

**SPECIFICATIONS:**

STEPS PER REVOLUTION: 200	ROTOR INERTIA: 120 G-CM <sup>2</sup> (0.66 OZ-IN <sup>2</sup> ) NOM
STEP ANGLE: 1.8°	HOLDING TORQUE: 4.3 KG-CM (59.7 OZ-IN) MIN <b>1</b>
STEP TO STEP ACCURACY: ± 5 % <b>1</b> , <b>2</b>	DETENT TORQUE: N/A G-CM (N/A OZ-IN)
POSITIONAL ACCURACY: ± 5 % <b>1</b> , <b>3</b>	
HYSTERESIS: %	INSULATION CLASS: B
WINDING RESISTANCE: 1.4 OHM ±10% AT 25° <b>7</b>	BEARINGS: ABEC 3, DOUBLE SHIELDED
WINDING INDUCTANCE: 1.4 mH ± 20% <b>8</b>	WEIGHT: 0.47 KG (1.03 LB) APPROXIMATE
PHASE VOLTAGE: 2.8 VDC	TEMP. RISE: 80 °C MAX. <b>9</b>
PHASE CURRENT: 2.0 AMP [(RATED)UNIPOLAR] <b>15</b>	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	

HT23-548

**REVISIONS**

ECO NO.	REV	DESCRIPTION	DATE	APPROVED
5197	A	INITIAL RELEASE	3/14/05	R. HAZELWOOD
5219	B	SPEC CHANGES	3/14/05	R. HAZELWOOD
5235	C	ADD EU COMPLIANCE NOTES	8/25/05	R. Hazelwood
5273	D	REMOVE CABLE CALLOUT	2/6/06	R. Hazelwood
5587	E	REMOVE 'D' IN BASE P/N	8/20/07	J. Kordik
6203	F	REVISE SPECS	12/21/10	J. Amos
6515	G	REVISE NOTE 5	6/11/12	J. Georgiana
7445	H	REVISE NOTE 16	6/6/16	J. Kordik

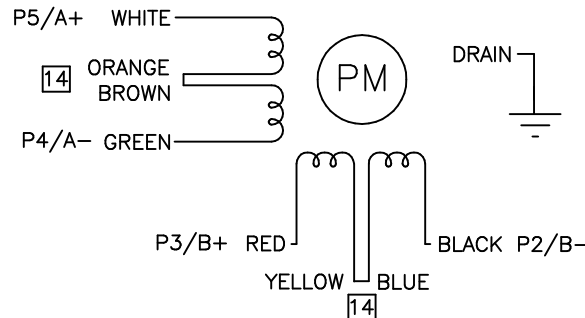
NOTES, UNLESS OTHERWISE SPECIFIED:

- 1** MEASUREMENTS 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. (WITH CABLE = 2.0 OHM)
- 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/PHASE, MOTOR RESISTANCE, AND AMP PART No.
- 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 = 1.5A
16. THIS MOTOR IS MANUFACTURED IN COMPLIANCE WITH THE CURRENT EU RoHS DIRECTIVE.
17. MOTOR LABEL TO INCLUDE "ROHS" COMPLIANT.
- 18** SHAFT OPTION: IF DOUBLE SHAFT REQUIRED ADD "D" TO END OF PART NUMBER.

BIPOLAR, FULL STEP, 2 PHASE ON SERIES CONNECTED

SWITCHING SEQUENCE FOR CW ROTATION FACING MOUNTING END

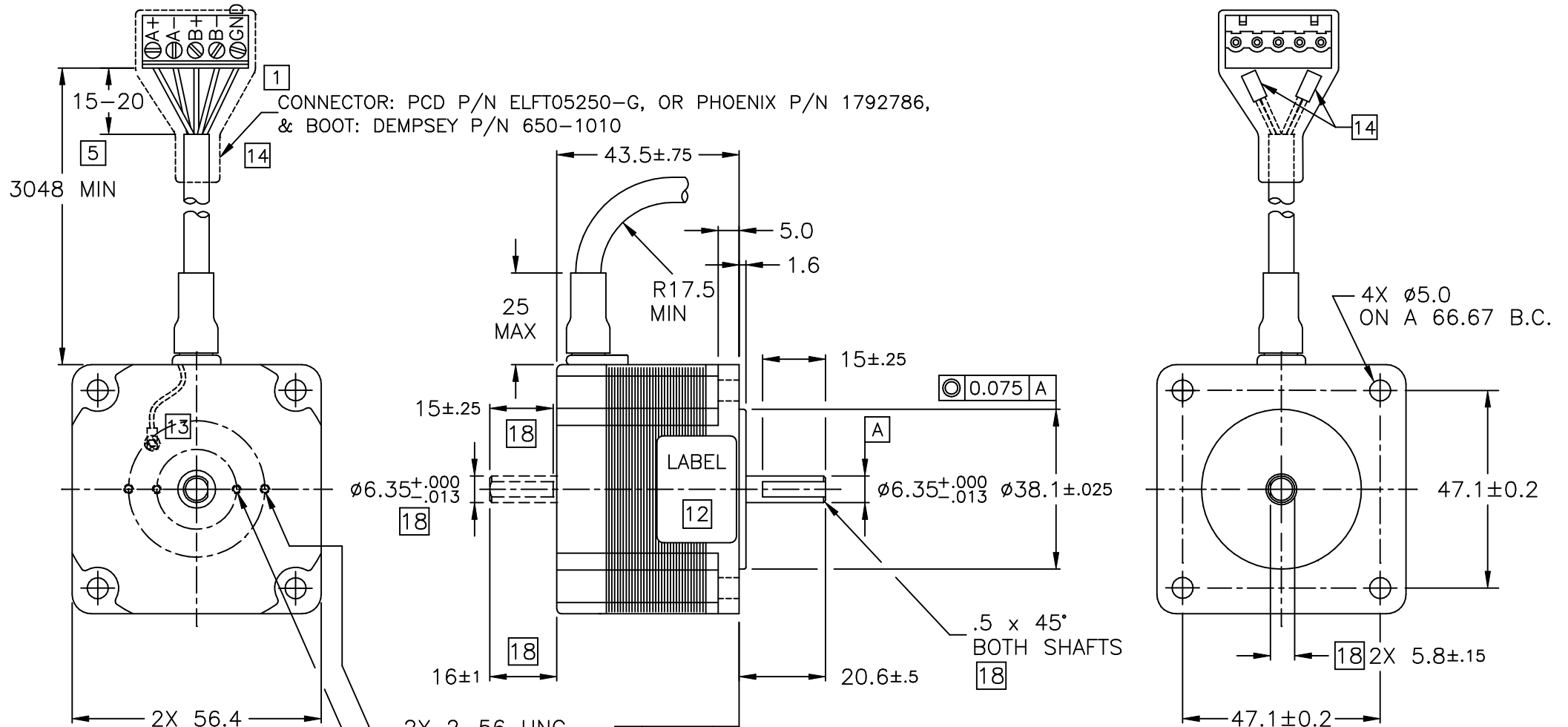
STEP	WHITE/A+	GREEN/A-	RED/B+	BLACK/B-
0	+	-	+	-
1	-	+	+	-
2	-	+	-	+
3	+	-	-	+
4	+	-	+	-



CONTRACT NO.		APPLIED MOTION PRODUCTS, INC.			
APPROVALS	DATE	<b>STEP MOTOR OUTLINE</b>			
DRAWN <i>S. ARNOLD</i>	3/8/2005				
CHECKED <i>R. Barrick</i>	3/9/05	<b>B</b>	COMPUTER DATA BASE DRAWING	DWG NO. HT23-548	REV H
APPROVED			SCALE: 1=1	SHEET 1 OF 2	

SEE SHEET 1 FOR REVISIONS

5 4 3 2 1 ← PIN SEQUENCE



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

2X 2-56 UNC  
5 DEEP ON A  
Ø32.5 B.C.


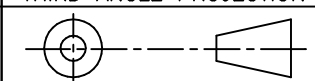
2X 2-56 UNC TAP  
THRU 180° APART  
ON A Ø19.05 B.C.

ALL DIMENSIONS ARE IN MILLIMETERS

CONNECTION CHART		
PIN	CONNECTOR	LEAD COLOR
1	GRND	SHIELD
2	B-	BLACK
3	B+	RED
4	A-	GREEN
5	A+	WHITE

YELLOW/ BLUE	SEE NOTE 14	ORANGE/ BROWN
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TOLERANCES		THIRD ANGLE PROJECTION		 <b>STEP MOTOR OUTLINE</b>
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 DRAWN S. ARNOLD CHECKED R. WOOD APPROVED	DATE 3/5/2005 3/14/05	
		SCALE: FULL	SHEET 2 OF 2	REV H DWG NO. HT23-548