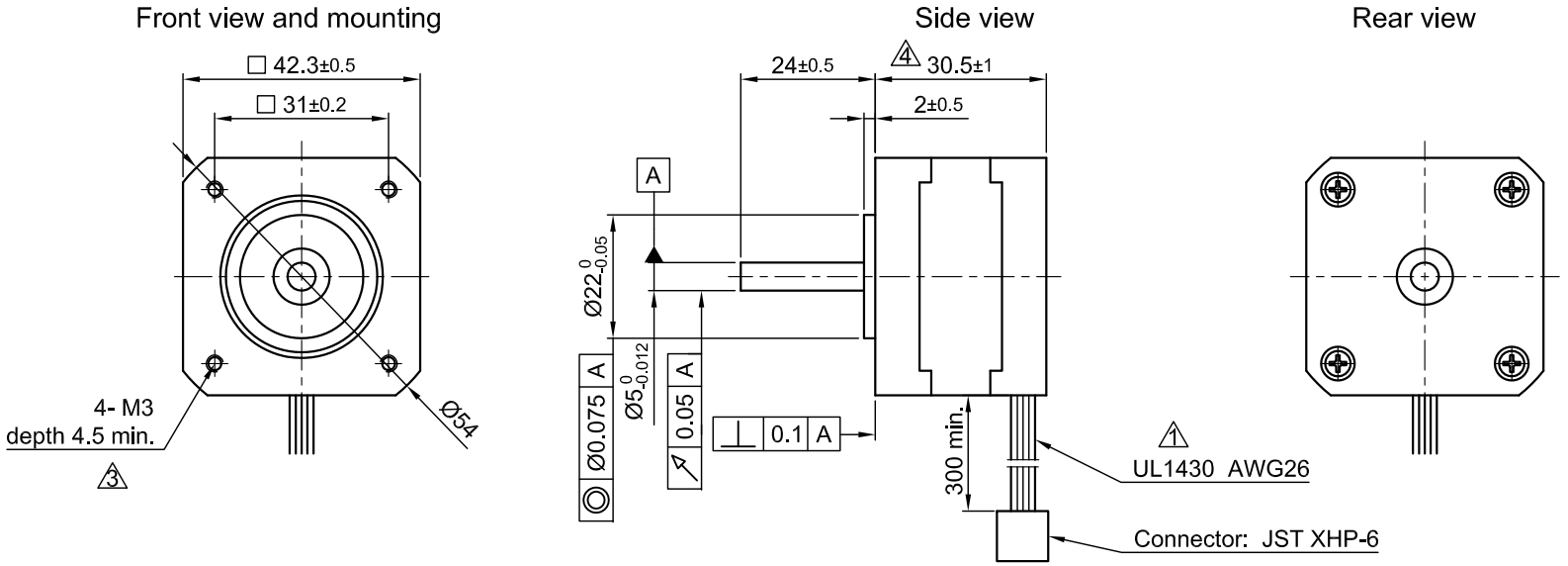
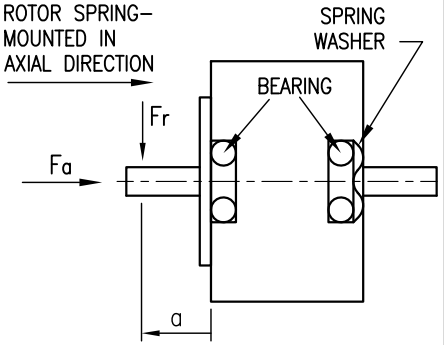


SPECIFICATION \ CONNECTION	UNIPOLAR OR BIPOLAR–1 WINDING	BIPOLAR SERIAL
VOLTAGE (VDC)	3.7	5.2 1
AMPS/PHASE	0.95	0.67
RESISTANCE/PHASE (Ohms)@25°C	3.9±15%	7.8±15%
INDUCTANCE/PHASE (mH) @1KHz	2.8±20%	11.2±20%
HOLDING TORQUE (Nm) [lb–in]	0.15 [1.416]	0.226 [2.0]
DETENT TORQUE (Nm) [lb–in]	5.9×10^{-3} [5.2×10^{-2}]	
STEP ANGLE (°)	1.8	
STEP ACCURACY (NON–ACCUM)	±5% 3 2	
ROTOR INERTIA ($Kg–m^2$) [$lb–in^2$]	3.8×10^{-6} [1.3×10^{-2}]	
WEIGHT (Kg) [lb]	0.2 [0.44]	

PERMISSIBLE RADIAL+AXIAL FORCE



AXIAL–FORCE Fa (N)	Fa=7				
DISTANCE a (mm)	5	10	15	20	
RADIAL–FORCE Fr (N)	58	36	26	20	
	AXIAL		RADIAL		
SHAFT PLAY (mm)	0.08		0.02		
AT LOAD MAX: (N)	4.5		4.5		

TEMPERATURE RISE: MAX.80°C (MOTOR STANDSTILL; FOR 2 PHASE ENERGIZED)
AMBIENT TEMPERATURE –10°~ 50°C [14°F ~ 122°F]
INSULATION RESISTANCE 100 MOhm (UNDER NORMAL TEMPERATURE AND HUMIDITY)
INSULATION CLASS B 130° [266°F]
DIELECTRIC STRENGTH 500VAC FOR 1 MIN. (BETWEEN THE MOTOR COILS AND THE MOTOR CASE)
AMBIENT HUMIDITY MAX. 85% (NO CONDENSATION)

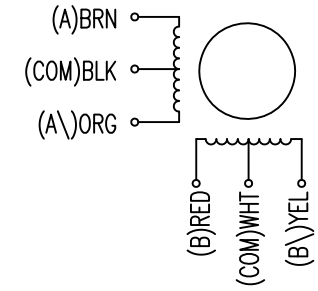
TYPE OF CONNECTION (EXTERN)			MOTOR		
UNIPOLAR	BIPOLAR 1WINDING	BIPOLAR SERIAL	CONNECTOR PIN NO.	LEADS	WINDING
A	A	A	1	BRN	A
COM	COM		5	BLK	COM
A\		A\	3	ORG	A\
B	B	B	2	RED	B
COM	COM		6	WHT	COM
B\		B\	4	YEL	B\

for >speed
for <speed

FULL STEP 2 PHASE–Ex.,
WHEN FACING MOUNTING END (X)

STEP	A	B	A\	B\		
1	+	+	–	–	CW	CCW
2	–	+	+	–		
3	–	–	+	+		
4	+	–	–	+		

WIRING DIAGRAM



REV	DESCRIPTION	DATE	DRN
4	change motor length	04.10.16	A.S.
3	rework draw/change depth M3	09.02.16	A.S.
2	VALUE OF BACK–EMF	20.06.11	LB

Nanotec® PLUG & DRIVE

Surface specification DIN ISO 1302	General tolerances DIN ISO 2768- cH	Work piece edge DIN ISO 13715

		SIGNATURE	DATE
APVD	S.Ha.	26.02.07	
CHKD			
DRN	J.W.	29.11.06	

STEPPING MOTOR

DWG.NO
ST4118S1006–A