

Hevasure Monitoring System

Technical Specification – Enclosure model

Introduction

Hevasure Monitoring technology enables continuous measurements to be made on important aspects of a heating or chilled water system as well as transmission of that data to remote locations where it can be viewed on a web-browser or mobile device. Alerts are issued if any parameter exceeds critical levels, ensuring that both engineering integrity and water quality are maintained, significantly reducing the risk of corrosion and preserving HVAC system efficiency.

The complete monitoring system comprises: hardware (sensors, data acquisition system with touch screen display, manifold, enclosure and fittings) as well as software. The primary hardware is contained within a metal, glass-fronted enclosure which can be wall mounted or free standing and is usually installed in a plant room (Figure 1). The measured data is automatically collected and transmitted to a central data store, via GSM or Wi-Fi where it can be viewed via a web page on a PC, smart phone or tablet (Figure 2). From this central data store notifications are sent out when a measured value exceeds pre-set limits. Further display / download options are available (e.g. graphical format).

Installation

Installation should only be carried out by a suitably qualified engineer, trained in Health & Safety within a Plant Room environment. Site specific H&S rules apply.

Reference should be made to the document 'Installation of Hevasure Monitoring Station – Enclosure Model'.

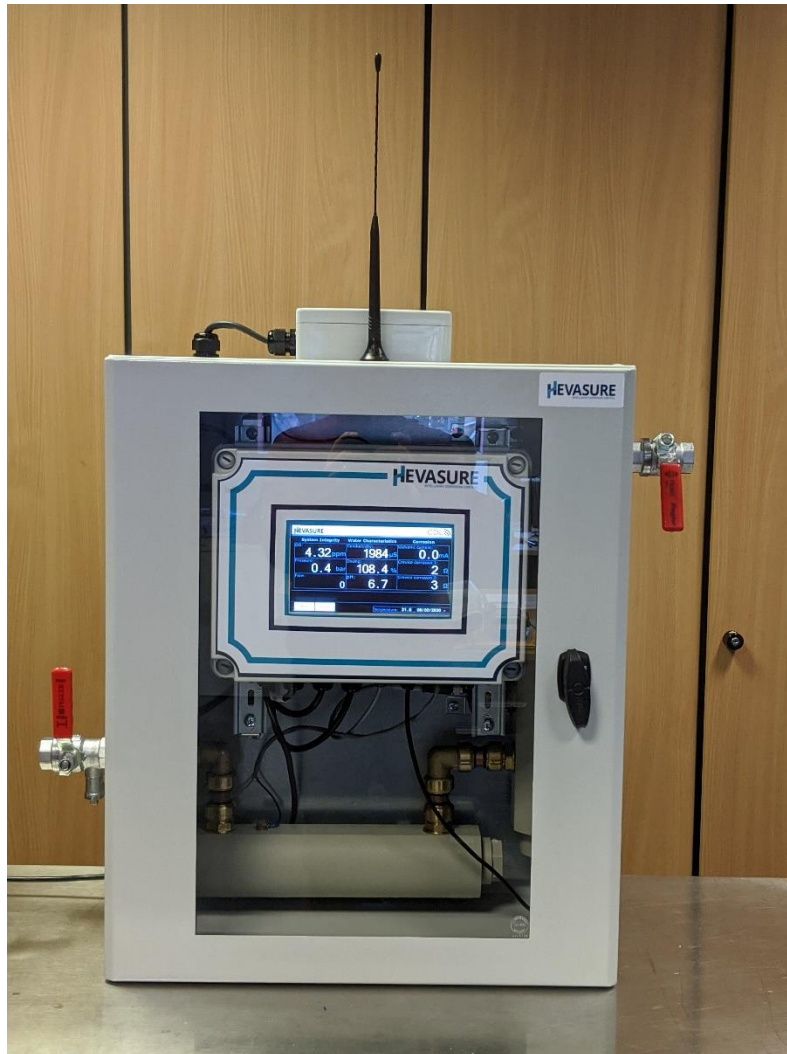


Figure 1: Hevasure Monitoring Station



Figure 2: Hevasure Data Dashboard

Enclosure

The overall dimensions of the steel enclosure are shown in Figure 3.

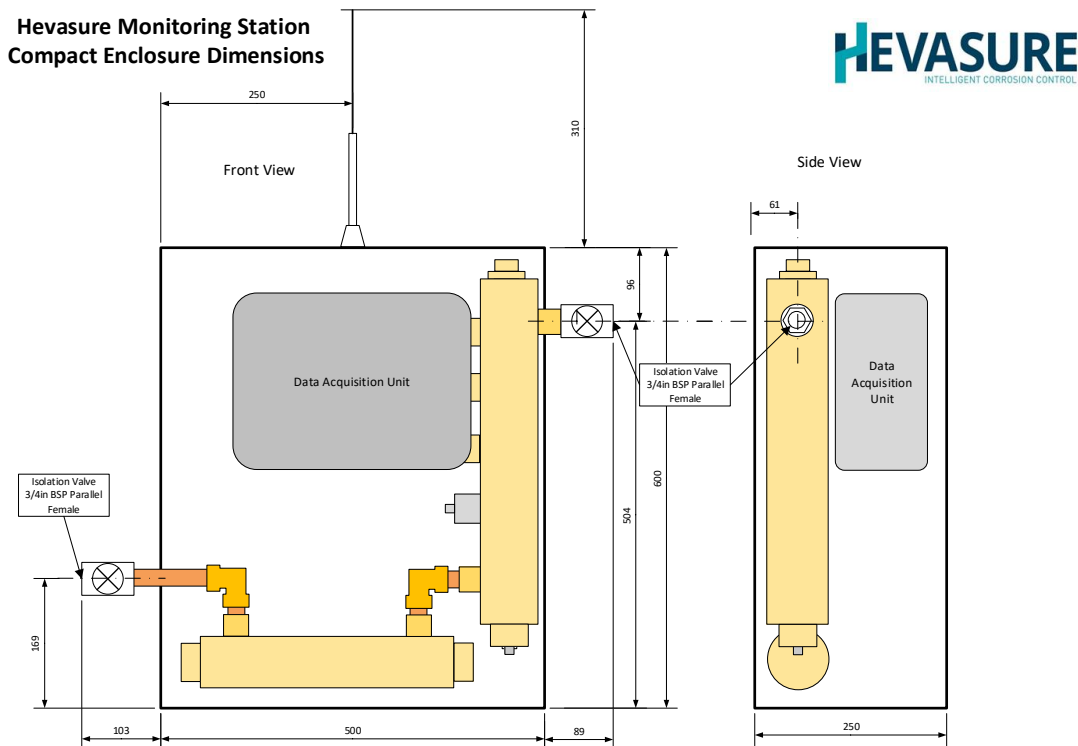


Figure 3. Monitoring Station Enclosure Dimensions

Steel cabinet: Schneider Electrical NSYS3D6525T.

Dimensions (mm): H600 x W500 x D250

Supplied with lockable handle and wall mounting brackets as standard.

CAD drawing available from Schneider Electrical [Web Site](#).

The enclosure is not IP rated it has been modified to allow improved access for routine maintenance operations.

Total weight: 25kg

Materials

Cabinet: mild steel (painted) with glass front

Manifold & galvanic current housing: Polypropylene

Plumb fittings: Brass and copper

Sensors: various with EPDM rubber seals

Operating Conditions

Max operating temperature (water): 82 C

Max hydraulic pressure: 10 bar

Note: for higher operating temperatures cooling fins can be used on the inlet side of the manifold

Plumbing connections

Connections to the LTHW or CHW system flow and return pipework is via 2 x ¾" BSP

Electrical connections

Universal input (100-240Vac) mains supply, hard-wired. Note: A CE-approved 24V 3A DC power supply is contained within the data acquisition system.

Data Acquisition System

The Hevasure Monitoring system comes with a state-of-the-art data acquisition system, containing a touch screen and numerous digital and analogue inputs, as well as a GSM (2G, 3G and 4G) enabled data logger. This will be delivered pre-configured for the particular system being monitored. Where mobile phone signals are not available the data acquisition system comes with Ethernet or Wi-Fi connections (Wi-Fi module optional extra).

Sensor inputs: 4 x Modbus

2 x 4-20mA current sink (passive)

2 x 4-20mA current source

8 X Corrosion Resistance sensors (2-wire connection), isolated as a group.

1X Galvanic Current detect, Current from galvanic source detected across 5 ohm resistor. This is isolated

1X Flow (pulse) input

Sensors (standard configuration)

1 x dissolved oxygen (Modbus output)

1 x conductivity (Modbus output)

1 x temperature (from conductivity sensor)

1 x pressure sensor (4-20mA)

1 x galvanic current sensor (mA output)

1 x crevice corrosion sensor (resistance)

1 x flow meter (pulse output)

Optional: 1 x pH sensor (Modbus output)

Document Control

V1: Issued 07/05/2019

First release for enclosure product version

V2: issued 05/03/2020

Updated to reference new plumb connections and add details on cabinet dimensions and weight. Figure 1 and Figure 3 updated

V3 issued 10/03/2020

Update to figure 3.