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Laser- Beam-Sensor

Series LBS-M-34

- **Resolution** ≥ 10µm*
- **High switching frequency** ≤ 25 kHz
- **Integrated switching output**
- **Axial und 90°-angled housing**
- **OEM versions on request**

Principal features:

- Resolution ≥ **10 µm***
- Switching frequency ≤ **25 kHz**
- Analog output **0-10 V**
- Switching point adjustable
- Glas optic with interferrence- and polarisation filter
- Supply **12-32 VDC**
- Range max. **2 m**
- Insensitive to external light
- Adjustable laser power
- Solid aluminium housing
- Laser Class 2
- Degree of protection **IP 67**
- Plug connector M12 / 4-pin.
- CE

* depends on diaphragm size

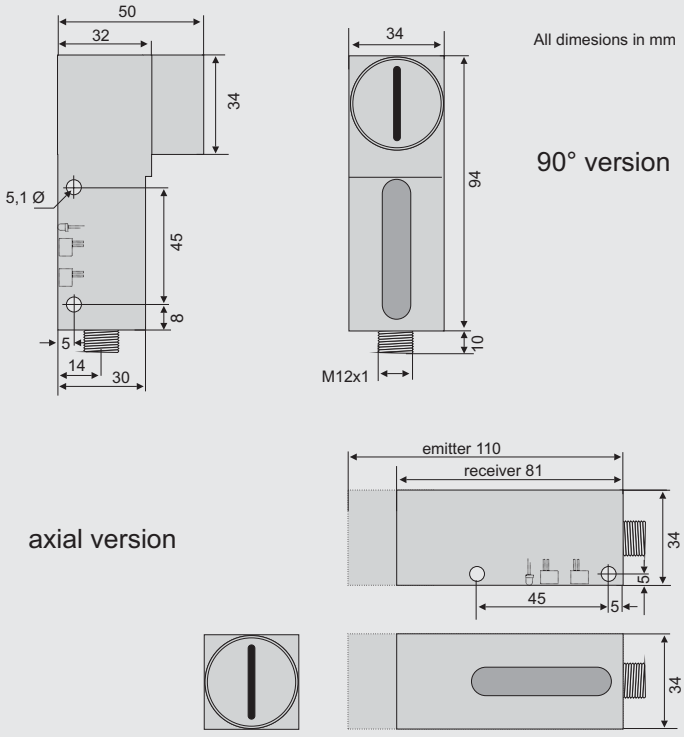
Applications:

- Filling control
- Height control
- Gap control
- Diameter control
- Positioning control
- Inspection of threads
- Edge detection
- Flow- and opacity measurement
- Thickness measurement
- Sagging control

Advantages:

- Highly precise and dynamical
- Integrated switching output
- Easy alignment due to visible laserbeam and visible receiver diaphragm

Dimensions



Wiring connections

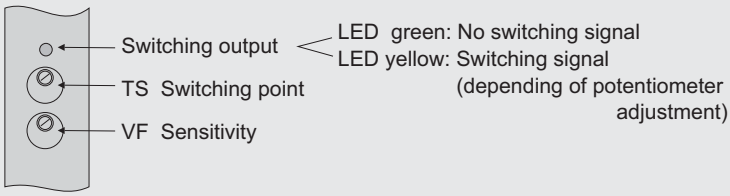
Emitter

1 (+)12-32 VDC
2 Laser power control (0-5 VDC)
Test input (5-32 VDC)
3 GND
4 Shield / housing

Receiver

1 (+)12-32 VDC
2 Analog output (0-10 VDC)
3 GND
4 Output $\overline{Q}$

Operating and display elements



Technical data

LBS-M-34	Operating range	2 m				
Principal data	Max operating temperature	-20 °C to +50 °C				
	Max. external light	≤ 5000 Lux (depends on diaphragm size)				
	Degree of protection	IP 67				
	Connection	M12 plug connector, 4-pin				
	Housing version	Axial or 90°				
	Housing	Aluminium anodized				
	Diaphragm size	5x2	10x2	20x2*	25x2	30x2* **
	Resolution	10 µm	20 µm	40 µm	50 µm	60 µm
	Linearity +/-	0.3% FS	1% FS	2% FS	2% FS	3% FS
	Reproduceability	1 ‰ FS				
Emitter	Supply voltage	12-32 VDC, inverse and overload protected				
	Max. rersidual ripple	≤ 10%				
	Current consumption	~ 60 mA				
	Laser power control / test input	0-5 VDC / 5-32 VDC Emitter switch-off				
	Laser	CW Laser red, 670 nm				
	Protection class	2 (EN 60825:1-1994)				
Receiver	Supply voltage	12-32 VDC				
	Max. residual ripple	≤ 10%				
	Current consumption	~ 30 mA (without load)				
	Switching output / logic	PNP or NPN $\overline{Q}$				
	Analog output	0-10 VDC				
	Output current	max. 100 mA				
	Switching frequency	≤ 25 kHz				
	Cutoff frequency	≤ 50 kHz				
	Adjustments	Switching point and sensitivity adjustable via 3-gear potentiometer				

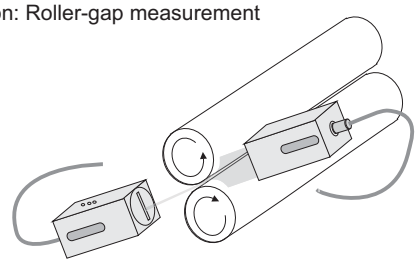
Ordering information

Laser-Beam-Sensor	Part No.
LBS-M34-5x2 axial	10661694
LBS-M34-10x2 axial	10661695
LBS-M34-25x2 axial	10661696
LBS-M34-5x2 90° angular	10661697
LBS-M34-10x2 90° angular	10661698
LBS-M34-25x2 90° angular	10661699

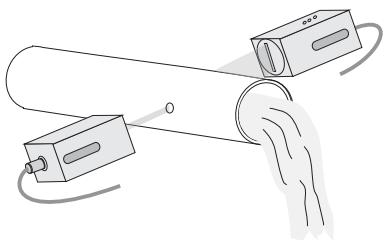
Cable	Part No.
PNP, M12, angular length 2 m	11241120
NPN, M12, angular length 2 m	11251411

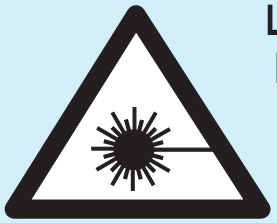
* optional
* optional diaphragms with 50 mm available
** diaphragm with 30 mm results a 28 mm shadowing

Application: Roller-gap measurement



Application:Flow and opacity measurement





LASER CLASS 2
EN 60825-1:1994

Do not stare into beam !

Presented by: