Automated Extraction Monitoring System (AEMS)

Solenoid and gas analyser junction boxes

1

FIELD ANALYTICAL UNIT (FAU)

GAS ANALYSER
Infra-red measurement of CH4 and CO2. Electrochemical for O2 and optional H2S. Pump for drawing sample gas for analysis. Readings can be logged at 10 sec intervals. Easily removed and swapped out for full service/calibration, eliminating system downtime.

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Circuit Breakers

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FIELD SERVER UNIT (FSU)

HEATER
Maintains temperature of FSU to ensure functionality in cold climatic conditions

4

Power Supply Unit and battery charger

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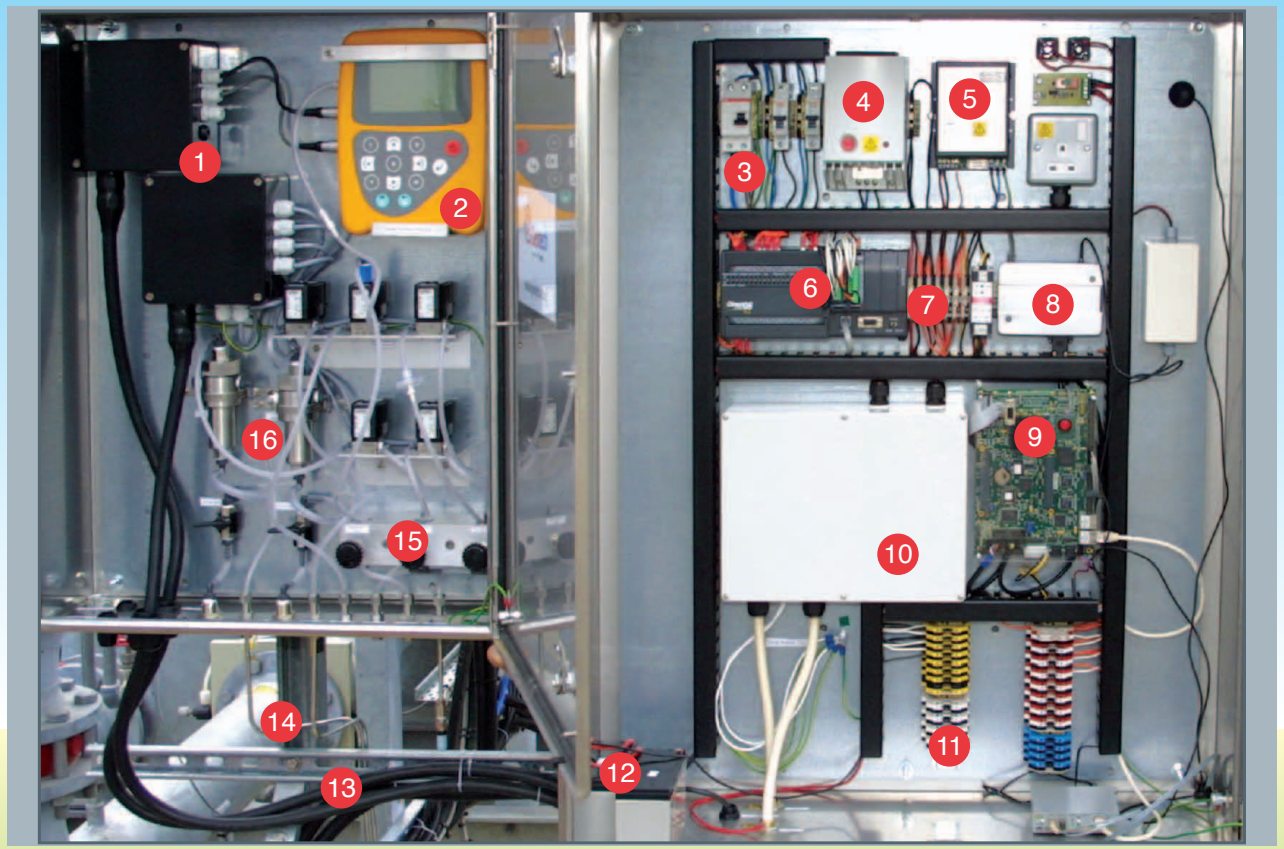

GAS CONDITIONING AND WATER FILTERS
Removal of condensate and particulates from the sample gas prior to analysis. Ensures analysis sensors do not become damaged.

16

FLOW REGULATORS
Ensure gas sample flow is maintained at the correct level (approx. 300cc/min).

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SAMPLE INPUTS
Sample line connections for gas sample points (maximum of four), optional auto-calibration gas, clean air purge inlet, and gas analyser exhaust.

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13

ARMOURED CABLE
Communication between FSU and FAU gas analyser and solenoids.

12

Rechargeable battery back-up

Interface PCB 10

Input / output terminal blocks 11

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STATIC GAS ANALYSIS AND CHP CONTROL FOR LANDFILL GAS AND BIOGAS

9 FIELD COMPUTER
Controls & drives the AEMS system. Provides communication to PLC & offers Ethernet port

Geotech
A subsidiary of LANDTEC

PLC.
Contains intelligent logic for control of sample sequencing, system calibration and data acquisition from FAU and external sensors. The intelligence and functionality of the AEMS system is derived from the PLC module.

6

I/O.
Options for 4-20mA modules, for output of data signals (for process and engine control system use), or data input from additional sensors (examples include flow, pressure, pH, temperature). Also accepts thermocouple input modules.

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MODEM
Wireless GPRS connection for transmission of gathered data to secure web-based server, from which users can extract data at any time from any location. Allows remote system interface for maintenance and update purposes.