



**RCD/RCB combination switch, 20A, 30mA, miniature circuit-br. type C trip characteristic, 1-phase+N, residual current circuit-br. trip characteristic: AC**



**Part no. PKNM-20/1N/C/003-MW**  
**Catalog No. 236245**

### Delivery program

Basic function			Combined RCD/RCB devices
Number of poles			1 pole+N
Tripping characteristic			C
Application			Switchgear for residential and commercial applications
Rated current	$I_n$	A	20
Rated switching capacity according to IEC/EN 61009		kA	10
Rated fault current	$I_{\Delta N}$	A	0.03
Type			Type AC
Tripping		s...	non-delayed
Product range			PKNM
Sensitivity			AC current sensitive
Impulse withstand current			Partly surge-proof 250 A

### Technical data

#### Electrical

Sensitivity			AC current sensitive
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### Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	20
Heat dissipation per pole, current-dependent	$P_{vid}$	W	0
Equipment heat dissipation, current-dependent	$P_{vid}$	W	5.4
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
			0
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
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) / Earth leakage circuit breaker (EC000905)			
Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / MCB/RCCB combination (ecl@ss10.0.1-27-14-22-07 [AFZ810015])			
Number of poles (total)			2
Number of protected poles			1
Rated voltage	V		230
Rated insulation voltage $U_i$	V		440
Rated impulse withstand voltage $U_{imp}$	kV		4
Rated current	A		20
Rated fault current	A		0.03
Leakage current type			AC
Current limiting class			3
Rated short-circuit breaking capacity acc. EN 61009	kA		10
Rated short-circuit breaking capacity IEC 60947-2	kA		0
Rated short-circuit breaking capacity $I_{cn}$ acc. EN 61009-1	kA		10
Disconnection characteristic			
Surge current capacity	kA		0.25
Voltage type			AC
Frequency			50 Hz
Release characteristic			C
Concurrently switching N-neutral			Yes
With interlocking device			No
Over voltage category			3
Pollution degree			2
Ambient temperature during operating	°C		-25 - 40
Width in number of modular spacings			2
Built-in depth	mm		70
Suitable for flush-mounted installation			No
Anti-nuisance tripping version			No
Degree of protection (IP)			IP20
Connectable conductor cross section solid-core	mm <sup>2</sup>		1 - 25
Connectable conductor cross section multi-wired	mm <sup>2</sup>		1 - 25