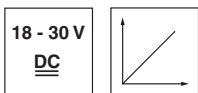




OPS 774

Optical position sensor



- 20mm line length at the object (for a scanning distance of 44mm)
- 2mm depth of field
- Almost reflection-independent detection of material edges
- Analogue current output indicating the position of the material edge
- Analogue current output for contamination monitoring
- Metal housing with glass cover, protection class IP 65

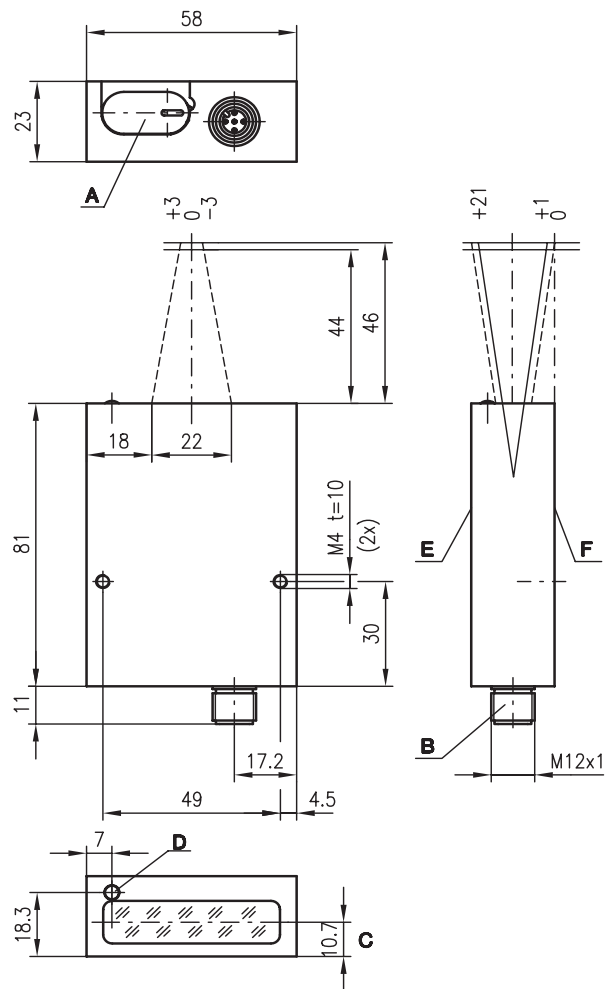


Accessories:

(available separately)

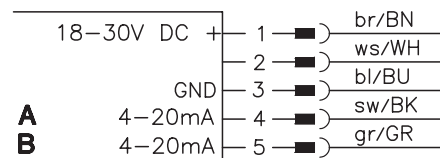
- M12 connectors

Dimensioned drawing



- A Diagnostics plug
- B Connector M12
- C Optical axis
- D Indicator diode
- E Cover
- F Floor/reference surface

Electrical connection



- A Edge position
- B Exposure time

We reserve the right to make changes • ops_774_e.fm

Specifications

Optical data

Measurement range	44 ... 46mm
Line length at object	20mm
Resolution	≤ 0.2mm
Free space ¹⁾	≥150mm
Light source	LED (modulated light)
Wavelength	665nm (red light)
Flutter range	± 1mm

Timing

Measurement frequency	6 ... 60Hz
Response time	≤ 200ms
Delay before start-up	≤ 600ms

Electrical data

Operating voltage U_B	18 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Bias current	≤ 100mA
Analogue outputs	4 ... 20mA, $R_L \leq 500\Omega$
	analogue output A: edge position (see diagrams)
	analogue output B: exposure time (soiling)
	large current: long exposure time, sensor soiled or dark material
	small current: short exposure time, sensor ok or light material

Indicators

LED yellow (continuous light)	on
LED yellow (off)	interference, no voltage supply

Mechanical data

Housing	aluminium
Optics cover	glass
Weight	130g
Connection type	M12 connector, 5-pin
Dimensions (W x H x D)	23 x 58 x 81 mm

Environmental data

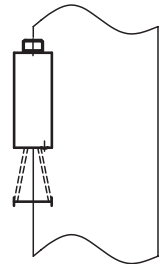
Ambient temp. (operation/storage)	+10°C ... +40°C (-30°C ... +70°C)
Protective circuit ²⁾	1, 2, 3
VDE safety class	protective extra-low voltage
Protection class	IP 65
Standards applied	IEC 60947-5-2

- 1) To safely comply with the optical data specified, a free space of ≥150mm is required; i.e. there must be no reflecting surfaces within the object area
 2) 1=transient protection, 2=polarity reversal protection, 3=short-circuit protection for all outputs

Order guide

Designation	Part No.
OPS 774	500 39020

Tables



Object movement from +1 to +21 mm

± 0.5mm linearity deviation ¹⁾
≤ 0.4mm resolution
± 0.3mm linearity deviation ¹⁾
≤ 0.2mm resolution

Object movement from +21 to +1 mm

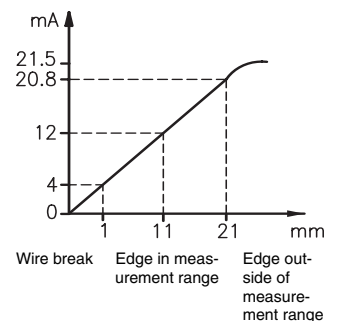
± 0.6mm linearity deviation ¹⁾
≤ 0.4mm resolution
± 0.4mm linearity deviation ¹⁾
≤ 0.2mm resolution

- 1) Static measurement - the linearity deviation is less with dynamic object.

Measurement object 90% white, phase-free

Diagrams

Edge position



Remarks

- **Installation conditions**
The housing must be conductively connected to machine ground. Clean optics regularly or provide with blower device.
- The optimal distance is achieved when both light lines form a single line.
- The measured position of the material edge can change depending on the luminosity coefficient of the material.