

## FLOW COMPUTERS

# A Flow Computer for every application

The gas-net product family and the FC2000 Flow Computer series complement each other ideally and make it possible to offer solutions for every application.

Admittedly, at first sight, both product families look very similar – there is indeed very little difference in the external appearance and the basic design. Both devices are designed to fit into standard 19" cabinets with  $\frac{1}{2}$  the width; the gas-net products can also be supplied at a  $\frac{1}{3}$  of the width.

The gas-net devices excel in the consistent use of DSfG standards, i.e. all of the products in the gas-net family (Z0/Z1/F1 and M1) archive the billing data in accordance with DSfG standards and, apart from the Z0, all of them also have a DSfG port at the back of the device.

Both of the above-mentioned products can be adapted to all common natural gas metering systems, i.e. the calculation methods and parameters for connecting the devices to all types of meters (turbine meters, rotary meters, ultrasonic meters, orifice meters) are already implemented in the devices.



gas-net F1 Flow Computer



FC2000 Flow Computer

One of the main advantages of the gas-net devices is the fact that the classic transmitter signals (pulse, pressure sensor and PT100 temperature sensor) are connected to the intrinsically-safe, Atex-approved inputs in the EXMFE4 card. Another benefit can be found in the fact that the remote data transfer function, which is used to call up the billing data per telephone, is integrated in the devices. Instead of using the pulse signals from the meter to register the actual flow rate, it is alternatively possible to switch the Absolute-ENCODER index onto the same card. This means that it is not necessary to change the hardware if you want to use the Absolute-ENCODER technology with a gas-net device.

As there is an analogue or a GSM modem installed in almost all DSfG systems, it is also possible to synchronise the clock inside the devices to the PTB standard time. This not only saves the cost of installing a radio clock receiver but it also means that the function is guaranteed regardless of how good the quality of the radio signal is on site. When using a gas-net flow computer, it is also not necessary to use any external units such as data

logging devices, DSfG-DFÜ or safety barrier units. This reduces the cost of the devices themselves and, moreover, installation and/or assembly costs are also much lower.

The AGA8 DC92 process of calculating the compressibility (real gas) factor, which until now has never been used in Germany, has recently been approved by the PTB and is now also available in the gas-net devices. This new calculation method is available without any extra charge, the only condition is that the PLUS-version is ordered.

A very popular tool for remote access to the corrector is the so-called tele-control panel, which is a part of the GAS-WORKS software package. The keys on the device can be 'virtually' operated just as easily from your office desk as they are on site.



Tele-control panel for the gas-net devices



DSfG Bus structure

The FC2000 has established itself internationally, particularly in applications where high accuracy, Ethernet communication, energy metering in connection with gas chromatographs and system solutions are of the utmost importance.

As well as the common types of meters, metering methods such as coriolis or venturi meters can also be used.

Within the field of turnkey metering systems, Instromet International's main business, this Flow Computer can be found in offshore plants, gas transmission stations at border crossover points with large flow rates and in systems feeding gas-driven power plants.

The device is also suitable for the metering of other media besides natural gas, e.g. oil, condensates, wet gases, steam and water.

Both products round off Elster-Instromet's portfolio of high-end electronic products. The know-how from both companies can now be bundled and used to the full benefit of our customers.

### Metering systems

Offshore



Gas transmission stations



Power plant



On top of the standard functions, customers very often demand monitoring and warning functions and this is also available in one of our software versions.

When you look at the FC2000 Flow Computer, it is quite clear that throughout the decades the development team has constantly focussed on providing the market with a high-performance, innovative device, as, of course, has always been the case at Elster-Instromet Systems.

We will be glad to answer any questions you may have.

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