

## Specifications

Code	Power supply		Max Current for each motor
	Power	Logic	
SW5D3070	24 ÷ 80 Vdc	24 Vdc (mandatory and isolated)	7.10 Arms (10.10 Apeak)

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

**COMMUNICATION INTERFACES**  
Industrial Ethernet Interface Multiprotocol

**ENCODER INTERFACES (isolated)**  
incremental encoder input 5V differential RS422 or 5V single-ended TTL/CMOS (isolated), or absolute multiturn encoder input 5 V Endat2.2 or BiSS-C or SSI

**USB INTERFACE**  
USB service interface for programming and real time debug

**INPUTS (optocoupled)**  
8 digital

**OUTPUT (optocoupled)**  
4 digital

**ANALOG INPUTS (isolated)**  
2 analog

**ANALOG OUTPUTS (isolated)**  
2 analog

**SAFE TORQUE OFF INPUTS (optocoupled)**  
2 STO 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

## MULTIPROTOCOL

The drive can be configured to communicate with a wide range of major fieldbuses on the market without any hardware alteration but with a simple software setup. Fieldbuses already available for interfacing on a Multiprotocol device include:



Downloading the ad hoc firmware, it's possible to change the communication protocol according to the need of your application. Multiprotocol drives ensure fast and flexible operation and user-friendly configuration provided on the software, without the need for additional servers or special hardware.

## Open loop / Closed Loop



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

## Multiprotocol fieldbus programmable vectorial drivers for 2 stepper motors

**TITANIO**  
VECTOR · STEPPER · DRIVES



# SW5D3070

- Industrial Ethernet Interface Multiprotocol fieldbus
- Outputs to drive two independent motors
- USB serial for real time programming and debugging
- Vectorial control, for smooth and silent movements
- Closed loop of speed, torque and position
- Easily programmable with e3PLC Programming Environment



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## Multi-Axes Systems

Slave Mode - c0A80 PowerLink (DS402)

POWERLINK is a standard Ethernet-based communication protocol that guarantees reliable and deterministic communications: it is therefore well suited to meet the needs of industrial automation and process control. POWERLINK utilizes the same object dictionaries and communication mechanisms as CANopen, including process data objects (PDOs), service data objects (SDOs), and network management (NMT). For this reason, POWERLINK can be referred to as a "CANopen over Ethernet."

Main features of the POWERLINK fieldbus:

- real-time data
- freedom to choose the network topology best suited to the application (star, tree, ring, or combinations of all these network architectures)
- Cyclic and isochronous data exchange: the Managing Node, during the clock cycle, sends requests to all nodes according to a predetermined sequence (equidistant time cadence) while waiting for the response from each node
- deterministic, as the network and device update time is constant
- dynamic mapping of PDOs.
- hot plug: disconnection of one (or more) nodes does not affect network functionality; if one node is disconnected, the others continue to operate. This means, for example, that it is possible to disconnect part of the robotic line for maintenance and reconnect it without "disturbing" other connected machines.

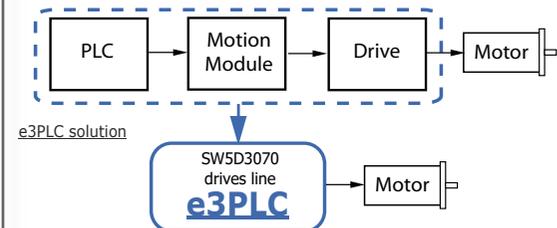


Drives control through command by master controller.

## Stand Alone Mode

User Programmable - e3PLC- c0A90

**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 ...

## 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

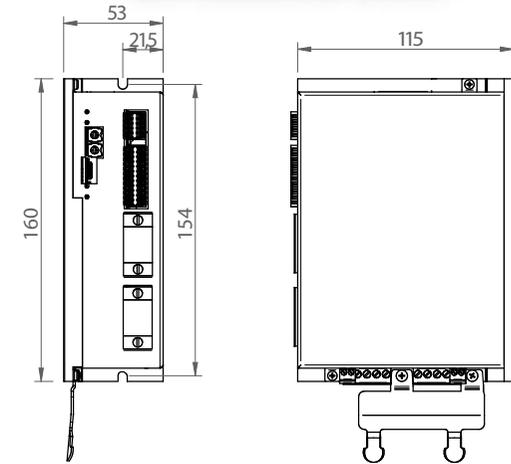
**Electric shaft** with encoder or analogue input with variable tracking ratio (Electric Gear)

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)			Weight (g.)
	H	L	W	
SW5D3070x4T2-3x	160.0	53.0	115.0	470

## 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	STO inputs	Interface	Encoder inputs	SCI Interface	Control Mode
<b>Azionamenti Linea SW5: Modelli D3070</b>													
SW5D3070R4T2-30	c0A80	24 ÷ 80 Vdc	24 Vdc (mandatory and isolated)	0,0 ÷ 7,1 Arms (10.0 Apeak)	8	4	2	2	2	PowerLink	incremental encoder	USB service interface for programming and debug in real time	Slave through PowerLink (DS402)
SW5D3070R4T2-35	c0A80										multiturn absolute encoder		Slave through PowerLink (DS402)
SW5D3070E4T2-30	c0890									Modbus TCP/IP	incremental encoder		Programmable e3PLC Modbus TCP/IP
SW5D3070E4T2-35	c0890										multiturn absolute encoder		Programmable e3PLC Modbus TCP/IP
SW5D3070H4T2-30	c0680									EtherCAT	incremental encoder		Slave through EtherCAT (DS402)
SW5D3070H4T2-35	c0680										multiturn absolute encoder		Slave through EtherCAT (DS402)
SW5D3070T4T2-30	c0990									Profinet	incremental encoder		Programmable e3PLC Profinet
SW5D3070T4T2-35	c0990										multiturn absolute encoder		Programmable e3PLC Profinet
SW5D3070I4T2-30	c0B90									EtherNET/IP	incremental encoder		Programmable e3PLC EtherNET/IP
SW5D3070I4T2-35	c0B90										multiturn absolute encoder		Programmable e3PLC EtherNET/IP

### Configuration and Programming Kits

Kit code	Description
USBC_SERV0EE-1M	USB configuration and programming communication kit with cable and USB key with Ever Studio and e3PLC in demo version.