SWISS PRECISION

DIMETIX
LASER DISTANCE SENSORS

Manual

Air cooling Jacket 500216

V 1.1

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Dimetix AG • Degersheimerstr. 14 • 9100 Herisau • Switzerland • Phone +41 71 353 00 00 • Fax +41 71 353 00 01 • info@dimetix.com • www.dimetix.com

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1 Assembly

1.1 Mounting sensor

1) Take out the guide bracket from housing after opening the rear cover.

Fig. 1: Rear Cover

2) Connect the sensors D-sub connector to the D-sub connector of the housing terminal board.

Fig. 2: Laser sensor mounting

3) Screw the laser sensor to the guide bracket with bolts (M4 x 8mm).

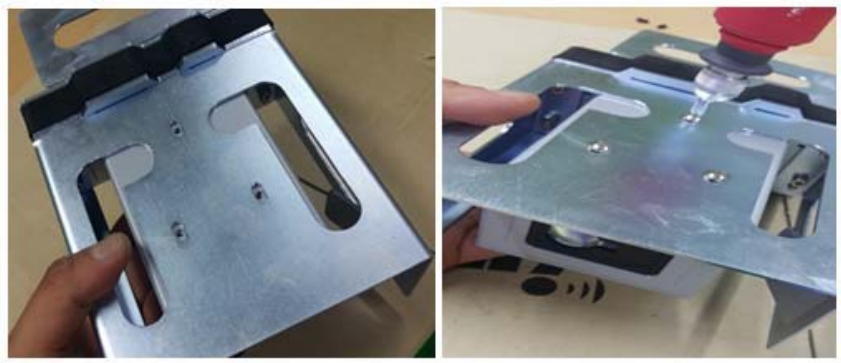


Fig. 3:

1.2 Wiring

For easy wiring of the cooling jacket we recommend to work as follows:

1) Pull out the guide bracket whilst holding it as shown in Fig. 6. Pull out until it stops at the screw thread of the cable gland as in Fig. 4.

Fig. 4

Fig. 5

2) If the guide bracket is jammed, loosen the 4 bolts (Fig. 6) with a screw driver and try again.

Fig. 6

3) Wire up the cables by inserting them through the cable gland according to the wiring diagram on page 9.

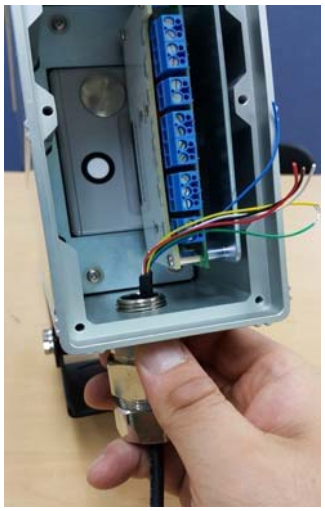


Fig. 7:

Fig. 8

4) After slightly loosening the bolts of the guide bracket, push the guide bracket into the housing and fix the bolts tightly (Fig. 9).

Fig. 9:

Fig. 10

Please note: Whilst fastening the screws, be careful not to damage the rubber sponge. Once the screw has reached the metal plate, turn the screw only twice or three times

The rubber sponge fixed by four bolts seals out oil and moisture to prevent damage to the wiring and terminal board.

5) Mount the rear cover to the back of the housing with six screws as shown in Fig. 11.

Fig. 11:

1.3 Base Alignment

Adjust the direction of the sensor with the bolts on the tilting base.

We recommend to manually support the housing for alignment to prevent damage of product because housing's center of gravity is lurched forward.

Fig. 13:

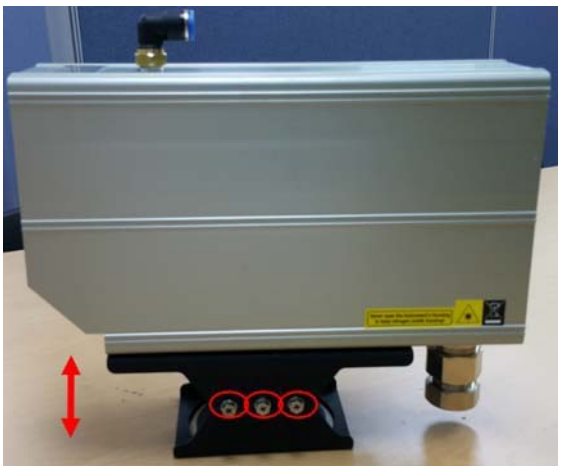


Fig. 12:

1.4 Mounting air line

1.4.1 How to insert tubes

Insert tubes (10mm) into the quick coupler of an air nipple (air nipple size : PT 1/8).

Fig. 14:

Fig. 15:

1.4.2 How to take out tubes

Pull out the tubes pushing the quick coupler to take them out of the air nipple as Fig. 16 and 17.

Fig. 16:

Fig. 17:

1.5 Air purging

Supplied air circulates inside the housing through an air guide plate, thus laser sensor is cooled.

In addition a curtaining effect protects the lense of the laser sensor against contamination of dust or dirt generated at the factory. The main purpose of this air jacket is cooling.

The air used to purge the housing should be filtered and dried, to avoid contamination of the sensor by oil and moisture. Further, use a valve to adjust the airflow in order to avoid excessive usage of compressed air.

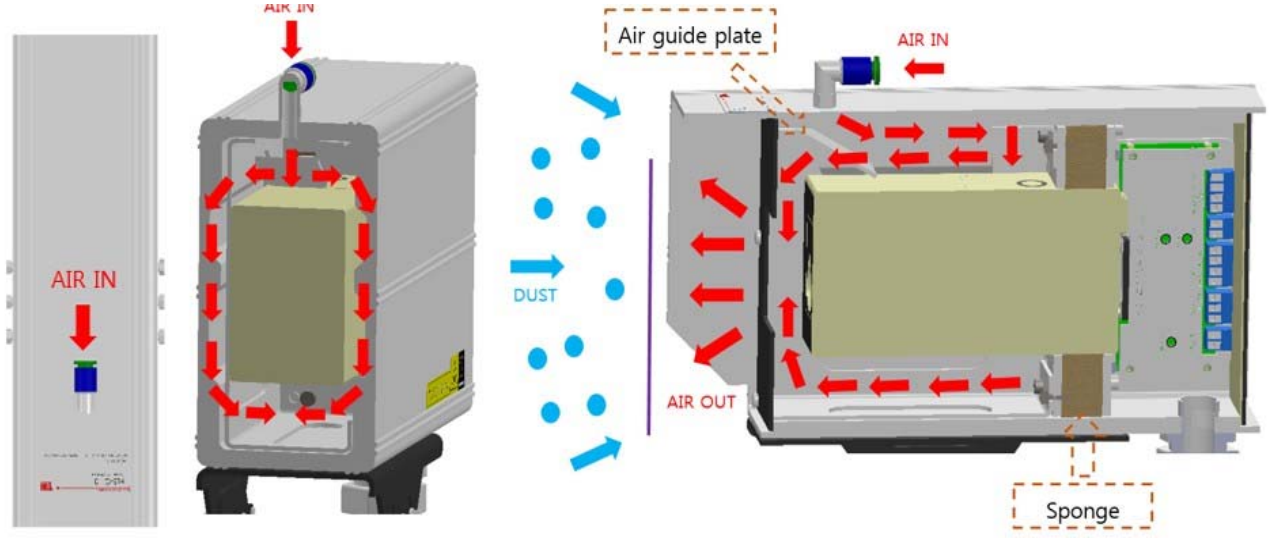


Fig. 18: Air flow

⚠	**The rubber sponge (material EVA) seals the terminal board from the air purged area. This gives an additional protection of the electric connection against potential contamination of air. Furthermore the rubber inlay reduces vibrations.**

2 Wiring Diagram

The air jacket comes with a terminal board for easy wiring. Three LED's show the status of the Power, Relay 1 and Relay 2.

Designator
COM2
NO2
COM1
NO1
AO +
AO -
RX+
RX-
TX+
TX-
RXD
TXD
GND
V + (24VDC)
V -

2.1 Power

Green LED turns on if 24VDC power is applied to the terminal board.

Fig. 19

2.2 Relay

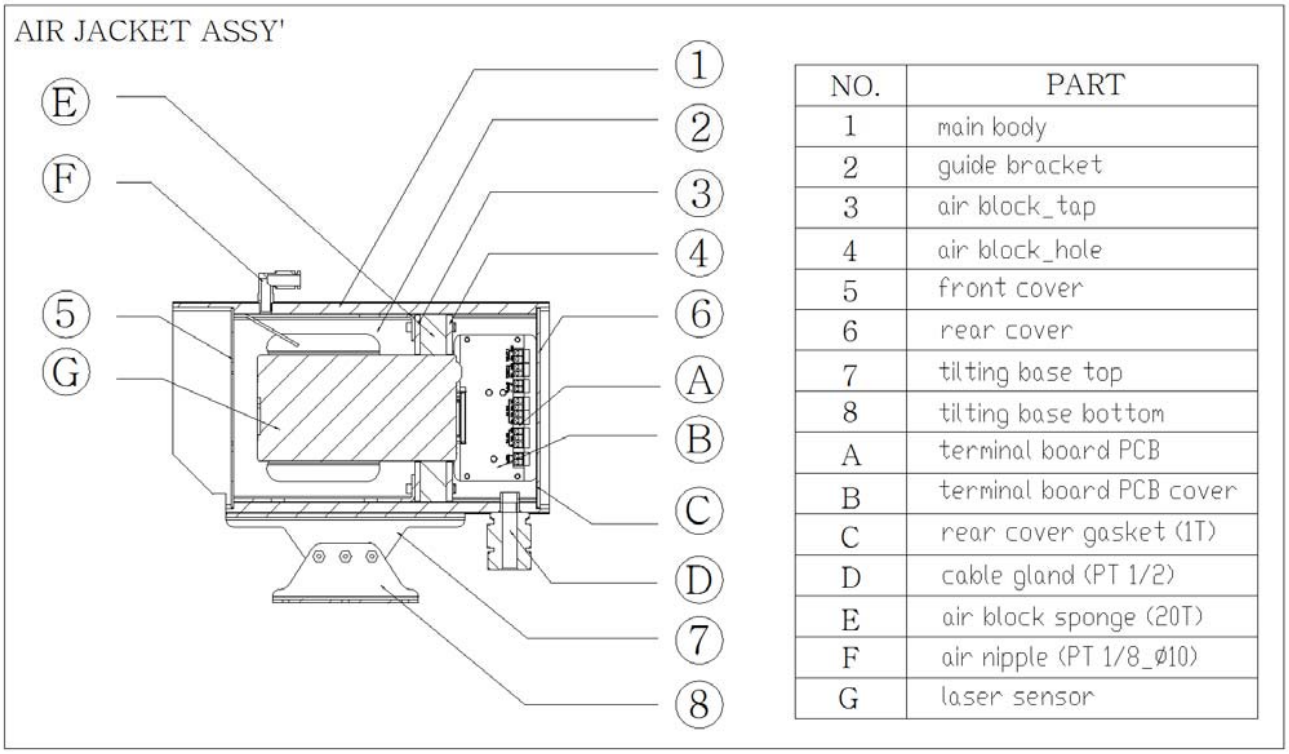
The terminal board has two solid relays connected to the DO1 respectively DO2 output of the sensor. The switching time of the relays is about 20ms. If this switching time is not an issue in the application, using the relays output is more convenient. However, if the application is time critical and the 20ms delay is not acceptable, use a cable glans at the sensor and connect directly to the screw terminal inside the sensor.

For easy commissioning you can find the LED at the terminal board showing he status of the relays.

Fig. 20 Relay 1 on

Fig. 21: Relay 2 on

3 Structure



NO.	PART
1	main body
2	guide bracket
3	air block_tap
4	air block_hole
5	front cover
6	rear cover
7	tilting base top
8	tilting base bottom
A	terminal board PCB
B	terminal board PCB cover
C	rear cover gasket (1T)
D	cable gland (PT 1/2)
E	air block sponge (20T)
F	air nipple (PT 1/8_ø10)
G	laser sensor

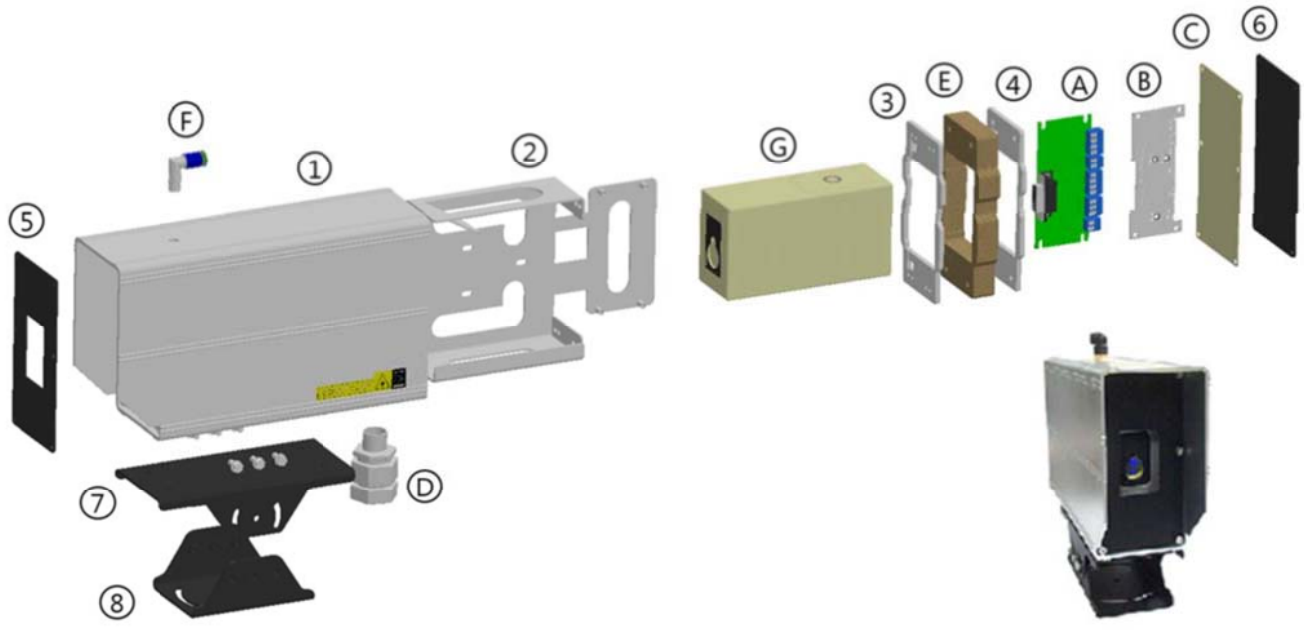
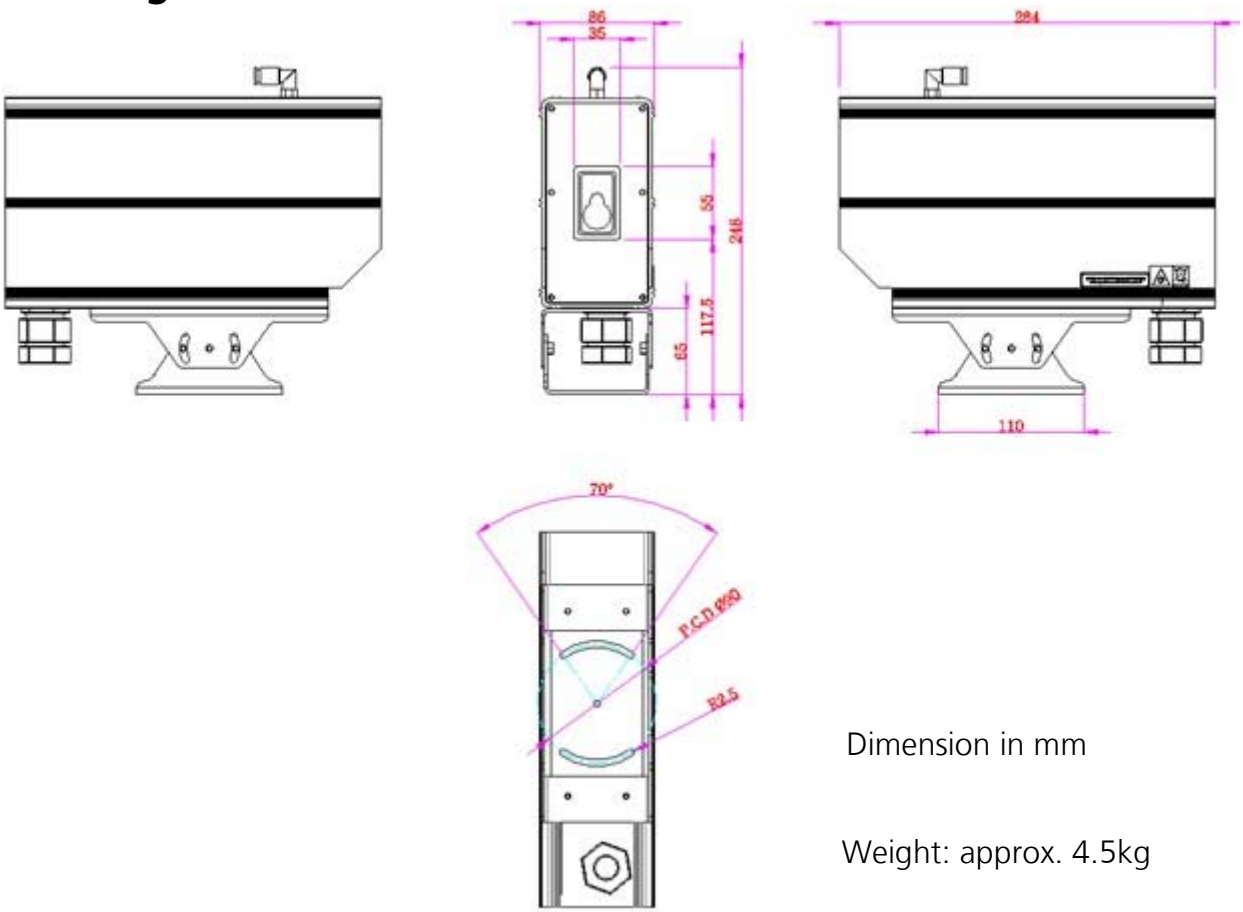


Fig. 22

4 Drawing



Dimension in mm

Weight: approx. 4.5kg