Instruction Manual
Outdoor Protective Housing for
thermoIMAGER TIM
LightWeight
Outdoor Protective Housing for thermoIMAGER TIM cameras
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1 General Information

1.1 Description

Thank you for choosing the **Outdoor protective housing**.

The outdoor protective housing is an ideal complement for the TIM camera and the USB server for applications with additional influences of different kinds. It protects the devices among things like dirt, dust and moisture. The outdoor protective housing can be used for any TIM camera (lenses up to 90 ° FOV). The integrated heating and the blower result in an extended operating temperature.

- Avoid abrupt changes of the ambient temperature.
- Avoid mechanical violence – this may destroy the system (expiry of warranty).
- If you have any problems or questions, please contact our service department.

Read the manual carefully before the initial start-up. The producer reserves the right to change the herein described specifications in case of technical advance of the product.
1.2 Warranty

All components of the device have been checked and tested for perfect function in the factory. In the unlikely event that errors should occur despite our thorough quality control, this should be reported immediately to MICRO-EPSILON.

The warranty period lasts 12 months following the day of shipment. Defective parts, except wear parts, will be repaired or replaced free of charge within this period if you return the device free of cost to MICRO-EPSILON. This warranty does not apply to damage resulting from abuse of the equipment and devices, from forceful handling or installation of the devices or from repair or modifications performed by third parties. MICRO-EPSILON is exclusively responsible for repairs.

No other claims, except as warranted, are accepted. The terms of the purchasing contract apply in full. MICRO-EPSILON will specifically not be responsible for eventual consequential damages. MICRO-EPSILON always strives to supply the customers with the finest and most advanced equipment. Development and refinement is therefore performed continuously and the right to design changes without prior notice is accordingly reserved.

For translations in other languages, the data and statements in the German language operation manual are to be taken as authoritative.

1.3 Scope of Supply

- Protection housing with integrated heating incl. protection window or foil window and air purge collar
- Operators manual
## 2 Technical Data

### 2.1 General Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>-40 °C ... +50 °C</td>
</tr>
<tr>
<td>Heating</td>
<td>PTC heater (automatically starting at T &lt; 15 °C) / fan for homogeneous temperature distribution</td>
</tr>
<tr>
<td>Power supply</td>
<td>24 V AC</td>
</tr>
<tr>
<td>Power</td>
<td>70 W</td>
</tr>
<tr>
<td>Protective window</td>
<td>Germanium (Ge), zinc sulfide (ZnS), Borofloat or foil</td>
</tr>
<tr>
<td>Environmental rating</td>
<td>IP66</td>
</tr>
<tr>
<td>Air purge collar</td>
<td>Integrated</td>
</tr>
<tr>
<td>Max. FOV</td>
<td>90 ° (HFOV)</td>
</tr>
</tbody>
</table>
| Integrable additional components | USB-Server Gigabit  
Industrial Process interface (PIF) |

FOV: Enlargement of the total measuring field at object level  
HFOV: Horizontal enlargement of the total measuring field at object level
2.2 Dimensions

Figure 1: Dimensions
2.3 Electrical Connections

Figure 2: Connection circuit board
2.4 Air Purge Collar

The lens must be kept clean at all times from dust, smoke, fumes and other contaminants in order to avoid reading errors. These effects can be reduced by using an air purge collar. Make sure to use oil-free, technically clean air only.

The needed amount of air (approx. 2...10 l/ min.) depends on the application and the installation conditions on-site.
3 Installation

3.1 Electrical Installation

Loosen the two screws and open the outdoor protective housing, as shown in Figure 3.

Figure 3: Opening the housing
Inside the protective housing is the electronic circuit board, where all loads are connected (see Figure 2). The heating element and the fan are already integrated and connected. To supply the outdoor protective housing with voltage, you must connect a 24 V line. This is connected to the marked side of the board. Observe the correct polarity and ensure that no voltage is present. The USB server and the industrial PIF are connected to the board as shown and are supplied by 24 V.

To get the cables into the housing, you must loosen the two cable glands, as shown in Figure 5. On the left side is a cable gland with 8 mm sealing insert and on the right is a cable gland with two 6 mm sealing inserts. It is recommended to pull the Ethernet cable or the USB cable through the 8 mm sealing insert. The PIF cable and the 24 V cable are passed through the two 6 mm sealing inserts.

<table>
<thead>
<tr>
<th>Cable gland 1</th>
<th>Cable gland 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 8 mm sealing insert</td>
<td>2 x 6 mm sealing insert</td>
</tr>
<tr>
<td>For Ethernet or USB cable</td>
<td>For PIF cable and 24 V line</td>
</tr>
</tbody>
</table>

Figure 4: Cable glands on the backside of the outdoor protective housing

To get the Ethernet cable with a plug through the opening, you have to cut the rubber insert.
3.2 Mounting of the USB Server

Insert the USB server at a slanted angle to the designated disk (Figure 5). If necessary, remove the clip from the USB server (Figure 6) and turn the USB server (Figure 5) until the clip is locked into the bracket (Figure 7).

Figure 5: Insertion of the USB server into the provided board

Figure 6: USB server clip

Figure 7: USB server holding plate
The USB server is now ready mounted (Figure 8):

Figure 8: USB server ready mounted
3.3 Mounting of the TIM Camera

Step 1: Loosen the knurled screw from the mounting plate (Figure 9).

Figure 9: Loosen the knurled screw from mounting plate
Step 2: Carefully remove the mounting plate (Figure 10).

Figure 10: Remove the mounting plate
Step 3: Mounting the TIM cameras

Mount the TIM4xx/ 640/ 1M/ 05M to the mounting plate using the supplied 1/4 x 3/8 UNC inch screw and a washer DIN125A-6,4 A2 (Figure 11).

Mount the TIM160 to the mounting plate using the supplied 1/4 x 3/8 UNC inch screw and four washers DIN125A-6,4 A2 (Figure 12).

Mount the TIM2xx to the mounting plate using the supplied 1/4 x 1 1/4 UNC inch screw, the distance sleeve and one washer DIN125A-6,4 A2 (Figure 13).
After the camera is fully assembled, the mounting plate can be attached back to the outdoor protective housing with the provided screw.

**Figure 14:** Fully assembled TIM camera on mounting

**Figure 15:** Fully assembled TIM camera in outdoor protective housing
4 Accessoires

4.1 Industrial Process Interface (PIF)

In addition to the installation of the TIM camera and the USB server, the industrial PIF (without housing) can be integrated into the outdoor protective housing as shown in Figure 16. The industrial PIF without housing can be purchased under the order number TM-CJAPIF500V2-TIM.

![Image of Outdoor protective housing with industrial PIF]

Figure 16: Outdoor protective housing with industrial PIF

Before the industrial PIF is attached, the camera must be installed in the outdoor protective housing, see Chapter 3.3.
4.2 Wall Mount

The outdoor protective housing can be attached to a wall using a wall mount. This is available as an option under the part number **TM-OPHWM-TIM**.

**Figure 17:** Wall mount for outdoor protective housing

**Figure 18:** Outdoor protective housing with wall mount
Appendix A - Declarations of Conformity

CE Declaration of Conformity

DBK Technitherm Limited under our sole responsibility declare that the product(s) as listed below:

Product category: PTC Heating Elements (for Building-in)

Model names: HP Series (HP03, HP04, HP05 & HP06)

- Conforms to the principal safety objectives of the European Low Voltage Directive 2006/95/EC, by application of the following standards:
  DIN EN 60335-1 (VDE 0700-1):2012-10; EN60335-1:2012
- Conforms to the European RoHS Directive 2011/65/EC.
- Conforms to the European REACH Directive 1907/2006/EC.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Signed</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>M. J. Lewis</td>
<td>Development Director</td>
<td>[Signature]</td>
<td>02/10/2014</td>
</tr>
</tbody>
</table>

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CE-Konformitätserklärung

Dokument-Nr./
Monat, Jahr: CE 34 – 10/2016

Wir erklären, dass die Produkte
RAH8035S1
RAH8038S1
RAH9225S1
RAH1238S1

Konform zu folgenden Standards sind:
EN 60950-1:2006+A11+A1+A12+A2

Prüfgrundlage(n):
Diese Standards geben den Status zum Zeitpunkt der Erstellung des Zertifikates wieder.

Ausstellungsdatum:
08.08.2016

Burgthann, 28. Mai 2015

MOTRAXX ELEKTROGERÄTE GmbH

Philip Scherbel

Diese Erklärung beinhaltet keine Zusicherung von Eigenschaften.
Die Sicherheitshinweise der Produktunterlagen sind zu beachten.
EU-Konformitätserklärung

Name und Anschrift des Herstellers 
VC Videocomponents GmbH  
Brachenfelder Str. 45  
D-24534 Neumünster

Produktbezeichnung 
Wetterschutzgehäuse mit Sonnendach, IP66  
aufklappbar, 230V AC für Heizung + Kamera

Artikelnummer: 14510


Die Geräte entsprechen folgenden Normen:


Die oben aufgeführten Geräte werden daher mit einem CE-Zeichen ausgestattet.

Bei eigenmächtiger Änderung an den gelieferten Produkten und/oder nicht bestimmungsgemäßer Verwendung erlischt die Gültigkeit dieser Konformitätserklärung.

Neumünster, 10. März 2013  
VC-Videocomponents GmbH

Margrit Ammermann  
Geschäftsführung