

## The World's Most Compact Integrated Nema34 Stepper Motors



### State of the art technology with the highest microstepping resolution in the industry

JVL now launches a new integrated stepper motor with RS485 and CANopen serial interface and programmable motion controller. All the necessary electronics in a stepper system are integrated in the motor itself. JVL has used the newest technology to obtain an incredibly high step resolution of 819200 step/revolution – resulting in unsurpassed smoothness and silent running. The length is only 95 mm (3,74") and it is therefore the shortest motor in the world with built-in controller. The motors are available in 3 sizes:

- MIS340 with 3.0 Nm, Length 95 mm
- MIS341 with 6.1 Nm, Length 126 mm
- MIS342 with 9.0 Nm, Length 156 mm

The motor contains everything needed to solve a modern control task as stand-alone or controlled from a PLC or PC. 8 I/O points can be individually configured to digital input, digital output or analogue input. Modbus RTU and CANopen provide easy connections to a PLC or HMI. An ActiveX/OCX driver is available to make interfacing to LabView, Excel, VB or other Windows-programs simple. The MAC motor standard protocol enables MAC motors and QuickStep motors and SMC85 controllers to be connected on the same RS485 bus with up to 254 axes.

- Shortest length in the industry only 95 mm for 3 Nm
- Extreme Resolution up to 819200 step/rev equal to 4096 microsteps per fullstep
- Velocity precision 0.01 RPM. Acceleration precision 1 RPM/sec.
- Built-in PLC with 8 I/O: each DI or DO 24V or 0-5V (12bit) analogue input with advanced input filtering
- RS485 up to 921 kbit and Modbus RTU





- Option: RS422 and RS485 for encoder I/O and connection to external HMI or PLC
- Point-to-point or multiaxis operation up to 254 axes on the same RS485 bus
- CANbus with CANopen DSP402 and DS301
- Option: Pulse/Direction mode for electronic gearing
- Prepared for High speed position capture
- Wide Supply range from 12-80 VDC delivering high torque at high speed
- Motor current 0-9 Amp RMS, 12.6 Amp Peak
- Dual supply maintain position values etc in emergency-stop situations
- ActiveX / OCX driver available as well as MacTalk protocol
- Powerful graphic programming with +/-\*/ calculations and advanced functions
- All connections with M12 connectors, IP67
- Option for double shaft and encoder single or multi turn

The integrated stepper motor can be delivered with wireless Bluetooth, ZigBee or WLAN. The motor is also prepared for future options like Profibus and Industrial Ethernet like EtherCAT and EtherNet/IP and absolute multiturn encoder without external battery. The PCB with stepper motor controller as used inside the motor is also available as type no. SMC85.

Flange size is 86x86 mm which corresponds to the NEMA34 standard and shaft diameter can be either 9.53 mm or 14 mm with key depending on type. Planetary gears that fit the motor directly are delivered from stock.

**For further information, please contact:**

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