



Product ID: IPex12W
Category: IP Controller and Accessories

High-performance data logger and controller for remote monitoring and control. Low-power design for battery- and solar-powered operation.

TECHNICAL SPECIFICATIONS

CPU	32-bit MIPS microcontroller @ 3.6864 MHz with 512 KB Flash and 128 KB RAM
Memory	4 MB DataFlash for data storage; 64 KB EEPROM for configuration data
Additional memory	MicroSD slot for additional memory (up to 32MB)
Real-time clock	External RTC with backup capacitor
ADC	16-bit ADC multiplexed to the 4 analog inputs
Watchdog timer (WDT)	Internal watchdog timer available
Device configuration	Configuration via desktop application, config.odins.es platform and via MQTT commands, once communication with the server has been established.
Firmware update	Remote firmware update
LED indicators	3 status LEDs
Communication protocol	MQTT
Sampling interval	120 ~ 86400 sec.

I/O AND COMMUNICATIONS PORTS

I/O	6 digital outputs for controlling 6–20 V latching valves 6 digital inputs with volt-free contacts for pulse counters (10 Hz) 4 analog inputs (current or voltage) with adjustable gain 0–250mV, 0–500mV, 0–1V, 0–1.25V, 0–2.5V, 0–5V, 0–10V, and 4–20mA. The analog input supply voltage is adjustable from 0 to 12 V
Additional I/O	I/O expansion using IPex08 slave controllers — up to 10 devices.

Ports of communications	1 × SDI-12 port for up to 16 probes 1 × USB 2.0 port for basic device setup 1 × port for long-distance wired communications (up to 2 km)
Additional communication ports	Wi-Fi
Analog input calibration	All analog inputs can be calibrated using AT commands via the USB serial port
I/O Protection	All I/O points are protected against incorrect wiring with respect to the configuration, subject to the following limits: Maximum I/O voltage: 30 VDC Maximum current at latching outputs: 2 A

POWER SUPPLY

Supply voltage	12.8 V with 3.6 Ah LiFePO ₄ battery
PV charge controller	MPPT solar charger included for 12V solar panels (36 cells in series)
Current consumption	In Sleep mode 270uA. In active state 1.7mA (no communication) Active with 12.73mA communications (transmitting 50mA)
Battery life	More than 7 days with a fully charged 12.8V battery and a 5-minute reading and sending frequency. (For a 5-minute sending frequency, the battery life exceeds 20 days)* *Depends on the device's operating conditions, coverage level, temperature, battery charge level, number of connected sensors, etc.

ENVIRONMENTAL CONDITIONS

Operating temperature	-25° ~ 85°C* *If a LiFePO₄ battery is used, the operating range is 0° to 60°C
Humidity	5% ~ 95% (non-condensing)

ORDER INFORMATION

Minimum order quantity	1
Order reference	IPex12W

CONSTRUCTION FEATURES

Dimensions	162x252x120mm (W/H/D)
Enclosure material	Polycarbonate
Mounting type	Surface-mounted
Ingress protection rating	IP67
Weight	1014g without battery 3544g with lead-acid battery 1384g with lithium battery

CERTIFICATES AND DECLARATIONS

Standards	EN 61000-6-2:2019 EN 61000-6-3:2007 + A1:2011
------------------	---



Product compliant with RoHS (2011/65/EU)