ARDUINO MICRO PINS associated functions

The following list is the map of the hardware signals and of their function used in this prototype and is valid with ARDUINO MICRO.
Is possible use other version of ARDUINO board, but must be look for the correct pins position of the corresponding signal.

ARDUINO MICRO PINS associated functions (1)

Name on ARDUINO MICRO		*Name on schematic*	*Associated function on card*
PIN 1	*MOSI*	*Not used*	
PIN 2	*RXLED/SS*	*Not used*	
PIN 5	*RESET*	*Not used*	
PIN 6	*GND*	*GND*	*Power and signal ground reference*
PIN 10	*D5*	*Not used*	
PIN 19	*3V3*	*Not used*	*Output internal 3,3 V supply of ARDUINO MICRO*
PIN 27	*Not connected*	*Not used*	
PIN 28	*Not connected*	*Not used*	
PIN 29	*+5V*	*Not used*	*This voltage is generated by internal linear regulator of ARDUINO MICRO. The 5V and +5VHALL generated by linear regulator present on the card don't must be wired with this pin*
PIN 30	*RESET*	*Not used*	
PIN 31	*GND*	*GND*	*Power and signal ground reference*
PIN 32	*VI*	*Vin*	*Input 12 V supply for ARDUINO MICRO*
PIN 33	*MISO*	*Not used*	
PIN 33	*SCK*	*Not used*	

Name on ARDUINO MICRO	Name on schematic	Associated function on card
========== MASTER > SLAVE COMMUNICATION EXPANSION==========		
Signals reserved for expansion serial communication between MASTER and SLAVE controllers		
PIN 3	D1/TX	D1/TX	Reserved for communication MASTER <>SLAVE
PIN 4	D0/RX	D0/RX	Reserved for communication MASTER <>SLAVE
PIN 7	D2/SDA	TX EN	Reserved for communication MASTER <>SLAVE
PIN 9	D4/PWM8	NET_ALL INPUT	Reserved for communication MASTER <>SLAVE
PIN 13	IO8	ADD_NODE_1	Reserved for communication MASTER <>SLAVE
PIN 15	IO10/PWM16	ADD_NODE_2	Reserved for communication MASTER <>SLAVE
PIN 18	IO13/PWM10	READY	Reserved for communication MASTER <>SLAVE
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Name on ARDUINO MICRO	Name on schematic	Associated function on card
========== POWER FAIL DETECT ==========		
Signals reserved for expansion serial communication between MASTER and SLAVEs		
PIN 8 D3/SCL	PF_INT	Power Fail signal Interrupt INT1 (INPUT). This signal is generated by a circuit connected directly to the terminal pin of the +24 Vdc input. During power down the residual time to execute the function of data save is proportional to the electrolytic capacitor values. The time for each save operation (1 byte) require minimum 3,3 ms. A digital transition from high to low level alarm interrupt routine 0, routine PowerFail()

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Name on ARDUINO MICRO	Name on schematic	Associated function on card
========== MOTOR COMMAND SIGNALs ==========		
PIN 11	D6/PWMH	Reverse — Digital command (OUTPUT)to driver coil RL1 (transistor)
PIN 12	D7	Forward — Digital command (OUTPUT)to driver coil RL2 (transistor)
PIN 14	IO9/PWM16	PWM 1 — Pulse Wave Modulation Motor command signal (OUTPUT). The output frequency is 2 kHz (with modifying on TIMER 1)
PIN 21	A0	CUR_MONITOR — Analog signal. The voltage level is proportional to rms value of the current flowing into the coil of the motor

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========== SENSOR HALL SIGNALs INTERFACE ==========		
PIN 16	IO11	ENC_B	Digital state (INPUT) sensor hall 2 (GREEN wire of the CONCENS)
PIN 17	IO12	ENC_A	Digital state (INPUT) sensor hall 1 (YELLOW wire of the CONCENS)

Name on ARDUINO MICRO	Name on schematic	Associated function on card
========== ABSOLUTE POSITION SENSOR INTERFACE ==========		
Signals reserved for actuator equipped with sensor absolute linear position (potentiometer)		
PIN 20	AREF	V_REF_POS	Reference output voltage supply for potentiometer sensor
PIN 22	A1	ABS_POS	Reserved for analog signal position

Name on ARDUINO MICRO	Name on schematic	Associated function on card
========== MISCELLANEUS DIGITAL INPUT COMMAND ==========		
Digital signals reserved for command operator interface		
PIN 23	A2	OP_MODE_0	Forward digital signal (INPUT)
PIN 24	A3	OP_MODE_1	Reverse digital signal (INPUT)
PIN 25	A4	OP_MODE_2	Calibration (Homing) digital signal (INPUT)
PIN 26	A5	OP_MODE_3	MANUAL/CYCLE (LOCAL/NETWORK) digital signal (INPUT)

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