

DM8000 Series Microprocessor Based Digital Tachometer and Process Meter



The DM8000 is an economical microprocessor-based digital tachometer system capable of measuring shaft speeds lower than 1 RPM.

With an on-board microcomputer coupled with sophisticated internal software and a quartz crystal controlled reference frequency, the DM8000 is able to maintain accuracy of $\pm 0.04\%$, even if the shaft is uneven.

The DM8000 is field programmable through the easy-to-use front panel interface and can be configured to display any desired unit of measure. Large 1/2 inch

4-digit LED display numbers allow viewing under the most adverse conditions.

The DM8000 is actually **four devices in one:**

- Tachometer
- Counter
- Totalizer
- Zero Speed Switch

In addition, the DM8000 will accept a second sensor input and toggle the display between the two sensors by depressing a front panel key. This allows one display to do the work of two, saving cost and space.

The isolated 5 Amp form C relay output can be configured for many different alarming conditions. Designed to use a variety of inputs, including the Dart Hall-Effect solid state PU Series pick-up, the system delivers trouble free operation at an economical cost.

History Note-Future

Exciting new products are under development. Watch for news at: www.dartcontrols.com

DM8000 STANDARD FEATURES

- Selectable alarm relay output: low, high, window or not window (a second alarm option is available)
- User inputs allow for special functions: counter reset, counter gate, and alarm display
- Control modes are selectable between rate, time, and counter
- Factory default function—reset to factory setting
- User-default storage capability allows user to store/recall a known good set of parameters while experimenting with new settings
- Non-volatile memory allows all custom settings to be stored for future use
- NEMA 4X Rating (faceplate with supplied gasket)
- Accepts second sensor for one display/two speeds operation

TYPICAL APPLICATIONS

The DM8000 can be used in process applications for monitoring speeds and rates, or counting discrete input signals. Process applications using counting may be batching, filling, mixing, punching, cutting, drilling, diverting, or alarming. Process applications using speed or rate monitoring may be conveyors, conveyor ovens, material flow, rotational rpm, and testing.

DM8000 SELECTION GUIDE

MODEL	INPUT	DISPLAY UNITS	STD. SPEED RANGE
DM8000	120/240 VAC	Rate or Time	Field Programmable*

Requires Dart PU-E or other pick-up.

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

DM8000 OPTION DESCRIPTION

OPTION	SUFFIX
Second alarm output relay (form C).....	-R
Provision for remote pushbutton switches	-1
Pluggable terminal strip	-P
Magnetic pick-up input board	-3

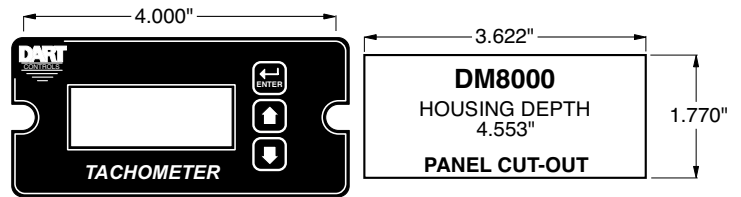
DM8000 OPERATING SPECIFICATIONS

AC input voltage.....	85–250 VAC
Input frequency.....	50/60 Hz
Input pulse rate.....	1 to 125,000 input pulses per minute
Resolution.....	from 0.01 RPM
Accuracy.....	±0.04% display up-date every pulse or 0.5 seconds, whichever is longer
Isolated high/low alarm output	5 Amp 230 VAC
Display range.....	0 to 9999
Transducer signal input.....	0-5 to 0-24 VDC square wave

4-IN-1 METER DOES IT ALL

- Programmable Rate (RPM, GPM, FPM)
- Programmable Time / Time in Process
- Counter/Totalizer w/ Contact Outputs
- Zero Speed Switch

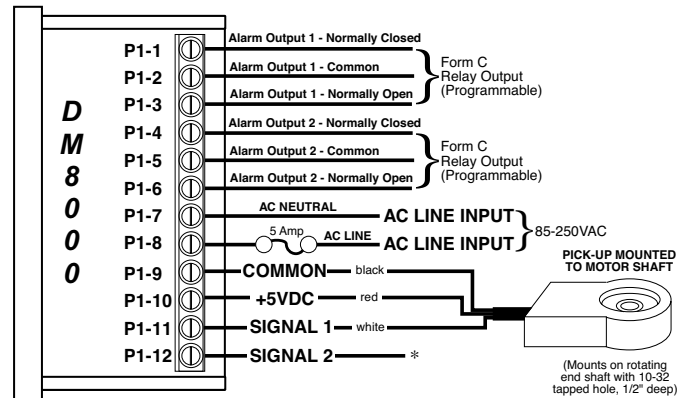
DM8000 MOUNTING SPECIFICATIONS



DM8000 DIMENSIONAL SPECIFICATIONS

MODEL	WIDTH	HEIGHT	DEPTH
DM8000 inches (millimeters)			
Housing	3.620 (91.95)	1.656 (42.06)	4.428 (112.47)
Lens	4.539 (115.29)	2.289 (58.13)	0.375 (9.52)

DM8000 HOOK-UP



* Used for various functions, including quadrature counter mode.

DART PU-E SELECTION AND MOUNTING

MODEL	PULSES PER REV	MIN. RPM
PU-2E	ONE	1.0
PU-20E	TEN	0.1

MOUNTING PROCEDURE

1. Tap motor shaft 10-32 x 1/2" deep.
2. Remove red cap on pick-up screw.
3. Remove black dust cover from PU.
4. See illustration below.

