



Model: ECHO4

Remote Monitoring System



Description:

The ECHO4 Remote Monitoring System (RMS) is designed to make, what is considered to be a complicated task, of interfacing and reading sensors, logging the results, transmitting to the cloud, a simple and affordable option for any user. All whilst in still covering installations in remote locations and with limited power options. With our options of telemetry and power capabilities, we can ensure your data is always reliable and accurate!

The ECHO4 has 4 x analogue inputs from current and voltage sensors such as 4-20mA & 0-10V and the possibility of installing an expansion card for 5 x pulse inputs. We can also accept inputs digitally from RS232 and RS485 devices using the digital expansion card.

Data is sent to the 'ECHOVIEW' cloud platform based on your required wake up and interval timings where you can view the readings for analysing, graphing, exporting and reporting. 'ECHOVIEW' also offers the capability to program the input channels and system settings, timings, alarm thresholds and type of notifications and much more.

Product Highlights:

- 4 x analogue inputs, 5 x pulse inputs
- Digital RS232 and RS485 serial interface
- 2 x relay outputs for alarming or control
- Compatible with 1000's of sensor types
- Remotely Programmable
- IP67, self contained enclosure

Applications include, but not limited to:

- Remote condition monitoring
- Remote tank/ibc/tote level monitoring
- Pumping station monitoring and control
- Security detection and alarming
- Utility water and power applications
- Farming and Agriculture monitoring



Specification:

ECHO4 - Remote Monitoring System		
Inputs	Standard: 4 x 4-20mA / 0-10V channels Optional: Expansion card with 5 x volt free pulse channels Optional: Expansion card with RS232 & RS485 interface	
Outputs	Optional 2 relay outputs controlled either remotely or when threshold breached	
Supply voltage	3.9V, 16AH Non-rechargeable Battery, 6-24Vdc. solar and mains options	
Sensor Excitation	Provide power to sensors (5 V or 21.6 V, 31 mA max.) for a programmable length of time	
Data Logging Capacity	80 data points per channel, (first in first out)	
Communications	GSM (4G (CatM1 / NB1) with 2G fallback – worldwide frequencies)	
Display	The built-in back lit 40x40mm LCD display acts as a local gauge to help test the device and ensure it is communicating well. It is also used to check sensors and wiring. Can be used as a local display to show measured values on wake up.	
IP Rating	IP67	
Operating Temperature	-20 to +65°C	
Antenna:		
Programming	Remotely from ECHOVIEW or locally via USB (Windows software free of charge from Stork Solutions. Mini USB not provided)	
Configurable Parameters	System: - Wake up interval (min: 1 min, max: 24 hr) - Transmit interval (min: 1 min, max: 24 hr) - Modem state (including idle, transmit on power up, pollable) - Antenna selection (internal or external) - Synchronisation time - Transmission window	Inputs: - Type (analogue or digital) - Tag name - Units of measure - Zero & span (scaling) and linearisation - Alarm thresholds (10 high (rising) and 10 low (falling)) - Call out delay - Sensor excitation time and settling voltage upon waking the device, touch left button for immediate reading



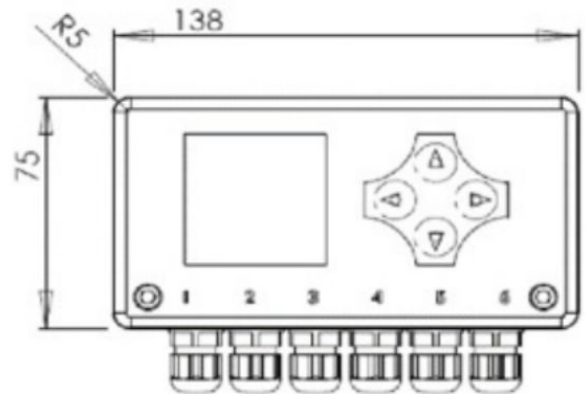
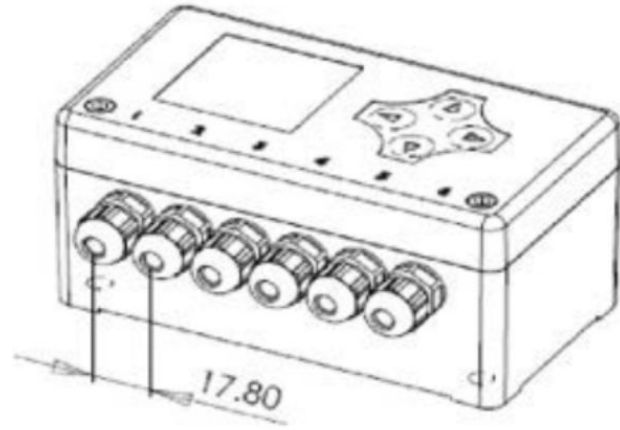
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- Data can be accessed view the hosted ECHOVIEW web based platform
- Available on any web browser connected to the internet
- The platform receives data from ECHO4 devices which are ported to your platform
- Remote configuration of the ECHO4 device via the portal
- Alarms can be set via the portal or email
- Data can be pulled API
- Safe and secure platform for your data

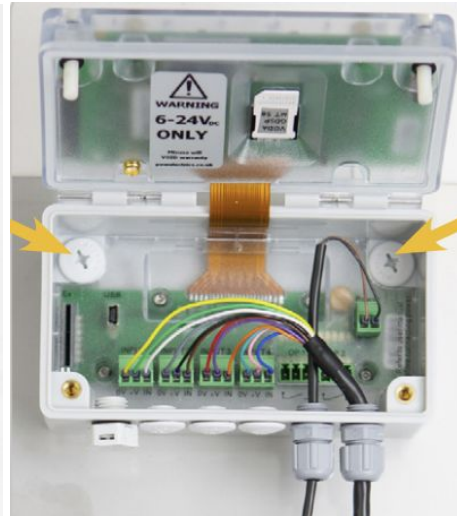




Dimensional Drawings:



Internal Features:





Part Numbering system:

ECHO4 Remote Monitoring System	ECHO4	-	X	X	-	X	-	X	X
Power Requirements									
6-24V dc Power Supply	A								
3.9 Volt, 16AH non-rechargeable battery	B								
10W Solar Powered with battery backup & regulator	C								
Mains power 110/230 Vac with battery backup	D								
Mains power 110/230 Vac with UPS and battery backup	E								
Inputs									
4 x 4-20mA / 0-10V channels	A								
A + Expansion card with 5 x volt free pulse channels	B								
A + Expansion card with RS232 & RS485 interface	C								
Outputs									
2 x Relays					A				
None					N				
Special Options									
None								0	0



Accessories & Subscriptions:

External Antenna with installation kit, part number: 8D4272/M2:



Annual Subscription, Part Number: DATA-PLATFORM1

Annual subscription - transmissions every 60 minutes. Recurs annually until cancellation is requested. Multi-network sim card to give best possible coverage even in rural locations. Secure web based data access - see your sensor readings on your computer, tablet or smartphone using your favourite browser. Includes email alarms when thresholds are breached or if no communications from a device (please tell us your requirements). Data accessible via API (fair use policy).

Annual Subscription, Part Number: DATA-PLATFORM2

Annual subscription - transmissions every 10 minutes. Recurs annually until cancellation is requested. Multi-network sim card to give best possible coverage even in rural locations. Secure web based data access - see your sensor readings on your computer, tablet or smartphone using your favourite browser. Includes email alarms when thresholds are breached or if no communications from a device (please tell us your requirements). Data accessible via API (fair use policy).

Annual Subscription, Part Number: DATA-PLATFORM3

Annual subscription - transmissions every 5 minutes. Recurs annually until cancellation is requested. Multi-network sim card to give best possible coverage even in rural locations. Secure web based data access - see your sensor readings on your computer, tablet or smartphone using your favourite browser. Includes email alarms when thresholds are breached or if no communications from a device (please tell us your requirements). Data accessible via API (fair use policy).