Description

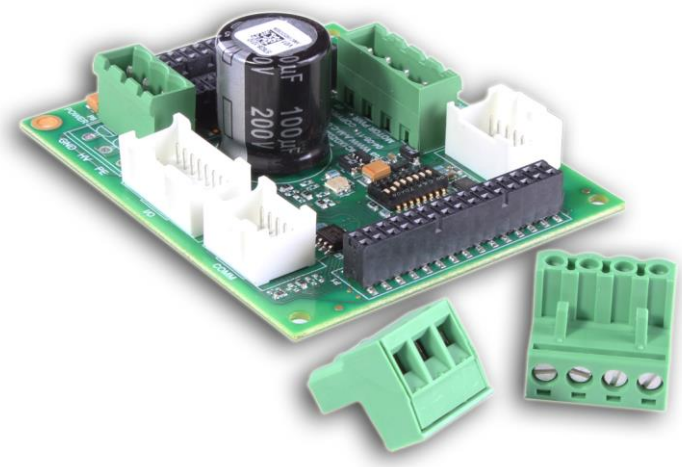
The MC1XDZC02-QD mounting card is designed to host a DZC or DZXC series DigiFlex® Performance™ digital servo drive. The drive plugs into the bottom side of the mounting card, providing a compact assembly with connectors and switches readily accessible. The MC1XDZC02-QD is ideal for prototyping and integrating a DZC or DZXC series digital servo drive in your machine.

The MC1XDZC02-QD utilizes vertical-entry quick-disconnect screw terminals for the Motor and Power connectors (mating connectors included). For side-entry right angle Motor and Power connections use the MC1XDZC02 mounting card.

Drive Compatibility*

DZ (Standard Environment)		DZX (Extended Environment)
80 V Models	**175 V Models**	**80 V Models**
20A	25A	15A
12A	10A	8A

*For 40 amp DZ series, use MC1XDZC02 mounting card model
*For 60 amp DZ series, use MC1XDZC02-HP1 mounting card model



Features

- Mounts DZC- and DZXC-Series DigiFlex® Performance™ Digital Servo Drives
- Single Axis Mounting Card
- On-board Signal Conditioning
- On-board 8-position DIP Switch for Configuration and Communication Settings
- On-board CANopen Transceiver for CANopen Communication

DRIVES SUPPORTED

- DZCANTE-012L080
- DZCANTE-020L080
- DZCANTE-010L200
- DZCANTE-025L200
- DZXCANTE-008L080
- DZXCANTE-015L080

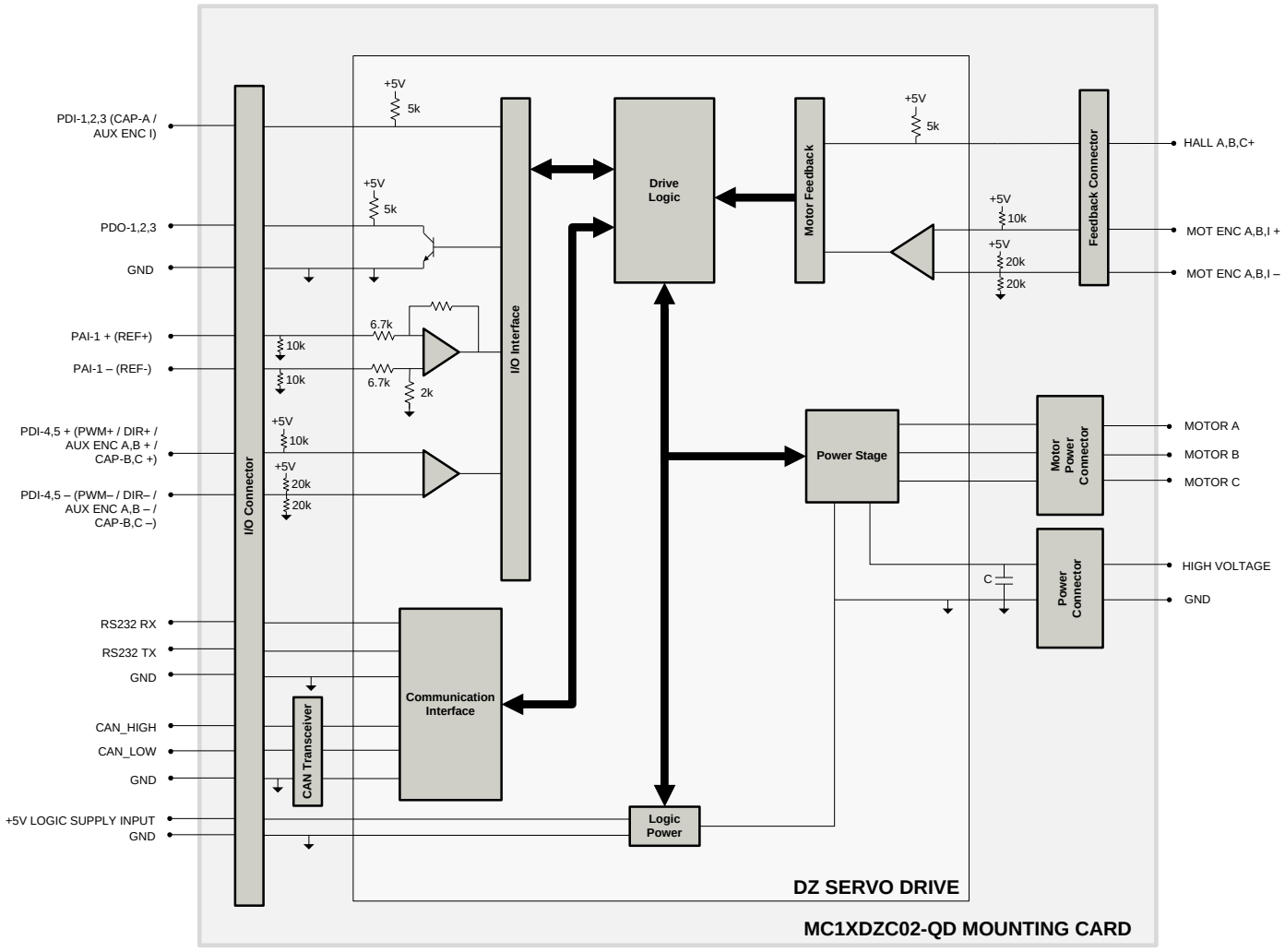
FEEDBACK SUPPORTED

- Incremental Encoder
- Hall Sensors
- Auxiliary Incremental Encoder

COMPLIANCES & AGENCY APPROVALS

- RoHS II

BLOCK DIAGRAM & SPECIFICATION SUMMARY



Mechanical Specifications	
Mounting Signal Connector: P1	30-pin, dual-row, 2.54 mm pitch socket
Mounting Power Connector: P2	24-pin, dual-row, 2.54 mm pitch socket
Mounting Power Connector: P3	24-pin, dual-row, 2.54 mm pitch socket
I/O Connector: P4*	16-port, dual-row, 2.00 mm spaced plug terminal
Communication Connector: P5*	10-port, dual-row, 2.00 mm spaced plug terminal
Feedback Connector: P6*	12-port, dual-row, 2.00 mm spaced plug terminal
Motor Power Connector: P7 (mating connector included)	4-port, 5.08 mm spaced insert connector
Power Connector: P8 (mating connector included)	3-port, 5.08 mm spaced insert connector
Bus Capacitance	100 μF / 200 V
Size (L x W x H)	2.5 x 3.0 x 1.0 inches
Weight	50.7 g (1.8 oz)

***Mating Connector Kit**

Mating connector housing and crimp pins can be ordered as a kit using *ADVANCED* Motion Controls part number **KC-MC1XDZ02**. This includes mating connector housing and crimp style contacts for the I/O, Feedback, and Communication connectors. The recommended tool for crimping the contacts is Molex part number **63811-6300**.

PIN FUNCTIONS

P1 – Mounting Signal Connector
This connector mates directly to the drive. For pin functions refer to the drive datasheet.

P2 – Mounting Power Connector
This connector mates directly to the drive. For pin functions refer to the drive datasheet.

P3 – Mounting Power Connector
This connector mates directly to the drive. For pin functions refer to the drive datasheet.

P4 – I/O Connector

Pin	Name	Description	I/O
1	+5V LOGIC	+5V Logic Supply Input	I
2	GND	Ground	GND
3	PDI-3	Programmable digital input 3, or High Speed Capture A, or Aux Enc I	I
4	PAI-1 + (REF +)	Differential reference signal input, 12-bit resolution. Can also be used as programmable analog input 1.	I
5	PDI-2	Programmable digital input 2	I
6	PAI-1 - (REF -)	Differential reference signal input, 12-bit resolution. Can also be used as programmable analog input 1.	I
7	PDI-1	Programmable digital input 1	I
8	PDO-3	Programmable digital output 3	O
9	GND	Ground	GND
10	PDO-2	Programmable digital output 2	O
11	PDI-5 +	Programmable, differential digital input or Direction+ or Aux Enc B+ or Capture C+	I
12	PDO-1	Programmable digital output 1	O
13	PDI-5 -	Programmable, differential digital input or Direction- or Aux Enc B- or Capture C-	I
14	PDI-4 +	Programmable differential digital input, or PWM+ or Aux Enc A+ or Capture B+	I
15	GND	Ground	GND
16	PDI-4 -	Programmable differential digital input, or PWM- or Aux Enc A- or Capture B-	I

P5 – Communication Connector

Pin	Name	Description	I/O
1	RESERVED	Reserved	-
2	RESERVED		-
3	RS232 RX	Receive Line (RS-232) – Connect to TX port on PC	I/O
4	RS232 TX	Transmit Line (RS-232) – Connect to RX port on PC	I/O
5	GND	Ground	GND
6	GND		GND
7	CAN_L IN	CAN _L bus line (dominant low)	I/O
8	CAN_L OUT		I/O
9	CAN_H IN	CAN_H bus line (dominant high)	I/O
10	CAN_H OUT		I/O

P6 – Feedback Connector			
Pin	**Name**	**Description**	**I/O**
1	HALL B	Commutation Sensor Inputs.	I
2	HALL A	Commutation Sensor Inputs.	I
3	MOT ENC A+	Differential Encoder A Channel Input	I
4	HALL C	Commutation Sensor Inputs.	I
5	MOT ENC A-	Differential Encoder A Channel Input (for single-ended signals use only the positive input)	I
6	GND	Ground	GND
7	+5V OUT	+5V Encoder Supply Output	O
8	MOT ENC B+	Differential Encoder B Channel Input	I
9	MOT ENC I+	Differential Encoder Index Input	I
10	MOT ENC B-	Differential Encoder B Channel Input (for single-ended signals use only the positive input)	I
11	MOT ENC I-	Differential Encoder Index Input (for single-ended signals use only the positive input)	I
12	GND	Ground	GND

P7 – Motor Power Connector			
Pin	**Name**	**Description**	**I/O**
1	MOTOR A	Motor phase A	O
2	MOTOR B	Motor phase B	O
3	MOTOR C	Motor phase C	O
4	PE	Protective Earth Ground (motor cable shield)	PE

P8 –Power Connector			
Pin	**Name**	**Description**	**I/O**
1	PE	Protective Earth Ground	PE
2	HIGH VOLTAGE	DC Power Input	I
3	POWER GND	Power Ground (Common with Signal Ground)	GND

BOARD CONFIGURATION

DIP Switch Functions

Drive Address Settings

Node-ID	SW1	SW2	SW3	SW4	SW5	SW6
Load from non-volatile memory	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
…	…	…	…	…	…	…
63	ON	ON	ON	ON	ON	ON

CANopen Bit Rate Settings

Bit Rate (bits/sec)	SW7
Load from non-volatile memory	OFF
125K	ON

CANopen Termination Node Selection

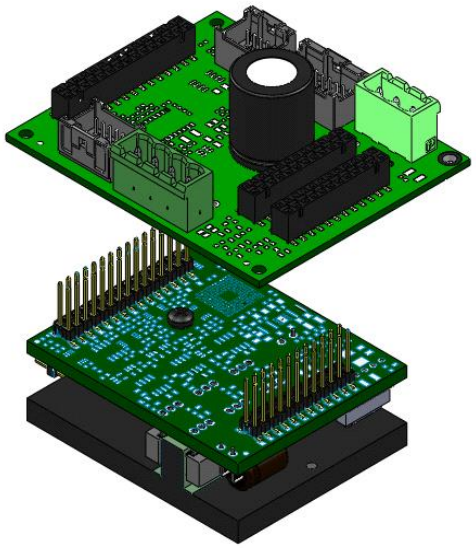
CANopen Termination	SW8
Not Terminated	OFF
Terminated	ON

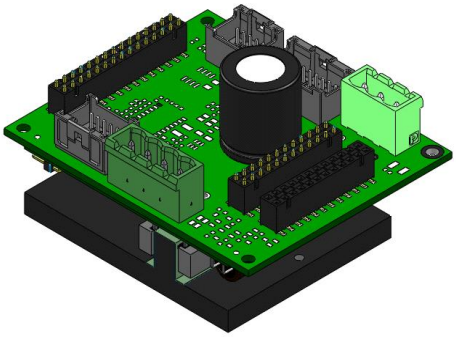
LED Functions

The MC1XDZC02-QD contains LEDs that indicate DC Power and Logic power supply status. The Power LED will light up when power is applied to P7-Power Connector, and the Logic LED will light up when the +5 VDC Logic Power is applied to P4-I/O Connector.

Mounting Configuration

Note that a DZ servo drive plugs into the MC1XDZC02-QD from the underside of the mounting card to allow easy access to the mounting card switches and connectors. The drive and mounting card assembly can be secured to a panel or heatsink through the mounting holes in the drive baseplate, or with standoffs at the four mounting holes in the corners of the mounting card (standoff height must be at least 22.11mm for DZ-012L080 drive models, and 26.65mm for all other drive models).





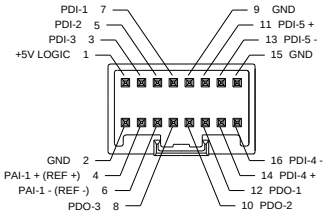
CONNECTOR INFORMATION

P1 – Mounting Signal Connector	
Connector Information	30-pin, dual-row, 2.54 mm pitch header
Mating Connector Example	No Mating Connector Required. Mate directly to drive

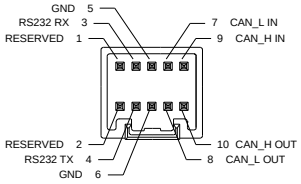
P2 – Mounting Power Connector	
Connector Information	24-pin, dual-row, 2.54 mm pitch header
Mating Connector Example	No Mating Connector Required. Mate directly to drive

P3 – Mounting Power Connector	
Connector Information	24-pin, dual-row, 2.54 mm pitch header
Mating Connector Example	No Mating Connector Required. Mate directly to drive

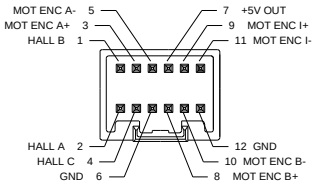
P4 – I/O Connector		
Connector Information		16-port, dual-row, 2.00 mm spaced plug terminal, vertical mount
Mating Connector	Details	Molex: P/N 51353-1600 (housing); 56134-9100 (contacts)
	Included with Card	No



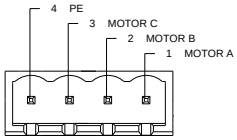
P5 – Communication Connector		
Connector Information		10-port, dual-row, 2.00 mm spaced plug terminal, vertical mount
Mating Connector	Details	Molex: P/N 51353-1000 (housing); 56134-9100 (contacts)
	Included with Card	No



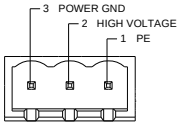
P6 – Feedback Connector		
Connector Information		12-port, dual-row, 2.00 mm spaced plug terminal, vertical mount
Mating Connector	Details	Molex: P/N 51353-1200 (housing); 56134-9100 (contacts)
	Included with Card	No



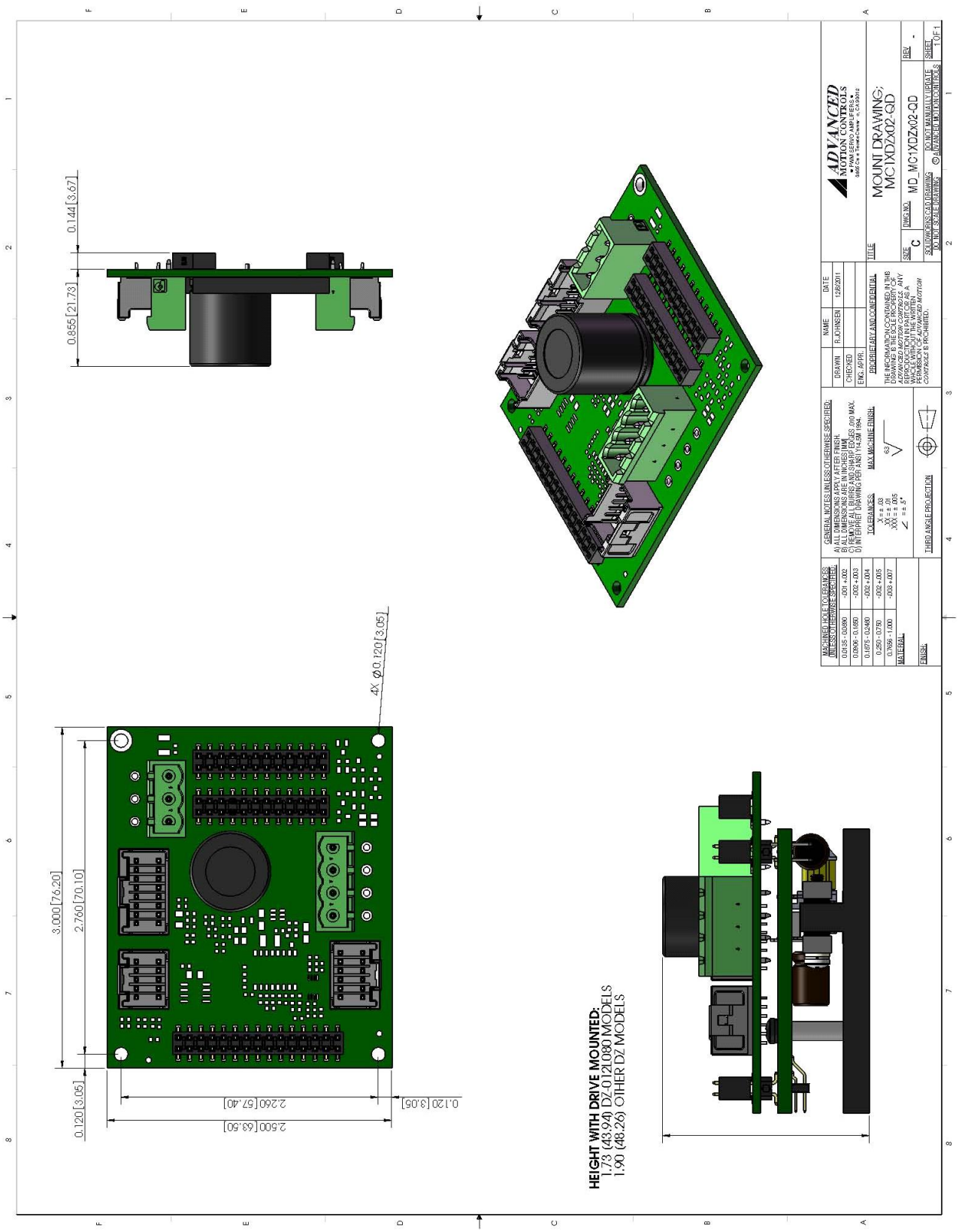
P7 – Motor Power Connector		
Connector Information		4-port, 5.08 mm spaced insert connector, vertical mount
Mating Connector	Details	Phoenix Contact: P/N 1757035
	Included with Card	Yes



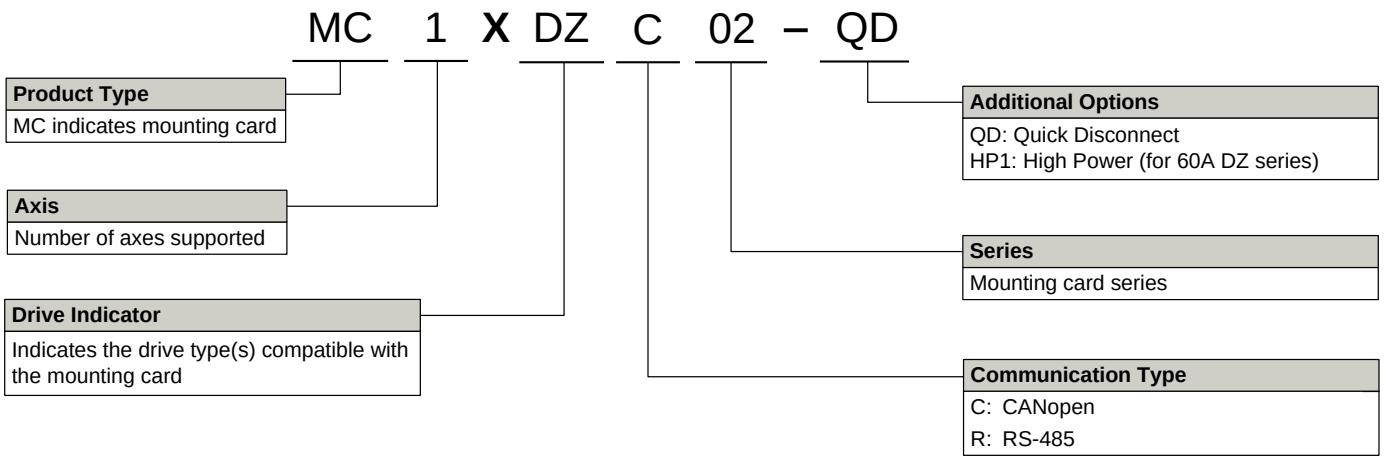
P8 –Power Connector		
Connector Information		3-port, 5.08 mm spaced insert connector, vertical mount
Mating Connector	Details	Phoenix Contact: P/N 1757022
	Included with Card	Yes



MOUNTING DIMENSIONS



PART NUMBERING INFORMATION



DigiFlex® Performance™ series of products are available in many configurations. 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.

[A]ll specifications in this document are subject to change without written notice. Actual product may differ from pictures provided in this document.