NA003-M64 / NA003.COM-M64(*A)

Art.Nr.: 270010X / Art.Nr.: 2700200

Installation Guide

Dok. Nr.: 090756

www.tele-online.com

Fig.1: NA003-M64

For further installation guide for you product , scan code

General document information:

- The full operation manual is available at **https://www.tele-online.com** or at **https://www.naomi.at/login**
- This installation guide does not replace the manual! For the complete installation the manual is required.
- The safety instructions are to be observed!

(*A) Is a comment for NA003.COM with serial interface. All (*A) comments are only avaliable with this extended version!

Safety instructions:

Danger! Never carry out work on live parts!
Danger of fatal injury!
The product must not be used in case of obvious damage!
To be installed by qualified and authorized personnel only!

In General: Strictly and always follow safety advices and warnings! Do not use this product in case of obvious damage!

The device was developed, produced and tested in accordance to the latest industry standards. Nevertheless improper handling or use can endanger humans and machines. Failure to observe these instructions may result in personal injury, property damage, or economic loss. Please use the device only in accordance with the installation and operating instructions. Check for secure assembly and good condition. Moreover, the rules and regulations on accident prevention applicable to the place of use must be strictly followed.

- Eliminate all faults immediately which may endanger safety!
- Do not make any unauthorised changes and only use replacement parts and optional accessories purchased from or recommended by TELE!
- In case of obvious damage the device must be checked and replaced if necessary!
- Country specific regulations have to be considered in any case!
- If required by national standards, the NA003 has to be protected against unauthorized changes by password and/or sealing!

Intended use:
The TELE NA003 is a multinational grid and system protection unit, that protects energy generation plants (like combined heat and power plants, wind generators, waterpower plants, photovoltaic plants). In case of power failures or net anomalies, power gererating plants have to be disconnected immediately from the mains supply to avoid unintentional feeding to the grid. On the one hand continuing grid feeding could endanger maintenance staffs, on the other hand connected devices could be exposed to inadmissible voltages and/or frequencies.
In case the grid operator requires thresholds and settings that are not conforming with the local standards, it is possible to set thresholds outside the normative defined range! Outside these range the device is not in accordance with the standards anymore and the corresponding certificate loses validity! This state is indicated as „ncnf" [none conformity] on the display.
Settings outside the conformity range are therefore in responsibility of the operator respectively the acceptance authority!
The NA003, especially the NA003.com(*A) with serial interface can only be set with a computer because further national standards mandatoried by the local authorities can only be read online. So, the manual can be downloaded online at www.tele-online.com.

Dimensions:

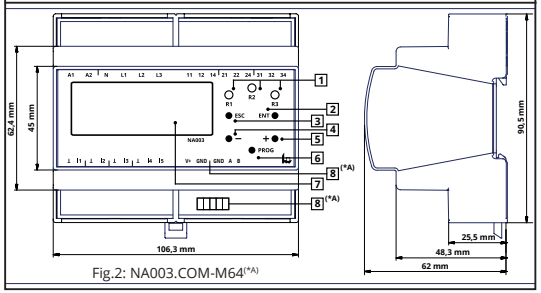


Fig.2: NA003.COM-M64(*A)

Control elements:

#	Marking	Type	Function
1	R1, R2, R3	LED (yellow)	Status indication output relays
2	ENT	Pushbutton	ENTER, input, menu level forward
3	ESC	Pushbutton	ESCAPE, input, menu level back, test/reset
4	-	Pushbutton	Change parameters, menu navigation
5	+	Pushbutton	Change parameters, menu navigation
6	PROG	Pushbutton (sealable)	PROGRAM, enter program mode
7		LCD-Display	Display, 4x20 characters
8 (*A)		Modbus Interface (*A)	For serial communication via Modbus RTU

Terminals:

A1, A2	Supply	DC: 24V AC: 110 - 230V @ f: 48-63 Hz A1: L (+) A2: N (-)
L1, L2, L3, N	Measuring input	U_N: 3x400V AC
11, 12, 14	Relay channel A (CO contact) Status indication via yellow LED R1	Isolated changeover contact 11: Common 12: Normally closed contact 14: Normally open contact
21, 22, 24	Relay channel B (CO contact) Status indication via yellow LED R2	Isolated changeover contact 21: Common 22: Normally closed contact 24: Normally open contact
31, 32, 34	Output relay R3 (CO contact) Status indication via yellow LED R3	Isolated changeover contact 31: Common 32: Normally closed contact 34: Normally open contact
I1, ⊥	Digital input 1 (Feedback contact contactor A)	Contact input (24V/5mA), configurable Input active: I1 connected to ⊥
I2, ⊥	Digital input 2 (Feedback contact contactor B)	Contact input (24V/5mA), configurable Input active: I2 connected to ⊥ Does not apply to national standards without functional safety!
I3, ⊥	Digital input 3 (Remote disconnection)	Contact input (24V/5mA), configurable Input active: NO->I3 to ⊥ (std); NC->I3 open

Terminals:

I4, I5, ⊥	Digital inputs 4 und 5 (Parameter switchover)	Applies to CEI 0-21, C10/11 LV/HV, EN50549-1/2 LV/HV Contact input (24V/5mA) Input active: I4 or I5 connected to ⊥
V+, GND (*A)	Modbus interface RS485 - Supply	+24Vd.c. Supply. ***Must be connected!***
GND, A, B (*A)	Modbus interface RS485 - Communication	Modbus Data interface. *Both Modbus GND are internally connected*

Technical data:

Supply circuit
Supply voltage: DC: 24V AC: 110 - 230V
V+/GND: 24V d.c. (*A)
Rated surge voltage: 6 kV
Internal protection: 250V / 500mA slow blow (soldered)
In order to ensure the proper function during power failures, an external UPS has to be used for the entire supply (A1/A2 and V+/GND (*A)).

Measuring circuit
Measuring input: 3 x 400V AC
Input impedance: 1MΩ
Overvoltage category: III

Output circuit
Number of contacts: 3 changeover contacts
Rated current: 5A / 250V AC
Overvoltage category: III
Protection: 5A fast blow (external installation)

Ambient conditions and general specifications
Ambient temperature operation: -25 ... +65°C
Ambient temperature storage: -40 ... +70°C
Visibility temperature display: -15 ... +65°C
Relative humidity: 5 ... 95% (non-condensing)
Pollution degree: 2
Weight: 300g
Location: For indoor use only
Installation: An external circuit-breaker is required for mains installation to the unit. Installation class 1 must be avaliable in the environment
Installation note: Power contactors may cause significant disturbances. Therefore, the NA003 should be mounted with a minimum distance of 5 cm to neighbouring power contactors.

Rated insulation voltage: 400V

Electrical connection
Wire size: max. 2,5mm²
Stripping length: max. 8mm
Torque: max. 0,5Nm
Screw: M3, slot screwdriver 0,6 x 3,5mm
Interface / Push-IN (*A): Push-IN terminals, 0,5mm², Stripping length 6mm, To loose: slot screwdriver 0,4 x 2mm

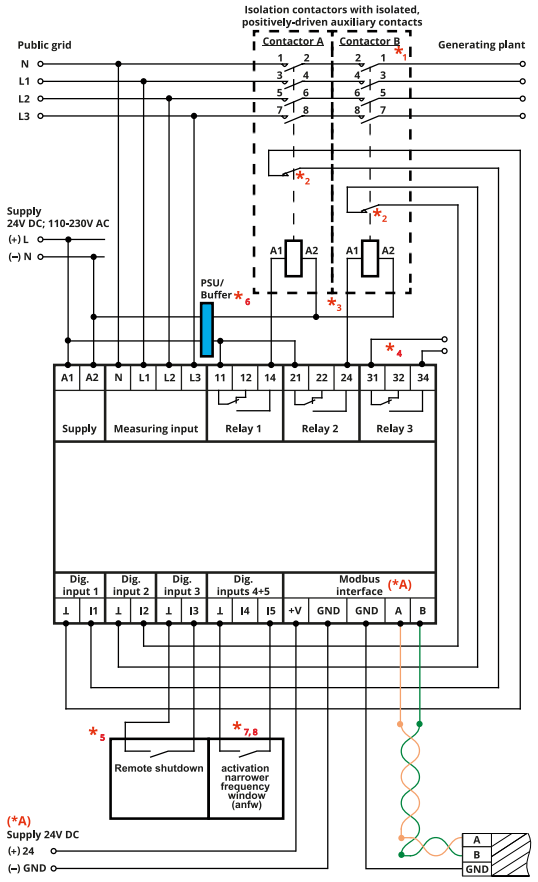
Protection class: Terminals and Housing: IP 2XB

Seal wire: max. diameter <=1,32mm

Interface (*A)
Type: Modbus RTU/RS485, 5V Transceiver
Supply: 24V d.c.
Modbus register / configuration: See software manual (website: www.tele-online.com)
Cable management communication: Must be installed in-building and with no connection to earth. Length of cables <10m.

Mounting on DIN rail according to EN 60715:
Snap the rear mounting clip of the device into place in such a way that a safe and tight fit is ensured.

Connection diagram in general
Care possible changes depending on country specific standards, check the manual online at www.tele-online.com



Key notes:

- ***1 ...** Contactor B not applicable for all countryspecific standards in which no functional safety is required!
- ***2 ...** Auxiliary contact configurable as "n/o", "n/c" or "disabled"
- ***3 ...** 1- or 2-channel connection possible and can be configured.
- ***4 ...** Evaluation, contact error for power generation plants mandatoried for VDE-AR-N 4105:2018-11 and C10-11:2019
- ***5 ...** Digtial contact as normally opened, normally closed, or „disabled". Default is n.o.
- ***6 ...** VDE-AR-N 4105:2018-11 FRT (fault ride through) behavior with buffered isolation contactors.
- ***7 ...** Parameter switching see connection diagram in manual - CEI 0-21
- ***8 ...** Parameter switching see connection diagram in manual - C10/11

***A ...** Na003.COM serial interface - Modbus RTU with RS485

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NEED SUPPORT? PLEASE
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Subject to alterations and errors.
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