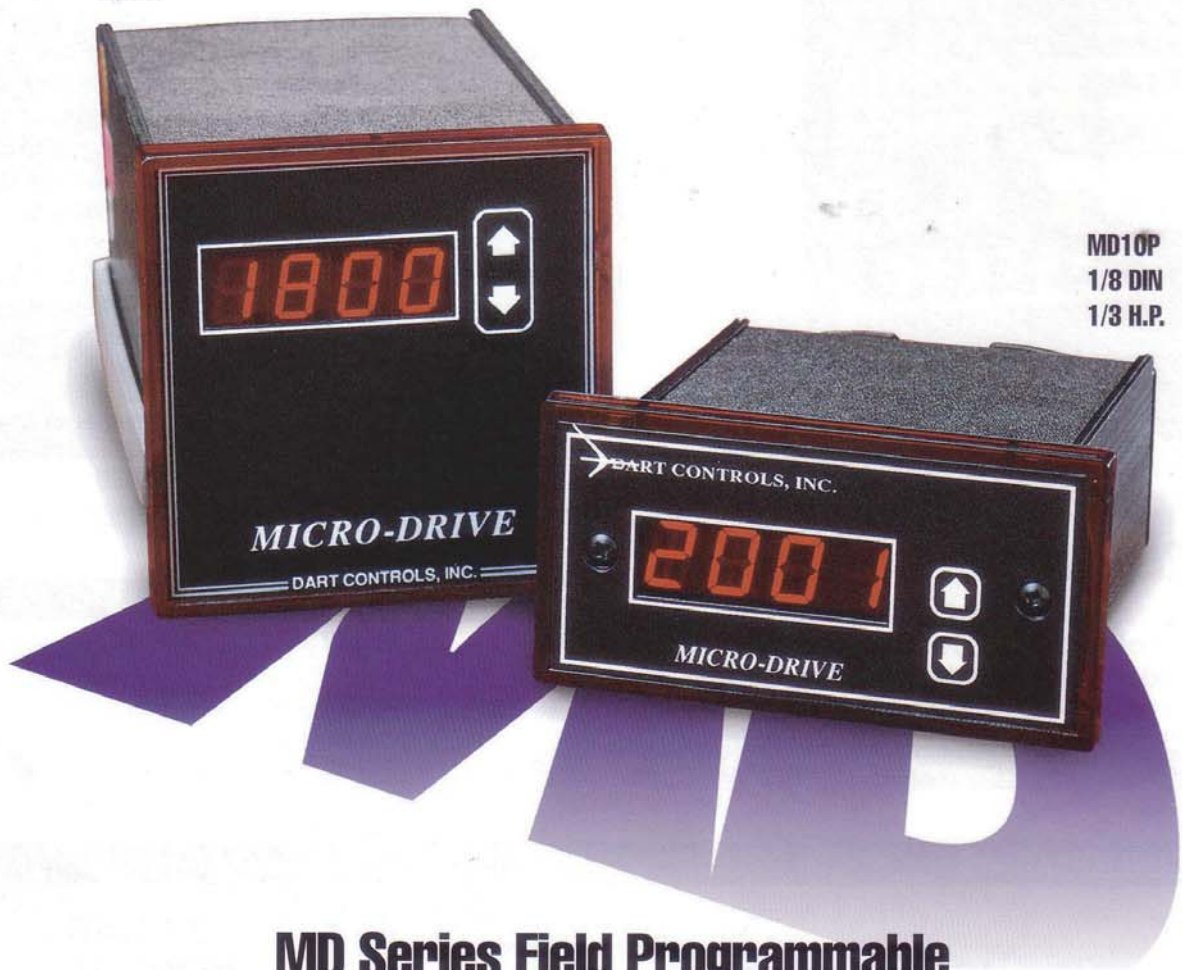


MD3P
1/4 DIN
2 H.P.



MD10P
1/8 DIN
1/3 H.P.

MD Series Field Programmable Closed Loop DC Speed Control

A compact, cost-efficient, programmable DC speed control with digital closed loop feedback and LED display for DC PM motors rated to 2 horsepower. An on-board microprocessor with non-volatile memory coupled with sophisticated internal software makes Dart's Micro-Drive the ultimate in accuracy and control.

Friendly field programming permits customizing the MD for specific applications and displays the set speed directly in RPM, FPM, GPM, Process Time, or other engineering units. Programmable parameters include maximum and minimum set speed, decimal points, operating mode (master or follower), and the constant which takes into account motor gear ratios.

The Micro-Drive is simple to operate: set the desired RPM, rate, or time in the large 1/2" LED display by depressing the "up" and "down" pushbuttons, one digit at a time or fast sweep.

The Micro-Drive settings are exact and repeatable. It will precisely control speed to $\pm 1/2$ RPM of set speed, long term.

Industry standard cut-out dimensions of 1/8 DIN and 1/4 DIN provide easy panel installation. All wiring connects directly to a screw type barrier terminal strip. No adjustments of the control are necessary.

Dart's Micro-Drive is uniquely suited for many commercial and industrial applications; particularly for continuous flow type systems.

MD SERIES STANDARD FEATURES

- Microprocessor based, field programmable operating parameters allow set speed to be directly displayed in RPM, FPM, GPM, Process Time, or other units
- Compact 1/8 DIN or 1/4 DIN sturdy aluminum housings for panel mounting
- Large four digit 1/2" LED display for set speed
- Up-down pushbutton switches for set points—slow/fast sweep
- G.E. "Lexan" membrane covers red lens
- Screw type barrier terminal strip
- Non-volatile memory retains set point
- Digital closed loop
- Fixed acceleration; 2 to 4 seconds, load dependent
- Speed range - 25:1 minimum
- Programmable operating parameters:*
 - Maximum set speed
 - Minimum set speed
 - Decimal point or colon
 - Constant for gear ratios
- Inhibit circuit permits start and stop without breaking AC lines; and pre-setting speed
- Accuracy: $\pm 1/2$ RPM of set speed, long term
- Master/Follower operation
- Self-contained power supply for transducer (+5VDC, 50mA)
- Variety of pick-up inputs: Hall-Effect, Photoelectric, Magnetic (optional), or any TTL
- Input pulse rate - 5000 pulses per minute maximum
- Transient voltage protection
- U.L. 508 Recognized, file # E78180 (MD10P)
- CSA Certified, file # LR 85877 (MD10P)

*All units are shipped and set for 0-2400 RPM with one pulse per revolution pick-up input.

MD SERIES SELECTION GUIDE

MAX. H.P.	MAX. ARM ¹ DC AMPS	MODEL NUMBER	STANDARD SPEED RANGE
<i>120 VAC Single Phase Input, 0-90 VDC Output</i>			
1/3	4	MD10P	Field Programmable ²
1	10	MD3P	Field Programmable ²
<i>240 VAC Single Phase Input, 0-180 VDC Output</i>			
2/3	4	MD10P-5	Field Programmable ²
2	10	MD3P-5	Field Programmable ²

Requires Dart PU-E or other pick-up.

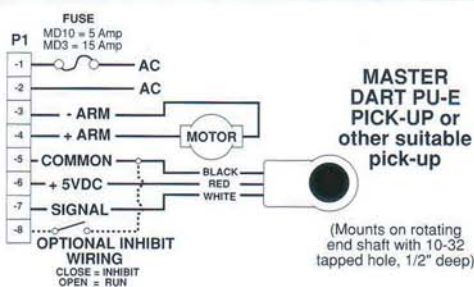
1 - Minimum output current of 150mA.

2 - Shipped set for 0-2400 RPM with one pulse per revolution.

OPERATING SPECIFICATIONS

Temperature -10° to +45° C.
 AC Input Voltage $\pm 10\%$ Rated Line Voltage
 Input Frequency 50/60 Hz.
 Overload capacity 200% for 1 minute
 Transducer Signal Input 0-5 to 0-24 VDC square wave

WIRING DIAGRAM - MASTER



OPTION DESCRIPTION

OPTION

SUFFIX

Provisions for remote up/down pushbutton switches¹ -13*
 Divide by 1, 10 or 100 option board for magnetic pick-up² -3*

* Field installable.

1 -13A option for MD3P

2 -3A option for MD3P

Other options are available, please consult factory for your requirement.

DIMENSIONAL SPECIFICATIONS

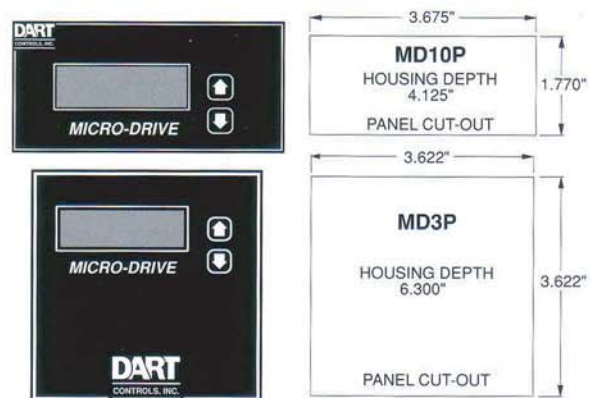
MODEL	WIDTH	HEIGHT	DEPTH	WEIGHT
<i>MD10P Inches (centimeters)</i>				
Housing	3.62 (09.2)	1.66 (4.3)	4.13 (10.5)	14.72 oz
Lens	4.42 (11.3)	2.25 (5.7)	0.25 (00.6)	

MD3P Inches (centimeters)

Housing*	4.00 (10.2)	3.50 (8.9)	6.30 (16.0)	34.64 oz
Lens	3.80 (09.6)	3.80 (9.6)	0.42 (01.1)	

* Includes clamp into housing dimension

MOUNTING SPECIFICATIONS



WIRING DIAGRAM - MASTER/FOLLOWER

