DATASHEET - PBHT-80/4/003



Residual-current circuit breaker trip block for PLHT, 80A, 4p, 30mA, type



Part no. PBHT-80/4/003 Catalog No. 248826

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Basic function			Add-on residual current protection unit
Number of poles			2 pole
Application			For commercial and industry applications
Rated current	In	Α	80
Rated short-circuit strength	I _{cn}	kA	same as connected PLHT
Rated fault current	$I_{\Delta N}$	Α	0.03
Туре			Type AC
Tripping		s	non-delayed
Product range			РВНТ
Sensitivity			AC current sensitive
Impulse withstand current			Partly surge-proof 250 A

Technical data

Electrical

Climatic proofing

Rated frequency	f	Hz	50
Sensitivity			AC current sensitive
Rated current	In	Α	80
Rated impulse withstand voltage	U_{imp}	kV	4
lifespan			
Electrical	Operations		≧ 1500
Mechanical	Operations		≧ 10000
Mechanical			
Standard front dimension		mm	45
Device height		mm	90
Built-in width		mm	95 (5.5TE)
Mounting			screwed onto PLHT
Degree of Protection			IP40, IP54 (with moisture-proof enclosure)
Terminals top and bottom			Lift terminals
Terminal protection			DGUV VS3, EN 50274
Permissible storage and transport temperatures		°C	-35 - +60

 $25\text{-}55^{\circ}\text{C}/90\text{-}95\%$ relative humidity according to IEC 60068-2

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	80
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	7
Static heat dissipation, non-current-dependent	P_{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	40
			Starting at 40 °C, the max. permissible continuous current decreases by 3% for every 1 °C
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) / Residual current circuit breaker (RCCB) (EC000003)

Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / Residual current circuit breaker (RCCB) (ecl@ss10.0.1-27-14-22-01 [AAB906014])

Number of poles 4 Rated voltage V 400 Rated current A 80 Rated fault current mA 30 Rated insulation voltage Ui V 440 Rated impulse withstand voltage Uimp kV 4 Mounting method IDIN rail IDIN rail Leakage current type AC Selective protection Short-time delayed tripping No No Short-circuit breaking capacity (lcw) kA 0 Surge current capacity kA 0.25 Frequency 50 Hz Additional equipment possible Yes With interlocking device Yes Degree of protection (IP) IP20 Width in number of modular spacings 5.5 Bull-in depth mm 70			
Rated current A 30 Rated fault current MA 30 Rated insulation voltage Ui V 440 Rated impulse withstand voltage Uimp KV 4 Mounting method DIN rail Leakage current type AC Selective protection No Short-time delayed tripping No Short-circuit breaking capacity (Icw) KA 0 Surge current capacity Frequency NA 0.25 Frequency So Hz Additional equipment possible Yes With interlocking device Protection (IP) Width in number of modular spacings	Number of poles		4
Rated fault current Rated insulation voltage Ui Rated impulse withstand voltage Uimp Mounting method Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible With interlocking device With innumber of modular spacings MA 30 440 440 AC DIN rail AC No No So So Frequency No No So So Frequency Additional equipment possible With innumber of modular spacings Test T	Rated voltage	V	400
Rated insulation voltage Ui Rated impulse withstand voltage Uimp kV 4 Mounting method Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings	Rated current	А	80
Rated impulse withstand voltage Uimp Mounting method Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings kV 4 DIN rail AC C No No No Surge No Surge No Surge No Surge Yes Frequency Frequency Additional equipment possible Ves Frequency Fres F	Rated fault current	mA	30
Mounting method Leakage current type AC Selective protection No Short-time delayed tripping No Short-circuit breaking capacity (Icw) KA 0 Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings DIN rail AC AC No No No No Short-circuit breaking capacity (Icw) KA 0 25 Frequency Fr	Rated insulation voltage Ui	V	440
Leakage current type Selective protection No Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings AC No No No No KA 0 50 KA 0 50 Frequency KA 0.25 Yes 1P20 Frequency Yes 1P20	Rated impulse withstand voltage Uimp	kV	4
Selective protection Short-time delayed tripping No Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings No No No No No No No No No N	Mounting method		DIN rail
Short-time delayed tripping Short-circuit breaking capacity (Icw) Surge current capacity KA 0.25 Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings No No No No EA O EA	Leakage current type		AC
Short-circuit breaking capacity (Icw) Surge current capacity kA 0.25 Frequency 50 Hz Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings	Selective protection		No
Surge current capacity kA 0.25 Frequency 50 Hz Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings kA 0.25 Yes 1 P20 5.5	Short-time delayed tripping		No
Frequency 50 Hz Additional equipment possible Yes With interlocking device Yes Degree of protection (IP) IP20 Width in number of modular spacings 5.5	Short-circuit breaking capacity (Icw)	kA	0
Additional equipment possible With interlocking device Pegree of protection (IP) Width in number of modular spacings Yes Yes IP20 S.5	Surge current capacity	kA	0.25
With interlocking device Yes Degree of protection (IP) IP20 Width in number of modular spacings 5.5	Frequency		50 Hz
Degree of protection (IP) Width in number of modular spacings 5.5	Additional equipment possible		Yes
Width in number of modular spacings 5.5	With interlocking device		Yes
	Degree of protection (IP)		IP20
Built-in depth mm 70	Width in number of modular spacings		5.5
	Built-in depth	mm	70
Ambient temperature during operating °C -25 - 40	Ambient temperature during operating	°C	-25 - 40
Pollution degree 2	Pollution degree		2
Connectable conductor cross section multi-wired mm ² 2.5 - 50	Connectable conductor cross section multi-wired	mm²	2.5 - 50
Connectable conductor cross section solid-core mm ² 2.5 - 50	Connectable conductor cross section solid-core	mm²	2.5 - 50