Your **Next** Intelligent **Move**

TECHNOSOFT
MOTION TECHNOLOGY

iMOT23xS TM-CAN Intelligent Step Motor Size 23

Step Motors with Integrated Drive for OEM Applications

The iMOT23xS TM-CAN represents the newest family of the Technosoft intelligent step motors that combine motion controller, drive, encoder and motor into a single compact package in the NEMA 23size (56x56 mm).

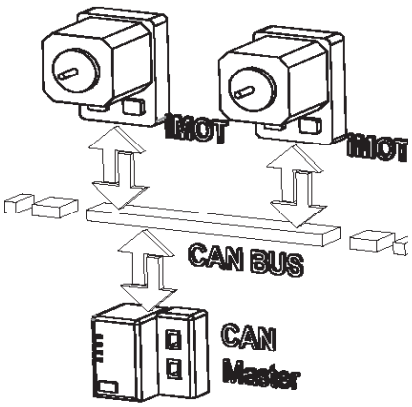
The iMOT23xS series represents a cost-effecive, compact solution specifically targeted to those distributed motion control applications where the elimination of the cabling between motor, sensor and drive is the success

As an intelligent motor, the iMOT23xS TM-CAN is empowered by the extreme flexibility offered by the TML (Technosoft Motion Language) instruction set. Acting as a programmable motion controller, drive and motor in a compact form, the unit can replace the host in various single or multi-axis stand-alone applications.

Distributed Control

Complex motion sequences, advanced positioning profiles like PVT or electronic caming, I/O and program flow control, data transfer between axes, subroutines, ISRs and multiple homing modes ease the motion application implementation task.

In systems that require a host, the iMOT23xS TM-CAN operates as an intelligent slave executing motion sequences triggered via commands received on RS-232 or TMLCAN while fully supporting as well the CiA402 CANopen drive profile.



TML

CANopen

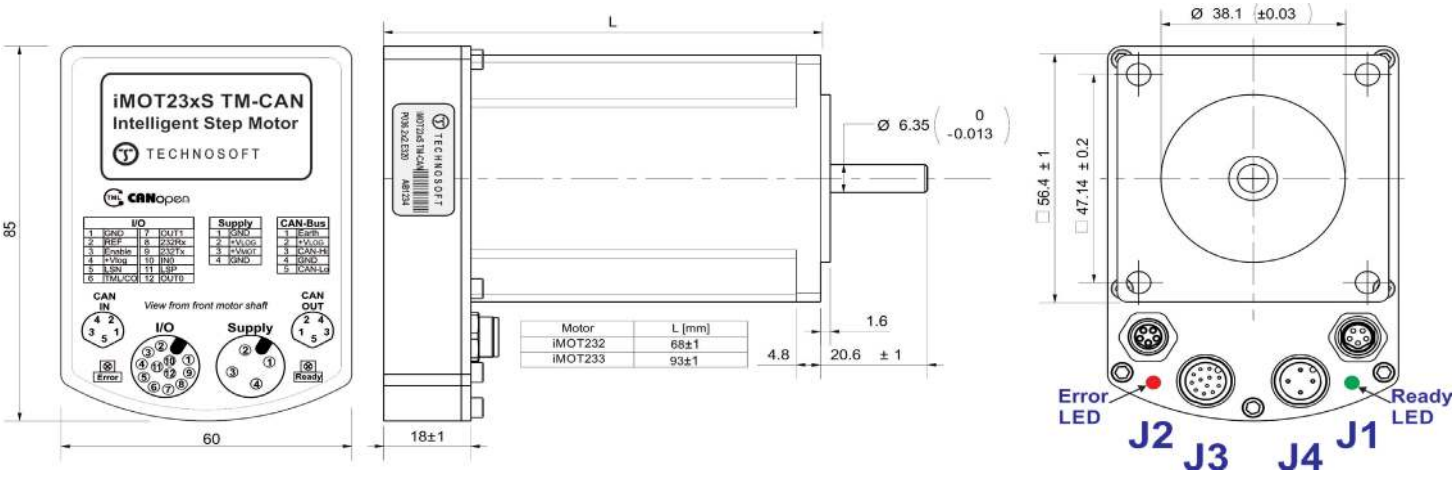
Features :

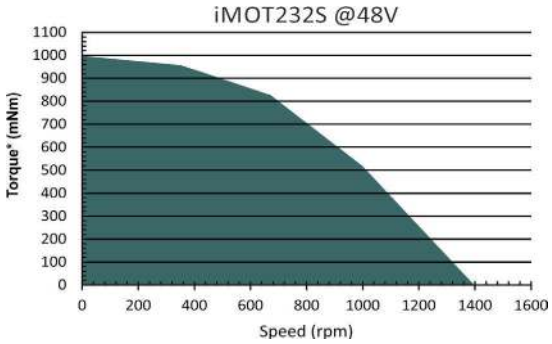
- Fully digital intelligent 2 phase step motor with embedded motion controller, drive and absolute position sensor
- Available in 2 motor lengths, offering 1 and 1.6 mNm
- Cost effective positioning system, due to compacteness and elimination of motor wiring
- Advanced motion control capabilities (PVT, S-curve, electronic cam)
- Motion programming via TML (Technosoft Motion Language) or motion libraries for Visual C / VB / LabVIEW / Linux and PLC
- Two control options: stepless closed loop servo using an absolute feedback sensor; stepper open loop using microstepping and step loss detection based on the feedback sensor
- Standalone operation with stored motion sequences
- Motor supply:12-48V; Logic supply: 12-36V
- Communication:
  - CAN-Bus with TMLCAN protocol or
  - CANopen protocol (CiA301 and 402)
- Digital and analogue I/Os:
  - 4 digital programmable inputs, 5-24V, PNP/NPN
  - 2 digital outputs, 24V/TTL, PNP (0.3A) / NPN (0.4A)
  - 1 analogue input: 12 bits resolution, 0-5V
- Feedback device:
  - Integrated absolute position sensor offering a resolution of 4096 bits / revolution
- Protections:
  - Over-current, over-temperature, short circuit
  - Over and undervoltage, i2t, control error
  - Opto-isolated CAN circuit

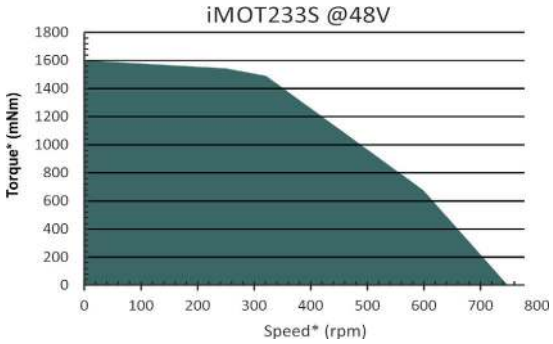
Typical Applications

- Systems with distributed motor control intelligence
- Packaging
- Printing
- Textile
- Medical
- Handling
- Labeling
- Pick and place

Technical and Ordering Information







* All values ±10% at 20°C

EasyMotion Studio

A graphical development platform, for configuration, parameterization and programming of the drive, through

- Motion system set-up wizard
- Tuning assistance
- Automatic TML code generation capability
- Definition, programming and testing of motion sequences
- Advanced data logging and customizable control panels

Motion Control Libraries

The TML_LIB Motion Control Libraries can be used to implement a motion control application on a PC from Visual C/C++, C#, Visual Basic, Delphi or LabVIEW under Windows or Linux operating systems.
If a PLC is used as host, implementations of the TML_LIB according with IEC-61131 stand-ard are available for Siemens, B&R and Omron PLCs.

Application notes with TML program examples at :
www.technosoftmotion.com

Ordering Information * :

P036.222.E320	iMOT232S TM-CAN Intelligent Step Motor, CAN
P036.232.E320	iMOT233S TM-CAN Intelligent Step Motor, CAN
P034.001.E002	EasyMotion Studio Software
P040.001.Exxx	TML_LIB Motion Library

*Other communication buses available upon request

iMOT23xS Intelligent Step Motor Family Specifications:

Electrical Specifications	Units	iMOT232S	iMOT233S
Rated torque	mNm	1000	1600
Rotor Inertia	g.cm²	275	480
Speed Range (@ 48Vdc)	rpm	1400	750
Encoder resolution	counts/rev		4096
Logic Power Supply input	V		12-36
Motor Power Supply input	V		12-48
Ambient operating temperature	°C		0-40
Isolation rating			IP42

Mechanical Specifications *	Units	iMOT232S	iMOT233S
Flange and Shaft	NEMA23 compatible, front 56.4 x 56.4mm, 6.35mm		
Frame size	mm	68 x 60; 93 x 60 in connectors area	
Length	mm +/-1	68	93
Weight	g	740	1140

*Other mechanical configurations, with adapted gearboxes are available upon request

Mating Connectors :

J1	Molex 130029-0002
J2	Molex 130029-0005
J3	Phoenix-Contact 1430161
J4	Phoenix-Contact 1682906

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