

## Product Update

# EasyNO<sub>x</sub> – NO<sub>x</sub> Monitoring

## New Software – Release 1.6.1



As of now all EasyNO<sub>x</sub> devices are delivered by MOTORTECH with software version 1.6.1.

To update an EasyNO<sub>x</sub>, please read the section Software Update in the latest version of the operating manual, which can be downloaded at <https://www.motortech.de/infocenter/download-center/operating-manuals.html>.

### Download \*

The new EasyNO<sub>x</sub> software and the latest operating manual can be downloaded at the following link (approx. 49 MB):

<http://www.motortech.biz/downloads/MOTORTECH-SoftwarePackage-EasyNOx-FW-1-6-1.zip>



### Update from software version 1.4.1 or lower

Be sure to observe the final section *Update from Software Version 1.4.1 or Lower* on page 5 when updating from one of the software versions concerned to software version 1.4.2 or higher.

## New Functions and Modifications

### Release 1.6.1 – 2021/07/20

#### NO<sub>x</sub> monitor

- Bugfix: An error was fixed that in release 1.6.0 caused the NO<sub>x</sub> monitor to no longer calculate the daily average correctly.
- Bugfix: An error was fixed that caused the screen to go black if you exited the *NO<sub>x</sub> Export* view while a log was being copied or a NO<sub>x</sub> monitoring report being created.

### Release 1.6.0 – 2021/06/01

#### NO<sub>x</sub> monitor

- Bugfix: In the German user interface, the group selection fields in the *NO<sub>x</sub> History* view are now available in German.
- Bugfix: An error in the *NO<sub>x</sub> Monitoring* view was fixed that caused the measured value display for oxygen O<sub>2</sub> not to be updated at measured values close to 0 %.
- New function: View *NO<sub>x</sub> Sensor* added for displaying status information from the connected NO<sub>x</sub> sensor.
- Update: Online help updated.
- Update: The operator data for the NO<sub>x</sub> monitoring report can now be specified in the newly added view *Information on Operator*.
- Update: In the *NO<sub>x</sub> Setup* view, values up to 2,000 mg/Nm<sup>3</sup> are now allowed for the NO<sub>x</sub> concentration daily average thresholds *Level Limit* and *Level Warning*.

\*We recommend downloading via the Internet browser Mozilla Firefox or Microsoft Edge. Google Chrome might prevent the download.

#### DISTRIBUTION

Customers / others	Yes
Representatives and Sales Partners	Yes
OEM partners	No
MOTORTECH subsidiaries	Yes

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## Product Update

### General

- Bugfix: An error was fixed that in a software update caused the EasyNO<sub>x</sub> to stop and become inoperable.
- Bugfix: An error was fixed that caused the PIN Reset Authorization Key (PRRK) display window to freeze upon requesting a reset key for all PINs.

### Release 1.4.4 – 2021/02/23

#### NO<sub>x</sub> monitor

- Bugfix: An error was fixed that led to a crash in the *NO<sub>x</sub> Export* view.

#### General

- Update: Unit for memory allocation changed in service report (PDF).

### Release 1.4.3 – 2021/01/18

#### NO<sub>x</sub> monitor

- Bugfix: In the *NO<sub>x</sub> Trends* view, the displayed chemical formula and unit of an entry in the legend was corrected.
- New function: The available setting range of the charging pressure threshold now adapts itself to the scaling of the manifold pressure sensor.

#### I/O communication module BPlus

- Bugfix: If the value range is exceeded, the analog output outputs 20 mA now.

### Release 1.4.2 – 2020/12/08

#### NO<sub>x</sub> monitor

- Bugfix: Restart from the *Display Configuration* view works properly again.
- Bugfix: In *NO<sub>x</sub> Monitoring* view color background of LCD displays in case of faulty signal corrected.
- Bugfix: Detection of continued normal operation when MAP signal is faulty fixed.
- Bugfix: Value gaps in the *NO<sub>x</sub> History* view are now displayed correctly.
- Bugfix: All detected errors or manipulations on the NO<sub>x</sub> files are now indicated.
- Bugfix: Miscalculation of hours at the turn of the year fixed.
- New function: Country-specific date formats are now used in the *NO<sub>x</sub> Export view*.
- New function: The serial numbers of the SD card, the CAN bus modules and the NO<sub>x</sub> sensors are now monitored.
- New function: A message box appears if a report is to be generated and no operator data has been specified.
- New function: In the *NO<sub>x</sub> Monitoring* view, the color gradient and the end value of the analog NO<sub>x</sub> display now adapt to the configured thresholds.
- New function: Predefined filtering of NO<sub>x</sub> and O<sub>2</sub> raw values
- New function: Display of O<sub>2</sub> trend in the *NO<sub>x</sub> Trends* view
- New function: SD card errors are registered in the logbook.
- Update: The input of the constants *K* and *KNO<sub>2</sub>* has been limited to 2 decimal places.

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Customers / others	Yes
Representatives and Sales Partners	Yes
OEM partners	No
MOTORTECH subsidiaries	Yes

## Product Update

- Update: For better differentiation, the line width in the *NO<sub>x</sub> Trends* view has been widened.

### General

- Bugfix: Software dongles could not be backed up.
- Bugfix: A crash could occur when adding software dongles.

## Release 1.4.1 – 2020/08/06

### NO<sub>x</sub> monitor

- Bugfix: Missing translations in the logbook corrected.
- Bugfix: Data compression of the current day in the annual log and in the PDF report removed.
- New function: Saving and loading of NO<sub>x</sub> monitor configuration files
- Update: Online help updated.

### I/O communication module BPlus

- Bugfix: Analog output scaled. 0 mg/Nm<sup>3</sup> to 1,000 mg/Nm<sup>3</sup> corresponds to 4–20mA.

## Release 1.4.0 – 2020/08/03

## Release 1.3.00001 – 2020/08/03

### NO<sub>x</sub> monitor

- New function: The logbook input dialog now additionally displays the locked entries and allows the user to log in with a higher level when selecting a locked entry.

### General

- Bugfix: Fixed some minor bugs in the function mapping.

## Release 1.3.00000 – 2020/07/27

### NO<sub>x</sub> monitor

- New function: Two new NO<sub>x</sub> monitoring modes, *Load via CANopen* and *Start/Stop via CANopen*, available.

### General

- Bugfix: SDO heartbeat timeout set from 1 second to 2 seconds.

### DISTRIBUTION

Customers / others	Yes
Representatives and Sales Partners	Yes
OEM partners	No
MOTORTECH subsidiaries	Yes

## Product Update

- New function: Device profile CiA 401 added.
- New function: Device *BPlus* (I/O communication module) added.
- New function: Function mapping of analog and binary inputs and outputs implemented.
- New function: The general error and warning output of the EasyNO<sub>x</sub> can now be diverted to devices with CiA-401 profile.

### Release 1.2.1 – 2020/07/09

#### NO<sub>x</sub> monitor

- Bugfix: Separation of normal operation detection and NO<sub>x</sub> averaging
- Bugfix: One hour offset at day change fixed.
- New function: Added minimum temperature monitoring for thermocouples.
- New function: In the *NO<sub>x</sub> Thresholds Settings* view, the NO<sub>x</sub> monitoring parameters are disabled if no serial number is specified.
- New function: Load signal input on CAN bus module
- New function: MAP values are displayed as trend.
- New function: All NO<sub>x</sub> monitor views are automatically exited after a timeout.
- New function: Scaling of MAP sensor implemented.
- New function: Logbook entries filter extended.
- Update: Display of historical values optimized.

#### General

- New function: EasyNO<sub>x</sub> online help added.
- Update: No logging of the *Operator* access level login in the *Events* view
- Update: Main menu button *Recordings* with smaller text

### Release 1.2.0 – 2020/06/17

#### Test Release 1.1.00002 – 2020/06/17

#### NO<sub>x</sub> monitor

- Bugfix: The logbook now checks that an SD card is inserted in the EasyNO<sub>x</sub>.
- Bugfix: Several minor bugs fixed.
- New function: The operator information has been added to the report.

#### General

- Update: Screenshot function integrated.
- Update: User interface style sheet revised.

### Test Release 1.1.00001 – 2020/06/10

#### DISTRIBUTION

Customers / others	Yes
Representatives and Sales Partners	Yes
OEM partners	No
MOTORTECH subsidiaries	Yes

## Product Update

### NO<sub>x</sub> monitor

- New function: The logbook was added.
- New function: The signing of the report was added.
- Update: The report was improved.

### Test Release 0.1.00004 – 2020/05/28

#### NO<sub>x</sub> monitor

- Bugfix: An error was fixed that caused the online display of the second NO<sub>x</sub> monitor to be displayed inversely.

### Test Release 0.1.00003 – 2020/05/19

#### NO<sub>x</sub> monitor

- New function: Different arrangements of the thermocouples are supported.
- New function: The NO<sub>x</sub> monitoring report was added.
- Update: The trend page is now accessed through the *NO<sub>x</sub> Monitoring* view.
- Update: The display format of the normal operation hour counter and the failure hour counter has been changed.

#### General

- Update: The configuration and service PDFs now also list the NO<sub>x</sub> configuration values.

### Test Release 0.1.00002 – 2020/05/07

#### NO<sub>x</sub> monitor

- Bugfix: An error in the handling of the dew point was fixed.

### Test Release 0.1.00001 – 2020/05/05

#### NO<sub>x</sub> monitor

- New function: The NO<sub>x</sub> sensor status was added.

### Test Release 0.0.1 – 2020/04/20

- Initial version

## Known Issues

All versions

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Representatives and Sales Partners	Yes
OEM partners	No
MOTORTECH subsidiaries	Yes

## Product Update

- After deleting devices in the device configuration, in certain cases they can only be added back to the device configuration after the EasyNO<sub>x</sub> has been restarted.
- The connection status symbol at the bottom right of the menu bar also shows disconnections to devices that have not been added.

## Update from Software Version 1.4.1 or Lower

### Fixing of Calculation Error

In software version 1.4.2, a calculation when archiving the data was corrected. If you update from software version 1.4.1 or lower to software version 1.4.2 or higher, proceed as follows to retroactively correct this calculation in the archived data:

1. Remove the memory card from the EasyNO<sub>x</sub>.
2. Perform the desired software update in the EasyNO<sub>x</sub>.
3. After the successful update, switch off the EasyNO<sub>x</sub> by disconnecting it from the power supply.
4. On the memory card of the EasyNO<sub>x</sub>, there are folders with year numbers for each year the NO<sub>x</sub> monitor has values for, and for each engine in these folders there is a file with a "3" preceding the underscore in the file name, e.g. NO<sub>x</sub>03\_4756.bin. Use your computer to delete all files with a "3" preceding the underscore in the respective folders on the memory card.
5. Re-insert the memory card into the EasyNO<sub>x</sub>.
6. Switch on the EasyNO<sub>x</sub> by supplying it with power.
7. For one time, starting the device software will take longer.

→ The calculation has been successfully corrected in the archived data.

## Monitoring of Serial Numbers

As of software version 1.4.2, the serial numbers of the NO<sub>x</sub> sensor, the CAN bus module and the memory card are being monitored. If you update from software version 1.4.1 or lower to software version 1.4.2 or higher, you will get entries in the logbook that the serial numbers of these devices have been changed respectively. These messages appear because no serial numbers have been stored before, and therefore they do not need to be observed.

If you replace the NO<sub>x</sub> sensor or another device in the EasyNO<sub>x</sub> system, we recommend additionally making a manual entry in the logbook for confirmation.

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