

SPECIFICATIONS:	
STEPS PER REVOLUTION: 200	ROTOR INERTIA: 280 G-CM ² (1.53 OZ-IN ²) NOM
STEP ANGLE: 1.8°	HOLDING TORQUE: 8.5 KG-CM (118 OZ-IN)MIN ^[1]
STEP TO STEP ACCURACY: ± 5 % ^{[1] , [2]}	DETENT TORQUE: N/A G-CM (N/A OZ-IN)
POSITIONAL ACCURACY: ± 5 % ^{[1] , [3]}	
HYSTERESIS: %	INSULATION CLASS: B
WINDING RESISTANCE: 1.8 OHM ±10% AT 25° ^[7]	BEARINGS: ABEC 3 , DOUBLE SHIELDED
WINDING INDUCTANCE: 3.2 mH ± 20% ^[8]	WEIGHT: 0.7 KG (1.54 LB)
PHASE VOLTAGE: 3.6 VDC	TEMP. RISE: 80 °C MAX. ^[9]
PHASE CURRENT: 2.0 AMP [(RATED)UNIPOLAR] ^[15]	OPERATING TEMP. RANGE: -20 TO +50°C
	STORAGE TEMP. RANGE: -40 TO 70°C
SHAFT RUNOUT: 0.05 T.I.R.	RELATIVE HUMIDITY RANGE: 5 TO 95 %
RADIAL PLAY: 0.02 MAX W/0.45 KG RADIAL LOAD	
END PLAY: 0.08 MAX W/0.45 KG AXIAL LOAD	

HT23-549D-ZAA

REVISIONS				
ECO NO.	REV	DESCRIPTION	DATE	APPROVED
6941	A	INITIAL RELEASE	6/16/14	J KORDIK
8034	B	CHG REAR SHAFT LENGTH/TYPO	8/28/18	M.Maroney

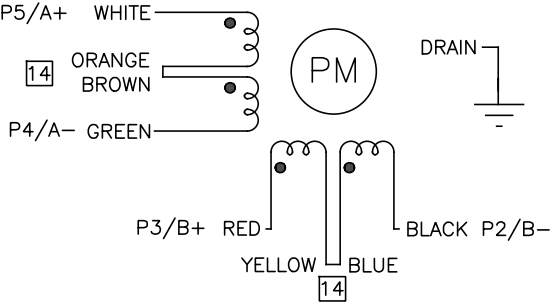
NOTES, UNLESS OTHERWISE SPECIFIED:

- ^[1] MEASURMENTS MADE AT RATED CURRENT IN EACH PHASE.
- ^[2] BETWEEN ANY TWO ADJACENT STEP POSITIONS.
- ^[3] MAXIMUM ERROR IN 360°.
4. HIPOT 500 VAC, 60 Hz FOR ONE MINUTE.
- ^[5] LEADS: 8 ,AWG 24,7 STRAND MIN.,UL AND CSA APPROVED, UL 1430 OR UL 3265, CABLE, 8 COND. W/DRAIN, P/N 666-2107.
6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
- ^[7] AS MEASURED ACROSS ANY WINDING. RESISTANCE IS DOUBLED WITH BOTH WINDINGS IN SERIES. MEASUREMENTS MADE WITHOUT CABLE.
- ^[8] AS MEASURED ACROSS ANY WINDING USING AN A.C. INDUCTANCE BRIDGE, AT 1KHz. INDUCTANCE IS FOUR TIMES VALUE WITH WINDINGS IN SERIES. MEASUREMENTS MADE WITHOUT CABLE.
- ^[9] AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED VOLTAGE APPLIED TO 2 PHASES; WITH MOTOR AT REST.
10. HIGH TORQUE MOTOR DESIGN, MICROSTEP LAMINATION.
11. ROTOR & STATOR LAMINATED CONSTRUCTION.
- ^[12] LABEL TO INCLUDE AMPS, MOTOR RESISTANCE, DATE CODE, AMP P/N AND MADE IN TAIWAN.
- ^[13] DRAIN WIRE TO BE CONNECTED TO INSIDE OF REAR ENDBELL.
- ^[14] SOLDER CENTER TAP WIRES TOGETHER, WRAP IN SHRINK TUBING AND CONCEAL WITHIN BOOT.
- ^[15] CURRENT SETTING WHEN USED WITH STAC-6 = 1.5 A
16. THIS MOTOR TO BE MANUFACTURED IN COMPLIANCE WITH EU DIRECTIVE "ROHS 2002/95/EC".
- ^[17] ENCODER 970-1001 INSTALLED PER AMP ASSEMBLY PRACTICES. ENCODER CABLE SOLD SEPARATELY..

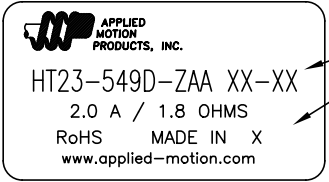
BIPOLAR, FULL STEP, 2 PHASE ON SERIES CONNECTED

SWITCHING SEQUENCE FOR CW ROTATION
FACING MOUNTING END

STEP	WHITE/A+	GREEN/A-	RED/B+	BLACK/B-
0	+	-	+	-
1	-	+	+	-
2	-	+	-	+
3	+	-	-	+
4	+	-	+	-

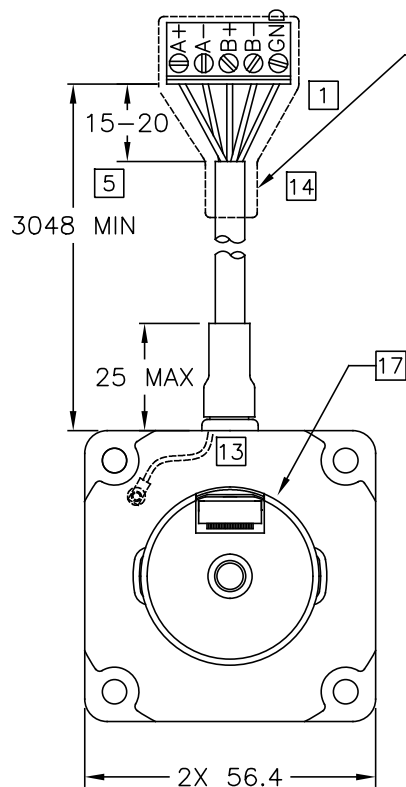


LABEL DETAIL

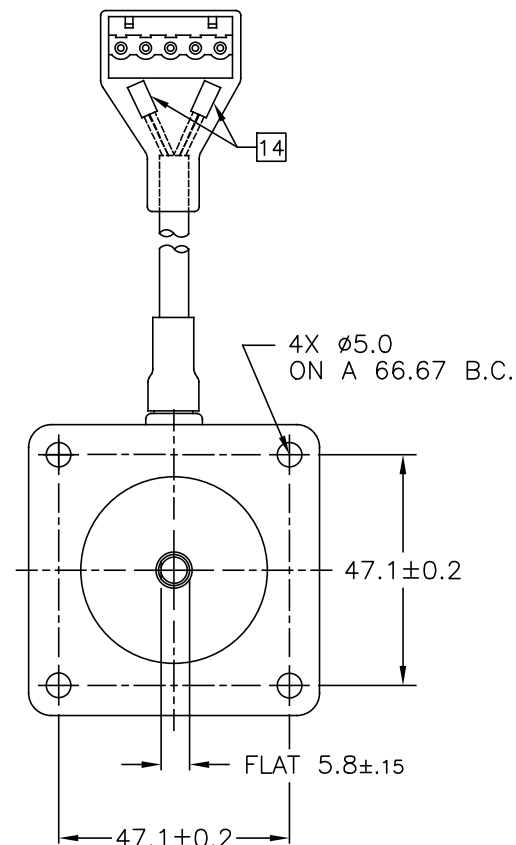
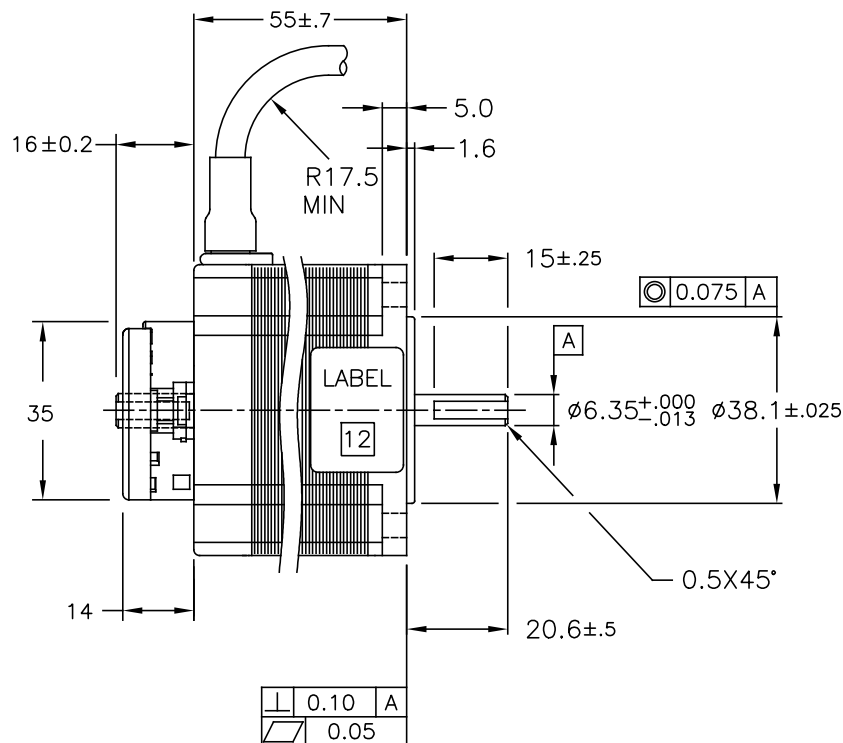


CONTRACT NO.		APPLIED MOTION PRODUCTS, INC.		
APPROVALS	DATE	STEP MOTOR OUTLINE		
DRAWN <i>R.JONEZ</i>	3/17/14			
CHECKED		B COMPUTER DATA BASE DRAWING DWG NO. HT23-549D-ZAA REV B		
APPROVED				
APPROVED		SCALE: NONE		SHEET 1 OF 2

5 4 3 2 1 ← PIN SEQUENCE



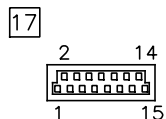
CONNECTOR: PCD P/N ELFT05250-G, OR PHOENIX P/N 1792786,
& BOOT: DEMPSEY P/N 650-1010



ENCODER RESOLUTION: 2000 cpr
WITH MARKER PULSE.

ENCODER PINOUTS

PIN	SIGNAL
1	CH A
2	CH A-
3	CH B
4	CH B-
5	INDEX
6	INDEX-
7	N/C
8	N/C
9	N/C
10	N/C
11	N/C
12	N/C
13	+Vcc
14	GND
15	N/C



MOTOR CONNECTION CHART		
PIN	CONNECTOR	LEAD COLOR
1	GND	SHIELD
2	B-	BLACK
3	B+	RED
4	A-	GREEN
5	A+	WHITE
YELLOW/ BLUE	SEE NOTE 14	ORANGE/ BROWN

ALL DIMENSIONS ARE IN MILLIMETERS

TOLERANCES		THIRD ANGLE PROJECTION	
DECIMALS: MM (INCH) X.XXX = ± (.005) X.XX = ±0.13 (.010) X.X = ±0.25 (.020) ANGLES: MACH. = ±.5° CHAM. = ±.5°			
COMPUTER DATA BASE DRAWING		APPROVALS	DATE
		DRAWN R. JONEZ	3/17/14
		CHECKED	
		APPROVED	
		STEP MOTOR OUTLINE	
		B	DWG NO. HT23-549D-ZAA
		REV B	
		SCALE: FULL	
		SHEET 2 OF 2	

Mouser Electronics

Authorized Distributor

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[HT23-549D-ZAA](#)