hydrospider2™

Economical 4G telemetry, logging and alarm system

The Halytech **hydrospider2** is an ultra low power economical solution for data logging, automatic reporting and alarm dialing. It communicates via SMS, email, FTP, Twitter and more.

The **hydrospider2** is housed in a compact IP60 enclosure. Its small size makes it ideal for a variety of environmental and industrial monitoring applications.
The whole system including an external battery is designed to fit inside a Tipping Bucket Rain Gauge (TBRG), dramatically reducing installation costs of rainfall monitoring stations.

The **hydrospider2** has an easy to use web interface with built in help. It can be used with any computer or operating systems without the need to install any software.

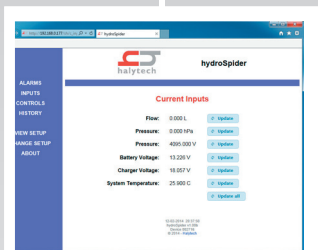**Compact Unit**

Features

- Complete system includes:
    - Compact IP60 enclosure with built in mounting system
    - Multiple digital and analogue inputs
    - LCD display / keypad option
    - SDI-12 and Modbus input option
    - Digital outputs for powering sensors / accessory control
    - Built-in charger regulator for solar panel / mains charger
    - Ethernet interface
    - Integrated 4G modem with 3G fallback
    - External antenna
    - Data logger with over 400,000 records of storage
- User configurable inputs, outputs and alarms
- Connects to any computer with a browser and LAN port
- Easy to use internet-type setup
- Download data as CSV file compatible with Excel
- Alarms via SMS / email / Twitter
- Automatic CSV reports via email / FTP
- Ultra low power design
- Simple and inexpensive install - mounts inside TBRG
- Field-upgradeable software
- Optional DNP3 protocol support
- Designed and manufactured in Australia

Simple Access With Any Browser

Fits Inside TBRG

Typical Applications

- Rainfall / Water Level Stations
- Environmental Monitoring
- Agriculture
- Automatic Meter Reading (AMR)
- Water Treatment
- Irrigation and Bore Monitoring

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Specifications

General

Dimensions (approx)	158(W) x 90(H) x 46(D) mm
Weight (approx)	360 g
Enclosure rating	IP60
Enclosure material	ABS
Mounting system	Integrated into enclosure
Operating temperature	Standard: -5 to +60 deg C
	"X" option: -20 to +60 deg C
Factory warranty	12 months parts and labour return to base

Power Supply

Operating voltage	Nominal 12V DC
Charger type	Built-in battery management system supporting an external battery and external 12V solar panel and/or 16 - 24V DC mains charger
Backup battery	Internal, user replaceable 9V battery

Inputs

Standard inputs	Up to 2 analogue + 2 digital + 4 system inputs
Optional inputs	Up to 16 SDI-12 / Modbus or RS-232
Input names	User definable
Connector	Modular terminal, push wire type

Analogue Inputs

Resolution	12 bits
Type	User selectable:
	Calibrated 4 - 20 mA
	0 - 2.4V DC
	0 - 5V DC
	0 - 10V DC
Units of measure	User definable
Sampling period	User definable, 1 second minimum

Digital Inputs

Input range	0 - 12V DC or voltage-free switch contact
Type	User selectable: switch, event (rainfall), counter, utility meter

Counter / Event Inputs

Minimum pulse width	5 ms
Maximum frequency	100 Hz
Range	0 - 999,999

System Inputs

Type	External battery voltage
	Charger voltage
	System temperature
	Internal moisture sensor

Outputs

Number of outputs	Up to 2
Type	1 x Switched power for sensor control
	1 x Open collector for accessory control
Output names	User definable
Output control	Via browser, alarms and/or sensor warmup

Alarms

Number of alarms	16
Type	SMS, e-mail transmission and/or Twitter
Trigger	User definable input and trigger point
SMS / email text	1 per alarm, user definable
# of phone numbers	3 per alarm, user definable
# of email addresses	3 per alarm, user definable
Alarm names	User definable

Logger

Capacity	Approximately 400,000 records
Storage memory	Non-volatile FLASH
Time resolution	1 second
Time synchronisation	Automatic by NTP
Report format	CSV file
Automatic reporting	Directly to user by email and/or FTP

Communication Interfaces

Ethernet	10/100 base-T with LANlink Cable
Mobile communications	Built-in 4G with 3G fallback
Antenna	External antenna with SMA connector
Internet connectivity	4G with 3G fallbak
Optional Display / Keypad	Backlit 2 line x 16 char LCD, 3 key keypad

Optional Software

Live SMS	Remote access and SMS alarm escalation
DNP3	For SCADA system communication

Optional Assesories

LANlink Cable
Mains Power Supply
12V Solar Panel
12V Rechargeable Sealed Lead-Acid Battery
Tipping Bucket Rain Gauge (TBRG) with Mounting Bracket

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