



Application Note

AN2004

EXCEL Example

DLS / FLS

Abstract

This application note describes how to control a Dimetix distance sensor connected to a serial interface by VBA (Visual Basic for Application). The VBA program is integrated into an EXCEL worksheet.

V1.00

Please check www.dimetix.com
for the latest version

This application note is provided as is without any warranty for any problems this sample may cause.



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1 Introduction

Direct connection of the Dimetix sensors to a RS-232 interface of a PC is easily possible. To control the DLS sensor a software is required. This sample illustrates how the Dimetix sensor can be controlled from a VBA application based on EXCEL.

This sample is available as free download from the support section of the Dimetix home page www.dimetix.com.

1.1 Requirements

This sample runs on a PC with a RS-232 interface, Windows XP or later and Excel 97 or later.

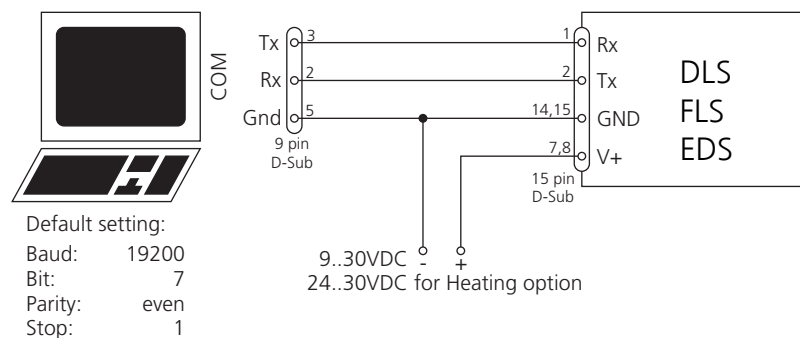
1.2 Dimetix distance measurement sensors

The sample is made to control a Dimetix sensor with default settings. Please change the baud rate settings with the DLS/FLS Utility if necessary. The DLS/FLS Utility is available in the support section under www.dimetix.com. The default settings for the baud rate are as follows:

Communication parameters: Setting 7: 19200Baud, 7 Data bits, Parity Even

1.3 Wiring

Please connect the Dimetix sensor to your PC as shown in the following diagram:



Picture 1: Sensor connection to a PC



2 Structure and usage of the sample

	A	B	C	D
1	Dimetix distance sensor command sample with Visual Basic for applications			
2				V.3.0.0
3		Individual settings		
4				
5	COM port number		1	
6	Device ID (default=0)		0	
7	Laser on			
8	Laser off			
9				
10				
11				
12		Single Measurement		Error code
13	Get distance		477.6 mm -	
14				
15				
16				
17	Start tracking with buffering	Tracking with buffering		Error code
18	Get single value		477.1 mm -	
19				
20	Repeated read out	Stop read out		
21				
22	Stop tracking with buffering			
23				
24				
25	© DIMETIX AG, Switzerland			

Picture 2: Sample work sheet

Open the Excel document Dimetix_Sample_in_VBA.xls. A warning message may appear which informs you that the sample contains active content (macros). In this case, choose "Enable Content" to allow macros and continue.

The sample worksheet looks like the picture on the left. Enter the number of the COM port which you connected the Dimetix sensor to into the field "COM port number". If necessary update the "Device ID" (the default setting for the device ID is 0).

To switch the laser on or off, click on the buttons "Laser on" or "Laser off". A single distance measurement is triggered with a click on "Get distance" and the result is displayed in the field B13.

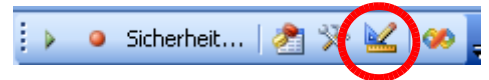
A click on "Start tracking with buffering" starts the tracking with buffering of the Dimetix sensor. By a click on "Get single value" the program reads the result from the sensor and displays it in field B18 in mm resolution. With a click on "Repeated read out" the results are read out and displayed repeatedly.

By pressing "Stop read out", the repeated read out function is stopped. The button "Stop tracking with buffering" stops a possible repeated read out and also stops the tracking with buffering measurement. If the sensor returns errors, their numbers are filled into the Error code field D13 or D18 while the distance field B13 or B18 is marked with a dash ("-"). Same is done in the Error code field after valid measurements.

3 Program code

3.1 Excel97-2003

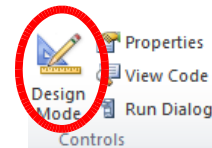
Press the button "Design mode" in the Visual Basic tool bar. If this toolbar is not available, left click somewhere in the menu bar area and check "Visual Basic".



Right-click the command button which you would like to know the program code of and choose "Show code". Your desired code fragment appears.

3.2 Excel 2010

Press the button "Design mode" under the menu "Developer". If the "Developer" menu is not available, activate it: Menu File → Options → Customize Ribbon → Check **Developer**.



Double-click the command button which you would like to know the program code of. Your desired code fragment appears.