Reference	Connection	Device Socket	Mating Connector
X28	DC supply 1 = +24V 2 = GND	Phoenix FKCT 2,5/ 4-B BK	Phoenix FKCT 2,5/ 4-ST BK
X29	Ethernet 1	RJ45	RJ 45
X30	Ethernet 2	RJ45	RJ45
X31	Ethernet 3	RJ45	Rj45
X32	Ethernet 4	RJ45	RJ45
X8	USB	USB-A	USB-A
X5	SD Card	MicroSD Slot	MicroSD Card
D9	Run LED (green/red)	-	-
D10	Status LED (red/yellow)	-	-
D11	Error LED (red/yellow)	-	-
D12	Sys LED (green)		

Embedded Features

- OPC UA Server for easy connection to MES, ERP and SAP systems and visualizations
  - Custom definable address space
  - Support of data models and methods with Python
  - Certified from the OPC Foundation
- OPC UA Client functions for data exchange between different OPC UA Servers
- OPC Historical Data Access (HDA) - In the IBH Link UA, the historical data is organised as a ring buffer in the RAM. If a micro SD card is installed and formatted, the Remanent History function can be activated.
- OPC UA Alarms and Conditions - Servers can report asynchronous alarms to clients registered with the server.
- SoftPLC - is a software program that emulates a conventional programmable logic controller (PLC). This includes both the functionality and non-functional aspects such as robustness and real-time behaviour.
- Support and analysis - control diagnosis, client diagnosis, network diagnostics, system events

Advanced Features

- Docker Container (ready to use)
  - UA Global Discovery Server - is a server that provides central security management and network services.
  - AWS IoT Greengrass - provides a secure way to seamlessly connect your edge devices to any AWS service as well as to third-party services.
  - Node-RED - is an open-source programming tool, for connecting hardware devices, APIs and online services creatively and easily.
- Docker Container Management with Portainer

Communication Features

- Connection to S7-PLCs over S7 TCP/IP or IBH Link S7++
- Connection to S5-PLCs over IBH Link S5++
- Support for
  - SINUMERIK 840D/840D SL and SINUMERIK ONE
  - LOGO 8 and LOGO!
  - Mitsubishi controller MELSEC IQR, FX5, QnA and L series
  - Rockwell controller Controllogix and Compactlogix
- Modbus connection
- OpenVPN Client and Team Viewer IoT for the management interface level
- OPC UA native or over MQTT cloud connection
- NTP synchronisation

Security Features

- OPC UA Security – is based on the mechanisms defined by the OPC Foundation. It includes authentication and authorisation, encryption and data integrity through signing.
- Reverse connection – in this case, the OPC UA server connects to the OPC UA client. An inverse server connection can be set up if the server is located in an area that is better protected than the client, behind a firewall.
- Firewall – to restrict the communication options at the management and control level
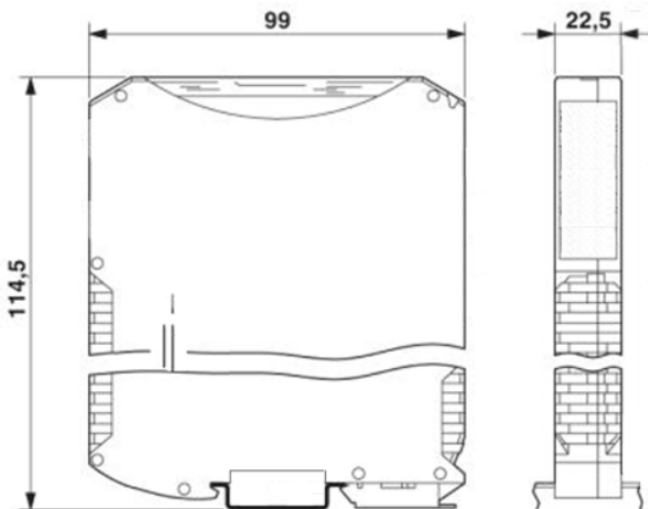- Local user administration with assignment of different authorisations.

Configuration Management Features

- Web interface for setting up and managing all embedded and advanced features
- Convenient configuration with the freely available IBH OPC UA Editor (no program changes required in the PLC)
- SoftPLC projects with TIA Portal and S7 SIMATIC Manager
- Firmware updates freely available (all updates undergo the test according to the OPC foundation specification)
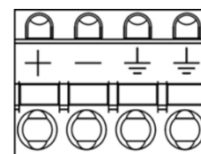
Technical Data

Electrical Data

Power supply voltage	min. 12 VDC (-10 %) typ. 24 VDC max. 36 VDC (+10 %)
Power consumption	min. 3 W max. 24 W

Hardware Specification

CPU type	ARM®v7 Cortex™-A9
RAM	2 GB
eMMC	4 GB
Ethernet	4x 10/100 Mbit/s
USB	USB 2.0
Mass storage	microSD card slot, storage size max 16 GB (evaluated), class10
Additional features	TPM chip, Temperature sensor
RTC	GoldCap for real-time functionality

Software Specification

Operating system	Linux (Yocto)

Environmental Data

Storage temperature	-20 °C - +70 °C
Operating temperature	-20 °C - +60 °C
Humidity	10% - 95% non condensing

Dimension (in millimeters):

Power supply: