DATASHEET - HN-C40/3N



Miniature circuit breaker (MCB), 40 A, 3p+N, characteristic: C

Powering Business Worldwide*

Part no. HN-C40/3N Catalog No. 194915

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		piu	gram

Desir function			Ministrans since it has shown
Basic function			Miniature circuit-breakers
Number of poles			3 pole+N
Tripping characteristic			C
Application			Switchgear for residential and commercial applications
Rated current	In	Α	40
Rated switching capacity according to IEC/EN 60898-1	I _{cn}	kA	6
Product range			HN

Technical data

Electrical

Rated switching capacity according to IEC/EN 60898-1 I_{cn} kA 6

Design verification as per IEC/EN 61439

Design verification as per IEC/EN 61439			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	40
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	11.5
Static heat dissipation, non-current-dependent	P _{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	75
			linear, per +1 °C, results in a 0.5% reduction of current carrying capacity
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects $$			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 8.0

	e circuit breaker (MCB) (FC000042)

Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB)

Release characteristic Number of poles (total) Number of protected poles Rated current Rated current Rated where the poles (total) Rated insulation voltage Ui Rated insulation voltage Ui Rated short-circuit breaking capacity Icn according to EN 80898 at 230 V Rated short-circuit breaking capacity Icn according to EN 80898 at 400 V Rated short-circuit breaking capacity Icn according to EN 80898 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 80947-2 at 400 V Rated short-circuit breaking capacity Icn ac	(ecl@ss10.0.1-27-14-19-01 [AAB905014])		, , , , , , , , , , , , , , , , , , , ,
Author of poles (total)	Built-in depth	mm	44
Author of protected poles Aated current Aated voltage Aated insulation voltage Uin Aated short-circuit breaking capacity Icn according to EN 60898 at 230 V Aated short-circuit breaking capacity Icn according to EN 60898 at 400 V Aated short-circuit breaking capacity Icn according to EN 60898 at 400 V Aated short-circuit breaking capacity Icn according to EN 60898 at 400 V Aated short-circuit breaking capacity Icn according to EN 60898 at 400 V Aated short-circuit breaking capacity Icn according to EN 60898 at 400 V Aated short-circuit breaking capacity Icu according to EN 60898 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Aated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Aated s	Release characteristic		С
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Asted voltage Asted insulation voltage Ui Asted insulation voltage Uimp Asted impulse withstand voltage Uimp Asted short-circuit breaking capacity Icn according to EN 60898 at 230 V Asted short-circuit breaking capacity Icn according to EN 60898 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Asted short-ci	Number of protected poles		3
Name	Rated current	Α	40
Rated impulse withstand voltage Uimp Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity I	Rated voltage	V	230
Asted short-circuit breaking capacity Icn according to EN 60898 at 230 V AC AC Act act as Another circuit breaking capacity Icn according to EN 60898 at 400 V AC Act act as Another circuit breaking capacity Icu according to IEC 60947-2 at 230 V AC Act act as Another circuit breaking capacity Icu according to IEC 60947-2 at 230 V ACT act as Another circuit breaking capacity Icu according to IEC 60947-2 at 230 V ACT act as Another circuit breaking capacity Icu according to IEC 60947-2 at 230 V AC CONCURRENT STATE S	Rated insulation voltage Ui	V	440
AC Rated short-circuit breaking capacity Icu according to EN 60898 at 400 V KA 6 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V KA 0 Rated short-circuit b	Rated impulse withstand voltage Uimp	kV	4
Rated short-circuit breaking capacity Icu according to EIC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 250 -60 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 250 -60 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 250 -60 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 250 -60 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 250 -60 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 250 -60 Rated short-circuit breaking capacity I	Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V	kA	6
Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V kA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V kA 0 Requency Hz 50 - 60 Current limiting class 3 Flush-mounted installation Yes Concurrently switching neutral conductor Yes Pollution degree 3 Additional equipment possible Yes Width in number of modular spacings 4 Degree of protection (IP) IP20 Ambient temperature during operating °C -25 - 75 Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25 Connectable conductor cross section solid-core in ma in the solution in the solutio	Voltage type		AC
Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Frequency Hz 50 - 60 Current limiting class 3 Flush-mounted installation Concurrently switching neutral conductor Ves Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Additional equipment during operating Pollution temperature during operating Connectable conductor cross section multi-wired Connectable conductor cross section solid-core RA Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section solid-core RA Degree of mm² 1 - 25 Connectable conductor cross section solid-core RA Degree of mm² 1 - 25	Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V	kA	6
Frequency Current limiting class Current limi	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V	kA	0
Current limiting class Current limiting class Concurrently switching neutral conductor Concurrently switching neutral conductor Ves 3 Additional equipment possible Ves Width in number of modular spacings Width in number of modular spacings Ves Ves Ves Ves Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V	kA	0
Flush-mounted installation Concurrently switching neutral conductor Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Additional equipment possible Width in number of modular spacings Ambient temperature during operating Connectable conductor cross section multi-wired Connectable conductor cross section solid-core Telush-mounted installation Yes Yes 3 4 IP20 IP20 Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Frequency	Hz	50 - 60
Concurrently switching neutral conductor Over voltage category 3 Pollution degree 3 Additional equipment possible Width in number of modular spacings Width in number of modular spacings IP20 Ambient temperature during operating "C -25 - 75 Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Current limiting class		3
Over voltage category 3 Pollution degree 3 Additional equipment possible Width in number of modular spacings Width in number of protection (IP) Ambient temperature during operating "C -25 - 75 Connectable conductor cross section multi-wired Connectable conductor cross section solid-core mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Flush-mounted installation		Yes
Pollution degree 3 3 Additional equipment possible Yes Width in number of modular spacings 4 4 Degree of protection (IP) IP20 Ambient temperature during operating °C -25 - 75 Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Concurrently switching neutral conductor		Yes
Additional equipment possible Width in number of modular spacings Ambient temperature during operating Connectable conductor cross section multi-wired Connectable conductor cross section solid-core Yes 4 1P20 Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Over voltage category		3
Width in number of modular spacings 4 Degree of protection (IP) Ambient temperature during operating °C -25 - 75 Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Pollution degree		3
Degree of protection (IP) Ambient temperature during operating °C -25 - 75 Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Additional equipment possible		Yes
Ambient temperature during operating °C -25 - 75 Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Width in number of modular spacings		4
Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Degree of protection (IP)		IP20
Connectable conductor cross section solid-core mm² 1 - 25	Ambient temperature during operating	°C	-25 - 75
	Connectable conductor cross section multi-wired	mm ²	1 - 25
Explosion-proof No	Connectable conductor cross section solid-core	mm ²	1 - 25
	Explosion-proof		No