JetMove 600

Technical Information

Version Update

V1.17 - V1.18

Jetter

JETTER AG reserves the right to make alterations to its products in the interest of technical progress. These alterations need not be documented in every single case.

This manual and the information contained herein has been compiled with the necessary care. JETTER AG makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantibility and fitness for a particular purpose. JETTER AG shall not be liable for errors contained herein or for incidental or consequential damage in connection with the furnishing, performance, or use of this material.

The brand names and product names used in this hardware description are trade marks or registered trade marks of the respective title owner.

Table of Contents

1 Introduction

Versions-Update Overview			
Version	**Funktion**	**erweitert**	**korrigiert**
V1.18	New register: 1x000 „Control Register"	✓	
	Special Limit Switch Function	✓	
	IN-POS-bit in register 1x100 „Drive Status1"		✓

2 Modifications / New Functions

2.1 New register 1x000 "Control Register"

Register 1x000 Control Register	
Function	**Description**
Read	Present control information.
Write	Set/reset modes or switch on/off functions
Value Range	bit-oriented, 24 Bit
DRIVE	-
ASCII	-
Value after reset	0

Bit	Description
00	**RESERVED**
01	**RESERVED**
02	**RESERVED**
03	
04	
05	
06	
07	
08	
09	
10	
11	
12	
13	

14	
15	
16	
17	
18	
19	RESERVED
20	**1 = Special Limit Switch Function** 1 = Special function is switched on 0 = Special function is switched off Please refer to chapter "Special Limit Switch Function".
21	RESERVED
22	RESERVED
23	RESERVED

2.2 Special Limit Switch Function

This function can be used if only the following hardware signals are given for hardware operation range check:

- 1 signal for reference switch as shown below (half of the operation range the signal is low (0), for the other half the signal is high (1))
- 1 signal for negative and positive limit switches as shown below (if either one of the limit switches is active the signal is high (1), if non the signal is low(0))

Operation range:

Reference
signal:

Limit switch
signal:
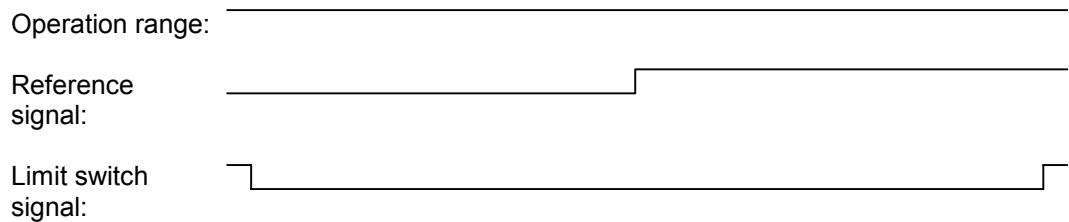
For this case the common limit switch functions PSTOP+NSTOP (function 6) for a digital input of the drive can be used. The drive then will automatically execute an emergency stop if one of the limit switches is going active. But it is not possible to move the axis out of the limit switch zone except manually, because any positioning in positive or negative direction will not be allowed since the drive does not know which limit switch is active.

To enable the drive to move the axis out of the limit switch zone the special limit switch function can be used. This function simply reads two of the 4 digital inputs and sets the available digital outputs on the drive depending on the two inputs. The two digital outputs than provide a positive and a negative limit switch signal which are used by the remaining two digital inputs with the two standard functions PSTOP and NSTOP. For this standard functions the limit switch signals are low active.

Function table

Digital Input 1   = I1 = Reference signal (high active)
Digital Input 2   = I2 = Limit switch signal (high active)
Digital Output 1 = O1 = Positive limit switch signal
Digital Output 2 = O2 = Negative limit switch signal

I1	I2	O1	O2
L	L	H	H
H	L	H	H
L	H	L	H
H	H	H	L

H = HIGH voltage level
L = LOW voltage level

To use the function the follwing hardware and software setup has to be done:

Hardware setup:

- The reference signal (high active) has to be connected to digital input 1
- The limit switch signal (high active) has to be connected to digital input 2
- Wire between digital output 1 and digital input PSTOP (input 3)
- Wire between digital output 2 and digital input NSTOP (input 4)

The digital outputs are 24V open collector outputs, therefore two pull-up resistors with a value of 4KOhm have to be connected from 24V to each of the output connectors. In the function table above 'H' means connector of output is an open collector (24V are measured at the connector), 'L' means connector of ouput is connected to digital ground (DGND is measured at the connector).

Software setup:

- Setup the function to OFF for digital output 1
- Setup the function to OFF for digital output 2
- Setup the function to OFF for digital input 1
- Setup the function to OFF for digital input 2
- Setup the function to PSTOP for digital input PSTOP (input 3)
- Setup the function to NSTOP for digital input NSTOP (input 4)
- Set bit 20 of the register 1x000 "Control Register". The function will be acitve as long as the bit stays 1

Attention:
After changing the functions for digital inputs and outputs the amplifier has to be reset.

Attention:
The special limit function only works correct while point to point positioning and endless positioning.

3 Error correction

3.1 IN-POS-bit

Problem-Effects:
When the IN-POS-bit in register 1x100 "Drive Status1" is used it could happen that the positioning immidiately after the start was indicated as finished through the IN-POS-bit (axis in destination window) even the axis did not move at all.

Problem-Analyse:
The IN-POS-bit was not reset fast enough after a start command for a positioning.

Solution:

The IN-POS-bit is reset after a start command for a positioning before the next possible reading or writing of a register of the JetMove 600 can be executed by the CPU.