inom	1p	2p	3p	3p+n	4p
4x In (B curve)	63 A	5101175063	5101275063	5101375063	5101675063	5101475063
	80 A	5101175080	5101275080	5101375080	5101675080	5101475080
	100 A	5101175100	5101275100	5101375100	5101675100	5101475100
	125 A	5101175125	5101275125	5101375125	5101675125	5101475125
8x In (C curve)	63 A	5101185063	5101285063	5101385063	5101685063	5101485063
	80 A	5101185080	5101285080	5101385080	5101685080	5101485080
	100 A	5101185100	5101285100	5101385100	5101685100	5101485100
	125 A	5101185125	5101285125	5101385125	5101685125	5101485125
12x In (D curve)	63 A	5101195063	5101295063	5101395063	5101695063	5101495063
	80 A	5101195080	5101295080	5101395080	5101695080	5101495080
	100 A	5101195100	5101295100	5101395100	5101695100	5101495100
	125 A	5101195125	5101295125	5101395125	5101695125	5101495125


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Order codes accessories

Supplied by SEP EUROPE ®

Add-on terminals Reference image	Wire size	PIN		FORK	
		Grey	Blue	Grey	Blue
	1x50mm2 solid/stranded 1x35mm2 flexible	2115900060	2115900120	2115900090	2115900150
	2x25mm2 solid/stranded 2x16mm2 flexible	2115900070	2115900130	2115900100	2115900160
	3x16mm2 solid/stranded 3x10mm2 flexible	2115900080	2115900140	2115900110	2115900170

Marker – spacer Reference image	Description	Code
	Component Spacer 0,5mm	2119000010

Lockout Reference image	Description	Code
	Lockout set - complete	2115909099
	Locking devices adaptor	2115909015
	Locking device screw adaptor	2115909010
	Padlock with 2 identical keys	2115909020
	Warning tag (English)	2115909030