

UniPi Neuron M10x



Series	Digital inputs	Digital outputs	Relay outputs	Analog inputs	Analog outputs	Communication
M10x	12	4	8	1	1	1x RS485 1x Ethernet 10/100 1x 1Wire bus

Model	CPU	RAM	Others
M103	4x 1.2 GHz	1 GB	Wifi + Bluetooth

Basic properties

- Power supply 24 V DC
- RTC with backup up to 7 days
- Linux operating system
- 1x 10/100 Ethernet
- 4x USB for connecting other devices Wifi, 3G(LTE),...
- 1x RS485 galvanically isolated serial interface for connection of expansion and communication modules
- Direct Switch function
 - Rapid input response within the group – tens of μ s
 - 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
- Possibility to choose multile programing platforms
 - Mervis
 - REX
 - CODESYS
 - OpenSource
 - TCP ModBus and other interfaces are available for your OWN applications
- 4x 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		 Analog inputs
Ethernet	1× 10/100BaseT	Number of inputs × groups 1 × 1
Serial channels	1× RS485, 1× 1-Wire	Common connector AGND
Transmission speed RS485	9.6 .. 115 kbps	Available functions 0 – 10 V 0 – 20 mA
Galvanic isolation RS485	Yes	Galvanic isolation No
Galvanic isolation 1-Wire	Yes	Resolution 12 bits
		Conversion speed 10µs
 Digital inputs		 Analog outputs
Number of inputs × groups	4 × 1, 8 × 1	Number of outputs × groups 1 × 1
Common connector	DIGND	Common connector AGND
Galvanic isolation	Yes	Available functions AO 0 – 10V / 0 – 20mA Resistance measure: 0 – 2 kΩ, Ni1000, Pt1000
Functions of inputs	Signalization, counter, Direct Switch	Galvanic isolation No
Operation range	5 – 24 V DC	Resolution 12 bits
Input voltage of log. 0	Max. 3,5 V DC	Range/current 10V/20mA
Input voltage of log. 1	Min. 5 V DC	Conversion speed 1ms
Input resistance of log. 1	6 200Ω	
Delay 0→1/1→0	20 µs / 60 µs	
 Digital outputs		 Power supply
Number of outputs × groups	4 × 1	Rated voltage - SELV 24 V DC
Common connector	DOGND	Voltage tolerance -15% .. +25% 20,4 .. 30 V DC
Galvanic isolation	No	Power consumption Typ. 6W Max. 15W
Type of output	Transistor	Internal protection Yes
Additional 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		 Installation and operating conditions
Number of outputs × groups	2 × 3, 1 × 2	Operating temperature 0 °C .. +55 °C
Galvanic isolation	Yes	Storing temperature -25 °C .. +70 °C
Type of contact	Closing contact	Dielectrical strength In accordance with EN 60950
Switchable voltage	250 V AC/30 V DC	Degree of protection IP (IEC 529) IP20
Switchable current	5A	Operation position Horizontal
Short time overvoltage	5A	Installation On 35mm DIN rail into distribution box
Current via common conn.	10A	Connection Pluggable terminal blocks
Time to switch on/off	10ms	Wire gauge Max. 2,5 mm ²
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		 Standards compliance
Dimensions	140 × 90 × 59 mm	ČSN EN 6095-1 ed. 2
Weight	500 g	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