JX3-THI2-RTD

Version Update
from V. 1.04 to V. 2.00

Version Update

Jetter

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1   Introduction

Introduction

This chapter shows a history of the JX3-THI2-RTD operating system versions.

Why create an operating system update?

An operating system update offers you the following possibilities:

- Expanding the function range
- Clearing software bugs
- Transmitting a specific operating system version, e. g. after releasing an operating system version

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Operating System Update

Operating system ("OS") file for the operating system update

For an operating system update, you will need the following file:

OS File	Description
JX3-THI2-RTD_<to_version>.0.00.os	Operating system file for JX3-THI2-RTD with version <to_version>.0.00.

Download of the OS File

On their **homepage http://www.jetter.de**, Jetter AG supply OS files for download. For getting to the new OS files, please turn to the Support section or to the quick links of the JX3-THI2-RTD module.

Operating System Update in JetSym

Take the following steps to carry out the operating system update:

Step	Action
1	Download the OS file from www.jetter.de
2	Establish a connection between PC and controller
3	Execute the menu item Build > Operating System Update in JetSym
4	Select the OS file
5	Depending on the controller and on the module, the following items have to be specified: ■ Module number ■ Submodule socket ■ Slave number ■ I/O-module number
6	Start the operating system update by OK
7	**Result:** The new operating system starts after Power Off / Power On.

Version Update Overview - JX3-THI2-RTD Module

V 1.03

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

Operating Principle	New	Fixed
JX3-THI2-RTD:		
With the sensor disconnected, the forcing function returned the value 0 and "Error". Now, forcing works properly - values can be simulated for a channel that is not used.		✓
The JX3-THI2-RTD responds faster to system bus requests. If a great number of JX3 modules was connected to a controller, the module JX3-THI2-RTD responded too slowly.		✓
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 module register messages have been added: No-load Short circuit Deficient temperature Overtemperature	✓	

V 1.04

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

Operating Principle	New	Fixed
JX3-THI2-RTD:		
If T was < 0 °C, the JX3-THI2-RTD module would clear collective bit 16 in MR 0.		✓
Temperature measurements in three-wire mode on channel 2		✓

V 2.00

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

Operating Principle	New	Fixed
JX3-THI2-RTD:		
Collective bit 21 of module register 0 is new	✓	
Alterations made to MR 1y00	✓	
Alterations made to MR 1y01	✓	
New module register: MR 1y22	✓	
New module register: MR 1y30	✓	
Alterations made to the limiting values and the trailing indicator	✓	

2   New Features

Introduction

The development department of Jetter AG constantly expands the function range of the JX3-THI2-RTD module. By means of an operating system update, the function range of the module can be expanded. What you need for making an update:

- An OS file
- The software tool JetSym
- A connection between PC and controller

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Collective bit 21 of module register 0 is new

Collective bit 21   Collective bit 21 signalizes that in each channel, there is at least one valid measuring value.

The positive result is that the application program need not wait for averaging to be completed. This way, the machine can process the measured value earlier. This can considerably reduce the time required for initializing.

Alterations made to MR 1y100

Status Bit 7	Status bit 7 "The channel has been calibrated" does not exist any more, because all calibrating values become invalid for all channels at once.
Status Bit 10	There is a new status bit 10 "The line resistance has been compensated".
Status Bit 21	Status bit 21 signalizes that in channel y, there is at least one valid measuring value.
	The positive result is that the application program need not wait for averaging to be completed. This way, the machine can process the measured value earlier. This can considerably reduce the time required for initializing.

Alterations made to MR 1y100

Command 6	By command 6, the following bits are reset in status register 1y00: ■ Bit 16 "No-load of channel y" ■ Bit 17 "Short circuit of channel y" ■ Bit 18 "Deficient temperature of channel y" ■ Bit 19 "Overtemperature of channel y"
Command 70	Command 70 "Reset the trailing indicator for minimum value" is new. This command sets MR 1y20 to the recent measuring value.
Command 71	Command 71 "Reset the trailing indicator for maximum value" is new. This command sets MR 1y21 to the recent measuring value.
Command 72	Command 72 "Reset the trailing indicator for minimum and maximum value" is new. This command sets MR 1y20 and MR 1y21 to the recent measuring value.
Command 111	Command 111 "Re-acquisition of the line resistance" does not exist any more. The JX3-THI2-RTD module now continuously re-acquires the line resistance.
Command 113	Command 113 "Activate channel" is new. This command complements command 112 "De-activate channel". Commando 113 activates channel y, which was de-activated by command 112 before.
Commando 162	Command 162 "Display of potentiometer value" replaces commands 180 and 181, which do not exist any more.

New Module Register: MR 1y22

MR 1y22 "Supply Cable Resistance R_L"

In MR 1y22 "Supply Cable Resistance R_L" the currently measured supply cable resistance is stored now.

New module register: MR 1y30

MR 1y30 "Default Value at Error"	Under fault condition, the JX3-THI2-RTD module now transmits the value set in MR 1y30 "Default Value at Error" to the controller to be displayed.
Reset Value	The reset value of the module register is -500.0. Earlier, it was 0. The value -500.0 has got the advantage, that it is invalid in all measuring modes. This way, the application program can be used for locating the errors.

Limits and Slave Pointers

Reference to Currently Displayed Measuring Values

The following limit value and trailing indicator registers refer to the currently displayed value selected by means of command 160, 161 oder 162:

- MR 1y08 "Lower Limit of Temperature Input y"
- MR 1y09 "Upper Limit of Temperature Input y"
- MR 1y20 "Trailing Indicator Minimum Value of Temperature Input y"
- MR 1y21 "Trailing Indicator Maximum Value of Temperature Input y"

Possible Measuring Values to be Displayed

By means of command 160, the measured temperature value can be selected to be displayed.

By means of command 161, the measured resistance value can be selected to be displayed.

By means of command 162, the measured potentiometer value can be selected to be displayed.