High temperature identification system

**Model Number**

OIT500-F113-B12-CB

Optical high temperature identification system, 200 to 450 mm

**Features**

- High-temperature code carrier up to 500 °C (932 °F)
- Sturdy and compact design
- Integrated illumination
- High operating range
- Large sensing range
- High depth of focus

**Function**

The OIT500-* stationary read device is an optical identification system that works using industrial vision methods and is used in automated manufacturing processes. The ambient conditions in automobile construction in particular, for example the cyclical temperature changes, often make the use of read-only tags with electronic components difficult if not impossible. For the OIT high-temperature identification system, read-only tags of solid metal plates with a perforated matrix are used, which are designed for use at temperatures of up to 500 °C and suitable for high mechanical stress.

Simple installation and commissioning without complicated, time-consuming Teach-In processes enable rapid entry. Pluggable connections for the rapid exchange of devices and a controller with simple command set via the Ethernet interface guarantee simple operation. A scratch-resistant, replaceable quartz glass panel and sturdy metal housing make the OIT500-* a robust, efficient identification system.

**Indicating / Operating means**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grounding screw</td>
</tr>
<tr>
<td>2</td>
<td>Power supply</td>
</tr>
<tr>
<td>3</td>
<td>Network</td>
</tr>
<tr>
<td>4</td>
<td>Trigger</td>
</tr>
<tr>
<td>5</td>
<td>external illumination</td>
</tr>
</tbody>
</table>

**Electrical connection**

8-pin Network connection

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transmit data (+)</td>
</tr>
<tr>
<td>2</td>
<td>Transmit data (-)</td>
</tr>
<tr>
<td>3</td>
<td>Receive data (+)</td>
</tr>
<tr>
<td>4</td>
<td>not assigned</td>
</tr>
<tr>
<td>5</td>
<td>not assigned</td>
</tr>
<tr>
<td>6</td>
<td>Receive data (-)</td>
</tr>
<tr>
<td>7</td>
<td>not assigned</td>
</tr>
<tr>
<td>8</td>
<td>not assigned</td>
</tr>
</tbody>
</table>

4-pin M12 socket

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24 V power supply</td>
</tr>
<tr>
<td>2</td>
<td>Laser control</td>
</tr>
<tr>
<td>3</td>
<td>Ground</td>
</tr>
<tr>
<td>4</td>
<td>Illumination control</td>
</tr>
</tbody>
</table>

8-pin Harting connection

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Composite error output</td>
</tr>
<tr>
<td>2</td>
<td>External ground</td>
</tr>
<tr>
<td>3</td>
<td>Mode bit 1</td>
</tr>
<tr>
<td>4</td>
<td>Mode bit 0</td>
</tr>
<tr>
<td>5</td>
<td>24 V external power supply</td>
</tr>
<tr>
<td>6</td>
<td>24 V device power supply</td>
</tr>
<tr>
<td>7</td>
<td>Trigger release input</td>
</tr>
<tr>
<td>8</td>
<td>Device ground</td>
</tr>
</tbody>
</table>

4-pin M12 socket

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24 V power supply</td>
</tr>
<tr>
<td>2</td>
<td>not assigned</td>
</tr>
<tr>
<td>3</td>
<td>Ground</td>
</tr>
<tr>
<td>4</td>
<td>Trigger signal</td>
</tr>
</tbody>
</table>

**Technical data**

**General specifications**

<table>
<thead>
<tr>
<th>Light source</th>
<th>Integrated LED lightning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light type</td>
<td>infrared</td>
</tr>
</tbody>
</table>

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".
# Symbologies
- **Hole matrix**
  - Data format: decimal
  - Data capacity: 6 (numerical)
  - Orientation: omnidirectional

<table>
<thead>
<tr>
<th>Read distance</th>
<th>200 ... 450 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth of focus</td>
<td>≤ 50 mm</td>
</tr>
<tr>
<td>Reading field</td>
<td>330 mm x 250 mm at max. read distance</td>
</tr>
<tr>
<td>Evaluation frequency</td>
<td>5 Hz</td>
</tr>
<tr>
<td>Target velocity</td>
<td>triggered ≤ 0.5 m/s</td>
</tr>
</tbody>
</table>

## Functional safety related parameters
- **MTTF<sub>d</sub>** 51 a
- **Mission Time (T<sub>M</sub>)** 10 a
- **Diagnostic Coverage (DC)** 0 %

## Indicators/operating means
- **Operation indicator**
  - LED green: supply
  - LED green: ready
- **Function indicator**
  - Yellow LED: trigger
  - Yellow LED: code read
  - Red LED: pre-fault
  - Red LED: group error

## Electrical specifications
- **Operating voltage**
  - U<sub>B</sub> 24 V DC ± 15%, PELV
- **Operating current**
  - I<sub>B</sub> 250 mA without output drivers

## Interface
- **Physical**
  - Ethernet
- **Protocol**
  - TCP/IP
- **Transfer rate**
  - 100 MBit/s

## Input
- **Input voltage**
  - to be applied externally 24 V ± 15% PELV
- **Number/Type**
  - 1 trigger input 2 control unit inputs, optically decoupled
- **Input current**
  - approx. 1 mA at 24 V DC

## Output
- **Number/Type**
  - 1 electronic output, PNP, optically decoupled
- **Switching voltage**
  - to be applied externally 24 V ± 15% PELV
- **Switching current**
  - 100 mA each output

## Ambient conditions
- **Ambient temperature**
  - 0 ... 45 °C (32 ... 113 °F)
- **Storage temperature**
  - -20 ... 60 °C (-4 ... 140 °F)

## Mechanical specifications
- **Degree of protection**
  - IP64
- **Connection**
  - 8-pin Harting HAN
  - RJ-45
  - 2 x 5-pin M12 socket
  - Supplied ferrite sleeve for suppression of the Ethernet cable

## Material
- **Housing**
  - diecast aluminum powder coated
- **Mass**
  - approx. 4000 g

## Compliance with standards and directives
- **Directive conformity**
  - EMC Directive 2004/108/EC
  - EN 61326-1, EN 61000-6-4
- **Standard conformity**
  - Noise immunity
  - EN 61326-1
- **Emitted interference**
- **Degree of protection**
  - EN 60529

## Approvals and certificates
- **EAC conformity**
  - TR CU 020/2011

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## Accessories
- **OIC-C10V2A-CB1**
  - Code carrier for optical high-temperature identification system, stainless steel
- **V8HAN-G-10M-PVC-ABG**
  - Female cordset, Harting, 8-pin, shielded, PVC cable
- **V45-10M-PUR-ABG-V45-G**
  - Connecting cable, RJ-45 to RJ-45, PUR cable
- **V45-GP**
  - Field-attachable "Push-Pull" connector
- **V45-G**
  - Field-attachable male connector
- **V1S-G-10M-PVC**
  - Cable connector, M12, 4-pin, PVC cable
- **V8HAN-G**
  - Female connector, Harting, 8-pin, field attachable
- **OITControl**
  - Software for OIT high temperature identification system
- **OIZ-FG500**
  - Replacement glass for series OIT300, OIT500 and OIT1500

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)
Notes

Dimensions

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".