General Overview

Application

The EDU 32 FP accessory is a microcomputer-controlled counter and display apparatus. It is designed to be used in conjunction with RITTER Gas Meters, to count and display the absolute volume and flow-rate of Gases flowing through the RITTER Meter. It consists of a unit in a separate (desk top) casing with a two-line Plain-Text-LCD-Display, and can be used with all RITTER Drum-type Gas Meters and Bellows-type Gas Meters. The following individual alterations and functions can be programmed via the Control Buttons:

1. Gas Meter type being used
2. Individual measurement range (min./max. flow rates) for custom-built Gas Meters
3. Upper and lower limiting values for Flow Rate
4. Pulse Generator in use: Standard (200 Pulses per revolution of the measurement drum), Ex-Proof (50 Pulses/Revolution), 2 x 200 Pulses (forward/backward), 500 Pulses per revolution of the measuring drum or custom-built Models (customer-preferred number of pulses under 200 or 50 respectively)
5. Language German/English in the Display
6. Analog-Output: Current Output or Voltage Output
7. Contrast adjustment of the Display

Technical Data

Power supply

- either 110 V / 60 Hz or 230 V / 50 Hz (must be specified with order)
- Over-/undervoltage:
  - +15%
  - -5% (with Current Output “On”)
  - -20% (with Current Output “Off”)
- 6 Volt Accumulator for battery operation
- Standard power socket, power cord (1)

Input

Pulses from Pulse Generator built into Gas Meter, round 5-pin-socket suitable for all RITTER Drum-type Gas Meters and Bellows-type Gas Meters (Type and Model programmable via the control buttons).

Output

1. Interface RS 232 (Standard Sub-D-9-pin-socket):
   - Signal: +/- 15 Volts
   - Transmission rate: 9,600 Baud
   - Data = 8 Bit, Parity = N, Stopbit = 1
2. Analog Output, programmable, round 5-pin-socket:
1. Current Output: 4 – 20 mA or 0 – 20 mA or
2. Voltage Output: 0 – 1 Volt

**Display**

- Large 2-line LCD display, 16 characters per line
- Display language programmable: English / German
- Display contrast adjustable (via the menu)
- Display of:
  - Measured gas volume in [Liters]
  - Actual flow rate in [Liters per hour]
  - Programmed gas meter type/model
  - Power status (Mains / Battery / Low Batt)

**Control elements**

- Push-buttons, waterproof

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
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<tbody>
<tr>
<td>ON/OFF</td>
<td>On/Off</td>
</tr>
<tr>
<td>RESET</td>
<td>(In measurement mode): Resetting the display to zero</td>
</tr>
<tr>
<td>ENTER</td>
<td>(In set-up mode): For scrolling through provided menu options and saving of selected option</td>
</tr>
<tr>
<td>MODE</td>
<td>(In measurement mode): Choice of display “Volume” and/or “Flow Rate”</td>
</tr>
<tr>
<td>SELECT</td>
<td>(In set-up mode): For selection of required menu option</td>
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**Further Functions**

- Data transmission via RS 232 to a PC
- Configuration of the EDU 32 FP from the PC
- Pre-selection of a minimal or maximal flow rate
- Acoustic signalling (beep) when the flow rate values exceed the pre-selected min./max. range
- Power supply for the power interface can be turned off (to increase the running time during battery operation)

**Control Codes**

(for data transmission from Interface RS 232 to Computer)

- Ctrl-V (Hex 16) provides: VOL 00000,00 LTR
- Ctrl-F (Hex 06) provides: FLOW 000,00 L/H
- Ctrl-C (Hex 03) causes: RESET
- Ctrl-T (Hex 14) provides: Type + Power Status

**Fuse**

- 0.1 Ampere – located at the rear wall in a fuse drawer below the power socket. The fuse drawer contains a spare fuse as well.

**Dimensions**

- Width x depth x height = 155 x 200 x 120 mm
Weight

> 1,4 kg

Temperature Range

> 0 °C to + 50 °C

Scope of supply

> Power cord (with delivery into countries with German Standard for socket / plug only)
> Connection cord to Pulse Generator

The most recent version of this data-sheet can be found at https://www.ritter.de/en/data-sheets/electronic-display-unit/

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