

## Miniature circuit breaker (MCB), 50 A, 3p+N, characteristic: C

**Part no.**                    **HL-C50/3N**  
**194816**

<b>General specifications</b>		
Product name		Eaton Moeller series xPole - HL/HL-HX MCB
Part no.		HL-C50/3N
EAN		9010238063006
Product Length/Depth		85 millimetre
Product height		73 millimetre
Product width		70 millimetre
Product weight		0.456 kilogram
Compliances		RoHS conform
Product Tradename		xPole - HL/HL-HX
Product Type		MCB
Product Sub Type		None
<b>Delivery program</b>		
Application		Switchgear for residential and commercial applications xPole Home - Switchgear for residential applications
Number of poles		Three-pole + N
Number of poles (total)		4
Number of poles (protected)		3
Tripping characteristic		C
Release characteristic		C
Amperage Rating		50 A
Type		HL Miniature circuit breaker
<b>Technical Data - Electrical</b>		
Voltage type		AC
Rated operational voltage (Ue) - max		230 V
Rated insulation voltage (Ui)		440 V
Rated impulse withstand voltage (Uimp)		4 kV
Frequency rating - min		50 Hz
Frequency rating - max		60 Hz
Rated switching capacity (IEC/EN 60898-1)		4.5 kA
Rated short-circuit breaking capacity (EN 60898) at 230 V		4.5 kA
Rated short-circuit breaking capacity (EN 60898) at 400 V		4.5 kA
Rated short-circuit breaking capacity (IEC 60947-2) at 230 V		0 kA
Rated short-circuit breaking capacity (IEC 60947-2) at 400 V		0 kA
Overvoltage category		III
Pollution degree		3
<b>Technical Data - Mechanical</b>		
Width in number of modular spacings		4
Built-in depth		44 mm
Degree of protection		IP20
Connectable conductor cross section (solid-core) - min		1 mm <sup>2</sup>
Connectable conductor cross section (solid-core) - max		25 mm <sup>2</sup>
Connectable conductor cross section (multi-wired) - min		1 mm <sup>2</sup>
Connectable conductor cross section (multi-wired) - max		25 mm <sup>2</sup>
<b>Design verification as per IEC/EN 61439 - technical data</b>		
Rated operational current for specified heat dissipation (In)		50 A
Heat dissipation per pole, current-dependent		0 W
Equipment heat dissipation, current-dependent		15.3 W

Static heat dissipation, non-current-dependent		0 W
Heat dissipation capacity		0 W
Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		75 °C
<b>Design verification as per IEC/EN 61439</b>		
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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.
10.9.2 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.
<b>Additional information</b>		
Current limiting class		3
Features		Additional equipment possible Concurrently switching N-neutral
Special features		Ambient temperature hint: a 1 °C increase results in a 0.5% linear reduction of current carrying capacity
Suitable for		Flush-mounted installation
Used with		Miniature circuit breaker HL

## 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) (ecl@ss10.0.1-27-14-19-01 [AAB905014])		
Built-in depth	mm	44
Release characteristic		C
Number of poles (total)		4
Number of protected poles		3
Rated current	A	50
Rated voltage	V	230
Rated insulation voltage $U_i$	V	440
Rated impulse withstand voltage $U_{imp}$	kV	4
Rated short-circuit breaking capacity $I_{cn}$ according to EN 60898 at 230 V	kA	4.5
Voltage type		AC
Rated short-circuit breaking capacity $I_{cn}$ according to EN 60898 at 400 V	kA	4.5
Rated short-circuit breaking capacity $I_{cu}$ according to IEC 60947-2 at 230 V	kA	0
Rated short-circuit breaking capacity $I_{cu}$ according to IEC 60947-2 at 400 V	kA	0
Frequency	Hz	50 - 60

Current limiting class			3
Flush-mounted installation			Yes
Concurrently switching neutral conductor			Yes
Over voltage category			3
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		mm <sup>2</sup>	1 - 25
Connectable conductor cross section solid-core		mm <sup>2</sup>	1 - 25
Explosion-proof			No