iRIS UnderCover

Compact Wireless IP-Datalogger

Data Acquisition | Hydrology | Groundwater | Flood | Water Quality

General Description

The IP datalogger iRIS UnderCover has been designed and constructed for **use in harsh outdoor and industrial environments. It is compact, cost effective and easily configured**, with support for a wide range of instrumentation. The compact unit facilitates installation within KISTERS' raingauge enclosures. The single communication slot supports either a wireless 3G or 4G modem. SDI-12 is an optional feature.

The iRIS UnderCover provides a **Wi-Fi hotspot that enables access to the device wirelessly** (max. range of 80 m in clear line of sight and a strong signal from the connected device) using KISTERS' **free-of-charge iLink software** (Windows, Android). iLink helps configuring the logger, editing and checking settings and calibrations for QA/QC, performing **real-time diagnostics** to resolve technical issues, and downloading data. The optional HydroTel™ software can be used for remote configuration and data downloading.

iRIS UnderCover provides **40 free-format alarms** that can be assigned to any of the 20 virtual sensors. When an alarm is activated, the logger performs actions like sending SMS alerts, adjusting the log rate, controlling digital output, controlling the frequency of the telemetry call-in, etc.

Main Features

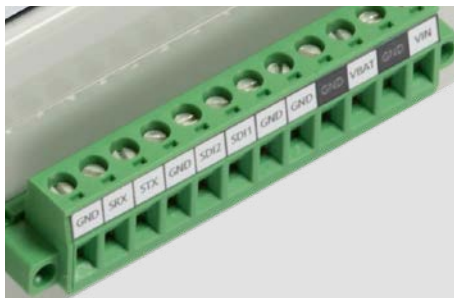
- IP 65 (pending testing)
- Low power consumption
- Battery operated and solar charged
- Up to 20 virtual sensors
- Non-volatile memory
- Local wireless configuration and data download
- Real-time clock: High accuracy, backed by on-board lithium battery to prevent loss of date/time

Applications

The physical size of the iRIS UnderCover allows for mounting within KISTERS' Tipping Bucket Rain Gauges for **measuring rainfall and precipitation in urban and rural locations**. Based on this combination, KISTERS offers the **complete turnkey rain monitoring and reporting system RainTrak**. Please ask for details.

The iRIS UnderCover is suitable for

- Data Acquisition
- Hydrometric Stations
- Automatic Weather Stations
- Environmental Monitoring
- Agrometeorological Monitoring



KISTERS

Technical Specifications

Digital Input/Output	– 2 digital input channels: configured as pulse/switch, support: event (rainfall), counter/ totalising, utility meter inputs – Inputs: clean contact to 0 V or 3.6-12 V DC referenced to GND – Output is switched 12 V or open-drain sinking to 0 V, both limited to 100 mA – iRIS UnderCover Pro: additional digital I/O channel
Analogue Input/Output	– 2 analogue inputs: uni-polar, 16 bit resolution, 30 V DC surge-protection – Input ranges: 0-0.1, 0-2.5, 0-5, 0-30 V – Internal 100 Ω sink resistors allow use of input current (0/4-20mA). – 1 analogue (excitation) output for energizing passive instruments (e.g. potentiometer type wind vanes) or alternatively for sending a derived analogue signal to other equipment, selectable as 0-5 V or 4-20 mA
Self-diagnostics & Fault Finding	– Diagnostics displayed in real time within iLink software. – Logging of system inputs, system temperature, external battery voltage and current, internal battery voltage, supply voltage and current input, RSSI (signal strength)
Communications & Protocols	– 3G or 4G modem – FTP file transfer sending 2 x FTP servers – Wi-Fi – Pro version: SDI-12 instrumentation port (complies with SDI-12 V1.3, supports 5 addressable sensors) and Modbus slave/master (TCP and RTU)
Power Supply	– External 12 V SLA or 11.1 V Li-Ion battery – Integral charger 10-30 V DC input, optional: solar panel – Internal batteries (4 x AA) Over voltage and reverse polarity protected with self-resetting fuse – Voltage of battery and charger input: monitored, logged, displayed, alarmed – Vin cable length max. 3 m
Data Storage: Flash Memory	Total 32 MB, of which 16 MB allocated to logged data (1,398,101 samples)
Status LEDs	– 1 LED for device status information – 1 LED for WiFi communication (local logger configuration and data downloads) – 1 LED for communication via COMMS1 daughter board (typically LTE or LTE-M communication)
Environmental Conditions	– Enclosure: IP65 (pending testing) – Operating temperature: -40 °C to +70 °C (-40 °F to +158 °F) – Storage temperature: -40 °C to +85 °C (-40 °F to +185 °F)
Size (WxHxD) and Mass	80 x 160 x 55 mm (3.15 in x 6.3 in x 2.16 in), 0.5 kg (1.1 lb)
Conformity / Compliance	RoHS, FCC, CE (WEEE pending)

Version	3G modem	4G modem	SDI-12	Digital I/O	Analogue Out	Modbus	FTP	Virtual Sensors	Config. Alarms
iRIS UnderCover No Modem	-	-	-	0	x	-	-	10	20
iRIS UnderCover Standard	x	x	-	0	x	-	x	10	20
iRIS UnderCover Pro	x	x	x	1	x	x	x	20	40

Reseller

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