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Find the *Danaher / American Precision Industries DM-226* at our website: *Click HERE*

DM-226 INSTALLATION

Rev 0594

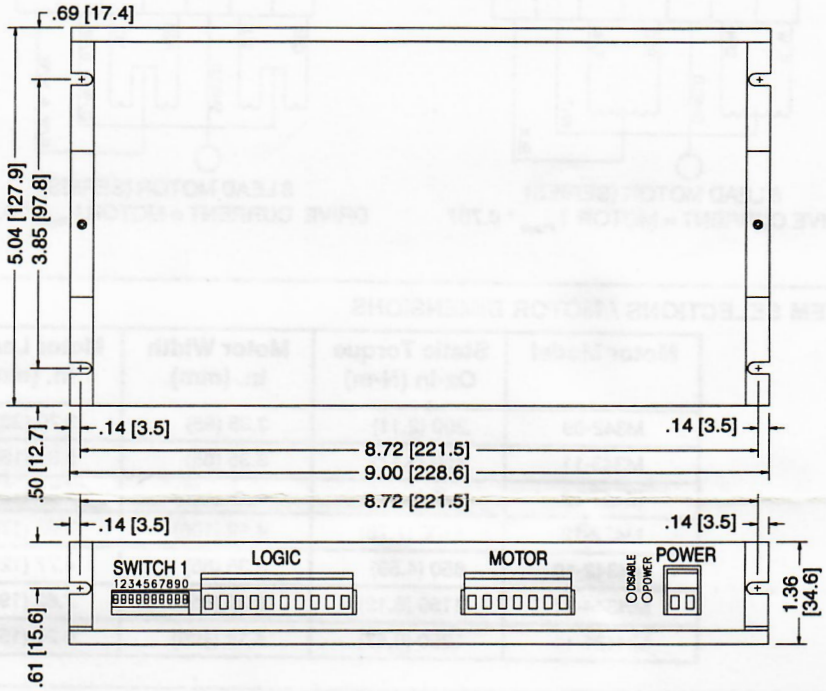
DESCRIPTION

Each DM-226 includes an integral heatsink and plug type connectors for motor, logic and power connections. DIP switches select step resolutions, current settings, standstill current reduction and step mode. Input power has reverse polarity protection. Status LED's indicate drive disabled and power on.

INSTALLATION STEPS

- Configure current switches for motor selected.
- Configure microstep resolution switch settings.
- Wire logic inputs, +5 VDC supply, and motor connections.
- Mount drive in open air flow with fan cooling.
- Wire 24-120 VDC and supply power.
- Supply input signals to operate.

DIMENSIONS [-] denotes millimeters



Subject to changes without notice.

CONNECTIONS

LOGIC

1. OUT COM
2. STEP
3. CW/$\overline{\text{CCW}}$
4. HI/$\overline{\text{LOPWR}}$
5. ENA/$\overline{\text{NOPWR}}$
6. RUN/$\overline{\text{RESET}}$
7. OPTO IN
8. FAULT
   (Over Current, Over Temp, Under Voltage)

MOTOR

1. A+
2. A-
3. GND
4. B+
5. B-
6. COM
7. COM

POWER

1. IN (24V-120V DC)
2. GND

STATUS

1. DISABLE
2. POWER ON

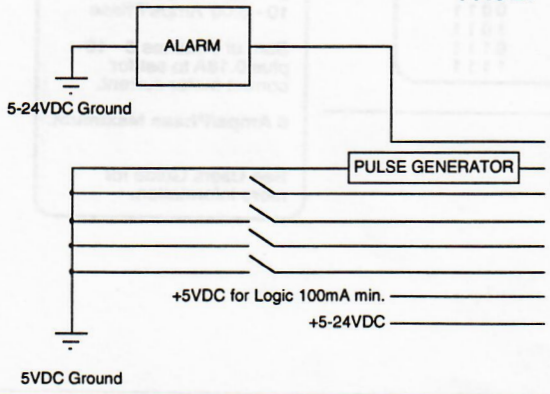
LOGIC CONNECTIONS (10 PINS)

LOGIC INPUTS ..... Optically isolated. TTL compatible. User must sink 10mA minimum to trigger input logic.

STEP INPUT ..... 750 KHz max.pulse rate, 50% ±5% duty cycle, steps on trailing edge.

STEP MODE ..... STEP+ & STEP- Allows for individual (2) step pulse trains in each direction. STEP & DIRECTION Needs a single pulse train with the direction specified by a logic level.

FAULT OUTPUTS ..... Sinking output to OUTCOM, 5-24 VDC, 60mA max. Disable LED on. Overcurrent - Protected from short circuit - phase to phase. phase to ground. Over temperature - internal air temp exceeds 185°F (85°C). Under voltage - DC voltage drops below 22VDC. (Power must be cycled to reset drive.)



Output Common	OUT COM
Step / Step+ Signal	STEP / STEP+
Direction / Step- Signal	CW/$\overline{\text{CCW}}$ / STEP-
High/Low Power Signal	HI/$\overline{\text{LOPWR}}$
Enable / No Power Signal	ENA/$\overline{\text{NOPWR}}$
Run/Reset	RUN/$\overline{\text{RESET}}$
Opto Input (5 VDC)	OPTO IN
Fault (24 VDC Max) (Over Current, Temperature, Under Voltage)	FAULT

LOGIC

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CONTROLS DIVISION

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MOTOR CONNECTIONS (7 PIN)

Motor Phase A+	A+
Motor Phase A-	A-
Motor Ground	GND
Motor Phase B+	B+
Motor Phase B-	B-
Motor Phase A Common	A COM
Motor Phase B Common	B COM

MOTOR

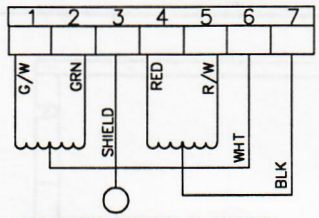
POWER INPUT 2 PIN KEYED CONNECTOR

24-120VDC Unregulated
10% maximum ripple
* Reverse polarity protection

DC Input	IN
DC Ground	GND

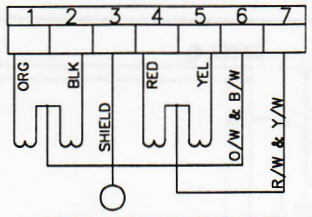
DC

BASIC MODEL MOTORS
MOTOR CONNECTOR



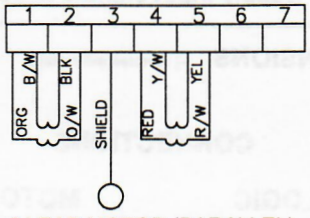
6 LEAD MOTOR (SERIES)
DRIVE CURRENT = MOTOR I_{Phase} * 0.707

COMPLETE MODEL MOTORS
MOTOR CONNECTOR



8 LEAD MOTOR (SERIES)
DRIVE CURRENT = MOTOR I_{Phase} * 0.707

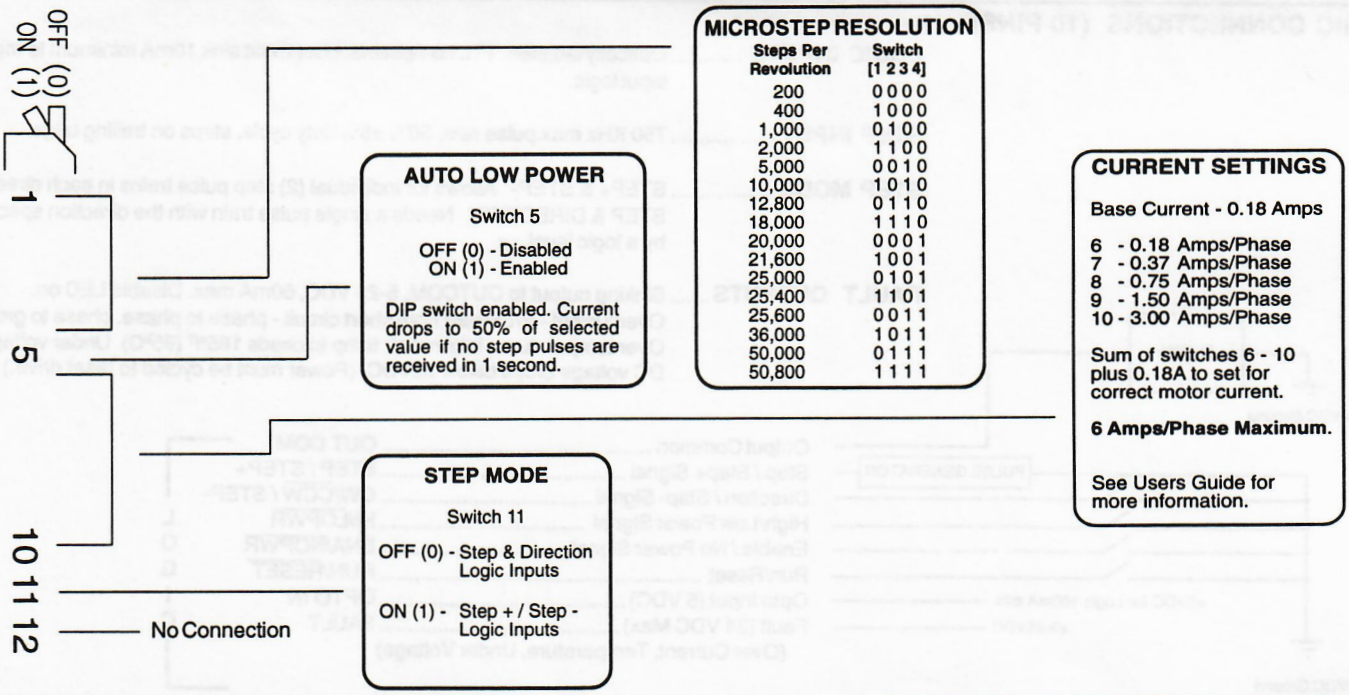
COMPLETE MODEL MOTORS
MOTOR CONNECTOR



8 LEAD MOTOR (PARALLEL)
DRIVE CURRENT = MOTOR I_{Phase} * 1.414

SYSTEM SELECTIONS / MOTOR DIMENSIONS

Motor Model	Static Torque Oz-in (N-m)	Motor Width in. (mm)	Motor Length in. (mm)	Current Setting - Series [123456789101112]
M342-09	300 (2.11)	3.35 (85)	3.70 (93)	x x x x x 00110 x x
M343-11	450 (3.17)	3.35 (85)	5.31 (135)	x x x x x 01110 x x
M421-12	625 (4.41)	4.19 (106)	4.87 (124)	x x x x x 00001 x x
M422-12	1100 (7.76)	4.19 (106)	7.05 (179)	x x x x x 00001 x x
MH342-10	650 (4.59)	3.35 (85)	4.77 (121)	x x x x x 00101 x x
MH344-11	1150 (8.12)	3.35 (85)	7.62 (194)	x x x x x 00101 x x
MH421-11	1200 (8.47)	4.19 (106)	6.20 (157)	x x x x x 10101 x x



AUTO LOW POWER

Switch 5

OFF (0) - Disabled
ON (1) - Enabled

DIP switch enabled. Current drops to 50% of selected value if no step pulses are received in 1 second.

MICROSTEP RESOLUTION

Steps Per Revolution	Switch [1 2 3 4]
200	0 0 0 0
400	1 0 0 0
1,000	0 1 0 0
2,000	1 1 0 0
5,000	0 0 1 0
10,000	1 0 1 0
12,800	0 1 1 0
18,000	1 1 1 0
20,000	0 0 0 1
21,600	1 0 0 1
25,000	0 1 0 1
25,400	1 1 0 1
25,600	0 0 1 1
36,000	1 0 1 1
50,000	0 1 1 1
50,800	1 1 1 1

CURRENT SETTINGS

Base Current - 0.18 Amps

6 - 0.18 Amps/Phase
7 - 0.37 Amps/Phase
8 - 0.75 Amps/Phase
9 - 1.50 Amps/Phase
10 - 3.00 Amps/Phase

Sum of switches 6 - 10 plus 0.18A to set for correct motor current.

6 Amps/Phase Maximum.

See Users Guide for more information.

STEP MODE

Switch 11

OFF (0) - Step & Direction Logic Inputs

ON (1) - Step + / Step - Logic Inputs

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