

# Low Voltage DC PWM Drive *Team*

The 65 Series from Dart are high performance PWM drives for low voltage DC motors. Used many times in applications with battery voltage as the supply the PWM drive saves energy, increasing time between charges plus extends the overall life of the battery. The 65 Series are also used with low voltage power supply (typically 12-24VDC) due to the size of the motor being used.

Available in four continuous current ratings, the 65 Series maximizes power density in a small footprint. In particular, the 65E10 and 65E20 models have been significantly upgraded to further improve their power efficiency and add features frequently needed in portable equipment and solar powered applications. In addition we have introduced a new NEMA 4X enclosed drive rated up to 20A at 48VDC.

Driven by customer feedback, here are some of the new features we have added to selected (10A and 20A) models:

- 12-48 VDC supply voltage range from same drive
- Up to 1000 Watts power handling in a 3.6" x 4.3" footprint
- Up to 60% lower voltage drop across the drive
- High switching frequency for quiet operation
- LED's - Supply Voltage and Current Limit
- Current Limit output
- Current Limit drive shutdown (option)
- Under (supply) Voltage drive shutdown (option)
- NEMA 4X enclosed models

The 65 Series are used in a wide variety of applications including portable equipment, AGV's, portable conveyors, ag equipment, truck mounted spreaders and sprayers, and many more. Call us today to find out more about this and other products from Dart!

## FEATURED PRODUCT



65E60 / 65E40 Series



65E10 / 20C Series



65E10 / 20C Series Enclosed



RoHS

## 65 SERIES FEATURES + SPECIFICATIONS

- Low (12-48Vdc) voltage supply
- Chassis and enclosed models
- Quiet operation - high frequency switching (65E10 & 20)
- Barrier terminal strip
- Adjustable Minimum speed (0-30% of base)
- Adjustable Maximum speed (50-100% of base)
- Adjustable IR Compensation (speed regulation)
- Adjustable Current Limit (to 200% of continuous rating)
- Adjustable Acceleration (0-10 seconds)
- Ships with 5K $\Omega$  speed pot kit
- Low power Inhibit circuit for motor start/stop
- 1% base speed regulation over 30:1 speed range
- -10° to +45°C ambient temperature
- Overload capacity: 150% for one minute
- Inhibit circuit—permits low power start & stop
- Current fold-back at 80°C heat sink temp (65E40 & 60)

Model	Width	Length	Depth	Weight
65E10C/ 65E20C	3.62 in [9.19 cm]	4.25 in [10.80 cm]	1.30 in [3.30 cm]	6 oz [170 gm]
65E40C/ 65E40-12	3.70 in [9.40 cm]	7.00 in [17.78 cm]	1.70 in [4.32 cm]	13.4 oz [297 gm]
65E60/ 65E60-12	6.70 in [17.02 cm]	9.00 in [22.86 cm]	2.27 in [5.77 cm]	34 oz [962 gm]
65E10E/ 65E20E	5.53 in [14.00 cm]	7.30 in [18.50 cm]	4.78 in [12.10 cm]	40 oz [1.13 kg]

Base Model								Options	
Model	Supply Voltage	Motor Voltage	Current	Power/ Current Limit LED's	Current Limit Shutdown	Current Limit Output	Body	-LED	-UVL
65E10C	12-48 VDC	12-48 VDC	10 ADC	Yes	Yes	Yes	C	F	F
65E10E	12-48 VDC	12-48 VDC	10 ADC	Yes	Yes	Yes	E	STD	F
65E20C	12-48 VDC	12-48 VDC	20 ADC	Yes	Yes	Yes	C	F	F
65E20E	12-48 VDC	12-48 VDC	20 ADC	Yes	Yes	Yes	E	STD	F
65E40-12	12 VDC	12 VDC	40 ADC	No	No	No	C	N/A	N/A
65E40	24-36 VDC	24-36 VDC	40ADC	No	No	No	C	N/A	N/A
65E60-12	12 VDC	12 VDC	60 ADC	No	No	No	C	N/A	N/A
65E60	24-36 VDC	24-36 VDC	60 ADC	No	No	No	C	N/A	N/A

C – Chassis

E – NEMA 4 enclosed

STD - Standard Feature

N/A – Option Not available

F – Option is available as Factory Installed only

### OPTION DESCRIPTION

- LED: Chassis model support for driving external customer supplied LED's for Supply Voltage and Current Limit
- UVL: Detects supply voltage dropping below preset value (protects battery deep discharge)