MicroBasic Scripting

One of the controller's most powerful and innovative features is the ability for the user to write programs that are permanently saved to the EEPROM and run from the controller's flash memory.
This capability is the equivalent of combining the motor controller functionality with a PLC or Single Board Computer directly in the controller.

Scripts can be simple or elaborate and can be used for various purposes:

- Complex sequences to chain motion sequences based on the status of analogue/digital inputs, motor position or other measured parameters.
- Adapt parameters at runtime that can read and write most of the controller's configuration settings.
- Create new functions for adding functions or operating modes that may be needed for a given application.
- Autonomous operations can be fully written and performed.

Script Structure and Possibilities

Scripts are written in a Basic-Like computer language and because it is literal syntax then it is very close to the every-day written English. The language is very easy to learn and simple scripts can be written in minutes. The MicroBasic scripting language also includes support for structured programming, allowing fairly sophisticated programs to be written. Several shortcuts borrowed from the C++ language are also included in the scripting language and may be used to write shorter programs.

Go to http://www.motiontech.com.au/wp-content/uploads/2017/11/MT-Scripting-Data-Sheet-241017.pdf for more complete details.

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MTS2

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MTRG

Motion Technologies LV Brushless DC Motor Controllers

Model number	Nbr axis Channels	Volts DC Supply	Cont. Amps/Ch	Peak Amps/Ch	Sensorless FOC[1]	Cooling	Frame
MTS1330[4]	1	30	20	30	No	Conduction plate	Open
MTS2330S[4]			40	60	Yes		
MTM1330[4]			50	75	No		Enclosed IP51
MTM1330A[3][4]					Yes		
MTH1630[4]			100	150	No	Heatsink extrusion	
MTH1650[4]		50					
MTS1360		60	20	30		Conduction plate	Open
MTS2360S			40	60	Yes		Enclosed IP51
MTF2360S			80	120			
MTF2360AS[2]							
MTM1660					No		
MTM1660A[3]					Yes		
MTH1660			100	150	No		
MTRG1860[3]			300	500	Yes		
MTH1672[4]		72	100	150	No	Heatsink extrusion	
MTRG1872[3][4]			260	350	Yes	Conduction plate	
MTH1696		96	100	150	No	Heatsink extrusion	
MTRG1896[3]			200	300	Yes	Conduction plate	
MTS2330[4]	2	30	20	30			Open
MTH2330			50	75	No	Heatsink extrusion	Enclosed IP51
MTH2350[4]		50					
MTS2360		60	20	30			Open
MTF2360			40	60	Yes	Conduction plate	Enclosed IP51
MTF2360A[2]							
MTH2360			50	75	No	Heatsink extrusion	
MTH2372[4]		72					
MTH2396		96					

Motion Technologies LV Brushless DC Motor Controllers

Analogue Inputs	Digital Inputs	G.P. Outputs	Pulse Inputs	Dimensions, mm	Weight, grams	Abs. encoder support[5]	Model number
6	6	2 @ 1.5A	4	70x70x27	60	None	MTS1330[4]
8	10	4 @ 1.5A	8	123x83x25	100	sin/cos anal., SSI digital	MTS2330S[4]
4	6	2 @ 1.5A	5	140x113x29	380		MTM1330[4]
					1500		MTM1330A[3][4]
11	19	8 @ 1.0A	6	228x140x40		None	MTH1630[4]
						None	MTH1650[4]
6	6	2 @ 1.5A	4	70x70x27	60	None	MTS1360
8	10	4 @ 1.5A	6	123x83x25	100	sin/cos anal., SSI digital	MTS2360S
				140x140x25	460	sin/cos anal., SPI digital	MTF2360S
							MTF2360AS[2]
4	6	2 @ 1.5A	5	140x113x29	380	sin/cos anal., SSI digital	MTM1660
							MTM1660A[3]
11	19	8 @ 1.0A	6	228x140x40	1500	None	MTH1660
8	10	6 @ 1.0A	8	190x200x58	3000	sin/cos anal., SPI digital	MTRG1860[3]
11	19	8 @ 1.0A	6	228x140x40	1500	None	MTH1672[4]
8	10	6 @ 1.0A	8	190x200x58	3000	sin/cos anal., SPI digital	MTRG1872[3][4]
11	19	8 @ 1.0A	6	228x140x40	1500	None	MTH1696
8	10	6 @ 1.0A	8	140x200x58	2300	sin/cos anal., SPI digital	MTRG1896[3]
		4 @ 1.5A		123x83x25	100	sin/cos anal., SSI digital	MTS2330[4]
11	19	8 @ 1.0A	4	228x140x40	1500	None	MTH2330
							MTH2350[4]
8	10	4 @ 1.5A	8	123x83x25	100	sin/cos anal., SSI digital	MTS2360
			6	140x140x25	460	sin/cos anal., SPI digital	MTF2360
							MTF2360A[2]
11	19	8 @ 1.0A	4	228x140x40	1500	None	MTH2360
							MTH2372[4]
							MTH2396

Notes:

1) Field Orientated Control (aka Vector Drive), see technical note here:
   http://www.motiontech.com.au/wp-content/uploads/2017/11/MT-Scripting-Data-Sheet-241017.pdf
2) Resolver feedback for sinusoidal commutation with latest B ver 2.4 hardware which includes header for Ethernet & Bluetooth
3) Resolver feedback support
4) OEM product only, subject to 11 pcs min. order quantity.
5) SSI is differential, simplex, non-multiplexed. SPI is single-ended, duplex, multiplexed.

Optional Extras:

25-pin to RC Radio Cable	USB-isolator
DSUB 9pin cable (male/female)	RS232-Isolator
Hall and comms cables	Data Logger
Break-out boards	48-24V DC-DC converter
Battery management systems	I/O extender, AGV support

- For medium duty low cost controllers, see http://www.motiontech.com.au/wp-content/uploads/2017/11/MT-Electromen-Brushless-DC-Motor-Speed-Controllers-111017-1.pdf
- Available for low voltage DC brushed motors, contact us for details.
- Available for low voltage AC induction motors, 60 & 96V, up to 500A, contact us for details.

Common features for all models:

1) Hall feedback (motors must have hall devices)
2) CAN bus networking at 1 Mbit/s
3) Encoder input, dual, 32 bit counters
4) Bi-directional forward/reverse control
5) Regenerative Braking
6) Max. amps = 150% of continuous
7) Free setup software
8) Multiple operation modes
9) Battery voltage and temperature sensors
10) Remote control pulse input
11) MicroBasic scripting (see details over)
12) 32 bit processor with 1ms control loop
13) 5v to 14v DC power supply output (for encoders, etc)
14) RS232 and USB communications
15) Under and Over voltage protection
16) Short circuit protection (selectable sensitivity)
17) Fan cooling not usually required
18) Over-temperature protection
19) Incremental encoder input compatability
20) Remote control for radio, joystick, wireless modem or microcomputer