## **DATASHEET - PLSM-B12/2-MW**



## Miniature circuit breaker (MCB), 12A, 2 p, type B characteristic

Powering Business Worldwide\*

Part no. PLSM-B12/2-MW Catalog No. 242376

## **Delivery program**

Basic function			Miniature circuit-breakers
Number of poles			2 pole
Tripping characteristic			В
Application			Switchgear for residential and commercial applications
Rated current	In	Α	12
Rated switching capacity according to IEC/EN 60898-1	I <sub>cn</sub>	kA	10
Product range			PLSM

# Technical data

**Electrical** 

Rated switching capacity according to IEC/EN 60898-1	I <sub>cn</sub>	kA	10
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## **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	$I_n$	Α	12
Heat dissipation per pole, current-dependent	$P_{vid}$	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	5.9
Static heat dissipation, non-current-dependent	$P_{vs}$	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 7.0**

Circuit breakers and tuses (EG000020) / Milniature Circuit breaker (MCB) (EC000042)	

Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ep.(@ss10.01-27-14-19-01 [AAR005014])

	(ecl@ss10.0.1-27-14-19-01 [AAB905014])		
Auther of protected poles  Rated current Rated current Rated voltage Rated insulation voltage Ui Rated insulation voltage Uimp Rated short-circuit breaking capacity Icn EN 60898 at 230 V Rated short-circuit breaking capacity Icn EN 60898 at 400 V Rated short-circuit breaking capacity Icn EN 60898 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V Rated short-circuit breaking capacity	Release characteristic		В
Asted doursent Asted current Asted orbitage Uring Asted insulation voltage Uring Asted insulation voltage Uring Asted insulation voltage Uring Asted insulation voltage Uring Asted short-circuit breaking capacity Ion EN 60998 at 230 V KA 10  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 10  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 10  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60997-2 at 230 V KA 0  Asted short-circuit breaking capacity Ion EN 60997-2 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60997-2 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60997-2 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60997-2 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60997-2 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted short-circuit breaking capacity Ion EN 60998 at 400 V KA 0  Asted sho	Number of poles (total)		2
Asted voltage  Asted insulation voltage Uim Asted insulation voltage Uimp Asted short-circuit breaking capacity Icn EN 60898 at 230 V Asted short-circuit breaking capacity Icn EN 60898 at 400 V Asted short-circuit breaking capacity Icn EN 60898 at 400 V Asted short-circuit breaking capacity Icn EC 60947-2 at 230 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking	Number of protected poles		2
No.	Rated current	Α	12
Asted impulse withstand voltage Ulimp  Asted short-circuit breaking capacity Icn EN 60898 at 230 V  Asted short-circuit breaking capacity Icn EN 60898 at 400 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 230 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 230 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 230 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Asted short-circuit breaking capacity Icn IEC 60947-2 at 200 V  Actual Capacity In Inch Inch Inch Inch Inch Inch Inch I	Rated voltage	V	400
Asted short-circuit breaking capacity Icn EN 60898 at 230 V Asted short-circuit breaking capacity Icn EN 60898 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capacit	Rated insulation voltage Ui	V	440
Rated short-circuit breaking capacity Icn EN 60898 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 240 V Rated short-circuit breaking capa	Rated impulse withstand voltage Uimp	kV	4
Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V	Rated short-circuit breaking capacity Icn EN 60898 at 230 V	kA	10
Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V  AC  Frequency  Current limiting class Suitable for flush-mounted installation Concurrently switching N-neutral  Over voltage category  Collidion degree Additional equipment possible  Width in number of modular spacings  Built-in depth  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  KA   0  AC  AC  AC  AC  AC  B.  AC  B.  AC  AC  AC  AC  AC  AC  AC  AC  AC  A	Rated short-circuit breaking capacity Icn EN 60898 at 400 V	kA	10
ACC Frequency Hz 50 - 60 Current limiting class Suitable for flush-mounted installation Concurrently switching N-neutral Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Built-in depth Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired  ACC Social So	Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V	kA	0
Frequency Current limiting class Suitable for flush-mounted installation Concurrently switching N-neutral Over voltage category Sullition degree Additional equipment possible Width in number of modular spacings Suiti-in depth Overgee of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired  Hz 50 - 60  No  No  No  No  Yes  2  Yes  2  1  1  1  1  1  1  1  1  1  1  1  1	Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V	kA	0
Current limiting class  Suitable for flush-mounted installation  Concurrently switching N-neutral  Over voltage category  Collution degree  Additional equipment possible  Width in number of modular spacings  Suilt-in depth  Oegree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  3  No  No  No  No  Salta Category  4  5  7  8  9  9  9  9  9  9  9  9  9  9  9  9	Voltage type		AC
Suitable for flush-mounted installation  Concurrently switching N-neutral  Over voltage category  Collution degree  Additional equipment possible  Width in number of modular spacings  Built-in depth  Connectable conductor cross section multi-wired  No  No  No  No  No  No  No  No  No  N	Frequency	Hz	50 - 60
Concurrently switching N-neutral  Over voltage category  Collution degree  Collution	Current limiting class		3
Over voltage category  Over voltage category  Output on degree  Additional equipment possible  Ves  Width in number of modular spacings  Suilt-in depth  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  Mark of the section of t	Suitable for flush-mounted installation		No
Pollution degree 2 Additional equipment possible Yes Width in number of modular spacings 2 Built-in depth mm 70.5 Degree of protection (IP) IP20 Ambient temperature during operating °C -25 - 55 Connectable conductor cross section multi-wired mm² 1 - 25	Concurrently switching N-neutral		No
Additional equipment possible  Width in number of modular spacings  Built-in depth  Degree of protection (IP)  Ambient temperature during operating  "C"  Connectable conductor cross section multi-wired  Wes  2  IP20  The protection (IP)  "C"  The protection (IP)  The protection (IP	Over voltage category		3
Width in number of modular spacings  Built-in depth  mm 70.5  Degree of protection (IP)  Ambient temperature during operating  °C -25 - 55  Connectable conductor cross section multi-wired  mm² 1 - 25	Pollution degree		2
Built-in depth mm 70.5 Degree of protection (IP) IP20 Ambient temperature during operating °C -25 - 55 Connectable conductor cross section multi-wired mm² 1 - 25	Additional equipment possible		Yes
Degree of protection (IP)  Ambient temperature during operating  °C -25 - 55  Connectable conductor cross section multi-wired  mm² 1 - 25	Width in number of modular spacings		2
Ambient temperature during operating  °C -25 - 55  Connectable conductor cross section multi-wired  mm² 1 - 25	Built-in depth	mm	70.5
Connectable conductor cross section multi-wired mm <sup>2</sup> 1 - 25	Degree of protection (IP)		IP20
	Ambient temperature during operating	°C	-25 - 55
Connectable conductor cross section solid-core mm <sup>2</sup> 1 - 25	Connectable conductor cross section multi-wired	mm²	1 - 25
	Connectable conductor cross section solid-core	mm <sup>2</sup>	1 - 25