

Description

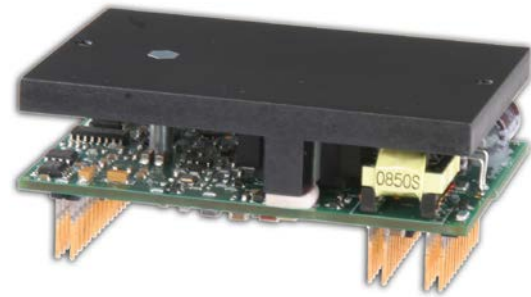
The DZRALTE-025L200 digital servo drive is designed to drive brushed and brushless servomotors from a compact form factor ideal for embedded applications. This fully digital drive operates in torque, velocity, or position mode and employs Space Vector Modulation (SVM), which results in higher bus voltage utilization and reduced heat dissipation compared to traditional PWM. The drive can be configured for a variety of external command signals. Commands can also be configured using the drive's built-in Motion Engine, an internal motion controller used with distributed motion applications. 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 DZRALTE-025L200 features a RS-232 interface for drive configuration and setup as well as a RS-485 interface for drive networking. Drive commissioning is accomplished using DriveWare® 7, available for download at www.a-m-c.com.

All drive and motor parameters are stored in non-volatile memory.

Power Range

Peak Current	25 A (17.7 A _{RMS})
Continuous Current	12.5 A (12.5 A _{RMS})
Supply Voltage	40 - 175 VDC



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
- ▲ 12-bit Analog to Digital Hardware
- ▲ On-the-Fly Mode Switching
- ▲ On-the-Fly Gain Set Switching

MODES OF OPERATION

- Current
- Hall Velocity
- Position
- Velocity

COMMAND SOURCE

- PWM and Direction
- Encoder Following
- Over the Network
- ±10 V Analog
- 5V Step and Direction
- Indexing
- Jogging

FEEDBACK SUPPORTED

- Halls
- Incremental Encoder
- ±10 VDC Position
- Auxiliary Incremental Encoder

INPUTS/OUTPUTS

- 2 High Speed Captures
- 1 Programmable Analog Input (12-bit Resolution)
- 2 Programmable Digital Inputs (Differential)
- 3 Programmable Digital Inputs (Single-Ended)
- 3 Programmable Digital Outputs (Single-Ended)

COMPLIANCES & AGENCY APPROVALS

- UL
- cUL
- CE Class A (LVD)
- CE Class A (EMC)
- RoHS

MECHANICAL INFORMATION

P1 - Signal Connector

Connector Information		30-pin, 2.54 mm spaced, dual-row header
Mating Connector	Details	Samtec: SSM-115-L-DV
	Included with Drive	No

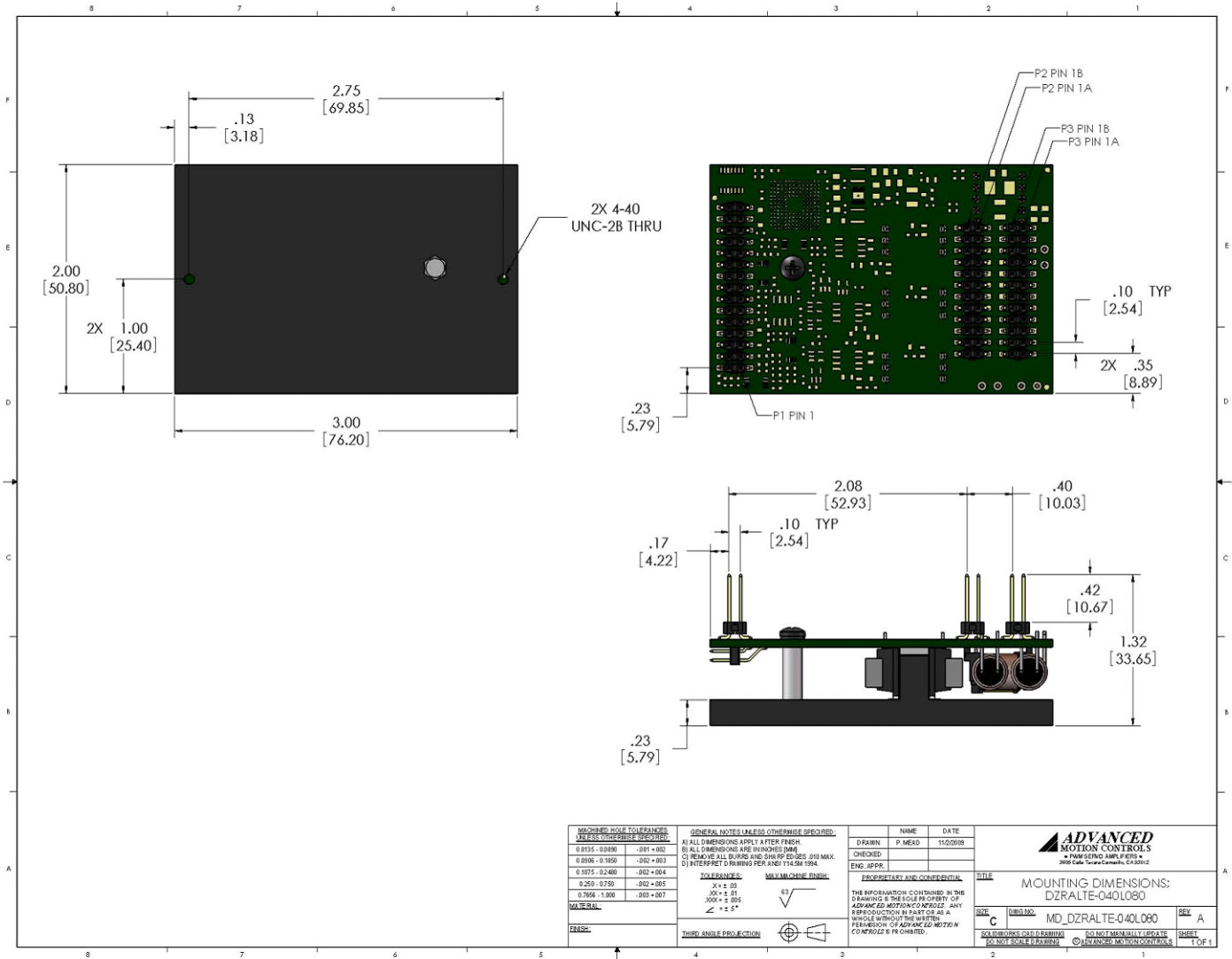
P2 - Power Connector

Connector Information		24-pin, 2.54 mm spaced, dual-row header
Mating Connector	Details	Samtec: BCS-112-L-D-PE
	Included with Drive	No

P3 - Power Connector

Connector Information		24-pin, 2.54 mm spaced, dual-row header
Mating Connector	Details	Samtec: BCS-112-L-D-PE
	Included with Drive	No

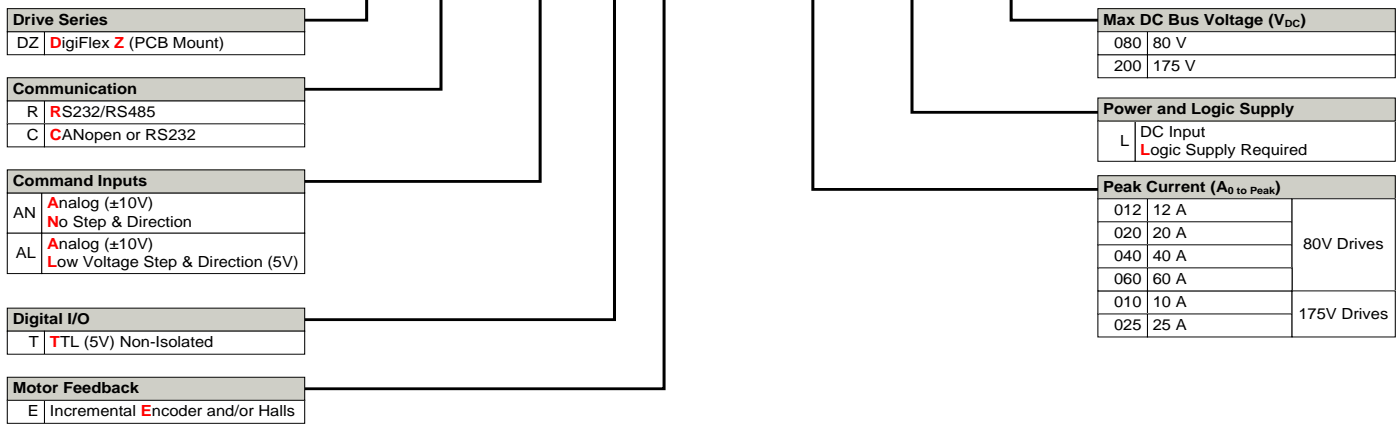
MOUNTING DIMENSIONS



<p>MACHINED HOLE TOLERANCES UNLESS OTHERWISE SPECIFIED:</p> <table border="1"> <tr><td>0.0150 - 0.0499</td><td>-.001 +.002</td></tr> <tr><td>0.0500 - 0.1899</td><td>-.002 +.003</td></tr> <tr><td>0.1900 - 0.4999</td><td>-.002 +.004</td></tr> <tr><td>0.5000 - 0.9999</td><td>-.003 +.005</td></tr> <tr><td>1.0000 - 4.9999</td><td>-.003 +.007</td></tr> </table> <p>MAXIMUM:</p> <table border="1"> <tr><td>DRILL</td><td>+.0000</td></tr> <tr><td>REAM</td><td>-.0005</td></tr> <tr><td>FINISH</td><td>-.0005</td></tr> </table>	0.0150 - 0.0499	-.001 +.002	0.0500 - 0.1899	-.002 +.003	0.1900 - 0.4999	-.002 +.004	0.5000 - 0.9999	-.003 +.005	1.0000 - 4.9999	-.003 +.007	DRILL	+.0000	REAM	-.0005	FINISH	-.0005	<p>GENERAL NOTES UNLESS OTHERWISE SPECIFIED:</p> <p>1) ALL DIMENSIONS APPLY AFTER FINISH.</p> <p>2) ALL DIMENSIONS ARE IN UNLESS NOTED OTHERWISE.</p> <p>3) REMOVE ALL BURRS AND SHARP EDGES 2ND MAX.</p> <p>4) INTERPRET DIMENSIONS PER ANSI Y14.5M 1994.</p> <p>TOLERANCES: MAX MACHINE FINISH:</p> <table border="1"> <tr><td>X ± .03</td></tr> <tr><td>300 ± .01</td></tr> <tr><td>3000 ± .005</td></tr> </table> <p>∠ ± 5°</p> <p>TEMP ANGLE PROJECTION:</p>	X ± .03	300 ± .01	3000 ± .005	<p>NAME: P MEAD</p> <p>DATE: 11/20/09</p> <p>DRAWN: []</p> <p>CHECKED: []</p> <p>ENG. APPRO: []</p> <p>PROPRIETARY AND CONFIDENTIAL</p> <p>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ADVANCED MOTION CONTROLS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ADVANCED MOTION CONTROLS IS PROHIBITED.</p>	<p>ADVANCED MOTION CONTROLS SERVO AMPLIFIERS & SERVO MOTOR</p> <p>TITLE: MOUNTING DIMENSIONS: DZRALTE-040L080</p> <table border="1"> <tr><td>SIZE: C</td><td>REV. NO.: MD_DZRALTE-040L080</td><td>SHEET: A</td></tr> </table> <p>DO NOT SCALE DRAWING</p> <p>DO NOT MANUALLY UPDATE</p> <p>© ADVANCED MOTION CONTROLS</p>	SIZE: C	REV. NO.: MD_DZRALTE-040L080	SHEET: A
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PART NUMBERING INFORMATION

Example: **D Z R A L T E - 0 1 2 L 0 8 0**



DigiFlex® Performance™ series of products are available in many configurations. Note that not all possible part number combinations are offered as standard drives. All models listed in the selection tables of the website are readily available, standard product offerings.

ADVANCED Motion Controls also has the capability to promptly develop and deliver specified products for OEMs with volume requests. Our Applications and Engineering Departments will work closely with your design team through all stages of development in order to provide the best servo drive solution for your system. Equipped with on-site manufacturing for quick-turn customs capabilities, ADVANCED Motion Controls utilizes our years of engineering and manufacturing expertise to decrease your costs and time-to-market while increasing system quality and reliability.

Examples of Customized Products

- ▲ Optimized Footprint
- ▲ Private Label Software
- ▲ OEM Specified Connectors
- ▲ No Outer Case
- ▲ Increased Current Resolution
- ▲ Increased Temperature Range
- ▲ Custom Control Interface
- ▲ Integrated System I/O
- ▲ Tailored Project File
- ▲ Silkscreen Branding
- ▲ Optimized Base Plate
- ▲ Increased Current Limits
- ▲ Increased Voltage Range
- ▲ Conformal Coating
- ▲ Multi-Axis Configurations
- ▲ Reduced Profile Size and Weight

Feel free to contact Applications Engineering for further information and details.

Available Accessories

ADVANCED Motion Controls offers a variety of accessories designed to facilitate drive integration into a servo system. Visit www.a-m-c.com to see which accessories will assist with your application design and implementation.



All specifications in this document are subject to change without written notice. Actual product may differ from pictures provided in this document.