



Product ID: IPex12G
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	4MB Dataflash for data storage; 64KB EEPROM memory 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 available
Device settings	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 protocols	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 0–250 mV, 0–500 mV, 0–1 V, 0–1.25 V, 0–2.5 V, 0–5 V, 0–10 V, and 4–20 mA The analog input supply voltage is adjustable from 0 to 12 V.
Additional I/O	Possibility of expanding the number of I/O with the IPex08 slave controller - Up to 10 devices

Communication ports	1 x SDI-12 for up to 16 probes 1 x USB 2.0 port for basic device setup 1 x Port for long-distance wired communications (up to 2 km)
Additional communication options	GPRS / NB-IoT / LTE-M / LTE Cat 1 bis
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 restrictions: Max. voltage at I/O 30VDC Max. current at latch outputs 2A

POWER SUPPLY

Supply voltage	12,8V with 3.6 Ah LiFePo4 battery (charger included)
PV Charger	MPPT solar charger included for 12V solar panels (36 cells in series)
Current consumption	Sleep mode: 270 μ A; active mode (communications off): 1.7 mA; active mode (communications on): 12.73 mA; TX peak: 50 mA.
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	IPex12G
Accessories	Wireless3G

CONSTRUCTION FEATURES

Dimensions	162x252x120mm (W/H/D)
Box materials	Polycarbonate
Mounting type	Surface-mounted
Ingress protection	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
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Product compliant with RoHS (2011/65/EU)