



MD50E-420



MD50E-420 Digital Closed Loop DC Drive System

Ideal for Metering Pump and other applications requiring an isolated 4-20mA input/output signal

The MD50E-420 is a field-programmable closed loop DC drive system employing an advanced velocity-form PID algorithm for accurate and responsive control. The MD50E-420 also features a unique, isolated 4-20mA input and output for easy integration with existing Process Control systems.

The MD50E-420 is ideally suited for metering pump applications by efficiently combining all of the application requirements into a single compact package. The MD50E-420 not only accepts a 4-20mA signal to control the pump speed, but it also provides a 4-20mA output signal back to the Process Control that is proportional to the actual running speed. Both the input and output signals are isolated from each other and from the control itself. The MD50E-420 also has two field-programmable Form C relay contacts that can be set to indicate a wide variety of conditions such as the pump is running, a "fault" condition exists, and many other events.

The MD50E-420 comes in a NEMA 4X enclosure complete with an auto/off/manual switch on the cover.

APPLICATIONS

The MD50E-420 system is ideal in many process applications requiring a closed-loop DC variable speed drive with an isolated 4-20mA input and output.

- Typical applications include:
- Waste water treatment
 - Chemical metering processes
 - Laboratory mixing equipment
 - Industrial auger/mixing equipment
 - Polymer injection processes

STANDARD FEATURES

- 1/4 to 2.0 HP range
- Universal power supply supports 85-265 VAC input
- NEMA 4X enclosure with auto/off/manual switch
- Front panel field-programming (with lock-out jumper)
- Target and actual speed can be any engineering unit of measure
- Two alarm relay outputs (form C, 5 Amp @ 250 VAC)
- Large 1/2" LED display
- Master/Follower modes
- Displays set point or actual running speed
- Adjustable PID settings

OPERATING SPECIFICATIONS

Ambient Temp	-10° to +45° C
Line Input Frequency	50/60 Hz
Overload Capacity.....	200% for 1 minute
Transducer Input	0-5 to 0-24 VDC
On-board transducer	
Power Supply	5 VDC, 50mA
4-20mA input/output accuracy.....	± 1%

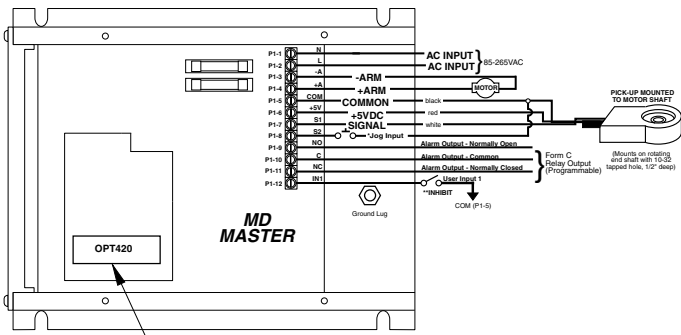
INPUT/OUTPUT POWER RATINGS

INPUT	OUTPUT	MAX. ARM DC AMP	MAX. H.P.
120VAC	0-90VDC	10	1.0
240VAC	0-180VDC	10	2.0

AVAILABLE OPTIONS

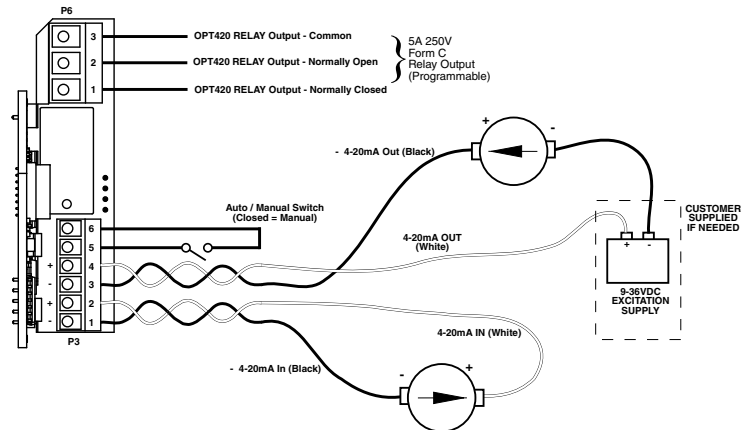
- Provision for Remote Up/Down pushbutton switches

MD50 DRIVE TYPICAL WIRING DIAGRAM



* For AC inputs utilizing two hot lines, both inputs should be protected with appropriately sized fuses or circuit breakers.
 ** P1-8(S2) & P1-12(IN1) user input may be programmed for a number of functions, including (jog, inhibit, etc.)

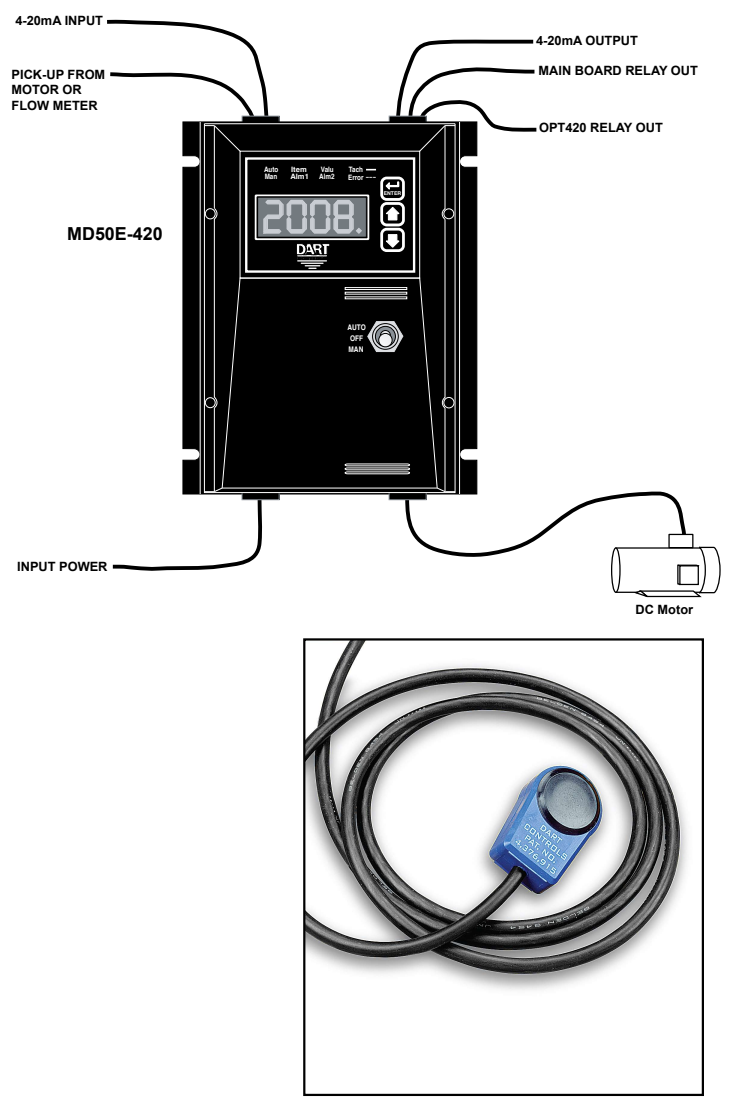
4-20mA HOOK-UP



MD50E-420 MOUNTING SPECIFICATIONS



METERING PUMP APPLICATIONS



Compatible with the Dart PU-E Series Hall Effect Pick-ups or a NPN open collector equivalent product.