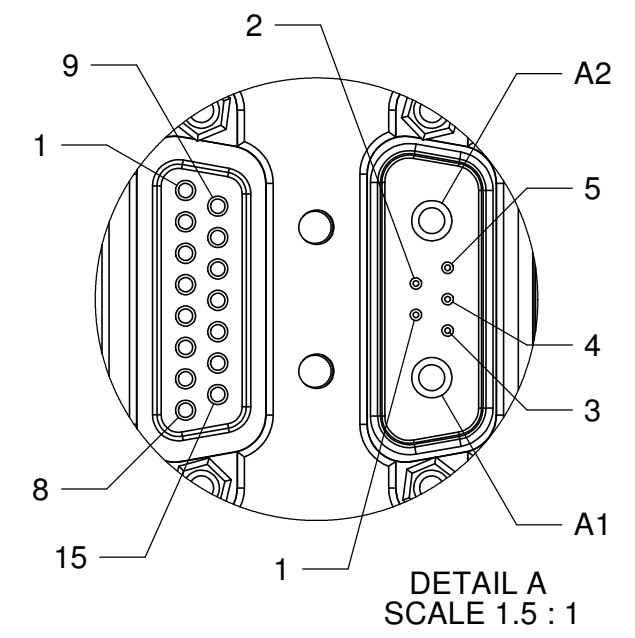
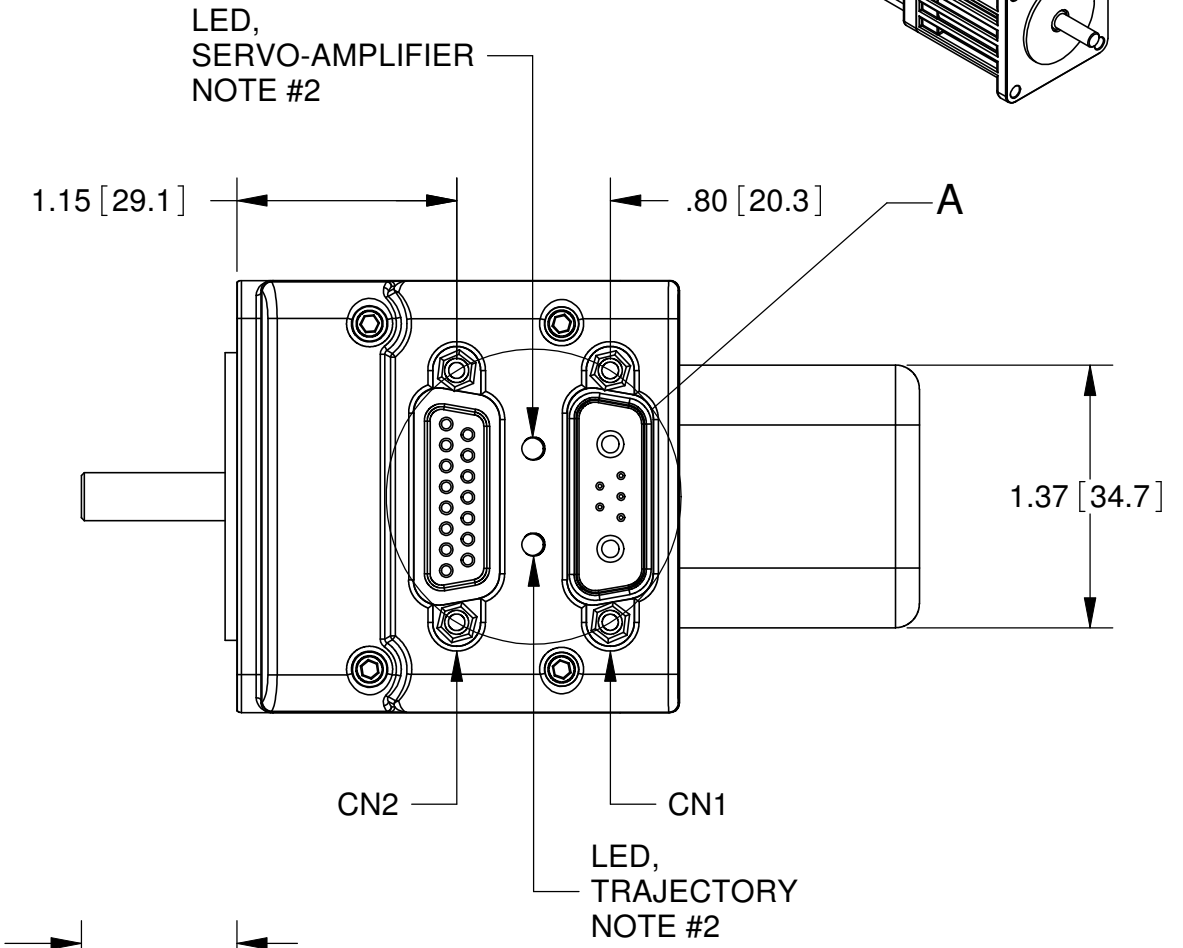
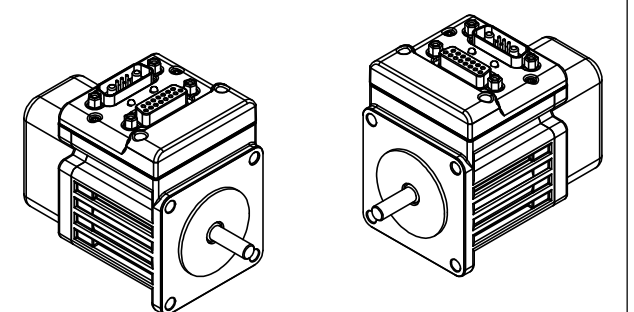


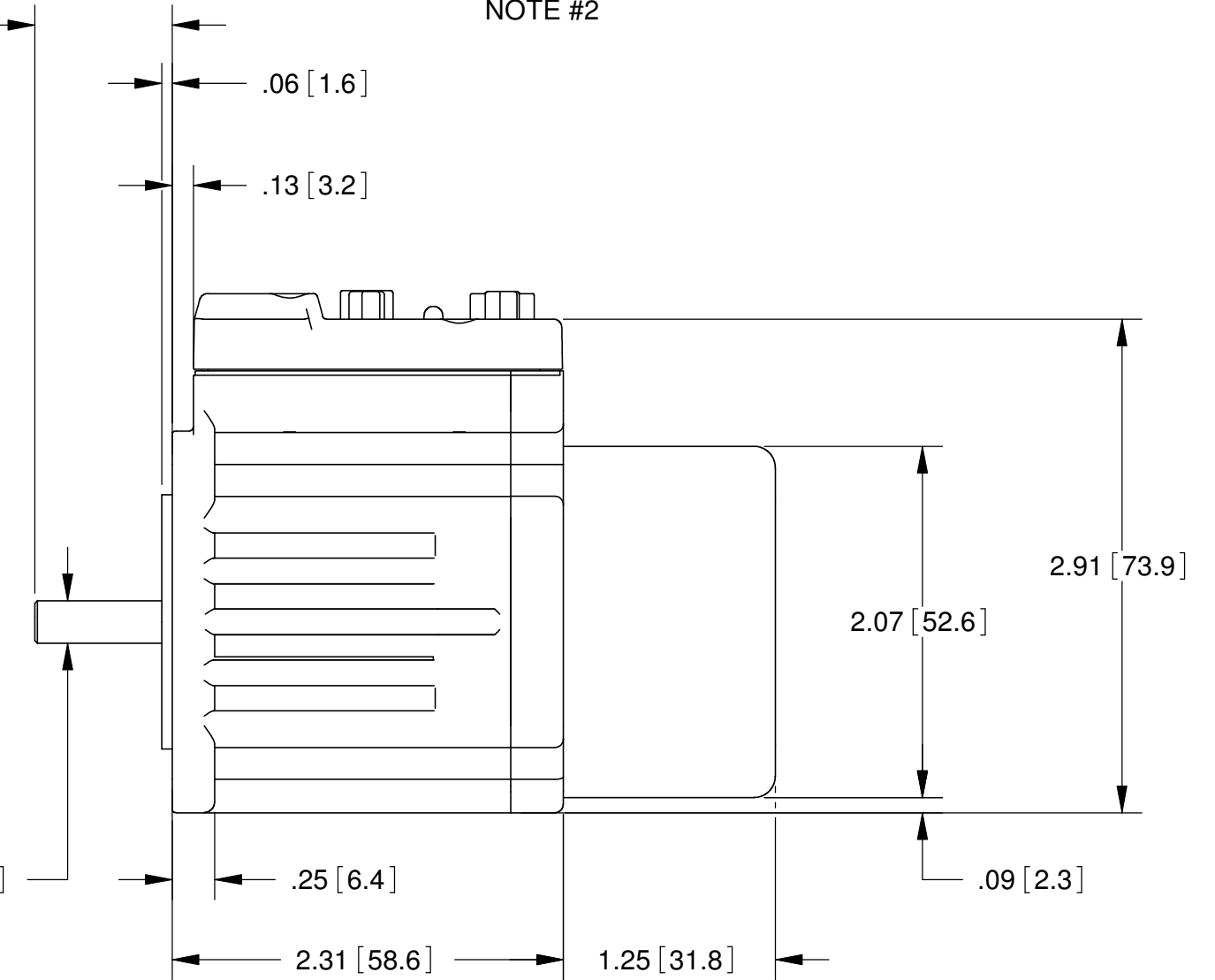
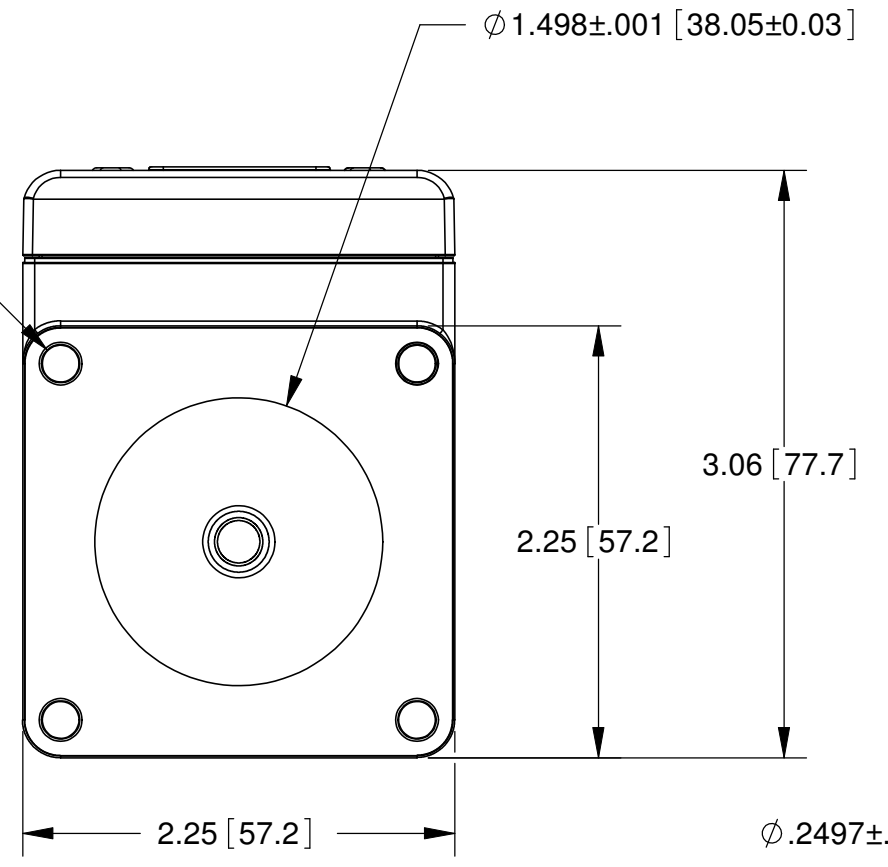
REV.	DESCRIPTION	ZONE	ECO	DATE	APPROVED
C	PRELIMINARY RELEASE			10/12/2010	M. TRAN

NOTES:

- DRAWING APPLIES TO THE FOLLOWING SMARTMOTOR WITH PART NUMBERS:  
 SM23165D-BRK      SM23165D-DEBRK  
 SM23165DT-BRK    SM23165DT-DEBRK
- 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)
- 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.
- RECOMMENDED BOLTING SCREW SIZE TO BE 10-32 OR M5, SOCKET CAP.



4X  $\phi$ .200 [5.1] THRU  
ON  $\phi$ 2.625 [66.68]  
B.C. EQUALLY SPACED



CN2 : 15PIN D-SUB FEMALE CONNECTOR					
PIN #	NAME	FUNCTIONS			
		Default Function	Secondary Function	Digital I/O	Analog Input (10bit Res)
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	NA	RS485 A (+)	5V TTL	0 to 5V
6	I/O F	NA	RS485 B (-)	5V TTL	0 to 5V
7	I/O G	G-Synchronization	RS485-ISO Adaptor Data Flow Control	5V TTL	0 to 5V
8	ENC A OUT	Encoder A Output			
9	ENC B OUT	Encoder B Output			
10	RS232 Tx	RS232 Transmit			
11	RS232 Rx	RS232 Receive			
12	+5Vdc OUT	+5Vdc Supply Out			
13	GND	Signal GND			
14	POWER GND	POWER GND	For -DE Option, Pin 15 is Contorl power (20V to 48V) and Pin 14 is PWR GND. *PIN 15 is not connected to A1.		
15	POWER	POWER			

CN1 : 7PIN COMBO D-Sub Male Connector				
PIN #	NAME	FUNCTIONS	Ties to CN2, PIN #	
1	I/O G	G-Synchronization	7	
2	+5V dc OUT	+5Vdc Output	12	
3	RS232 Tx	RS232 Transmit	10	
4	RS232 Rx	RS232 Received	11	
5	GND	Signal GND	13	
A1	DRIVE PWR	Dirve Power (20 - 48Vdc)	15^	
A2	POWER GND	POWER GND	14	

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MATERIAL: ALUMINUM HOUSING      FINISH: BLACK ANODIZED HOUSING

DRAWN: M. TRAN      DATE: 10/09/2010  
ENGR      DATE:

**INCH**      UNLESS OTHERWISE SPECIFIED:      INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M - 1994.

THIRD ANGLE PROJECTION      DIMENSIONS ARE INCHES AND TOLERANCES ARE:      ALL DIMENSIONS, TOLERANCES AND ROUGHNESS APPLY AFTER FINISHING, WHEN APPLICABLE.

DECIMALS: .XXX ± .005      ANGLES: .XX ± 0.25°  
.XX ± .03      .X ± 0.5°

NO BURRS ALLOWED, BREAK SHARP EDGES .01 MAX.

**Animatics Corporation**

TITLE: SM23165D AND SM23165DT SERIES W/BRAKE OPTION

SIZE: C      DWG NO: SM23165x-BRK

DO NOT SCALE DRAWING      SCALE: 1:1      SHEET: 1 OF 1