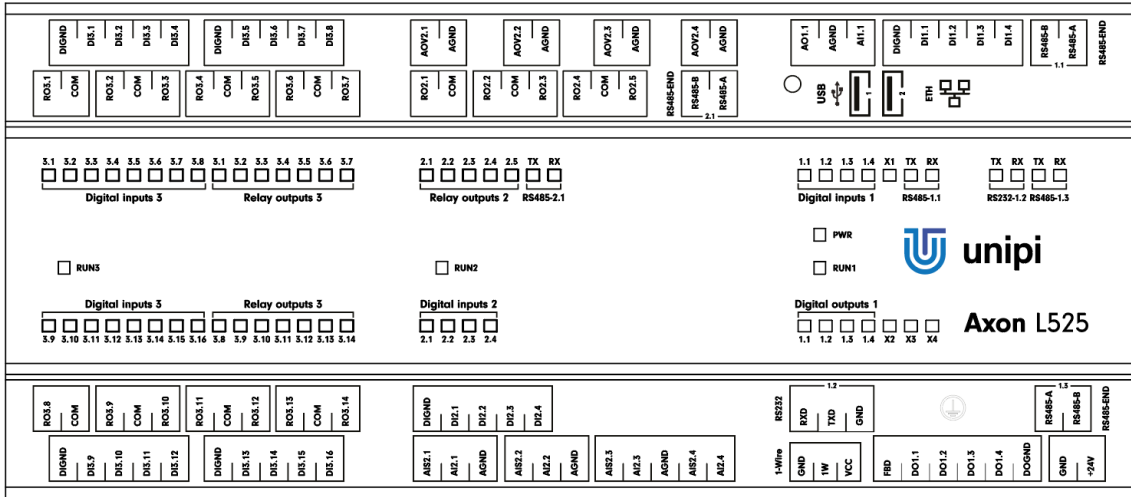


Unipi Axon L525

PRODUCT DESCRIPTION

Unipi Axon L525 is a programmable logic controller (PLC) designed for automation, control, regulation, and monitoring. The L525 is an intermediate model of the Axon 500 line focused on a higher number of analog I/O, but also features a high number of all inputs/outputs available on Unipi products (digital, relay). That makes it applicable in complex projects including measurements and control of analog components. The controller is equipped with two RS485 serial interfaces a 1-Wire interface for connection of digital temperature or humidity sensors.



COMPUTING MODULE

Allwinner H5 1.2 GHz quad-core CPU, 1GB RAM, 8GB eMMC onboard memory

FEATURES

Inputs/outputs

- 24 × digital input incl. counter
- 4 × digital output
- 19 × relay output
- 5 × analog input
- 5 × analog output

Software

- Powered by OS Linux
- Mervis – IDE (IEC 61131-3), HMI editor, proxy server, cloud database, SCADA, wide range of supported protocols
- Open-source solutions – Node-RED, openHAB, Homebridge, FHEM, PiDome, DomotiGa, Domoticz, Pimatic and many more
- Custom SW implementation– EVOK open API, Modbus TCP interface, SysFS

FUNCTIONALITY

Automation, IoT and IIoT, remote online monitoring and regulation, HVAC control, SCADA, sensorics, smart home control (lighting, doors, locks, irrigation etc.)

Communication interfaces

- 3 × RS485
- 1 × RS232
- 1 × 1-Wire bus
- 1 × 1Gbit Ethernet
- 2 × USB 2.0

Other features

- Built-in webserver
- Special functions – Direct Switch, MasterWatchdog, user LEDs
- Durable aluminium chassis (IP20)
- Extended operating temperature range
- Available in an OEM variant
- Custom development available (IQRf, LoRa, wM-Bus, ZigBee, EnOcean and more)

Unipi Axon L525

• Communication

| | |
|-----------------------------------|------------------------------------|
| Ethernet | 1 × 1Gbit Ethernet |
| Serial/bus channels | 3 × RS485, 1 × RS232, 1 × 1-Wire |
| RS485 1.1, 2.1 transmission speed | 134 baud .. 115 200 baud |
| RS485 1.3 transmission speed | 50 baud .. 3 Mbaud |
| RS485 galvanic isolation | Yes |
| RS485 biasing resistors | Yes, 560 Ω |
| RS485 terminating resistor | Built-in attachable, 120 Ω |
| RS232 transmission speed | 50 baud .. 3 Mbaud |
| RS232 galvanic isolation | No |
| 1-Wire galvanic isolation | Yes |
| 1-Wire output voltage Vcc | 5 V |
| 1-Wire max. current Vcc | 50 mA |
| 1-Wire connector | 3 × pole, max. 1.5 mm ² |
| WiFi | IEEE 802.11 b/g/n |
| Bluetooth | 4.0, Low Energy (BLE) |
| WiFi/Bluetooth antenna | Internal |
| USB | 2 × USB 2.0 |

• Digital inputs

| | |
|--|--|
| Nr.of inputs × groups | 4 × 6 |
| Common connector | DIGND |
| Galvanic isolation | Yes |
| Functions of inputs | Counter (incl. memory), signalization, Direct Switch |
| Max. frequency of counter input signal | 10 kHz |
| Input voltage of log. 0 | Max. 3 V DC |
| Input voltage of log. 1 | Min. 7 V DC |
| Max. input voltage | 35 V DC |
| Input resistance | 6 200 Ω |
| Delay 0→1/1→0 | 20 μs / 60 μs |

• Digital outputs

| | |
|------------------------------------|---------------------------------|
| Nr.of outputs × groups | 4 × 1 |
| Common connector | DOGND |
| Galvanic isolation | No |
| Type of output | NPN transistor (open collector) |
| Optional functions | PWM |
| Switchable voltage | 5–50 V DC |
| Switchable current continual/pulse | 750 mA / 1 A |
| Max. total current DO 1.1–1.4 | 1 A |
| PWM max. frequency | 200 kHz |
| PWM max. resolution | 16 bits |

• Relay outputs

| | |
|-----------------------------|----------------------|
| Nr.of outputs × groups | 1 × 3, 2 × 8 |
| Galvanic isolation | Yes |
| Type of contact | Normally open (SPST) |
| Switchable voltage | 250 V AC / 30 V DC |
| Switchable current | 5 A |
| Short time overvoltage | 5 A |
| Current via common conn. | 10 A |
| Time to switch on/off | 10 ms |
| Mechanical lifetime | 5 000 000 cycles |
| Electrical lifetime | 100 000 cycles |
| Protection against shortage | No |
| Inductive load protection | Not included |
| Isolation voltage | 4 000 V AC |

• Analog inputs

| | | |
|-------------------------------|------------------------|---|
| Nr.of inputs × groups | 1 × 1 | 4 × 1 |
| Common connector | AGND | AGND |
| Available functions | 0–10 V 0–20 mA | 0–10 V / 0–2.5 V 0–20 mA 0–1960 Ω 0–100 kΩ |
| Galvanic isolation | No | Yes |
| Resolution | 12 bits | 16 bits – U, I 24 bits – R |
| Conversion speed | 10 μs | 60 μs – U, I 400 ms – R |
| Input resistance | 66 kΩ – U 100 Ω – I | 44 kΩ – U 100 Ω – I |
| Resistance measurement method | – | 2/3wire |

• Analog outputs

| | | |
|-------------------------------|---|--------------|
| Nr.of outputs × groups | 1 × 1 | 4 × 1 |
| Common connector | AGND | AGND |
| Available functions | AO 0–10 V / 0–20mA Resistance measurement: 0–2 kΩ (Pt/Ni1000) | 0–10 V |
| Galvanic isolation | No | Yes |
| Max. voltage/current | 10 V / 20 mA | 10 V / 25 mA |
| Resolution | 12 bits | 12 bits |
| Conversion speed | 1 ms | 300 μs |
| Resistance measurement method | 2wire | – |

• Power supply

| | |
|-----------------------------|-----------------------|
| Rated voltage - SELV | 24 V DC |
| Power consumption | Typ. 8 W Max. 17 W |
| Reverse polarity protection | Yes |

• Installation and operating conditions

| | |
|-----------------------------------|---|
| Operating conditions | 0 °C .. + 70 °C, relative humidity 10 % .. 95 %, without aggressive substances, condensing vapor and fog |
| Storing conditions | - 25 °C .. + 70 °C, relative humidity 10 % .. 95 %, without aggressive substances, condensing vapor and fog |
| Degree of protection IP (IEC 529) | IP 20 |
| Operation position | Horizontal |
| Installation | On 35mm DIN rail into distribution box (holder included) |
| Connection | Pluggable terminal blocks |
| Wire gauge | Max. 2.5 mm ² |

• Dimensions and weight

| | |
|------------|------------------|
| Dimensions | 210 × 90 × 60 mm |
| Weight | 555 g |

• Standards compliance

| |
|----------------------|
| EN 60730-1 ed.3:2012 |
| RoHS |
| WEEE |