Programmable vectorial drivers for 2 phases stepper motors

TITANIO
VECTOR - STEPPER - DRIVES

PROFI NET®

WARRANTY 3 YEARS

SW5A4085

Titanio drivers

- Vectorial control
- Fieldbus Profinet for a greater bandwidth and for more stations on the network
- Closed loop of torque, speed and position
- Serial service for real time programming and debugging
- New e3PLC Programming Environment, easy and intuitive

Features

Specifications

MODELS

Code	Power supply		Current
	Power	Logic	
SW5A4085	18 ÷ 100 Vac single phase or 3 phases	18 ÷ 100 Vac single phase (optional and not isolated)	8.50 Arms (12.00 Apeak)

EMULATED STEP RESOLUTION
Stepless Control Technology (65536 position per turn)

COMMUNICATION INTERFACES
Profinet (dual ethernet ports with an IRT switch)

ENCODER INTERFACES
incremental encoder input 5V differential RS422 or 5V single-ended TTL/CMOS (not isolated)

SCI INTERFACE
SCI service interface for programming and real time debug

OPTOCOUPLED INPUTS
6 digital inputs

OPTOCOUPLED OUTPUT
4 digital outputs

ANALOG INPUTS
2 analog inputs

SAFETY PROTECTIONS
over/under-voltage, over current, overheating, short circuit between motor phase to phase and phase to ground

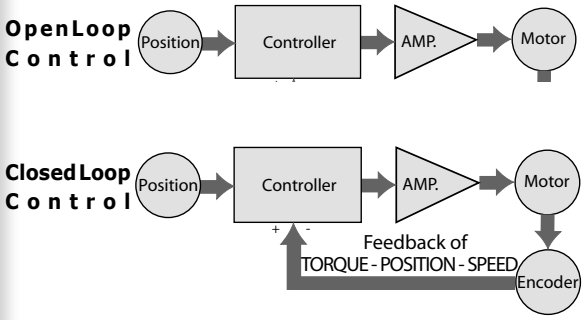
TEMPERATURES
working from 5°C to 40°C, storage from -25°C to 55°C

HUMIDITY
5% ÷ 85% not condensing

PROTECTION DEGREE
IP20

STANDARD
Category C3 following standard EN 61800-3

Open loop / Closed Loop



Better control compared to both an open loop stepper solution and a servo-controlled brushless solution

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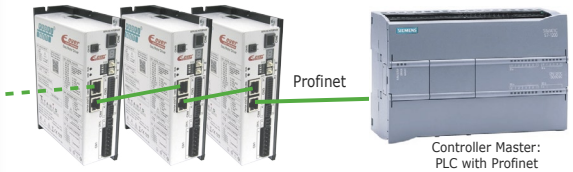
Control Modes

Multi Axes Systems

Slave Mode - c0990 Profinet

Profinet is used for data exchange between master controllers (PLC) and devices in the application and uses the proven communication model of Profibus DP extended with Ethernet as communication medium.

Hereby the implemented characteristics:
- Developed with the Enhanced Real-Time Ethernet Controller 200P (Siemens V4.6 PN Stack inside)
- GSDML v2.35 file
- IRT switch for dual Ethernet ports
- Drives can be controlled over Profinet as an IO device
- supporto RT (Real Time) protocol for Profinet IO, for applications with up to 10 ms cycle time: module 64 bytes I, 64 bytes O
- supporto IRT (Isochronous Real Time) protocol for Profinet IO, for applications with less than 1 ms cycle time: module 64 bytes I IRT, 64 bytes bytes O IRT
- 64 bytes (Input) and 64 bytes (Output) to transfer IO data between the IO controller and the IO devices
- 16 bytes (I/O) are fixed mapped
- 40 bytes (I/O) may be variably mapped to desidered functions using e3PLC
- 8 bytes (I/O) are used to R/W drive objects according to CANOpen SDO service.
- Digital IO (24Vdc) and analog inputs of the drive are available as distributed I/O points over Profinet.

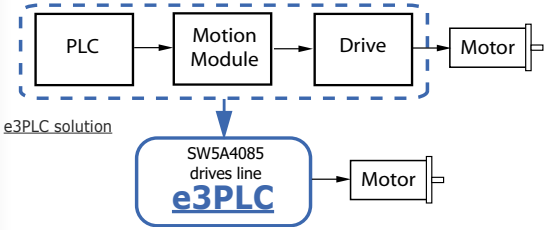


Drives control through commnd by master controller.

Stand Alone Mode

User Programmabile - e3PLC- c0990

FIELDBUS DRIVES WITH AUTONOMOUS FUNCTIONING that, by integrating advanced PLC and motion controller functions in one single device, programmable by the user with the IDE for Windows PC and e3PLC, allows to reduce the traditional machine control solution.



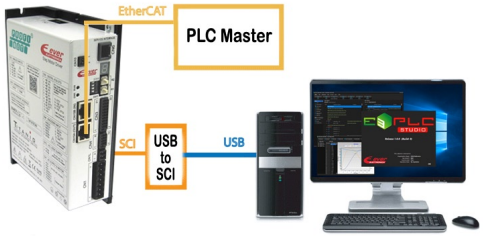
The e3PLC IDE allows the user to access all the I/O control functions and resources, provided by the drive, and to locally program its Motion Control Module, which can also be synchronized with other drives and events of the controlled process. Thanks to the advanced functionalities of the Power Motion Module, an integrated Real-time Process Module, applications can be easily created for special applications such as:
- *Labelling*
- *Electronic cams*
- *Control Sequences of cable processing*
- *Many other user-customized processes ...*

Available Models

Mechanical Specifications

Configuration software

Fieldbus configuration or
IDE e3PLC configuration (programmable)



Ever co. proprietary PC Software Tools for easy and quick configuration or programming, real time debug and supervision of each system

Autonomous management of the firmware for the execution of the ***homing***, of the target movement with relative or absolute quota and for the generation of the ramp profiles

Torque mode for operation with torque limitation

Speed control thanks to digital inputs, analogue inputs or fieldbus

Electronic CAM with advanced programming of internal profiles inside the drive

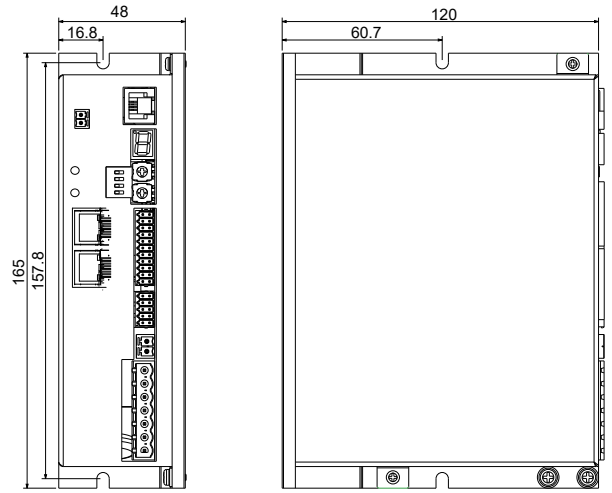
Electric shaft with encoder or analogue input with variable tracking ratio (Electric Gear)

Fast inputs and outputs for motor' start & stop and event synchronization for high speed response applications such as labeling, nick finder, flying saw etc.

Possibility to synchronize the movements in multi-axis systems, even without fieldbus

Enabling and on-the-fly changing of the motion control modes

Mechanical Data



Models	Dimensions (mm) H	L	W	Weight (g.)
SW5A4085T2N1-00	165.0	120.0	48.0	390

Ordering Information for SW5A4085 Drives

Ordering code		Power			System Resources						
Versions	Config.	Power Supply	Logic Power Supply	Current	Digital Inputs	Digital Outputs	Analog Inputs	Analog Outputs	Interface	SCI Interface	Control Mode
SW5A4085 Drives Line											
SW5A4085T2N1-00	c0990	18 ÷ 100 Vac	18 ÷ 100 Vac (optional)	0.0 ÷ 8.5 Arms (12 Apeak)	6	4	2	0	Profinet	For programming and real time debug	Fieldbus Profinet e3PLC Profinet

Configuration and Programming Kits	
Kit code	**Description**
SW5_SERV00-SL	SCI configuration communication kit with cables, service serial to RS485 and RS485 to USB converters and CD-Rom.
SW5_SERV00-EE	SCI service e3PLC programming with cables,service serial to RS485 and RS485 to USB converters and CD-Rom.