

# Digital Speed Pots

Similar to the Digital DC drives, Dart Controls is the exclusive provider of Digital Speed Pots to the market.

A Digital Speed Pot may be either open or closed loop, that can be used with any type, brand or technology drive that accepts a 3-wire speed pot input to change the motor speed. They include the programmable digital display, logic and alarm function and all other features of the Dart MicroDrives, less the drive.

The closed loop versions of these products are the ASP Series. The ASP comes in two styles depending on the application - the **ASP10** (for continuous applications) and the **ASP40** (for start/stop or applications requiring rapid drive response time). The open loop version is the **DP4**.

The programmable display is of particular value to the machine/ process operator, providing drive speed information in meaningful engineering units (GPM, FPM, MM:SS, % of Master, etc.)

Both the ASP Series and the DP4 come in panel mount designs. ASP's may be configured in three modes - Rate, Time and Follower. Follower mode allows for two or more motors to operate at speeds in proportion to each other - a common need in blending, batch and synchronized material feed and handling applications. Many times the logic controller functionality built into the MicroDrive can eliminate the need for a PLC and its custom programming.

The ASP40 offers the additional benefit of a velocity loop PID control algorithm; 4-20mA process signal follower and industrial serial communication. Development will continue on the ASP40 to offer additional serial communication protocols, additional program management tools and a Graphic User Interface (GUI) for both configuration and control.



ASP10



ASP40



DP4



PU-E Series

Performance-matched for use with the ASP Series

## RoHS



# ASP / DP4 Series Features + Specifications

- Dual Voltage 120/240 VAC, 50/60Hz
- 85-250VAC line voltage operating range
- Closed loop -  $\pm 0.1\%$  regulation\* (ASP models only)
- For ASP models, encoder required - See Dart PU Series
- Barrier terminal strip - optional plug terminal strip
- Configurable Minimum & Maximum speed
- Configurable Linear Accel & Decel (ASP only)
- Programmable display units
- Uni- and bi-polar output (DP4 only)
- Non-volatile memory retains custom programming
- Program lockout safety feature
- Custom user program memory storage & retrieval
- $-10^{\circ}$  to  $+45^{\circ}\text{C}$  ambient temperature
- 100:1 speed range
- 5Vdc, 50mA sensor supply voltage
- 0-5 to 0-24Vdc sensor input signal range (pulse)
- Configurable alarms with Form C relay output
- Inhibit circuit—permits low power start & stop
- Suitable for wash down applications

Model	Width	Length	Depth	Weight
ASP10 <sup>1</sup>	3.62 in	1.66 in	4.63 in	1.32 lb
ASP40 <sup>1</sup>	[9.19 cm]	[4.21 cm]	[11.75 cm]	[0.60 kg]
DP4 <sup>1</sup>				

<sup>1</sup> – Front bezel is 4.54 x 2.29 in.



*Optimized for use with the Dart PU Series Speed Sensor*

\*Sensor PPR/application dependent

Base Model					Options					
Model	Supply Voltage	Output	Housing	Body	-P	-1	OPT3 <sup>1</sup>	-9	OPT51	-420
ASP10	120/240 VAC	Equivalent to a potentiometer. Compatible with 1K $\Omega$ to 10M $\Omega$ pot circuits	Wash down (NEMA 4X) when installed in similarly rated panel	P	F	F	✓	F	N/A	N/A
ASP40	120/240 VAC			P	N/A	F	✓	N/A	✓	✓
DP4	120/240 VAC			P	F	F	✓	F	N/A	N/A

P –Panel mount

1- Order as separate line item

✓ - Option is available

F – Option is available as Factory Installed only

N/A – Option Not available

## Option Description:

- P: Plug-style terminal strip for ability to remove all wires / harness connection easily
- 1: Provision for external set of Up/Dn push buttons
- OPT3: Option card that boosts signal from 2-wire (non-powered) magnetic proximity sensors
- 9: Blank front bezel overlay (all references to Dart removed)
- OPT51: RS485 Serial Communication card. Factory or field installed in MD50E only - field installed only in MD40P and MD50P
- 420: 4-20mA isolated input/output card. Factory or field installed (as OPT420). Does NOT supply loop power