

# Processors

## High Performance Embedded Pro

### Main features

- ✓ Designed for edge computing, analysis and datalogging applications
- ✓ 512 MB DDR3 RAM memory and 8 GB eMMC flash memory
- ✓ RS-232/485, Ethernet & Wi-Fi
- ✓ Embedded Linux Yocto O.S.

### Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	35 x 88,5 x 48 mm (2 DIN rail modules)
Control unit	<b>Processor</b>	ARM A7 800 MHz
	<b>RAM memory</b>	512 MB
	<b>Flash memory</b>	8 GB eMMC
	<b>Wi-Fi</b>	802.11 b/g/n (2.4 GHz)

## High Performance Embedded

### Main features

- ✓ Designed for local monitoring and cloud management applications
- ✓ 512 MB DDR3 RAM memory and 512 MB NAND flash memory
- ✓ RS-232/485, Ethernet & Wi-Fi
- ✓ Embedded Linux Yocto O.S.

### Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	35 x 88,5 x 48 mm (2 DIN rail modules)
Control unit	<b>Processor</b>	ARM A7 700 MHz
	<b>RAM memory</b>	256 MB
	<b>Flash memory</b>	512 MB NAND
	<b>Wi-Fi</b>	802.11 b/g/n (2.4 GHz)

# Low cost embedded CPU

## Main features

- ✓ Designed for data capturing, reception and sending
- ✓ 8 MB SRAM and 448 KB ROM memory
- ✓ 16 MB SPI Flash memory
- ✓ Integrated 2.4 GHz Wi-Fi

## Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	35 x 88,5 x 48 mm (2 DIN rail modules)
Control unit	<b>Processor</b>	ESP32 Dual-core 32-bit
	<b>ROM memory</b>	448 KB
	<b>SRAM memory</b>	8 MB
	<b>SPI Flash memory</b>	16 MB
	<b>Wi-Fi</b>	802.11 b/g/n (2.4 GHz)

# Power supply

## 230 Vac Power supply

### Main features

- ✓ Versatile, universal and robust
- ✓ Reset button configurable via software
- ✓ Multi-voltage and multi-frequency switching regulator
- ✓ Up to 10 modules connected to the same power supply

### Technical features

Category	Parameters	Value
Power supply	Power	85...264 Vac / 120...370 Vdc
	Frequency	47...63 Hz
	Consumption	10,5 VA / 6,5 W
Mechanical characteristics	Dimensions (Width x High x Length)	17,5 x 88,5 x 48 mm (1 DIN rail module)
User interface	Button	Reset button

## 12/24 Vdc Power supply

### Main features

- ✓ Ideal for machinery applications
- ✓ Reset button configurable via software
- ✓ 12 & 24 Vdc power supply
- ✓ Up to 10 modules connected to the same power supply

### Technical features

Category	Parameters	Value
Power supply	Power	12-24 Vcc
	Consumption	12 W (máx.)
Mechanical characteristics	Dimensions (Width x High x Length)	17,5 x 88,5 x 48 mm (1 DIN rail module)
User interface	Button	Reset button

# Battery

## Supercapacitor

### Main features

- ✓ Ideal to avoid a power supply failure of your monitoring
- ✓ Alarms sending in case of failure of the electrical supply
- ✓ Average battery life of 2 minutes
- ✓ Perfect to monitor critical applications

### Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	35 x 88,5 x 48 mm (2 DIN rail modules)
Supercapacitor	<b>Average lifetime</b>	2 minutes

# Communications

## RS-232, RS-485 & Ethernet

### Main features

- ✓ Simultaneous communication via RS-232 and RS-485
- ✓ Baudrate configurable from 9600 to 115200 bps
- ✓ 10/100 Mbps Ethernet port
- ✓ Galvanically isolated communications

### Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	17,5 x 88,5 x 48 mm (1 DIN rail module)
Serial interface	<b>Type</b>	RS-232/485
	<b>Baudrate</b>	9600 ... 115200 bps
Network interface	<b>Type</b>	Ethernet
	<b>Working speed</b>	10/100 Mbps

## RS-232, RS-485 & GPRS

### Main features

- ✓ Simultaneous communication via RS-232 and RS-485
- ✓ Baudrate configurable from 9600 to 115200 bps
- ✓ Quad band GSM/GPRS
- ✓ Connector for SMA external antenna

### Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	17,5 x 88,5 x 48 mm (1 DIN rail module)
Serial interface	<b>Type</b>	RS-232/485
	<b>Baudrate</b>	9600 ... 115200 bps
Radio interface	<b>Type</b>	Quad-band GSM/GPRS
	<b>Frequency bands</b>	850 / 900 / 1800 / 1900 MHz
	<b>Antenna</b>	External
	<b>Connector</b>	SMA

# GPRS (for High Performance Embedded)

## Main features

- ✓ Quad band GSM/GPRS
- ✓ 850 / 900 / 1800 / 1900 MHz
- ✓ Connector for SMA external antenna
- ✓ Low cost CPU for edge computing applications (optional)

## Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	17,5 x 88,5 x 48 mm (1 DIN rail module)
Radio interface	<b>Type</b>	Quad-band GSM/GPRS
	<b>Frequency bands</b>	850 / 900 / 1800 / 1900 MHz
	<b>Antenna</b>	External
	<b>Connector</b>	SMA

# Metering & Control

## Three-phase energy metering

### Main features

- ✓ Active and reactive energy, power, voltage, current, frequency and cos phi
- ✓ 4 quadrant measure including single and three phase parameters
- ✓ Precision of class 1 active and class 2 reactive
- ✓ Indirect measurement through current transformers. Split and closed core.

### Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	35 x 88,5 x 48 mm (2 DIN rail module)
Measurement circuit	<b>Current inputs</b>	Indirect
	<b>Current transformer</b>	In / 1 A
	<b>Voltage and current wire section</b>	2,5 mm <sup>2</sup>
Precision class	<b>Precision</b>	Class 1 active and class 2 reactive

## 8 Signal relays NO/NC

### Main features

- ✓ Signal relays configurable as NO or NC
- ✓ Activation/deactivation time configurable
- ✓ Activation current up to 2 A
- ✓ Relays real time status on leds

### Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	17,5 x 88,5 x 48 mm (1 DIN rail module)
Signal relays	<b>Number</b>	8 signal relays
	<b>Type</b>	NO or NC configured on demand
	<b>Max. operating voltage</b>	50 Vac/Vdc
	<b>Max. activation current</b>	2 A, 60 W, cos=1
	<b>Min. signal duration</b>	10 ms

# 5 Digital inputs and 2 Power relays

## Main features

- ✓ Configurable as dry contact (w/o internal tension) or wet contact (with internal tension)
- ✓ Inputs activation via external 0-24 VDC signal or internal  $\pm 12$  VDC power supply (for PNP or NPN sensors)
- ✓ Working modes: input, pulse counter and pulse width time counter. Pulse capturing up to 1 ms
- ✓ Maximum activation current of the relays of 6A

## Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	17,5 x 88,5 x 48 mm (1 DIN rail module)
Digital inputs	<b>Type, number and voltage</b>	5 digital inputs 0-24 Vdc
	<b>Minimum voltage and current</b>	0 Vdc / 160 $\mu$ A
	<b>Maximum voltage and current</b>	30 Vdc / 12 mA
	<b>Input sensitivity</b>	0-7 Vdc : 0; 8-30 Vdc : 1
	<b>Minimum pulse duration</b>	1 ms
	<b>Counters</b>	Counters of 32 bits / Max. frequency 250 Hz
Relay outputs	<b>Type</b>	NO
	<b>Max. operating parameters</b>	6A, 250VAC, $\cos=1$ , 70°C

# 10 Digital inputs

## Main features

- ✓ Configurable as dry contact (w/o internal tension) or wet contact (with internal tension)
- ✓ Inputs activation via external 0-24 VDC signal or internal  $\pm 12$  VDC power supply (for PNP or NPN sensors)
- ✓ Working modes: input, pulse counter and pulse width time counter. Pulse capturing up to 1 ms
- ✓ Pulse capturing up to 1 ms

## Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	17,5 x 88,5 x 48 mm (1 DIN rail module)
Digital inputs	<b>Type, number and voltage</b>	10 digital inputs 0-24 Vdc
	<b>Minimum voltage and current</b>	0 Vdc / 160 $\mu$ A
	<b>Maximum voltage and current</b>	30 Vdc / 12 mA
	<b>Input sensitivity</b>	0-7 Vdc : 0; 8-30 Vdc : 1
	<b>Minimum pulse duration</b>	1 ms
	<b>Counters</b>	10 counters of 32 bits / Freq. max 250 Hz



# 7 Analogue inputs and 2 Power relays

## Main features

- ✓ Analogue inputs with 4096 points of resolution
- ✓ Configurable as 0...10 V / 0...20 mA or 4...20 mA
- ✓ Maximum activation current of the relays of 6A
- ✓ Combine actuation with monitoring in the same module

## Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	17,5 x 88,5 x 48 mm (1 DIN rail module)
Analogue inputs	<b>Number, type and range</b>	6 analogue inputs 0...10 V / 0...20 mA or 4...20 mA
	<b>Transducer resolution</b>	12 bits (4096 points)
Relay outputs	<b>Type</b>	NO
	<b>Max. operating parameters</b>	6 A, 250 Vac, cos=1, 70°C

# 12 Analogue inputs

## Main features

- ✓ Analogue inputs with 4096 points of resolution
- ✓ Configurable as 0...10 V / 0...20 mA or 4...20 mA
- ✓ Ideal for applications of humidity, level and pressure monitoring
- ✓ Maximum accuracy with resolution of 4096 points

## Technical features

Category	Parameters	Value
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	17,5 x 88,5 x 48 mm (1 DIN rail module)
Analogue inputs	<b>Number, type and range</b>	6 analogue inputs 0...10 V / 0...20 mA or 4...20 mA
	<b>Transducer resolution</b>	12 bits (4096 points)