

SGDV-OCB01A - CANopen Network Module for Sigma-5

Introduction

The SGDV-OCB01A is an add-on board, compatible with Sigma-5 series command option attachable type amplifiers SGDV – xxx x E x A. It provides an interface for a CANopen communication network. The CANopen interface enables the user to achieve high-speed distributed control with a high level of reliability. CANopen is a higher-layer protocol commonly used in the automation industry. The specification of this protocol is maintained and developed by the CiA organization (www.can-cia.org).

CANopen network module features

The CANopen network module offers a wide range of functions based on the following:

- CANopen DS-301 specification
- Drive profiles according to DSP-402, V2.0 support the following modes:
 - Profile Position Mode
 - Homing Mode
 - Profile Velocity Mode
 - Profile Torque Mode
 - Interpolated position mode
- Rotary switches for setting node ID – up to 127 nodes
- Communication rate of up to 1 Mbps
- Standard 9-pin D-type connector
- Two indicator LEDs according to CiA303-3

The CANopen network module is conform to:

- CiA Specifications
- Safety Standard UL508
- Material Compliance UL94V-0
- RoHS Directive 2002/95/EC
- WEEE Directive 2002/96/EC
- Low Voltage Directive 73/23/EEC
- EMC Directive 89/336/EEC models, which provides an



SGDV-OCB01A Technical Specifications

CANopen communication standards	DS-301, V4.02
CAN bit rates	20, 50, 125, 250, 500, 800, 1000 Kbps
CAN identifier Standard	11 bit
CANopen node-ID	1-127 (set by two rotary switches)
NMT services	Slave
SDO communication	1 server
Block transfer	No
Segmented transfer	Yes
Block transfer	No
PDO communication	Producer and consumer, default setting according to DSP-402
Supported RPDOs	1 to 4
Supported TPDOs	1 to 4
PDO mapping entries	Dynamic with maximum 2 mapping entries
SYNC	Consumer
Time stamp	No
Emergency messages	Producer
Node guarding	No
Heartbeat	Producer and Consumer
Non-volatile storage	Yes
CANopen profile for drives	DSP-402, V2.0
Axis types	Linear and Rotary
Motor type	Brushless AC servo
Storage temperature	-20 to +85 °C
Ambient temperature	0 to +55 °C
Ambient temperature to ensure	
Long-term reliability	+45 °C or less
Ambient humidity	90 % RH or less (non-condensing)
Vibration	4.9 m/s ² or less
Current consumption	0.28A from 5VDC Servo Drive supply