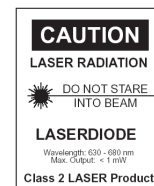


**SA-Dist04-000****Non contact ride height / displacement sensor**

Laser Beam alignment

**Key Features:**

- *High quality sensor for contactless distance measurement*
- *Wide measuring range of 100 - 600mm*
- *Measurement range teachable in steps of 10mm*
- *High suppression of interfering light (100k Lux, sunlight)*
- *Short response time of < 1.6ms*
- *High environmental protection (IP 67)*
- *Operating temperature range 0 to +60°C*
- *High vibration resistant*

## SA-Dist04-000

## Non contact ride height / displacement sensor

### Technical specifications

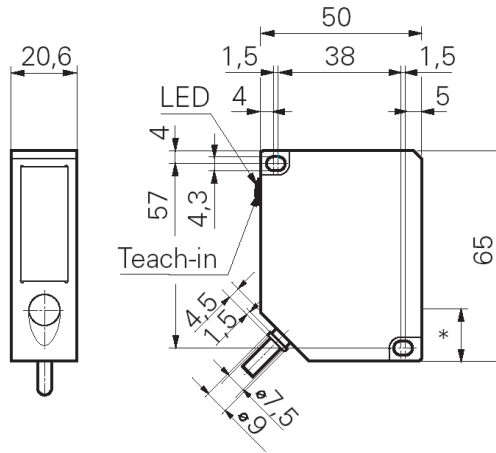
<b>Measurement ranges</b>			
Total range (factory default)	mm	100-600	
Min. teach in range	mm	10	
<b>Measurement tolerances</b>			
Resolution (matt white ceramics)	mm	0.0015...0.8	
Linearity error (matt white ceramics)	mm	±0.05...±2.4	
Offset tolerance (range 50-500mm)* <sup>1</sup>	mm	±(0.15 + 0.8)	
<b>Response time (typ)</b>			
black surface (30% reflection)	msec	<1.6	
<b>Optical characteristics</b>			
Light source: laser diode red pulsed			
Laserclass	class	2	
Wavelength	nm	675	
Laserbeam height	mm	4...12	
Laserbeam width	mm	2	
Sensor element		photodiode line	
Suppression of interfering light	kLux	100	
<b>Operational status indicator</b>			
LED green/red/blinking			
<b>Reference</b>			
For further technical information refer to manual AC-DOC_Teaching_SA-DIST04-000			
<b>Electrical characteristics</b>			
Supply voltage	V	12-28	
Current consumption	mA	<75	
Reverse battery protection built in			
Short circuit protection built in			
Analog output	V	0...5	
load resitance analog output	kΩ	>100	
<b>Mechanical characteristics</b>			
Aluminum housing			
Dimensions	mm	65x50x20.6	
Weight	g	220	
Cable			
Wire cross section		8 x AWG24	
Type		PVC cable shielded	
Length	mm	1000	
Connector type			
Standard		open wire	
Other connectors		on request	
<b>Environmental data</b>			
Protection class		IP67	
Ambient operating range	°C	0 to +60	
<b>Calibration</b>			
Use formulas on next page to calculate physical values			
<b>Ordering information</b>			
For ordering this product use 2D Article number SA-Dist04-000			

\*<sup>1</sup> If sensor is teach to other than factory default measurement range:± (0.15 + 1 resolution step full scale of teach measurement range)

## SA-Dist04-000

## Non contact ride height / displacement sensor

### Dimensions



\*optical axis of laserbeam

### Formulas to calculate physical values

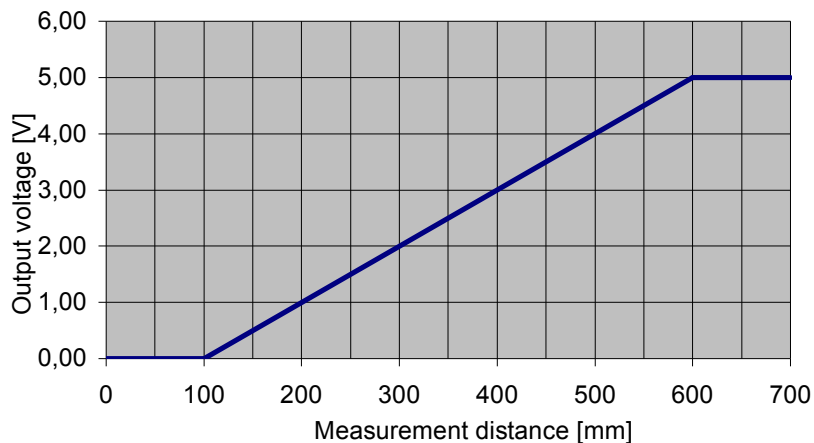
SA-Dist04		Multiplier			Offset		
12 Bit A/D	Measuring range [mm]	=	500/4095	*	Digits	+	100
16 Bit A/D	Measuring range [mm]	=	500/65535	*	Digits	+	100
Voltage	Measuring range [mm]	=	100	*	Volt	+	100



Note:

Decreasing the measuring range by teaching causes a change of the formula. The Formula is needed to calculate the physical values.

**Therefore do not forget to adapt the formula to the changed measuring range !!!**



### Connector layout

### Connector type

Name	Description	Color
Power	Power supply 12 – 28V	brown
Teach IN	External teach input	yellow
Signal	Analog Out 0-5.0V	pink
GND	Ground	blue
Service	Service only, keep isolated, as blind wires	green, red

Open wires