Industrial process interface (PIF)

innovative infrared technology
optris® Industrial process interface

TECHNICAL DATA

Features:

• Industrial process interface with 3 analog / alarm outputs, 2 analog inputs, 1 digital input, 3 alarm relays
• Separate fail-safe relay output
• PI/Xi hardware including all cable connections and PIX Connect software are permanently observed during operation

Electrical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>5 – 24 V DC</td>
</tr>
<tr>
<td>LED display</td>
<td>2 green LEDs for power and fail-safe / 3 red LEDs for alarm relay status</td>
</tr>
<tr>
<td>Isolation</td>
<td>500 V AC RMS between PI/Xi camera and process</td>
</tr>
<tr>
<td>Outputs</td>
<td>3 analog / alarm outputs / 3 alarm relays¹</td>
</tr>
<tr>
<td>Inputs</td>
<td>2 analog inputs / 1 digital input</td>
</tr>
<tr>
<td>Bereiche</td>
<td>0/4-20 mA (für AO 1 – 3) / 0 – 30 V / 400 mA (for alarm relays DO 1 – 3) / 0 – 10 V (for AI 1 – 2) / 24 V (for DI)</td>
</tr>
</tbody>
</table>

¹) Active if AO1, 2 or 3 are programmed as alarm output

General specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental rating</td>
<td>IP65 (NEMA-4)</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>–30 °C ... 85 °C (–22 °F ... 185 °F)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>–30 °C ... 85 °C (–22 °F ... 185 °F)</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>10 – 95 %, non condensing</td>
</tr>
<tr>
<td>Vibration</td>
<td>IEC 60068-2-6 (sinusoidal form) / IEC 60068-2-64 (broadband noise)</td>
</tr>
<tr>
<td>Shock</td>
<td>IEC 60068-2-27 (25 G and 50 G)</td>
</tr>
<tr>
<td>Weight</td>
<td>610 g (21.5 oz) (with 5 m [16.4 ft] cable)</td>
</tr>
<tr>
<td>Cable length</td>
<td>5 m (16.4 ft) HT cable (standard), optional 10 m and 20 m (32.8 ft and 65.5 ft)</td>
</tr>
</tbody>
</table>

Programmable features

Analog inputs

• Emissivity setting
• Ambient temperature compensation
• Reference temperature
• Uncommitted value
• Flag control
• Triggered snapshots, triggered recording, triggered line scan camera, triggered event grabber
• Reset peak-/valley-hold

Digital input

• Flag control
• Triggered snapshots, triggered recording, triggered line scan camera, triggered event grabber
• Reset peak-/valley-hold

Analog outputs

• Main measure area
• Measurement area
• Internal temperature
• Flag status
• Alarm
• Frame sync.
• Fail-safe
• External communication
• Center pixel (direct output)*

¹) Available only for the models PI 1M / PI 05M

Technical images
Example for a fail-safe monitoring of the PI with a connected PLC

PIF-terminal box convenient connection of process cables

PC
PIX Connect

Fail-safe monitoring states

1. Breakdown of PIF power supply
2. Cable break of fail-safe cable
3. Interruption of cable PI – PIF
4. Malfunction of PI camera
5. Breakdown of PI power supply / Interruption of USB cable
6. Malfunction of PIX Connect software

Fail-Safe status:

Normal: Relay closed  LED on
Alarm: Relay open    LED off

PC
PIX Connect

Snapshot of programmable features

5–24 V DC

PLC

Vcc

Digital IN
Low = OK
High = FS

Digital IN
Low = OK
High = FS

Digital IN
Low = OK
High = FS