midi ingénierie

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DMAC and microMAC
Commands Abstract

Commands and variables	Short form	Description
General		
MODULE_RESET (ALL)	MRE	Module software reset. Clears all memory range if ALL is specified
POWER (ON)(OFF)❶	POW	Motor power on / off
POWER (ON)(OFF) (SC)❷	POW	Motor power on / off
READ	REA	Read variables (user or system)
READ_VERSION	RV	Read module information and reference (software version)
Setup		
SET_ADDRESS add	SAD	Definition of module address
SET_BAUDRATE v	SBA	Serial communication speed
#LINE_DELAY❶	LDE	RS485 line turnaround delay (in µs)
Paramètres		
#HIGH_SPEED	#HSP	Max allowed speed
#LOW_SPEED	#LSP	Start/End speed
#ACCEL_TIME❶	#ATI	Acceleration ramp duration in ms
#DECEL_TIME❶	#DTI	Deceleration ramp duration in ms
#RAMPING_TIME❷	#RTI	Speed Ramp duration in ms (same for acceleration and deceleration)
#TORQUE_RATIO❷ #LOW_TORQUE	#TRA #LTO	Motor torque (in percentage of nominal torque) Standby motor current
#POSITIVE_END #NEGATIVE_END	#PEN #NEN	Software positive end Software negative end
#STATUS #ERROR	#STA #ERR	Module status register Module error register
Modes		
STANDBY_MODE (ON)(OFF)❷	SMO	Automatic standby mode
OPTIMIZED_CURRENT (ON)(OFF)❶	OCU	Optimized motor current management
HARD_ENDS (ON)(OFF) (POS)(NEG) (HALT)(STOP) SOFT_ENDS (ON)(OFF)(HALT)(STOP) INVERSE_POLARITY (ALL)(OFF)(IN)(OUT)	HEN SEN IPO	Hardware ends enable and behaviour Software ends enable Inputs and Outputs polarity
S_CURVE (ON)(OFF)❶	SCU	Speed profile (trapezoïdal / sinus)
Mouvements		
MOVE_TO P	MTO	Moves to absolute position P
MOVE_ON D	MON	Moves by offset D
MOVE_SPEED S	MSP	Moves at constant speed S
HALT	HAL	Stop without deceleration
STOP	STO	Stop with deceleration
#POSITION	#POS	Absolute motor position
#PROFILE_SPEED	#PSP	Instantaneous speed (computed)
#SPEED❶	#SPE	Instantaneous speed (measured)
I/Os		
#OUTPUT	#OUT	Logical outputs
#INPUT	#INP	Logical inputs
#INPUT_ANALOG	#IAN	Analog input (mV)
#SUPPLY_VOLTAGE	#SVO	Module supply voltage (mV)
#TEMPERATURE❷	#TEM	Internal case temperature
#CPU_TEMPERATURE❶	#CTE	Microcontroller temperature
#OUTPUT_CONFIG❶	#OCO	Busy et Error routed to IN1 and IN2

❶ Implemented on DMAC only
❷ Implemented on microMAC only

Commands et variables	Short form	Description
Variables		
#V1 to #V4❷	#Vn	User variables
#M1 to #M4❷	#Mn	User memorized variables
#V1 to #V32❶	#Vn	User variables
#M1 to #M8❶	#Mn	User memorized variables
Sequencer		
START_SEQ ln	SSE	Starts sequence execution at line ln
#ON_RESET	ORE	Automatic execution at reset at line ln (0 = off)
#LINE	#LIN	Sequence line currently being executed
STEP ln❷	STE	Debug step execution of sequence line ln
OPEN_SEQ CLOSE_SEQ	OSE CSE	Edit sequence mode open Edit sequence mode close
WAIT t	WAI	Delay in milliseconds
JUMP ln	JUM	Jump to line ln
JUMP_REL n	JRE	Jump by line offset n
IF … JUMP	IF/JUM	Conditional jump
IF … JUMP_REL	IF/JRE	Conditional relative jump (offset)
CALL ln	CAL	Sub-function call
RETURN	RET	Return from sub-function
NOP	NOP	No operation
#TIMER_1 to #TIMER_3❶	#TIM	Timer counts down to 0 (milliseconde)

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