# **DATASHEET - PLS6-D3,5/3N-MW**



# Miniature circuit breaker (MCB), 3,5A, 3pole+N, type D characteristic

Powering Business Worldwide\*

Part no. PLS6-D3,5/3N-MW Catalog No. 243032

Similar to illustration

Delivery program				
Basic function			Miniature circuit-breakers	
Number of poles			3 pole+N	
Tripping characteristic			D	
Application			Switchgear for residential and commercial applications	
Rated current	In	Α	3.5	
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

Jesign verification as per IEC/EN 61439  Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	Α	3.5
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	4
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
C/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 wi 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**

Electric angineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker (MCB) / Miniature circuit breaker (MCB) (ecl@ss.10.1-27-14-19-01 (AAB905014))   Release characteristic	Technical data ETTIVI 7.0					
Release characteristic	Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)					
Number of poles (total)         4           Number of protected poles         3           Rated current         A         3.5           Rated voltage         V         400           Rated singulation voltage Ui         V         440           Rated singulation voltage Uimp         kV         4           Rated short-circuit breaking capacity Icn EN 60888 at 230 V         kA         6           Rated short-circuit breaking capacity Icu IEC 608947-2 at 230 V         kA         6           Rated short-circuit breaking capacity Icu IEC 80947-2 at 230 V         kA         0           Rated short-circuit breaking capacity Icu IEC 80947-2 at 230 V         kA         0           Rated short-circuit breaking capacity Icu IEC 80947-2 at 230 V         kA         0           Voltage type         BL         0         0           Frequency         BL         0         0           Current Imiting class         3         0           Suitable for flush-mounted installation         No         0           Concurrently switching N-neutral         Yes         2           Over voltage category         Yes         2           Pollution degree         Yes         4           Width in number of modular spacings         Yes	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])					
Number of protected poles Rated current Rated current Rated voltage Rated insulation voltage Ui Rated insulation voltage Uinp Rated insulation voltage Uinp 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 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 400 V Rottage type Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 400 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rottage type Rotted short-circuit breaking	Release characteristic		D			
Rated current         A         3.5           Rated voltage         V         400           Rated insulation voltage Ui         V         440           Rated impulse withstand voltage Uimp         kV         4           Rated short-circuit breaking capacity Icn EN 60898 at 230 V         kA         6           Rated short-circuit breaking capacity Icu EIC 60947-2 at 230 V         kA         6           Rated short-circuit breaking capacity Icu EIC 60947-2 at 230 V         kA         0           Rated short-circuit breaking capacity Icu EIC 60947-2 at 400 V         kA         0           Voltage type         AC         AC           Frequency         Hz         50 - 60           Current limiting class         3         3           Suitable for flush-mounted installation         Yes         3           Concurrently switching N-neutral         Yes         2           Over voltage category         3         3           Pollution degree         Yes         2           Additional equipment possible         Yes           Width in number of modular spacings         mm         70.5           Built-in depth         mm         70.5           Degree of protection (IP)         mm         70.5	Number of poles (total)		4			
Rated voltage         V         400           Rated insulation voltage Ui         V         440           Rated inpulse withstand voltage Uimp         kV         4           Rated short-circuit breaking capacity Icn EN 60898 at 230 V         kA         6           Rated short-circuit breaking capacity Icn EN 60898 at 400 V         kA         6           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           Voltage type         AC         AC           Frequency         Hz         50 - 60           Current limiting class         3         3           Suitable for flush-mounted installation         Yes           Concurrently switching N-neutral         Yes           Over voltage category         3         3           Pollution degree         2         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-wire	Number of protected poles		3			
Rated insulation voltage Ui         V         440           Rated impulse withstand voltage Uimp         kV         4           Rated short-circuit breaking capacity Icn EN 60989 at 230 V         kA         6           Rated short-circuit breaking capacity Icn EN 60989 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           Voltage type         AC         AC           Frequency         Hz         50 - 60           Current limiting class         Suitable for flush-mounted installation         No           Concurrently switching N-neutral         Yes           Over voltage category         3           Pollution degree         2           Additional equipment possible         Yes           Width in number of modular spacings         4           Built-in depth         Pollution depth           Degree of protection (IP)         IP20           Ambient temperature during operating         °C         25 - 55           Connectable conductor cross section multi-wired         mm²         1-25	Rated current	Α	3.5			
Rated impulse withstand 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 Icn IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn IEC 60947-2 at 400 V Voltage type 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 Built-in depth Built-in depth Concurrenting operating Concurrent during operating Concurrent du	Rated voltage	V	400			
Rated short-circuit breaking capacity Icn EN 60898 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 400 V Voltage type Rrequency Rufe of Insh-mounted installation Concurrently switching N-neutral Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Built-in degth Built-in degth Built-in degth Connectable conductor cross section multi-wired  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 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 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 Icu IEC 60947-2 at 200 V Rated Short-circuit breaking capacity Icu ICC 60947-2 at 200 V Rated Short-circuit breaking capacity Icu ICC 60947-2 at 200 V Rated Short-circuit breaking capacity Icu ICC 60947-2 at 200 V Rated Short-circuit breaking capacity Icu ICC 60947-2 at 20	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 Voltage type AC Frequency BZ Current limiting class 3 Suitable for flush-mounted installation No Concurrently switching N-neutral Ves Over voltage category 3 Pollution degree 2 Additional equipment possible Yes Width in number of modular spacings Width in number of modular spacings Frequency Mahient temperature during operating Parallel Mahient Parallel Mahient temperature during operating Parallel Mahient Paral	Rated impulse withstand voltage Uimp	kV	4			
Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Voltage type Received	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  Voltage type  AC  Frequency  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  kA  0  AC  AC  AC  AC  AC  AC  PE  90  90  90  90  90  90  90  90  90  9	Rated short-circuit breaking capacity Icn EN 60898 at 400 V	kA	6			
Voltage type  Frequency  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  AC  AC  AC  AC  AC  AC  PA  SO - 60  No  Yes  3  2  4  Yes  4  4  1-25  1-2	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 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  Hz 50 - 60  No  No  Yes  Yes  2  4  Pollution degree 4  Pos  Tos  Pos  Pos  Pos  Pos  Pos  Pos	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 category 3 Pollution degree 2 Additional equipment possible Width in number of modular spacings Width in number of modular spacings Built-in depth mm 70.5 Degree of protection (IP) Ambient temperature during operating CC -25 - 55 Connectable conductor cross section multi-wired  3  And And And And And And And And And An	Voltage type		AC			
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  mm  70.5  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  No  No  No  No  1  Pes  3  4  Pollution degree  4  Pollution degree  1  Pollution degree  Pollution degree  1  Pollution degree  Pollution degree  Pollution degree  1  Pollution degree	Frequency	Hz	50 - 60			
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  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Y	Current limiting class		3			
Over voltage category  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Wighth in depth  Degree of protection (IP)  Ambient temperature during operating  "C"  -25 - 55  Connectable conductor cross section multi-wired  "B"  3  Yes  4  Pol.5  IP20  -25 - 55  Connectable conductor cross section multi-wired  "mm"  1 - 25	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  Width in number of modular spacings  Built-in depth  Degree of protection (IP)  Ambient temperature during operating  "C"  -25 - 55  Connectable conductor cross section multi-wired  Wes  4  1-25	Over voltage category		3			
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	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	mm²	1 - 25			
	Connectable conductor cross section solid-core	mm²	1 - 25			