

# CANopen I/O modules

## Intelligent Automation

The sysWORXX CANopen I/O modules are compact devices allows for an easy extension of I/O points via CANopen. They provide standard compliant CANopen access with a high density on I/O points per device. The sysWORXX CANopen I/O devices are just the right completion to existing CANopen systems and expand the possibilities of distributed control systems easily.



Analog, digital and temperature modules

CANopen standard compliant I/O

Best price-performance ratio

**sysWORXX**  
Automation Series

In decentralized automation applications so-called remote I/Os are used to sample or switch I/O signals at distant locations. The sysWORXX CANopen I/O modules enable an easy and standard-compliant way to extend application I/O in CANopen networked applications. Comprehensive software tools for configuration and analysis eases the task of implementation, test and commissioning of your application.

Besides the transmission of I/O process values, each sysWORXX CANopen I/O module features sophisticated error detection and reporting features as well as professional I/O filtering and protection functions. All sysWORXX I/O modules have an internal temperature sensor as well as an over-heat protection. The CAN bus interface on the sysWORXX I/O modules are optically isolated and the CANopen node-ID and CAN-bus bit rate of each CANopen I/O module can either be set via on-board switches or remotely via CANopen Layer Setting Services (LSS).

Depending on the I/O type the sysWORXX I/O modules support the CiA 401 device profile (Device profile for generic I/O devices) or the more sophisticated CiA 404 device profile (device profile for measuring devices and closed-loop controllers). The CiA 404 device profile includes calibration functions as well as automatic computation of process values from the sampled analog value using linear scaling factors.

SYS TEC electronic puts considerable effort in providing a standard-compliant CANopen interface. Thus the sysWORXX CANopen I/O devices can be used to interoperate with

other third-party CANopen devices without restrictions. The sysWORXX CANopen I/O devices feature an integrated CANopen bootloader that enables in-application device firmware updates on deployed modules.

### Customer-specific customizations

The sysWORXX I/O modules can easily be modified to meet specific customer needs. The scope of customer-specific modifications of the sysWORXX I/O modules range from customized assembly of I/O components on the existing board to a new full-custom design. For customers who plan to integrate the sysWORXX I/O modules in their own devices yet lack the required space SYS TEC electronic offers the sysWORXX I/O as PCB-only version, coming without enclosure.

SYS TEC electronic offers various brand-labeling options for OEM customers who want to use the PLCmodule-C32 under their own corporate identity. Just contact us to discuss your specific needs and how SYS TEC electronic can realize your product solution.

### About SYS TEC electronic

SYS TEC electronic GmbH is a system house for distributed automation technology. We provide a comprehensive service from consulting to OEM integration.

Founded in 1990 in Germany SYS TEC electronic has more than 20 years experience in customized development of microcontroller systems and industrial communication.

Features	IO-X1	IO-X2	IO-X3	IO-X4	IO-X5	IO-X6	IO-X7
<b>Digital Inputs</b> (24 VDC/isolated)	16	24					
<b>Digital Outputs</b> (24 VDC/ 0,5 A isolated)	8		24				
<b>Analog Inputs</b> (0..10V, +/- 10V, 0..20mA, 4-20mA)				8			
<b>Analog Outputs</b> (0..10V, 0..20mA, 4-20mA)						8	
<b>Resistance Temperature Sensors</b> (PT100, PT1000)					8		
<b>Thermocouple Sensors</b> (type J, K, L, R, S, T, E)							8

## Key Features

- Supported CAN-bus bit rates are 10/20/50/100/125/250/500/800/1000 kbit/s
- Galvanic isolated CAN-bus
- supports up to 110 CAN-nodes on same bus segment
- On-board jumper for 120 Ohm CAN-bus termination
- Node-ID and bit-rate setting via Hex-encoding switches or Layer Setting Services
- Internal monitoring and diagnostic of on-board temperature, power supply, memory, I/O and other controller internals
- Five heartbeat consumer objects available
- SYNC consumer for synchronous PDO transmission
- Non-volatile storage of the configuration data (STORE/RESTORE command)
- CANopen boot-loader for device firmware update on deployed devices
- High-quality connector plug included in scope of delivery
- Power supply: 24 V ± 20%
- IP20 enclosure, dimensions: 95 mm x 70 mm x 58 mm, DIN-rail mountable
- Operating temperature: -20 °C to 70 °C (0 °C to 50 °C for I/O-X7)

## Outstanding performance...

The CANopen IO-C12 is a compact CANopen I/O extension module. It combines a compilation of industrial proven I/O's with features of network management and node guarding in a compact DIN-rail mountable housing. Clearly arranged LED indicate the status of every I/O at the first glance. Removable terminal blocks enable easy deployment and exchange of modules.

- 27 digital inputs 24VDC
- 16 digital outputs 24VDC/0,5A
- 4 Relay outputs 250VAC/3A
- 4 analog inputs 0..10VDC
- 2 analog outputs 0..10VDC
- 2 PWM outputs 24VDC/0,5A



## Ordering Information

3001000	CANopen IO-X1
3001010	CANopen IO-X1, pulsed output
3001001	CANopen IO-X2
3001002	CANopen IO-X3
3001003	CANopen IO-X4
3001004	CANopen IO-X5
3001005	CANopen IO-X6
3001006	CANopen IO-X7
phyPS-409-Y	CANopen IO-C12

For quotations please contact us:  
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