



Data registration and high performance controller device for remote control and monitorization. Low energy usage and can be operated with a battery and solar panel.

## TECHNICAL SPECIFICATIONS

<b>CPU</b>	MIPS microcontroller 32bits @ 3.6864MHz with 512Kb. Flash, 128Kb RAM
<b>Memory</b>	Dataflash of 4Mb for data storage EEPROM memory of 64 Kb for configuration data
<b>Additional memory</b>	Micro-SD slot for additional memory (up to 32 Mb)
<b>Real time clock</b>	External with a backup battery
<b>ADC</b>	ADC 16 bits multiplexed to the 8 I/O
<b>Watchdog timer (WDT)</b>	Internal Watchdog available.
<b>Device configuration</b>	Basic configuration with AT commands through the USB port or with the desktop application
<b>Firmware updates</b>	Remote firmware updates
<b>LED indicators</b>	3 status LEDs
<b>Communication protocols</b>	MQTT
<b>Time between measurements</b>	120 ~ 86400 seconds.

## I/O AND COMMUNICATIONS PORTS

<b>I/O</b>	6 digital outputs for the control of latch type valves of 6-20V 6 free potential digital inputs with contacts for counters (10Hz) 4 analog inputs (by current or supply) with an adjustable gain 0-250mV, 0-500mV, 0-1V, 0-1.25V, 0-2.5V, 0-5V, 0-10V, and 4-20mA The supply of the analog inputs is adjustable 0-12V
<b>Additional I/O</b>	Possibility of expansion of the number of I/O with the slave controller IPex12/S Up to 10 possible expansions
<b>Communications ports</b>	1 x SDI-12 for up to 16 probes 1 Host USB 2.0 for basic device configuration 1 x serial bus for long distance communications (up to 2 Km.)
<b>Additional communications ports</b>	GPRS/3G, NB-IoT/LTE-CATM Networks

## Calibration of analog inputs

All of the analog inputs can be calibrated by AT commands through the USB port

## Protection for the I/O

All of the I/O are protected against incorrect wiring with the configuration and the following restrictions:

Max. supply in I/O 30VDC

Max. current for the latch outputs 2A

## SUPPLY CIRCUIT

### Supply voltage

12,8V with LiFePo4 battery of 3,6 ah (charger included)

### PV Cargador

Solar MPPT charger included for 12V solar pannels (36 cells)

### Consumption

In Sleep mode 270uA. In active mode 1.7mA (without communication)

When active with communications 12.73mA (when transmitting 50mA)

## Autonomy

More than 7 days with the 12.8V battery totally charged and sending and reading data with a periodicity of 5 minutes. (With a periodicity of 5 minutes only sending the autonomy is over 20 days)

## ENVIRONMENTAL CONDITIONS

### Working temperature

-25° ~ 85°C

### Humidity

5% ~ 95% (without condensation)

### Degree of protection

IP67

## INFORMATION ABOUT ORDERS

### Minimum order

1

### Order reference

IPex12

### Accessories:

Wireless3G,

## CONSTRUCTION FEATURES

### Dimensions

240x160x90mm (W/H/D)

### Box material

Polycarbonate

### Installation type

Superficial installation

## CERTIFICATES AND DECLARATIONS

### Rules

EN 61000-6-2:2005  
EN 61000-6-3:2007 +  
A1:2011



This product is compatible with the RoHS (2011/65/UE)