## **DATASHEET - PLSM-B13-Q-MW**



Miniature circuit breaker (MCB), 13 A, 1p, characteristic: B

Part no. PLSM-B13-Q-MW Catalog No. 266035



Similar to illustration

**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	13
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	2.5
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) (ecl@ss10.0.1-27-14-19-01 [AAB905014])

Release characteristic B

Number of protected poles         1           Rated current         A         13           Rated voltage         V         230           Rated insulation voltage Ui         V         440           Rated impulse withstand voltage Uimp         kV         4           Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V         kA         10           Rated short-circuit breaking capacity Icu according to EN 60898 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 400 V         kA         0           Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V         kA         0           Voltage type         AC         AC           Frequency         B         50 - 60           Concurrently switching neutral conductor         No         No           Over voltage category         3         3           Pollution degree         2         2           Additional equipment possible         Yes           Width in number of modular spacings         Image: Contract of the possible of the possibl			
Rated current Rated voltage V 230 Rated insulation voltage Ui Rated insulation voltage Uiip Rated impulse withstand voltage Uiinp 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 Icu according to IEC 60947-2 at 400 V Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Voltage type Return I will breaking capacity Icu according to IEC 60947-2 at 400 V Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA  0 Current limiting class Concurrently switching neutral conductor Over voltage category Rollidon degree 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  Current limiting class Concurrently switching neutral conductor Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA  0 Current limiting class Concurrently switching neutral conductor Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA  0 Current limiting class Concurrently switching neutral conductor Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA  0 Current limiting class Concurrently switching neutral conductor Voltage type Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA  0 Cur	Number of poles (total)		1
Rated voltage         V         230           Rated insulation voltage Ui         V         440           Rated insulation voltage Uimp         kV         4           Rated short-circuit breaking capacity Icn according to EN 60998 at 230 V         kA         10           Rated short-circuit breaking capacity Icn according to EN 60998 at 400 V         kA         10           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           Voltage type         AC         AC           Frequency         Hz         50 - 60           Current limiting class         3         3           Concurrently switching neutral conductor         No         No           Over voltage category         2         3           Pollution degree         2         2           Additional equipment possible         Yes           Width in number of modular spacings         1           Built-in depth         mm         70.5           Degree of protection (IP)         IP20           Ambient temperature during operating         °C         -25 - 75           Connectable conductor cross section multi-wired         mm²<	Number of protected poles		1
Rated insulation voltage Uin Rated impulse withstand voltage Uinp 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 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 Voltage type Requency	Rated current	Α	13
Rated impulse withstand voltage Uimp Rated impulse withstand voltage Uimp Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Rated short-circuit breaking capacity Icu 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 Voltage type Rrequency Rrequency Rrequency Ruterol limiting class Concurrently switching neutral conductor  Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Ruilt-in degth Ruilt-in degth Ruterol Impulse Ruterol ICP Ruterol	Rated voltage	V	230
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 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 400 V KA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V KA 0 Voltage type AC Frequency Hz 50 - 60 Current limiting class Concurrently switching neutral conductor No Over voltage category 3 Pollution degree 2 Additional equipment possible Yes Width in number of modular spacings 1 Built-in depth mm 70.5 Degree of protection (IP) IP20 Ambient temperature during operating Conductor mm 2 Connectable conductor cross section multi-wired mm 2 Connectable conductor cross section mm 2 Conne	Rated insulation voltage Ui	V	440
Rated short-circuit breaking capacity Icn according to EK 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 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 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 2	Rated impulse withstand voltage Uimp	kV	4
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 RAC Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RAC Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RAC Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RAC Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RAC RAC RAC RAC RAC ROC ROC ROC ROC ROC ROC ROC ROC ROC RO	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 400 V  Voltage type  AC  Frequency  Hz  50 - 60  Current limiting class  Concurrently switching neutral conductor  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  kA  0  AC  AC  AC  AC  AC  AC  AC  AC  AC	Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V $$	kA	10
Voltage type  Frequency  Lurent limiting class  Concurrently switching neutral conductor  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Built-in depth  mm  70.5  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  AC  AC  AC  AC  PA  50 - 60  No  No  2  4  No  4  5  4  7  7  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  7  8  8	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V	kA	0
Frequency  Current limiting class  Concurrently switching neutral conductor  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Width in number of modular spacings  Built-in depth  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  Hz  50 - 60  No  No  No  1  2  4  7  7  8  1  1  1  1  1  1  1  1  1  1  1  1	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V	kA	0
Current limiting class Concurrently switching neutral conductor Over voltage category Pollution degree 2 Additional equipment possible Width in number of modular spacings Built-in depth Built-in depth Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired  3  No  2  4  7  8  9  1  1  1  1  1  1  1  1  1  1  1  1	Voltage type		AC
Concurrently switching neutral conductor  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  No  No  No  1  POL  POS  POS  POS  POS  POS  POS  POS	Frequency	Hz	50 - 60
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  "C"  Connectable conductor cross section multi-wired  "S"  3  Yes  Yes  1  1  1  1  1  1  1  1  1  1  1  1  1	Current limiting class		3
Pollution degree 2 Additional equipment possible Yes Width in number of modular spacings 1 Built-in depth mm 70.5 Degree of protection (IP) IP20 Ambient temperature during operating °C -25 -75 Connectable conductor cross section multi-wired mm² 1 - 25	Concurrently switching neutral conductor		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  Yes  1  1  1  1  1  1  1  1  1  1  1  1  1	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 - 75  Connectable conductor cross section multi-wired  1  mm²  1 - 25	Pollution degree		2
Built-in depth mm 70.5  Degree of protection (IP) IP20  Ambient temperature during operating °C -25 - 75  Connectable conductor cross section multi-wired mm² 1 - 25	Additional equipment possible		Yes
Degree of protection (IP)  Ambient temperature during operating  °C  -25 - 75  Connectable conductor cross section multi-wired  mm²  1 - 25	Width in number of modular spacings		1
Ambient temperature during operating °C -25 - 75  Connectable conductor cross section multi-wired mm² 1 - 25	Built-in depth	mm	70.5
Connectable conductor cross section multi-wired mm² 1 - 25	Degree of protection (IP)		IP20
	Ambient temperature during operating	°C	-25 - 75
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	mm²	1 - 25