Jetter automation


# JetMove D203

Version update from V. 2.14 to V. 2.15

We automate your success.

Version 1.00
May 2015 / Printed in Germany

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# 1 Version update - Overview

**Overview - Version 2.15.0.00**

The following table gives an overview of newly added or enhanced features and fixed software bugs:

| Function | New | Enhanced | Fixed |
|---|---|---|---|
| PID controller - Displaying the integral-action component both in a register and by the oscilloscope | | ✓ | |
| Displaying further registers by the oscilloscope | | ✓ | |
| CAN diagnostics | ✓ | | |
| Tracking error after switching the mechanical gear ratio (R194 and R195) | | | ✓ |
| Write access to R219: Control deviation of PID controller | | | ✓ |
| First positioning after power enable | | | ✓ |
| Second axis - Table of jerks | | | ✓ |

# 2 Enhancements

## 2.1 PID controller

**Availability within the oscilloscope**

**PID controller - Displaying the integral-action component both in a register and by the oscilloscope**

(#3576) From version 2.15.0.00 onwards, the integral-action component can be read out of register R259 of the PID controller.

## 2.2 Displaying further registers by the oscilloscope

**PID controller**

**(# 3578 and #3576) From version 2.15.0.00 onwards, the following additional register is displayed by the oscilloscope:**

Register R259: Integral-action component of the PID controller.

## 2.3 CAN diagnostics

**CAN**

**From version 2.15.0.00 onwards, the user can read the CAN status out of the following registers:**

**Register 1x470 – CAN error and status register (read only):**

| Bit no. | Message | Bit state | Description |
|---|---|---|---|
| 8 | FE | | Form error flag |
| | | 1 | A form error occurred on the bus. This means that one or more of the fixed-form bit fields had the wrong level on the bus. |
| | | 0 | No form error detected; the CAN module was able to send and receive correctly. |
| 7 | BE | | Bit error flag |
| | | 1 | The received bit does not match the transmitted bit outside of the arbitration field or during transmission of the arbitration field. A dominant bit was sent but a recessive bit was received. |
| | | 0 | No bit error detected. |

| Bit no. | Message | Bit state | Description |
|---|---|---|---|
| 6 | SA1 | | Stuck at dominant error. The SA1 bit is always at 1 after a hardware reset, a software reset, or a *Bus Off* condition. This bit is cleared when a recessive bit is detected on the bus. |
| | | 1 | The CAN module has not detected a recessive bit. |
| | | 0 | The CAN module has detected a recessive bit. |
| 5 | CRCE | | CRC error |
| | | 1 | The CAN module has received a wrong CRC. |
| | | 0 | The CAN module has not received a wrong CRC. |
| 4 | SE | | Stuff error |
| | | 1 | A stuff bit error occurred. |
| | | 0 | No stuff bit error occurred. |
| 3 | ACKE | | Acknowledge error |
| | | 1 | The CAN module has not received an acknowledge error. |
| | | 0 | All messages have been correctly acknowledged. |
| 2 | BO | | See 2): *Bus Off* state. The CAN module is in *Bus Off* state. |
| | | 1 | There is an abnormal rate of errors on the CAN bus. This condition occurs when the transmit error counter (CANTEC) has reached the limit of 256.<br>During *Bus Off*, no messages can be received or transmitted. The *Bus Off* state can be exited by setting the *Auto Bus On* (ABO) (CANMC.7) bit and after 128 * 11 receive bits have been received. After leaving *Bus Off*, the error counters are cleared. |
| | | 0 | Normal operation |
| 1 | EP | | Error-passive state |
| | | 1 | See 1): The CAN module is in error-passive mode. CANTEC has reached 128. |
| | | 0 | The CAN module is in error-active mode. |
| 0 | EW | | See 3): Warning state |
| | | 1 | One of the two error counters (CANREC or CANTEC) has reached the warning level of 96. |
| | | 0 | Values of both error counters (CANREC and CANTEC) are less than 96. |

**Register 1x471 – CAN transmit error register (read only): 0…255**
**Register 1x472 – CAN receive error register (read only): 0…255**

**New errors, new warning:**
**F44 CAN error passive state**
**F44 CAN *Bus Off* state**
**W10 CAN Warning state**

# 3 Fixed

## 3.1 Tracking error

**Mechanical gear ratio**

**Tracking error after switching the mechanical gear ratio**

(#2761) In earlier versions, tracking error monitoring could be provoked by setting specific gear ratios (R194: Motor revolutions, R195: Load revolutions, R196: Lead screw pitch).

From version 2.14.0.01 onwards, this behavior does not occur any more.

## 3.2 HIPERFACE encoder SFS60

**Displaying the absolute position value**

**Displaying the absolute position at initializing the HIPERFACE encoder**

(#3108) In earlier versions, the wrong absolute position could be displayed when the HIPERFACE encoder SFS60 was being initialized.

From version 2.15.0.00 onwards, this behavior does not occur any more.

## 3.3 PID controller - Control deviation

**R219**

**Write access to R219: Control deviation of PID controller**

(#3575) In earlier versions, the manipulated variable of the PID controller (R225) could be set by write access to R219: Control deviation of the PID controller.

From version 2.15.0.00 onwards, this behavior does not occur any more.

## 3.4 First motion after power enable

| | |
|---|---|
| **Absolute and relative positioning** | **Relative positioning after power enable is possible as well**<br>(#3623) In earlier versions, only absolute positioning was allowed to be carried out after power enable. Relative positioning was not reliable.<br>From version 2.15.0.00 onwards, relative positioning can also be the first motion after power enable. |

## 3.5 Table of jerk values

| | |
|---|---|
| **Jerk limitation** | **Access to the correct table of jerk values**<br>(#3220) In earlier versions, the second axis accessed the table of jerk values that referred to the first axis.<br>From version 2.15.0.00 onwards, this behavior does not occur any more. |

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