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TECHNOLOGY GROUP

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- In stock / Ready-to-ship
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Expert team | Trust guarantee | 100% satisfaction

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Find the *Danaher / American Precision Industries DM-224i* at our website: ***Click HERE***

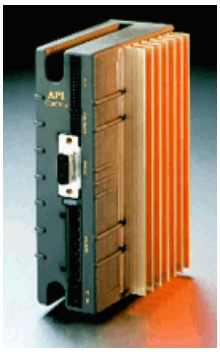
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DM-2200 Series

Intelligent Drive Series

API Controls' DM-224i and 2205i microstepping motor drives combined with our step motors offer a totally new concept for solving your motion control tasks using step motors.

Although the traditional solution is a viable option in many applications, API's new Distributed Drive Technology is the best choice in appilcations that do not require highly coordinated motions. API Controls' Intelligent Step Drives accept direct digital commands over a network and can significantly reduce your motion system cost.



Turbo Stepper® Brushless Motor Systems

Stepper Drive		Turbo Stepper Motor		Holding Torque	Pullout Torque	Motor Inertia		Motor Weight
Model No.	Power VDC	Model No.	Motor Winding	oz-in (Nm)	oz-in (Nm)	oz-in-sec^2 x 10^{-4}	(kg-cm^2)	lb (kg)
DM-2202i	48	MSD-521-3014	Series	29 (205)	14.2 (100)	1.69	(12)	0.55 (.250)
	48	MSD-521-3014	Parallel	29 (205)	19.1 (135)	1.69	(12)	0.55 (.250)
	48	MSD-521-3016	Parallel	29 (205)	13.5 (95)	1.69	(12)	0.55 (.250)
DM-224i	48	MST-N170-ANNL	Parallel	24 (.17)	15 (.11)	.0005	(.035)	.46 (.21)
DM-2205i	48	MST-N171-ANNL	Parallel	44 (.31)	28 (.20)	.0006	(.044)	.60 (.27)
CMD-260	48	MST-N170-AENL	Parallel	44 (.31)	28 (.20)	.0006	(.044)	.60 (.27)
	48	MST-N230-CNNL	Parallel	85 (.60)	54 (.38)	.0023	(.16)	1.1 (.5)
	48	MST-N231-CNNL	Parallel	150 (1.06)	96 (.68)	.0033	(.23)	1.8 (.8)
	48	MST-N232-CENL	Parallel	265 (1.87)	170 (1.19)	.0066	(.47)	2.6 (1.2)
	48	MST-N232-CENL	Parallel	265 (1.87)	170 (1.19)	.0066	(.47)	2.6 (1.2)
	48	MST-N340-DNNL	Series	450 (3.2)	284 (2)	.0166	(1.17)	3.8 (1.7)
	48	MST-N341-CNNL	Series	650 (4.6)	410 (2.9)	.0216	(1.53)	5.0 (2.3)
	48	MST-N341-CENL	Series	650 (4.6)	410 (2.9)	.0216	(1.53)	5.0 (2.3)
DM-2205i	72	MST-N170-ANNL	Series	24 (.17)	15 (.11)	.0005	(.035)	.46 (.21)
CMD-260	72	MST-N171-ANNL	Series	44 (.31)	28 (.20)	.0006	(.044)	.60(.27)
	72	MST-N170-AENL	Series	44 (.31)	28 (.20)	.0006	(.044)	.60(.27)
	72	MST-N230-CNNL	Series	85 (.60)	54 (.38)	.0023	(.16)	1.1 (.5)
	72	MST-N231-CNNL	Series	150 (1.06)	96 (.68)	.0033	(.23)	1.8 (.8)
	72	MST-N232-CENL	Series	265 (1.87)	170 (1.19)	.0066	(.47)	2.6 (1.2)
	72	MST-N232-CENL	Series	265 (1.87)	170 (1.19)	.0066	(.47)	2.6 (1.2)
	72	MST-N340-DNNL	Series	450 (3.2)	284 (2)	.0166	(1.17)	3.8 (1.7)
	72	MST-N341-CNNL	Series	650 (4.6)	410 (2.9)	.0216	(1.53)	5.0 (2.3)
	72	MST-N341-CENL	Series	650 (4.6)	410 (2.9)	.0216	(1.53)	5.0 (2.3)
	72	MST-N342-CNNL	Series	1200 (8.5)	756 (5.3)	.0436	(3.08)	8.4 (3.8)
	72	MST-N342-CENL	Series	1200 (8.5)	756 (5.3)	.0436	(3.08)	8.4 (3.8)

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Intelligent Drive Series

API Motion offers both the low power DM-224 and high power DM-2205 series intelligent microstep drives to meet a wide variety of applications. Our 2202 series drives are ideally suited for use with our Turbo Disc Magnet Stepper motors. Their high switching frequencies optimize the performance of these low inductance motors.



Features

These intelligent drives feature unique advantages for the user. Their processor based control design allows them to integrate easily in many different applications.

Programmability

- 4kB of flash memory
- APImate™ software
- Windows 95® compatible
- Full math support

Communication

- One Serial PortÑswitch selectable RS-232, 422, 485; 19.2 kBaud
- Optional DeviceNet support

Inputs/Outputs

¥ 7 user programmable inputs

- 4 user programmable outputs

Multiple Command Sources

¥ Digital I/O: up to 64 stored se-quences

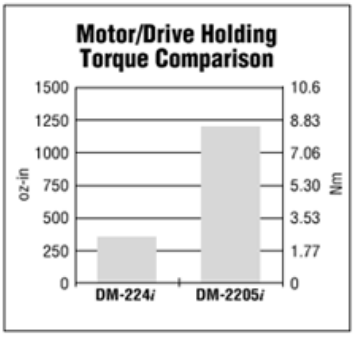
- Network: up to 255 stored sequences, DeviceNet option
- Real-time velocity streaming

Performance

- Auto switching between micro and full step modes
- Programmable low power mode
- Software selectable midband and inductance compensation

Benefits

- Stand-alone operation
- Windows-based application programming
- Advanced control capability
- Easy to interface with: I/O controllers PLC and industrial PC Other serial communication devices
- Suitable for common communication standards
- Replace DC motors and drives
- Wide motor torque range
- Cooler running motor
- Software optimized performance for each motor



DeviceNet™ ODVA Requirements

Device Type	Position Controller
Explicit Peer-to-Peer Messaging	**N**
I/O Peer-toPeer Messaging	**N**

DM-2202i, DM-224i and DM-2205i Models

DM-2202i 12-48 VDC, 2.4A	DM-224i 12-48 VDC, 3A	DM-2205i 24-72 VDC, 5A	Description
DM-2202i	DM-224i	N/A	TTL I/O
N/A	DM-224i-A	N/A	TTL I/O TTL I/O and one 8-bit analog input
N/A	DM-224i-O	DM-2205i-O	5-24 VDC optically-isolated I/O

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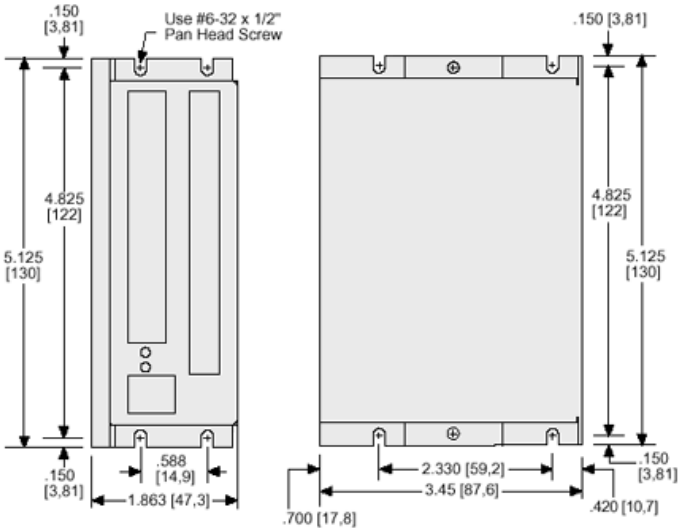
Configuration Consistency Value	**N**
Faulted Node Recovery	**Y**
Baud Rates: 125, 250 and 500 kB	
Master/Scanner	**N**
I/O Stave Messaging	
• Bit Strobe	**N**
• Polling	**Y**
• Cyclic	**N**
• Change of State (COS)	**N**

DM-2202i-E	DM-224i-E	DM-2205i-E	Encoder inputs and and 5-24 VDC optically-isolated I/O
N/A	DM-224i-AE	DM-2205i-AE	Encoder inouts and 5-24 VDC optically-isolated I/O and one 8-bit analog input
DM-2202i-EDN	DM-224i-EDN[1]	N/A	DeviceNet™ compliant with encoder inouts and 5-24 VDC optically-isolated I/O

(1) This product has been tested by an ODVA authorized independent test lab and found to comply with ODVA Conformancxe Test Version I

DM-2205i Series
(72 VDC, 5A)





*Representation drawing only; request complete catalog for individual model data.

Drive Type	**Two phase, bipolar, constant current, recirculating**	
Resolution	**12800 steps/rev, auto-switches to full step at software programmable velocity**	
Power	**Drive**	+24 to +74 VDC, unregulated, 10% ripple

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	Output	Hardware Setting , 0.16 to 5.0 amps (continuous per phase)
Protection	**Short Circuit**	Phase to phase, phase to ground
	Bus Over-Voltage	85°C (nominal)
	Low Power Mode	Software programmable, 0, 33, 66, or 100%
Environmental	**Temperature**	Ambient 0°C to 50°C, storage -40°C to 85°C
	Humidity	0 to 95%, non-condensing
Operational	**Acceleration**	Linear ramp with velocity streaming
	Step Accuracy	± 0 steps
	Position Range	± 2.1 billion
	Speed Range	0 to 100 RPS (6000 rpm) (motor dependant)
	Sequence Storage	Flash RAM, 255 sequences, 4k bytes
Communications	**Type**	RS-232C, RS-422 / RS 485 terminated and unterminated
	Baud Rate	19200
	Format	8 data bits; 1 stop bit; no parity
	Multi-Axis	32 units, switch selectable (Axis ID)
Inputs	**Type**	7 general purpose inputs TTL (5 VDC Max), (optional 5-24 VDC optical isolation available)
	Active State	High or low, software programmable
	Limits	Software programmable, must use general purpose inputs
	Encoder	0 to 200 kHz quadrature (optional), (A, B channels)
	Analog	-10 to +10 VDC, 8 bit resolution (optional)
Outputs	**Type**	4 general purpose TTL outputs, 5-24 VDC optical isolation available, 35 mA maximum current

Recommended Standard Motor Selections

Step Motor Model	Holding Torque oz / Nm	Software Current Setting	Steps Per Revolution
MST-T232-CFOO	265 / 1.87	2.78	200
MST-T233-CFOO	350 / 2.47	2.74	200
MST-T341-CFOO	650 / 4.6	3.25	200
MST-T342-CFOO	1200 / 8.5	4.91	200
MST-D341-CFOO	150 / 1.06	2.3 (4.6)*	200

***Motors may be connected in serial or parallel.**

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Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

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