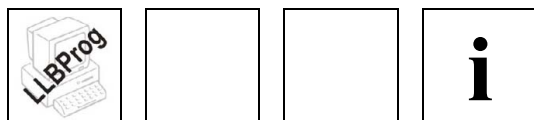


## Laser Measuring Device LLB-60-D (H)

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- **Analog interface: 0...20 mA or 4...20 mA**
- **RS232 -, RS422 - interface**
- **Detection of positions**
- **Non contact distance measurement**
- **Distance measurements on**
  - natural surfaces : 0.05 up to approx. 65 m
  - reflective target plate : 0.05 up to approx. 500 m
- **LLB60-00600, LLB60-00601: without heating**
- **LLB60-00610, LLB60-00611: with heating**
- **Programmable**

## Characteristics

Supply voltage.....	9...30 VDC
with heating.....	24...30 VDC
Current consumption without load .....	< 0.5 A
with heating.....	< 2.5 A
Measuring range	
on natural surfaces .....	typically 0.05...65 m
on reflective target plate .....	typically 0.05...500 m
Smallest unit displayed .....	0.1 mm
Measuring accuracy	
LLB60-00600, LLB60-00610.....	typically $\pm 1.5$ mm at $2\sigma$
LLB60-00601, LLB60-00611.....	typically $\pm 3.0$ mm at $2\sigma$
Time for a measurement	
Single measurement.....	typically 0.15...4 s
Tracking Mode.....	typically 0.15...4 s
Light source.....	Laser diode, red light
Wavelength $\lambda$ .....	620...690 nm
Laser protection class.....	2 accor. IEC 60 825-1: 2001 / FDA 21CFR 1040.10 und 1040.11
Beam divergence.....	0.16 x 0.6 mrad
Pulse duration.....	$0.45 \times 10^{-9}$ s
Radiant power.....	< 0.95 mW
Life time .....	> 50.000 h at 20 °C
Analog interface <sup>1)</sup> .....	0...20 mA, 4...20 mA, $\leq 500 \Omega$
Configuration interfaces .....	RS232 Point to Point, RS422 Master – Slave, max. 10 devices
Digital switching outputs.....	Open Drain, 30 VDC, 200 mA
2 Digital outputs for level control <sup>1)</sup> .....	programmable
1 Digital output.....	Device error
Digital input <sup>1)</sup> .....	external triggering
Switching level.....	1-level > +9V...< +30 V, 0-level < 2 V
Mass.....	665 g, 690 g with heating

<sup>1)</sup> programmable parameter

### Environmental conditions

#### EMC

- Discharge of static electricity, DIN EN 61000-4-2: 2001
- Immunity to disturbance, DIN EN 61000-6-2: 2001
- Emission, DIN EN 61000-6-4: 2001

Working temperature ..... -10 °C...+50 °C, max. +45 °C in Tracking Mode

Working temperature with heating ..... -40 °C...+50 °C, max. +45 °C in Tracking Mode

Storage temperature ..... -40 °C...+70 °C, dry

Protection class, DIN EN 60529: 1991 <sup>2)</sup> ..... IP 65

<sup>2)</sup> valid with screwed on mating connector and / or screwed together cable gland

### Dimension drawing

