

SPECIFICATIONS:

STEPS PER REVOLUTION: 200	ROTOR INERTIA: 460 G-CM ² (6.51E-03 oz-in-sec ²)NOM
STEP ANGLE: 1.8°	DETENT TORQUE: 0.070 N-m (9.91 oz-in) MIN
STEP TO STEP ACCURACY: ±.09 DEGREES [1], [2]	INSULATION CLASS: B
RADIAL PLAY: 0.02 mm MAX W/.5KG RADIAL LOAD	WEIGHT: 1.0 KG (2.2 LB)
END PLAY: 0.08 MAX W/1.0 KG AXIAL LOAD	OPERATING TEMP. RANGE: -20 TO +50 °C
SHAFT RUNOUT: 0.05 T.I.R.	STORAGE TEMP. RANGE: -30 TO +70 °C
TEMP. RISE: 80 °C MAX. [8]	RELATIVE HUMIDITY RANGE: 15 TO 99 %

SPECIFICATION	[3]	[7]	[1]	[1]	
CONNECTION	RESISTANCE PER PHASE OHM ±10%	INDUCTANCE PER PHASE mH ±20%	RATED CURRENT Amp	HOLDING TORQUE N-m Min	HOLDING TORQUE oz-in Min
BI-POLAR SERIES	2.2	6.8	2.12	1.90	269
BI-POLAR PARALLEL	0.7	1.7	4.24	1.90	269
UNI-POLAR	1.1	1.7	3.00	1.35	191

NOTES, UNLESS OTHERWISE SPECIFIED:

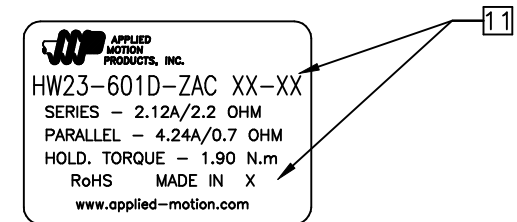
- [1] MEASUREMENTS MADE AT RATED CURRENT IN BOTH PHASES.
- [2] BETWEEN ANY TWO ADJACENT FULL STEP POSITIONS.
- [3] MEASUREMENTS MADE AT LEAD ENDS.
- 4. HIPOT 500 VAC, 60 Hz FOR ONE MINUTE.
- 5. LEADS: 8, 22 AWG, 7 STRAND MIN., UL AND CSA APPROVED, 105°C RATED CABLE 666-2126, 8 COND W/DRAIN.
- 6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
- [7] MEASURED USING AN A.C. INDUCTANCE BRIDGE, AT 1KHz AT LEAD ENDS.
- [8] AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED CURRENT APPLIED TO 2 PHASES; WITH MOTOR AT REST.
- [9] MOTOR TO MEET IP65 STANDARDS. CABLE GLAND TO BE NICKEL-PLATED BRASS, ASI P/N 3012215 OR EQUIVALENT.
- 10. THIS MOTOR TO BE MANUFACTURED IN COMPLIANCE WITH EU DIRECTIVE "ROHS 2002/95/EC".
- [11] MOTOR LABEL TO INCLUDE "ROHS" COMPLIANT, 'MADE IN (COUNTRY OF ORIGIN)' AND DATE CODE.
- [12] ENCODER CABLE 3004-195-10 TO BE INCLUDED WITH MOTOR. PLEASE REFER TO CABLE DRAWING, AVAILABLE ON WEBSITE, FOR FULL DETAILS. ENCODER VOLTAGE: +5V ±5%, ENCODER CURRENT: 160ma.
- 13. ASSEMBLE PER AMP SPEC 960-0082.

HW23-601D-ZAC

REVISIONS

ECO NO.	REV	DESCRIPTION	DATE	APPROVED
6449	A	INITIAL RELEASE	3/7/12	J KORDIK
6564	B	WAS -ZAA, DRAWING CLEANUP	7/25/12	J KORDIK
6578	C	105°C CABLE/DRAWING CLEANUP	8/22/12	J KORDIK

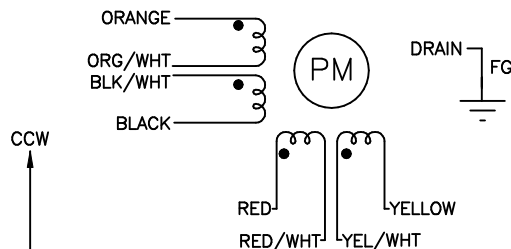
LABEL DETAIL



BIPOLAR, FULL STEP, 2 PHASE ON PARALLEL CONNECTED

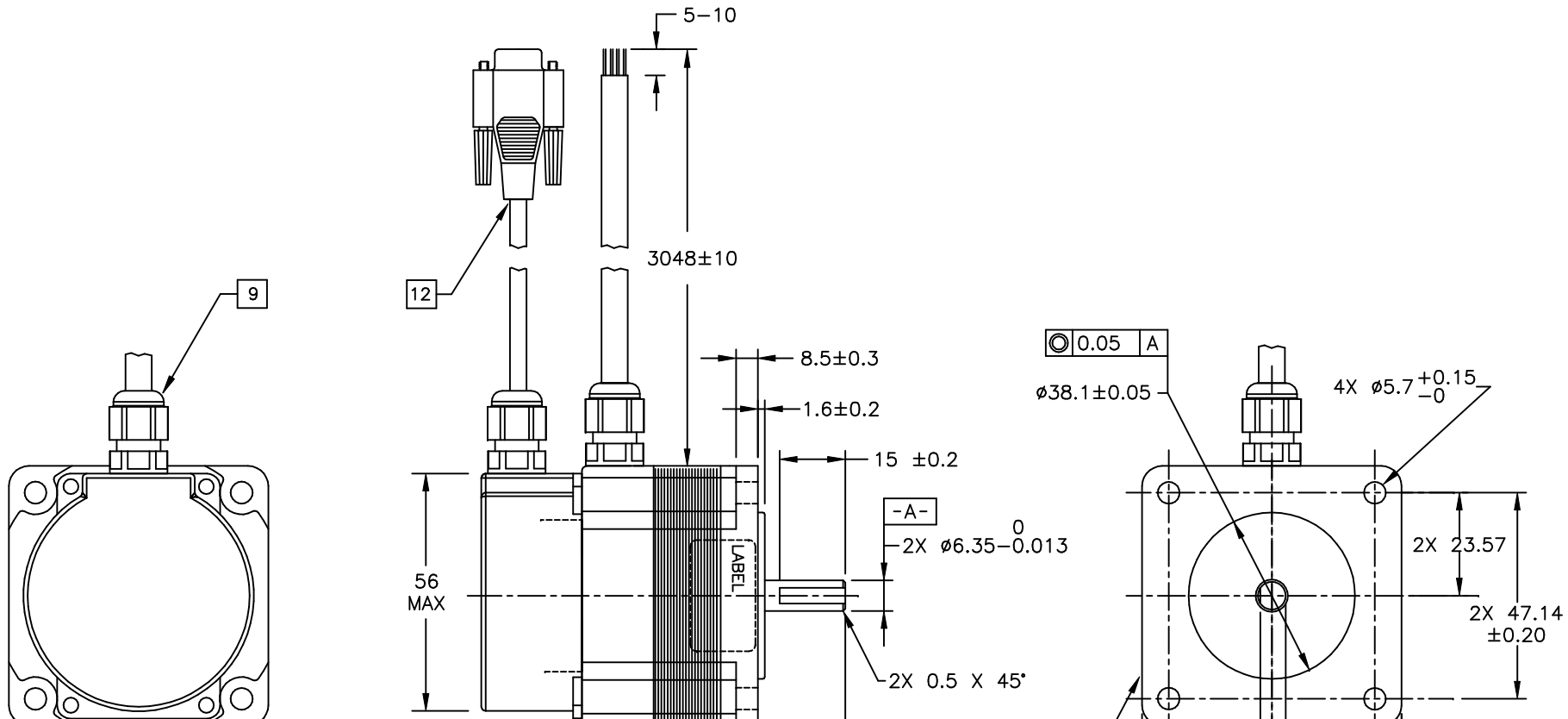
SWITCHING SEQUENCE FOR CW ROTATION FACING MOUNTING END

STEP	ORANGE & BLK/WHT	BLACK & ORN/WHT	RED & YEL/WHT	YELLOW & RED/WHT
0	+	-	+	-
1	-	+	+	-
2	-	+	-	+
3	+	-	-	+
4	+	-	+	-



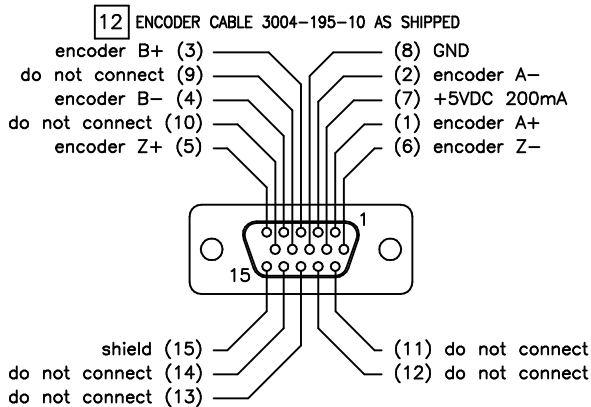
- 14. HIGH TORQUE MOTOR DESIGN, MICROSTEP LAMINATION, INTENDED FOR USE WITH 80VDC DRIVES WHEN WINDINGS CONNECTED IN PARALLEL AND WITH 160VDC DRIVES WHEN WINDINGS CONNECTED IN SERIES.

CONTRACT NO. -		APPLIED MOTION PRODUCTS, INC.			
APPROVALS	DATE	<h1>STEP MOTOR OUTLINE</h1>			
DRAWN <i>R.JONEZ</i>	<i>3/7/12</i>				
CHECKED		<h2>B</h2>	COMPUTER DATA BASE DRAWING	DWG NO. HW23-601D-ZAC	REV C
APPROVED			SCALE: NONE	SHEET 1 OF 2	



CONNECTION TABLE			CONN (REF)
LEAD COLOR	SIGNAL	PIN	
BLUE	CH A	1	
BLUE/WHITE	CH A-	2	
YELLOW	CH B	3	
YELL/WHITE	CH B-	4	
ORANGE	INDEX	5	
ORN/WHITE	INDEX-	6	
-	N/A	9	
-	N/A	10	
-	N/A	13	
-	N/A	14	
-	N/A	11	
-	N/A	12	
RED	+Vcc	7	
BLK	GND	8	
DRAIN	SHIELD	15	

12



0.10	A
0.05	

TOLERANCES		THIRD ANGLE PROJECTION		APPLIED MOTION PRODUCTS, INC.		
DECIMALS: MM (INCH)						
X.XXX = ± (.005)						
X.XX = ±0.13 (.010)		APPROVALS		DATE		
X.X = ±0.25 (.020)		DRAWN		3/7/12		
ANGLES:		CHECKED		STEP MOTOR OUTLINE		
MACH. = ±5°		APPROVED		B DWG NO. HW23-601D-ZAC REV C		
CHAM. = ±5°				SCALE: NONE SHEET 2 OF 2		
COMPUTER DATA BASE DRAWING						