

### Proper Environment

- Protection class: IP65 (applies only when sensor cable is plugged in)  
 Lenses are excluded from the protection class. Contamination of the lenses causes impairment or failure of the function.
- Max. ambient temperature (of the sensor) without cooling: 45 °C (113 °F)
- Max. ambient temperature (of the sensor) with cooling: 95 °C (203 °F)
- Max. pressure: 3 bar (cooling medium), 5 bar (compressed air)
- Only fluid cooling media are permissible. Air / gas cooling is not sufficient.

### Unpacking/Included in Delivery

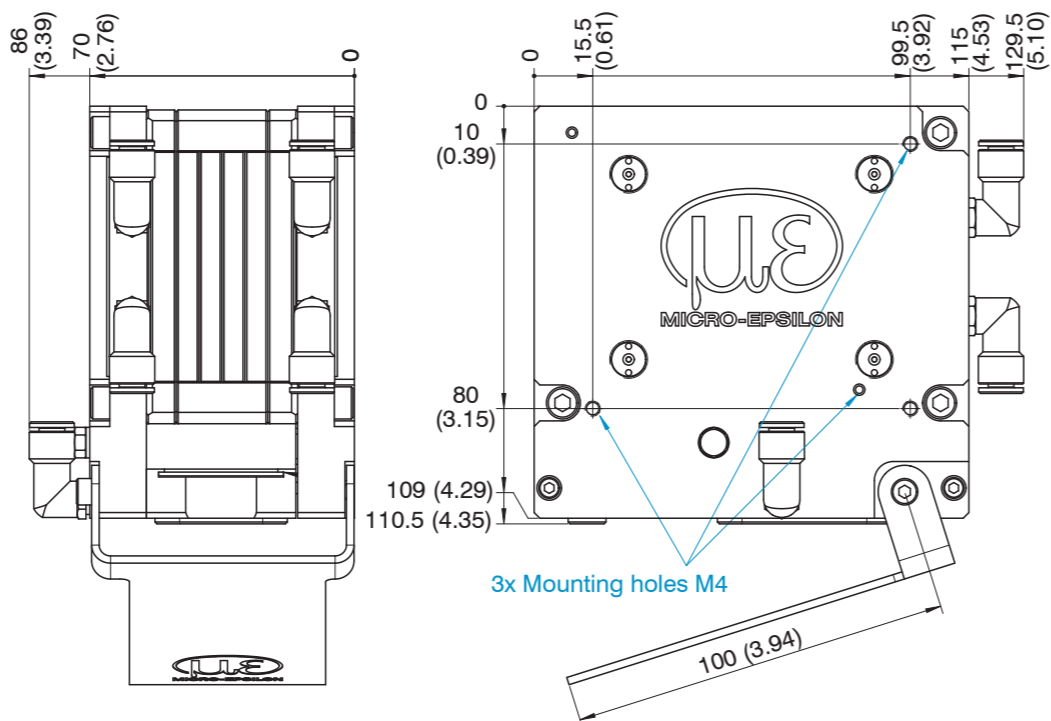
- 2 cooling plates (only with protective/cooling housing)
- 2 base plates
- 1 protective plate
- 1 protective glass
- 1 protective glass slot
- 1 additional compressed air connection

### Sensor Mounting, Dimensions

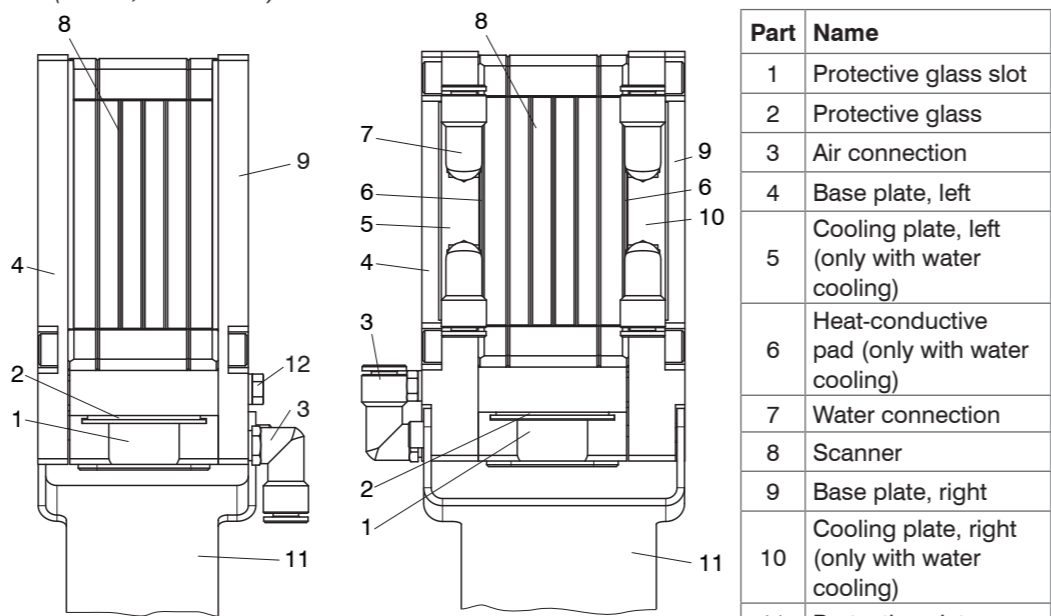
The scanCONTROL sensors are optical sensors for measurements with micrometer accuracy.

Ensure careful handling during installation and operation!

- Mount the sensor only to the existing mounting holes/threaded holes on a flat surface. Clamps of any kind are not permitted and can lead to failure of the sensor.



Protective/cooling housing with blow-out system and water cooling, article 2105077, dimensions in mm (inches, rounded off)



Protective housing and protective/cooling housing assembly

| Part | Name   |
|------|--|
| 1    | Protective glass slot                          |
| 2    | Protective glass                               |
| 3    | Air connection                                 |
| 4    | Base plate, left                               |
| 5    | Cooling plate, left (only with water cooling)  |
| 6    | Heat-conductive pad (only with water cooling)  |
| 7    | Water connection                               |
| 8    | Scanner  |
| 9    | Base plate, right                              |
| 10   | Cooling plate, right (only with water cooling) |
| 11   | Protective plate                               |
| 12   | Optional air connection                        |

### Protective Housing scanCONTROL LLT30xx



- Adaptive protective housing for scanCONTROL 30xx
- Measuring ranges 25 - 200 mm
  - Air supply of the optical path
  - Exchangeable protective glass



### Protective/Cooling Housing scanCONTROL LLT30xx



- Adaptive protective/cooling housing for scanCONTROL 30xx
- Measuring ranges 25 - 200 mm
  - Air supply of the optical path
  - Exchangeable protective glass
  - Water cooling circuit for sensor cooling (ambient temperatures up to 95 °C (203 °F))

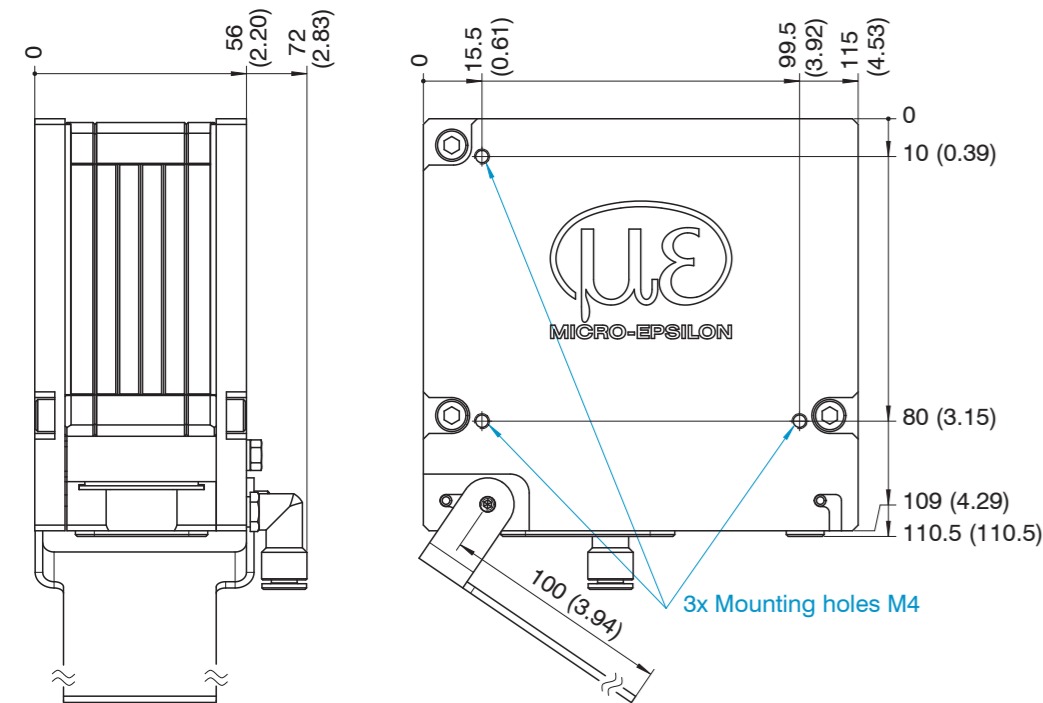
### Use

In dirty environments and with increased ambient temperatures, it is recommended to operate the scanner with a protective housing or protective/cooling housing. The protective housing and protective/cooling housings are optional accessories. Their use may impair the linearity of the sensor in the complete system which is why a referenced measurement is recommended.

The system must only be operated within the limits specified in the technical data. The sensor must be used in such a way that no persons are endangered or machines and other material goods are damaged in the event of malfunction or total failure of the scanner. Take additional precautions for safety and damage prevention in case of safety-related applications.

### Variants

- Protective housing with blow-out system and compressed air connection, article 2105076
- Protective/cooling housing with blow-out system, compressed air connection and water connections for cooling, article 2105077



Protective housing with blow-out system, article 2105076, dimensions in mm (inches, rounded off)

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## Mounting of Protective/Cooling Housing

If the protective/cooling housing is installed, make sure that the product labels are removed from the scanner (on the sides).

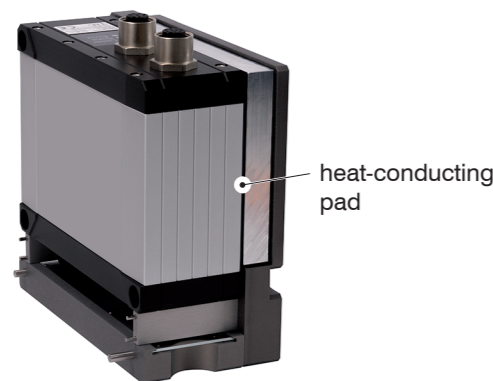
- ➔ Join the left base plate to the protective glass slot. Insert the left cooling plate. Centering pins hold the cooling plate in place.



- ➔ Remove the protective film from one side of the heat-conducting pad and stick it on the scanner.

- ➔ Remove the protective film from the heat-conducting pad.

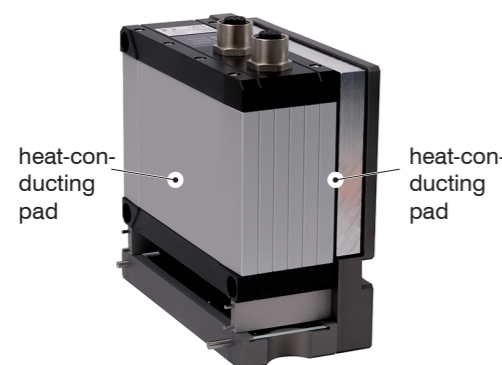
- ➔ Join the scanner to the left cooling plate.



- ➔ Join the right base plate to the right cooling plate.

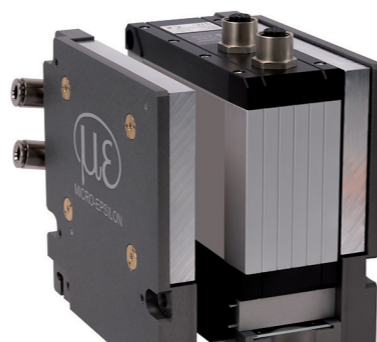


- ➔ Remove the protective film from one side of the second heat-conducting pad and stick it on the scanner.



- ➔ Remove the protective film from the heat-conducting pad.

- ➔ Join the right base plate with the right cooling plate to the scanner.



- i Pressing the scanner onto the protective glass slot in order to avoid gap formation ensures proper function of the blow-out system.

- ➔ Tighten the fastening screws M5x16 on both sides with a torque of 3.5 Nm. With RT (Rear Tail) sensors, only the lower bolts are required.

Slightly tighten the adjusting screws (1) on the base plates by hand as far as it will go in order to ensure proper heat dissipation. Screw back by 1/2 turn. The pitch of the adjusting screw is 0.75 mm/turn.

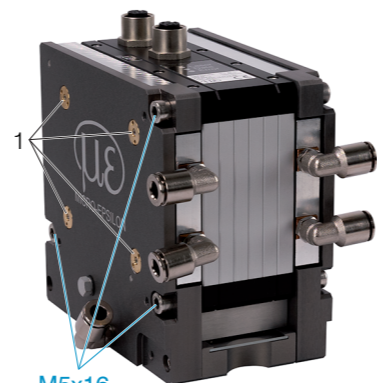
- i Make sure that the ball bearing is half compressed when installed in order to achieve the optimal tolerance compensation. This is why the adjusting screw must be turned back by 1/2 turn after being slightly tightened to the stop.

- ➔ Push the protective glass from the front into the protective glass slot as far as it will go.

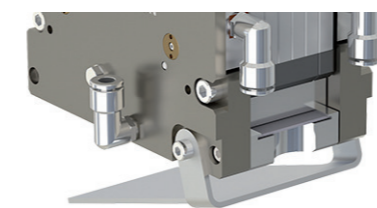
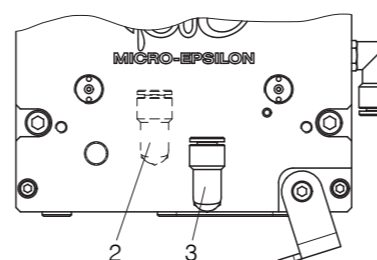
Depending on the ambient conditions, the gap between the sensor and the protective glass can be flushed with compressed air. For this purpose, the blind plug (2) is replaced by an additional air connection (included in the scope of delivery).

- 2 Blow-out system gap between sensor and protective housing
- 3 Blow-out system protective glass

- ➔ Mount the protective plate at the laser entrance window. For fastening, use the Allen screw (M4x8) and the set screw (M4x10) included in the scope of supply.



M5x16  
3,5 Nm



## Mounting the Protective Housing

- ➔ Join the scanner to the left base plate with the protective glass slot.

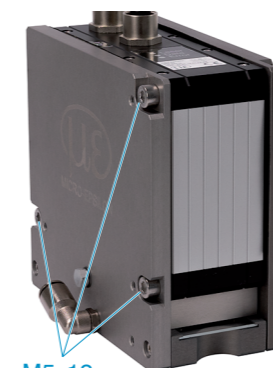
- ➔ Join the right base plate to the scanner.



- i Pressing the scanner onto the protective glass slot in order to avoid gap formation ensures proper function of the blow-out system.

- ➔ Tighten the fastening screws M5x12 on both sides with a torque of 3.5 Nm. With RT (Rear Tail) sensors, only the lower bolts are required.

- ➔ Push the protective glass from the front into the protective glass slot as far as it will go.

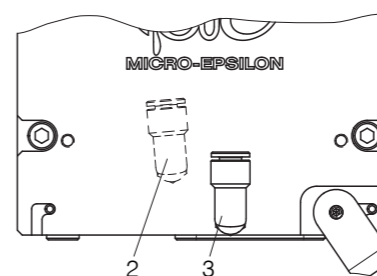


M5x12  
3,5 Nm

Depending on the ambient conditions, the gap between the sensor and the protective glass can be flushed with compressed air. For this purpose, the blind plug (2) is replaced by an additional air connection (included in the scope of delivery).

- 2 Blow-out system gap between sensor and protective housing
- 3 Blow-out system protective glass

- ➔ Mount the protective plate at the laser entrance window. For fastening, use the Allen screw (M4x6) and the set screw (M4x6) included in the scope of supply.

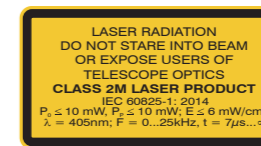


## Laser Class Marking

The scanCONTROL 30xx sensors operate with a semiconductor laser. Operation of the laser is indicated visually by the LED on the sensor. The laser warning signs are concealed by the protective housings or had been removed prior to mounting.

- ➔ Stick the warning and information label supplied with your scanner visibly onto the protective or cooling housing.

### Laser class 2M



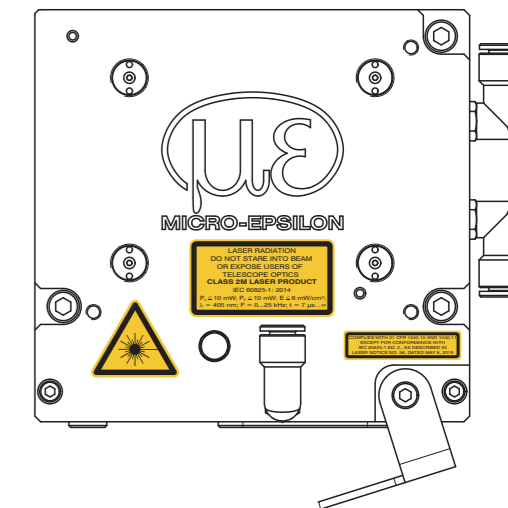
LLT30xx-25/BL, LLT30xx-50/BL,  
LLT30xx-100/BL



LLT30xx-25, LLT30xx-50, LLT30xx-100



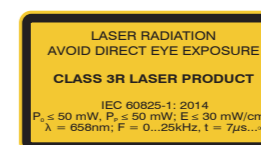
LLT30xx-200



### Laser Class 3R



LLT30xx-25, LLT30xx-50



LLT30xx-100, LLT30xx-200

In addition, the following label must be affixed above the laser exit on the sensor housing:

