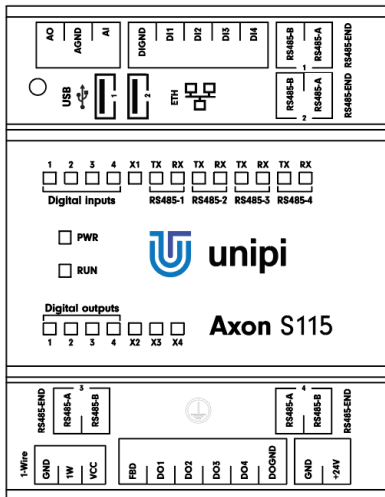


# Unipi Axon S115

## PRODUCT DESCRIPTION

Unipi Axon S115 is a programmable logic controller (PLC) and gateway designed for automation, control, regulation and monitoring. The S115 is a compact model with a universal architecture combining digital and analog I/Os suitable for simple installations. The S115 has a special feature of four RS485 serial interfaces - this makes the controller suitable for integration into extensive serial buses or as an aggregator for various serial protocols. The controller also features 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

## FUNCTIONALITY

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

## FEATURES

### Inputs/outputs

- 4 × digital input incl. counter
- 4 × digital output
- 1 × analog input
- 1 × 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

### Communication interfaces

- 4 × RS485
- 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 S115

## • Communication

|                                  |                                    |
|----------------------------------|------------------------------------|
| Ethernet                         | 1 × 1Gbit Ethernet                 |
| Serial/bus channels              | 4 × RS485, 1 × 1-Wire              |
| RS485 1 transmission speed       | 134 baud .. 115 200 baud           |
| RS485 2, 3, 4 transmission speed | 50 baud .. 3 Mbaud                 |
| RS485 galvanic isolation         | Yes                                |
| RS485 biasing resistors          | Yes, 560 Ω                         |
| RS485 terminating resistor       | Builtin attachable, 120 Ω          |
| 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 <sup>2</sup> |
| 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 × 1                                                   |
| Common connector                          | DIGND                                                   |
| Galvanic isolation                        | Yes                                                     |
| Functions of inputs                       | Counter (incl. memory),<br>signalization, Direct Switch |
| Max. frequency of counter input<br>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<br>DO1–DO4      | 1 A                             |
| PWM max. frequency                 | 200 kHz                         |
| PWM max. resolution                | 16 bits                         |

## • Analog inputs

|                               |                        |
|-------------------------------|------------------------|
| Nr.of inputs × groups         | 1 × 1                  |
| Common connector              | AGND                   |
| Available functions           | 0–10 V<br>0–20 mA      |
| Galvanic isolation            | No                     |
| Resolution                    | 12 bits                |
| Conversion speed              | 10 μs                  |
| Input resistance              | 66 kΩ — U<br>100 Ω — I |
| Resistance measurement method | —                      |

## • Analog outputs

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

## • Power supply

|                             |                       |
|-----------------------------|-----------------------|
| Rated voltage - SELV        | 24 V DC               |
| Power consumption           | Typ. 3 W<br>Max. 12 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<br>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 <sup>2</sup>                                                                                    |

## • Dimensions and weight

|            |                 |
|------------|-----------------|
| Dimensions | 70 × 90 × 60 mm |
| Weight     | 202 g           |

## • Standards compliance

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

