JX2-SM2

Quick Reference

Rev. 1.14.1

Register pattern:

1xyzz	1 (fix) x = Module number (2 ... 7) y = Axis number (1 ... 2) zz = Register number (00 ... 99)

Registers:

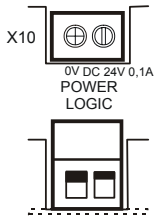
1xy00	Status register	
	Bit 0:	Referenced?
	Bit 1:	Has AXARR position been reached?
	Bit 2:	Has the axis reached the destination window?
	Bit 4:	Is negative limit switch active?
	Bit 5:	Is positive limit switch active?
	Bit 6:	Is reference switch active?
	Bit 7:	Is/was software limit switch active?
	Bit 8:	Is/was hardware limit switch active?
	Bit 12:	Referencing error?
	Bit 13:	BUSY (for commands 9-12, 42 and register 1x143)
	Bit 14:	Software limit switch enable (activation by setting the bit)
	Bit 16:	Axis is within decelaration ramp
	Bit 23:	Speed pre-control (activation by resetting the bit)
1xy01	Command Register	
	0	Stop with deceleration ramp
	3	Set reference
	4	Clearing the reference
	5	Axis stop without decelaration ramp
	9	Automatic machine referencing, ->+, observing the reference switch
	10	Automatic machine referencing, ->-, observing the reference switch
	11	Automatic machine referencing, ->+, ignoring the reference switch
	12	Automatic machine referencing, ->-, ignoring the reference switch
	17	Relative positioning - ON
	18	Absolute positioning - ON (Default)
	19	Continuing the interrupted positioning
	20	Relative positioning with start input - ON
	21	Relative positioning w/ start input - OFF
	22	Stop at the reference position (default)
	23	No stop at the reference position
	30	Establishing communication between 2 modules
	42	Clearing communication between 2 modules
	44	Follower function ON
	45	Follower function OFF
	46	Function "Follower via Table" ON
	47	Function "Follower via Table" - OFF
	52	Time table mode - ON
	53	Time table mode - OFF
	54	At the end of the table the actual slave position is not set to the first table value
	55	Resetting the actual position - slave (default)
	56	Starting endless motion in positive direction
	57	Starting endless run in negative direction
	66	Starting the winding mode
	67	Stopping the winding mode
	68	Layer traversing in winding mode
	69	Continuous traversing in winding mode
1xy02	Set Position	-8.388.608 ... +8.388.607
1xy03	Max. stepping rate	1 ... 250.000
1xy04	Polarities	0 ... 7
1xy05	Acceleration ramp	1 ... 32.767
1xy06	Deceleration ramp	1 ... 32.767
1xy07	Destination window	0 ... +8.388.607
1xy08	Start / Stop frequency	1 ... 5.000
1xy09	Present actual position	-8.388.608 ... +8.388.607
1xy11	Present stepping rate	0 ... 250.000
1xy14	Position of positive software limit switch	-8.388.608 ... +8.388.607
1xy15	Position of negative software limit switch	-8.388.608 ... +8.388.607
1xy21	Scaling factor - max. stepping rate	1 ... 255
1xy23	Resolution of drive system	0 ... 32.767
1xy43	Number of the master axis	
	Module JX2-SM1D:	0, 21, 31, 41, 51*, 61**, 71**
	Modules JX2-DIMA, JX2-SV1, JX2-SM2:	0, 21, 22, 31, 32, 41, 42, 51*, 52*, 61**, 62**, 71**, 72**
	*: Possible only for NANO-D and JetControl 246. **: Possible only for JetControl 246.	
	Counter module JX2-CNT:	102 - 124***
	***: The last two figures denote the module number of JX2-CNT, e.g. 105 = module number 05. Addresses 117 through 124 are possible only with NANO-D and JetControl 246.	
1xy67	Relative Positioning with Start Input	-8.388.608 ... +8.388.607
1xy68	Absolute position of the latest positioning cycle	-8.388.608 ... +8.388.607
1xy69	Pulse length of STEP signal	8 ... 65.535
1xy95	Actual position of the master axis	-8.388.608 ... +8.388.607
1xy96	Speed of the master axis	
	Modules JX2-DIMA, JX2-SV1, JX2-SM2:	-32.768 ... +32.767
	Counter module JX2-CNT:	-8.388.608 ... +8.388.607
1x199	Version number of the operating system	0 ... +8.388.607
	Follower Control	
1xy10	P-gain of the position feedback controller	0 ... 32.767
1xy44	Overflow position for endless positioning	0 ... +8.388.607
1xy52	Adjustment of the number of increments per revolution	0 ... +8.388.607
1xy53	Pointer to a table element	0 ... +7.499
1xy54	Value of the table element	-8.388.608 ... +8.388.607
1xy55	Total number of table elements	1 ... +7.500
1xy56	Factor between master and slave	0 ... 32.767
1xy57	Divisor between master and slave	0 ... 32.767
1xy58	Max. positive position of the master axis	-8.388.608 ... +8.388.607

1xy59	Max. negative position of the master axis	-8.388.608 ... +8.388.607
1xy60	Limitation of acceleration	0 ... 65.535
1xy78	Increasing the value of register 1xy95 by multiples of 0.5 ms	1 ... 65.535
1xy85	Overflow position for endless and relative positioning	0 ... +8.388.607
	Winding mode	
1xy56	Travel distance of a traversing axis during one spindle revolution	-32.768 ... +32.767
1xy57	Number of increments carried out by the spindle axis referring to one spindle revolution	1 ... 32.767
1xy79	Increased resolution of the winding gradient	0 ... 8.388.607
1xy88	Void increments	0 ... 8.388.607
1xy89	Changing the winding gradient at the edge of the coil	0 ... 8.388.607
1xy90	Counter of layers	-8.388.608 ... +8.388.607
1xy91	Counter of windings	-8.388.608 ... +8.388.607
1xy92	Number of windings to be carried out in relation to the last spindle position	-8.388.608 ... +8.388.607
1xy93	Positive edge	-8.388.608 ... +8.388.607
1xy94	Negative edge	-8.388.608 ... +8.388.607
	Capture Function	
1xy86	Enable of the capture function	0 ... 3
1xy87	Acquired position value	-8.388.608 ... +8.388.607
	Automatic shift of the reference point	
1xy71	New position value after shifting the reference point	-8.388.608 ... +8.388.607

Description of Connections

Power supply of the module:

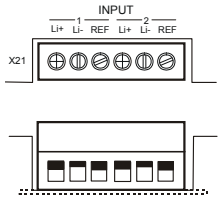
2-pin terminal block (Phoenix) Contact Spacing: 5.08



Terminal X10	Signal	Comment
0V	GND	connected to the ground potential
+24V	24 V	

Control inputs:

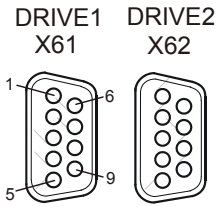
6-pin terminal block (Phoenix) Contact Spacing: 5.08



Terminal X21	Signal	Comment
Li +	DC 24V / 2.8 kΩ	Positive limit switch
Li -	DC 24V / 2.8 kΩ	Negative limit switch
REF	DC 24V / 2.8 kΩ	Reference switch

DRIVE outputs:

Female connector SUB-D, 9 pins, per output:

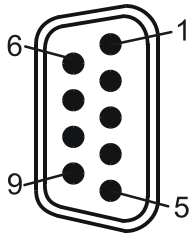


Pin	Signal
1	Step + (RS-422)
2	Dir + (RS-422)
3	Step (Open Collector)
4	0 V
5	5V output (50 mA)
6	Step - (RS-422)
7	Dir - (RS-422)
8	Dir (Open Collector)
9	0 V

JETTER System Bus:

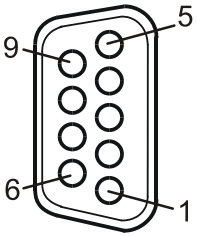
JX2 module are interconnected through the JETTER system bus.

Input - Male SUB-D connector, 9 pins:



Pin	Signal	Comment
1	CMODE0	
2	CL	
3	GND	
4	CMODE1	
5	TERM	
6	Not assigned	
7	CH	
8	Not assigned	
9	DC 5V	

Output - Female connector SUB-D, 9 pins:



Pin	Signal	Comment
1	CMODE0	
2	CL	
3	GND	
4	CMODE1	
5	TERM	
6	Not assigned	
7	CH	
8	Not assigned	
9	DC 5V	