#### DATASHEET - NDRBM-15/2/B/003-F-OL



Electronic RCD/MCB combination, 15 A, 30 mA, MCB trip characteristic: B, 2p, RCD trip characteristic: F



Part no. Catalog No. NdRBM-15/2/B/003-F-OL 300509

## **Delivery program**

|                |   | Combined RCD/MCB device, digital                       |
|----------------|---|--|
|                |   | 2 pole   |
|                |   | В  |
|                |   | Switchgear for residential and commercial applications |
| In             | А | 15   |
| $I_{\Delta N}$ | А | 0.03   |
|                |   | Туре F   |
|                |   | NdRBM  |
|                |   |  |

# Technical data

| $I_{\Delta n}$ | mA              | 30       |
|----------------|-----------------|----------|
|                |                 | В        |
|                |                 | 3        |
|                |                 |          |
|                |                 |          |
|                |                 | IP20     |
|                |                 | IP40     |
|                | °C              | -25 +40  |
|                | mm              |          |
|                | mm              | 0.8 2    |
|                | I <sub>Δn</sub> | °C<br>mm |

### **Design verification as per IEC/EN 61439**

| •   |   |    |  |
|---|---|----|--|
| Technical data for design verification  |   |    |  |
| Operating ambient temperature min.  | ٥ | °C | -25  |
| Operating ambient temperature max.  | 0 | °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<br>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**

| Chronic process control angine arise (Economy / Ecutive Istantion (Economy / Ecutive Istantion (Economy / Ecutive Istantion (Economy / Economy / Ecutive Istantion (Economy / Economy / E  |  |     |                    |  |  |  |
|--|--|-----|--------------------|--|--|--|
| JAZE0005Number of poles (trail)2Number of poles (trail)2Rade vitageV30Rade vitage Number of poles (trail)V30Rade vitage Number of poles (trail)V30Rade vitage Number of poles (trail)V4Rade vitage Number of poles (trail)V30Rade vitage Number of Poles (trail)N30Rade vitage Number of Poles (trail)N30Number of Poles (trail)N30 <td< td=""><td>Circuit breakers and fuses (EG000020) / Earth leakage circuit breaker (EC000905)</td><td></td><td></td></td<>   | Circuit breakers and fuses (EG000020) / Earth leakage circuit breaker (EC000905)   |     |                    |  |  |  |
| Number of protected poles     Image: Protected poles     Protected poles       Rated insulation voltage Uin     V     30       Rated insulation voltage Uin     V     30       Rated insulation voltage Uinp     V     30       Rated insulation voltage Uinp     V     4       Rated functurent     V     30       Rated functurent     V     30       Corrent limiting class     V     30       Rated short-circuit breaking capacity acc. EN 61009     V     30       Rated short-circuit breaking capacity IEC 6094-2     V     30       Store of circuit breaking capacity IEC 6094-2     V     30       Rated short-circuit breaking capacity IEC 6094-2     V     30       Store of circuit breaking capacity IEC 6094-2     V     No       Store of circuit breaking capacity IEC 6094-2     V     No       Store of circuit breaking capacity IEC 6094-2     V     No       Store of circuit breaking capacity IEC 6094-2     V     No       Store of circuit breaking capacity IEC 6094-2     V     No       Store of circuit breaking capacity IEC 6094-2     No     No <td colspan="5">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])</td>   | 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]) |     |                    |  |  |  |
| Rad voltage   V   90     Rated insultion voltage Uinp   V   90     Rated inpulse withstand voltage Uinp   V   90     Rated funct current   V   90     Rated funct current Vpo   V   90     Current limit plass   V   90     Rated short-circuit breaking capacity Acc. EN 61009-1   KA   90     Rated short-circuit breaking capacity ICE 0897-2   KA   90     Strage current capacity   KA   90   90     Strage current capacity ICE 0897-2   KA   90   90     Strage current capacity   KA   90   | Number of poles (total)  |     | 2                  |  |  |  |
| Ratei maids notage Ui   20     Ratei maids notage Uimp   K   4     Ratei maids notage Uimp   K   4     Ratei maids notage Uimp   K   5     Ratei maids notage Uimp   K   6     Ratei maids notage Uimp   K   6     Ratei maids notage Uimp   K   6     Rate danci curent   K   6     Current linting class   K   6     Rated short-circuit breaking capacity acc. EN 61009   K   0     Rated short-circuit breaking capacity lic D6047-2   K   0     Rated short-circuit breaking capacity lic C0047-2   K   Not-time delayed     Surge current capacity   K   Not-time delayed     Surge current capacity   K   Not-time delayed     Surge current capacity   K   Not-time delayed     Concurrent y switching N-neutral   Not-time delayed   Not-tim Concurrent y Not Not Not Not Not Not Not No   | Number of protected poles  |     | 2                  |  |  |  |
| Atted implies with a doutage limp     I     I     I       Rated nurrent     I </td <td>Rated voltage</td> <td>V</td> <td>240</td>  | Rated voltage  | V   | 240                |  |  |  |
| Rated current   A   S     Rated fault current   A   Q     Leakage current type   F   F     Current limiting class   G   A   Q     Rated short-circuit breaking capacity acc. EN 61009   A   Q   A     Rated short-circuit breaking capacity lacc. EN 61009-10   A   Q   A     Rated short-circuit breaking capacity lacc. EN 61009-10   A   Q   A     Rated short-circuit breaking capacity lacc. EN 61009-10   A   Not-time delayed   Not-time delayed     Store current capacity   A   Not-time delayed   Not-time de  | Rated insulation voltage Ui  | V   | 250                |  |  |  |
| Ratef autoremt     A     B       Ratef autoremt type     5     5       Current timiting class     6     6     6       Rated short-circuit breaking capacity IEC 60947-2     6     0     0       Rated short-circuit breaking capacity IEC 60947-2     6     0     0       Stord-circuit breaking capacity IEC 60947-2     6     0     0     0       Stord-circuit breaking capacity IEC 60947-2     6     0 <td>Rated impulse withstand voltage Uimp</td> <td>kV</td> <td>4</td>   | Rated impulse withstand voltage Uimp   | kV  | 4                  |  |  |  |
| Leakage current type   Fe     Current limiting class   3     Reted short-circuit breaking capacity IEC 60947-2   KM     Rated short-circuit breaking capacity IEC 60947-2   KM     Disconnection characteristic   MM     Surge current capacity IEC 60947-2   KM     Vitage type   KM     Vitage type   KM     Vitage type   KM     Frequency   KM     Release characteristic   KM     Outcurrent type interview   KM     Vitage type   KM     Release characteristic   KM     Routeur type interview   KM     Routeur type interview   KM     Vitage type   KM     Routeur type interview   KM  <   | Rated current  | А   | 15                 |  |  |  |
| Concretion     Concret  | Rated fault current  | А   | 0.03               |  |  |  |
| Rete short-circuit breaking capacity acc. EN 61009Image: Algorithm of the shing capacity IEC 60947-2Image: Algorithm of the shing capacity IEC 60947-2Rete short-circuit breaking capacity Icn acc. EN 61009-1KAImage: Shirt-time delayedDisconnection characteristicShirt-time delayedSurge current capacityKAImage: Shirt-time delayedVidage typeShirt-time delayedShirt-time delayedNotage typeShirt-time delayedShirt-time delayedRelease characteristicShirt-time delayedShirt-time delayedConcurrently switching N-neutralShirt-time delayedShirt-time delayedWith interlocking deviceShirt-time delayedShirt-time delayedPollution degreeShirt-time delayedShirt-time delayedNotage categoryShirt-time delayedShirt-time delayedWith in number of modular spacingsShirt-time delayedShirt-time delayedSuitable for flush-mounted installationShirt-time delayedShirt-time delayedAnti-nuisance tripping versionShirt-time delayedShirt-time delayedSuitable for flush-mounted installationShirt-time delayedShirt-time delayedAnti-nuisance tripping versionShirt-time delayedShirt-time delayedDispecied for flush-mounted installationShirt-time delayedShirt-time delayedAnti-nuisance tripping versionShirt-time delayedShirt-time delayedDispecied for flush-mounted installationShirt-time delayedShirt-time delayedAnti-nuisance tripping versionShirt-time delayedShirt-ti  | Leakage current type   |     | F                  |  |  |  |
| Rate abort-circuit breaking capacity IEC 60947-2   kA   0     Rated short-circuit breaking capacity Icn acc. EN 61009-1   kA   0     Disconnection characteristic   Short-time delayed   Short-time delayed     Surge current capacity   AC   C     Voltage type   Short-time delayed   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     With interlocking device   Short-time delayed   Short-time delayed     Pollution degree   Short-time delayed   Short-time delayed     Mith in number of modular spacings   Short-time delayed   Short-time delayed     Suitable for flush-mounted installation   Short-time delayed   Short-time delayed     Anti-nuisance tripping version   Short-time delayed   Short-time delayed     Short-time delayed   Short   | Current limiting class   |     | 3                  |  |  |  |
| Ated short-circuit breaking capacity len acc. EN 61009-1   kA   0     Disconnection characteristic   Short-time delayed     Surge current capacity   A   3     Voltage type   A   A     Frequency   Disconnection sharacteristic   B     Release characteristic   B   B     Concurrently switching N-neutral   M   No     Voltage type   No   No     Pollution degree   So   So     Nuth in number of modular spacings   M   So     Suitable for flush-mounted installation   M   So     Anti-insiance triping version   M   So     Dage of protection (IP)   M   So     Release of protection (IP)   M   So   | Rated short-circuit breaking capacity acc. EN 61009  | kA  | 10                 |  |  |  |
| Disconnection characteristic   Sint time delayed     Surge current capacity   Sint time delayed     Voltage type   Sint time delayed     Frequency   Coll     Release characteristic   Sint time delayed     Concurrently switching N-neutral   Sint time delayed     With interlocking device   Sint time delayed     Pollution degree   Sint time delayed     Anbient temperature during operating   Sint time delayed     Suitable for flush-mounted installation   Sint time delayed     Anti-nuisance tripping version   Sint time delayed     Digree of protection (IP)   Sint time delayed     Sint temperature during space (Sing Sing Sing Sing Sing Sing Sing Sing   | Rated short-circuit breaking capacity IEC 60947-2  | kA  | 0                  |  |  |  |
| Surge current capacityKAR<br>A3Voltage typeCCFrequencyCDRelease characteristicCBConcurrently switching N-neutralCNoWith interlocking deviceNoCOutro otdage categoryC3Pollution degreeC2Muthin temperature during operatingC2Suitable for flush-mounted installationCNoSuitable for flush-mounted installationCNoAnti-nuisance tripping versionCNoDegree of protection (IP)CPolConnectable conductor cross section solid-coreCPolSuitable for flush-mounted installationCPolDegree of protection (IP)CPolSuitable for flush-mounted installationCPolSuitable conductor cross section solid-coreCPolSuitable conductor coreCPolSuitable conductor coreCPolSuitable conductor coreCPolSuitable conductor coreCPolSuitable conductor coreCPol <td>Rated short-circuit breaking capacity Icn acc. EN 61009-1</td> <td>kA</td> <td>10</td>   | 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       With innumber of modular spacings     6       Suitable for flush-mounted installation     70       Anti-nuisance tripping version     6       Degree of protection (IP)     mm       Regree of protection section solid-core     mm       Regree of protection section solid-core     mm   | Disconnection characteristic   |     | Short-time delayed |  |  |  |
| Frequency   Joint Construction (Construction (Constructi               | Surge current capacity   | kA  | 3                  |  |  |  |
| Release characteristic   Belase character  | Voltage type   |     | AC                 |  |  |  |
| Concurrently switching N-neutral   Mo     With interlocking device   Mo     Over voltage category   S     Pollution degree   S     Ambient temperature during operating   Mo     With in number of modular spacings   Mo     Built-in depth   Mo     Stable for flush-mounted installation   Mo     Anti-nuisance tripping version   Mo     Degree of protection (IP)   Mo     Poncetable conductor cross section solid-core   mn  | Frequency  |     | 50 Hz              |  |  |  |
| With interlocking device   No     Over voltage category   3     Pollution degree   2     Ambient temperature during operating   C   2     With in number of modular spacings   Mo   2     Built-in depth   Mo   2     Suitable for flush-mounted installation   Mo   Mo     Anti-nuisance tripping version   Mo   Mo     Degree of protection (IP)   Mo   Mo     Koncettable conductor cross section solid-core   Mo   Mo  | Release characteristic   |     | В                  |  |  |  |
| Over voltage category 3   Pollution degree 2   Ambient temperature during operating C 25 - 40   Width in number of modular spacings C 7   Buit-in depth Mm 7   Suitable for flush-mounted installation C Mm   Anti-nuisance tripping version C Version   Degree of protection (IP) Imm 125   Koncetable conductor costs section solid-core Mm2 125   | Concurrently switching N-neutral   |     | No                 |  |  |  |
| Pollution degree 2   Ambient temperature during operating °C 25 - 40   Width in number of modular spacings Immediate 2   Buit-in depth Mmediate 70   Suitable for flush-mounted installation Immediate No   Degree of protection (IP) Immediate Immediate   Connectable conductor cross section solid-core Immediate 125   | With interlocking device   |     | No                 |  |  |  |
| Ambient temperature during operating<br>Width in number of modular spacings<br>Buit-in depth<br>Suitable for flush-mounted installation<br>Anti-nuisance tripping version<br>Degree of protection (IP)<br>Connectable conductor cross section solid-core   | Over voltage category  |     | 3                  |  |  |  |
| Width in number of modular spacings Image: spacing spaci | 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) Mm <sup>2</sup> IP20   Connectable conductor cross section solid-core Mm <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 version Mathematical Stress Stres | 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             |  |  |  |