SPECIFICATIONS ODS COMPACT-LINE

Delivered with 2 meter cable

	ODS 80	ODS 155	ODS 250	USB 150
Measurement data:				
Measuring range (FS)	50 mm	200 mm	400 mm	200 mm
Measuring range	50-100 mm	50-250 mm	50-450 mm	50-250 mm
Center distance	75 mm	150 mm	225 mm	150 mm
Resolution at short range[1]	0.01 mm	0.01 mm	0.01 mm	0.01 mm
Resolution at long rang[1]	0.02 mm	0.04 mm	0.40 mm	0.04 mm
Measurement Linearity[1]	± 0.04 mm	± 0,15 mm	± 0.70 mm	± 0.15 mm
Updating frequency	1 kHz	1 kHz	1 kHz	1 kHz
Temperature deviation	± 0.03% FS/C°	± 0.03% FS/C°	± 0.03% FS/C°	± 0.03% FS/C°
Light source/wave length	Red LASER / 650 nm	Red LASER / 650 nm	Red LASER / 650 nm	Red LASER / 650 nm
Size of spot	Ø 2 mm	Ø 2 mm	Ø 2 mm	Ø 2 mm
Laser protection class	IEC 2	IEC 2	IEC 2	IEC 2

Output data:	**Electrical data:**	**Environment data:**	**Physical data:**
Analog output(only RS232 sensors): 4-20 mA or 1-9 V	Supply voltage not USB: 15 - 36 VDC	Operating temperature 0 - +50 C°	Dimensions: 48 x 40 x 19.5 mm
Digital output: RS232 / RS422 / USB	Power consumption max 1.2 W	Storage temperature -20 - +70 C°	Weigth excl. cable 55 g
Baud rate: 38400 / 115200 kbs (ASCII)	USB version: 5 V - 0,75 W	Humidity non condensing: max 90 % RH	Connection: Cable / M8 plug / USB micro B
Binary or ASCII digital output		Degree of protection: IEC IP65	Housing: Aluminium/Glass Windows

(1) Static measurement on white paper at measuring/sampling frequency, without any averaging of the serial output signal: 2·6 » 2 times the standard deviation.

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Description

ODS Compact-Line are optical distance measuring devices for non contact precision measurement of distance.
The ODS Compact-Line is units where optics, sensor, and signal processing electronics are all integrated. The distance to an object is detected by means of the triangulation principle. A collimated laser beam forms a spot on the measuring object. The image of the spot is reflected onto a position detector, a CCD camera, and the electronic and software converts this position into the distance to the object by advanced mathematical procedures.
The digital output signal is binary as default, but can be switched to ASCII by command ASON to the sensor. Measuring frequency is 1000 Hz.

Automatic adjustment of the light intensity permits measurement on a wide variety of different surfaces. The Compact-Line can measure on most surfaces from white to black and all colours in between. Even though the sensor is constructed to measure on diffusely reflecting surfaces, many shiny surfaces can be measured too.

The Compact-Line is easy to mount correctly, since a light emitting diode on the upside of the sensor indicates, when the object is outside the range in which it can be detected, and when the object is at the centre of the measuring range. Furthermore, the measuring spot is visible.

Compact-Line sensors can be delivered with RS422 or USB or (RS232 and (4-20mA or 1-9V)) interface. See table below for possible plug/cable options.

ASCII mode Protocol

The sensor can be set to output data in ASCII format instead binary format. The sensor is default delivered in binary mode and to switch to ASCII mode the ASCII text "ASON" has to be transmitted to the sensor.
To switch the sensor back to binary mode the text "ASOFF" has to be send to the sensor.
To achieve full measurement speed (1000 Hz) in ASCII mode the baud rate has to be 115200 baud or above. If the baud rate is 38400 the output frequency of the sensor will only be 333 Hz (This only applies for ASCII mode. If the sensor is in Binary mode it will always give out the full measurement frequency of 1000 Hz).

Select programming

The Select functionality consists of a number of modes and filter settings that easy can be modified with **ODS Explorer*** or with commands send to sensor. See user manual for more info.
Filter settings: Median Filter, Simple Average Filter, Running Average Filter.
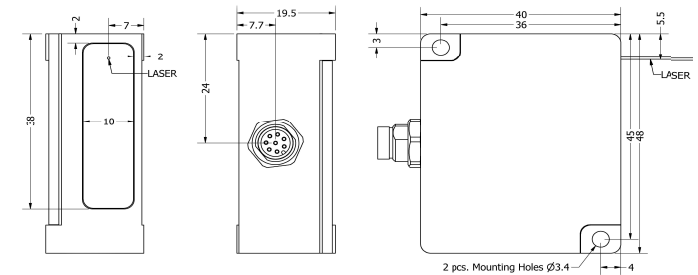Mode settings: Level Mode, Sample-Hold Mode, Baud Rate.
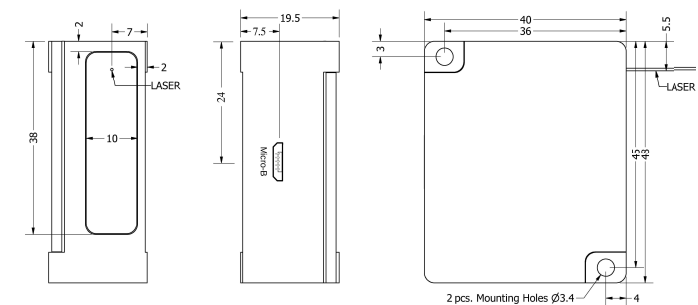
* Windows demo/test software free of charge.

USB interface

Compact-Line use a industry standard interface that auto-matic configures a virtual Comport in Windows and Linux operation systems first time the sensor is connected.
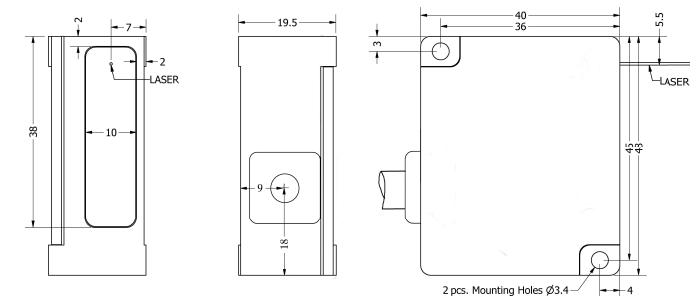Use this Comport for application software.

Dimensions

M8 8 pol connection (incl. 2 m cable with USB A connector)

USB micro-B connection (incl. 2 m cable with USB A connector)

Cable connection (incl. 2 m fixed cable with loose leads)

Interface	Analog Out		Connection Type		
	4-20 mA	1-9 V	USB micro-B	Fixed Cable	M8 8 pol
RS232	X	X	na	X	X
RS422	na	na	na	X	X
USB	na	na	X	X	X

X = possible selections