

# ASCOSpeed ASP5500

## Assembly Instructions



MICRO-EPSILON  
8120 Brownleigh Dr  
Raleigh NC 27617

phone: 919 787 9707  
fax: 919 787 9706  
[www.micro-epsilon.us](http://www.micro-epsilon.us)

### 1. Safety instructions

#### 1.1. General

Read manual before you start using the device.  
Operation only according to specification.

Supply voltage 20 V ... 28 V DC

Risk of injury and damage to equipment due to malfunction or failure of the sensor must be prevented

#### 1.2. Operational environment

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

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

Storage temperature: -20 to +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 from the object being measured

Protective housing: Caution when opening. The cover is heavy and mechanically not secured!

### 2. Standard equipment

- ASCOSpeed 5500 including CD and manual
- 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), for use in cable tracks, with free leads length x = 5 m or 15 m.
- PS2010 power supply, 24 VDC / 2.5 A
- SC5500-10/MS connection cable for master-slave operation, length 10 m.

### 4. Installation and mounting

Unobstructed view to the target.

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

Do not measure on curved surfaces!

Vibration free mounting plate with four M6 fastening screw threads.

Ensure heat dissipation via mounting bracket.

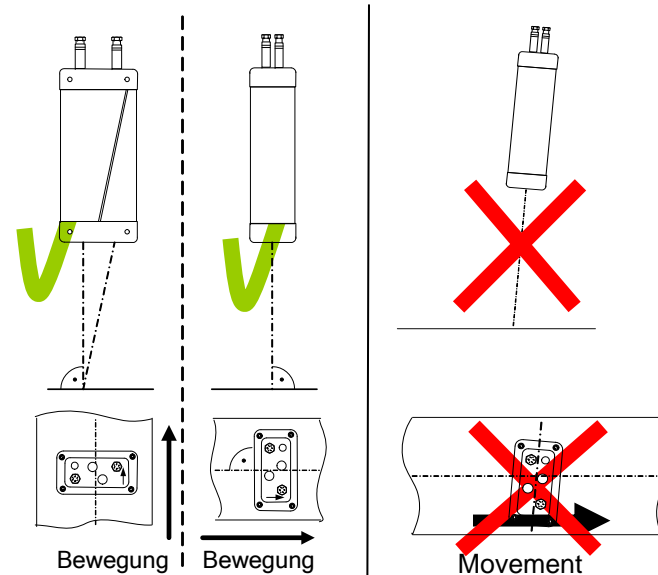
Ensure sufficient air flow in rolling mills.

Keep sensor distance to target at 300mm.

M6x40 hexagon socket (Allen) screws (or longer, not included in delivery).

### 5. Alignment

- Mount at right angle to the measurement surface.
- Arrow on connection panel → facing movement direction according to factory default setting



Correct installation

Tilt / Rotation

### 6. Installation instructions

- All wiring be done with no power supplied to the unit.
- For set up connect the service cable (included) to allow access to the device at any time.
- Smallest bending radius for the cables 60 mm.

### 7. Display

Status LEDs at sensor:

"signal"

- Green: Signal OK
- Red: No signal
- Yellow: Device is initializing



"busy" yellow communication / calibration / offline measurement

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

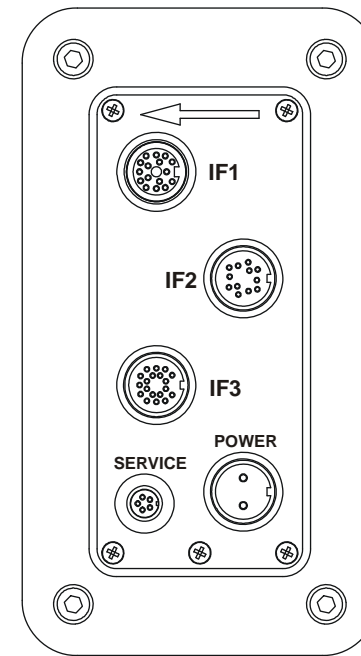
Note: Target moving and "signal" LED lights up briefly green → valid measured readings.

### 8. Connections



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

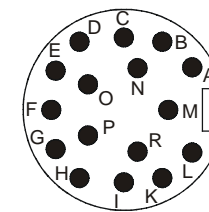
Colors for PC 5500-5 power cable



I (on rear of device)

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

Connector pane



Interface socket IF1,

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	blue	blue
POWEREXT1	H	red	red
GND-OUT1	I	black	black
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

16-pin connector

### 9. Commissioning

- Connect the ASCOSpeed via the PC5500-5 power cable.
- Turn on the power supply for the ASCOSpeed 5500. → A bright red spot of light will appear on the target.
- 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).
- Activation of the pulse outputs, see 10.3.
- Connect the encoder display device or any other signal processing unit such as Quad card, PLC or scope) to the OUT1 A and B pulse output (interface IF1).  
Note: For the HTL level at OUT1, connect an additional and suitable auxiliary voltage at POWEREXT (H) and GNDEXT (G) from IF1.

See manual for detailed circuit description and settings

### 10. Set up via 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).

#### 10.2. Help

- The READ command (or Read or reAD or read) returns all the parameters set
- Using the "Help" command or "?", all the valid commands will be listed with its explanation - with the "Help command" only information on the selected Command will be listed.

#### 10.3. Activation of the pulse output

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

See the manual for details of all communication commands.

### 11. Additions

#### 11.1. Factory settings

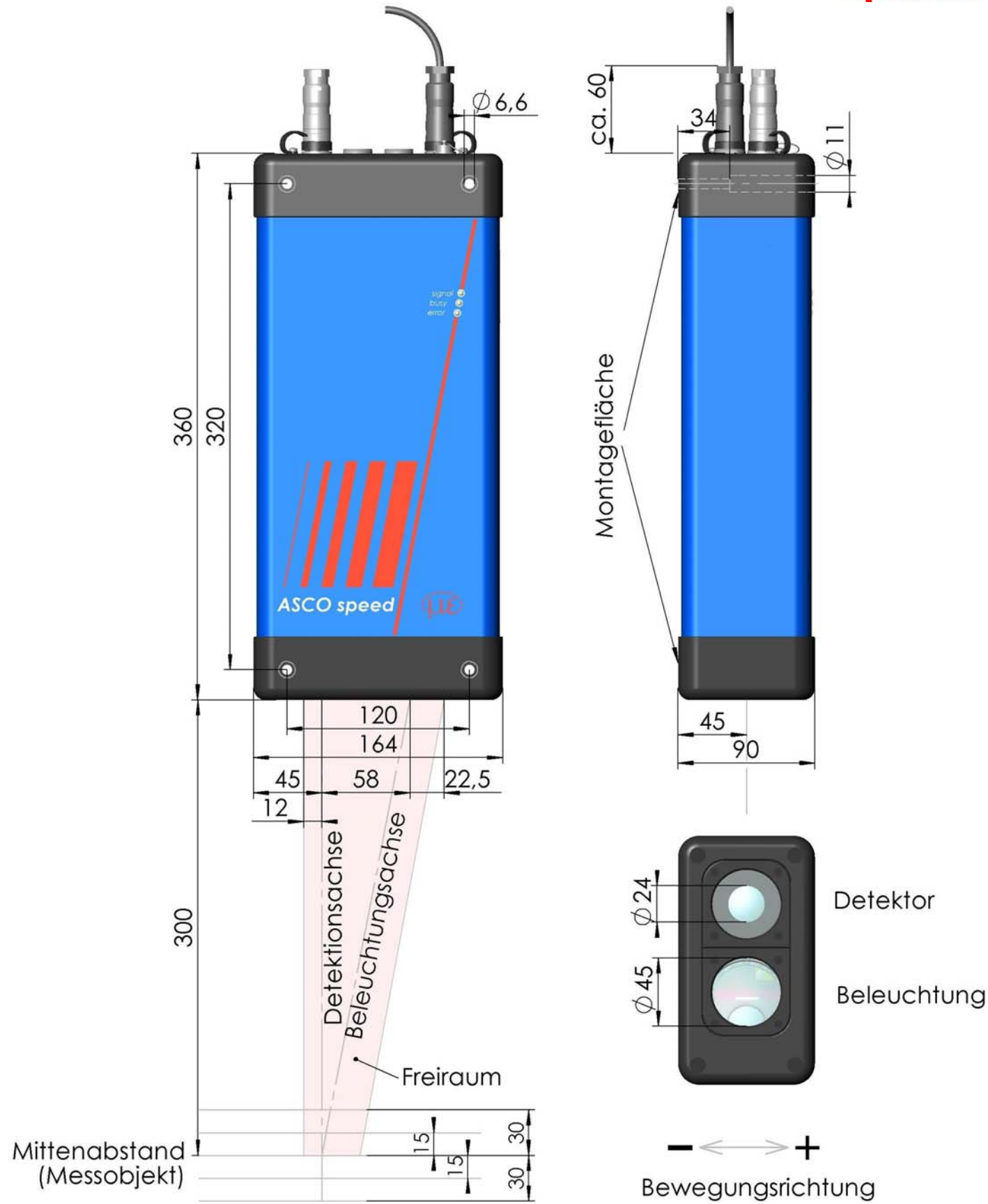
- The ASCOSpeed 5500 is completely functional with its factory settings.
- The internal brightness control is activated and automatically adjusts the LED based on the target.
- All outputs inactive, communication only possible using the S1 service port.

#### 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 for the sensor can be found at "Download" at <http://www.micro-epsilon.us> ready to be downloaded from MICRO-EPSILON.

Subject to change

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 means of heat dissipation in a hot environment.

#### Please note

- Ensure sufficient air flow in rolling mills.
- Be careful opening, the lid of the protective case is heavy and not locked!
- Do not adjust the light exit tube! Pay attention to the dimensional drawing
- Keep a distance of 265 mm from the protective case to the target

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

