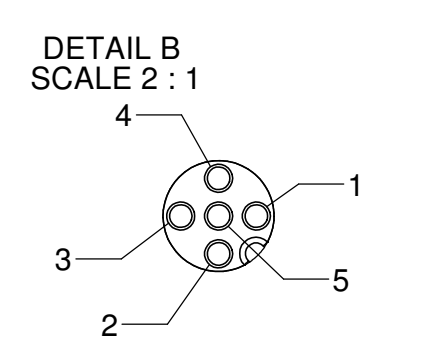
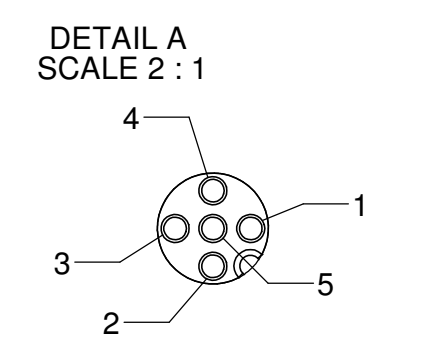
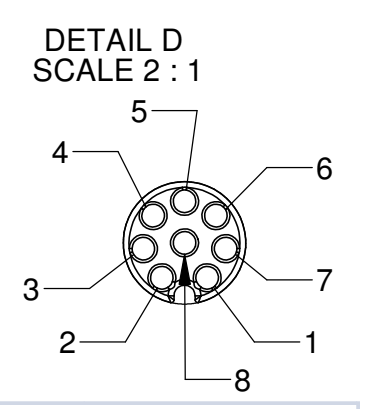
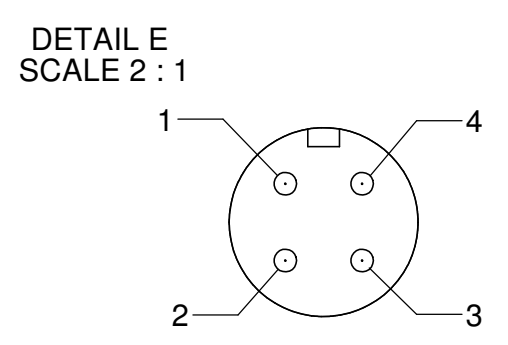
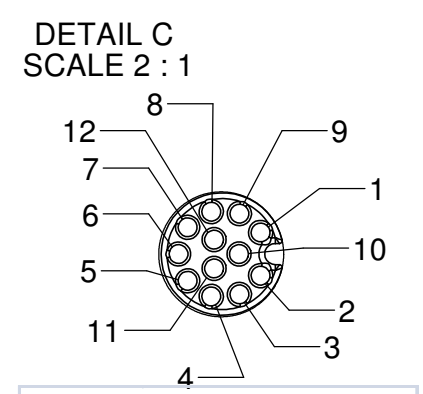
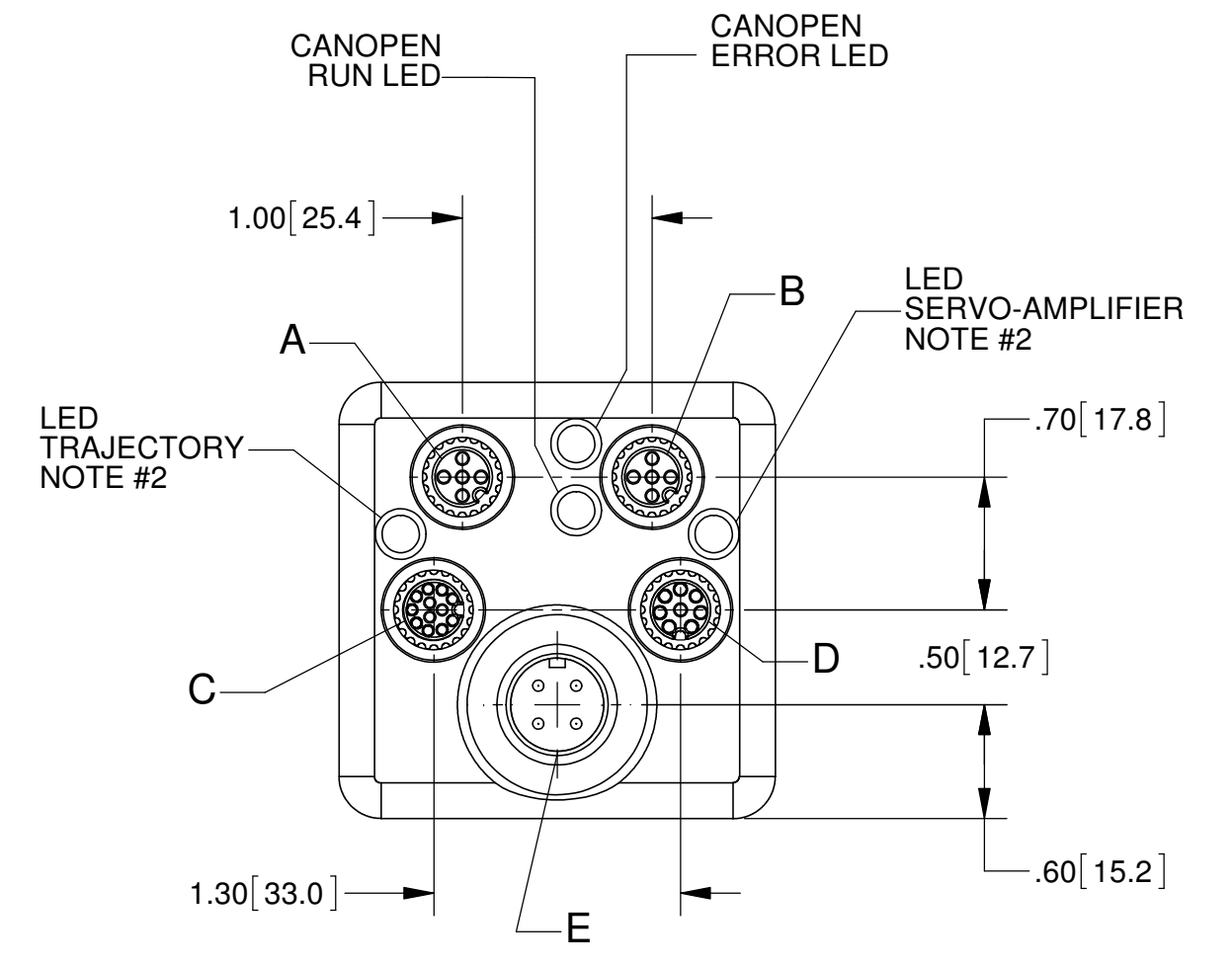
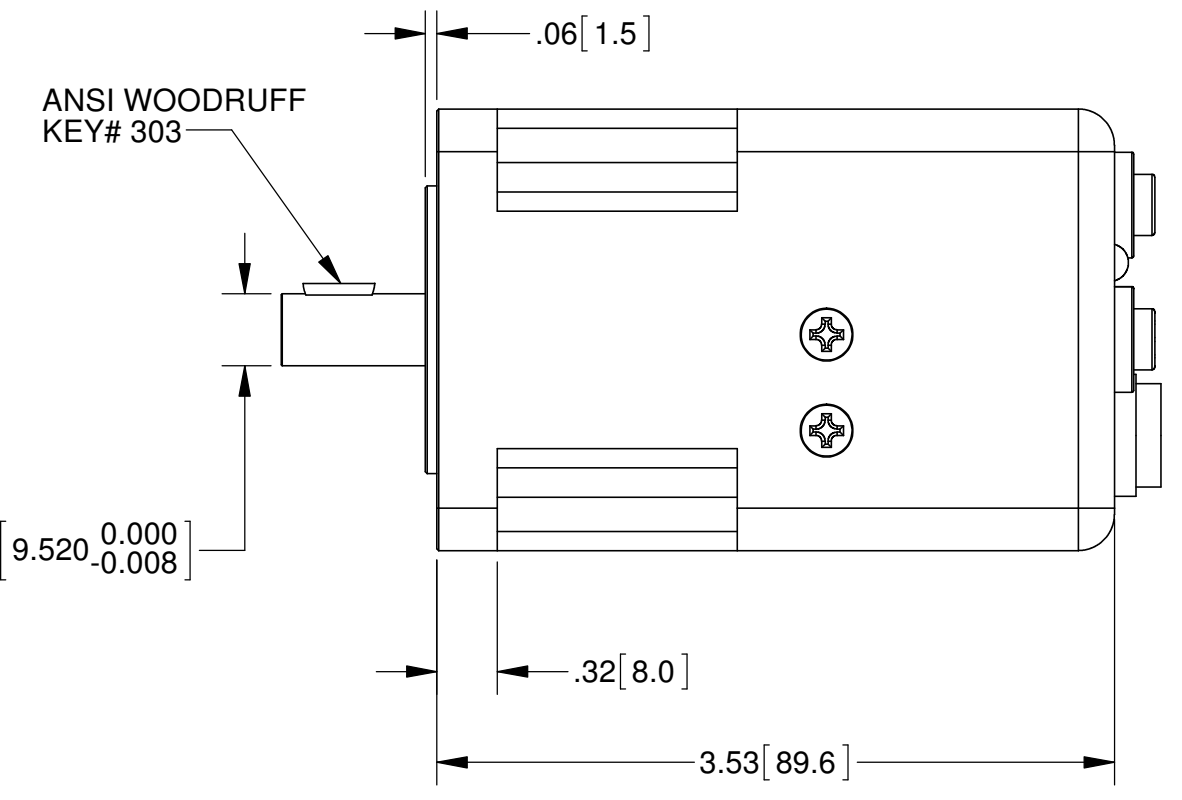
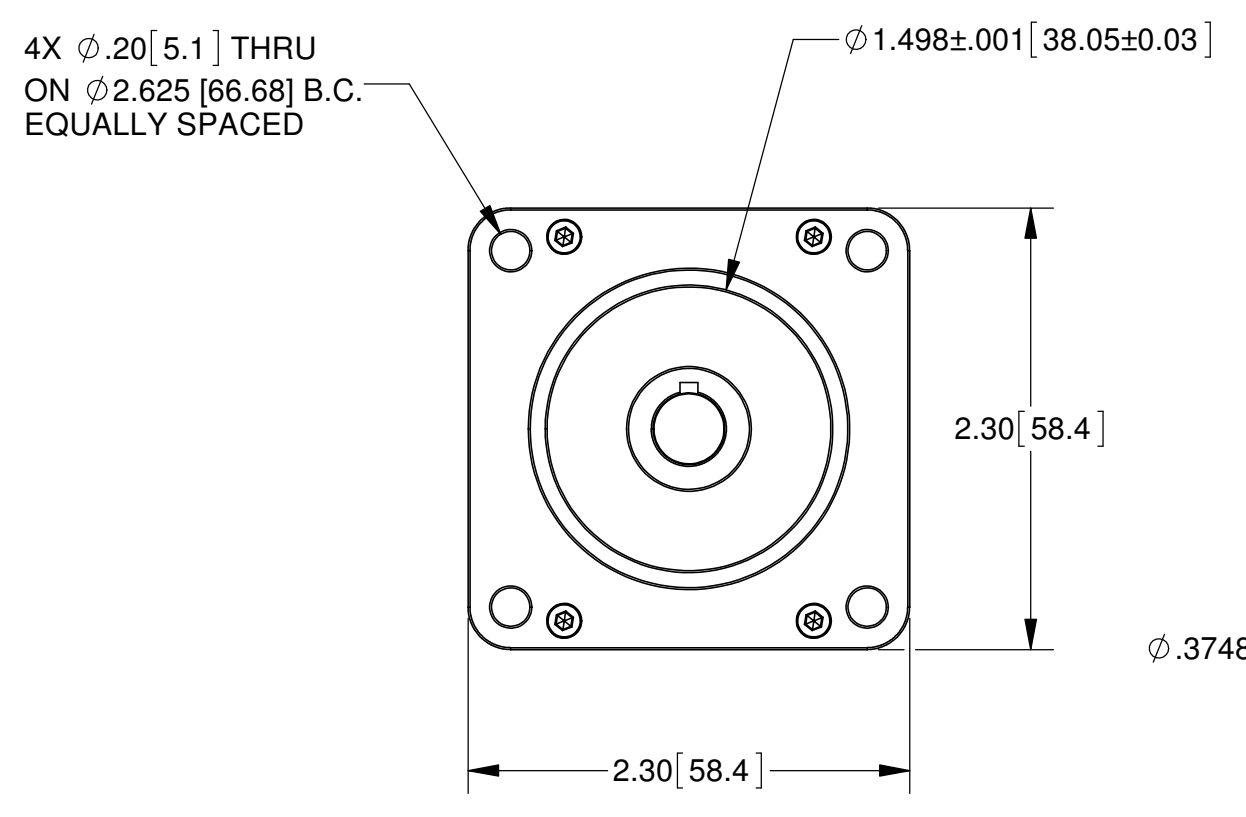
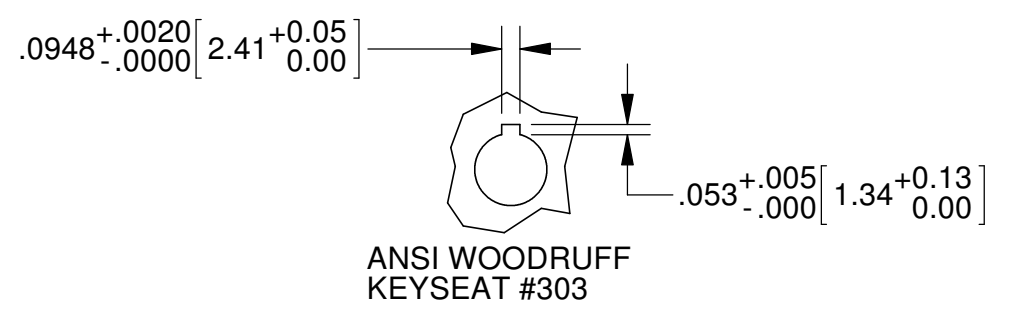
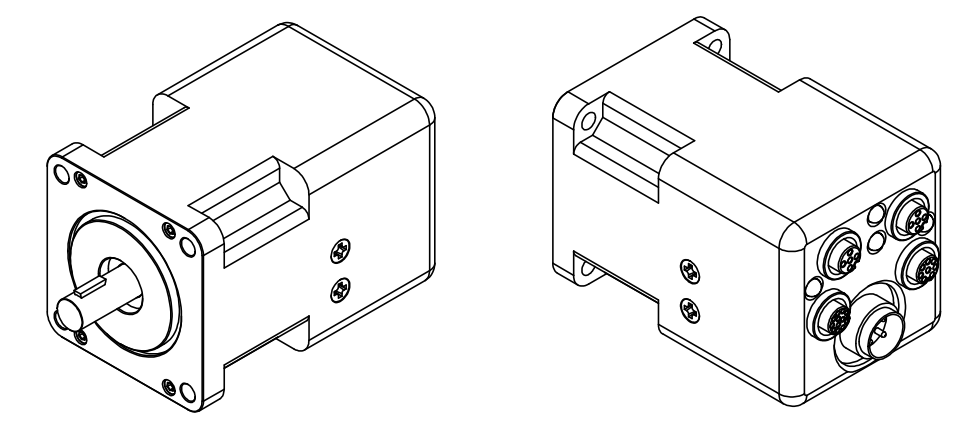


REV.	DESCRIPTION	ZONE	ECO	DATE	APPROVED
A	PRELIMINARY RELEASE			06/01/2011	M. TRAN

- NOTES:
- DRAWING APPLIES TO THE FOLLOWING SMARTMOTOR WITH PART NUMBERS:  
SM23165M SM23165MT
  - 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
  - MUST SUPPLY 24V FOR CONTROL POWER ON PIN 1 OF POWER INPUT CONNECTOR P1.
  - IOs 0 TO 7 AND 10 CAN SOURCE UP TO 150mA MAX WHEN USED AS OUTPUT.
  - IOs 8 AND 9 CAN SOURCE UP TO 300mA MAX WHEN USED AS OUTPUT.
  - DIMENSIONS IN [ ] ARE mm.
  - RECOMMENDED BOLTING SCREW SIZE TO BE 10-32 OR M5x0.8.



P3 24V I/Os	
M12x1 12-Pin, Female	
PIN	Description
1	IO-0
2	IO-1
3	IO-4
4	IO-5
5	IO-6
6	IO-7
7	IO-8 OR BRK LNE
8	IO-9
9	NOT FAULT OUT
10	DRV ENABLE IN
11	24V out
12	GND -Common

P2 COMMUNICATION	
M12x1 8-Pin, Female	
PIN	Description
1	GND -Common
2	RS485B CHO
3	RS485A CHO
4	ENC A+ (IN/OUT)
5	ENC B- (IN/OUT)
6	ENC A- (IN/OUT)
7	5Vdc out
8	ENC B+ (IN/OUT)

P1 CANOPEN	
M16x0.75 4pin, Male	
PIN	Description
1	CNTRL PWR 24Vdc max
2	CHASSIS GND/EARTH
3	GND -Common
4	AMPLIFIER PWR 48Vdc max

P4 LIMITS	
M12x1 5-Pin, Female	
PIN	Description
1	24V out
2	IO-3 OR -Limit
3	GND -Common
4	IO-2 OR +Limit
5	IO-10 OR SYN

P5 CANOPEN/DeviceNet	
M12x1 5-Pin, Female	
PIN	Description
1	NC
2	V+ (Monitor)
3	V-
4	CAN -H
5	CAN -L

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MATERIAL ALUMINUM HOUSING	FINISH BLACK ANODIZED HOUSING	DRAWN M. TRAN	DATE 6/1/2011
THIRD ANGLE PROJECTION		ENGR	DATE

**INCH** UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE INCHES AND TOLERANCES ARE:  
DECIMALS: .XXX ± .005 .XX ± .01  
ANGLES: .XX ± 0.25° .X ± 0.5°

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M - 1994.  
ALL DIMENSIONS, TOLERANCES AND ROUGHNESS APPLY AFTER FINISHING, WHEN APPLICABLE.  
NO BURRS ALLOWED, BREAK SHARP EDGES .01 MAX.

**Animatics Corporation**

TITLE  
**SM23165M and SM23165MT with CanOpen Option**

SIZE C DWG NO SM 23165 M&MT -C

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