

# 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 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 patented Hall-Effect solid state PU-E pick-up, the system delivers trouble free operation at an economical cost.

The DM8000 offers the same enhanced display options and capabilities featured in our other digital control products, as well as the Universal Power Supply and rugged European style terminal strip.

## 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)

## 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.

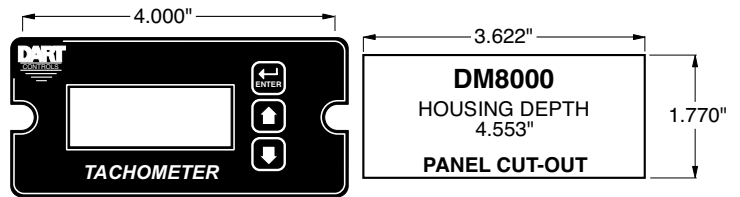
## DM8000 OPTION DESCRIPTION

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.....	85–265 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 max settable range: 0 to 9999
Transducer signal input.....	0-5 to 0-24 VDC square wave

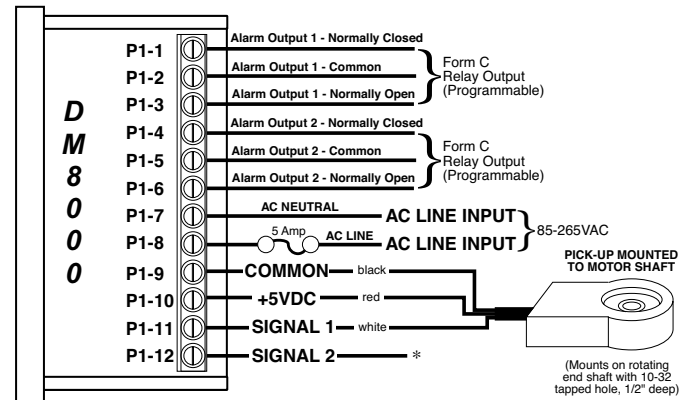
## DM8000 MOUNTING SPECIFICATIONS



## DM8000 DIMENSIONAL SPECIFICATIONS

MODEL	WIDTH	HEIGHT	DEPTH
<i>DM8000 inches (millimeters)</i>			
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	MAX. RPM
PU-2E	ONE	1.0	5000
PU-20E	TEN	0.1	5000

### 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.

