Profibus I/O Modules with 16-Digital Inputs and 16-Digital Outputs

**Profibus I/O Modules with 16-Digital Inputs and 16-Digital Outputs**

16 IN / 16 OUT (universal)

Profibus-DP device with 16 digital I/O channels, channels can be used universally as inputs or outputs, combined 12 socket, rotary switches for addressing, M12 bus connection, 7/8" power supply.

### Bit Assignment

<table>
<thead>
<tr>
<th>Bit</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>M12 Input</td>
<td>4B</td>
<td>4A</td>
<td>3B</td>
<td>3A</td>
<td>2B</td>
<td>2A</td>
<td>1B</td>
<td>1A</td>
</tr>
<tr>
<td>Byte 0</td>
<td>8B</td>
<td>8A</td>
<td>7B</td>
<td>7A</td>
<td>6B</td>
<td>6A</td>
<td>5B</td>
<td>5A</td>
</tr>
<tr>
<td>Byte 1</td>
<td>4B</td>
<td>4A</td>
<td>3B</td>
<td>3A</td>
<td>2B</td>
<td>2A</td>
<td>1B</td>
<td>1A</td>
</tr>
</tbody>
</table>

### Diagnostic Indication

<table>
<thead>
<tr>
<th>LED</th>
<th>Indication</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1...8 A/B</td>
<td>yellow</td>
<td>channel status</td>
</tr>
<tr>
<td>1...8 A/DIA</td>
<td>red</td>
<td>periphery fault</td>
</tr>
<tr>
<td>Us</td>
<td>green</td>
<td>sensor/system power supply</td>
</tr>
<tr>
<td>BF</td>
<td>red</td>
<td>bus error</td>
</tr>
<tr>
<td>DIA</td>
<td>red</td>
<td>common indication for periphery faults</td>
</tr>
</tbody>
</table>

### Pin Assignment

**Bus connection M12**

- 1 = +5 V
- 2 = Line A - GN
- 3 = GND (0 V)
- 4 = Line B - RD
- 5 = earth

**Power supply 7/8”**

- 1 = GND (0 V)
- 2 = GND (0 V)
- 3 = Earth
- 4 = +24 V
- 5 = +24 V

**Input M12**

- 1 = +24 V
- 2 = IN/OUT B
- 3 = GND (0 V)
- 4 = IN/OUT A
- 5 = Earth

- 1 = internal signals: galvanically separated to sensors
- 2 = actuators
- 3 = system sensors
**Technical Data**

**Environmental**
- Degree of protection: IP 67
- Operating temperature range: -10°C (+14°F) to +60°C (+140°F)

**Mechanical**
- Weight: 380 g
- Housing material: PBT

**Bus system**
- ID number: 09CA hex
- GSD file: Lum_09CA.GSD
- Transmission rate: max. 12 MBaud
- Address range: 1–125 dec
- Rotary address switches: 1–99 dec
- Default address: 99 dec

**System/Sensors power supply**
- Rated voltage: 24 V DC
- Voltage range: 19–30 V DC
- Power consumption: 120 mA
- Reverse polarity protection: yes

**Input power supply**
- Voltage range: min. (Usystem - 1.5 V)
- Sensor current: 100 mA (at Tamb 30°C) per socket
- Short circuit-proof: yes
- Indication: LED green

**Inputs**
- Type 3 acc. to IEC 61131-2
- Rated input voltage: 24 V DC
- Channel type N.O.: p-switching
- Number of digital channels: max. 16
- Channel status indicator: LED yellow per channel
- Diagnostic indication: LED red per channel

**Output power supply**
- Voltage range: 24 V DC
- Reverse polarity protection: yes/antiparallel diode
- Indication: LED green
- Optional disengageable actuator low-voltage detection over integrated DIP-switch.

**Outputs**
- Rated output current: 1.6 A per channel
- Short circuit-proof: yes
- Max. output current: 9 A (12 A*) per module
*Test proven and approved under the following conditions:
- looped through System/Sensorpower
- supply max. 2.5 A
- Power supply cable STL 204 (5 x 1.00 mm2)
- Operating temperature range max. 40°C
- Overload-proof: yes
- Number of digital channels: max. 16
- Channel type N.O.: p-switching
- Channel status indicator: LED yellow per channel
- Diagnostic indication: LED red per channel/socket

**Diagnostic**
- Module diagnostic and single channel diagnostic according to Profibus specification (please see operating instructions under www.beldensolutions.com/downloads)

**Included in delivery/accessories**
- Dust covers M12: 2 pieces
- Attachable labels: 10 pieces

---

**Part Number**

0970 PSL 700

The application of these products in harsh environments should always be checked before use.
Specifications subject to alteration.