

ASCOSpeed ASP5500

Assembly Instructions



MICRO-EPSILON Optronic GmbH
Lessingstrasse 14
01465 Dresden-Langebrueck,
Germany

Telephone: +49 35201 / 729 - 0
Telefax: +49 35201 / 729 - 90
www.micro-epsilon.de optronic@micro-epsilon.de

1. Safety instructions

1.1. General

Refer to the manual. Operation only **within specification**.

Supply voltage 20 V ... 28 V DC (direct current)

Persons must not be endangered or equipment damaged due to malfunction or total failure of the sensor.

1.2. Operational environment

Protection rating: IP65 (only applicable to water),
IP67 (in stainless steel housing with oil resistant gaskets)

Operating temperature: 0 ... 50 °C (without external cooling)

Storage temperature: -20 ... +70 °C

EMC standards: DIN EN 61326-1:2006

- Interference emission EN 61 000-6-3 / DIN EN 55011
- Interference resistance: EN 61 000-6-2 / DIN EN 61326

1.3. Caution

Glare: Do not stare directly into the LED light or its direct reflection at the object being measured

Protective case: Be careful when opening. The cover is heavy and not locked!

2. Standard equipment

- ASCOSpeed 5500 with accompanying CD and assembly instructions,
- PC5500-5 power cable, length 5 m,
- C5500-5 service cable, Sub-D female connector (COM interface).

3. Optional accessories

- SC5500-x/IF1 interface cable (or IF2 or IF3), can be used in a cable carrier system, with free cable ends, length x = 5 m or 15 m.
- PS2010 power pack, 24 VDC / 2.5 A
- SC5500-10/MS connection cable for master-slave operation, length 10 m.

4. Installation and mounting

Unobstructed view of the target.

Smooth, stable running of the target, installation as close as possible to guiding elements, rollers, etc.

Do not measure on curved surfaces!

Oscillation-free mounting plate with four M6 fastening screw threads.

Ensure heat dissipation to the support.

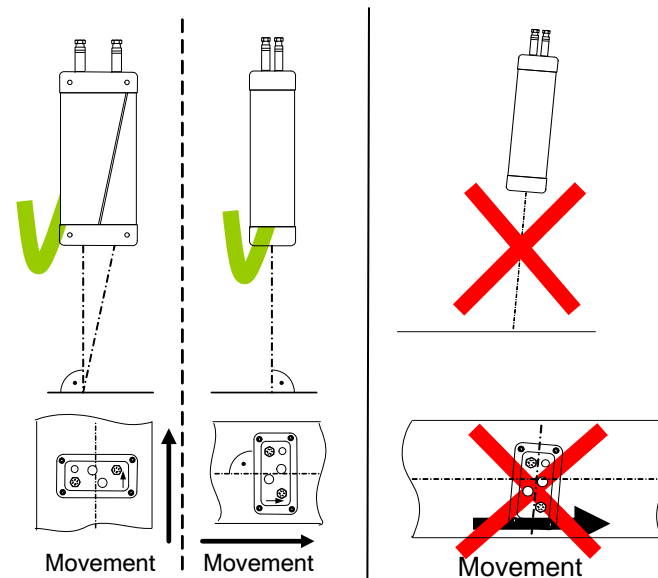
Ensure sufficient **scavenging air** in rolling mills.

Keep a **mounting distance** to target of **300mm**.

M6x40 hexagon socket (Allen) bolts (or longer, not included in the scope of delivery).

5. Alignment

- **Mount at right angles** to the surface to be measured.
- **Arrow on jack panel** → movement direction set at the factory.



Correct installation

Tilting and rotating

6. Installation instructions

- **Only connect devices when system is switched off.**
- **In addition, connect the service cable** (included) to allow access to the device at any time.
- The smallest **bending radius** for the cables recommended is 60 mm.

7. Display

LEDs on the device side:
"signal"

- **Green:** Signal OK
- **Red:** No signal
- **Yellow:** Device is initialising



"busy" yellow command processing / calibration / offline measurement

"error" red flashes in event of "fatal error" or is briefly lit in case of "critical error"

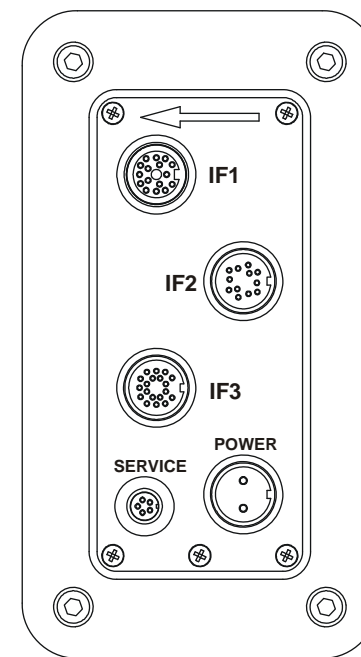
Note: Materials moved and "signal" LED lights up briefly green → valid measured values.

8. Connections



Power:
+24 V in: pin 1 (white)
0V in: pin 2 (brown)

Colours for PC 5500-5 power cable



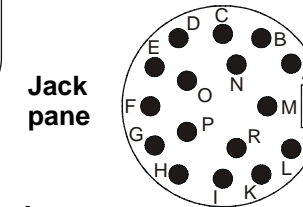
I (on rear of device)

Interface socket IF1, 16-pole
(extract)

Signal	Pin	Colour on socket	Colour in the cable SC5500-x/IF1
OUT1A+	A	wht	wht
OUT1A-	B	br	br
OUT1B+	C	ye	ye
OUT1B-	D	gn	gn
GNDEXT1	G	blu	blu
POWEREXT1	H	red	red
GND-OUT1	I	bla	bla
Not assigned	K	pur	pur
DIR IN+	L	pnk-gr	gr-pnk
DIR IN-	M	red-blu	red-blu
TRIG IN+	N	wht-gn	wht-gn
TRIG IN-	O	br-gn	br-gn

Notes:

- **Arrow on jack panel** → movement direction of the object being measured (set at the factory). **Direction can be changed by parameterisation!**
- IF2 and IF3 only available in the version with interface expansion module.
- See also operating instructions for complete pin assignment



Jack pane

9. Commissioning

1. Connect the ASCOSpeed via the **PC5500-5** power cable.
2. **Switch on the power supply** for the ASCOSpeed 5500.
→ **A bright red spot of light** will appear on the target.
3. **Display:** LEDs on the device side are lit up as described in Chapter 7 "Display". The smallest **bending radius** for the cables recommended is 60 mm. **Note:** **Move target** → "signal" LED lights up briefly green (valid measured values).
4. **Activation** of the pulse outputs, see 10.3.
5. Connect the **encoder display device** with its own operating voltage at the **OUT1 A and B** pulse output (interface socket IF1).
Note: For the HTL level at OUT1, connect an additional and suitable **auxiliary voltage** at POWEREXT (H) and GNDEXT (G) from IF1.

See operating instructions for circuit and setting options.

10. Operation with a PC

10.1. Setting up

- Connect the ASCOSpeed 5500 to the serial port (COM; RS232) of a PC using the C5500-5/RS232 **service cable**.
- **Start a terminal program** (e.g.: "Hyperterminal" from Microsoft Windows "Accessories → Communications").
- **Basic settings:** 9600 baud, no parity and protocol XON/XOFF (9600, 8N1, XON/XOFF). Set the display in the **terminal program** to "String".

10.2. Help

- The **READ** command (or **Read** or **reAD** or **read**) returns **all** the parameters set as answer.
- Using the "Help" command or "?", all the valid commands will be listed without any commentary - with the "Help command" only information on the selected Command will be listed.

10.3. Activation of the pulse output

1. **Pulse interface OUT1** (on IF1): 5V TTL level
2. Selection of the **scaling factor: INCFACOR 1 1** (e.g. for 1 pulse / mm on the OUT 1 channel)
3. **Activation** of the OUT1 pulse output by means of the RS232 service interface (baud rate, parameter ...):
Activation command: INCO n 1
4. **Save** the activation using the ***store** command and the **password:** micro

See the operating instructions for details of other communication **commands**.

11. Additions

11.1. Factory settings

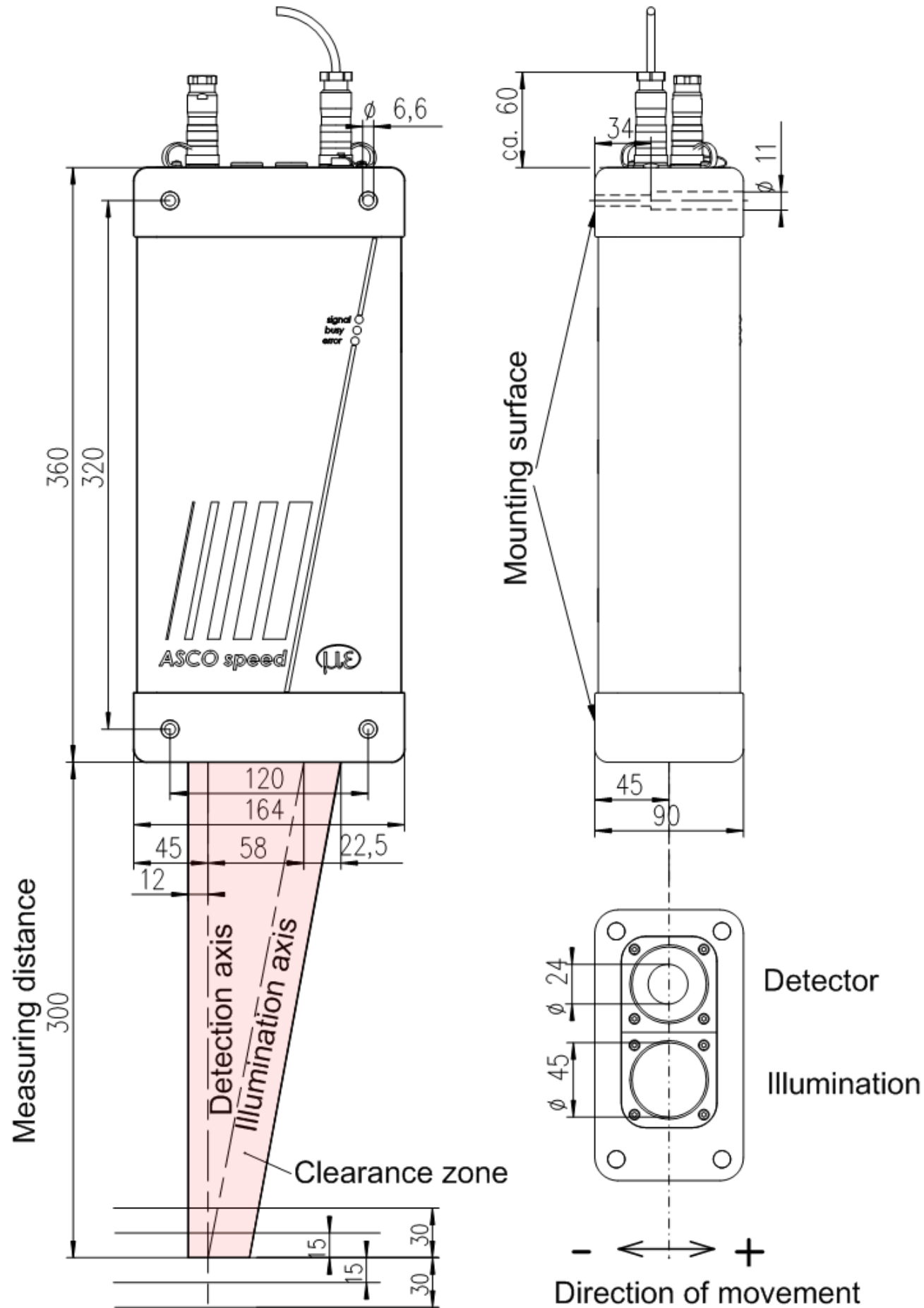
- The ASCOSpeed 5500 is completely functional with its factory settings.
- The **internal brightness regulator is switched on** and takes over the automatic adaptation to the target.
- **All outputs inactive**, communication only possible using the S1 service port.

11.2. CD-ROM and Internet

- **Sample files** for typical applications are provided on the enclosed **CD-ROM**, transmission to the ASCOSpeed by means of a terminal program (see 10.1).
- **Other documents** of the sensor concerned can be found at "Download" at <http://www.micro-epsilon.de/> ready to be downloaded from MICRO-EPSILON.

Subject to alterations.

Dimensional drawing of the ASP5500 (dimensions in mm, not to scale)
 Weight approx. 5.6 kg



11.3. Stainless steel housing

The stainless steel housing is designed for mechanical protection, but not as a sole means of heat dissipation in a hot environment.

Please note

- Ensure sufficient **scavenging air** in **rolling mills**.
- Be careful opening it when it is in mounted condition. **The cover of the protective case is heavy and not locked!**
- **Do not** fit the tube if it is in a twisted condition! Pay attention to the dimensional drawing
- **Keep a distance of 265 mm from the protective case to the target** (plate)

Dimensional drawing of the ASP5500 (dimensions in mm, not to scale), weight: approx. 33 kg

