iPOS3604 HX-CAN Intelligent Servo Drive 4A, 36Vdc

For Brushless, Brushed, Linear or Step Motors

Description

The iPOS3604 HX-CAN is a new member of the iPOS family of Technosoft intelligent drives. It is based on a new design concept for closed-frames drives, offering a very compact and cost effective solution for the control of rotary or linear brushless, DC brush, and step motors of powers up to 144 W.

Designed to cover low to medium volume applications, the iPOS3604 HX-CAN embeds motion controller, drive, and PLC functionalities into a single unit.

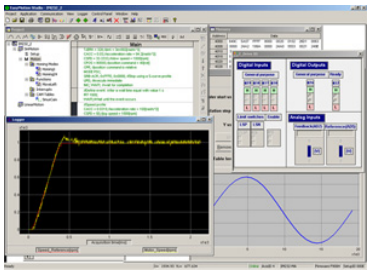
When used as an intelligent drive - like all other members of the iPOS family - the iPOS3604 HX-CAN is empowered by the extreme flexibility offered by the TML (Technosoft Motion Language) instruction set. Acting as a programmable motion controller and drive in a compact form, the unit can replace the host in various single or multi-axis stand-alone applications.

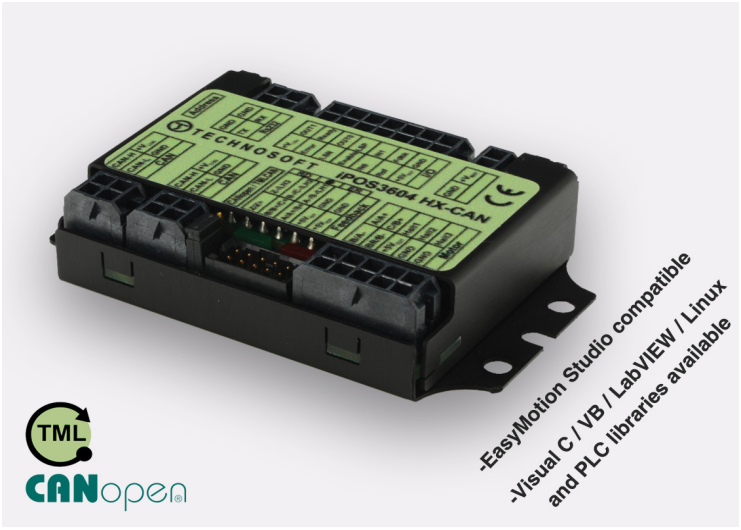
Complex motion sequences can be programmed and executed automatically at power-up from the non-volatile memory of the drive. Advanced positioning profiles like the PVT or electronic caming, I/O and program flow control, data transfer between axes, subroutines, ISRs and multiple homing modes ease the motion application implementation task.

In systems that require a host, the iPOS 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.

EasyMotion Studio

The configuration, tuning and programming of the iPOS3604 HX-CAN drive is easy with Technosoft's powerful graphical platform, EasyMotion Studio.





Features :

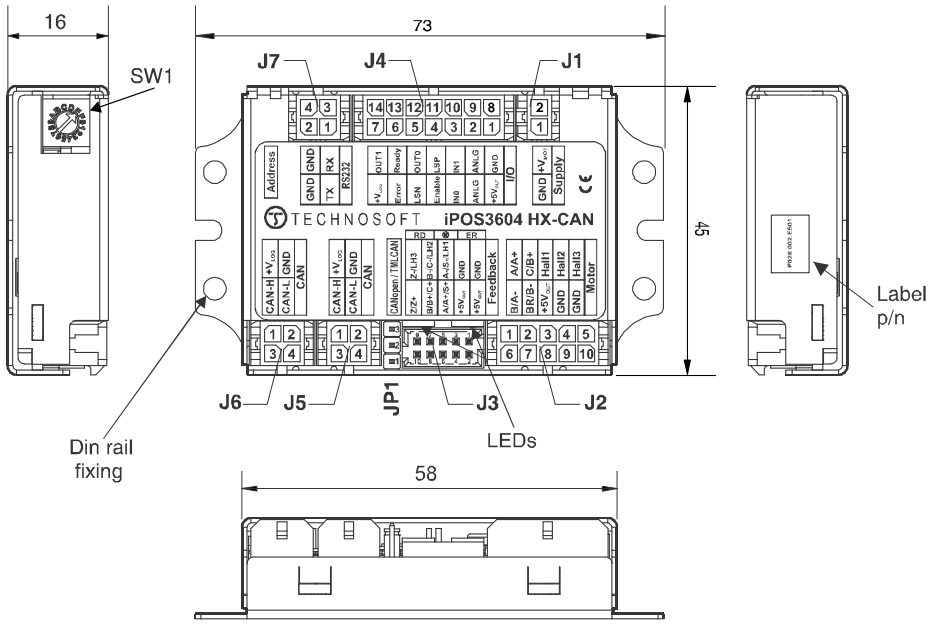
- **Motion controller and drive in a single compact unit**
- **Universal drive solution for brushless, brushed, linear or step (true closed loop) motors**
- **Advanced motion control capabilities (PVT, S-curve, electronic cam)**
- **Motion programming via TML (Technosoft Motion Language) or motion libraries for Visual C / VB / LabVIEW / Linux and PLC**
- **Standalone operation with stored motion sequences**
- **Communication :**
  - **RS-232 serial**
  - **CAN-Bus with TMLCAN or CANopen (CiA301, 305, 402) protocols**
- **Digital and analogue I/Os:**
  - **5 digital programmable inputs, 5 - 36 V**
  - **4 digital outputs, 5 - 36 V, 0.5 A**
  - **1 analogue input: 12 bit resolution, 0 - 5 V**
- **Feedback devices :**
  - **Incremental quad encoder (differential)**
  - **Analogue sine/cosine encoder (differential 1Vpp)**
  - **Digital Hall sensors**
- **Programmable protections :**
  - **Over-current, over-temperature, short circuit**
  - **Over and undervoltage, i2t, control error**

Electrical Specifications :

Motor power supply:	12 - 36 Vdc
Logic supply :	12 - 36 Vdc
Continuous phase current	4 A
Peak current (2.4 sec. max.)	10 A
PWM switching frequency	20 - 100 kHz
Operating ambient temperature	0 °C - 40 °C

TECHNOSOFT
MOTION TECHNOLOGY

TECHNICAL AND ORDERING INFORMATION



Weight : 48 g
All dimensions are in mm.

J1 Motor Supply
1 GND
2 +V_{MOT}

JP1 Jumper
1-2 CANopen mode
2-3 TMLCAN mode

SW1 Switch
Axis ID

J2 Motor + Halls
1 Motor phase A/A+
2 Motor phase C/B+
3 Hall 1
4 Hall 2
5 Hall 3
6 Motor phase B/A-
7 Brake/phase B-
8 +5V_{OUT}
9 GND
10 GND

J3 Feedback
1 GND
2 +5V_{OUT}
3 GND
4 +5V_{OUT}
5 A-/Sin-/LH1
6 A/A+/Sin+
7 B-/Cos-/LH2
8 B/B+/Cos+
9 Z-/LH3
10 Z+

J4 I/O & Logic Supply
1 +5 V_{OUT}
2 ANLG
3 In0
4 Enable
5 LSN
6 Error
7 +V_{LOG} In
8 GND
9 ANLG
10 In1
11 LSP
12 Out0
13 Ready
14 Out1

J5&J6 CAN
1 +V_{LOG} In/Out
2 GND
3 CAN-Hi
4 CAN-Lo

J7 RS232
1 232TX
2 GND
3 232RX
4 GND

LEDs
Green - Ready
Red - Error

The high level graphical development environment EasyMotion Studio supports the configuration, parameterization and programming of the drive, through:

- Motion system set-up wizard
- Tuning assistance with capture functions
- Definition, programming and testing of motion sequences

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

ORDERING INFORMATION :

P028.002.E501	iPOS3604 HX-CAN Intelligent Drive, 36V, 4A, closed frame, encoder, CAN
P034.001.E002	EasyMotion Studio Software
P040.001.Exxx	TML_LIB Motion Library*
P028.040.C099	Complete cable set 100 cm for iPOS3604 HX-CAN, enc.diff
P028.040.C079	Housing & crimp pins set for iPOS3604 HX-CAN

*ask for existing libraries types

FLEXIBILITY :

Control schemes supported by the iPOS3604 HX-CAN Drive

Motor types	Torque Control	Speed Control	Position Control
Brushless	√	√	√
Brushed	√	√	√
Step	√	√	√
Linear	√	√	√

CONNECTORS TYPE AND MATING CONNECTORS :

Connector	On the drive	Mating
J1	Molex 43045-0212	Molex 43025-0200
J2	Molex 43045-1012	Molex 43025-1000
J3	Molex 87831-1031	Molex 511110-1056
J4	Molex 43045-1412	Molex 43025-1400
J5,J6,J7	Molex 43045-0412	Molex 43025-0400

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