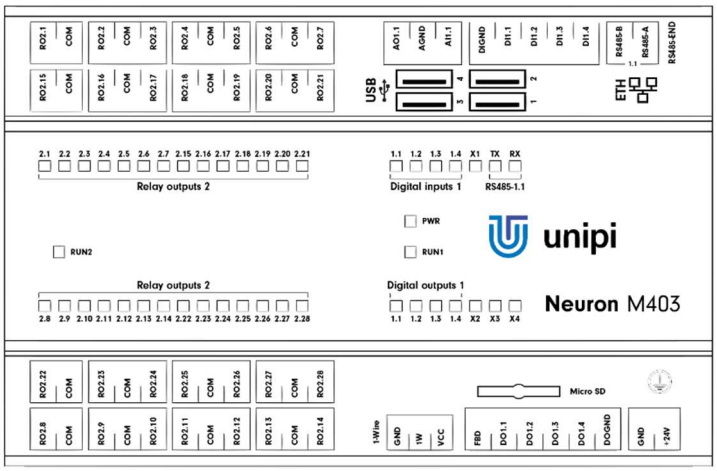
UniPi Neuron M40x

Series	Digital inputs	Digital outputs	Relay outputs	Analog inputs	Analog outputs	Communication
M40x	4	4	28	1	1	1× RS485 1× Ethernet 10/100 1× 1Wire bus

Model	CPU	RAM	Others
M403	4× 1.2 GHz	1 GB	Wifi + Bluetooth



Basic properties

- Power supply 24 V DC
- RTC with backup up to 7 days
- Linux operating system
- 1× 10/100 Ethernet
- 4× USB for connecting other devices Wifi, 3G(LTE),...
- 1× RS485 galvanically isolated serial interface for connection of expansion and communication modules
- Direct Switch function
  - Rapid input response within the group – tens of µs
  - Available features: identity, negation, toggle
- Watchdog for monitoring running of the control system
- Save and restore settings and fail-safe state of outputs to NVRAM and reload at startup
- Hardware restart function of 1Wire bus
- Posibility to choose mlultile programing platforms
  - Mervis
  - REX
  - CODESYS
  - OpenSource
  - TCP ModBus and other interfaces are available for your OWN aplications
- 4× user-configurable LEDs
- ready for wireless technologies - Zigbee, Lora, Sigfox, IQRF, GSM, LTE, ...
- Built-in Web server for display of user applications
- Compact size and easy installation on DIN rail

Communication

Ethernet	1× 10/100BaseT
Serial channels	1× RS485, 1× 1-Wire
Transmission speed RS485	9.6 .. 115 kbps
Galvanic isolation RS485	Yes
Galvanic isolation 1-Wire	Yes

Digital inputs

Number of inputs × groups	4 × 1
Common connector	DIGND
Galvanic isolation	Yes
Functions of inputs	Signalization, counter, Direct Switch
Operation range	5 – 40 V DC
Input voltage of log. 0	Max. 3,5 V DC
Input voltage of log. 1	Min. 5 V DC
Input resistance of log. 1	6 200Ω
Delay 0–>1/1–>0	20 µs / 60 µs

Digital outputs

Number of outputs × groups	4 × 1
Common connector	DOGND
Galvanic isolation	No
Type of output	Transistor
Aditional functions	PWM
Switchable voltage	5 – 50 V DC
Switchable current continual/pulse	750 mA / 1 A
Max. total current DO1.1–1.4	1A
Time to switch on/off	Typ. 130 ns / 20ns
Switching speed	Max. 200 kHz/8bit

Relay outputs

Number of outputs × groups	2 × 12, 1 × 4
Galvanic isolation	Yes
Type of contact	Closing contact
Switchable voltage	250 V AC/30 V DC
Switchable current	5A
Short time overvoltage	5A
Current via common conn.	10A
Time to switch on/off	10ms
Mechanical lifetime	5 000 000
Electrical lifetime	100 000
Protection against shortage	No
Inductive load protection	External
Isolation voltage	4 000 V AC

Dimensions and weight

Dimensions	140 × 90 × 59 mm
Weight	500 g

Analog inputs

Number of inputs × groups	1 × 1
Common connector	AGND
Available functions	0 – 10 V 0 – 20 mA
Galvanic isolation	No
Resolution	12 bits
Conversion speed	10µs

Analog outputs

Number of outputs × groups	1 x 1
Common connector	AGND
Available functions	AO 0 – 10V / 0 – 20mA Resistance measure: 0 – 2 kΩ, Ni1000, Pt1000
Galvanic isolation	No
Resolution	12 bits
Range/current	10V/20mA
Conversion speed	1ms

Power supply

Rated voltage - SELV	24 V DC
Voltage tolerance	–15% .. +25% 20,4 .. 30 V DC
Power consumption	Typ. 10W Max. 19W
Internal protection	Yes

Installation and operating conditions

Operating temperature	0 °C .. + 55 °C
Storing temperature	-25 °C .. +70 °C
Dielectrical strength	In accordance with EN 60950
Degree of protection IP (IEC 529)	IP20
Operation position	Horizontal
Installation	On 35mm DIN rail into distribution box
Connection	Pluggable terminal blocks
Wire gauge	Max. 2,5 mm^2

Standards compliance

ČSN EN 6095-1 ed. 2
ČSN EN 61000-6-3 ed. 2
ČSN EN 55014-1 ed. 3
ČSN EN 55022 ed. 3
2006/95/EC
2004/108/ES
2014/35/EU
2014/30/EC