**PROFILE**
The IO 300 is part of the P-open series and provides compact analog I/O extension for the PU 100 range of PLCs. Depending on version, the unit has 16 analog voltage inputs and/or 4 analog voltage outputs.

With its compact dimensions of 124 x 170 mm, and a depth of 85.5 mm, the IO 30x is ideally suited for mounting close to the process in decentralized systems.

The housing is designed for clip-on mounting to standard DIN rails. System extensions are easily implemented by connecting the IO 30x to its master PLC (PU 10x) via a cable which plugs into the module’s extension bus (E-bus). See the specifications of the relevant PLC module for the max. possible number of extension I/O.

**Input / output options**
The IO 300 has 16 analog voltage inputs, 4 analog voltage outputs, and 1 reference voltage output. The IO 301 provides only 16 analog voltage inputs, and the IO 302 has only 4 analog voltage outputs.

The input channels are multiplexed and have a signal range of ±10 V. Similarly, the output channels operate in the range of ±10 V, with a max. load of 5 mA.

The reference voltage output provides a short-circuit proof signal of +10 VDC.

Four front-panel LEDs show the module’s operational status.

**Convenient field connections**
Electrical wiring from the machine or process is taken directly to the terminal strips at top and bottom of the modules. The terminal strips are of the plug-in type, allowing system pre-wiring as well as fast module exchange.

Furthermore, the following alternatives are available for the terminal strips:
- Screw terminals
- Screwless spring-clamp terminals
- Crimp terminals.

Inscription labels on the terminal strips allow clear identification of each I/O.

**Analog input**

**Analog output**
**TECHNICAL DATA**

**Configuration**
Pre-configured

**Analog I/O**
16 differential inputs for ±10 V.
Resolution: 11 bits plus sign.
Common mode suppression: ±2 V
4 floating outputs for ±10 V.
Resolution: 11 bits plus sign.
Permissible load: ≥2kΩ, ≤5 mA, ≤10 mF
Connection: 3-wire technique
All inputs and outputs have reverse-polarity protection.

**Reference voltage output**
Signal: +10 VDC
Resolution: ±10 mV
Permissible load: ≤5 mA

**Status LEDs / diagnostics**
4 red LEDs show the module’s operational status.

**Interface**
E-bus
For connection to the master PLC.

**POWER SUPPLY**

**Module supply**
24 VDC, max. 0.3 A (to EN 61 131-2)

**Output energization**
From the module supply via internal DC/DC converter.

**Galvanic isolation**
Between module electronics and E-bus. The analog outputs are not isolated from the module supply.

**ENVIRONMENTAL CONDITIONS**

**Permissible temperature**
For operation: 5...50°C

**Climatic category**
KUF to DIN 40 040
Relative humidity: ≤85% yearly average, no condensation

**Shock and vibration**

- **Vibration test Fc**
to DIN 60068-2-6 (5...50 Hz)
Unit in operation: 1g or 0.075 mm
Unit not in operation: 1.5g or 0.15 mm

- **Shock test Ea**
to DIN IEC 60068-2-27 (15g, 11 ms)

**ELECTROMAGNETIC COMPATIBILITY**

**Electromagnetic immunity**
Complies with EN 50 082-2

**Electromagnetic radiation**
Complies with EN 50 081-2

**GENERAL**

**Housing**
Front dimensions: 124 x 170 mm
Depth: 85,5 mm
Module spacing: B = 113/118,5 mm
Protection mode: IP 20

**CE-marking**
Fulfils the European Directives for electromagnetic compatibility and low voltage.

**Electrical connections**
Choice of screw terminals (Phoenix type FRONT-MSTB 2,5/18-ST-5,08), screwless spring-clamp connection, or crimp terminals.
All terminal types simply plug onto the connector strips of the IO 300.

**Electrical safety**
Tested to IEC 348 (VDE 0411)
Protection class III (protective low voltage)

**Mounting method**
Clip-on rail mounting (NS 35/7,5 „top-hat“ rails to DIN EN 50 022)

**Weight**
approx. 0,55 kg

**Accessories**
Operating instructions

**ACCESSORIES**

**Description**

<table>
<thead>
<tr>
<th>Description</th>
<th>Order no.</th>
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</thead>
<tbody>
<tr>
<td>18-pole screw terminal strip</td>
<td>9407 799 00001</td>
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**ORDERING DATA**

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Analog extension module</td>
<td>9407 701 30001</td>
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<tr>
<td>IO 300 with 16 voltage inputs, 4 voltage outputs</td>
<td></td>
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<tr>
<td>IO 301 with 16 voltage inputs</td>
<td>9407 701 31001</td>
</tr>
<tr>
<td>IO 302 with 4 voltage outputs</td>
<td>9407 701 32001</td>
</tr>
</tbody>
</table>

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