## **DATASHEET - EMBH104**



## Miniature circuit breaker (MCB), 4 A, 1p, characteristic: B



Part no. EMBH104 EMBH104

Product name	Eaton Moeller series xPole UK - EM.H MCB
Part no.	EMBH104
EAN	5019586121462
Product Length/Depth	85 millimetre
Product height	73 millimetre
Product width	17.5 millimetre
Product weight	0.166 kilogram
Compliances	RoHS conform
Product Tradename	xPole UK - EM.H
Product Type	MCB
Product Sub Type	None
Public Consumption	Yes
Product Family Description	ES-PMCC-PDC-Eaton Moeller series xPole UK - EM.H MCB
Globally Marketable	Yes

Globally Marketable	Yes
Ambient operating temperature - max	75 °C
Ambient operating temperature - min	-25 °C
Amperage Rating	4 A
Application	Switchgear for residential and commercial applications
Built-in depth	70.5 mm
Connectable conductor cross section (multi-wired) - max	25 mm <sup>2</sup>
Connectable conductor cross section (multi-wired) - min	1 mm <sup>2</sup>
Connectable conductor cross section (solid-core) - max	25 mm <sup>2</sup>
Connectable conductor cross section (solid-core) - min	1 mm <sup>2</sup>
Current limiting class	3
Degree of protection	IP20
Features	Additional equipment possible
Frequency rating - max	60 Hz
Frequency rating - min	50 Hz
Number of poles	Single-pole
Number of poles (protected)	1
Number of poles (total)	1
Overvoltage category	III
Pollution degree	2
Rated impulse withstand voltage (Uimp)	4 kV
Rated insulation voltage (Ui)	440 V
Rated operational voltage (Ue) - max	230 V
Rated short-circuit breaking capacity (EN 60898) at 230 V	10 kA
Rated short-circuit breaking capacity (EN 60898) at 400 V	10 kA
Rated short-circuit breaking capacity (IEC 60947-2) at 230 V	15 kA
Rated short-circuit breaking capacity (IEC 60947-2) at 400 V	15 kA
Rated switching capacity (IEC/EN 60898-1)	10 kA
Rated switching capacity (IEC/EN 60947-2)	15 kA
Release characteristic	В
Tripping characteristic	В
Туре	EM Miniature circuit breaker
Used with	EM Miniature circuit breaker

Voltage type	AC
Width in number of modular spacings	1

## **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)

Built-in depth         PMM         70.5           Release characteristic         8         8           Number of poles (total)         1         1           Number of protected poles         4         4           Rated current         A         4           Rated voltage         V         230           Rated insulation voltage Uin         kV         4           Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V         kA         10           Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V         kA         10           Rated short-circuit breaking capacity Icu according to EK 60898 at 400 V         kA         15           Rated short-circuit breaking capacity Icu according to EK 60897-2 at 230 V         kA         15           Rated short-circuit breaking capacity Icu according to EK 60847-2 at 230 V         kA         15           Rated short-circuit breaking capacity Icu according to EK 60847-2 at 230 V         kA         15           Requency         by         3         3           Current limiting class         by         No           Concurrently switching neutral conductor         No         No           Concurrently switching neutral conductor         pollution degree         y         4      <	(ecl@ss10.0.1-27-14-19-01 [AAB905014])		
Number of poles (total) Number of protected poles Rated current Rated voltage Rated voltage Rated insulation voltage Ui Rated insulation voltage Uip Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Voltage type 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 EN 608947-2 at 230 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 240 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 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 200 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icn according to IEC 60947-2 at 200 V Ra	Built-in depth	mm	70.5
Number of protected poles         1           Rated current         A         4           Rated voltage         V         230           Rated insulation voltage Uin         V         440           Rated inpulse withstand voltage Uimp         kV         4           Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V         kA         10           Voltage type         AC         AC           Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V         kA         15           Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V         kA         15           Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V         kA         15           Frequency         kA         15           Current limiting class         3         3           Flush-mounted installation         No         No           Concurrently switching neutral conductor         No         No           Over voltage category         2         2           Pollution degree         2         Yes           Width in number of modular spacings         1         Yes           Width in number of modular spacings         1         Polument of modular spacings         Polument of modular spacings	Release characteristic		В
Rated current Rated voltage Rated insulation voltage Ui Rated insulation voltage Uimp Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Voltage type Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V Rated short-circuit breaking capacity Icn according to EC 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 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 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	Number of poles (total)		1
Rated voltage V 230 Rated insulation voltage Ui Rated insulation voltage Uimp	Number of protected poles		1
Rated insulation voltage Ui Rated impulse withstand voltage Uimp Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Voltage type 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 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 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 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 R	Rated current	Α	4
Rated impulse withstand voltage Uimp Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V  Voltage type 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 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 200 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 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 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 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 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 according to IEC 60947-2 at 200 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 break	Rated voltage	V	230
Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V  Voltage type  Rated short-circuit breaking capacity Icn according to EN 60898 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 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 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 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 short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacit	Rated insulation voltage Ui	V	440
Voltage type       AC         Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V       kA       10         Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V       kA       15         Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V       kA       15         Frequency       Hz       50 - 60         Current limiting class       3       No         Flush-mounted installation       No       No         Concurrently switching neutral conductor       No       No         Over voltage category       3       2         Pollution degree       2       2         Additional equipment possible       Yes         Width in number of modular spacings       1         Degree of protection (IP)       IP20         Ambient temperature during operating       °C       -25 - 75	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 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 RA 15 Frequency Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15 Frequency Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15 Frequency RA 15 Frequency RA 15 Frequency RA 15 Frequency RA 10 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15 Frequency RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15	Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V	kA	10
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 RA  Frequency Hz 50 - 60  Current limiting class Flush-mounted installation No  Concurrently switching neutral conductor  Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings  Degree of protection (IP)  Ambient temperature during operating  kA 15  15  15  15  15  15  15  15  15  15	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 No Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Degree of protection (IP) Ambient temperature during operating  KA 15  It is in the process of the conductor of the c	Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V	kA	10
Frequency Current limiting class Flush-mounted installation Concurrently switching neutral conductor No Concurrently switching neutral conductor Over voltage category Pollution degree 2 Additional equipment possible Width in number of modular spacings Degree of protection (IP) Ambient temperature during operating  Hz 50 - 60  No No  No  No  No  1 PO  2 PO  4 PO  4 PO  4 PO  6 PO  6 PO  7 PO  6 PO  7 PO  7 PO  8	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V	kA	15
Current limiting class  Flush-mounted installation  Concurrently switching neutral conductor  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Degree of protection (IP)  Ambient temperature during operating  3  No  No  No  Yes  1  IP20  Arbient temperature during operating	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V $$	kA	15
Flush-mounted installation  Concurrently switching neutral conductor  No  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Pegree of protection (IP)  Ambient temperature during operating  No  No  No  2  4  Pollution degree  Pes  Yes  Yes  I P20  Arbient temperature during operating	Frequency	Hz	50 - 60
Concurrently switching neutral conductor  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Degree of protection (IP)  Ambient temperature during operating  No  2  1  Pes  Pes  Yes  IP20  Arbient temperature during operating  C -25 - 75	Current limiting class		3
Over voltage category  3 Pollution degree 2 Additional equipment possible Width in number of modular spacings 1 Degree of protection (IP) Ambient temperature during operating 3 Yes Yes Ves 1 LP20 -25 - 75	Flush-mounted installation		No
Pollution degree 2 Additional equipment possible Yes Width in number of modular spacings 1 Degree of protection (IP) IP20 Ambient temperature during operating °C -25 - 75	Concurrently switching neutral conductor		No
Additional equipment possible  Width in number of modular spacings  Degree of protection (IP)  Ambient temperature during operating  Yes  1  IP20  Arbient temperature during operating  °C -25 - 75	Over voltage category		3
Width in number of modular spacings 1  Degree of protection (IP) IP20  Ambient temperature during operating °C -25 - 75	Pollution degree		2
Degree of protection (IP)  Ambient temperature during operating  °C  -25 - 75	Additional equipment possible		Yes
Ambient temperature during operating °C -25 - 75	Width in number of modular spacings		1
1 1 1	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 multi-wired	mm <sup>2</sup>	n <sup>2</sup> 1 - 25
Connectable conductor cross section solid-core mm <sup>2</sup> 1 - 25	Connectable conductor cross section solid-core	mm <sup>2</sup>	n <sup>2</sup> 1 - 25
Explosion-proof No	Explosion-proof		No