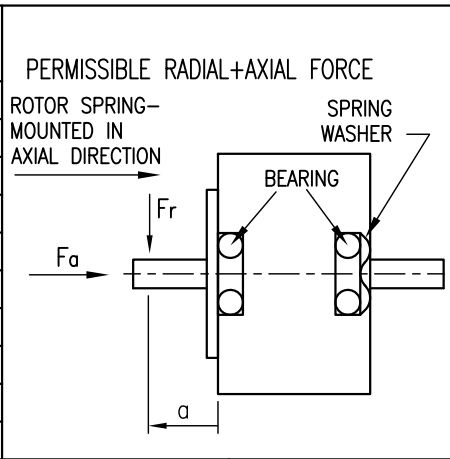


SPECIFICATION	BIPOLAR
VOLTAGE (VDC)	3.3
AMPS/PHASE	3.0
RESISTANCE/PHASE (Ohms)@25°C	1.1±15%
INDUCTANCE/PHASE (mH) @1KHz	2.7±20%
HOLDING TORQUE (Nm) [lb-in]	0.8 [7.08]
DETENT TORQUE (Nm) [lb-in]	2.8x10 ⁻² [0.25]
STEP ANGLE (°)	1.8
STEP ACCURACY (NON-ACCUM)	±5%
ROTOR INERTIA (Kg-m ²) [lb-in ²]	1.02x10 ⁻⁵ [3.48x10 ⁻²]
WEIGHT (Kg) [lb]	0.5 [1.1]

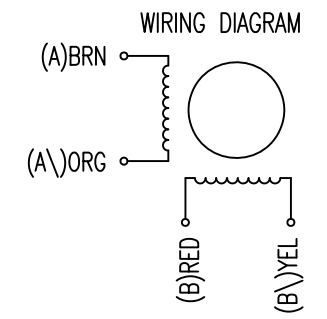


PIN NO	TYPE OF CONNECTION (EXTERN)		MOTOR	
	BIPOLAR	LEADS	WINDING	
1	A —	BRN	A	
2	A \ —	ORG	A \	
3	B —	RED	B	
4	B \ —	YEL	B \	

TEMPERATURE RISE: MAX.80°C (MOTOR STANDSTILL; FOR 2 PHASE ENERGIZED)	AXIAL-FORCE Fa (N)	Fa=7			
AMBIENT TEMPERATURE -10~ 50°C [14°F ~ 122°F]	DISTANCE a (mm)	5	10	15	20
INSULATION RESISTANCE 100 MOhm (UNDER NORMAL TEMPERATURE AND HUMIDITY)	RADIAL-FORCE Fr (N)	58	36	26	20
INSULATION CLASS B 130° [266°F]		AXIAL		RADIAL	
DIELECTRIC STRENGTH 500VAC FOR 1 MIN. (BETWEEN THE MOTOR COILS AND THE MOTOR CASE)	SHAFT PLAY (mm)	0.08		0.02	
AMBIENT HUMIDITY MAX. 85% (NO CONDENSATION)	AT LOAD MAX: (N)	4.5		4.5	

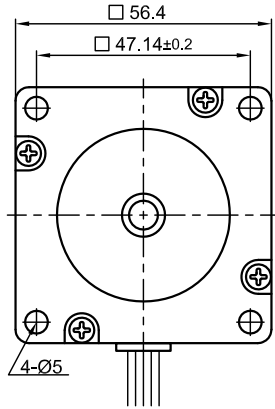
FULL STEP 2 PHASE-Ex., WHEN FACING MOUNTING END (X)

STEP	A	B	A \	B \	CCW	CW
1	+	+	-	-	↓	↑
2	-	+	+	-	↓	↑
3	-	-	+	+	↓	↑
4	+	-	-	+	↓	↑

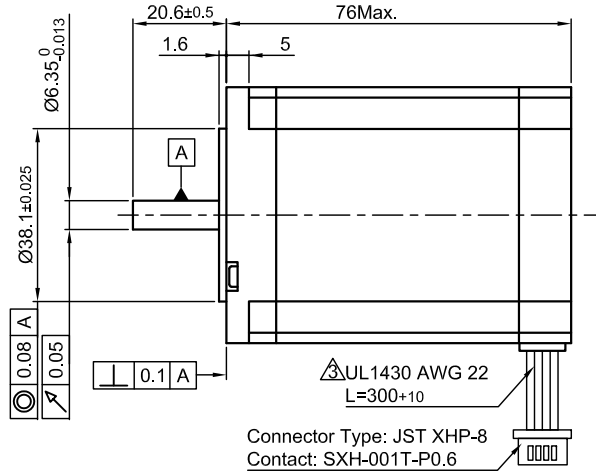


2	change AWG	23.06.16	A.S.				APVD	S.Ha.	17.03.10	STEPPING MOTOR
1	rework draw/change depth M2.5/M3	10.02.16	A.S.				CHKD			
REV	DESCRIPTION	DATE	DRN	Surface specification DIN ISO 1302	General tolerances DIN ISO 2768- cH	Work piece edge DIN ISO 13715	DRN	J.W.	17.03.10	DWG.NO
							SIGNATURE	DATE		ST4118D3004-B

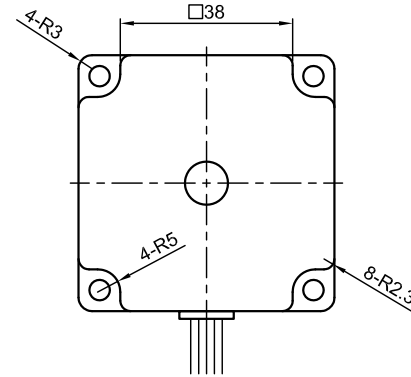
Front view and mounting



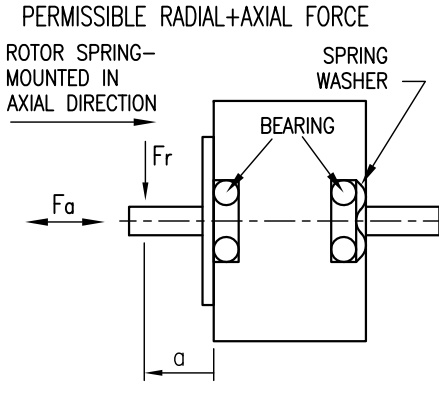
Side view



Rear view



SPECIFICATION	CONNECTION	UNIPOLAR OR BIPOLAR-1 WINDING	BIPOLAR	
			SERIAL	PARALLEL
VOLTAGE (VDC)		4.8		
AMPS/PHASE		2.0	1.41	2.82
RESISTANCE/PHASE (Ohms)@25°C		2.4±10%	4.8±10%	1.2±10%
INDUCTANCE/PHASE (mH) @1KHz		5.1±20%	20.4±20%	5.1±20%
HOLDING TORQUE (Nm) [lb-in]		1.32 [11.71]	1.87 [16.52]	1.87 [16.52]
DETENT TORQUE (Nm) [lb-in]		0.068 [0.602]		
STEP ANGLE (°) ± ACCURACY		1.8±5% (NON-ACCUM)		
ROTOR INERTIA (Kg-m ²) [lb-in ²]		4.8x10 ⁻⁵ [0.164]		
WEIGHT (Kg) [lb]		1.0 [2.2]		
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)				

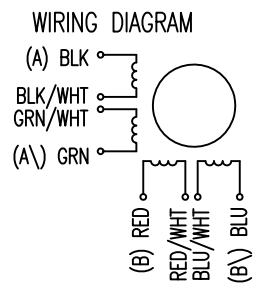


	AXIAL-FORCE Fa (N)	Fa=15			
DISTANCE a (mm)		5	10	15	20
RADIAL-FORCE Fr (N)		130	90	70	52
		AXIAL	RADIAL		
SHAFT PLAY (mm)		0.08	0.02		
AT LOAD MAX: (N)		4.5	4.5		

UNIPOLAR	TYPE OF CONNECTION (EXTERN)			MOTOR		
	1WINDING	BIPOLAR SERIAL	BIPOLAR PARALLEL	CONNECTOR PIN NO.	LEADS	WINDING
A	A	A	A	1	BLK	A
COM	A			3	BLK/WHT	
A\		A\	A\	2	GRN/WHT	A\
B	B	B	B	4	GRN	B
COM	B			5	RED	
B\		B\	B\	6	RED/WHT	B\
				7	BLU/WHT	
				8	BLU	

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

STEP	A	B	A\	B\	CCW	CW
1	+	+	-	-	↓	↑
2	-	+	+	-	↓	↑
3	-	-	+	+	↓	↑
4	+	-	-	+	↓	↑



4	NEW VALUE OF HOLD. TOR.	04.11.13	J.D.
3	NEW UL NO.+VALUE OF BACK-EMF	20.07.09	J.W.
2	TECHNICAL DATE	09.04.08	J.W.
REV	DESCRIPTION	DATE	APVD



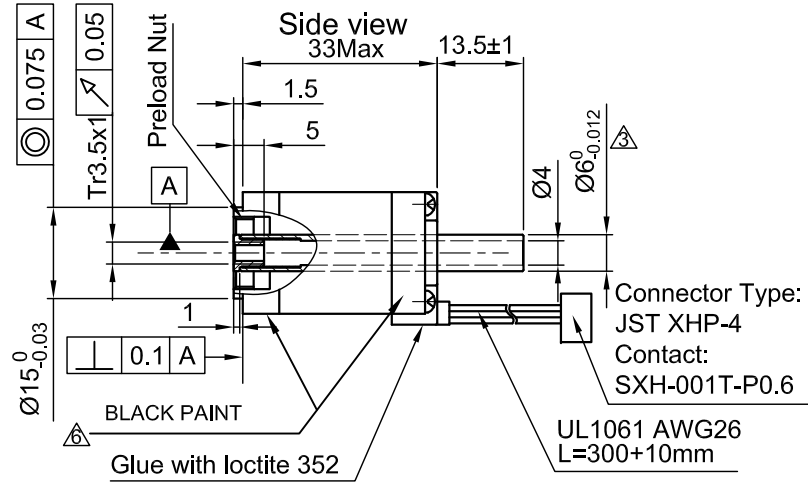
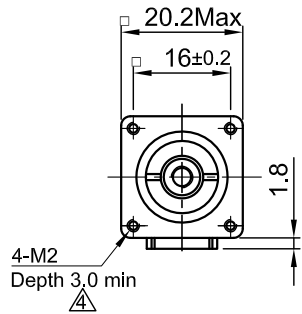
ST5918L2008-A

SCALE FREE	APVD	S.Ha.	19.03.07
X ±0.5	CHKD		
1PL ±0.2	DRN	J.W.	21.11.06
2PL ±0.1	SIGNATURE		DATE
ANGLE ±30'			

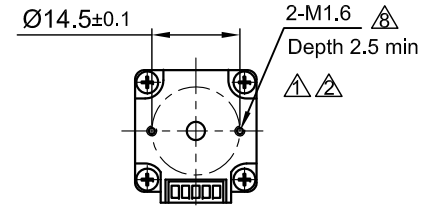
STEPPING MOTOR

DWG.NO ST5918L2008-A

Front view and mounting



Rear view



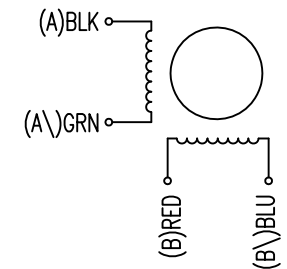
SPECIFICATION	
AMPS/PHASE	0.6
RESISTANCE/PHASE (Ohms)@25°C	6.5±15%
INDUCTANCE/PHASE (mH) @1KHz	2±20% Δ
SPINDLE PITCH (mm) [in]	1 [0.039]
THRUST (N) (lb)	30 [6.74] Δ
PEAK THRUST (N) [lb]	40[8.99] Δ
PEAK CURRENT (A)	0.8 Δ
RESOLUTION (mm/STEP)	0.005
STATIC THRUST (NO CURRENT)	>30[6.74] Δ
MAX. SPEED (mm/sec.) at 48V	40 Δ
MAX. SPEED WITH MAX. THRUST (mm/sec.)	1 Δ
WEIGHT (Kg) [lb]	0.06 [0.13]
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)	

Please regard the application note at www.nanotec.com for further informations.

Shaft play is adjustable at the motor.

PIN NO	TYPE OF CONNECTION (EXTERN)		MOTOR	
	BIPOLAR	LEADS	WINDING	
1	A —	BLK	A	
2	A\ —	GRN	A\ B	
3	B —	RED	B	
4	B\ —	BLU	B\ A	

WIRING DIAGRAM



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

STEP	A	B	A\ B	B\ A	CCW	CW
1	+	+	-	-	↓	↑
2	-	+	+	-	↓	↑
3	-	-	+	+	↓	↑
4	+	-	-	+	↓	↑

REV	DESCRIPTION	DATE	APVD
08	New screw hole	23.01.17	B.L.
07	Change the data	30.07.14	B.L.
06	BLACK PAINT	25.07.14	B.L.



L2018S0604-T3,5x1

SCALE	APVD	DATE
FREE	G.S.	08.07.10
X ±0.5	CHKD ZYL	08.07.10
1PL ±0.2	DRN GYQ	08.07.10
2PL ±0.1	SIGNATURE	DATE
ANGLE ±30'		

LINEAR AKTUATOR

DWG.NO

L2018S0604-T3,5x1