SPECIFICATIONS:

STEPS PER REVOLUTION: 200	ROTOR INERTIA: 480 G–CM ^{2} (2.62 OZ–IN^2) NOM
STEP ANGLE: 1.8°	HOLDING TORQUE: 13.5KG–CM (187 OZ–IN)MIN [1]
STEP TO STEP ACCURACY: ± 5 % [1] , [2]	DETENT TORQUE: 800 G–CM (11.11 OZ–IN) MIN
POSITIONAL ACCURACY: ± 5 % [1] , [3]	
HYSTERESIS: %	INSULATION CLASS: B
WINDING RESISTANCE: 1.0 OHM ±10% AT 25° [7]	BEARINGS: ABEC 3 , DOUBLE SHIELDED
WINDING INDUCTANCE: 1.6 mH ± 20% [8]	WEIGHT: 1.0 KG (2.2 LB)
PHASE VOLTAGE: 3.0 VDC	TEMP. RISE: 80 °C MAX. [9]
PHASE CURRENT: 3.0 AMP [RATED) UNIPOLAR]	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: 0.025 MAX W/A .5KG RADIAL LOAD.	
END PLAY: 0.075 MAX W/A 1KG AXIAL LOAD.	

HT23–401

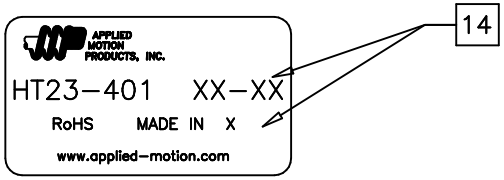
REVISIONS

ECO NO.	REV	DESCRIPTION	DATE	APPROVED
3987	A	INITIAL RELEASE	8/16/96	K. Kordik
5007	B	ADD"23HT76D" IF DBL SHFT		
5235	C	ADD EU COMPLIANCE NOTES	8/25/05	R. Hagelwood
6006	D	ADD ENV DRAWING/ ENC HOLES	10/20/09	J KORDIK

NOTES, UNLESS OTHERWISE SPECIFIED:

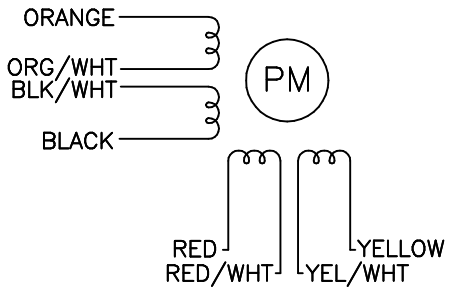
[1] MEASURMENTS MADE AT RATED CURRENT IN EACH PHASE.
[2] BETWEEN ANY TWO ADJACENT STEP POSITIONS.
[3] MAXIMUM ERROR IN 360°.
4. HIPOT 500 VAC, 60 Hz FOR ONE MINUTE.
[5] LEADS: 8 ,AWG 22 ,7 STRAND MIN.,UL AND CSA APPROVED, UL 3265.
6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
[7] AS MEASURED ACROSS ANY WINDING. RESISTANCE IS DOUBLED WITH BOTH WINDINGS IN SERIES.
[8] AS MEASURED ACROSS ANY WINDING USING AN A.C. INDUCTANCE BRIDGE, AT 1KHz. INDUCTANCE IS FOUR TIMES VALUE WITH WINDINGS IN SERIES.
[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 LAMINATION MATERIAL: 0.5mm thk, SEE AMP STD SPEC #1500–062.
[12] SHAFT OPTION: IF DOUBLE SHAFT REQUIRED ADD "D" TO END OF PART NUMBER. DOUBLE SHAFT REQUIRES ADDED HOLES FOR ENCODER OPTIONS.
13. THIS MOTOR TO BE MANUFACTURED IN COMPLIANCE WITH EU DIRECTIVE "ROHS 2002/95/EC".
[14] MOTOR LABEL TO INCLUDE "ROHS" COMPLIANT, 'MADE IN (COUNTRY OF ORIGIN)' AND DATE CODE.

LABEL DETAIL

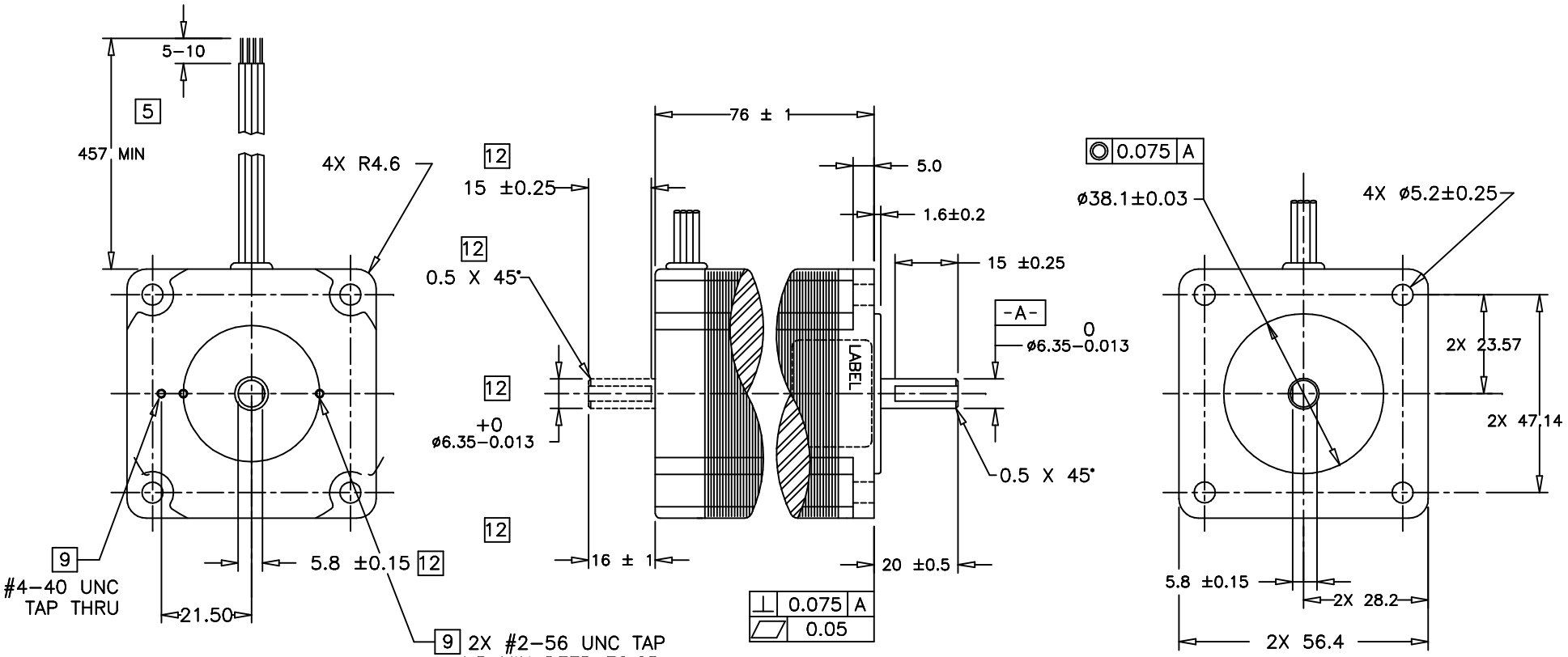


SWITCHING SEQUENCE FOR CW ROTATION FACING MOUNTING END

STEP	ORANGE	BLACK	RED	YELLOW
0	+	–	+	–
1	–	+	+	–
2	–	+	–	+
3	+	–	–	+
4	+	–	+	–



CONTRACT NO. CAT TS3653N3E9		APPLIED MOTION PRODUCTS, INC.	
APPROVALS	DATE	STEP MOTOR OUTLINE	
DRAWN R. BARRICK	8/15/96		
CHECKED B. Corser	8/16/96		
APPROVED K. Kordik	8/16/96	B COMPUTER DATA BASE DRAWING	DWG NO. HT23–401 REV D
APPROVED		SCALE: 1=1	SHEET 1 OF 2



TOLERANCES	THIRD ANGLE PROJECTION		APPLIED MOTION PRODUCTS, INC.
DECIMALS: MM (INCH) X.XXX= ± (.005) X.XX = ±0.13 (.010) X.X = ±0.25 (.020) ANGLES: MACH. = ±.5° CHAM. = ±5°			STEP MOTOR OUTLINE
COMPUTER DATA BASE DRAWING	APPROVALS	DATE	
	DRAWN R.BARRICK	10/13/09	B DWG NO. HT23–401 REV D
	CHECKED		
	APPROVED		SCALE: NONE SHEET 2 OF 2