



JX2-SV1
Version Update
from Version 1.33 to Version 1.40



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Table of Contents

1	Introduction	4
2	Expansions	6
2.1	Technological function "Winding"	6
2.2	Technological function "Position control to the position of another module"	6
2.3	Position controller: Speed pre-control	6
3	Eliminated Software Bugs	7
3.1	Technological function "Winding"	7
3.2	Position control mode 0: Digital offset	7

1 Introduction

Version Update - Survey			
Version	Function	upgraded	corrected
JX2-SV1 V1.24	<p>New technological function "Flying Shear"</p> <p>Registers for the positioning offset for technological functions in master-slave mode: Registers 1x139 and 1x595</p> <p>Register for speed limitation in the "follower control" technological function: Register 1x503</p> <p>Releasing the slave from master-slave operation by means of the positioning command in the technological function "follower control"</p> <p>Overflow problem in the technological function "follower control", variant: Table mode</p> <p>Overflow problem in the technological function "follower control", if an absolute encoder is used by the master.</p> <p>A tracking error has occurred during the reference run</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p> <p>✓</p>
JX2-SV1 V1.25	Technological function "Flying Shear"; immediate cutting.	✓	
JX2-SV1 V1.33	<p>Technological function "Winding"</p> <p>The position of the spindle on the circumference is displayed</p> <p>Offset of the traversing axis</p> <p>"Jump at the Edge" function</p> <p>Malfunctioning concerning the "Void Increments" function</p> <p>The winding gradient during the winding process equals zero</p> <p>Technological function "Follower Control", table mode, handling of overflows</p> <p>If a resolver error occurs, enable is switched off</p>	✓	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>
JX2-SV1 V1.40	<p>Technological function "Winding"</p> <p>The mathematical rounding in the turns counter can be switched off</p> <p>Digital winding functions properly again</p> <p>Technological function "Position control to the position of another module"</p> <p>Encoder can be switched during position control</p>	<p>✓</p> <p>✓</p>	<p>✓</p>

	Position controller: The speed pre-control is scalable Digital offset in position feedback mode 0	✓	✓
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2 Expansions

2.1 Technological function "Winding"

Mathematical rounding in the turns counter

Up to now, the turns counter has already been incremented after a half turn. The reason is that the turn is still counted, if the spindle comes to a hold only very short shortly before the end of the winding process.

As of this version it is possible, though, to switch off the mathematical rounding function. Then, the turns counter will not be incremented before even the last increment of the winding has been completed.

For this function, bit 8 in register 1x104 has been provided:

Bit 8 = 0 The turns counter is incremented after half a turn
 Bit 8 = 1 The turns counter is not incremented before the turn has been completed

2.2 Technological function "Position control to the position of another module"

Up to now, switching the encoder over to positioning (either an encoder, which is directly connected to the module, or an encoder which is read out via another module) can only be carried out, if the motion system has been de-energized.

From now on, this can also be carried out in jerk-free manner during position controlling.

Please note, though, that due to various encoder resolutions and controlled loops, a greater short-time upset may result.

2.3 Position controller: Speed pre-control

The speed pre-control is scalable now.

Up to now, it has only been possible to switch it off totally (by setting bit 23 in the status register (register 1x100)).

In register 1x555, the influence of the speed pre-control can now be defined in per thousand. Value 1000 stands for complete integration of the speed pre-control. Accordingly, at value 500, the speed pre-control in position feedback control is only integrated half (500 ‰).

Value zero stands for switching off the speed pre-control.

Register 1x555 Scaling of the Speed Pre-Control	
Function	Description
Read:	Present parameter value
Write:	New value of the parameter
Value range:	0 .. 1000 (‰)
Value after reset:	1000

3 Eliminated Software Bugs

3.1 Technological function "Winding"

In the "digital winding" function, the axis would exceed the edge in a fast, uncontrolled motion before finally reversing. The jump would be the greater, the greater was the distance between the edges.

3.2 Position control mode 0: Digital offset

If, in this mode, very long deceleration ramps were driven, it was possible that the digital offset (register 1x108) would not become effective any more.