# **DATASHEET - PLS6-B50/4-MW**



## Miniature circuit breaker (MCB), 50A, 4p, type B characteristic

Powering Business Worldwide\*

Part no. PLS6-B50/4-MW Catalog No. 243066

Dρ	livery	/ nro	gram
-	,	Pio	gram

1 p - 3			
Basic function			Miniature circuit-breakers
Number of poles			4 pole
Tripping characteristic			В
Application			Switchgear for residential and commercial applications
Rated current	In	Α	50
Rated switching capacity according to IEC/EN 60898-1	I <sub>cn</sub>	kA	6
Product range			PLS6

# **Technical data**

**Electrical** 

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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	In	Α	50
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	18
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 7.0**

Circuit breakers and fuses (EG000020) / Minia	***** - : *** - * : *   *** -   ** / MCD / / C000040 /

Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (pc)(@cs10.01-177-14-19-01 [AAR905014])

Aumber of poles (total) Aumber of protected poles Author of mush-record poles Author of modular spacings Author of protection (IP) Author of modular spacing Author of protection (IP) Author of modular cross section multi-wired Author of mush-record poles Author of mush-record poles Author of mush-record poles Author of modular spacings Author of protection (IP) Author of modular cross section multi-wired Author of mush-record poles Author of modular spacings Author of modular spa	(ecl@ss10.0.1-27-14-19-01 [AAB905014])	evice / iviiiilature ciii	cuit breaker system (Wood) miniature circuit breaker (Wood)
Author of protected poles  A	Release characteristic		В
As to deter de urient de la de de violage Uiro de la deter di insulation voltage Uiro de la deter short-circuit breaking capacity Icu EC 60987-2 at 230 V kA 6 constated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 0 constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 0 Constated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 0 Constated short-circuit breaki	Number of poles (total)		4
Asted voltage  Asted insulation voltage Uim  Asted impulse withstand 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 Icu IEC 60947-2 at 230 V  Asted short-circuit breaking capacity Icu IEC 60947-2 at 400 V  Acted short-circuit breaking capacity Icu IEC 60947-2 at 400 V  Acted short-circuit breaking capacity Icu IEC 60947-2 at 400 V  Acted short-circuit breaking capacity Icu IEC 609	Number of protected poles		4
No.	Rated current	Α	50
Asted impulse withstand voltage Ulimp  kV 4  Asted short-circuit breaking capacity Icn EN 60898 at 230 V kA 6  Asted short-circuit breaking capacity Icn EN 60898 at 400 V kA 0  Asted short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Asted short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Asted short-circuit breaking capacity Icn IEC 60947-2 at 2400 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 400 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 400 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 400 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 400 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 400 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 230 V kA 0  Accordance of the short-circuit breaking capacity Icn IEC 60947-2 at 200 V kA 0  Accordance of the short-circuit breaking	Rated voltage	V	400
Asted short-circuit breaking capacity Icn EN 60898 at 230 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 230 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 230 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 230 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 ICC 60947-2 at 200 V Asted short-circuit breaking capacity Icu IEC 60947-2 at 200 V Asted short-circuit breaking capa	Rated insulation voltage Ui	V	440
Rated short-circuit breaking capacity Icn EN 60898 at 400 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V KA 0 Rated sho	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	6
Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V  foltage type  forequency  AC  forequency  Builtable for flush-mounted installation  foncurrently switching N-neutral  Forequency  Follution degree  Follution degree  Foldition and equipment possible  Foldition and equipment possible  Foldition degree  Foldition degree  Foldition degree  Foldition degree  Foldition and equipment possible  Forequency  Foldition and equipment possible  Forequency	Rated short-circuit breaking capacity Icn EN 60898 at 400 V	kA	6
AC requency Hz 50 - 60 current limiting class cutable for flush-mounted installation concurrently switching N-neutral concurrently s	Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V	kA	0
Frequency Freque	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 Over voltage c	Voltage type		AC
Suitable for flush-mounted installation  Concurrently switching N-neutral  Over voltage category  Collution degree  Additional equipment possible  Ves  Vidth in number of modular spacings  Vidth in depth  Over equipment possible  White in depth  Over equipment possible  Ves  Additional eq	Frequency	Hz	50 - 60
Concurrently switching N-neutral Over voltage category 3 Pollution degree 2 Additional equipment possible Width in number of modular spacings Width in number of modular spacings Midth-in depth Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired  Wes  Yes  4  Mr 70.5  IP20  Ambient temperature during operating C C C C C C C C C C C C C C C C C C C	Current limiting class		3
Over voltage category  Over voltage category  Output on degree  Additional equipment possible  Ves  Vidth in number of modular spacings  Additional equipment possible  In the possible of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  In the possible of protection (IP)  In the possible of protecti	Suitable for flush-mounted installation		No
Pollution degree 2 Additional equipment possible Yes Width in number of modular spacings 4 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		Yes
Additional equipment possible  Vidth 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	Over voltage category		3
Vidth in number of modular spacings  Built-in depth  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  4  IP20  IP20  IP20  IP30  IP30	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		4
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 mm² 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	mm <sup>2</sup>	1 - 25
	Connectable conductor cross section solid-core	mm <sup>2</sup>	1 - 25