



## DISTANCE MEASURING – contactless and reliable

### FLS-C – for dynamic applications with unique accuracy



Measuring range: **0 ... 500 m**

Accuracy: **±1 mm**



Surveying applications



Elevator positioning



Storage technology



Crane positioning

## Dynamic and accurate

The FLS-C distance measuring device measures absolute distances up to 500 meters without contact. Due to most innovative laser technology the FLS-C has a unique accuracy of 1 mm. A further advantage of the FLS-C is the quick registration of positions of moving objects.

The FLS-C is an optical distance measuring device. It measures, maintenance-free, distances on natural and reflecting surfaces. It determines positions of objects, that are difficult to access or may have very high surface temperatures. Just as well, it measures distances in hostile environment accurately and with ease.

The FLS-C is designed to be suitable for both, heavy industrial and outdoor applications. It is constructed of a solid metal case and provides class IP65 environmental protection. Furthermore, various features make it flexible for multiple applications in numerous industries such as automotive, paper, metal and textile.



### Specification



#### Measuring range 0.05 up to 500 m

The FLS-C measuring device measures distances from 0.05 up to 500 meters.



#### Accuracy 1 mm

The accuracy amounts to 1 mm – independent of distance, operating temperature and target.



#### Repeatability 0.3 mm

The typical repeatability is 0.3 mm at the same measuring distance, the same ambient temperature and the same target object.



#### Extended operating temperature

An optional internal heater allows operation of the FLS-C device at temperatures as low as -40 °C.



#### Solid metal case IP65

The solid metal case effectively protects the device from ingress of dust and water.



#### Supply voltage

The FLS-C measuring device requires a voltage supply of between 9 V DC and 30 V DC.

### Interfaces



#### Serial interface

The FLS-C device can be connected via RS-232, RS-422, SSI or optionally via Profibus to your controlling system.



#### Connection of several FLS-C devices

Using the RS-422 or Profibus interface, up to 10 FLS-C devices can be controlled on a single line.



#### Analog output 0/4 – 20mA

The analog output provides a simple method of integration into a control system. The analog output may be configured according to the measuring range.



#### 2 Digital outputs

It is possible to configure two digital outputs with different switching positions. An additional digital output transmits a signal in case of an error.



#### Flexible connection possibilities

The FLS-C device can be connected via a D-sub-connector or via screw terminals inside the device. A threaded cable gland entry is built into the laser sensor case.

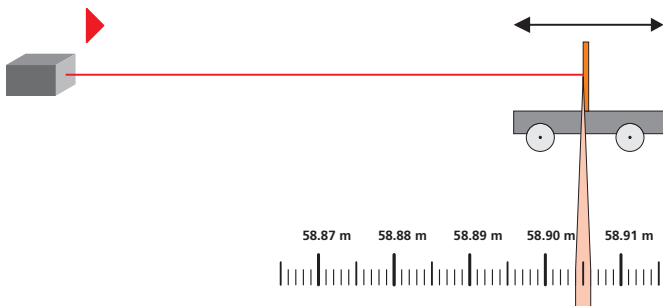


#### Status display

Four light-emitting diodes (LEDs) display the device status.



## Highlights



**Absolute measuring error:  $\pm 1$  mm**



### Fast determination of the position of moving objects

The FLS-C distance measuring device is especially convenient for the fast determination of positions of moving objects, as you find them in small part- or high rack storage areas or in crane compositions.

### Unique accuracy of 1 mm

The FLS-C measures with an absolute accuracy of 1 mm. The specified accuracy is reached over the complete range of measurement and temperature. Even a change of the target object does not affect the accuracy.

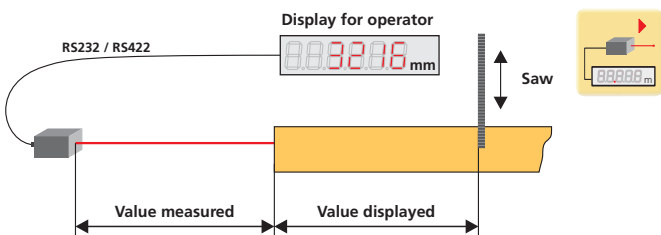
The repeatability of the FLS-C measuring device is typically 0.3 mm.

As a result, the FLS-C is the preferred distance measuring device for surveying the geometry of objects as well for supervising objects for movements. Its possible to gather the exact profile of a tunnel. Furthermore, for the definition of production data the FLS-C is used to measure the geometry of rooms or or any kind of object. Creating templates by the FLS-C distance measuring device for production are applications which are found in several industries such as wood, stone, glass or shipbuilding.

### Flexible measurement output

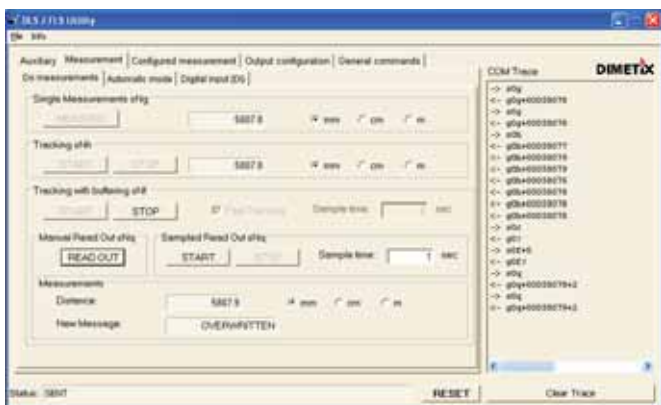
The measurement output of the FLS-C can be formatted to best suit an application. Standard outputs include a serial interface RS-232, RS-422, SSI and an analog output. Optionally, a connection to a Profibus-Master is also possible.

The FLS-C device can be connected via a D-sub-connector or via screw terminals inside the device.



### Direct connection of an external display

Do you need an external display to directly read the measuring results? For displaying the measuring results with millimeter precision the device can be connected to an external display directly, via the serial interface RS-232 or RS-422. Gain, offset and the output format can be configured easily.



### Configuration software

For simple configuration of the FLS-C measuring device self-explanatory software is provided. This software may be used to change settings on the measuring device in a fast and easy way. Various features can also be activated.

The software is available free of charge as a download from our web site ([www.dimetix.com](http://www.dimetix.com)). It also includes different languages for international use.

### Accessories

Various accessories are available for the FLS-C distance measuring device. Further information can be found on our web site ([www.dimetix.com](http://www.dimetix.com)).



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Product type Item No.	FLS-C 10 600502	FLS-C 30 600501	FLS-CH 10 600504	FLS-CH 30 600503
<b>Design conditions</b>	STANDARD	STANDARD	WITH HEATER (erweiterter Temperaturbereich)	WITH HEATER (erweiterter Temperaturbereich)
<b>Operating temperature</b>	-10 °C ... +50 °C	-10 °C ... +50 °C	-40 °C ... +50 °C	-40 °C ... +50 °C
<b>Accuracy</b> (includes all possible errors)	± 1 mm	± 3 mm	± 1 mm	± 3 mm
<b>Repeatability</b> (typ.)	± 0.3 mm	± 0.5 mm	± 0.3 mm	± 0.5 mm
<b>Resolution</b>	0.1 mm			
<b>Measuring range</b> – on reflective foil – on natural surfaces	approx. 0.5 ... 500 m 0.05 ... approx. 65 m			
<b>Supply voltage</b>	9 ... 30 V DC	9 ... 30 V DC	24 ... 30 V DC	24 ... 30 V DC
<b>Housing</b>	Metal case IP 65			
<b>Laser</b>	visible, red			
<b>Dimensions</b>	150 x 80 x 55 mm			
<b>Weight</b>	690 g	690 g	720 g	720 g
<b>Interfaces</b> – Standard	<ul style="list-style-type: none"> <li>– 1 serial interface RS-232 / RS-422 or SSI</li> <li>– 1 analog output 0/4 ... 20 mA, programmable</li> <li>– 3 digital output - 2 programmable, 1 error display</li> <li>– 1 digital input for external trigger</li> </ul>			
– Option	– Profibus			

Further information can be found in our manual.

LASER RADIATION  
DO NOT STARE INTO BEAM  
CLASS 2 LASER PRODUCT



Your local agent:

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