![Unipi technology logo]

Unipi Extension xS51

PRODUCT DESCRIPTION

Unipi Extension xS51 is an extension module communicating via the RS485 serial interface (Modbus RTU). The module is a simple and inexpensive method of extending your project by additional inputs & outputs. The xS51 features a set of analog I/Os combined with a set of digital and relay I/Os.
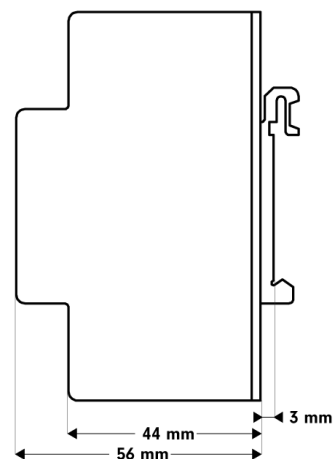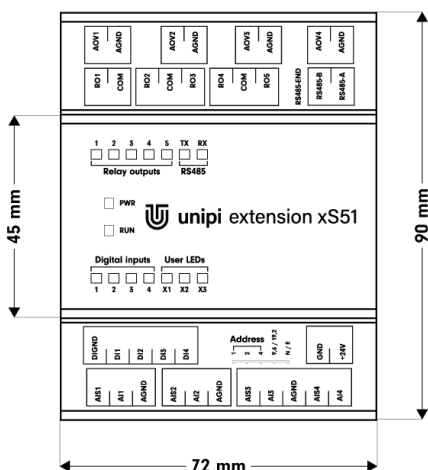

INPUTS & OUTPUTS

1 × RS485 Modbus RTU with galv. isolation
4 × digital input (incl. pulse counter)
5 × relay output
4 × analog input
4 × analog output

OTHER FEATURES

- Special functions
  - Direct Switch – automatic response to input value change
  - MasterWatchdog – switches outputs to a safe mode if communication with the PLC is interrupted
  - Configurable user LEDs.
- Durable aluminium chassis (IP20)
- Available in OEM variant.

Unipi Patron M527

Communication

Serial/bus channels	1 × RS485
RS485 transmission speed	134 baud ... 115 200 baud
RS485 galvanic isolation	Yes
RS485 biasing resistors	No
RS485 terminating resistor	Builtin attachable, 120 Ω

Digital inputs

No. of inputs × groups	4 × 1
Functions of inputs	Counter (incl. memory), Direct Switch
Input type	SINK
Input terminal	DI
Common ground	DIGND
Maximum voltage for log. 0	3 V⎓
Minimum voltage for log. 1	7 V⎓
Maximum voltage	35 V⎓
Non-defined state	3-7 V⎓
Input resistence for log. 1	6 200 Ω
Voltage drop on DI diode	1.2 V
Minimum pulse length	20 µs
0–>1 / 1–>0 delay	Typ. 20 µs / 60 µs
Maximum CNT counter input frequency	10 kHz
Galvanic isolation	Yes (between the groups)
Insulation voltage	2 000 V

Relay outputs

No. of inputs × groups	1 × 1, 2 × 2
Output type	Electromechanic non-shielded relay
Output terminal	RO
Common terminal	COM
Contact type	Normally open (SPST-NO)
Used relay type	FTR-F3AA024E-HA
Maximum switching voltage	250 V~ 30 V⎓
Maximum switching current	5 A
Maximum common terminal current	10 A
Short-term current overload	5 A
Mechanical lifespan	5 000 000
Electrical lifespan	Up to 100 000 (according to the connected load)
Operate/release time	10 ms
Designed for load character	Resistive
Load handling	External (RC, varistor, diode, thermistor)
Short circuit protection	No
Overvoltage protection	No
Galvanic isolation	Yes
Insultaion voltage	4 000 V

Analog inputs

No. of inputs × groups	4 × 1
Input terminals	AI, AIS
Common ground	AGND
Input modes	0–10 V⎓ voltage meas. 0-2.5 V⎓ voltage meas. 0–20 mA current meas. 0–1960 Ω resistance meas. 0–100 kΩ resistance meas.
Maximum input voltage	15 V⎓
Input resistance (voltage meas.)	44 kΩ
Input resistance (current meas.)	100 Ω
Accuracy	±0.2 %
Resolution	16 bits (voltage and current meas.) 24 bits (resistance meas.)
Conversion time	60 µs (voltage and current meas.) 400 ms (resistance meas.)
Protection type	Integrated overvoltage
Galvanic isolation	Yes (from other sections)

Analog outputs

No. of inputs × groups	4 × 1
Output terminals	AOV
Common conductor	AGND
Output functions	0–10 V⎓ voltage source
Output voltage range	0–10 V⎓
Output current range	–
Maximum output current	20 mA
Output accuracy	±0.5 %
Resolution	12 bits
Conversion	300 µs
Protection type	Integrated overvoltage
Galvanic isolation	Yes (from other sections)

Installation and operating conditions

Operating conditions	0 °C ... + 55 °C, relative humidity 10 % ... 95 %, without aggressive substances, condensing vapour and fog
Storing conditions	-25 °C ... +70 °C, relative humidity 10 % ... 95 %, without aggressive substances, condensing vapour 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 mm²

Power supply

Rated voltage - SELV	24 V⎓
Power consumption	Typ. 6 W Max. 14.5 W
Reverse polarity protection	Yes

Dimensions and weight

Dimensions	72 × 90 × 56 mm
Weight	320 g

Directive compliance

LVD:	2014/35/EU
EMC:	2014/30/EU
RoHS:	2015/863/EU
WEEE:	2012/19/EU