Model 555

Electronic volume corrector

This product is discontinued!

Applications

Universal volume corrector with integrated flexible data logging function

Brief information

The Model 555 electronic volume corrector converts the operating volumes recorded, using the gas meter's LF pulses on the basis of gas pressure and gas temperature measurements. Compressibility is calculated to S-GERG-88, AGA NX-19, AGA 8, nitrogen (100%) or is taken into account as a fixed value. The volume corrector is intrinsically safe and can be installed on the gas meter directly in hazardous areas or in close proximity to them.

The permanently connected temperature sensor (Pt-100), the mechanical pressure sensor connector (1/4" NPT), 3 cable glands for the internal connection terminals and a screw for connecting the equipotential bonding are all located on the outside of the housing. A 3-pin plug connector (Fischer receptacle) is intended for the serial communication connection.

Data logging function: The corrector can be configured to store up to 32000 logs at a time interval of 1 hour which equates to 190 days (6 months) of hourly readings of 5 different parameters with the time and date of the log.

The use of the IEC 1107 protocol (variant) allows the integration of the unit into established remote data readout systems that are already used for reading out electricity meters.

Display: All the meter readings, measured values and operating parameters are shown on the two-line, 16-digit alpha-numerical LCD display at the press of a button. The scope of the values and operating parameters to be displayed can be set individually.

Configuration: For reading out and/or setting or changing the operating parameters, user-friendly 555 for Windows software and a Model 999 programming cable are available. The security of pre-set data is guaranteed by the use of passwords and/or a programming switch located within the unit.

Additional functions: Two electrically isolated passive transistor outputs can be configured for the output of flow-proportional pulses for both operating and standard volumes. In addition, a digital, optically isolated status output is used for signalling alarm states. The serial port allows the connection of external devices (e.g. a modem) for reading out the data storage and for direct access to the process data and operating parameters.

Main features

- Volume corrector for pressure ranges up to 80 bar
- Approval according to European standard EN 12405
- Flexible data logging function
- Mains-free operation
- Aluminium weatherproofed housing IP 66
- Battery life 5 years
- Use in hazardous areas
- High accuracy
- Compressibility in accordance with S-GERG-88, AGA NX-19, AGA 8 (GC1 or GC2), nitrogen (100%) or programmable as a fixed value
- Possible integration into remote data transfer systems
- Alarm state input
- Two pulse outputs
- Status output
- Serial port (Fischer receptacle)
- Simple operation
- Configurable display

ELSTER Instromet

Model 555: Electronic volume corrector

Technical data

Order number	BOM1044
Housing	Cast aluminium, wall or meter mounting
Dimensions	H 179 mm x W 189 mm x D 100 mm (not including connections)
Weight	Approx. 3.3 kg (including battery)
Metrological approvals*	Approvals in accordance with European standard EN 12405 NMI - T5041, T3288 PTB - 7.741/98.43
ATEX approval	Approval for use in Zone 0, ID: EEx ia IIA T4
Protection class	IP 66 in accordance with EN 60529
Ambient conditions	Temperature: -20 to +60 °C Relative humidity: max. 93%, non-condensing No direct solar radiation
Power supply	One 7.2 V, 19 Ah lithium battery module (service life > 5 years under standard operating conditions) Mains connection (Model 555-P) in conjunction with one of the following devices: • Model 555 interface unit (modem) • Model 999 aux analogue output unit
Control panel	Keypad with 3 freely programmable buttons
Display	Two-line 16-digit LCD display. The scope of the values to be displayed can be configured.
Pulse inputs	1 pulse input for connection to the gas meter (maximum input frequency 0.5 Hz) 1 digital alarm state input for connecting message signals (e.g. manipulation contact)
Pressure sensor	Absolute pressure sensor, PDCR900 pressure type integrated in housing Connection (1/4" NPT internal thread) for precision steel pipe (Ermeto 6L) Available pressure measuring ranges up to 40 (80) bar, depends on national metrological approvals. (details in bar absolute, overpressure-proof to 125% P_{max})
Temperature sensor	Pt-100 resistance thermometer according to DIN 60751 with Ø 6 mm protective tube, for use with temperature sensor thermowell. The shielded cable (length 3 m) is permanently connected to the unit. The maximum permitted temperature range is -30 to +60 °C.
Compressibility	Calculation in accordance with S-GERG-88, AGA NX-19, AGA 8 (GC1 or GC2), nitrogen (100%) or programmable as a constant (fixed value)
Data logger	The corrector can be configured to store up to 32000 logs at a time interval of 1 hour which equates to 190 days (6 months) of hourly readings of 5 different parameters with the time and date of the log. Logged data can be read via a serial port.
Signal outputs	Two pulse outputs and one alarm output, each freely programmable. Pulse length can be selected: 10, 40 or 320 milliseconds. The outputs are electrically isolated, passive, open collector outputs. Maximum voltage 10 V DC / maximum current 0.5 mA
Communication protocols (optional)	Elster-Instromet (proprietary protocol) IEC 62056-21 (IEC1107 Mode C or with fixed baud rate)
Data interfaces	3-pin plug connector (Fischer receptacle) for connecting the Model 999 programming cable or external devices (e.g. modems)

* In addition several national approvals are also available. For further information please contact our corresponding office

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