

## Digital Amplifier: DZCANTE-012L080

DigiFlex Servo Drive DZCANTE-012L080 The DZCANTE-012L080 digital servo drive is designed to drive brushed and brushless servomotors from a compact form factor ideal for embedded applications. This fully digital drive operates in torque, velocity, or position mode and employs Space Vector Modulation (SVM), which results in higher bus voltage utilization and reduced heat dissipation compared to traditional PWM.

**Highlights** The command source can be generated internally or can be supplied externally. In addition to motor control, this drive features dedicated and programmable digital and analog inputs and outputs to enhance interfacing with external controllers and devices. The DZCANTE-012L080 features a single RS232 interface used for drive configuration and setup. Drive commissioning is accomplished using DriveWare available at [www.a-m-c.com](http://www.a-m-c.com). The CANopen interface can be used for online operation in networked applications. All drive and motor parameters are stored in nonvolatile memory.

**Features**

- Four quadrant regenerative operation
  - Space vector modulation (SVM) technology
  - Fully digital state-of-the-art design
  - Programmable gain settings
  - Fully configurable current, voltage, velocity and position limits
  - PIDF velocity loop
  - PID + FF position loop
  - Compact size, high power density
- Download (go directly to our Download Center or download here; some downloads require registration and separate login): [Data Sheet / Manual](#) [Recommended Accessories](#): [Mounting Card](#)

MC12XDZ **Specifications** **Model**

**Power Stage Specifications**

DZCANTE-012L080

DC Supply Voltage 20-80 VDC

Peak Current  $\pm 12$  A

Max. Continuous Current  $\pm 6$  A

Maximum Continuous Output Power 480 W

Minimum Load Inductance

250  $\mu$ H

Switching Frequency

20 kHz Heatsink (base) Temperature Range

0° to +75°C, disables if > 75°C

Power Dissipation at Continuous Current

24 W

Over-voltage Limit 86 V

Under-voltage Limit 17 V

Internal Bus Capacitance

33  $\mu$ F

**Control Specifications** **Communication Interfaces** CANOpen (ISO 11898-2), RS232 **Command Sources**

$\pm 10$ V Analog, communication Interface, Encoder Following

Feedback Supported

$\pm 10$  Analog, Auxiliary Incremental Encoder, Halls, Incremental Encoder

**Communication Methods**

Sinusoidal, Trapezoidal

**Modes of Operation**

Current, Position, Velocity Motors Supported

Brushed, Brushless, Induction, Voice Coil

**Hardware Protection**

40+ Configurable Functions, Over-Current, Over-Temperature (Drive & Motor), Over-Voltage, Short-Circuit (Phase-Phase & Phase-Ground), Under-Voltage

Programmable Digital Inputs/Outputs (PDIs/PDOs)

5/3

Programmable Analog Inputs/Outputs (PAIs/PAOs) 1/0 Current Loop Sample Time

50  $\mu$ s

Velocity Loop Sample Time

100  $\mu$ s

Position Loop Sample Time

100  $\mu$ s

Maximum Encoder Frequency 16 MHz (4 pre-quadrature)

**Mechanical Specifications**

P1 Connector 30-pin, 2.54 mm spaced, dual row header

P2 Connector 12-pin, 2.54 mm spaced, header Size (H x W x L)

0.71 x 2.0 x 2.5 inches

18.5 x 50.8 x 63.5 mm

Weight

3.3 oz.

94 gHeatsink (Base) Temperature Range<sup>2</sup> 0° - 65° C (32° - 149° F)

Storage Temperature Range

-40° - 85° C (-40° - 185° F) Cooling System

Natural ConvectionForm Factor

PCB Mounted