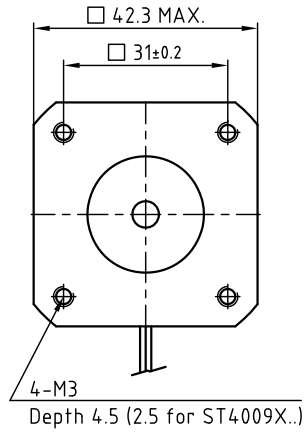
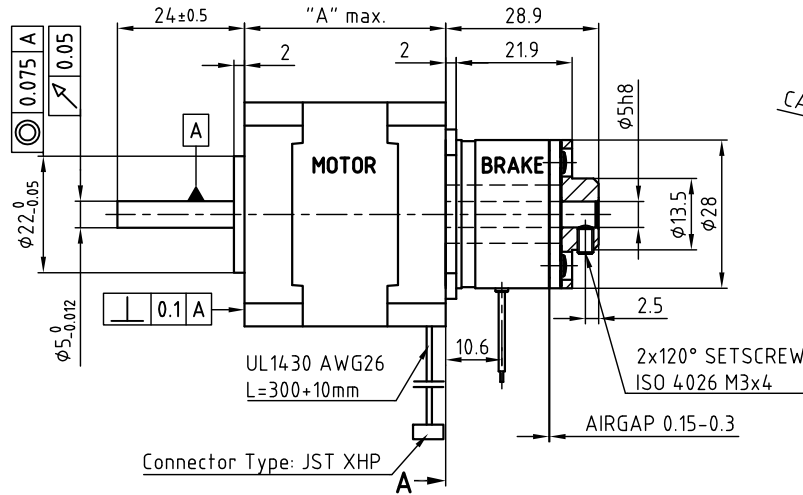


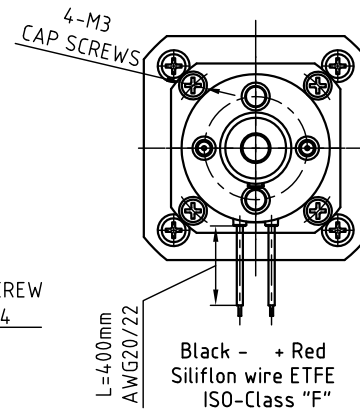
Front view and mounting



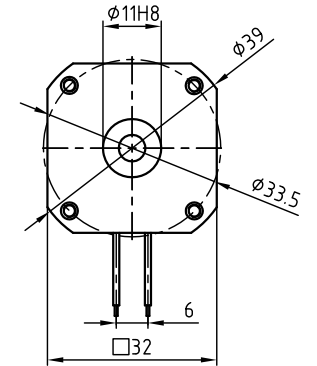
Side view A→



Rear view



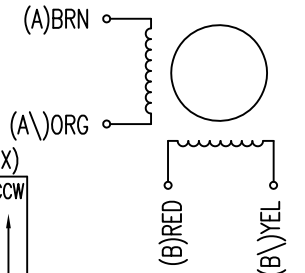
A-A View (Brake)



STEPPING MOTOR TYPE	BIPOLAR				BRAKE BKE-0.4-5.0 (8W)
	OTHER WINDINGS SEE DATESHEETS OR <a href="http://www.nanotec.de">www.nanotec.de</a>				
SPECIFICATION	ST4209X1404	ST4209S1404	ST4209M1704	ST4209L1704	
VOLTAGE (VDC)	8.7	2.8	2.77	2.77	24 Vdc ±5%
AMPS/PHASE	1.0	1.33	1.68	1.68	0.33
RESISTANCE/PHASE (Ohms)@25°C	8.7±15%	2.1±15%	1.65±15%	1.65±15%	72±10%
INDUCTANCE/PHASE (mH) @1KHz	18±20%	5.2±20%	4.0±20%	5.0±20%	0.4
HOLDING TORQUE (Nm) [lb-in]	0.17 [1.505]	0.22 [1.95]	0.36 [3.186]	0.44 [3.894]	Mstat: 0.4 [3.54]
DETENT TORQUE (Nm) [lb-in]	3.1x10 <sup>-4</sup> [0.028]	6.6x10 <sup>-3</sup> [0.058]	1.08x10 <sup>-2</sup> [9.6x10 <sup>-2</sup> ]	1.32x10 <sup>-2</sup> [0.117]	AIRGAP min/max: 0.15/0.3mm
STEP ANGLE (°) ACCURACY (NON-ACCUM)	0.9±5%				SWITCH ON TIME: 2ms
MOTOR LENGTH "A" (mm) [in]	22 [0.87]	33.5 [1.3]	38 [1.5]	47 [1.85]	SWITCH OFF TIME: 10ms
ROTOR INERTIA (Kg-m <sup>2</sup> ) [lb-in <sup>2</sup> ]	2.0x10 <sup>-6</sup> [6.8x10 <sup>-3</sup> ]	3.5x10 <sup>-6</sup> [1.2x10 <sup>-2</sup> ]	5.4x10 <sup>-6</sup> [1.84x10 <sup>-2</sup> ]	6.8x10 <sup>-6</sup> [0.0232]	1.3x10 <sup>-6</sup> [4.44x10 <sup>-3</sup> ]
WEIGHT (Kg) [lb]	0.15 [0.33]	0.22 [0.485]	0.28 [0.617]	0.35 [0.772]	0.08 [0.176]
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)					

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 \	

WIRING DIAGRAM



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

STEP	A	B	A \	B \	CCW
1	+	+	-	-	
2	-	+	+	-	
3	-	-	+	+	
4	+	-	-	+	

REV	DESCRIPTION	DATE	APVD	SCALE FREE	APVD	B.W.	25.06.10
				X ±0.5	CHKD		
				1PL ±0.2	DRN	J.W.	25.06.10
				2PL ±0.1	SIGNATURE		DATE
				ANGLE ±30'			



ST4209+BKE-0.4-5.0

STEPPING MOTOR

DWG.NO

ST4209+BKE-0.4-5.0