

# Expansion modules

## GPRS

### 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

## 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

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

# 10 Digital inputs

## Main features

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## Technical features

Category	Parameters	Value
Mechanical characteristics	Dimensions (Width x High x Length)	17,5 x 88,5 x 48 mm (1 DIN rail module)
Digital inputs	Type, number and voltage	10 digital inputs 0-24 Vdc
	Minimum voltage and current	0 Vdc / 160 $\mu$ A
	Maximum voltage and current	30 Vdc / 12 mA
	Input sensitivity	0-7 Vdc : 0; 8-30 Vdc : 1
	Minimum pulse duration	1 ms
	Counters	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>	7 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>	12 analogue inputs 0...10 V / 0...20 mA or 4...20 mA
	<b>Transducer resolution</b>	12 bits (4096 points)

# Three-phase energy meter

## 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>Metering capacity</b>	1 Three-phase / 3 Single-phase circuits
	<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

# Double three-phase energy meter

## 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 measuring two three-phase or six single-phase circuits
- ✓ 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)
Signal relays	<b>Current inputs</b>	Indirect
	<b>Metering capacity</b>	2 Three-phase / 6 Single-phase circuits
	<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

# 12/24 Vdc Power supply

## Main features

- ✓ Ideal for machinery applications
- ✓ Reset button configurable by software
- ✓ 12 & 24 Vdc power supply
- ✓ It replaces the 230 VAC power supply (default)

## Technical features

Category	Parameters	Value
Power circuit	<b>Power</b>	9...36 Vdc
	<b>Consumption</b>	0,5...20 W
Mechanical characteristics	<b>Dimensions (Width x High x Length)</b>	17,5 x 88,5 x 48 mm (1 DIN rail module)
User interface	<b>Button</b>	Reset button