flowplus16 Compact Inline Fluid Sensor

Description

flowplus16

The ViscoTec flowplus16 compact inline fluid sensor delivers optimum process assurance for fluid dispensing or dosing applications. It finds application in critical processes where the highest levels of quality control are mandated, or where simple, reliable fluid pressure sensing is required.

By measuring the pressure of the liquid being dispensed or dosed, the flowplus16 provides precise monitoring of flows up to 100ml/min, enabling you to achieve consistent results by detecting issues such as inconsistent material feed, clogging needles or nozzles, unsuitable needle-to-substrate distance or the presence of air bubbles in the fluid.

For laboratory or analytic work, the flowplus16 will deliver pressure and flow information, and can analyse static and dynamic application flow mechanics using the output and appropriate software.

flowscreen

The ViscoTec flowscreen evaluation unit is designed and produced for the monitoring of dosing processes. Up to two pressure sensors can be attached. The pressure values determined from the measurement signals are shown on a graphic display.
The flowscreen, when used in conjunction with the flowplus\textsuperscript{16}, puts signals from the flowplus\textsuperscript{16} into visual lines on the screen. Unstable or pulsating flow rates, e.g. pressure variations can be individually selected and evaluated to optimise your process. The intuitive user guidance of the software and the user-friendly touchscreen guarantee optimal process control for a lot of applications at any time.

**Features & Benefits**

- Helps achieve optimum dispensing/dosing process control
- Precise flow pressure measurement
- Simple to connect and integrate
flowplus16 Compact Inline Fluid Sensor

- Industry-standard output signal
- Can be used with all fluids
- FDA-certified interior surface
- Compatible with all media via an FDA-certified FFKM perfluoroelastomer interior surface
- No dead space in the sensor
- Connects with any commercial PLC or intelligent evaluation system via M8 connector
- Standard 0-10V output signal
- Built in signal amplifier eliminates need for external transducers or boosters
- Standard luer lock fitting at both ends
- Easy to install and integrate into existing dispensing or dosing systems
- Maintenance-free, easy to clean
- Can be used in static or moving applications

Applications

Measurable, consistent liquid flow enabled by the use of flowplus16 and flowscreen helps users to guarantee reliability, safety and standards compliance in a wide range of industries, including:

- Life Sciences
- Laboratory
- Pharmaceutical
- Research & Development
- Electronics & Microelectronics
- Photonics
- Process Engineering
- Industrial
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Specifications

### Technical Specifications of the flowplus\(^{16}\)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>up to 100ml/min *</td>
</tr>
<tr>
<td>Measurement parameters</td>
<td>0 to 16 bar/overload 25 bar</td>
</tr>
<tr>
<td>Input voltage</td>
<td>12-30VDC</td>
</tr>
<tr>
<td>Material</td>
<td>Housing – coated aluminium. Interior flow channel – FFKM. Molding – TPU.</td>
</tr>
<tr>
<td>Signal</td>
<td>0.1 to 10V</td>
</tr>
<tr>
<td>Electrical connection</td>
<td>Push-pull connector/M8 sensor plug</td>
</tr>
<tr>
<td>Mechanical connection</td>
<td>Luer lock DIN EN 1707</td>
</tr>
<tr>
<td>Operating temperature limits</td>
<td>15°C to 45°C</td>
</tr>
</tbody>
</table>

* Depends on the viscosity and primacy pressure of the medium
## Technical Specifications of the flowscreen

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power supply</strong></td>
<td>Mains adapter – 230 VAC / 50 Hz  Analysis system – 24V DC</td>
</tr>
<tr>
<td><strong>Display / resolution</strong></td>
<td>4.3” TFT with resistant touchscreen  480 x 272 pixels / 100ms (10Hz)</td>
</tr>
<tr>
<td><strong>Dimensions LxWxD (cm)</strong></td>
<td>19 x 13.5 x 4.5</td>
</tr>
<tr>
<td><strong>Input / output signals</strong></td>
<td>Input: 2x analogue signal 0-10V  Output: 1x ready, galvanically isolated</td>
</tr>
<tr>
<td><strong>Interfaces</strong></td>
<td>RS 232  USB (A port)  LAN</td>
</tr>
<tr>
<td><strong>Measurement programmes</strong></td>
<td>Graphic display of the measurement values</td>
</tr>
<tr>
<td><strong>Measurement over a certain time period</strong></td>
<td>Measurement without analysis  Measurement with analysis over max. 2 measurement windows and 1x envelope curve (freely configurable)</td>
</tr>
</tbody>
</table>
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Technical Specifications of the flowscreen

| Constant measurement | Measurement without analysis  
| Measurement with analysis over max. 1 measurement window (freely configurable) |

Other Information

Our [Technical Articles and White Papers page](#) has white papers to download about this technology:

**A new fluid pressure sensor for process control and validation in critical dispensing and dosing applications** by Peter Swanson

**The flowplus16 Pressure Sensor**

See the [preeflow flowplus16](#) as part of a real application in this dispensing and robotics [Case Study](#).
Automated dispensing helps security manufacturer increase throughput and quality

GJD Manufacturing switched to an automated method of dispensing silicone for sealing a plastic lens to aluminium housing. By doing this, they improved the throughput and quality of their white-light and infra-red LED illuminators for the security industry.

Ordering Information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIS21089</td>
<td>flowplus^{16} Fluid Sensor</td>
</tr>
<tr>
<td>VIS 21146</td>
<td>flowscreen Control Panel Unit</td>
</tr>
</tbody>
</table>
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Supplied by:

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