



Product ID: IPex12

Category: IP Controller and Accessories

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

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

I/O AND COMMUNICATIONS PORTS

I/O	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
Additional I/O	Possibility of expansion of the number of I/O with the slave controller IPex08 Up to 10 devices

Communications ports	1 x SDI-12 for up to 16 probes 1 USB 2.0 Port for basic device configuration 1 x Port for long-distance wired communications (up to 2 km)
Additional communications ports	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 in serie)
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)* <small>*Depends on the operating conditions of the device, coverage level, temperature, battery charge level, number of connected sensors, etc.</small>

ENVIRONMENTAL CONDITIONS

Working temperature	-25° ~ 85°C* <small>*If LiFePO4 battery is used, the operating range is from 0° to 60°C.</small>
Humidity	5% ~ 95% (without condensation)

INFORMATION ABOUT ORDERS

Minimum order	1
Order reference	IPex12
Accessories	Wireless3G

CONSTRUCTION FEATURES

Dimensions	162x252x120mm (W/H/D)
Box material	Polycarbonate
Installation type	Superficial
Degree of protection	IP67
Weight	1014g without battery 3544g with lead battery 1384g with lithium battery

CERTIFICATES AND DECLARATIONS

Rules	EN 61000-6-2:2019 EN 61000-6-3:2007 + A1:2011
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This product is compatible with the RoHS (2011/65/UE)