

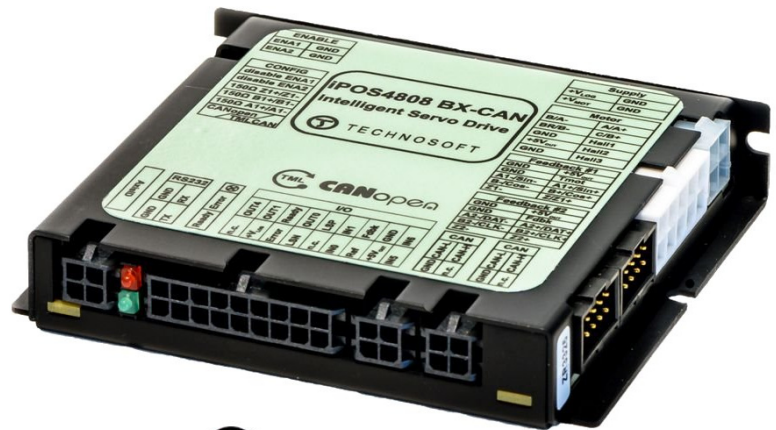
iPOS4808 BX-CAN INTELLIGENT SERVO DRIVE 8A, 48V_{DC}

FOR BRUSHLESS, BRUSHED, LINEAR OR STEP MOTORS

DESCRIPTION

The iPOS4808 BX-CAN is a new member of the iPOS family of Technosoft intelligent drives. It is based on a new design concept for closed-frame 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 400 W with CAN communication.

Designed to cover low to medium volume applications, the iPOS4808 BX-CAN embeds motion controller, drive, and PLC functionalities into a single unit. It can be used as an intelligent drive, or as a standard drive accepting TMLCAN or CANopen commands.



CANOPEN NETWORKING

The iPOS4808 BX-CAN drive supports CANopen application protocol in conformance with CiA 402 device profile. Advanced features are covered, as cyclic synchronous position, up to 35 customizable homing modes (including all CiA 402 standard homing modes), PVT third order interpolation polynomial motion profiles, etc.

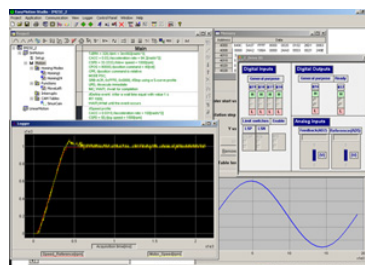
Initial drive commissioning is performed via the Technosoft EasySetup or EasyMotion Studio software platforms; checking and updating of setup data can also be done from the CANopen master.

DUAL LOOP

Equipped with 2 feedback connectors, the iPOS4808 BX-CAN provides advanced dual-loop control schemes that minimize the transmission backlash negative effects, and increases system damping and stability.

EASYMOTION STUDIO

The configuration, tuning and programming of the iPOS4808 BX-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 (CiA301v4.2 and CiA402v3.0) protocols selectable by h/w switch
- Digital and analogue I/Os:
 - 6 digital programmable inputs, 12 - 36 V, PNP/NPN programmable
 - 5 digital outputs, 5 - 36 V, 0.5 A, NPN-open collector
 - 2 analogue inputs: 12 bit resolution, 0 - 5 V
- Feedback devices (dual loop supported):
 - 1st Feedback :
 - Incremental quad encoder (single ended / differential)
 - Pulse & Direction (single ended) interface
 - Analogue sine/cosine encoder (differential 1Vpp)
 - Digital Hall sensors
 - 2nd Feedback :
 - Incremental quad encoder (differential), SSI, BISS
- Programmable protections :
 - Over-current, over-temperature, short circuit
 - Over and undervoltage, i2t, control error

ELECTRICAL SPECIFICATIONS :

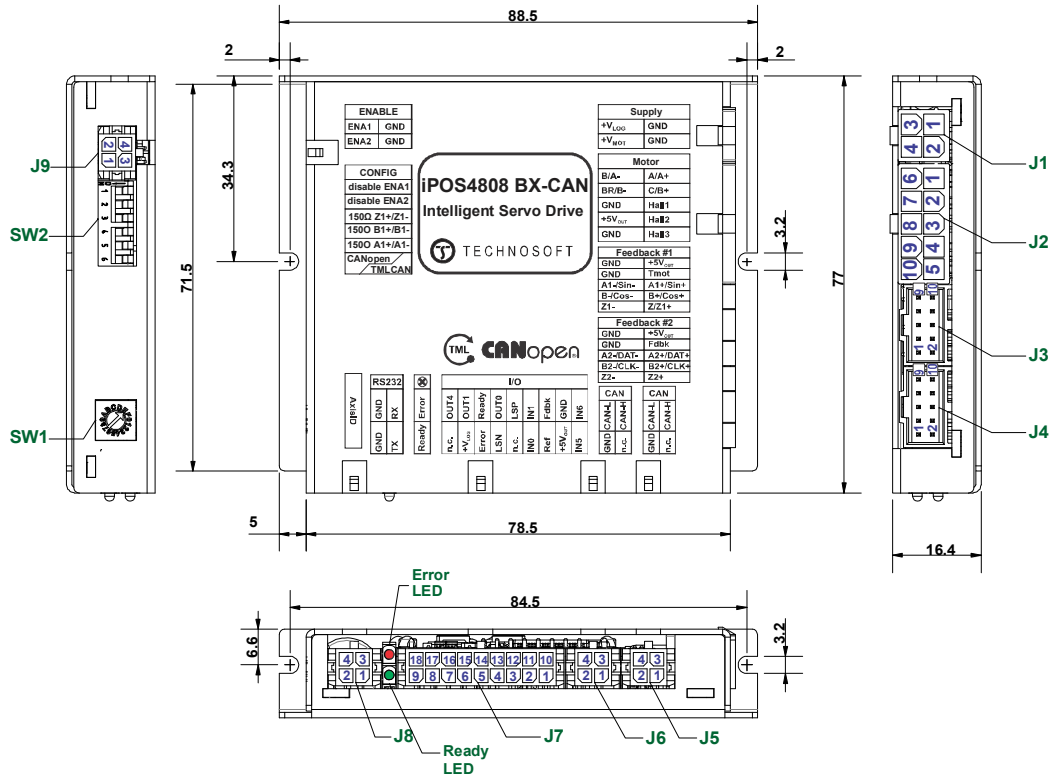
Motor power supply:	12 - 48 V _{DC}
Logic supply :	12 - 36 V _{DC}
Continuous phase current	8 A
Peak current (2.4 sec. max.)	20 A
PWM switching frequency	20 - 100 kHz
Operating ambient temperature	0 °C - 40 °C

Your
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Intelligent
Move



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TECHNICAL AND ORDERING INFORMATION



J1 Supply 1 GND 2 GND 3 +VLOG 4 +VMOT	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 GND 9 +5VOUT 10 GND	J3 Feedback#1 1 Z1- 2 Z1+ 3 B1-/Cos- 4 B1+/Cos+/Dir 5 A1-/Sin- 6 A1+/Sin+/Pulse 7 GND 8 TempMot 9 GND 10 +5Vout	J4 Feedback#2 1 Z2- 2 Z2+ 3 B2-/Dir-/CLK-/MA- 4 B2+/Dir+/CLK/MA+ 5 A2-/Pulse-/Data-/SL- 6 A2+/Pulse+/Data+/SL+ 7 GND 8 FDBK 9 GND 10 +5Vout	J5 CAN OUT J6 CAN IN J7 I/O & Logic Supply 1 In5 DI* 2 +5 VOUT 3 Reference AI* 4 In0 DI* 5 n.c. 6 In3/Limit- DI* 7 Out2/Error DO* 8 +VLOG 9 n.c. 10 In6 DI*	11 GND 12 Feedback AI* 13 In1 DI* 14 In2/Limit+ DI* 15 Out0 DO* 16 Out3/Ready DO* 17 Out1 DO* 18 Out4 DO*	J8 RS232 1 232TX 2 GND 3 232RX 4 GND	J9 Enable 1 ENA2 2 ENA1 3 GND 4 GND
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10 In6 DI* * AI - analog input ; DI - digital input ; DO - digital output

ORDERING INFORMATION :

P027.214.E201	iPOS4808 BX-CAN Intelligent Drive, 48V, 8A, closed frame, encoder, CAN
P034.001.E002	EasyMotion Studio Software
P040.001.Exxx	TML_LIB Motion Library**
P027.040.C299	Complete cable set 100 cm for iPOS4808 BX-CAN, enc.diff
P027.040.C279	Housing & crimp pins set for iPOS4808 BX-CAN

**ask for existing libraries types

FLEXIBILITY :

Control schemes supported by the iPOS4808 BX-CAN Drive

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

CONNECTORS TYPE AND MATING CONNECTORS :

Connector	Housing	Crimp Pin
J1	Molex 39-03-9042	Molex 45750-1111
J2	Molex 39-03-9102	
J3,J4	Molex 90142-0010	Molex 90119-0109
J7	Molex 43025-1800	Molex 43030-0007
J5, J6, J8, J9	Molex 43025-0400	

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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