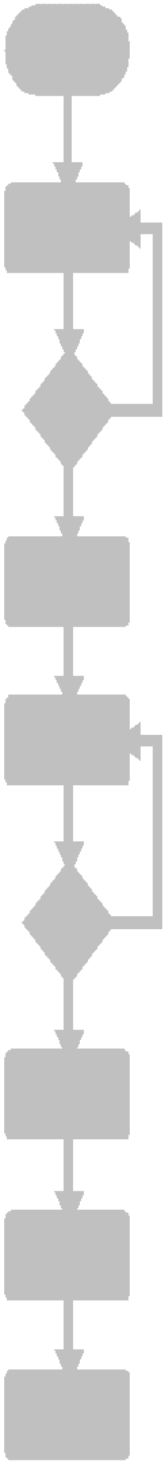

JetMove 105/108
Version Update
from V2.11 to V2.12

Jetter

Revision 1.01

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1 Introduction

Overview of Version Updates			
Version	**Function**	**New**	**Fixed**
V. 2.09.0.0	DC motor control	✓	
	2-phase stepper motor control	✓	
	Resolver optimizing		✓
V. 2.10.0.0	Triggering to float registers	✓	
	Incremental encoder	✓	
	Dead time compensation for trigger input	✓	
	Trailing indicator for tracking error	✓	
	Command 14	✓	
	R432 CamChangeType	✓	
	DC motor control	✓	
	Holding current for torque deactivation	✓	
	2-phase stepper motor control	✓	
	Torque-controlled shut-off		✓
	Negative leading axis difference in the table		✓
	Referencing with MC gantry axis		✓
	Reference position with decimal places		✓
	Commutation finding		✓
	Resolver optimizing		✓
	Overvoltage error		✓
	Machine referencing to the reference switch,		✓
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	Current reduction		✓
	Hold flag		✓
	Capture mode		✓
	Virtual encoder		✓
	Osci trigger		✓
V. 2.11.0.0	Limit switch monitoring	✓	
	Table configuration	✓	
	Controlling a linear motor made by LinMot	✓	
	Current pre-control	✓	
	Set and Clr registers for capture command	✓	
	Current setpoint filter	✓	
	Oscilloscope function: Pre-trigger	✓	
	Analog input deactivation	✓	
	Capture values influenced by dead time		✓
	"Ready for Operation" flag		✓
	Oscilloscope		✓

Overview of Version Updates			
Version	**Feature**	**New**	**Fixed**
V. 2.11.0.0	Position overflow		✓
	Oscilloscope		✓
	"Reference Set" flag		✓
	Change of positioning speed		✓
	Oscilloscope		✓
	System bus initialization by JetControl 3xx		✓
	Positioning		✓
	Capture edge detection		✓
V. 2.12.0.0	JetMove 108	✓	
	Motor cable test	✓	
	I²t-monitoring of the supply infeed	✓	
	Evaluation at the end of torque-controlled shut-off	✓	
	Software limit switches during referencing		✓
	Step change when switching into the same		✓
	Emergency stop within a deceleration ramp		✓

2 New Features

2.1 JetMove 108

(# 1077) As of version 2.11.0.02, JetMove 108 can be operated at a continuous rated current of 8 A (peak current 16 A). The rated output amounts to 384 W.

2.2 Motor cable test

(# 1077) As of version 2.11.0.02, the motor cable test can be activated at the first enable. For this test, hardware revision 2 is required.
The motor cable test has to be activated in operating mode (register 540).

Register 988: Hardware Revision	
Function	**Description**
Read	Read out as-is hardware revision
Type / unit	Integer
Value after reset	1 : Motor cable test cannot be carried out >= 2 : Motor cable test can be carried out

2.3 I²t-monitoring of the supply infeed

(# 1077) As of revision 2.11.0.02, I²t monitoring of the supply infeed is possible.
I²t monitoring of the supply infeed has been described in "JetMove 2xx at JetControl".

2.4 Evaluation at the end of torque-controlled shut-off

(# 1056) When the speed-controlled shut-off threshold is reached, dwell time starts. This dwell time is controlled by the application program. During dwell time additional evaluations can be carried out. First, a delay is programmed to translate the stopping process into dwell. Then, the RMS and peak values of motor current, and RPM peak value are evaluated. Evaluation may take a maximum of 4 seconds. Command 29 is issued to terminate evaluation.

This feature is available as of version 2.11.0.02.

Register 660: Delay until Evaluation	
Function	**Description**
Read	As-is delay time
Write	New delay time
Type / unit	Integer / [ms]
Value range	0 ... 65535 [ms]
Value after reset	10 [ms]

When the speed-controlled shut-off threshold is reached, the program waits for the delay time until additional evaluation starts.

Register 661: Evaluation: Motor Current RMS Value	
Function	**Description**
Read	After evaluation this register contains the motor current RMS value during dwell time.
Write	Illegal
Type/Unit	Float / [A_{rms}]
Value after reset	0 [A_{rms}]

When the speed-controlled shut-off threshold is reached, the program waits for the delay time until additional evaluation starts.

Register 662: Evaluation: Peak Current Value	
Function	**Description**
Read	After evaluation this register contains the motor current peak value during dwell time.
Write	Illegal
Type / unit	Float / [A_{rms}]
Value after reset	0 [A_{rms}]

Register 663: Evaluation: RPM Peak Value	
Function	**Description**
Read	After evaluation this register contains the RPM peak value during dwell time.
Write	Illegal
Type / unit	Float / [U/min]
Value after reset	0 [RPM]

3 Corrections

3.1 Monitoring of software limit switches during machine referencing

(# 1002) During machine referencing monitoring of software limit switches was disabled by JetMove. Nevertheless, it could happen that error 17 was issued if the axis exited the range of the software limit switches during referencing.

As of revision 2.11.0.01, this problem has been resolved.

3.2 Step change when switching into the same table

(# 1000) If the drive was operated at a master axis speed of R189 > 0 and the same table was activated by means of command 46, the value in register R434 PosDiff.Slave changed, so far. This change was as great as the product of speed R189 * table gradient at the coupling point * scan time Ts (= 2 ms).

As of revision 2.11.0.01, this problem has been resolved.

3.3 Emergency stop within a deceleration ramp

(# 1043) The deceleration ramp of a non-linear positioning movement can only be exited starting a new linear positioning.

So far, for modulo axes this limitation resulted in the following effect:
If the braking distance is noit sufficient, JetMove aborts the movement with constant deceleration. The axis is then located in front of or behind the target position. Therefore, the JetMove moves the axis to the original target position.

This behavior is not acceptable for emergency stop applications and has been changed as of version 2.11.0.01. This change includes the following:

Depending on the required or available braking distance the setpoint generator adds further modulo turns in the direction of movement. This way, the axis comes to a halt exactly at the target position.