EasyNOx – NOx Monitoring

New Software – Release 1.6.1

As of now all EasyNOx devices are delivered by MOTORTECH with software version 1.6.1.

To update an EasyNOx, please read the section *Software Update* in the latest version of the operating manual, which can be downloaded at www.motortech.de.

Download

The new EasyNOx 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

NOTICE

Update from software version 1.4.1 or lower

Be sure to observe the 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

NOx monitor

- Bugfix: An error was fixed that in release 1.6.0 caused the NOx 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 *NOx Export* view while a log was being copied or a NOx monitoring report being created.

Release 1.6.0 – 2021/06/01

NOx monitor

- Bugfix: In the German user interface, the group selection fields in the *NOx History* view are now available in German.
- Bugfix: An error in the *NOx Monitoring* view was fixed that caused the measured value display for oxygen O_2 not to be updated at measured values close to 0 %.
- New function: View *NOx Sensor* added for displaying status information from the connected NOx sensor.
- Update: Online help updated.
- Update: The operator data for the NOx monitoring report can now be specified in the newly added view *Information on Operator*.
- Update: In the *NOx Setup* view, values up to 2,000 mg/Nm³ are now allowed for the NOx concentration daily average thresholds *Level Limit* and *Level Warning*.

General

- Bugfix: An error was fixed that in a software update caused the EasyNOx 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

NOx monitor

- Bugfix: An error was fixed that led to a crash in the *NOx Export* view.

General

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

Release 1.4.3 – 2021/01/18

NOx monitor

- Bugfix: In the *NOx 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

NOx monitor

- Bugfix: Restart from the *Display Configuration* view works properly again.
- Bugfix: In *NOx 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 *NOx History* view are now displayed correctly.
- Bugfix: All detected errors or manipulations on the NOx 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 *NOx Export* view.
- New function: The serial numbers of the SD card, the CAN bus modules and the NOx 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 *NOx Monitoring* view, the color gradient and the end value of the analog NOx display now adapt to the configured thresholds.
- New function: Predefined filtering of NOx and O_2 raw values
- New function: Display of O_2 trend in the *NOx Trends* view
- New function: SD card errors are registered in the logbook.
- Update: The input of the constants *K* and *KNO2* has been limited to 2 decimal places.
- Update: For better differentiation, the line width in the *NOx 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

NOx 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 NOx monitor configuration files
- Update: Online help updated.

I/O communication module BPlus

- Bugfix: Analog output scaled. 0 mg/Nm³ to 1,000 mg/Nm³ corresponds to 4–20mA.

Release 1.4.0 – 2020/08/03

Release 1.3.00001 – 2020/08/03

NO_x 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_x monitor

- New function: Two new NO_x monitoring modes, *Load via CANopen* and *Start/Stop via CANopen*, available.

General

- Bugfix: SDO heartbeat timeout set from 1 second to 2 seconds.
- 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_x can now be diverted to devices with CiA-401 profile.

Release 1.2.1 – 2020/07/09

NO_x monitor

- Bugfix: Separation of normal operation detection and NO_x averaging
- Bugfix: One hour offset at day change fixed.
- New function: Added minimum temperature monitoring for thermocouples.
- New function: In the *NO_x Thresholds Settings* view, the NO_x 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_x 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_x 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

NOx monitor

- Bugfix: The logbook now checks that an SD card is inserted in the EasyNOx.
- 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

NOx 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

NOx monitor

- Bugfix: An error was fixed that caused the online display of the second NOx monitor to be displayed inversely.

Test Release 0.1.00003 – 2020/05/19

NOx monitor

- New function: Different arrangements of the thermocouples are supported.
- New function: The NOx monitoring report was added.
- Update: The trend page is now accessed through the *NOx 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 NOx configuration values.

Test Release 0.1.00002 – 2020/05/07

NOx monitor

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

Test Release 0.1.00001 – 2020/05/05

NOx monitor

- New function: The NOx sensor status was added.

Test Release 0.0.1 – 2020/04/20

- Initial version

Known Issues

All versions

- After deleting devices in the device configuration, in certain cases they can only be added back to the device configuration after the EasyNOx 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 EasyNOx.
2. Perform the desired software update in the EasyNOx.
3. After the successful update, switch off the EasyNOx by disconnecting it from the power supply.
4. On the memory card of the EasyNOx, there are folders with year numbers for each year the NOx 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. nox0**3**_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 EasyNOx.
6. Switch on the EasyNOx 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 NOx 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 NOx sensor or another device in the EasyNOx system, we recommend additionally making a manual entry in the logbook for confirmation.