JX3-THI2-RTD

Version update

from V. 2.00 to V. 2.01

Version Update

Jetter

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1 Introduction

Introduction

This chapter shows the history of OS versions.

Operating system update - Why?

An OS update lets you enhance the functionality of your device by

- adding new functions
- fixing software bugs
- installing an OS of a specific version after its release

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Updating the operating system

OS file for an operating system update

For an OS update, you will need the following file:

OS file	Description
JX3-THI2-RTD_2.01.0.00.os	Operating system file for JX3-THI2-RTD with version 2.01.0.00.

Downloading the OS file

Jetter AG make OS files available for download from their **homepage http://www.jetter.de**. OS files can be found in the support area. Another option is to follow the quick link on the JX3-THI2-RTD page.

OS update by means of JetSym

To update the OS, proceed as follows:

Step	Action
1	Download the OS file from www.jetter.de.
2	Establish a connection between PC and controller.
3	In JetSym, navigate to menu item "Build", then click "Update OS...".
4	Select the OS file.
5	Depending on the controller and the module the following information has to be entered: ■ Module number ■ Submodule position ■ Slave number ■ I/O module number
6	Start the operating system update by clicking OK.
7	**Result:** Following Power OFF/Power ON the new OS is launched.

JX3-THI2-RTD version update - Overview

V 1.03

The following table gives an overview of newly added features and fixed software bugs in OS version 1.03:

Description	New	Fixed
JX3-THI2-RTD:		
The forcing function returned the value "0" and "Error" when the sensor was unplugged. Now, the forcing function works correctly: it lets you simulate values for a channel which is not in use.		✓
The module JX3-THI2-RTD responds faster to requests from the system bus. If a great number of JX3 modules was connected to a controller, the module JX3-THI2-RTD responded too slow.		✓
The response time after the module is powered up has been reduced.	✓	
Module registers 1100 and 1200 have been expanded from 16 to 32 bits. The following functions have been added: No-load (cable breakage) Short circuit Deficient temperature Over-temperature	✓	

V. 1.04

The following table gives an overview of newly added features and fixed software bugs in OS version 1.04:

Description	New	Fixed
JX3-THI2-RTD:		
If the temperature was below 0 °C, the module JX3-THI2-RTD deleted collective bit 16 in MR 0.		✓
Wrong temperature in three-wire mode, channel 2		✓

V 2.00

The following table gives an overview of newly added features and fixed software bugs in OS version 2.00:

Description	New	Fixed
JX3-THI2-RTD:		
Collective bit 21 in module register 0 has been added	✓	
Changes to MR 1y00	✓	
Changes to MR 1y01	✓	
Module register 1y22 has been added	✓	
Module register 1y30 has been added	✓	
Changes to the features "Limits" and "Slave pointer"	✓	

V 2.01

The following table gives an overview of newly added features and fixed software bugs in OS version 2.01:

Description	New	Fixed
JX3-THI2-RTD:		
Enhanced no-load (cable breakage) and short-circuit detection	✓	
Error detection has been debounced	✓	
Automatic reset of collective bits 17 through 20 in MR 0	✓	
Command 113 automatically resets the error message	✓	
New averaging algorithm for cable resistance measurement	✓	
Bit 16 in MR 1y00 could not be reset		✓

2 New features

Introduction

Jetter AG are continuously striving to add new features and functions to the module JX3-THI2-RTD. By updating your OS you are given the possibility to take advantage of the new functionality. To do so, you need the following ...

- an OS file
- the software tool JetSym
- a connection between PC and controller

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Enhanced no-load and short-circuit detection

Erroneous behavior	Prior to this version, in the case of a cable breakage or short-circuit both bits in MR 1y00, 16 and 17, were set, despite the error being either cable breakage or short-circuit.
Correct behavior	This bug has been fixed as of this version. In the case of cable breakage, the JX3-THI2-RTD sets only bit 16 in MR 1y00. In the case of short-circuit, the JX3-THI2-RTD sets only bit 17 in MR 1y00.

Debouncing the error detection

Purpose of this feature	The JX3-THI2-RTD will not signal an error once the error occurs and is detected by the module, but only when the error occurs again.

Automatic reset of collective bits 17 through 20 in MR 0

New feature	Command 6 from MR 1y01 will reset in MR 1y00 bits 16 through 19 for channel y (y = 1 ... 2). Now, the JX3-THI2-RTD also resets collective bits 17 through 20 in MR 0 automatically. You are no longer required to reset the collective bits 17 through 20 in MR 0 using command 6 from MR 1.

Command 113 automatically resets the error message

New feature	If you enable channel y (y = 1 ... 2) by means of command 113 from MR 1y01, all error messages, that occurred when the channel was disabled, are automatically reset

New averaging algorithm for cable resistance measurement

New averaging algorithm

When the module JX3-THI2-RTD measures the cable resistance R_L in 3-wire mode, averaging is over 16 times 4 values. Between each block of four the module averages 64 sensor readings.

Connecting a calibrator meant that the average value settled in only after (64 + 4) * 16 values.

Now, the averaging algorithm of the module comprises only 1 times 4 values.

3 Fixed software bugs

Introduction

This chapter describes the software bugs which have been fixed in the new OS version.

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Bit 16 in MR 1y00 could not be reset

Symptoms

If bit 16 in MR 1y00 is set, the JX3-THI2-RTD signals cable breakage for channel y (y = 1 ... 2). So far, resetting bit 16 by means of command 6 in MR 1y01 did not work.

Affected versions/revisions

The following versions/revisions are affected by this bug:

Operating system version	2.00.0.00
Hardware revision	Not relevant
Configuration or operating mode	Not relevant

Remedy/workaround

There is no remedy for the affected versions/revisions.

Fixed versions/revisions

Starting from the following versions/revisions this bug has been fixed:

Operating system version	2.01.0.00
Hardware revision	Not relevant
Configuration or operating mode	Not relevant