## Miniature circuit breaker (MCB), 63 A, 2p, characteristic: C



Part no. HL-C63/2 Catalog No. 194777

	gram

Basic function			Miniature circuit-breakers
Number of poles			2 pole
Tripping characteristic			С
Application			Switchgear for residential and commercial applications
Rated current	In	Α	63
Rated switching capacity according to IEC/EN 60898-1	I <sub>cn</sub>	kA	4.5
Product range			HL

## Technical data

**Electrical** 

Rated switching capacity according to IEC/EN 60898-1 I<sub>cn</sub> kA 4.5

## Design verification as per IEC/EN 61439

Design verification as per IEG/EN 01439			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	63
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	11.5
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	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**

Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)

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

Release characteristic Number of poles (total) Number of protected poles Rated current Rated current Rated involtage Rated involtage Rated involtage Ui Rated involtage Ui Rated involtage Ui Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu accordin	(ecl@ss10.0.1-27-14-19-01 [AAB905014])		
Number of protected poles Rated current Rated voltage Rated voltage Rated voltage 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 EN 60898 at 400 V Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V Rated short-circuit breaking capacity Icn according to EN 60898 at 400 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 Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 30 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated s	Built-in depth	mm	44
Number of protected poles  Acted current Acted voltage Acted insulation voltage Ui Acted insulation voltage Uinp Acted insulation voltage Uinp Acted short-circuit breaking capacity Icn according to EN 60898 at 230 V Acted short-circuit breaking capacity Icn according to EN 60898 at 400 V Acted short-circuit breaking capacity Icn according to EN 60898 at 400 V Acted short-circuit breaking capacity Icn according to EN 60898 at 400 V Acted short-circuit breaking capacity Icn according to EN 60898 at 400 V Acted short-circuit breaking capacity Icn according to EN 60898 at 400 V Acted short-circuit breaking capacity Icn according to EN 60898 at 400 V Acted short-circuit breaking capacity Icn according to EN 60898 at 400 V Acted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Acted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Acted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Acted Short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V Acted Short-circuit breakin	Release characteristic		С
Asted dourset of the saking capacity Icn according to EN 60898 at 230 V	Number of poles (total)		2
Asted voltage  Asted insulation voltage Ui Asted insulation voltage Uimp  Asted short-circuit breaking capacity Icn according to EN 60898 at 230 V Voltage type  Acc Act Act Act Act Act Act Act Act Ac	Number of protected poles		2
Nate   1984	Rated current	Α	63
Asted impulse withstand voltage Ulimp  KV 4  Asted short-circuit breaking capacity Icn according to EN 60898 at 230 V  Active Asted short-circuit breaking capacity Icn according to EN 60898 at 400 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 400 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V  Active Asted short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V	Rated voltage	V	230
Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V  kA Ac Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V  kA Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V  kA Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V  kA Carrequency  kA 0  Current limiting class Current limiting class Currently switching neutral conductor  Concurrently switching neutral conductor  Cover voltage category  Collution degree  Additional equipment possible  Width in number of modular spacings  Coeffect of protection (IP)  Ambient temperature during operating  Concurrents with the merenture during operating  Concurrents wind  Concurr	Rated insulation voltage Ui	V	440
AC Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 230 V kA 4.5 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 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 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-circ	Rated impulse withstand voltage Uimp	kV	4
Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V	Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V	kA	4.5
Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V	Voltage type		AC
Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V  Frequency  Hz  50 - 60  Current limiting class  Flush-mounted installation  Concurrently switching neutral conductor  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Overgee of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  Midth in number of modular cross section solid-core  Midth in a mm²  1 - 25  Connectable conductor cross section solid-core  Midth in a mm²  1 - 25	Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V	kA	4.5
Frequency Current limiting class 3 Flush-mounted installation Concurrently switching neutral conductor  3 Connectable conductor cross section multi-wired Connectable conductor cross section solid-core  Hz 50 - 60  3 Connectable conductor cross section solid-core  Hz 50 - 60  3 Connectable conductor cross section solid-core  No  No  Yes  Yes  Yes  1  2  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 230 V	kA	0
Current limiting class Substitution Current limiting class Current limiting class Substitution	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  Pegree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  Connectable conductor cross section solid-core  Pegs Ambient temperature during operating  Connectable conductor cross section solid-core  Pegs Ambient temperature during operating  Connectable conductor cross section solid-core  Pegs Ambient temperature during operating  Connectable conductor cross section solid-core  Pegs Ambient temperature during operating  Connectable conductor cross section solid-core  Pegs Ambient temperature during operating  Connectable conductor cross section solid-core  Pegs Ambient temperature during operating  Peg	Frequency	Hz	50 - 60
Concurrently switching neutral conductor  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Pegree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section solid-core  No  No  No  3  2  Pegree  Yes  Peg  Peg  Peg  Peg  Peg  Peg  Peg  P	Current limiting class		3
Over voltage category  Solution degree  Additional equipment possible  Width in number of modular spacings  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  Connectable conductor cross section solid-core  3  Yes  2  1  1  1  1  1  1  1  1  1  1  1  1	Flush-mounted installation		Yes
Pollution degree 3 3 Additional equipment possible Yes Width in number of modular spacings 2 2 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		No
Additional equipment possible  Width in number of modular spacings  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  Connectable conductor cross section solid-core  Type  Yes  1  P20  1P20  1P20  1 - 25 - 75  1 - 25  1 - 25	Over voltage category		3
Width in number of modular spacings  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section solid-core  P20  2  P20  P20  P20  P25 - 75  P30  P30  P30  P40  P40  P40  P40  P40	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		2
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 areas section multi-wired	mm²	1 - 25
Explosion-proof No	Connectable conductor cross section multi-wired		
	Connectable conductor cross section multi-wired  Connectable conductor cross section solid-core	mm²	1 - 25