

# ME8010 - Remote Tank Level Monitoring System

## DATA SHEET

### FEATURES

- automates inventory and supply of chemical stock levels on multiple sites.
- time stamps every batch quantity, and records last 3000 operations - ideal for traceability of batches. Event Log remotely downloadable.
- remotely verifies site tank levels and status, from an office PC location and in the field via mobile phones, with configurable levels of access.
- easy to install, configure and control via simple SMS messages.
- minimal extra wiring needed to monitor/control a site.
- immediate unsolicited reporting of alarms (e.g. low tank level), direct to selected personnel e.g. delivery driver, dispenser technician.
- communication either via GSM or CDMA mobile networks to an office PC and/or mobile phones.
- incorporates into existing ManuFlo Admixture systems e.g. ME2000, UIC/A, ME995.



- The system to monitor and report chemical usage in tanks at remote sites is made up of ME8010 hardware units and "CellVisor" PC software (available from ManuFlo) and SMS-capable mobile phones, which all communicate via either GSM or CDMA mobile networks. In Australia, GSM is generally in metropolitan areas, and CDMA is generally in rural areas.

ME8010 units at remote sites:

- are connected to flowmeters to monitor and store information on tank levels, and to issue alarms if necessary.
- have a mobile modem and antenna and do not require a wired telephone connection.
- use SMS text messaging to issue alarms to nominated recipients and to receive authorised user commands e.g. to change alarm setpoints or remotely turn on controlled outputs.
- have on-board non-volatile memory. Up to 3000 events are time-stamped and logged, to allow later analysis of any site problems, or for usage reports. A remote PC can perform a password-protected selective download of the Event Log.
- transmit a watchdog message each day at a predetermined time to selected mobile phone(s) or to an optional PC-based central monitor.

The accompanying "CellVisor" monitoring and control software, on an office or home Personal Computer, can dial the remote sites via mobile or land modem to monitor current tank levels, and to retrieve logs, site status and alarms. The software can be run on any Windows PC with one serial (RS232) Communication port available, and provides an alarm/event report which can be exported as a "flat" file suitable for importing into Microsoft Excel for generation of custom reports.

<u>Code</u>	<u>Description</u>	<u>Code</u>	<u>Description</u>
ME8010	<ul style="list-style-type: none"> <li>• tank level monitor</li> <li>• inputs: 8 digital (see option below to expand to 16)</li> <li>• outputs: 4 relay</li> <li>• GSM internal modem with antenna</li> <li>• 7-40 VDC Power, with 240 vac adaptor supplied</li> </ul>	CVSW	<ul style="list-style-type: none"> <li>• CellVisor software for office PC, to configure ME8010. Supplied on CD.</li> </ul>
<b><u>OPTIONS</u></b>	<b><u>Description</u></b>	PCM-GSM	<ul style="list-style-type: none"> <li>• GSM PC mobile modem with fixed 3dB antenna, power pack and connecting cable.</li> </ul>
-IPBOX	<ul style="list-style-type: none"> <li>• mounted in IP54 polycarbonate enclosure box with lid.</li> </ul>	PCM-CDMA	<ul style="list-style-type: none"> <li>• CDMA PC mobile modem with fixed 3dB antenna, power pack and connecting cable.</li> </ul>
-16IN	<ul style="list-style-type: none"> <li>• 16 digital inputs instead of 8 e.g. for dual-loading plants.</li> </ul>		
-CDMA	<ul style="list-style-type: none"> <li>• with CSMA internal modem instead of GSM.</li> </ul>		
-110	<ul style="list-style-type: none"> <li>• 110 vac plug pack, instead of 240 vac.</li> </ul>		

Order Code format for the tank level monitor is "ME8010-options" e.g.

"ME8010" is a monitor/controller, with GSM Modem and Antenna, 240 vac powered, 8 digital inputs, and 4 relay outputs.

"ME8010-16IN-IPBOX" is as above, but with a total of 16 digital inputs and in an IP54 enclosure.

**ManuFlo**®™

**Flow Measurement Products**

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**Technical/Electrical Specifications**

**ME8010**

**Power**

**on-site controller/monitor**

- 7-40 VDC (supplied with external 240 vac, or optional 110 vac plug pack).
- quiescent current drain is about 90mA.

**Inputs**

- 8 optically-isolated digital inputs:
  - can accept signals of up to 48 VDC.
  - can count pulses up to a frequency of ~5kHz.
  - optional on-board “+8” expansion (i.e. for a total of 16 inputs).

**Outputs**

- 4 relay outputs, each capable of switching 5A at 240 vac.

Modem (fitted internally)

- GSM - requires a SIM card (not supplied) with a voice number and a data number; or
- CDMA.

Antenna

- pre-fitted

Flowmeter connection

- external 10-pin plug-in/plug-out wiring connection harness.

Standard Case

- Folded metal, approx. 195mm x 125mm x 50mm.

IP54 Enclosure option

- Standard Case is mounted inside a sealed Polycarbonate Enclosure
- Enclosure approx 198mm W, 263mm H, 85mm D
- access: 4 stainless steel screws secure the lid

**Operating Conditions**

- -25 °C to +70 °C
- 5% to 95% non-condensing humidity.

**PC requirements**

Drive

**for CellVisor software**

- CD drive required, to be able to load CellVisor Software
- 1.5 MB for program, plus 240K per downloaded event log from each ME8010.

Hard disk space

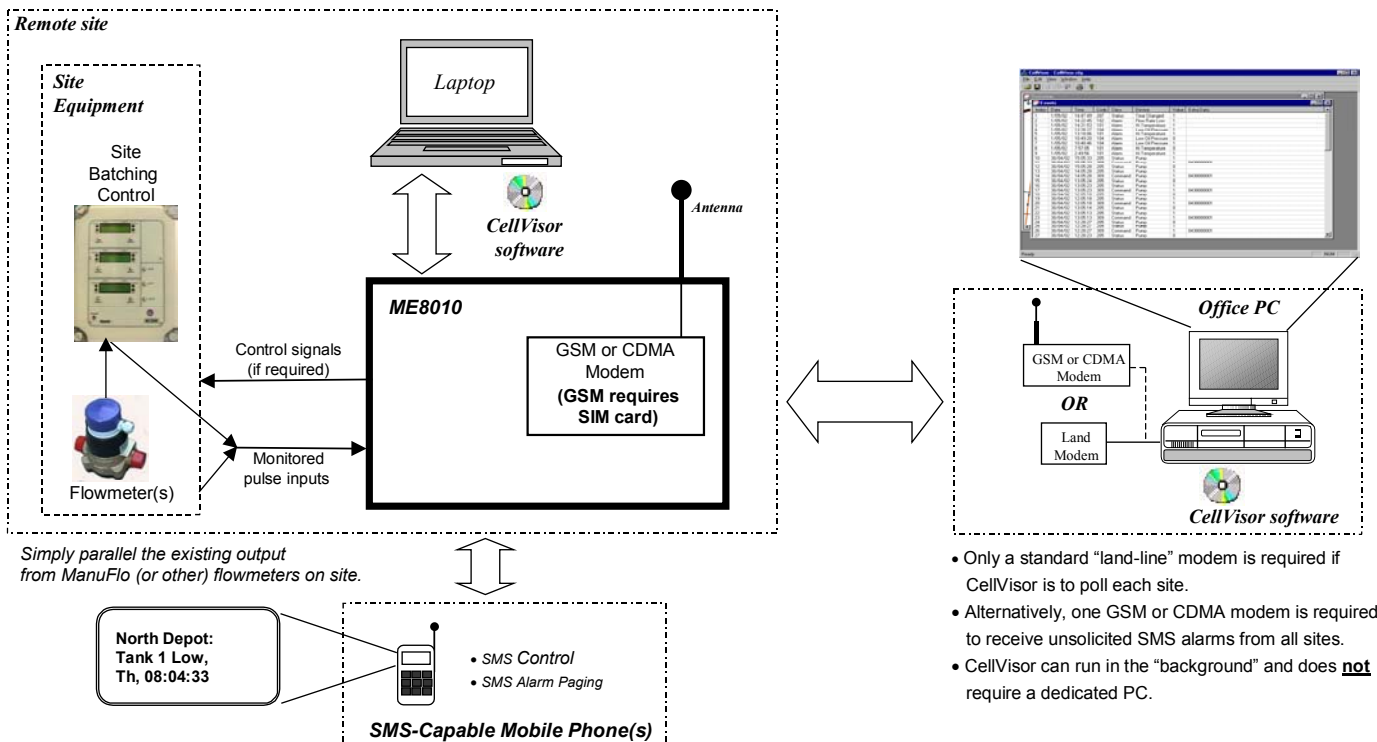
- Current Windows operating systems.

Operating system

- modem, either

Communications

- land modem (requires serial communication port if external), or
- GSM or CDMA mobile modem, and one serial (RS232) communication port for modem connection, and power point for modem power pack.



- Only a standard “land-line” modem is required if CellVisor is to poll each site.
- Alternatively, one GSM or CDMA modem is required to receive unsolicited SMS alarms from all sites.
- CellVisor can run in the “background” and does **not** require a dedicated PC.

Due to continuous product improvement, specifications and design may change without notice.

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