

# iMOT23xS XM-CAN INTELLIGENT STEP MOTOR SIZE 23

## STEP MOTORS WITH INTEGRATED DRIVE FOR OEM APPLICATIONS

The iMOT23xS XM-CAN represents the newest family of the Technosoft intelligent brushless servo motors that combine motion controller, drive, encoder and motor into a single compact package in the NEMA23size (56x56 mm).

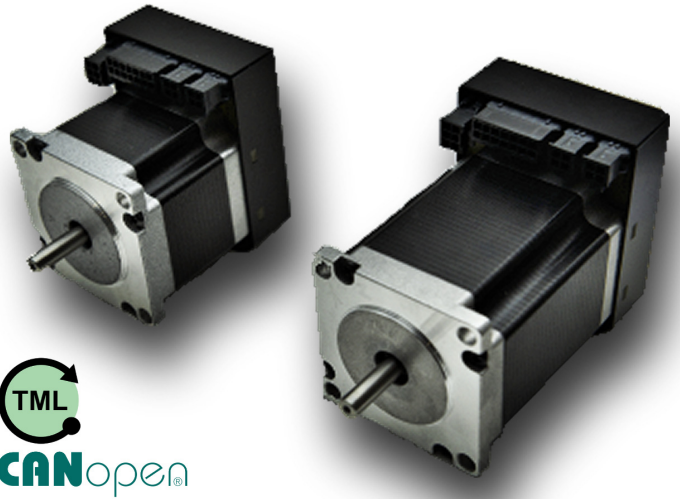
The iMOT23xS series represents a cost-effective, compact solution specifically targeted to those distributed motion control applications where the elimination of the cabling between motor, sensor and drive is the success factor.

As an intelligent motor, the iMOT23xS XM-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

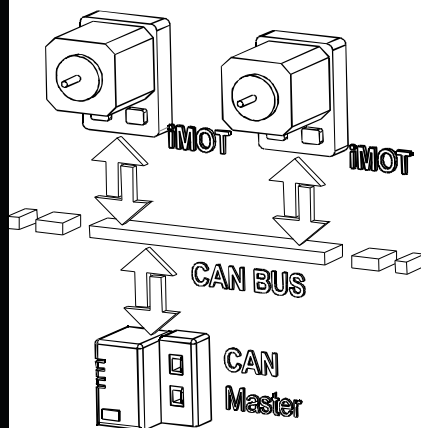
Complex motion sequences, advanced positioning profiles like PVT or electronic camming, I/O and program flow control, data transfer between axes, subroutines, ISRs and multiple homing modes ease the motion application implementation task.

In systems that require a host, the iMOT23xS XM-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.



### FEATURES :

- Fully digital intelligent 2 phase stepless motor with embedded motion controller, drive and absolute position sensor
- Available in 2 motor lengths, offering 1000 and 1600 mNm of continuous torque
- Cost effective positioning system, due to compactness 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
- Two control option: stepless closed loop servo using microstepping and step loss detection based on the feedback sensor
- C / VB / LabVIEW / Linux and PLC
- 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:
  - 5 programmable PNP/NPN digital inputs
  - 2 digital outputs, 0 - 5V, 0.5A
  - 1 analogue input: 12 bits resolution, 0-5 V
- Feedback device:
  - Absolute single-turn position sensor offering a resolution of 4096 counts / revolution
- 16 h/w addresses selectable by hex switch
- Programmable protections:
  - Over-current, over-temperature, short circuit
  - Over and undervoltage, i2t, control error



### TYPICAL APPLICATIONS

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

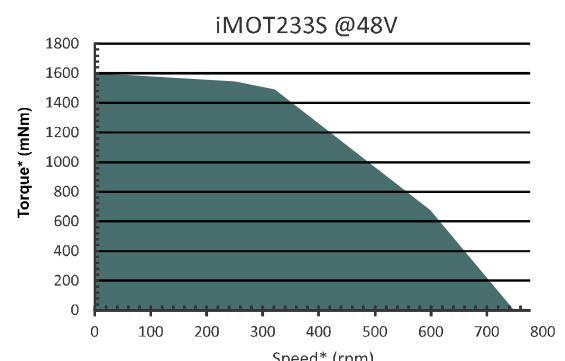
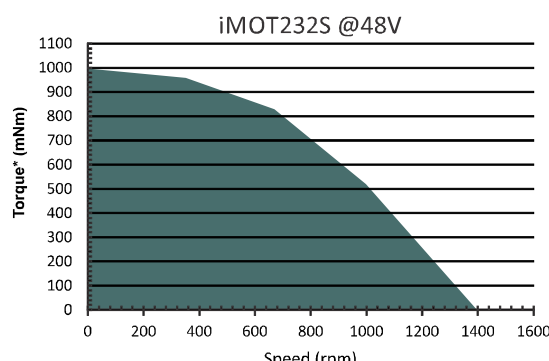
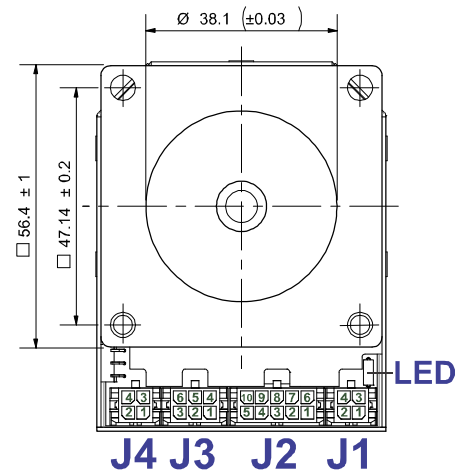
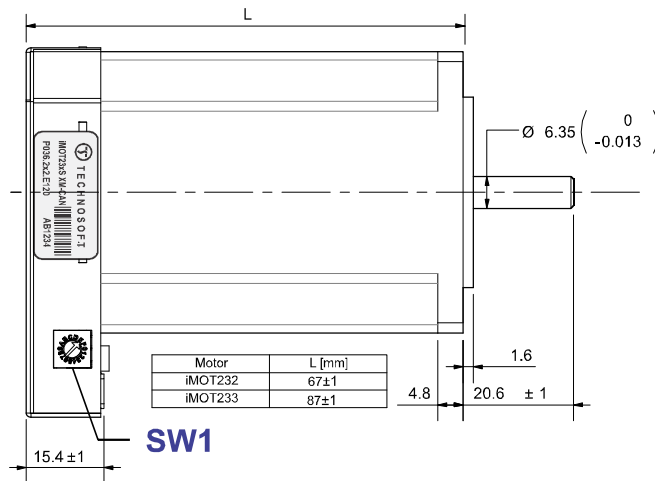
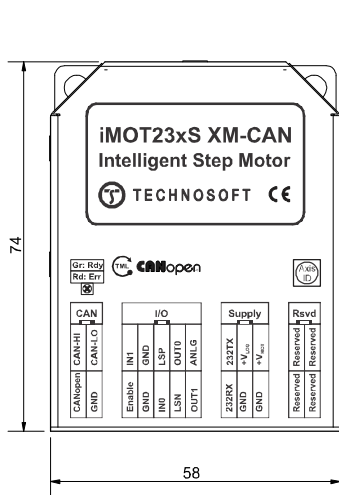
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Your  
Next  
Intelligent  
Move



TECHNO SOFT  
MOTION TECHNOLOGY

# TECHNICAL AND ORDERING INFORMATION



\* ALL VALUES ±10% at 20°C

## EASYSOFT STUDIO

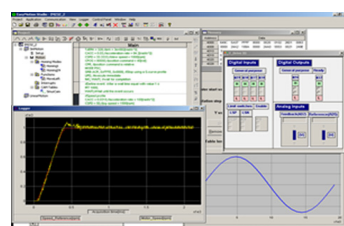
A graphical development platform, for configuration, parameterization and programming of the drive, through

- 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 standard are available for Siemens, B&R and Omron PLCs.



Application notes with TML program examples at : [www.technosoftmotion.com](http://www.technosoftmotion.com)

## ORDERING INFORMATION \* :

- P036.222.E120** iMOT232S XM-CAN Intelligent Step Motor, CAN
- P036.232.E120** iMOT233S XM-CAN Intelligent Step Motor, CAN
- P034.001.E002** EasyMotion Studio Software
- P040.001.Exxx** TML\_LIB Motion Library
- P038.040.C089** Complete cable set 100 cm for iMOT23x XM-CAN
- P038.040.C069** Housing & crimp pins set for iMOT23x XM-CAN

\*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.cm <sup>2</sup>	63	105
Speed Range ( @ 48Vdc)	rpm	0 - 1400	0 - 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 shaft	NEMA23 compatible, front 56.4 x 56.4mm, 6.35mm shaft	
Frame size area	mm 56.4 x 56.4; 58 x 74 in connectors	
Length	mm +/-1	67 87
Weight	g	700 1100

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

## MATING CONNECTORS :

J1, J4	Molex 2X2 MiniFit 43045-0400
J2	Molex 2X5 MiniFit 43045-1000
J3	Molex 2X3 MiniFit 43045-0600
Crimp pins	Molex 04303 -0007

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