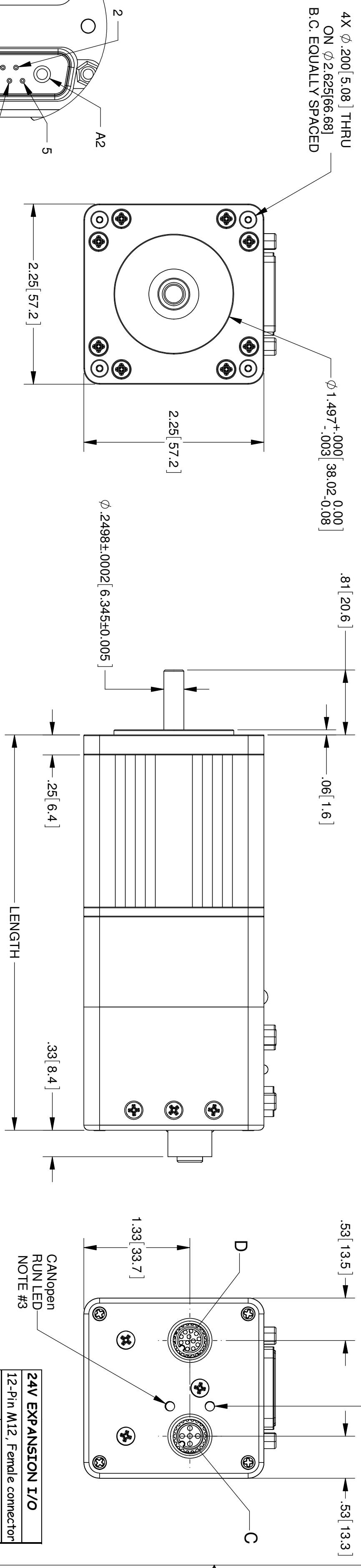
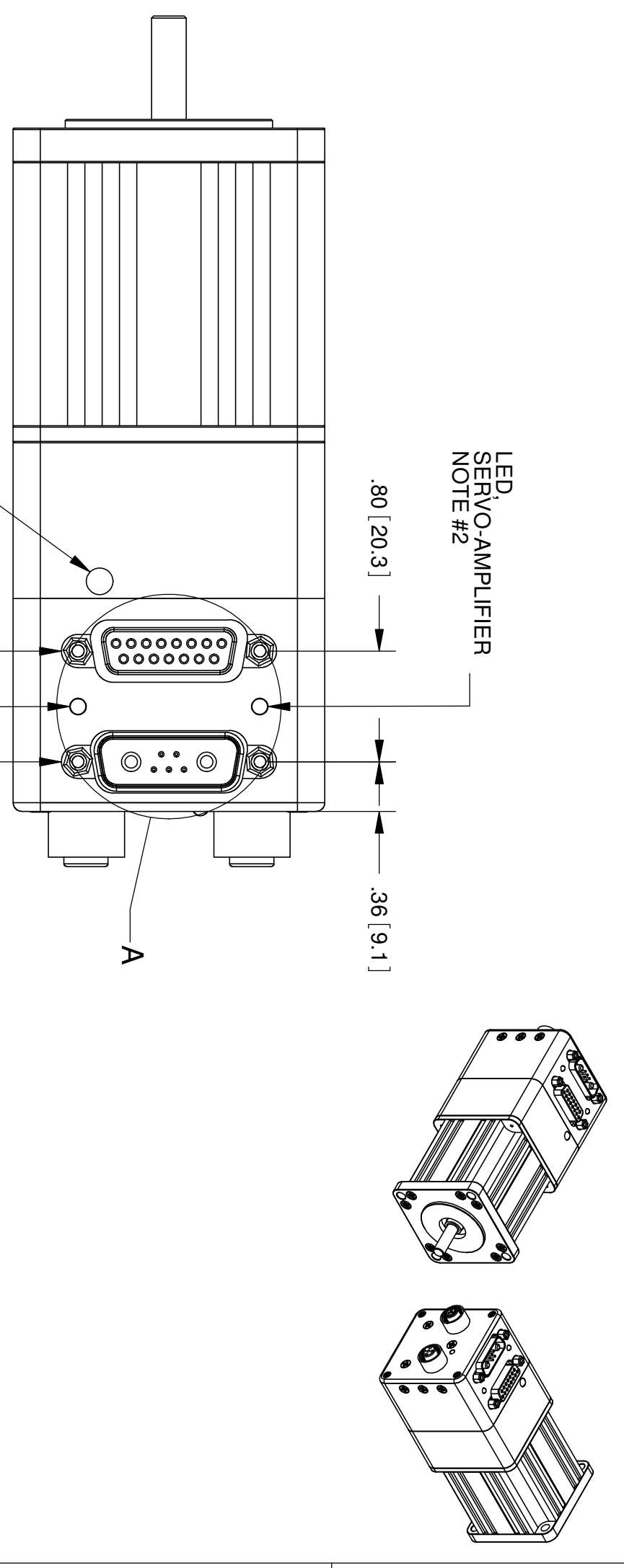
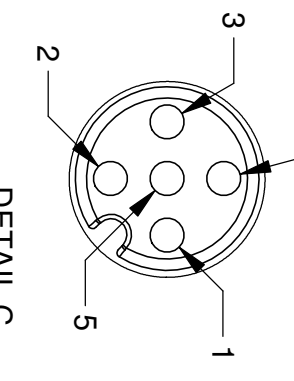


REV.	DESCRIPTION	ZONE	ECO	DATE	APPROVED
A	PRELIMINARY RELEASE			01/20/2011	M. TRAN

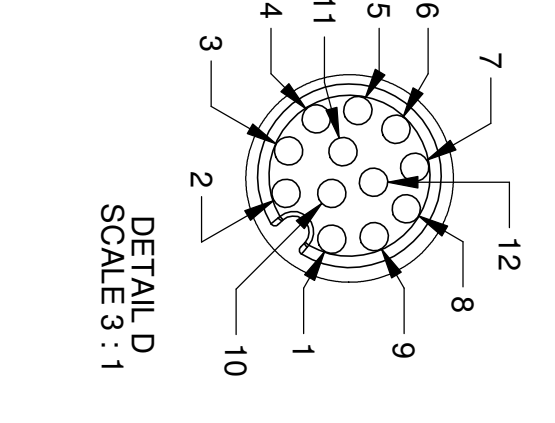
- NOTES:
- DRAWING APPLIES TO THE FOLLOWING SMARTMOTOR WITH PART NUMBERS:
SM23105D-BRK-C-AD1 SM23205D-BRK-C-AD1 SM23305D-BRK-C-AD1 SM23405D-BRK-C-AD1
SM23105D-DEBRK-C-AD1 SM23205D-DEBRK-C-AD1 SM23305D-DEBRK-C-AD1 SM23405D-DEBRK-C-AD1
 - LED, SERVO-AMPLIFIER:
• CLEAR = CONTROLLER POWER NOT AVAILABLE
• RED = FAULT
• FLASH GREEN = DRIVE (AMPLIFIER) IS OFF
• GREEN = DRIVE (AMPLIFIER) IS ON
LED, TRAJECTORY
• CLEAR = NOT IN CONTROLLED TRAJECTORY (DEFAULT STATE)
• GREEN = IN CONTROLLED TRAJECTORY (CLOSE LOOP MOTION)
• CANopen ERROR LED (RED)
• CLEAR = NO ERROR
• SINGLE FLASH = WARNING, COMMUNICATION ERROR COUNT LIMIT REACHED
• DOUBLE FLASH = GUARD OR HEART BEAT ERROR
• CANopen RUN LED (GREEN)
• SINGLE FLASH = DEVICE IS IN STOPPED STATE
• BLINKING = PREOPERATIONAL STATE
• SOLID = OPERATIONAL STATE
 - FOR -DE OPTION, DRIVE POWER AND CONTROLLER POWER ARE ON SEPARATE PINS. MUST PROVIDE POWER TO CONTROLLER AND DRIVE POWER TO OPERATE. SEE TABLE CN2 BELOW FOR PIN ASSIGNMENT.
 - DIMENSIONS IN [] ARE mm.



PART NUMBER	LENGTH	
	in	mm
SM23105D-BRK	4.29	109.0
SM23205D-BRK	4.88	123.8
SM23305D-BRK	5.53	140.3
SM23405D-BRK	6.18	156.8



CANopen	
5-Pin M12, Female connector	NAME
1	NC
2	NC
3	GND CAN
4	CAN H
5	CAN L



24V EXPANSION I/O	
12-Pin M12, Female connector	NAME
1	24V I/O #1
2	24V I/O #2
3	24V I/O #3
4	24V I/O #4
5	24V I/O #5
6	24V I/O #6
7	24V I/O #7
8	24V I/O #8
9	24V I/O #9
10	24V I/O #10
11	24V PWR IN
12	GND (I/O)

CN2 : 15PIN D-SUB FEMALE CONNECTOR

PIN #	NAME	FUNCTIONS		
		Default Function	Secondary Function	Digital I/O Analog Input
1	I/O A	External Encoder A Input	Step Input	5V TTL 0 to 5V
2	I/O B	External Encoder B Input	Direction Input	5V TTL 0 to 5V
3	I/O C	Positive Limit Input		5V TTL 0 to 5V
4	I/O D	Negative Limit Input		5V TTL 0 to 5V
5	I/O E		RS485 A (+)	5V TTL 0 to 5V
6	I/O F		RS485 B (-)	5V TTL 0 to 5V
7	I/O G	G-Synchronization	RS485-150 Adapter Data	5V TTL 0 to 5V
8	ENC A OUT	Encoder A Output		
9	ENC B OUT	Encoder B Output		
10	RS232 Tx	RS232 Transmitt		
11	RS232 Rx	RS232 Receive		
12	+5Vdc OUT	+5Vdc Supply Out		
13	GND	Signal GND		
14	POWER GND	POWER GND		
15	POWER	POWER		

For -DE Option, Pin 15 is Control power (20V to 48V) and Pin 14 is PWR GND. *PIN 15 is not connected to A1.

CN1 : 7PIN COMBO D-Sub Male Connector

PIN #	NAME	FUNCTIONS	Ties to CN2, PIN #
1	I/O G	G-Synchronization	7
2	+5Vdc OUT	+5Vdc Output	12
3	RS232 Tx	RS232 Transmitt	10
4	RS232 Rx	RS232 Received	11
5	GND	Signal GND	13
A1	DRIVE PWR	Drive Power (20 - 48Vdc)	15
A2	POWER GND	POWER GND	14

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INCH UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE INCHES AND TOLERANCES ARE:
DECIMALS: .XXX ± .005
XXX ± .03

ANGLES: XX ± 0.25°
X ± 0.5°

NO BURRS ALLOWED. BREAK SHARP EDGES .01

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M - 1994.

ALL DIMENSIONS, TOLERANCES AND ROUGHNESS APPLY AFTER FINISHING, WHEN APPLICABLE.

Animatics Corporation

TITLE: SM23x05D SERIES W/BRAKE, CANOPEN, AND EXT 24VIO OPTIONS

DWG NO: SM23x05D-BRK-C-AD1

SCALE: 1:1

SHEET: 1 OF 1