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Find the *Motion Solutions MDrive 34 Plus Motion Control* at our website: *Click HERE*

MDrive 34 Plus Motion Control

SKU: info-ims-mdim34

Brand: IMS

MDrive Plus 34 Motion Control (with optional CANopen) offers systems designers a cost effective, full featured programmable motion controller integrated with NEMA 34 high torque 1.8 degree step motor and microstepping driver. The motor is available in three stack lengths and has a holding torque of up to 1061 oz-in for applications that require higher motor speed, the Plus Squared version can accept 120 or 240 VAC input.

Features include:

- RS-422/485 communication
- +12 to +75 VDC input voltage
- Up to 1061 oz-in (749 N-cm) holding torque
- Robust programmable I/O (up to 8 general purpose points) with input filtering
- Powerful instruction set with advanced math functions using 1-2 character mnemonics
- Step/Direction I/O for electronic gearing.

949-586-7442



DC input voltage	Range (includes back-EMF)	+12 to +75 VDC
Power supply current requirement	Max per MDrive Plus (depends on voltage and load)	4.0
Aux-Logic supply	Voltage	+12 to +24 VDC
	Current requirement (max)	194 mA
Operating Temperature	Measured at heat sink (non-condensing humidity)	75C
	Measured at motor (non-condensing humidity)	90C

I/O

Standard features (Plus)

General purpose I/O	Number/type	4 I/O points, programmable as sinking outputs or sinking and sourcing inputs
	Logic range	Inputs and outputs tolerant to +24 VDC, inputs TTL compatible
	Output sink current	Up to 600 mA per channel
	Protection	Over temp, short circuit, transient over voltage, over voltage, inductive clamp
Dedicated I/O	Type	Step/clock, direction/clock, capture/trip
	Logic range	0 to +5 VDC, TTL compatible
Analog input	Resolution	10 bit
	Range (selectable)	0 to +5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA

Expanded features (Plus^2)

General purpose I/O	Number/type	8 I/O points, programmable as sinking or sourcing outputs or sinking and sourcing inputs (4 when remote encoder option.
	Logic range	Sourcing outputs +12 to +24 VDC, inputs and sinking outputs tolerant to +24 VDC, inputs TTL level compatible
	Output sink current	Up to 600 mA per channel
Electronic gearing	Range/resolution/threshold (external clock in)	0.001 to 2.000/32 Bit/TTL
	Input filter range	50 nS to 12.9 u;S (10 MHz to 38.8 kHz)
	Range (secondary clock out)	1 to 1
High speed I/O	Capture filter range	50 nS to 12.9 u;S (10 MHz to 38.8 kHz)
	Capture resolution	32 bit
	Trip output speed/resolution/threshold	150 ns/32 bit/TTL
Closed loop configuration (requires remote encoder) (see note 1)	Type	User supplied differential encoder
	Steps per revolution	200, 400, 800, 1000, 1600, 2000, 3200, 5000, 6400, 10000, 12800, 20000, 25000, 25600, 40000, 50000, 51200, 36000 (0.01 deg/ustep), 21600 (1 arc minute/ustep), 25400 (0.001mm/ustep)
	Encoder resolution	User-defined Note: ustep/rev 2X the encoder count/rev minimum

(Note1) The remote encoder option replaces the following with TTL level differential encoder inputs: General purpose I/O points 9-12, Step / direction I/O points.

Comm

Protocol	RS-422/485 (Full or half duplex).
Baude rate	4.8 to 115.2 kbps
Isolation	None - use isolated serial converter

Motion

Open loop configuration	Number of microstep resolutions	20
	Steps per revolution	200, 400, 800, 1000, 1600, 2000, 3200, 5000, 6400, 10000, 12800, 20000, 25000, 25600, 40000, 50000, 51200, 36000 (0.01 deg/ustep), 21600(1 arc minute/ustep), 25400 (0.001mm/ustep)
Closed loop configuration (requires encoder option)	Type	Internal, differential, magnetic
	Steps per revolution	51200
	Encoder resolution	512 lines (2048 edges)
Counters	Type	32 bit position and encoder
	Edge rate (Max)	5 MHz
Velocity	Range	+/-5,000,000 steps per second
	Resolution	0.5961 steps per second
Acceleration/deceleration	Range	1.5×10^9 steps per second^2
	Resolution	90.9 steps per second^2

Software

Program storage	Type/size	Flash/6384 bytes
User registers		(4) 32-bit
User program labels and variables		192
Math functions		+, -, x, /, >, <, =, <=, >=, AND, OR, XOR, NOT
Branch functions		Branch & call
General purpose I/O functions	Inputs	Home, limit plus, limit minus, go, stop, pause, jog plus, jog minus, general purpose
	Outputs	Moving, fault, velocity change, general purpose
Trip functions		Trip on input, trip on position, trip on time, trip capture, trip on relative position
Encoder functions		Stall detection, position maintenance, find index
Party mode addresses (1)		62

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