Flowtronic\textsuperscript{D} | 607 Series
Proportional Technology
Flowtronic®

Flowtronic® is a digitally operated flow controller up to 70 SCFM (2000 Nl/min). The Flowtronic® consists of a fast, direct-operated 2-port proportional valve that operates independently of the inlet pressure (max. 116 psi), and a control unit which contains all of the control electronics and sensors. The Flowtronic® offers precise flow adjustment and is very responsive to outside disturbances.

Typical applications for the Flowtronic® include: Paint coating technology, mixing of gases in process control, packaging and food processing industry, surface finishing and materials coating processes, burner control systems, and fuel cell technology.

The digital control electronics and a USB interface allow the controller to be adapted to different applications. The ASCO FlowCom PC software provides easy start-up.
By connecting the Flowtronic® to a PC with a USB interface, the Numatics FlowCom software can be used to optimally adjust the valve’s control parameters to a specific application. FlowCom software has an oscilloscope function that allows the user to select and visually see various response characteristics as the flow controller operates in an application. Control loop parameters can be adjusted using the software without removing the flow controller from service. This functionality streamlines the application development process. Control parameters can be saved and reloaded at any time.

The ASCO FlowCom software offers the following features:

- Real time display of: command signal, outlet pressure, internal control parameters (e.g. P, I or D), pressure switch signal, etc.
- Parameter setting: command signal, zero offset, span, limitation of output current, ramp function, etc.
- Diagnostics menu for error detection and testing
- Custom adjustment to an application
- Control of Flowtronic®

**Advantages**

- Low hysteresis
- Quick response times
- Very high sensitivity
- Standard 50 µm filtration
- Analog feedback output
- Easy change of control parameters
- Digital control
- Integrated display (optionally without)
- PC communication
Flowtronic®

- The Flowtronic® consists of a fast, direct-acting 2-port proportional valve, a pressure sensor unit and digital control electronics
- Controls applications that have varying flow
- Controls and maintains constant and even flow despite external disturbances such as fluctuating inlet pressure
- Measures flow precisely with two sensors
- Software and PC connection allows parameters to be adjusted to a specific application
- FlowCom software provides quick and easy start-up
- Diagnostic capability using the integrated LEDs or the FlowCom software

<table>
<thead>
<tr>
<th>Fluids</th>
<th>Ambient Temperature</th>
<th>Body</th>
<th>Internal Parts</th>
<th>Seals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air or neutral gas, filtered at 50 µm, condensate-free, lubricated or unlubricated</td>
<td>0 °C to 40 °C (32 °F to 104 °F)</td>
<td>Aluminum</td>
<td>Aluminum, stainless steel and brass</td>
<td>NBR (nitrile)</td>
</tr>
</tbody>
</table>

**General Valve Information**

- Minimum allowable pressure: 5 bar (58 psi)
- Maximum allowable pressure (MAP): 8 bar (116 psi)
- Control range: 0.4 – 70.6 SCFM, (10 – 2000 Nl/min) (ANR)
- Fluid Temperature: 0 °C to 50 °C (32 °F to 122 °F)
- Pressure Range: up to 116 psi (8 bar)
- Ports: 1/4, 3/8, 1/2 NPT or GTap
- Construction: Poppet valve
- Command signal - analog: 0 – 10 V (100 kΩ), 0 – 20 mA, 4 – 20 mA (resistance 250 Ω)
- Feedback output - analog: 0 – 10 V, 0 – 20 mA, 4 – 20 mA (max. load 500 Ω)
- Hysteresis: ± 3%
- Linearity/pressure measurement: ± 3%
- Repeatability: ± 1.5%
- Response time: < 200ms
- Calibration conditions: Ambient temperature 22.5 °C ± 2.5 °C (72.5 °F ± 4.5 °F)
  Fluid: Air
- Nominal diameter: 3mm, 5mm, 6mm
- Other features: Auto-tune, error display by LED

**Electrical Characteristics**

<table>
<thead>
<tr>
<th>Nominal Diameter DN (mm)</th>
<th>Voltage *</th>
<th>Max. Power (W)</th>
<th>Max. Current (mA)</th>
<th>Insulation Class</th>
<th>Degree of Protection</th>
<th>Electrical Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1000 Ni/ min</td>
<td>24 VDC = ± 10%</td>
<td>30</td>
<td>1250</td>
<td>H</td>
<td>IP65</td>
<td>- 5-pin M12 connector</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- USB connection with 4 pin M12 connector</td>
</tr>
<tr>
<td>2000 Ni/ min</td>
<td>24 VDC = ± 10%</td>
<td>34</td>
<td>1400</td>
<td>H</td>
<td>IP65</td>
<td>- 5-pin M12 connector</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- USB connection with 4 pin M12 connector</td>
</tr>
</tbody>
</table>

* Max. ripple: 10%
How to Order

**Version (ports), Body/Display**
- 0 = (GTap) without display*
- 1 = (GTap) with display*
- 2 = 1/2 (GTap) without display
- 3 = 1/2 (GTap) with display
- 6 = (NPT) without display*
- 7 = (NPT) with display*
- 8 = 1/2 (NPT) without display
- 9 = 1/2 (NPT) with display

**Command Signal**
- 0 = 0 – 10 Volt
- 1 = 0 – 20 mA
- 2 = 4 – 20 mA

**Feedback**
- 1 = Feedback output 00 – 10 Volt
- 2 = Feedback output 00 – 20 mA
- 3 = Feedback output 04 – 20 mA
- 4 = Feedback input 0 – 10 Volt
- 5 = Feedback input 0 – 20 mA
- 6 = Feedback input 4 – 20 mA

**Notes:**
- * Port size depends on flow range (1/4 or 3/8)
- 1) Feedback input is needed for dual loop units.

**Options**
- A00 = Dual loop control

**Flow Regulation Range**
- 10 = 0.4 - 3.5 SCFM (10 - 100 Nl/min)
  (1/4 - Versions 0, 1, 6 or 7 only)
- 20 = 0.4 - 7.1 SCFM (10 - 200 Nl/min)
  (1/4 - Versions 0, 1, 6 or 7 only)
- 30 = 0.4 - 10.6 SCFM (12 - 300 Nl/min)
  (1/4 - Versions 0, 1, 6 or 7 only)
- 50 = 0.7 - 17.7 SCFM (20 - 500 Nl/min)
  (1/4 - Versions 0, 1, 6 or 7 only)
- 60 = 0.8 - 21.2 SCFM (22 - 600 Nl/min)
  (1/4 - Versions 0, 1, 6 or 7 only)
- 99 = 1.8 - 35.3 SCFM (50 - 1000 Nl/min)
  (3/8 - Versions 0, 1, 6 or 7 only)
- 20 = 3.5 - 70.6 SCFM (100 - 2000 Nl/min)
  (1/2 - Versions 2, 3, /8 or 9 only)

**Digital I/O**
- 1 = Pressure switch output PNP ± 5%

**Connector Pin Out**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+24 VDC Supply</td>
</tr>
<tr>
<td>2</td>
<td>Command Signal</td>
</tr>
<tr>
<td>3</td>
<td>+0 VDC Common (Supply)</td>
</tr>
<tr>
<td></td>
<td>+0 VDC Common (Command Signal)*</td>
</tr>
<tr>
<td>4</td>
<td>Analog output (feedback)</td>
</tr>
<tr>
<td>5</td>
<td>Digital output (pressure switch)</td>
</tr>
<tr>
<td>Body</td>
<td>EMC shield</td>
</tr>
</tbody>
</table>

* A 6-wire cable with separate common for the command signal is used for cable lengths over 2m to minimize the voltage drop for the command signal.
Dimensions: inches (mm)

Weight: 1.85kg (4.08lbs)

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Model number</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Pin 12mm FEMALE Straight Field Attachable Connectors</td>
<td>TC05F20000000000</td>
</tr>
<tr>
<td>PG 9 Cable Gland</td>
<td></td>
</tr>
<tr>
<td>5 Pin 12mm FEMALE 90 DEGREE Field Attachable Connectors</td>
<td>TD05F20000000000</td>
</tr>
<tr>
<td>PG 9 Cable Gland</td>
<td></td>
</tr>
<tr>
<td>Micro Female 5 Pole Straight 6 Wire 24 AWG, Shielded</td>
<td>TC0503MMS000671Y</td>
</tr>
<tr>
<td>3 Meter</td>
<td></td>
</tr>
<tr>
<td>Micro Female 5 Pole 90 Degree 6 Wire 24 AWG Euro Color Code, Shielded</td>
<td>TC0505MMS000671Y</td>
</tr>
<tr>
<td>3 Meter</td>
<td></td>
</tr>
<tr>
<td>PC Software &amp; Cable Connector</td>
<td>Model number</td>
</tr>
<tr>
<td>Flowtronic® software &quot;ASCO-FlowCom-Light&quot; - free download at asco.com</td>
<td>88100895</td>
</tr>
<tr>
<td>Flowtronic® software &quot;ASCO-FlowCom-Expert&quot; - CD-ROM</td>
<td>Consult Factory</td>
</tr>
<tr>
<td>USB cable for connection of Flowtronic® to PC</td>
<td>88100897</td>
</tr>
</tbody>
</table>

Information subject to change without notice. For ordering information or regarding your local sales office visit www.asco.com.