

Preliminary datasheet.

MST43x NEMA43 Stepper Motor up to 25Nm



JVL is one of the world leading companies in the field of integrated servo and stepper motors. JVL have developed and released a new integrated stepper motor MIS43 and the stepper motor used for this motor can now also be delivered without build in electronics as a high torque stepper motor called MST430 - MST432 up to 21Nm.

The motor is very useful in applications where motors must be very compact, have very high torque at low speed and without backlash as a normal gear would offer.

- Shortest length in the industry only 99 for 10 Nm
- Can be delivered with wire out or optional high current connectors
- Optional IP 55 or IP67
- Option for double shaft and single or absolute multiturn encoder
- 5,5Am or 9 Amp windings.
- Can be delivered with build on controller.

Flange size is 110x110 mm which corresponds to the NEMA43 standard and shaft diameter is 19.0 mm with key. Planetary gears that fit the motor directly can also be delivered.

It will also be possible to deliver the motor with build on driver and controller called integrated stepper motor. The integrated stepper motor can be delivered with 9Amp driver and PLC on board, RS485 and optional Profinet EtherCAT , Powerlink and wireless Bluetooth, ZigBee, WLAN, absolute multiturn encoder build into the motor.

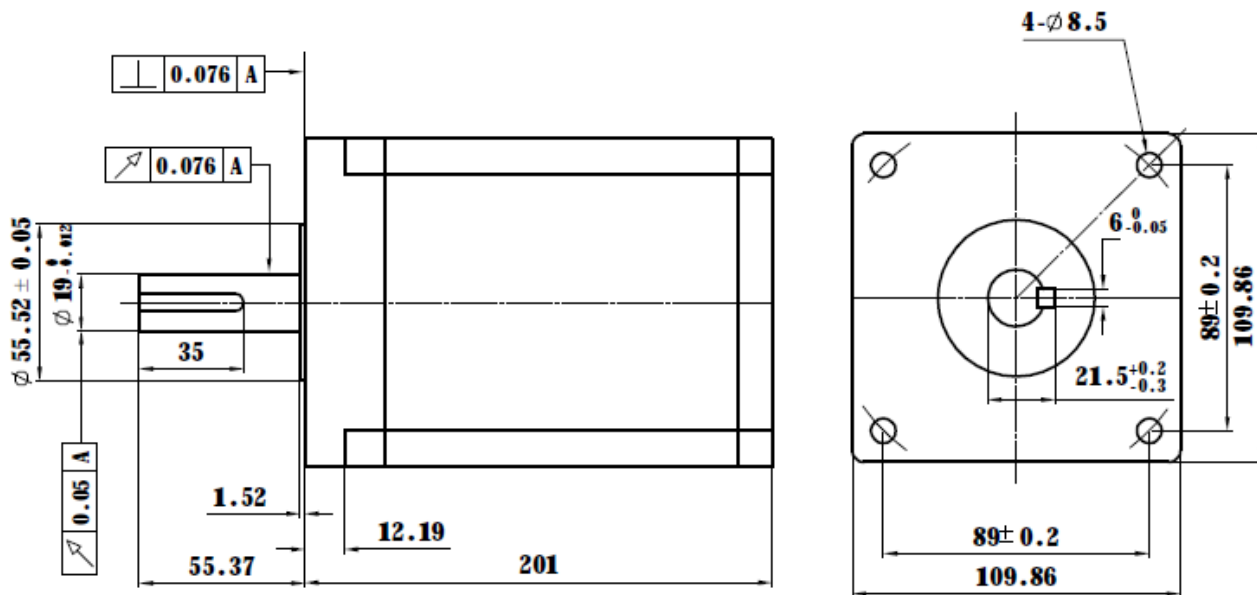
JVL can also deliver driver and controller for MST43x like SMD41 steppermotor driver og SMC85 stepper motor controller. Read more at www.jvl.dk

Technical data

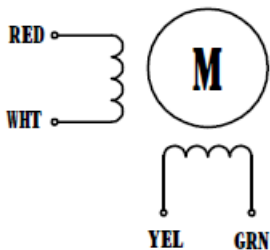
	MST430C223 -X1AA9.0	MST431C223 -X1AA9.0	MST432C223 -X1AA9.0	
Holding Torque	10	21	25	Nm
Rotor moment of Inertia	5,5	10,9	16,2	Kgcm ²
Weight	5,0	8,4	11,7	Kg

Current	9,0	9,0	9,0	Amp
Length (+-2mm)	99	150	210	mm
Detent torque	0,35	0,63	0,75	Nm +-10%
Resistance			0,53	Ohm +-10%
Inductance			10	mH +-20%
Max Radial force Fr with axial force 80N	At 5mm max 640N, At 10mm max 425 N , At 15mm max 320N, At 20mm max 240N			
Shaft Play	Axial shaft play 0,075mm at load max 10N. Radial shaft play 0,025mm at load max 5N			
Step angle	1,8 degree +-5% (Non-Accumulating)			
Temperature	Ambient 0-40 degree or internal temperature sensor max 85% degree. Will depend in supple voltage and load.			
Humidity	Ambient humidity Max 85% (No condensation)			
Insulation	Insulation class B 130 degree Celsius [266°F]. Insulation resistance 100M ohm.			

MST431 can only be delivered if orders above 25 pcs

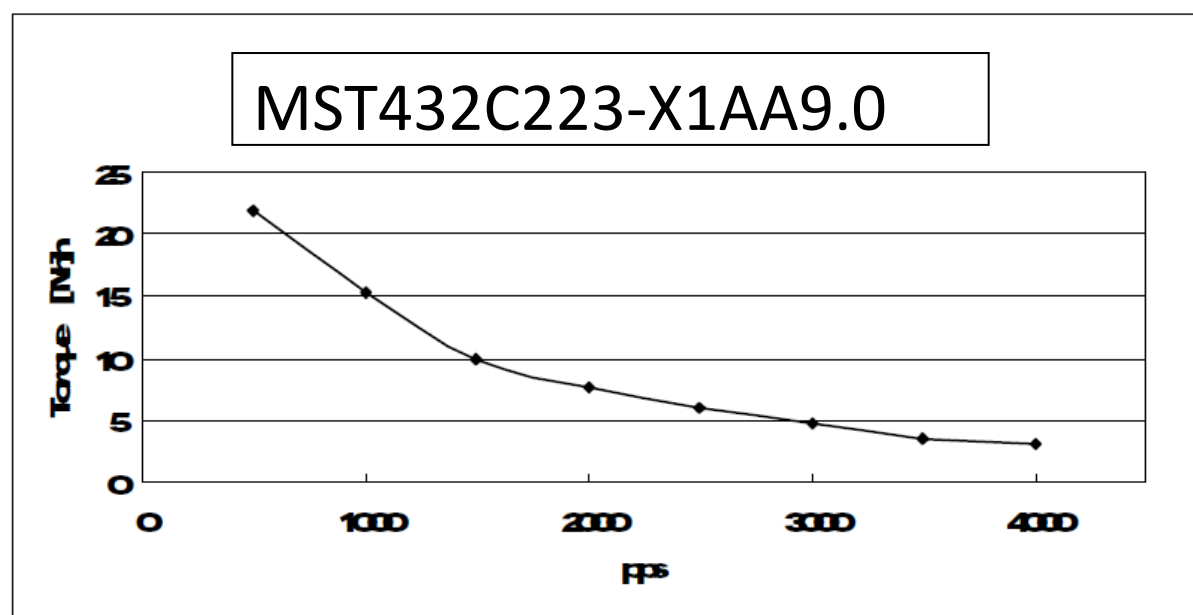
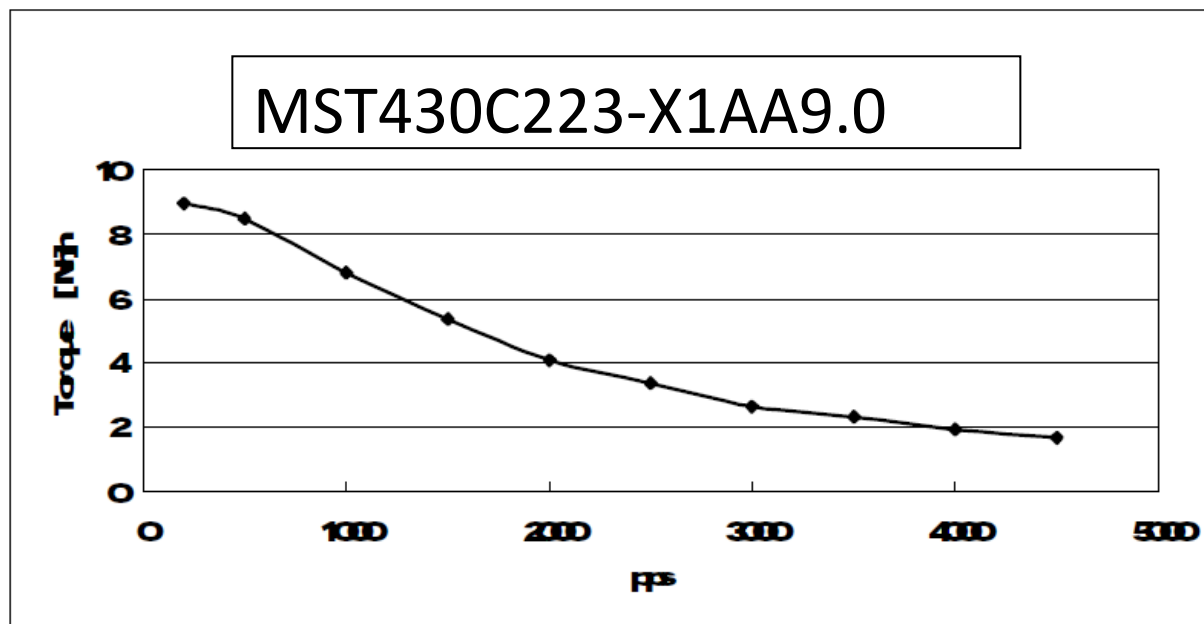


Wiring Diagram:



UL1332 AWG18# LENGTH310mm

Torque/ speed curve for MST43x. Speed shown as fullstep/sec and Voltage 80VDC.



For further information, please contact:

JVL A/S, Bregnerødvej 127, 3460 Birkerød, Denmark.

Tel. +45 4582 4440. E-mail: sales@jvl.dk. Web: www.jvl.dk