

IPETRONIK
AUTOMOTIVE ENGINEERING

NEW FEATURES

▶ M3 CAN-FD Support

- A M3-only system can be used with CAN-FD
- The M2 modules / X modules do not support CAN-FD and will cause interference in a mixed CAN / CAN-FD environment

▶ M-FLOW Trigas FW-Versions INFO

- The Trigas FW version is now shown in the GUI
- Scaling is stored in the pickoff, in the customer's preferred unit

▶ M-SENS 8 Wait time before sending 1st measurement data after startup on CAN-BUS

- Not all customers want to capture the initiation and settling of the input filters at power-up

▶ Other changes / bug fixes

- IPEmotion 2023 R1 is required for all new features to be available
- X module channel settings (sampling rate, data output format, filter) are now preserved after deactivation
- PTP Synchronization of the X-modules via IPEmotionRT can now use the more precise two-step sync

M3 CAN-FD SUPPORT

► Idea

- CAN-FD support for faster data transfer and reduced bus load
- Transmit more signals to a measurement data bus through CAN-FD

► Advantages

- Transfer more measurement signals on the bus compared to standard CAN
- Modern and technically advanced data interface
- Reduction of the number of CAN IDs per module, since one module can be covered by a single CAN ID, even including the internal signals

► Implementation

- Firmware version 01.01.00 or higher required
- Only M3-devices support this function
- Possible data rates
 - 500 kBd
 - 1 MBd
 - 2 MBd
 - 5 MBd

The screenshot shows the 'CAN hardware' configuration window. The 'Device data rate' dropdown menu is open, displaying the following options: Standard CAN, 500 kBd, 1 MBd, 2 MBd (highlighted), and 5 MBd. Other settings visible include: Medium: IPEcan, Serial number: 36400013, CAN bus: CAN-1, Device baud rate: 500 kBd, Bus load: 4,5 %, and Baud rate initialization: checked.

M-FLOW

Idea

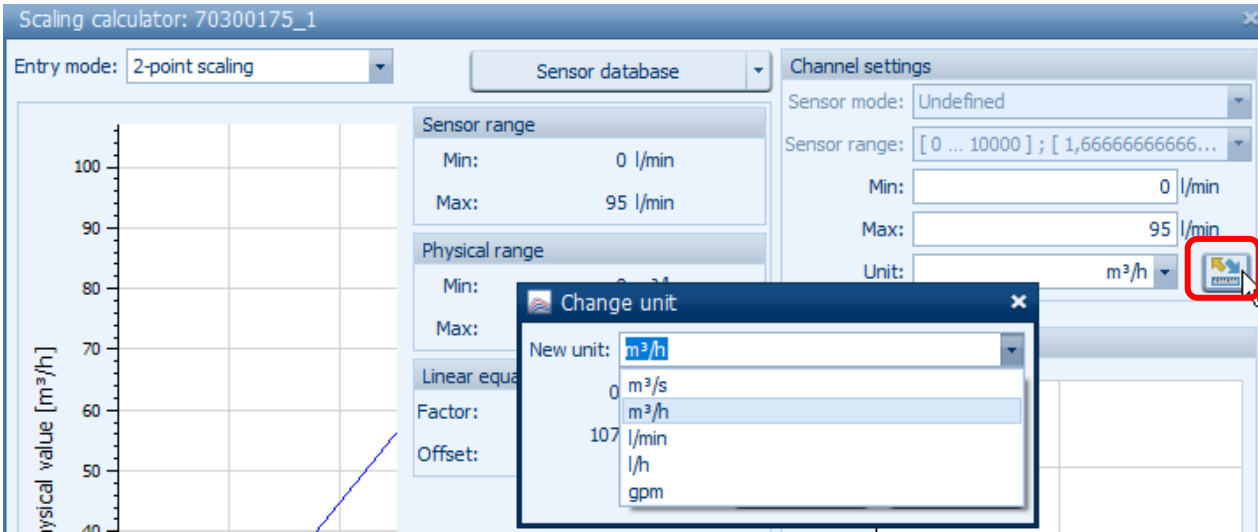
- Scale and unit of measurement stored in the pickoff to simplify use of M-FLOW
- Quick overview of the used hardware and firmware versions

Advantages

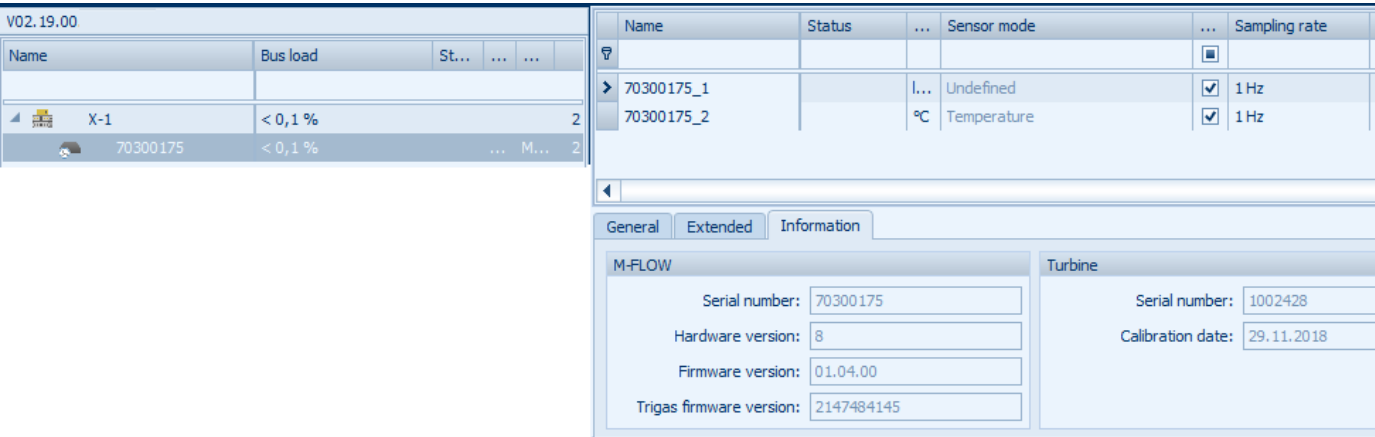
- Scaling is now stored in the pickoff not only in the SI unit, but also in the customer's preferred unit, if set by the user
- M-FLOW and Trigas firmware versions are shown in one place, together with the hardware version and serial numbers

Note

- Did you know, that changing the unit can be done very comfortably via the scaling calculator?



Scaling calculator: Changing Units



Version Information

M-SENS WAITING TIME

► Idea

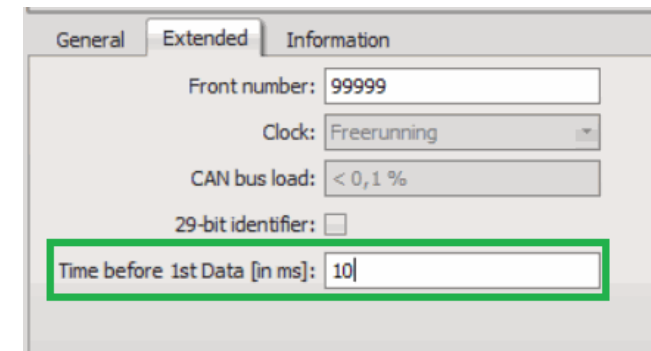
- The wait time for the output of measured values to the CAN bus has been introduced in order not to include possible settling of sensors/measured values in the measured data

► Advantages

- Not for every application is the transient behavior of sensors or filters helpful. With this in mind, we have introduced an option for the M-SENS modules to output measured values to the CAN bus only after the transient period.

► Implementation

- The wait time can be configured by the user either per module or generally for all M-SENS modules
- No wait time is the default (the same as the previous behavior)



General Extended Information

Front number: 99999

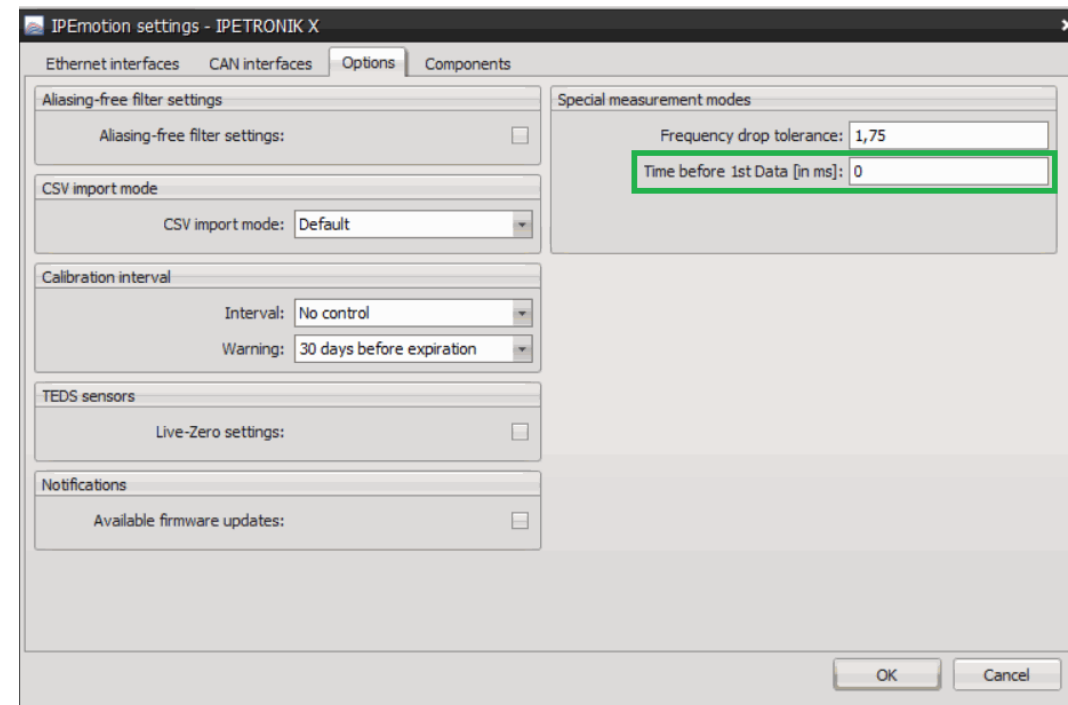
Clock: Freerunning

CAN bus load: < 0,1 %

29-bit identifier: ☐

Time before 1st Data [in ms]: 10

Module: Waiting Time



IPEmotion settings - IPETRONIK X

Ethernet interfaces CAN interfaces Options Components

Aliasing-free filter settings

Aliasing-free filter settings: ☐

CSV import mode

CSV import mode: Default

Calibration interval

Interval: No control

Warning: 30 days before expiration

TEDS sensors

Live-Zero settings: ☐

Notifications

Available firmware updates: ☐

Special measurement modes

Frequency drop tolerance: 1,75

Time before 1st Data [in ms]: 0

OK Cancel

General Options: Waiting time