#### DATASHEET - NDRBM-13/2/B/003-F-OL



Electronic RCD/MCB combination, 13 A, 30 mA, MCB trip characteristic: B, 2p, RCD trip characteristic: F



Part no. Catalog No. NdRBM-13/2/B/003-F-OL 300508

# **Delivery program**

Basic function			Combined RCD/MCB device, digital
Number of poles			2 pole
Tripping characteristic			В
Application			Switchgear for residential and commercial applications
Rated current	In	А	13
Rated fault current	$I_{\Delta N}$	А	0.03
Туре			Type F
Product range			NdRBM

# Technical data

Electrical			
Rated fault currents	$I_{\Delta n}$	mA	30
Characteristic			В
Selectivity Class			3
Mechanical			
Degree of protection			
Switch			IP20
Integrated			IP40
Admissible ambient temperature range		°C	-25 +40
Thickness of busbar material		mm	
Material thickness		mm	0.8 2

## Design verification as per IEC/EN 61439

Technical data for design verification			
Operating ambient temperature min.	o	°C	-25
Operating ambient temperature max.	٥	°C	40
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**

Circle devices control engineering / Electrical test electrical				
JAZBURGISNumber of poles (total)2Number of poles (total)3Number of poles (total)V3Rate vintageV3Rate vintage vintant ov lange vintant o	Circuit breakers and fuses (EG000020) / Earth leakage circuit breaker (EC000905)			
Number of protected poles2Number of protected poles2Rated voltageVRated insulation voltage UinVRated insulation voltage UinpVRated functurentORated functurentORated functurentVRated short-circuit breaking capacity sec. EN 61009VRated short-circuit breaking capacity IEC 0804-72VRated short-circuit br				
Rad votage   V   90     Rad votage Uin   V   90     Rated inpulse withstand votage Uinp   V   90     Rated inpulse withstand votage Uinp   V   90     Rated inpulse withstand votage Uinp   V   90     Rated rourent   V   90     Rated four current Vpo   V   90     Corrent Iming class   V   90     Rated short-circuit breaking capacity acc. EN 61009-1   KA   90     Rated short-circuit breaking capacity IEC 6009-72   KA   90     Rated short-circuit breaking capacity IEC 6009-72   KA   90     Storg current capacity   KA   90   90     Valse opponnet Capacity   S   90   90     Valse opponnet	Number of poles (total)		2	
Ratei ansulan valage Ui   V   2     Ratei ansulan valage Uimp   K   4     Ratei ansulan valage Uimp   A   3     Ratei ansulan valage Uimp   A   3     Ratei daurent   A   3     Rate daurent Vpe   F   5     Current linting class   F   3     Ratei short-circuit breaking capacity acc. EN 61009   K   0     Ratei short-circuit breaking capacity lic E0847-2   K   0     Ratei short-circuit breaking capacity lic E0847-2   K   0     Surge current capacity   K   Not-time delayed     Surge current capacity   Not   Not-time delayed     Surge current capacity current capacity   Not <t< td=""><td>Number of protected poles</td><td></td><td>2</td></t<>	Number of protected poles		2	
Retar inputse within a douting building bui	Rated voltage	V	240	
Rated current   A   9     Rated fault current   03     Leakage current type   F   9     Current limiting class   6   6   9     Rated short-circuit breaking capacity acc. EN 61009   F   0 <td< td=""><td>Rated insulation voltage Ui</td><td>V</td><td>250</td></td<>	Rated insulation voltage Ui	V	250	
Retain (arrent	Rated impulse withstand voltage Uimp	kV	4	
Lakage current typeFerLakage current type66Current limiting class66Reted short-circuit breaking capacity IEC 60947-260Bated short-circuit breaking capacity IEC 60947-260Disconnection characteristic660Surge current capacity IEC 60947-260Surge current capacity IEC 609	Rated current	А	13	
Concertion     Concerit     Concertit     Concertit<	Rated fault current	А	0.03	
Retad shor-circuit breaking capacity IcC 6094-2     Image: Algorithm of the shing capacity IcC 6094-2       Retad shor-circuit breaking capacity IcC 6094-2     KA     0       Bisconection characteristic     Sort-time delayed     Sort-time delayed       Surge current capacity     KA     0       Vitage type     A     Sort-time delayed       Release characteristic     Sort-time delayed     Sort-time delayed       Concurrently switching N-neutral     Sort-time delayed     Sort-time delayed       Vitage type     Sort-time delayed     Sort-time delayed       Release characteristic     Sort-time delayed     Sort-time delayed       Notacteristic     Sort-time delayed	Leakage current type		F	
Rate abort-circuit breaking capacity IEC 60947-2     KA     0       Rated short-circuit breaking capacity ICE 60947-2     KA     0       Disconnection characteristic     Short-time delayed     Short-time delayed       Surge current capacity     Short-time delayed     Short-time delayed       Voltage type     AC     Short-time delayed       Frequency     Short-time delayed     Short-time delayed       Release characteristic     Short-time delayed     Short-time delayed       Concurrently switching N-neutral     Short-time delayed     Short-time delayed       Vitage type     Short-time delayed     Short-time delayed       Concurrently switching N-neutral     Short-time delayed     Short-time delayed       Vitage category     Short-time delayed     Short-time delayed       Pollution degree     Short-time delayed     Short-time delayed       Vitage type     Short-time delayed     Short-time delayed       Vitage type     Short-time delayed     Short-time delayed       Vitage category     Short-time delayed     Short-time delayed       Vitage category     Short-time delayed     Short-time delayed       Vitage type </td <td>Current limiting class</td> <td></td> <td>3</td>	Current limiting class		3	
Rated short-circuit breaking capacity lon acc. EN 61009-1   kA   0     Disconnection characteristic   Short-time delayed     Surge current capacity   KA   3     Voltage type   KA   6     Frequency   KA   6     Release characteristic   B   6     Concurrently switching N-neutral   KA   9     Vitage type   No   6     Voltage characteristic   So (So (So (So (So (So (So (So (So (So (	Rated short-circuit breaking capacity acc. EN 61009	kA	10	
Disconnection characteristic     Market Surge current capacity     Short-time delayed       Surge current capacity     KA     3       Voltage type     C     C       Frequency     CO     D       Release characteristic     C     So       Concurrently switching N-neutral     C     So       Vit interlocking device     So     So       Pollution degree     C     So       Anbient temperature during operating     C     So       Suitable for flush-mounted installation     C     So       Anti-nusance triping version     C     So       Anti-nusance triping version     C     So       Degree of protection (IP)     C     So       Rometable conductor cross section solid-core     C     So	Rated short-circuit breaking capacity IEC 60947-2	kA	0	
Surge current capacity   KA   A     Voltage type   C   C     Frequency   50 H2   D     Release characteristic   C   B     Concurrently switching N-neutral   C   No     Vith interlocking device   No   C     Over voltage category   C   S     Pollution degree   C   S   S     Mith interlocking device   C   S   S     Pollution degree   C   S   S   S     Motint temperature during operating   C   S <t< td=""><td>Rated short-circuit breaking capacity Icn acc. EN 61009-1</td><td>kA</td><td>10</td></t<>	Rated short-circuit breaking capacity Icn acc. EN 61009-1	kA	10	
Voltage type   AC     Frequency   50 Hz     Release characteristic   50 Hz     Concurrently switching N-neutral   6     With interlocking device   No     Over voltage category   6     Pollution degree   2     Ambient temperature during operating   6     Stitle for flush-mounted installation   6     Anti-nuisance tripping version   6     Degree of protection (IP)   man     Ponetable conductor cross section solid-core   man	Disconnection characteristic		Short-time delayed	
Frequency Frequency   Release characteristic 5 Hz   Concurrently switching N-neutral 6   With interlocking device No   Over voltage category 6   Pollution degree 2   Ambient temperature during operating 6   Vitth in number of modular spacings 6   Suitable for flush-mounted installation mm   Anti-nuisance tripping version 6   Degree of protection (IP) mm   Concertable conductor cross section solid-core mm <sup>2</sup>	Surge current capacity	kA	3	
Release characteristic   B   B   B     Concurrently switching N-neutral   S   No     With interlocking device   No   S     Over voltage category   S   S     Pollution degree   S   S     With in number of modular spacings   S   S     Built-in depth   mm   S     Stabel for flush-mounted installation   Mo   S     Anti-nuisance tripping version   S   S     Degree of protection (IP)   mm   To     Concettable conductor cross section solid-core   mm²   125	Voltage type		AC	
Concurrently switching N-neutral No   With interlocking device No   Over voltage category Second   Pollution degree C 3   Ambient temperature during operating C 2   With in number of modular spacings Mo 2   Built-in depth mm 7   Stable for flush-mounted installation Mo No   Anti-nuisance tripping version Mo 9   Degree of protection (IP) Mn 12   Parter of the space of protection (IP) mm² 125	Frequency		50 Hz	
With interlocking deviceNoOver voltage category5Pollution degree5Ambient temperature during operating6With in number of modular spacings6Built-in depth7Suitable for flush-mounted installation6Anti-nuisance tripping version6Degree of protection (IP)102No125No125Internet of the space of protection space of protect	Release characteristic		В	
Normalization Normalization Normalization Normalization Normalization Normalization Normalization Normalization Normalization   Nutable for flush-mounded installation Normalization Normalization Normalization Normalization   Anti-nuisance tripping version Normalization Normalization Normalization   Degree of protection (IP) Image normalization Normalization   Normalization Image normalization Normalization   Normalization Normalization Normalization	Concurrently switching N-neutral		No	
Pollution degreePollution degreePollu	With interlocking device		No	
Ambient temperature during operating   PC   25 - 40     Width in number of modular spacings   PC   2     Buit-in depth   mm   70     Suitable for flush-mounted installation   MM   M     Anti-nuisance tripping version   MM   M     Degree of protection (IP)   Imm   120     Connectable conductor cross section solid-core   MM   125	Over voltage category		3	
Width in number of modular spacingsAnti-nuisance tripping versionAnti-nuisance tripping versionMathematical anti-nuisance tripping	Pollution degree		2	
Built-in depth mm 70   Suitable for flush-mounted installation M M   Anti-nuisance tripping version M M   Degree of protection (IP) Mn <sup>2</sup> IP0   Connectable conductor cross section solid-core Mn <sup>2</sup> 1.25	Ambient temperature during operating	°C	-25 - 40	
Suitable for flush-mounted installation Mo   Anti-nuisance tripping version Mo   Degree of protection (IP) IP20   Connectable conductor cross section solid-core mm² 1-25	Width in number of modular spacings		2	
Anti-nuisance tripping versionMarkMarkYesDegree of protection (IP)IP20Connectable conductor cross section solid-coremm²1-25	Built-in depth	mm	70	
Degree of protection (IP) IP20   Connectable conductor cross section solid-core mm² 1 - 25	Suitable for flush-mounted installation		No	
Connectable conductor cross section solid-core mm <sup>2</sup> 1 - 25	Anti-nuisance tripping version		Yes	
	Degree of protection (IP)		IP20	
Connectable conductor cross section multi-wired mm <sup>2</sup> 1 - 25	Connectable conductor cross section solid-core	mm²	1 - 25	
	Connectable conductor cross section multi-wired	mm²	1 - 25	