Specifications

MODELS

Code	Power supply		Max. Out Current
	Power	Logic	
SW4A3032	18 ÷ 56 Vac	24 ÷ 80 Vdc	3.2 Arms (4.5 Apeak)
SW4A3070	18 ÷ 56 Vac	24÷ 80 Vdc	7.1 Arms (10 Apeak)

OPTOISOLATED CONTROL BUSSES
Modbus or CANbus

ENCODER INTERFACE
incremental encoder not isolated input 5V Differential (RS422)
or 5V Single-Ended (TTL/CMOS)
encoder output not isolated 5V Differential (RS422)

SCI INTERFACE
service SCI interface for programming and real time debug

OPTOISOLATED INPUTS
4 digital inputs 2-24 Vdc NPN, PNP or Line-Driver 2 MHz

OPTOISOLATED OUTPUTS
2 digital outputs PNP, 24 Vdc - 100 mA

ANALOG INPUTS
2 analog inputs for potentiometer or ±10 Vdc

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

SAFETY PROTECTIONS
Over/UnderVoltage, OverCurrent, OverTemperature,
Phase/Phase and Phase/Ground Short

TEMPERATURE
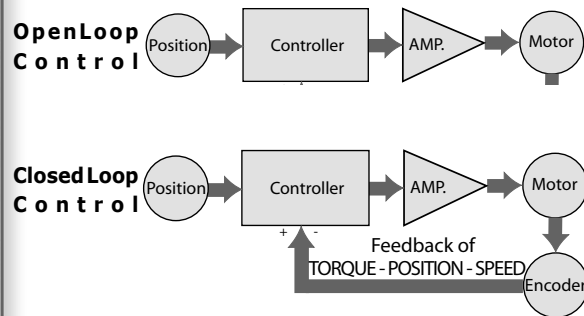operating from 0°C to 40°C, storage -25°C to 55°C

HUMIDITY
5% ÷ 85%

PROTECTION CLASS
IP20

Features

Control Modes

Open loop / Closed Loop

OpenLoop Control: Position → Controller → AMP. → Motor

Closed Loop Control: Position → Controller → AMP. → Motor → Encoder
Feedback of TORQUE - POSITION - SPEED

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

Programmable vectorial drivers for 2 phases stepper motors

TITANIO VECTOR - STEPPER - DRIVES

CANopen DS402
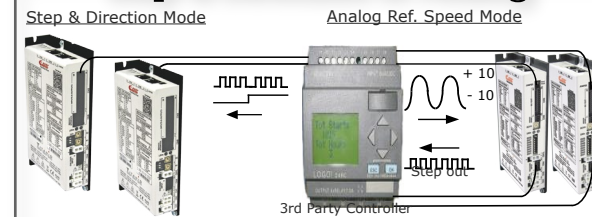
Modbus

GARANZIA 3 ANNI

SW4
Titanio drivers

- Multiform Control Modes
- Equipped with advanced safety features:
  - √ Integrated diagnostic
  - √ separated power supply for logic and power
  - √ fault monitoring and handling
- Drives main features:
  - √ Vectorial control
    The sinusoidal phase current with "else" technology keep the motor torque constant allowing smooth and noiseless movements.
  - √ Closed loop
  - √ Integrated oscilloscope
  - √ Auto tuning of motor control parameters
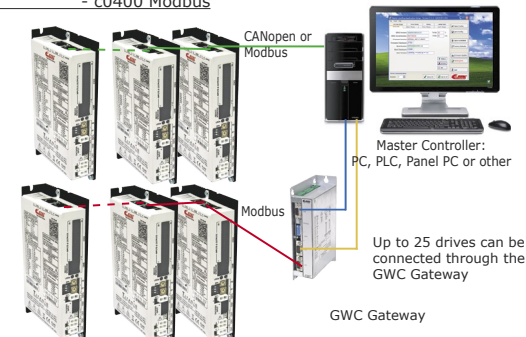 - √ High efficiency current set up

Step & Direction or Analog

Step & Direction Mode

Analog Ref. Speed Mode
+ 10
- 10
Step out
3rd Party Controller

Multi Axes Systems

Slave Mode - c0300 CANopen/c0380 CANopen DS402 - c0400 Modbus

CANopen or Modbus

Master Controller: PC, PLC, Panel PC or other

Modbus

Up to 25 drives can be connected through the GWC Gateway
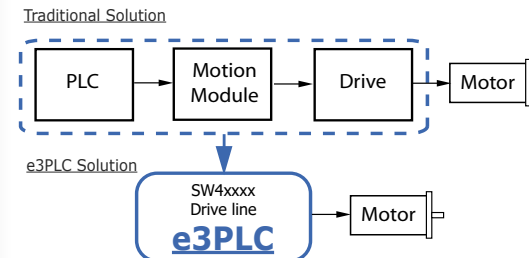
GWC Gateway

Drive control through commands by Master Controller.
Suitable for multi axes systems (up to 127 drives).
Built in powerfull Motion Module functionality assures perfect synchronization among axes and reduces Master Controller workload.

Stand Alone Mode

PUser Programmable - e3PLC- c0390 - c0490
e3PLC integrates PLC, Motion Module, Process Module and drive in One Device. e3PLC Studio PC interface is available to friendly, fast and easy custom to machine or process device programming.

Traditional Solution

PLC → Motion Module → Drive → Motor

e3PLC Solution

SW4xxxx Drive line **e3PLC** → Motor

Il Gestore Atomic permette all'utente di accedere a tutte le funzionalità e le risorse del dispositivo e di gestire e sincronizzare il Modulo di Movimento e le risorse di altri azionamenti con ogni evento di processo.

Access to all Powerful Motion functionalities
Built in Process Real Time Modules for special applications:
- Labelling
- CAM
- Wire Processing
- User Custom Process
- ......

Ever co. proprietary PC Software Tools for easy and quick development, configuration and supervision of each system.

Modulo Power Motion

- Step & Direction Control Mode
- Analog Speed Ref. Control Mode (by potentiometer or ±10Vdc)
- Velocity Control Mode
- Wide range of Positioning Control Modes (homing, relative, absolute, target)
- CAM Mode. CAM profile can be programmed
- Electric Gear with programmable gear ratio to track external master reference (from fieldbus or incremental encoder) of motor Speed and Position
- High speed I/O triggered motor start & stop to event syncronizing for fast response demanding application: labeling, nick_finder, on fly cut., etc ...
- Multi Axis movements syncronization capability
- On fly change among any Motion Module Control Modes
- On fly Electric Gear Enable/Disable capability
- Closed Loop of torque, speed and position also with absolute multiturn encoder

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

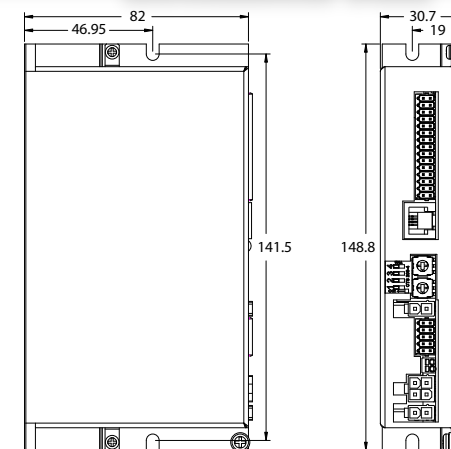**Electronic CAM** with advanced programming of internal profiles inside the drive

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

Models	Dimensions (mm)			Weight (g.)
	H	L	W	
SW4A30xx	148.8	82.0	30.7	350

Ordering Information for SW4 Drives

Ordering code		Power			System Resouces								Kits d'installazione
Versions	Config.	Power Supply	Logic Power Supply	Current	Digital Inputs	Digital Outputs	Analog Inputs	Analog Outputs	Interfaces	Encoder Interface	SCI Interface	Contol Mode	Software [1] Kits
SW4 Drives Line: 3032 Models													
SW4A3032N241-01	c0490-S0201	18 ÷ 56 Vac	24 ÷ 80 Vdc	0 ÷ 3.2 Arms (0÷4.5 Apeak)	4	2	2	0	---	Incremental	Service serial for programming and debug in real time	Modalità Ck&Dir loop chiuso	SW4_SERV10-SL or SW4_SERV11-SL
SW4A3032C261-01	c0380											Modalità CANopen DS402	SW4_SERV10-SL or SW4_SERV11-SL
	c0390											e3PLC CANbus	SW4_SERV10-EEor SW4_SERV11-EE
SW4A3032M261-01	c0400								Modbus			Modallità Modbus	SW4_SERV10-SL or SW4_SERV11-SL
	c0490											e3PLC Modbus	SW4_SERV10-EE or SW4_SERV11-EE
SW4 Drives Line: 3070 Models													
SW4A3070N241-01	c0490-S0201	18 ÷ 56 Vac	24 ÷ 80 Vdc	0 ÷ 7.1 Arms (0÷10.0 Apeak)	4	2	2	0	---	Incremental	Service serial for programming and debug in real time	Ck&Dir closed loop mode	SW4_SERV10-SL or SW4_SERV11-SL
SW4A3070C261-01	c0380											CANopen DS402 mode	SW4_SERV10-SL or SW4_SERV11-SL
	c0390											e3PLC CANbus mode	SW4_SERV10-EE or SW4_SERV11-EE
SW4A3070M261-01	c0400								Modbus			Modbus mode	SW4_SERV10-SL or SW4_SERV11-SL
	c0490											e3PLC Modbus mode	SW4_SERV10-EE or SW4_SERV11-EE

[1] Kits software are intended for the SCI communications for systems configuration or programming and includes converters and cables form serial service to RS485 (and from RS485 to USB in the SW4_SERV00-xx code versions) and a CD-Rom.