

SOFFMC Compact 301

Motion Controller



Equipped with CODESYS real-time core

- Standard IEC61131-3 programming language
- Open and modular programming environment
- Multi-person collaborative design

High real-time Linux operating system

- Optimized Linux operating system for high real-time, streamlined and stable operation

Support various communication protocols

- Integrated serial port allows communication with various instruments and sensors
- Network port Supports OPCUA, ModbusTCP and TCP/IP communication
- Support CANopen communication protocol
- Support communication with high-level languages such as C#, C++, etc. Adopt PLC Handlert protocol

Powerful motion control

- 8 EtherCAT servo axes can be controlled in 2ms; 16 EtherCAT servo axes can be controlled in 4ms;
- Point-to-point motion control, velocity synchronization, position synchronization function
- G-code interpolation (linear interpolation/arc interpolation/robot coordinate conversion)

Support EtherCAT fieldbus

- As the master station of EtherCAT, it is compatible with the third-party EtherCAT slave device

Support local expansion I/O; support remote I/O

- Controller body can expand 16 I/Os
- Up to 100m connection distance for remote terminal module; ETseries I/O module can be adapted to the third-party standard EtherCAT master station
- Plug-in terminal module, easy for installation

Ordering Model Cross Reference

Model	Runtime	Class	Status
SC-E08-301-0101	CODESYS	PLC	Released
SC-E08-301-0102		PLC + WebHMI	Released
SC-E08-301-0103		NC	Released
SC-E08-301-0104		NC + WebHMI	Released
SC-E08-301-0105		CNC+Robotics + WebHMI	Released

Specification

Specification	Description
Power down holding function	Yes. Power down holding data capacity 256Kbyte
Clock	Built-in clock records time, saved by battery (replaceable)
Operating system	Linux
Control software	CODESYS
Ethernet port	Support EtherCAT, fieldbus communication Support Modbus TCP, OPC UA communication
Support serial port	Support 1 RS485
CAN communication	Support CANopen bus
Support SD card	Download from user program; firmware upgrade
Axis capacity	8 EtherCAT servo axes can be controlled in 2ms; 16 EtherCAT servo axes can be controlled in 4ms
I/O	32 I/Os: 16 sink (NPN) input digital channels; comply with IEC 61131-2 typel/3 16 sink (NPN) output digital channels; comply with IIEC 61131-2; rated load current 500mA/channel; supported load types: resistive load, inductive load and lamp load
Operating/Storage temperature	-20...+55 °C/-40...+85 °C
Relative humidity	95% (no condensation)
Protection class	IP 20
Dimensions (width × height × depth)	91mm × 112mm × 95mm (depth with lug 110mm)

Software Features

- Using IEC61131-3 programming language, supporting ST, LD, SFC, FBD, CFC, etc.
- PLCOpen standard motion control library; support motion control functions such as point-to-point motion, electronic gear function/ECAM function, multi-axis interpolation (G-code), robot coordinate conversion, etc.
- Support C/C++; software engineers can use the most suitable language for program development
- Human-machine interface, trend graph continuous data recording and other functions
- Support web access to the visualization interface, allowing remote control
- Integration of typical industry process algorithm packages, such as tension control, flexible gantry, etc.