Model C6350B PowerView iGAL Galvanic CP Remote Monitor

Web based remote monitoring for galvanic anode installations

DATASHEET

- Remotely Monitor Galvanic Anode Systems
- No AC power required - Battery powered with up to 6 years life.
- Secure and user friendly
- Web access via normal web browser, no need for extra software or hardware
- Monitor multiple units and sites from a single private web login

- Remotely interrupt anode to cathode current, enabling performance verification testing as per the requirements of BS EN ISO 12696 Cathodic Protection of Steel in Concrete
- Programmable monitoring intervals for the measurement of reference electrode potential and anode current

Features

- **Monitor up to four anode currents**
- **Monitor up to four reference electrode potentials**
- **Remotely interrupt anode to cathode for testing**
- **Monitor ON and IOFF reference electrode potential**
- **Monitor reference electrode decay potentials**
- **Battery operation for 3 to 6 years**

Overview

The **PowerView iGAL** remote monitoring device is designed to provide remote monitoring and testing of galvanic anode installations. This battery powered unit is supplied as a standalone unit or mounted in an optional vandal resistant, weather-proof enclosure for easy installation.

Remotely Monitor Your Galvanic Installations

The iGAL is designed to enable remote monitoring of galvanic anode installation without the need for AC power. The remote monitoring facility enables daily function monitoring and monthly programmable performance monitoring, without the need to attend site.

Equipment is supplied with a 1 year Web portal licence and supporting SIM card, along with permanent 8GB on-site SD card providing direct manual access to monitoring data.

Web-based Logging and Monitoring

The iGAL is designed for use with the Data2Desktop Monitoring Web portal, which provides a client interface facility, allowing direct access to the monitoring data and adjustment of testing programs, via normal computer or mobile device browsers, without the need for any additional software or hardware.

Monitoring Capability

The iGAL units were specifically developed and designed to enable galvanic anode testing in accordance with the testing requirements listed in BS EN ISO 12696, which included:

- Measurement of ON and Instant Off reference electrode potentials
- Measurement of anode to cathode current
- Remotely interrupt the anode to cathode current at a programmable date and time for a programmable period while measuring reference electrode potentials (depolarisation testing)
- Remotely reconnect the anode to cathode following a scheduled depolarisation test period

Anode Current Monitoring and Switching

Up to four anode zones can be connected to and monitored through the iGAL, to measure individual anode to cathode zone current. The anodes can be remotely disconnected from the structure to enable testing including instant off potential and the measurement of potentials over a longer depolarisation period.

Up to two additional un-monitored anode zones, can be connected through the iGAL and disconnected at the same time as the monitored anode zones, to prevent reference electrode potential interference from adjacent anode zones.

Reference Electrodes

Up to four reference electrodes can be connected to and monitored through the iGAL. The anode current switching facility enables the measurement of On and Instant Off potentials as well as longer term depolarisation or decay potentials associated with performance verification testing.

Coupon Current Measurement

The iGAL units have the ability to measure up to four coupon currents through zero-resistance-ammeter inputs. Where the coupon surfaces areas are known, the coupon currents can be used to calculate the delivered cathode current density at the steel.

Temperature Sensor

An internal temperature sensor on the iGAL allows the local equipment temperature to be monitored which can be used to evaluate galvanic anode performance over varying temperatures.

Data Access

An annual licence is required for subsequent years to maintain the SIM card and provide Web portal access. Alternatively, data can be recovered manually from the on-site data storage facility (SD card), which provides a back-up of all historical monitoring data in CSV format.

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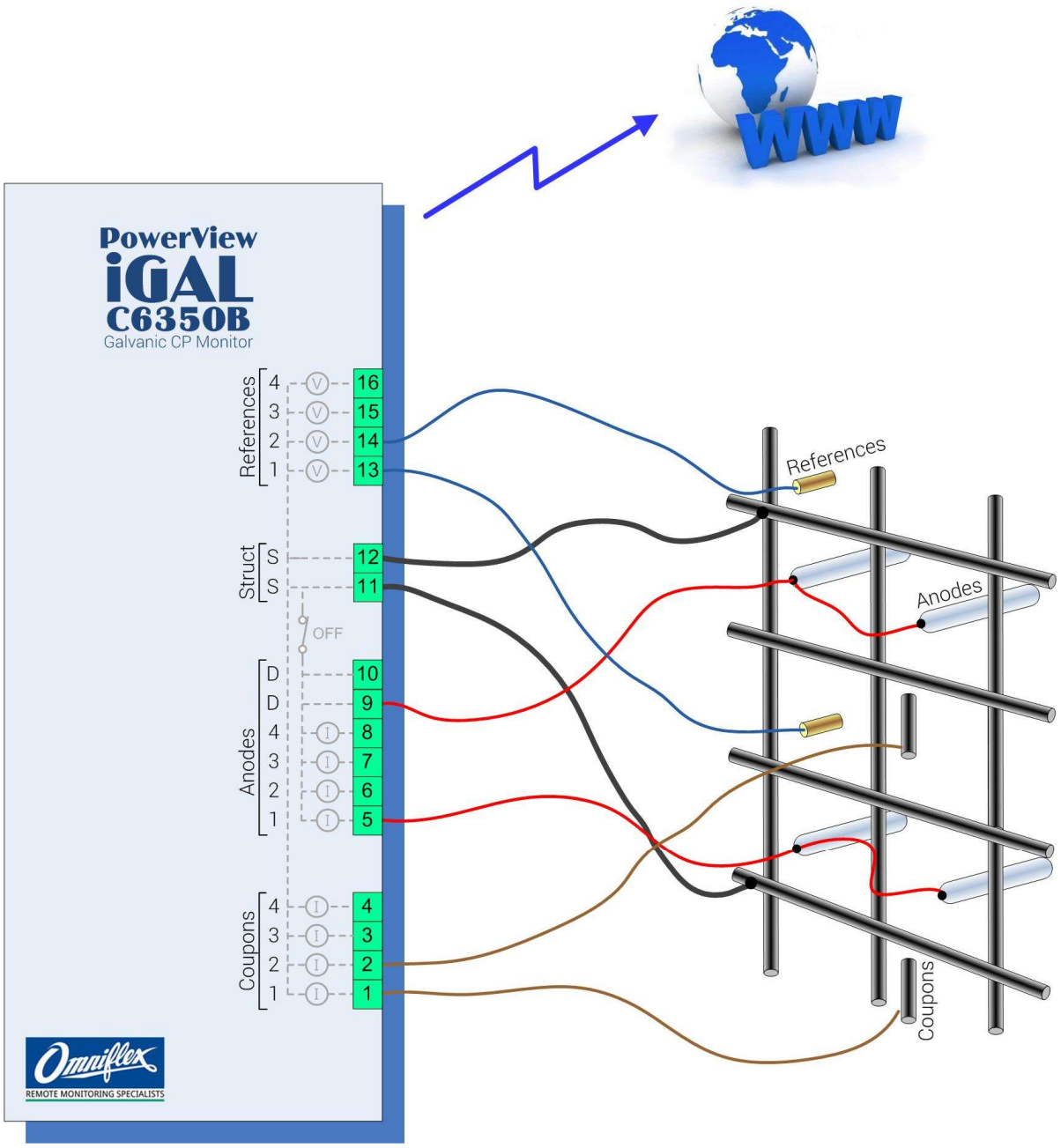
iGAL Connections



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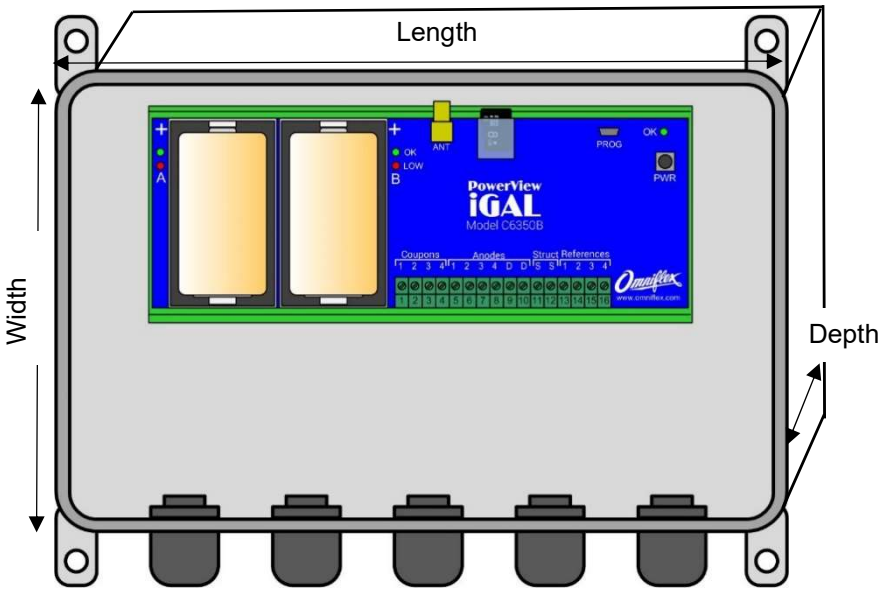
iGAL General Arrangement in Non-Metallic Enclosure



Length	271mm
Width	170mm
Depth	90mm

iGAL Arrangement in Vandal Resistant Enclosure with Cable Termination

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iGAL Data2Desktop Monitoring Web Portal

Overview | Charts | History | Test and Control | Ioff Results | Diagnostics | Diagnostic Charts

From Date: Blank for 15 days of data From Time: Blank for 00:00 To Date: Blank for lates

History

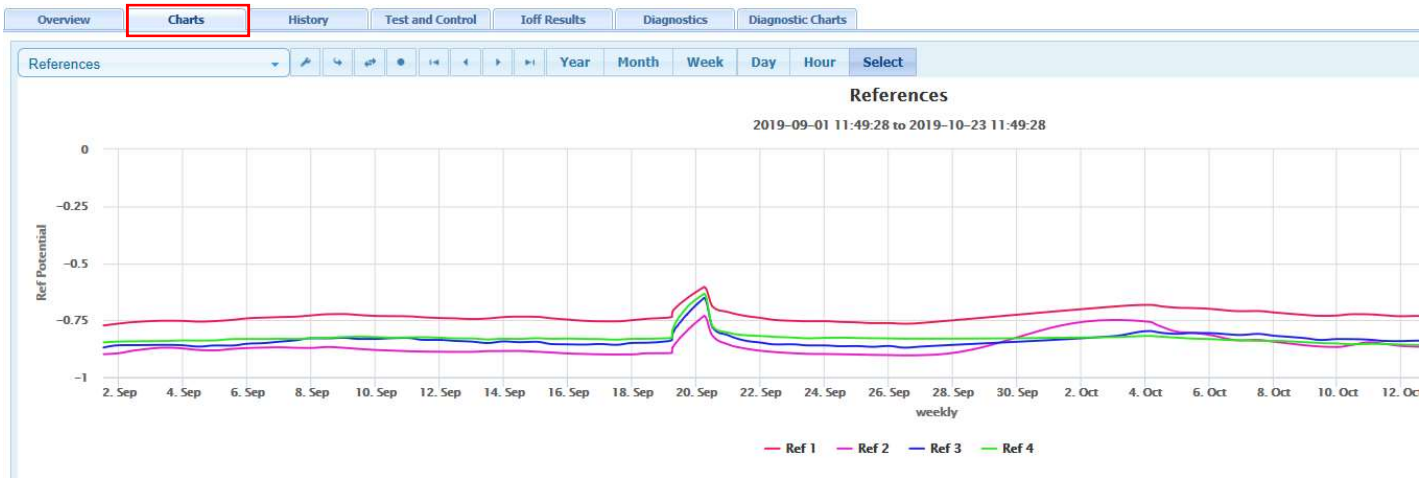
Update Time	Anode	Ref 1	Ref 2	Ref 3	Ref 4
2019-10-23 00:02:05	213	-0.7036	-0.7893	-0.756	-0.8677
2019-10-23 00:00:05	213.3	-0.7036	-0.7893	-0.756	-0.8676

Overview | Charts | History | Test and Control | Ioff Results | Diagnostics | Diagnostic Charts

From Date: Blank for 15 days of data From Time: Blank for 00:00 To Date: Blank for lat

History

Update Time	Ref 1	Ref 2	Ref 3	Ref 4
2019-10-23 00:00:24	-0.6907	-0.7736	-0.741	-0.8477
2019-10-22 12:00:14	-0.6926	-0.7586	-0.7408	-0.8477



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Specifications

Network Communication Specifications

Model C63500B-11 LTE Version (UK & Europe)	
Bands	LTE FDD: B1/B3/B5/B7/B8/B20 WDCMA: B1/B5/B8 GSM: B3/B8
Approvals	Various Carrier Approvals
Antenna	
Antenna	Basic 0dB antenna supplied
	External antenna available on request
Antenna Connection	SMA Female Jack on iGAL

Reference Half-Cell Voltage Measurement Inputs

Quantity	4 channels
Input voltage range	0 to ±3 V
Input Impedance	>100 MΩ
Resolution	1 mV
Accuracy	<10 mV

Anode Current Measurement Inputs

Quantity	4 channels
Range	0-1 A
Resolution	54 µA
Accuracy	<1 mA
Max current rating per channel	1 A

Anode Zone Switching Inputs - Non-monitored

Quantity	2 channels
Max current rating per channel	0.5 A

Anode Switching

Total switchable anode current including monitored and un-monitored anode zones	5A

Coupon Current Measurement Inputs

Quantity	4 channels
Range	0-1 mA
Resolution	10 nA
Accuracy	100 nA
Max current rating per channel	1 mA

LED Indicators

OK LED (Green)	On in running mode Off when Power is off or in standby
Battery OK (Top) LED (Green) (one per battery)	Flashes when Battery is OK
Battery Flat (Bottom) LED (Red) (one per battery)	Flashes when Battery is Flat

Temperature Sensor

Quantity	1 (internal)
Sensor Type	NTC Thermistor
Temperature Range	-20 to 55 °C
Accuracy	± 1 °C

Batteries

Quantity	2
Type	3.6V Primary Li-$SOCl_2$ (non-rechargeable)
Size	'D' Cell
Battery Life	3 – 6 years typical with once per day updates
Battery consumption criteria	Battery No 1 then battery No 2. Web portal warning notification to replace battery No 1 for uninterrupted service

Monitoring Capability

As Found	On potential of all connected reference electrodes Anode to cathode current of all connected anode zones
Instant Off Test	IOFF potential of all connected reference electrodes
Depolarisation Test	Potential of all connected reference electrodes following anode to cathode interruption
Programmable period	5 minutes to yearly intervals Decay period 5 min to 1 month

Environment

Operating Temperature	-10 to +50°C (+14°F – 122°F)
Storage Temperature	-10°C – 70 °C (+14°F – 158°F)

iGAL Mechanical

Width	227mm (10.7")
Height	87mm (6.7")
Depth	54mm (3.6")
Weight	0.43 kg approx.

Non-Metallic Enclosure Mechanical

Degree of Protection in Weatherproof Housing	IP67 / NEMA 4S
Width	271mm (10.7")
Height	170mm (6.7")
Depth	90mm (3.6")
Weight	0.6 kg approx. (box only).

Compliance to Standards

Safety	IEC950; EN60950
Emissions	EN 55011 Group I, Class A
Immunity	IEC 61326-1 (2005)

Ordering Information

ORDER CODE	DESCRIPTION
C6350B-11	PowerView iGAL (EU, South Africa)
Accessories	
C6360A	PowerView iGAL Weatherproof Housing
357.01.004	SAFX LSH20 3.6V Primary Lithium Battery (takes 2)

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