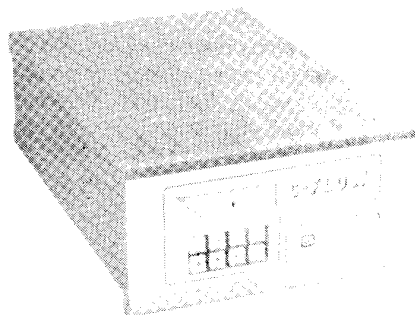


C-FLOW

INTELLIGENT SIGNAL PROCESSOR FOR FLOW METERS WITH FREQUENCY OUTPUT

The C-FLOW intelligent signal processor processes the signals from flow meters manufactured by MMG-AM. In the case of measuring viscous media, the calibration constant of flow meters is load-dependent to a significant extent, which impairs the accuracy of the measuring circuits. By using the C-FLOW signal processing unit, the calibration curve of the flow meter can be approximated by up to 8 straight sections, thus reducing the measuring error.



The C-FLOW signal processing unit is built with microprocessor which enables functions to be implemented that could not be included in the flow meter signal processors manufactured earlier. Such functions include: calibration during measurement, batch control, inquiring the measurements through serial data transfer line. The device is provided with a 16-character alphanumeric display; thus, in addition to the numeric value of the measured data, the designation of the measured parameter and its measuring unit can also be displayed. The outputs of C-FLOW also include those that the users already accustomed to, e.g. current output proportional to the volumetric flow, contact output to remote counter, signal failure signalling. The device is menu-controlled; it is capable of performing several functions at a time. The functions can be individually started or stopped by means of a keypad mounted on the front panel, without disturbing the other functions.

Due to its design, the C-FLOW can be installed in existing measuring circuits, without any additional investment (but the purchase of C-FLOW itself). By using a standardized RS232 serial line, it can be directly connected to computer systems. The device is designed for panel-mount.

Specification

Type number

3 6 9 5 - 0 - 1 0 0 - 0

Input parameters

- Turbine meter input
 - Input signal level 15 mV rms to 3 V rms
 - Input waveform nearly sinusoidal
 - Input frequency range 20 Hz to 5 kHz
- Vortex meter input
 - Input signal level 4 to 8 V
 - Input current min 10 mA
 - Input waveform pulse
 - Input frequency range 5 Hz to 10 kHz
 - Minimum pulse width 10 μ s
- Prover input
 - Input signal level 4 to 8 V
 - Input current min 10 mA

- Batch control input
Input signal level 4 to 8 V
Input current min 10 mA

Display

- Display type single-row 16-character alphanumeric LCD
- Quantities displayed
The so-called menus consist of the items of information supplied by the signal processor, grouped by functions. The menus include the desired information and data. By selecting one of the menu items, the preset, measured or calculated data actually used during the signal processing can be displayed. More than 50 data can be displayed.

Outputs

- Frequency output proportional to the linearized volumetric flow
- Signal failure output on flow meter signal failure
- Remote counter contact output adjustable by volume units
- Batch control contact output by preset batches
- Current output proportional to the volumetric flow

Accuracy data under reference conditions

- Error of frequency measurement $\pm 0.01\%$
- Output current error $\pm 0.1\%$
- Error of volumetric flow measurement $\pm 0.01\%$
- Error of totalized volume $\pm 0.01\%$

These errors relate to the electric output signal, while the error of the measuring circuit is determined by the error of the flow meter.

Serial data transfer line

- Transmission line RS232 (TxD)
- Reception line RS232 (RxD)
- Data transfer format 8 bits - No parity - 2 stop bits
- Data transfer rate 600, 1200, 2400, 4800, 9600 Baud, selectable
- Data transfer range, max. 200 m

Other informative data

- Supply voltage 230 V rms $^{+10}_{-15}\%$, 50 Hz
- Power dissipation max. 30 VA
- Ambient temperature range +5 to +40 C°
- Storage temperature range -25 to +70 C°
- Protection IP 20, shock protection class I.
- Dimensions 192 x 96 x 290 mm
- Mass approx. 5 kg