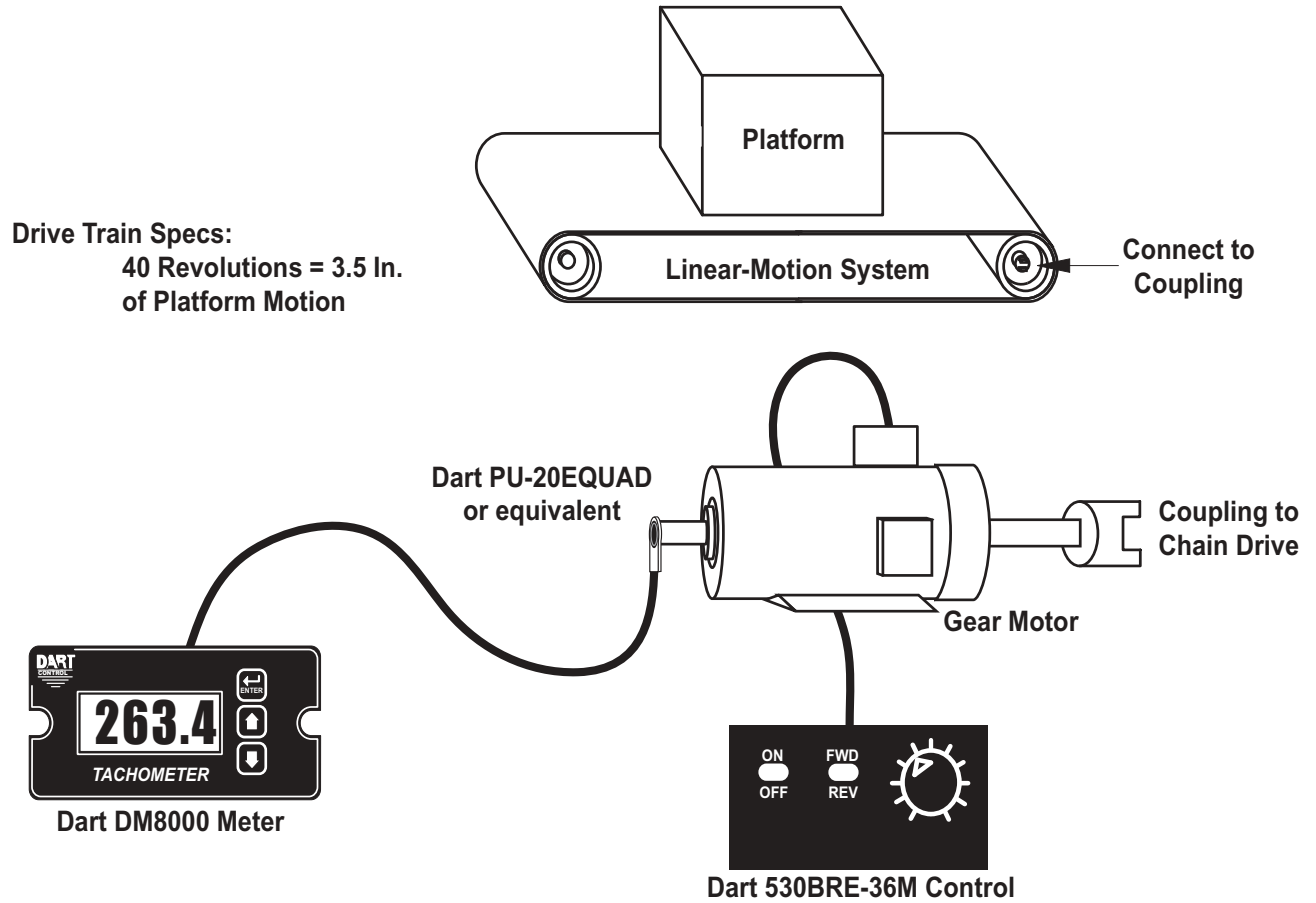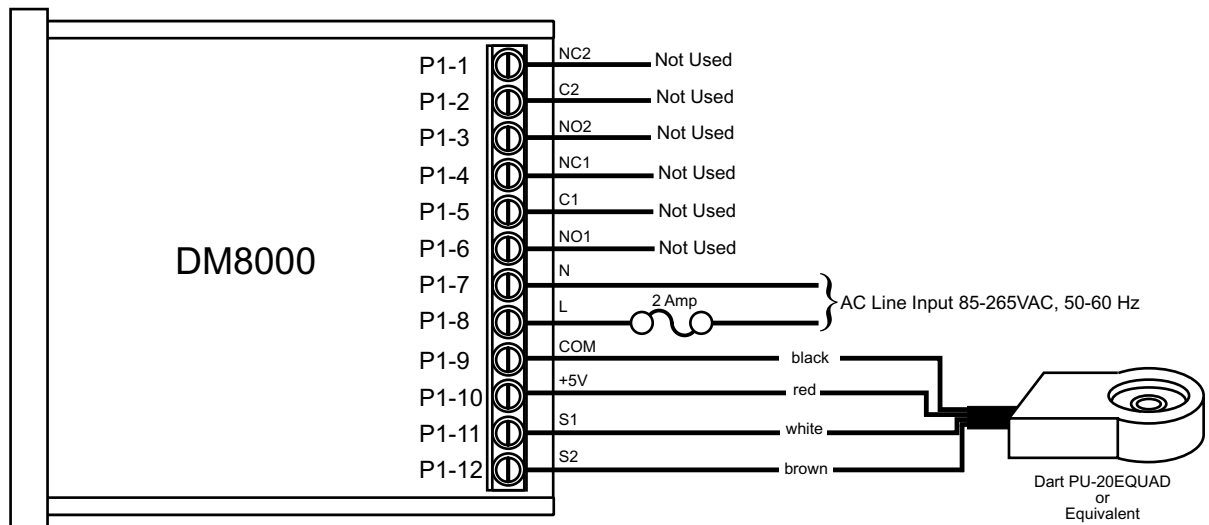# Bi-directional Incremental Position Display

Description:

A system is needed which will track the position of a bi-directional linear-motion platform and allow the user to select a home or zero position. The display should read in inches and indicate the position of the platform at all times.

Application Diagram:

Platform

Linear-Motion System

Connect to Coupling

Drive Train Specs:
40 Revolutions = 3.5 In.
of Platform Motion

Dart PU-20EQUAD or equivalent

Coupling to Chain Drive

Gear Motor

263.4
TACHOMETER

Dart DM8000 Meter

ON OFF   FWD REV

Dart 530BRE-36M Control

Wiring Diagram:

DM8000

Terminal	Label	Connection
P1-1	NC2	Not Used
P1-2	C2	Not Used
P1-3	NO2	Not Used
P1-4	NC1	Not Used
P1-5	C1	Not Used
P1-6	NO1	Not Used
P1-7	N	AC Line Input 85-265VAC, 50-60 Hz
P1-8	L	2 Amp
P1-9	COM	black
P1-10	+5V	red
P1-11	S1	white
P1-12	S2	brown

Dart PU-20EQUAD or Equivalent

Parameter Configuration:

Parameter	Value	Notes
10	5	Up/Down Counter Mode
20	35	Because the initial values were 40 revolutions per 3.5 inches of platform motion, each is multiplied by 10 to give an even number to increase accuracy since the display can be programmed in whole numbers. Additionally, because of the decimal point position, the Display Reference is multiplied by 10 to generate the proper display format. Without the second multiplication by 10, the display would only read 3.5 inches when the drive motor turned 400 revolutions.
21	400	In count mode, the Reference RPM is set in revolutions. 400 has been entered here to represent 40 revolutions and the Display Reference has also been multiplied by 10 to yield whole numbers.
22	10	Pulses per revolution of shaft encoder or pickup is 10 PPM
25	3	Decimal point position set to XXX.X on display