H-PCM Series

FUEL CELL ELECTRONIC PRESSURE CONTROL MODULE (Regulator & Isolation Valve)

**Key Features**

Designed for hydrogen applications with up to 3 Mpa(g) (435 psig) inlet pressure. The H-PCM series electronic Pressure Control Module (PCM) integrates GFI's Pressure Control Valve (PCV) and Low pressure Isolation Valve (IVL) along with a Pressure Relief Valve (PRV), filter and other customer defined features such as pressure sensor ports. This system is an electronic pressure regulator that delivers stable outlet pressures under varying fuel cell flow demands and inlet pressures with an integrated low pressure isolation valve. Each PCM is 100% functionally tested, Helium leak checked and serialized for complete traceability.

- Stable, electronically controlled outlet pressure
- Integrated low pressure isolation valve
- Integrated high flow Pressure Relief Valve (PRV)
- Integrated filter 40 or 10 micron filter
- Optional integrated pressure sensor and/or ports
- Wide range of pressure ranges available

**主要特性**

H-PCM系列电控调压器最大入口压力为3Mpa，该调压器集成GFI压力控制阀、低压截止阀、压力释放阀、滤清器以及客户定制的其它需求，比如压力传感器接口。电控调压可以在不同入口压力和流量需求下提供稳定的出口压力。产品在出厂前都经过100%的功能测试和氦气测漏，产品完全可追溯。

- 电控调压，出口压力稳定；
- 集成低压电磁截止阀；
- 集成大流量压力释放阀；
- 入口集成40μm或10μm滤芯；
- 可选装压力传感器；
- 出口压力可调范围广。

Engineered to meet International Standards and Regulations

All designs are subjected to rigorous qualification testing
- Including long-term endurance cycling, severe vibration, and accelerated cyclic corrosion.
## H-PCM Series

### GENERAL INFORMATION

<table>
<thead>
<tr>
<th>APPLICATION</th>
<th>Hydrogen low pressure regulator</th>
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<tbody>
<tr>
<td>DESIGN</td>
<td>Electronically controlled proportional valve + isolation valve</td>
</tr>
<tr>
<td>BODY MATERIAL</td>
<td>Aluminum, anodized</td>
</tr>
<tr>
<td>FUEL TYPE</td>
<td>Hydrogen</td>
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</tbody>
</table>

### PERFORMANCE

<table>
<thead>
<tr>
<th>NOMINAL INLET PRESSURE</th>
<th>Configurable from 0.5 to 3 MPa (g)</th>
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</thead>
<tbody>
<tr>
<td>REGULATED FLOW RATE</td>
<td>Configurable; &gt; 15 kg/hr hydrogen (@ 20°C)</td>
</tr>
<tr>
<td>OUTLET PRESSURE</td>
<td>Configurable from 0.2 to 3 barg nominal; electronically controlled</td>
</tr>
<tr>
<td>WORKING TEMPERATURE</td>
<td>-40°C to 120°C (-40°F to 248°F)</td>
</tr>
<tr>
<td>PRESSURE RELIEF VALVE</td>
<td>Multiple settings available; to be determined with customer</td>
</tr>
<tr>
<td>FILTER (REPLACEABLE)</td>
<td>40 micron and 10 micron available</td>
</tr>
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</table>

### OPTIONAL PRESSURE SENSOR OR PORT

Customer defined

### CONNECTIONS

<table>
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<tr>
<th>INLET THREAD TYPE</th>
<th>9/16&quot; - 18 UNF; other configurations possible</th>
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### Specifications

- **Body Material**: Aluminum, anodized
- **Fuel Type**: Hydrogen
- **Nominal Inlet Pressure**: Configurable from 0.5 to 3 MPa (g)
- **Regulated Flow Rate**: Configurable; > 15 kg/hr hydrogen (@ 20°C)
- **Outlet Pressure**: Configurable from 0.2 to 3 barg nominal; electronically controlled
- **Working Temperature**: -40°C to 120°C (-40°F to 248°F)
- **Pressure Relief Valve**: Multiple settings available; to be determined with customer
- **Filter (Replaceable)**: 40 micron and 10 micron available
- **Coil - Proportional Valve**: 12 V, PWM controlled, 5.7 ohm (@ 20°C)
- **Coil - Isolation Valve**: 12 V: 10.6 ohm @ 20°C +/- 5%; 24 V: 44 ohms @ 20°C +/- 5%
- **Connection Inlet Thread Type**: 9/16" - 18 UNF; other configurations possible
- **Connection Outlet Thread Type**: 9/16" - 18 UNF; other configurations possible