

EK230 VOLUME CORRECTOR:

# Compact and Powerful

In the last edition of our Profiles magazine, we introduced the new EK210 as well as some new features implemented in the EK230. Now our newest development, the EK230 is ready for the market. The new EK230 combines the compact design of the EK210 with the data-logging and communication features of the EK230.

It is a battery-operated device and can be used in a variety of applications. If a main connection is available, the EK230 can also be powered externally. The device can be installed either directly on the meter (with the aid of a bracket) or on the wall. It is also approved for use in Ex-Zone 1 hazardous areas.

There are three digital inputs available to connect the device to the meter. These inputs can be used to count the one or two-channel volume pulses or to monitor any attempts at manipulation. This means the device is totally compatible with the current pulsers used in the turbine and rotary meter totalizers. Since it is necessary to have an accurate time log, one of the digital inputs can also be used to synchronize the time.

Besides volume correction, there are also a number of other functions which make the EK230 stand out. The most important function is an integrated, event-triggered data logger with an approved peak-load display to carry out an exact evaluation of the consumption behaviour of a user. With the help of the archive function, the data logger stores the meter readings for actual and standard volumes as well as the mean pressure and temperature values, the compressibility and correction factors. This is possible either at programmable intervals (typically 60 minutes) or for certain definable events.

All of the data is stored including the current date and time as well as the appropriate status of the device to monitor the operation of the device at all times. The above-mentioned events might be an error such as the fact that the permissible operating pressure limit has been exceeded. In these cases, a separate set of data is stored with the current date and time and the status of the device. If the operating pressure drops back within the limits, another set of data is stored. This enables the user to determine the volumes consumed within this period by simply subtracting the meter readings.

To transfer the data to any device down the line, there are four freely-programmable digital outputs which can be used to transmit pulses, messages or time synchronisation pulses as required. Since remote data transfer is playing an increasingly



important role in metering, ELSTER has built an additional serial interface into the EK230 to connect a modem. Naturally, the EK230 is an integral part of the LIS200 system and it can be read out with the help of the already available equipment on site or via a modem. The transferred data can then be processed using our WinLIS software or any follow-up programs such as a billing program.

Using an AS200 readout device or a laptop equipped with WinPADS-200 software on site it is possible to read out the data from the archive and set the relevant parameters. The device is operated on site and the parameters are set with the aid of the keypad. The two-line display shows a short description of the individual values as well as the relevant codes and abbreviations.

FROM FRANK MICHELS, ELSTER GERMANY  
 michels@elster.com

No.	Date	Time	V <sub>n</sub> m <sup>3</sup>	V m <sup>3</sup>	p bar	T °C	Compressibility	Correc-tion	Event	Status
221	25.04.02	06:00	3 567 379.604	4 032 860.000	0.99785	33.77	1.0009	0.87566	0*8104	0
222	25.04.02	07:00	3 572 633.911	4 038 860.000	0.99786	33.78	1.0008	0.87564	0*8104	0
223	25.04.02	08:00	3 577 888.446	4 044 860.000	0.99800	33.76	1.0007	0.87582	0*8104	0
224	25.04.02	09:00	3 583 143.924	4 050 860.000	0.99813	33.75	1.0010	0.87598	0*8104	0
225	25.04.02	10:00	3 588 399.618	4 056 860.000	0.99813	33.74	1.0003	0.87599	0*8104	0
226	25.04.02	11:00	3 593 656.009	4 062 860.000	0.99817	33.75	1.0011	0.87602	0*8104	0
227	25.04.02	12:00	3 598 912.967	4 068 860.000	0.99832	33.78	1.0002	0.87606	0*8104	0
228	25.04.02	13:00	3 604 169.811	4 074 860.000	0.99832	33.75	1.0003	0.87614	0*8104	0
229	25.04.02	14:00	3 609 426.614	4 080 860.000	0.99842	33.79	1.0009	0.87612	0*8104	0
230	25.04.02	15:00	3 614 683.811	4 086 860.000	0.99843	33.73	1.0008	0.87628	0*8104	0
231	25.04.02	16:00	3 619 942.179	4 092 860.000	0.99858	33.71	1.0005	0.87651	0*8104	0
232	25.04.02	17:00	3 625 201.467	4 098 860.000	0.99865	33.69	1.0013	0.87662	0*8104	0
233	25.04.02	18:00	3 630 451.957	4 104 850.000	0.99876	33.72	1.0009	0.87662	0*8104	0
234	25.04.02	19:00	3 635 711.659	4 110 850.000	0.99882	33.74	1.0009	0.87661	0*8104	0