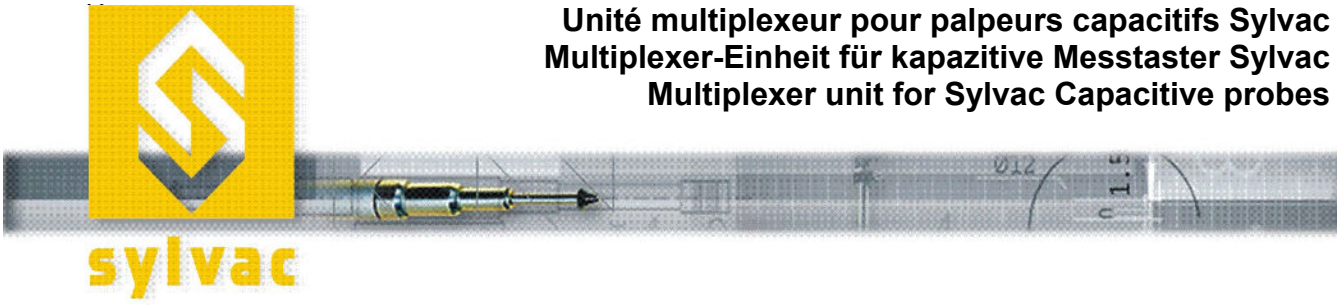
Unité multiplexeur pour palpeurs capacitifs Sylvac
Multiplexer-Einheit für kapazitive Messtaster Sylvac
Multiplexer unit for Sylvac Capacitive probes



D200S





MANUEL D'UTILISATION
GEBRAUCHSANLEITUNG
OPERATING INSTRUCTIONS

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1 Precautions

CAUTION:

- **Never** expose the D200S unit to water or moisture.
- **Never** use the D200S unit outside.
- Use the D200S unit at a temperature between 0 and 40°C.
- The manufacturer declines all responsibility in case of damage due to an inappropriate use of the D200S unit.
- **Not to use** aggressive products (Alcohol, trichloroethylene, etc.) to clean the synthetic parts.

1.1 Important information

Minimum configuration Hardware

Pentium processor or equivalent.
(Pentium 600 MHz or higher is recommended).

A computer functioning under Windows 2000 or Windows XP operating system.

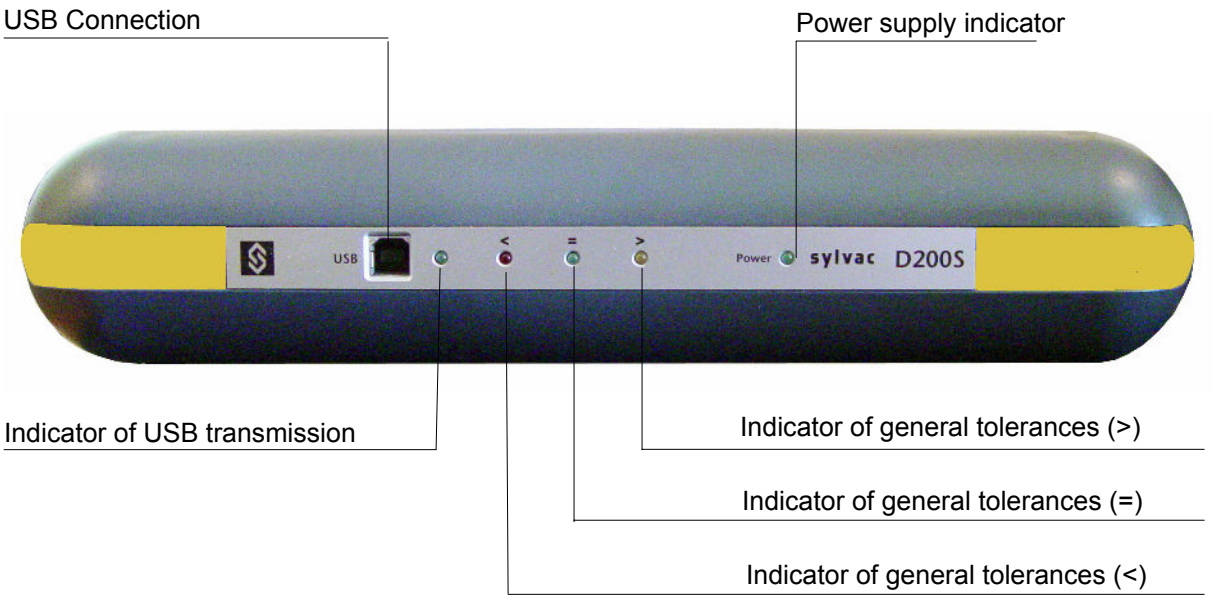
Stability of the unit :

The D200S unit must be switch ON ~30 minutes before all measurements.

2 General description of D200S unit

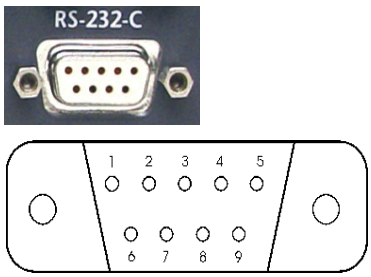
The D200S acquisition unit is a unit being able to read up to 8 probes Sylvac P2, P5, P10, P25, P50 with a maximum resolution of 0.1 µm and that in a dynamic mode. Many integrated functions make it possible to solve the majority of the measurements problems in workshop or laboratory. The parameters introduced into the software can be saved into the D200S unit. Several units can be coupled in order to connect up to 24 probes.

2.1 Front of unit





The unit can be positioned vertically using the two supports feet.



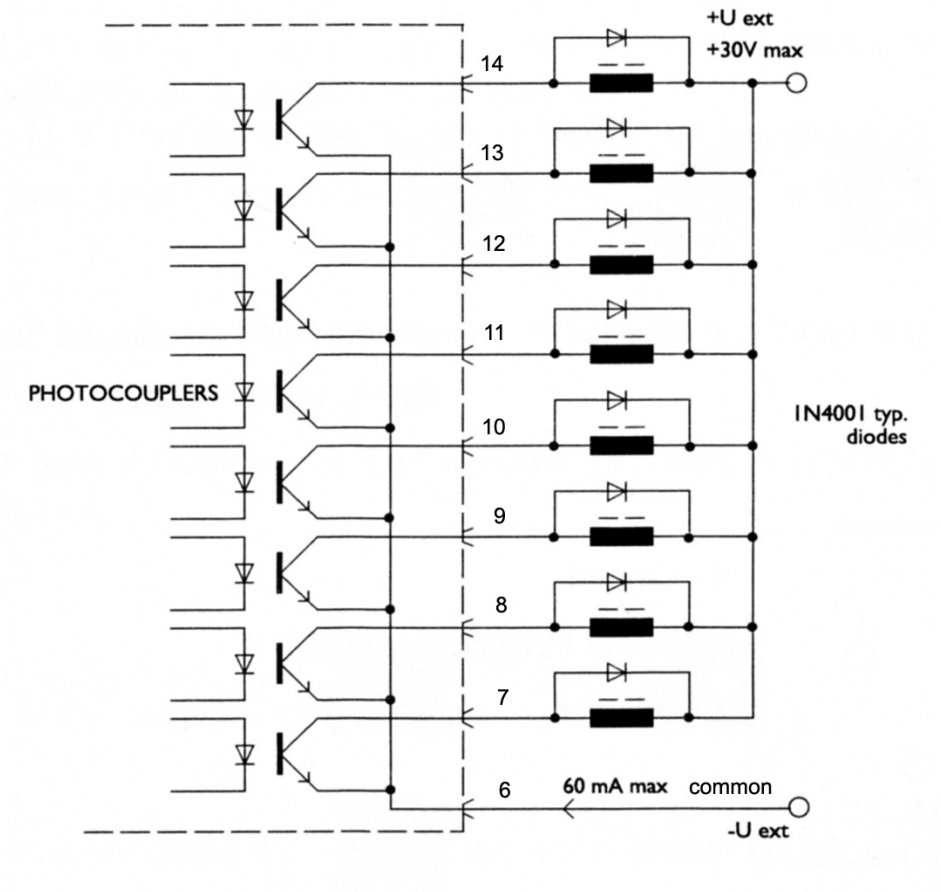
Pin 1	Not used
Pin 2	TXD = input RS 232 C
Pin 3	RXD = output RS 232 C
Pin 4	Not used
Pin 5	SG = Signal ground
Pin 6	Not used
Pin 7	Not used
Pin 8	Not used
Pin 9	Not used



N°	Configuration 1 Channel Tol	Configuration 2 Master Tol & D110
14	Tolerance channel 1	Tolerance >
13	Tolerance channel 2	Tolerance =
12	Tolerance channel 3	Tolerance <
11	Tolerance channel 4	
10	Tolerance channel 5	Lifting command D110
9	Tolerance channel 6	Lifting command D110
8	Tolerance channel 7	Lowering command D110
7	Tolerance channel 8	Lowering command D110
6	Common	Common
5 4	+5V +5V	+5V +5V
3	Switch 1	Switch 1
2	Switch 2	Switch 2
1	GNDD	GNDD

Pins 7 to 14 : Opto-couplers output for signal or pneumatic controls (D110) according to the mo

Comment : *In "Channel Tol" mode, the pins 7 to 14 are active when the measurement of the corresponding channel is out of tolerances.*



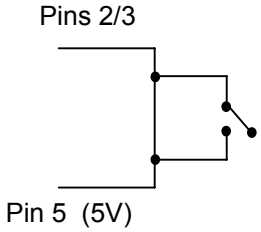
Max voltage = **30V** and the max current is **60 mA** per output.

The opto-coupler outputs must be supplies externally with negative voltage to common emitters (pin 6)

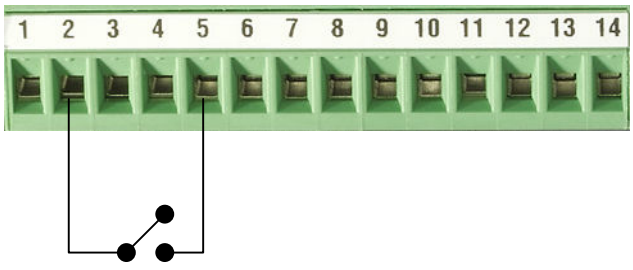
The protection diode is necessary in case of inductive charge (electro-valve, relay, solenoid…)

Pin 6 : Common for 8 opto-coupler outputs
Pin 5 : Output + 5V / 100 mA , non-regulated (protected)
Pin 4 : Output + 9V / 200 mA , non-regulated (protected)

Pins 2 & 3 : Input for external contact
Use only one tension of 5V on these inputs.



Example of connection for Switch 2



3 Software D200S

3.1 Description of Software D200S

The Software D200S is used like an interface between the D200S unit and the user. The use of the software makes it possible to read the values of the probes and configure the unit for the autonomous mode. All the parameters are saved when stopping the software.

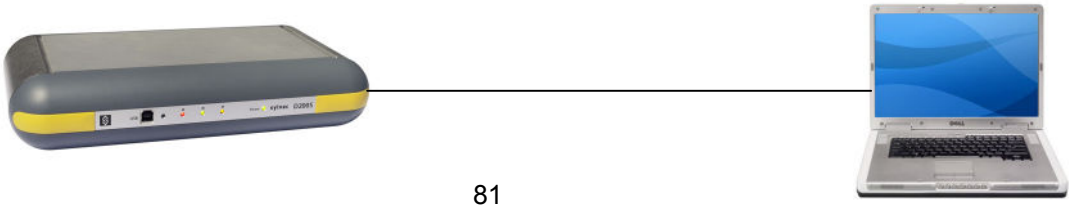


It is possible to use unit D200S and software D200S in two different ways.

1. The software can be used to memorize the control parameters, then the D200S unit can only be used (without connection and software)



2. The software can be used on line with the D200S unit, which will make it possible to follow measurements to the screen, as well as the bargraph of the individual values.



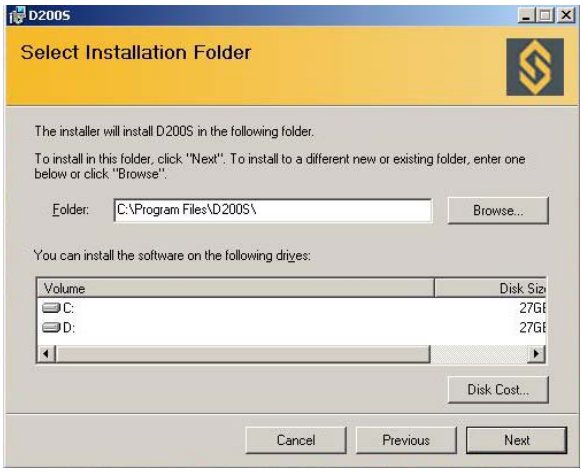
3.2 Installation of software D200S

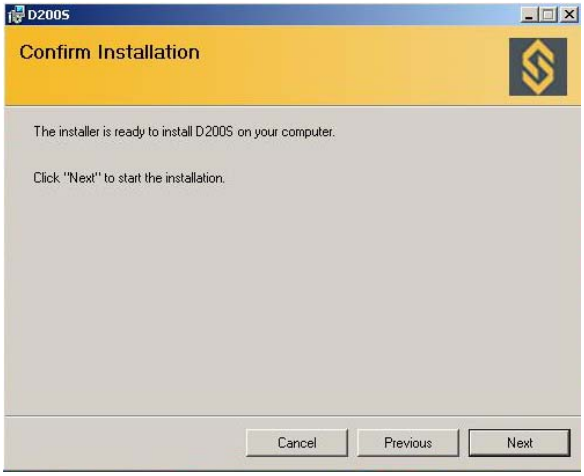
npack the CD of installation and introduce it into the CD reader of the PC.

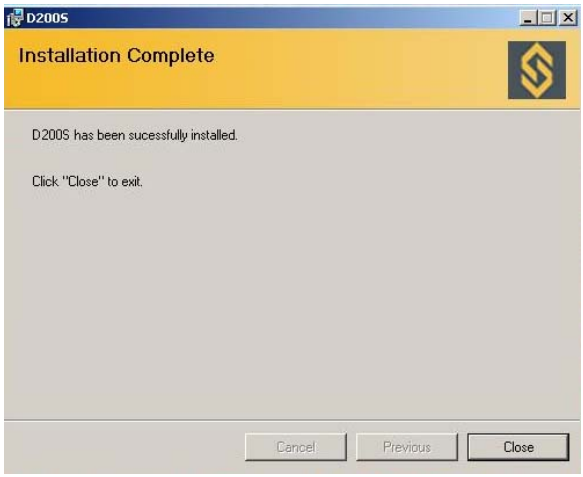
elect the CD reader directory for installation, then Setup.msi file and double click on .

ollow the instructions on the PC.









3.3 Hardware Connection between D200S unit and PC

1) Switch ON your PC.
2) Connect the USB plug of the D200S to the USB port of your PC with USB cable.
3) Connect the probes to the Tuchel connectors of the D200S unit.
4) Connect if necessary the digital outputs.
5) Connect the sector adapter to the socket 9V of the D200S unit.
   Caution : Use the sector adapter provided exclusively.
   The use of an erroneous sector adapter can damage the D200S unit.
6) Connect the sector adapter to the main power.
7) Switch ON the D200S unit then the 3 led's of tolerances flicker during a short moment and the PC detects the D200S unit automatically.

3.4 Installation of USB pilot

As soon as the PC detected the D200S unit, follow the requests on the screen to install the necessary pilots.

Windows XP

The Add assistant of material appears on the screen

A) Select Install from specific directory (experienced users) and click on Next.

B) Select CD-Reader and click on Next to search the files of the pilots necessary. The place of the pilot file is: **D:\Drivers\WindowsXP,** if your CD reader of CD has the letter D. If not, indicate the valid letter of your system.

C) Once that the assistant of material fund the results of research, click on Next to install the necessary pilot files.

Note: if the message “not found the numerical Signature” appears on the screen, click on "Yes" to continue the installation.

D) Once that the assistant of research for new materials finished the installations, click on "Finish".

E) If the update of assistant of material appear again. The points A, B, C and D should be carried out a second time.

F) Continue by "Checking of frontal LED indicators "

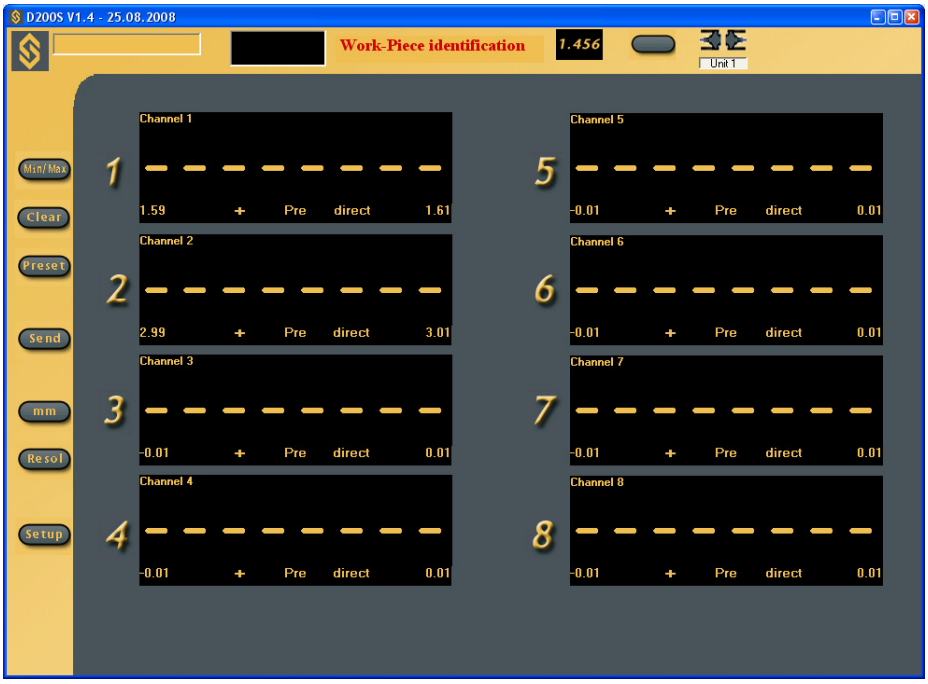
3.5 Checking of Frontal LED indicators

After the complete installation, the "LED" power should be ON permanently. If it is not the case, switch OFF theD200S unit, wait 10 seconds and switch ON the unit again.

LED	Colour	Description
Power	green	the D200S unit is connected to the sector and ready.
Activities USB	green	Indicate that the data are received / transmitted via USB connection.
Tolerances global status <	red	Indicate that measurements are out of tolerance (not re-workable)
Tolerances global status =	green	Indicate that measurement are in tolerance (good)
Tolerances global status >	yellow	Indicate that measurements are out of tolerance (re-workable)

Note: The "LED" "Activities USB" flickers only when data are sent or received via the USB connection, it does not flicker if via the RS232 cable.

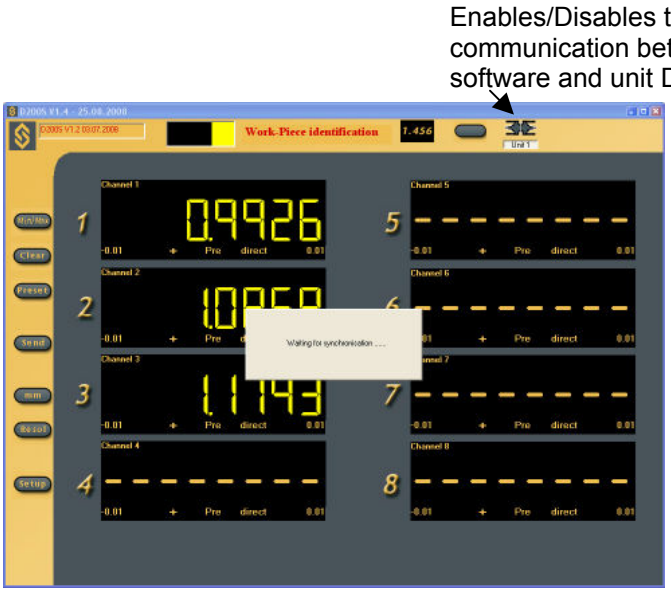
On the following installed appears., start the application.



The configurations introduced after the first use are saved to each exit of the software, thus the user finds the program in the same status after each use.

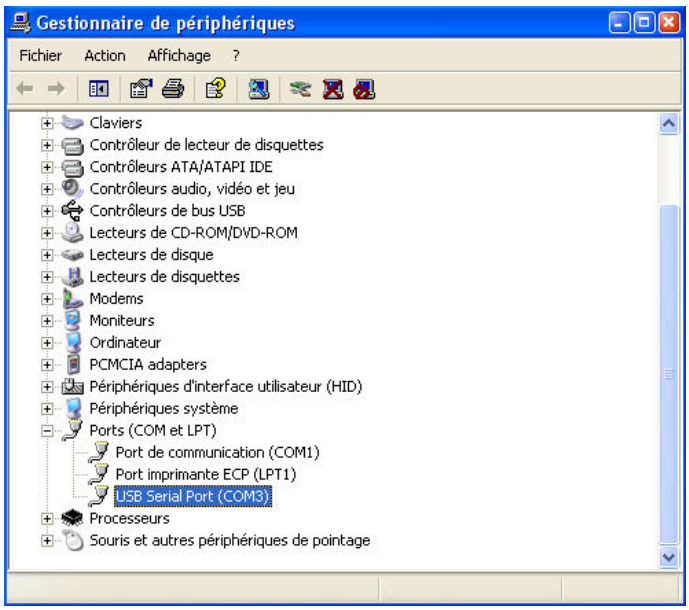
3.6 Connection (software) with D200S unit

In order to connect the software with the D200S unit, click on the activation icon to enable the software and the unit.
Wait until the message. « **Waiting for synchronisation…** » disappears.



Note: the port of communication can be configured in the software by a right clicking (in the gray zone) then by selecting "RS232 Setup".

The port number allocated by Windows can be visualized by opening the peripheral managers ("control panel /system" then select "material" and "peripheral managers "). The D200S appears as "a USB Serial Port". Each D200S connected to the PC will have a COM port which will be allocated for it.



4 Use of software D200S

4.1 The Main Menu



Access to the sub-menu
Click the right key of the mouse in the gray zone (out

whole of your personal data.

f

This sub-menu allows selecting the parameters of

This sub-menu allows selecting the programming

nt channels.

-menu allows selecting the function of the external contact (foot-pedal).

witch 1 Setting
his sub-menu allows you to choose the function of Switch 1 (Digital output connector)

Switch 2 Setting
This sub-menu allows you to choose the function of Switch 2 (Digital output connector)

Digital Output Setting
This sub-menu allows you to select the mode of measurement to be used. (Master Tol&D110 or Channel Tol.)

Simulation Mode
This mode allows to simulate the external contacts and to visualize the status of the digital outputs.

Send to
This sub-menu allows selecting the destination of the data to various software programs (Excel...)

Open File
This sub-menu allows you to open a saved file (* syl)

Save As…
This sub-menu allows you to save a file (* syl)

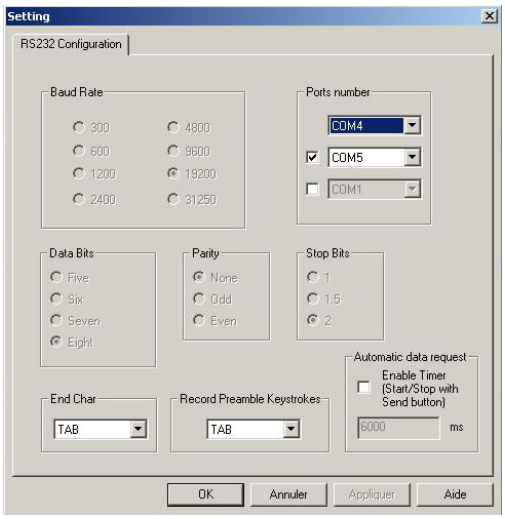
Open Configuration (From D200S)
This sub-menu allows you to activate the saved configuration in the D200S unit.

Transfer (to D200S)
This sub-menu allows you to transmit temporarily the configuration of the software in the D200S unit. t and save the configuration of the software in th

ransfer + Save (to D200S)
his sub-menu allows you to transmi
T e D200S unit. unit.

eset Unit
his sub-menu reinitializes the D200S

4.1.1 Sub-menu RS232 Setup



RS 232 Setup
The Parameters of transmission are:
Baud Rate : 19200
Data Bits : 8
Parity : N (None)
Stop Bits : 2
They are automatically selected.

The Configuration RS232 or USB allows you to select the port or the ports used. One unit = 1 port (COM...)

The end Characters of transmissions can be configured on : *TAB, ENTER, Up arrow, Down arrow*
The function of Record Preamble Keystrokes can be configured on :
ENTER, Up Arrow, Down Arrow, Left Arrow.

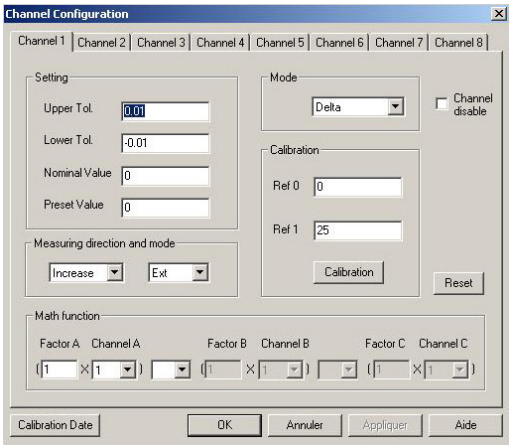
Automatic data request (Scanning)

To collect the data automatically, select the appendix in white, than select the frequency of measurement (for example: every three seconds (3000 ms)

To select a second connection, click the appendix in white, than select the second port used.

Idem for use of a third D200S unit.

4.1.2 Sub-menu Channel Setup



Configuration of the channels

Each channel can be configured with the following parameters:

Setting :

Upper Tol. = Upper tolerance

Lower Tol.. =Lower tolerance

Nominal Value = Nominal value

Preset Value = Pre-selected value

g direction and mode

Increase (+) = positive (+)

Decrease (-) = negative (-)

Measuring type: External or Internal

Measuring mode :

Direct: direct display of the value

Max: displays the maximum value

Min: displays the minimum value

Delta: displays the difference (maximum - minimum)

Mean: displays the mean value (maximum + minimum)/2

Flatness: displays the difference (maximum - minimum) of all channels, preceding the channel indicating the "Flatness" mode.

e. g.: the "Flatness" mode has been selected on channel 6 (no probe is connected to this channel). In this case, the difference of maximum-minimum of channels 1 to 5 will be calculated and displayed on channel 6. The utmost maximum and the smallest minimum of channels 1 to 5 are used for calculation. This corresponds to a general "delta" of the channels 1 to 5.

Comment: the "Flatness" mode must only be used on 1 channel at the time.

Concentricity: displays the difference (maximum - minimum), identical to a "delta".

Comment: after configuration of the measuring mode, it is necessary to press the "Min/Max" key to activate the function. If not, all channels will stay in direct mode.

Channel disable :

The channel selected can be hidden, the value is not visible anymore but the measurement is always active.

Calibration :

Each channel can be calibrated individually. See chapter 7.

Ref 0 : Reference value 0

Ref 1 : Reference value 1

Math. function

Factor A : multiplication factor of the channel.

Canal A : Selected channel(1, 2 ,…)

A measurement can be made up of several channels, the combination can be made by an operator (+,-,*,/).

Calibration Dates

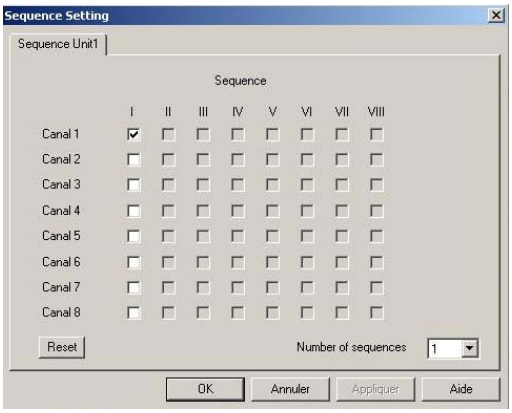
The calibration date can be introduced.

The next calibration date can be introduced.

Reset :

Erase all the data of the selected channel.

4.1.3 Sub-menu Sequences Configuration

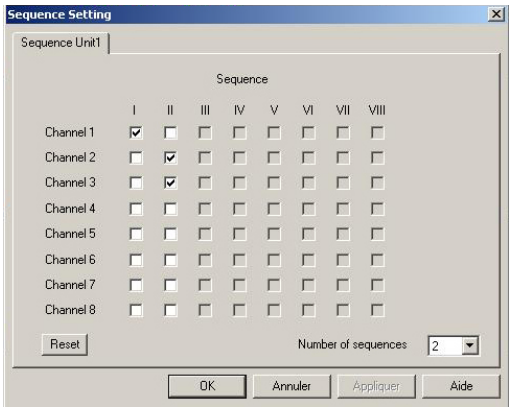


Configuration of the measuring sequences
This configuration allows the assignment of a certain number of channels to a sequence, in order to send on Excel (or other), that values introduced for a sequence given.
It is possible to configure up to 8 sequences.

** The use of the **preset** and the **send** are affected by the configuration of the sequences, by default only the sequence I is activated and all the channels are selected.*

Example :
1st sequence (I), channel 1 is selected.

The data acquisition on (Excel) will be, for each transmission.
Send the value
0.001(1st sequence) (Channel 1)
Send again
0.001 1st sequence) (Channel 1)



equences
1st sequence (I), channel 1 is selected.
2nd sequence (II) channel 2,3 are selected.

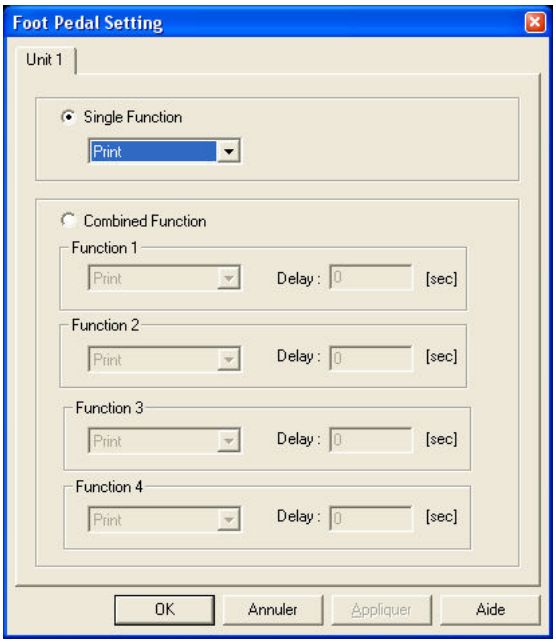
The data acquisition on (Excel) will be, for 1st transmission.

0.001 (1st sequence) (Channel 1)
2nd transmission
0.003 (2nd sequence) (Channel 2)
0.004 (2nd sequence) (Channel 3)

Send again :
0.001 (1st sequence) (Channel 1)
Then :
0.003 (2nd sequence) (Channel 2)
0.004 (2nd sequence) (Channel 3)

**Automatic data request*
In the automatic mode, the sequences are automatically sent one after the other.

4.1.4 Sub-menu Foot Pedal, Switch 1 and 2 Setting



Single Function
Allows the attribution of a single function to the external contact

Combined Function
Allows the attribution of multiple functions to the external contact. It is possible to combine up to 4 functions.

No Function
No function

Print
Activates the data transfer

Preset

Activates the "Preset" value

Clear

Initializes Min/Max…

D110 Lowering
Activates the downwards movement of the probes (by the unit D110).

D110 Lifting
Activates the upwards movement of the probes (by the unit D110).

D110 Toggle
Activates the upwards/downwards movement of the probes (by the unit D110).

Hold Enable
Activates the inhibition of values. The values displayed are locked; the movement of the probes has no effect on the displayed values anymore.

Hold Disable
Deactivates the inhibition of values.

Hold Toggle
Activates / deactivates the inhibition of the values.

pause Enable
Activates the "Pause" function (see also page 97)

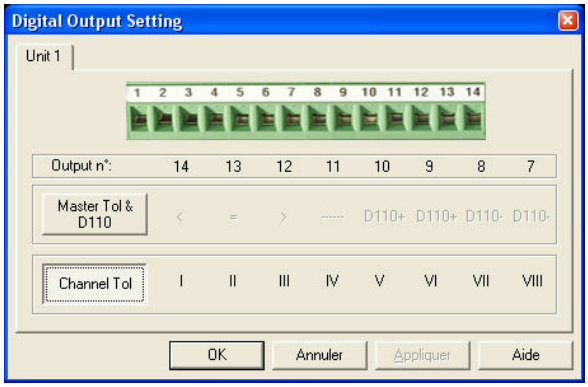
pause Disable
Deactivates the "Pause" function (see also page 97)

Pause Toggle
Activates / deactivates the "Pause" function (see also page 97)

Print – Seq1-8
Sends the selected sequence to Excel / Notepad. The sequences may be configured in menu "4.1.3 Sub-menu Sequences Configuration"

Change Digital Output Setting
Two modes are possible in the configuration menu for the Digital Output:
1 = Master Tol & D110,
2 = Channel Tol,
By activating the external contact, this configuration changes from one to the other function. See chapter 4.1.5

4.1.5 Sub-menu Digital Output



Digital Output
This menu allows modifying the configuration of the digital outputs according to 2 functioning modes:

Master Tol & D110
or
Channel Tol

According to the configuration, the digital Output functions will be modified according to table page 79

4.1.6 Sub-menu "Simulation Mode"

This menu allows the simulation of the digital outputs and the external contacts.

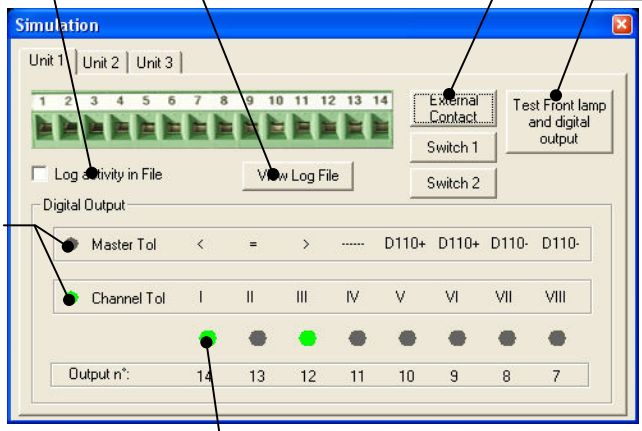
Shows the saved file

The actions of the external contacts and the switches 1/2 are saved in a file (saved in installation program)

Indicates the configuration of the digital outputs (Master Tol or Channel Tol)

Simulates an action on the concerned contact

Activates successively the frontal LED's and those of the digital outputs



The active digital outputs are mentioned in green

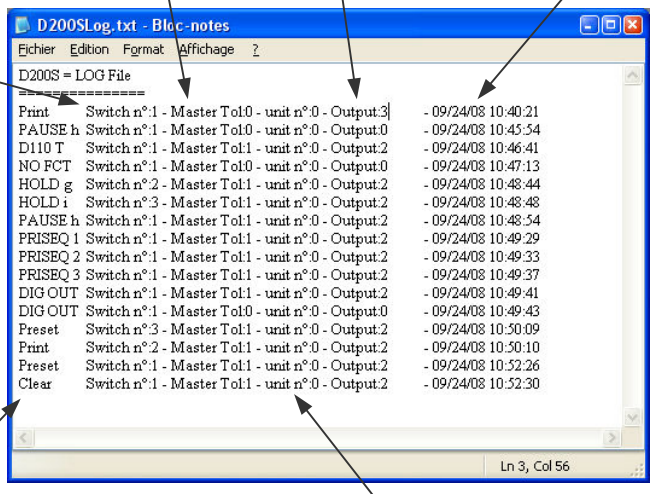
Description of the "Log" file

Indicates the config. of the digital outputs:
Master Tol 0 : Channel Tol
Master Tol 1 : Master Tol

Indicates the active digital output

Date and time of the measured value

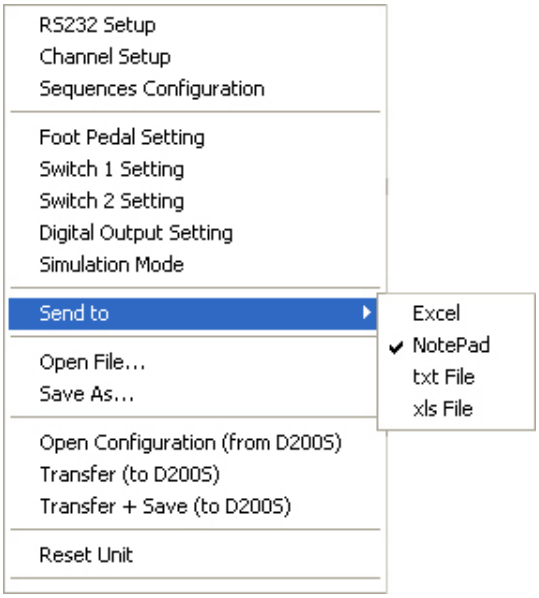
Indicates used channel
Switch n°1 : foot pedal
Switch n°2 : switch 1
witch n°3 : switch 2



Performed function:
NO_FCT : no function
Print : activates the data transfer
Preset : activates the "Preset" value setting
Clear : initializes the min, max, ... values
D110 D : activates the downward move.of probes (D110)
D110 U : activates the upwards move. of probes (D110)
D110 T : activates upw./downw. move.of probes (D110)
Hold g : activates lock-in of values
Hold i : deactivates lock-in of values
Hold j : activates/deactivates the lock-in of values
Pause h : activates the "Pause" function
Pause k : deactivates the "Pause" function
Pause l : activates/deactivates the "Pause" function
PRISEQx : sends the values of the channels selected according to menu "sequence configuration"
DIGOUT : changes the configuration of the digital outputs

Indicates the unit used for activation of the contact:
Unit n°0 : first unit
Unit n°1 : second unit
Unit n°2 : third unit

4.1.7 Sub-menu Send to



Send to

The function "**Send to**" allows sending the values directly to:

- Excel
- Notepad

or to save them in an Excel or Notepad file without opening the addition of:

- .txt File
- .xls File

A window opens during the first transmission values, it makes it possible to reach the function "send" even the software is not visible.

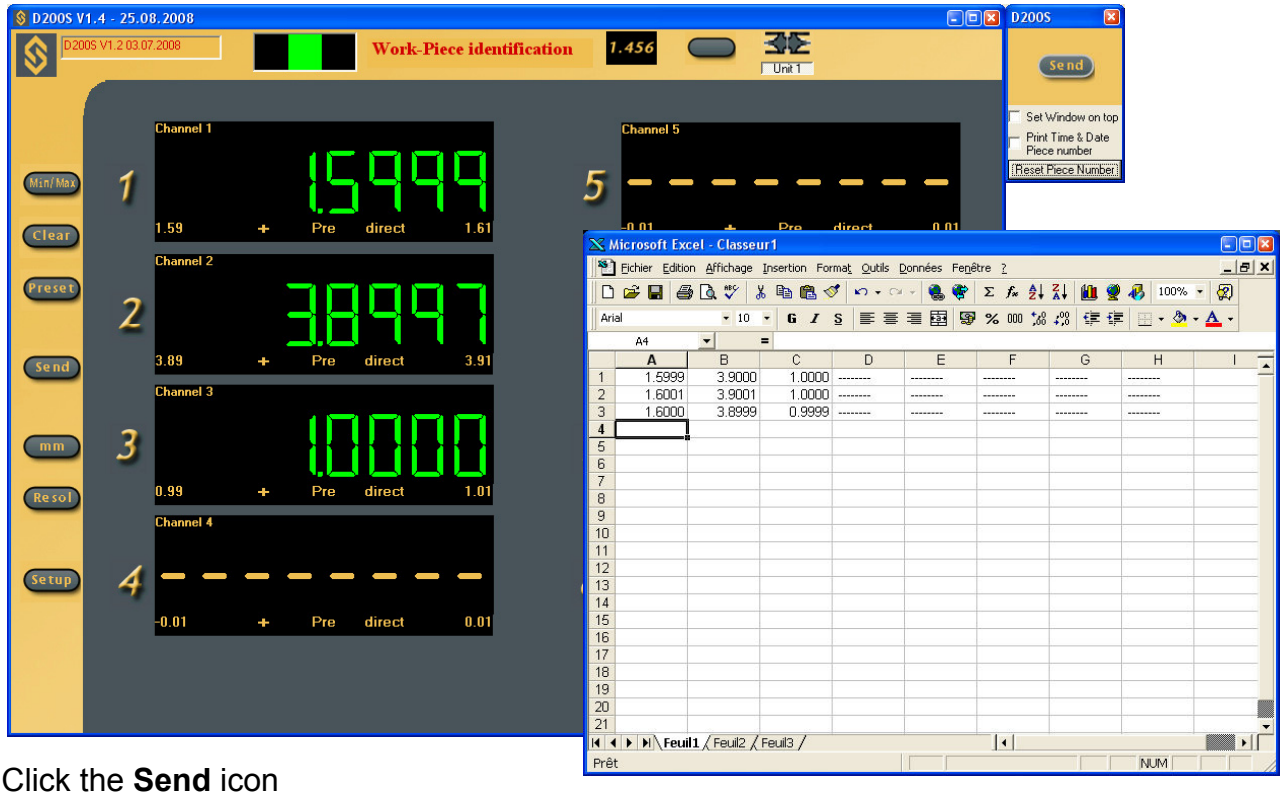
The option "**Set window on top**" makes it possible to send the values in Excel/Notepad while keeping software D200S to the foreground.

The option "**Print Time & Date / Piece Number**" allows sending the date, the time and the number of the part to Excel / Notepad before sending the measured values.

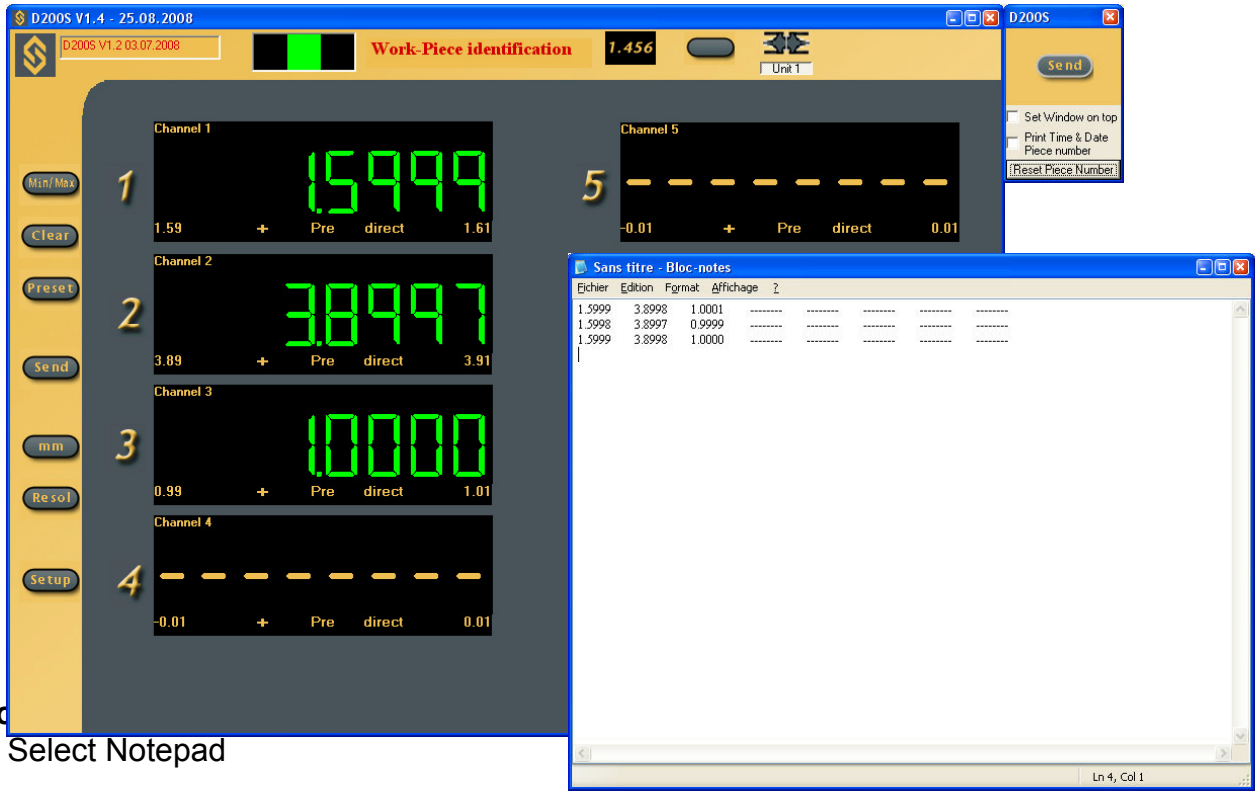
The option "**Reset Piece Number**" resets the numbering of the parts to zero.

Excel

1. Select Excel



2. Click the **Send** icon
   An Excel sheet will open, as well as the icon **Send**.
   Click on the icon **Send**, the selected values will be displayed on the Excel sheet.



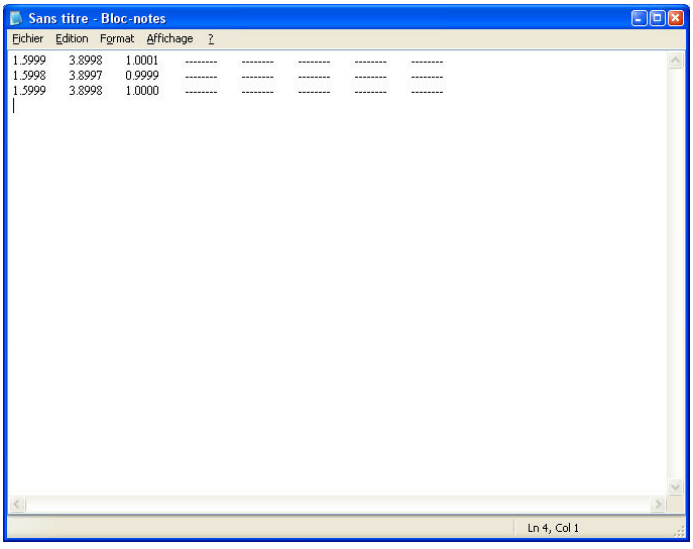
No

1. Select Notepad

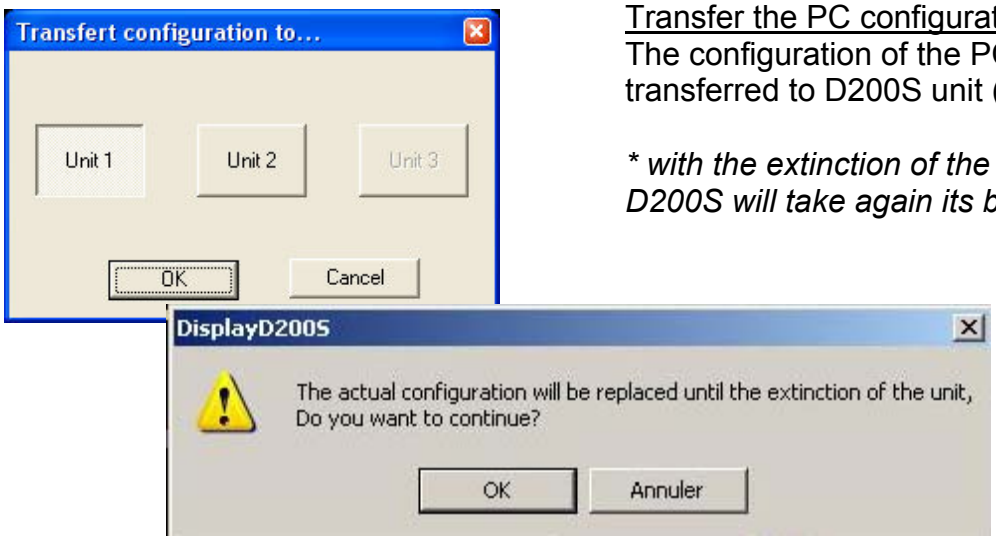
2. Click on the icon **Send**.
   A Notepad file will open, as well as the **Send** icon
   Click on the icon **Send**, the selected values will be displayed to the Notepad file.

.txt File / .xls File

1. Select a txt file to obtain a text file or a xls file to obtain an Excel file.
2. Select the .xls or .txt file in which the values have to be saved.
3. Click the **Send** icon
   A second **Send** icon will open.
   Click on the **Send** icon, the value(s) selected will be saved in a file defined under point 2.



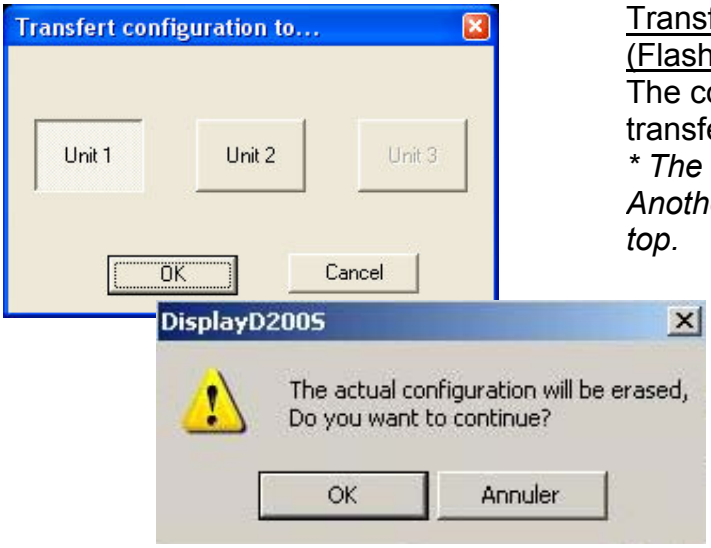
4.1.11 Transfer (to D200S)



Transfer the PC configuration in to the D200S
The configuration of the PC will be transferred to D200S unit (temporarily)

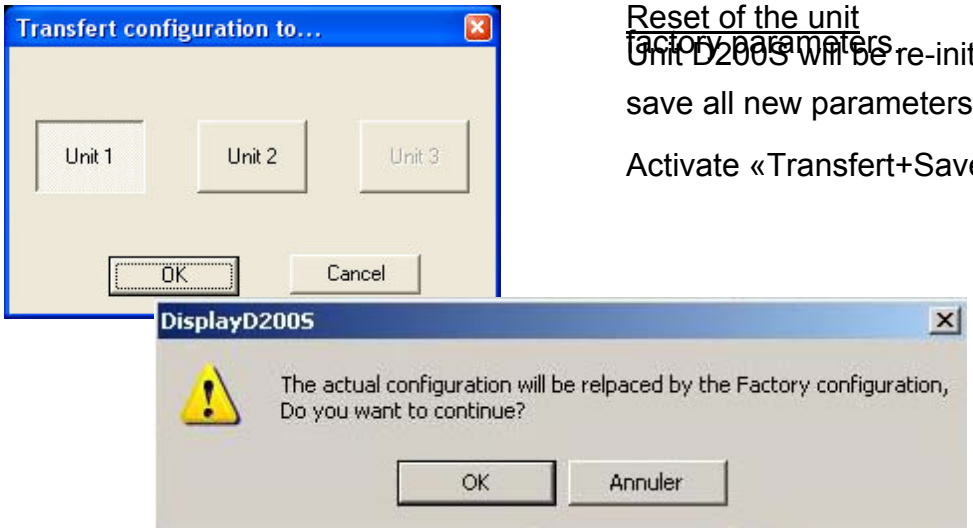
** with the extinction of the unit D200S, the D200S will take again its basic configuration.*

4.1.12 Transfer + Save (to D200S)



Transfer the PC configuration in to the D200S (Flash Memory)
The configuration of the PC will be transferred to D200S unit (Flash Memory)
** The new configuration could not be erase. Another configuration could be flashed on top.*

4.1.13 Reset unit

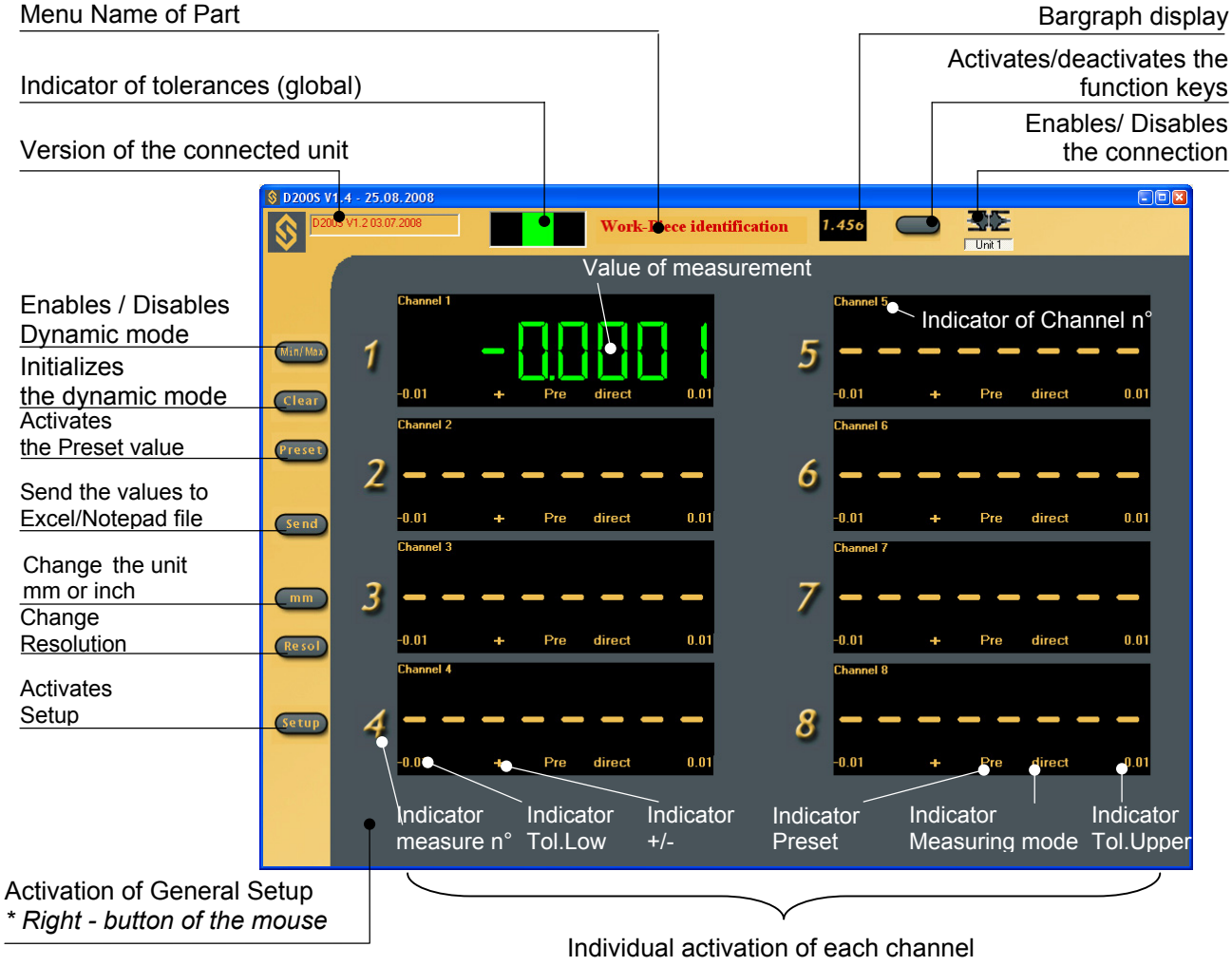


Reset of the unit
factory parameters
Unit D200S will be re-initialized according to save all new parameters into the unit.

Activate «Transfert+Save (to D200s)» to

5 Functions of the basic screen

5.1 Standard Mode





Allows the selection of direct measurement or measurement in dynamic mode. On each return in min/max mode the memories of minimum and maximum are re-initialized with the value measured by the probe. The minimum and maximum starts from this point. The icon becomes green when the min/max mode is activated.



Reinitializes memories of minimum and maximum to the value measured using a probe. A new minimum or maximum is done from this point (this function is available also using the external contact). This function is active only in dynamic mode.



Allows to Enable/Disable all the functions of the Bar tasks. No more Icons with function. It is also possible to disable the functions of the software and use them with the external contacts only.

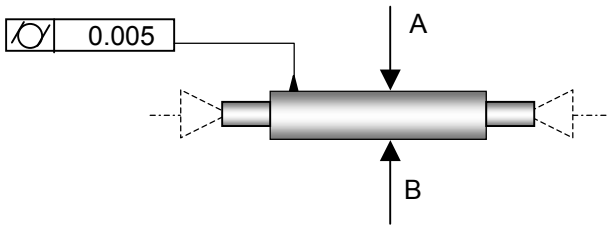


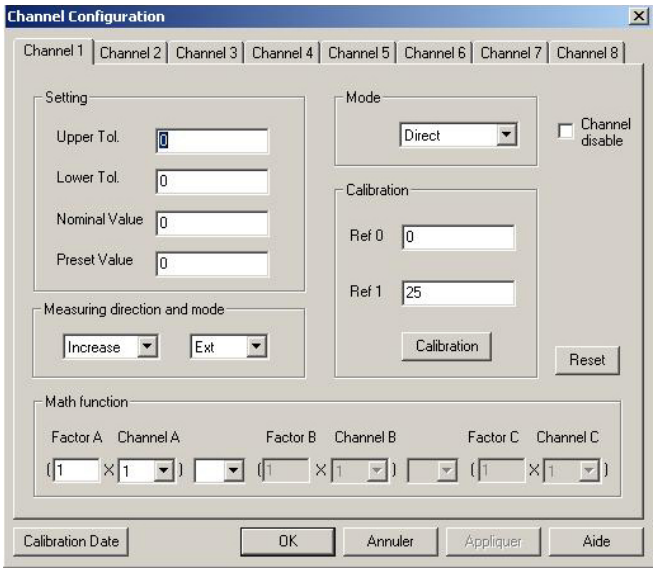
Send the values to Excel/NotePad/file (see chapter 4.1.5).
It also allows to start /stop the automatic data acquisition if it has been selected (see chapter 4.1.1 «Sub-menu RS232 Setup»).
The icon becomes green if the automatic data acquisition is functioning.



Allows the interruption of min/max measurements. The min/max values will not be saved as long as the mode «Pause» is active. This function is only displayed when the min/max mode is active.

5.3 Example of measurement with two points of measurement (2 probes)





1. Place the part between centers.
2. Place the probe **A** and **B** in contact with the part.
3. The configuration of channel **1 (A)** will be as follows :
   Setting

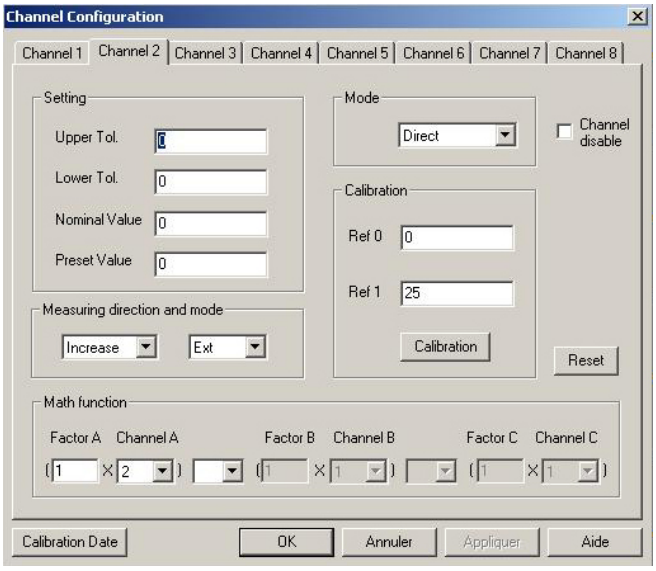
   Upper Tol. = 0
   Lower Tol. = 0

   Measuring direction and mode
   ment
   Increase / *positive (+)*
   Ext. / *external measure*

   Mode
   Direct

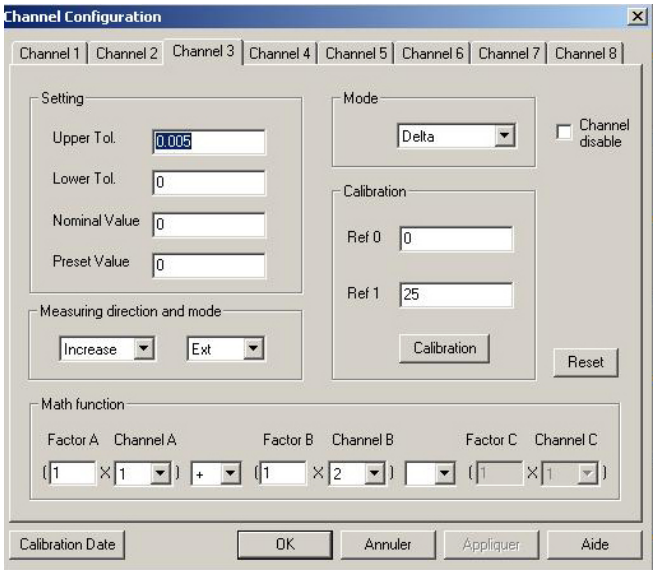
   Math function

   Factor A = 1
   Channel A =1



4. Idem for Channel **2 (B)**
   Except:

   Factor A =1
   Channel A =2



4. The configuration of channel **3** will be as follows :
   Setting
   Upper Tol. = 0.005
   Lower Tol. = 0
   Nominal Value = 0
   Preset Value = 0

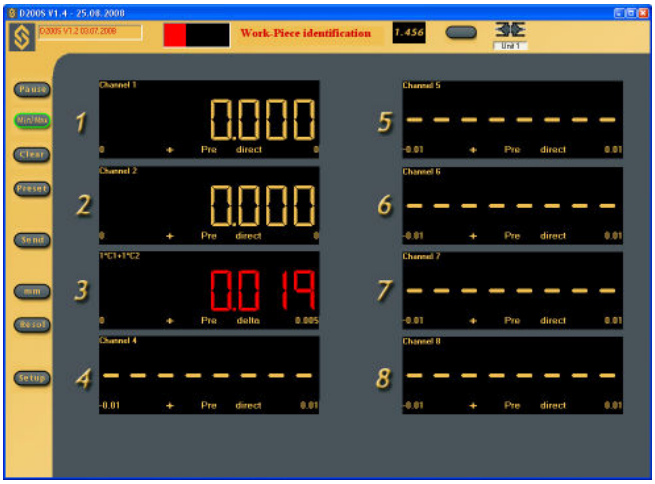
   Measuring direction and mode

   Increase / *positive (+)*
   Ext. / *external measurement*

   Mode
   Delta *(max-min mode)*

   Math function

   Factor A = 1
   Channel A =1
   +
   Factor B = 1
   Channel B =2



5. Active the Delta mode by clicking the icon : **MinMax**

6. Turn the part (360°)

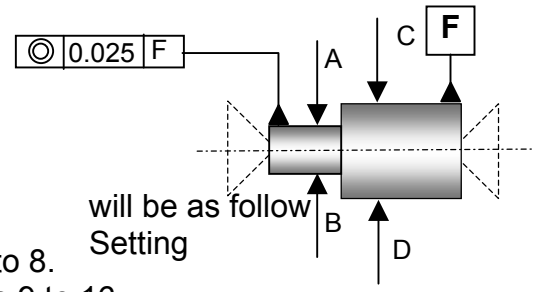
7. The display will indicate :
   Channel 1 : direct value of probe A
   Channel 2 : direct value of probe B
   Channel 3 : delta value of probes A+B

8. Re-initialization is made by the **Clear** icon.

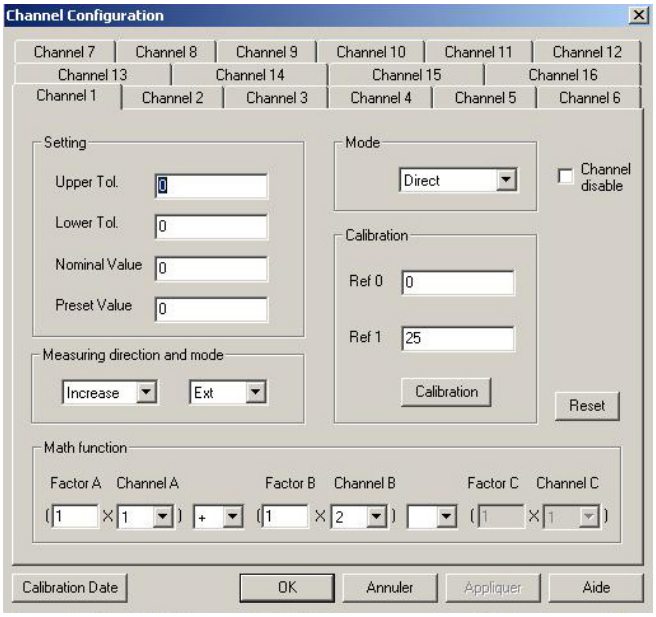
To save the current configuration temporarily in the D200S unit, use the menu **Transfer (to D200S)**. The configuration will be saved until the extinction of the D200S unit.

To save the current configuration definitively in the D200S unit, use the **Transfer + Save (to D200S)**. The configuration will be saved definitively in the D200S unit.

5.4 Example of measurement with four points of measurement (4 probes) with two D200S units.



The first D200S unit covers the channels 1 to 8.
The second D200S unit covers the channels 9 to 16
For this application we will use channels 1,2 and 9,10



will be as follow
Setting

Lower Tol. = 0
Nominal Value = 0

1. Place the part between centers.
2. Place the probes **A**,**B**,**C**,**D** in contact with the part.
3. The configuration of channel **1 (A+B)**

s :

Ext. / *External measurement*

Increase / *positive (+)*

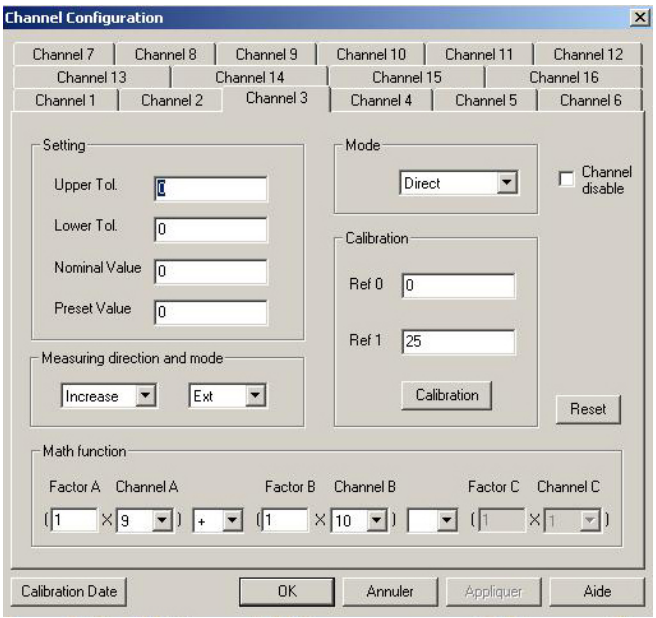
Upper Tol. = 0
Direct
Measuring direction and mod
Preset Value = 0

e

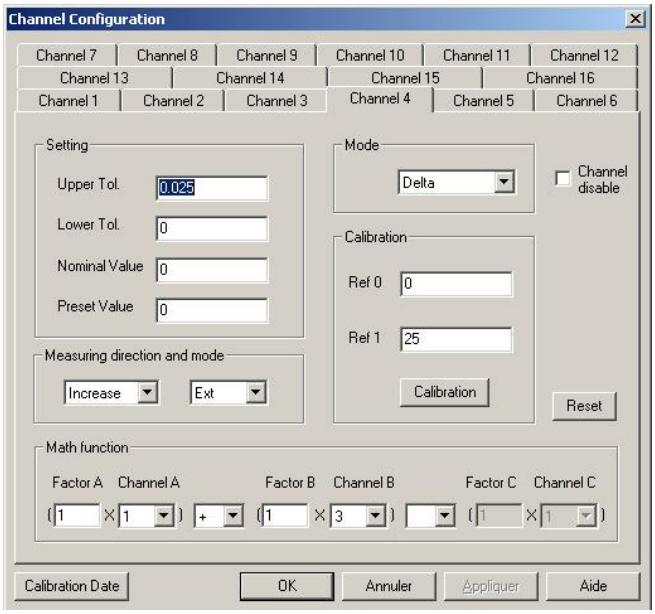
4. Idem for Channel **3 (C+D)**
   Except:

Math function

Channel A =1
+
Factor B = 1



Factor A = 1
Channel A =9
+
Factor B = 1
Channel B =10



4. The configuration of channel **4 (A+B)** + **(C+D)** will be as follows :
   Setting
   Upper Tol. = 0.025
   Lower Tol. = 0
   Nominal Value = 0
   Preset Value = 0

   Measuring direction and mode
   Increase / *positive (+)*
   Ext. / *External measurement*

   Mode
   Delta

   Math function

   Factor A = 1
   Channel A =1
   +
   Factor B = 1
   Channel B =3



5. Active the Delta mode by clicking on the icon : **MinMax**

6. Turn the part (360°)

7. The display will indicate :
   Channel 1 : direct value of probes A+B
   Channel 3 : direct value of probes C+D
   Channel 4 : delta value of probes (A+B)+(C+D)
8. Re-initialization is made by the **Clear** icon.

To save the current configuration temporarily in the D200S unit, use the menu **Transfer (to D200S)**. The configuration will be saved until the extinction of the D200S unit.

To save the current configuration definitively in the D200S unit, use the **Transfer + Save (to D200S)**. The configuration will be saved definitively in the D200S unit.

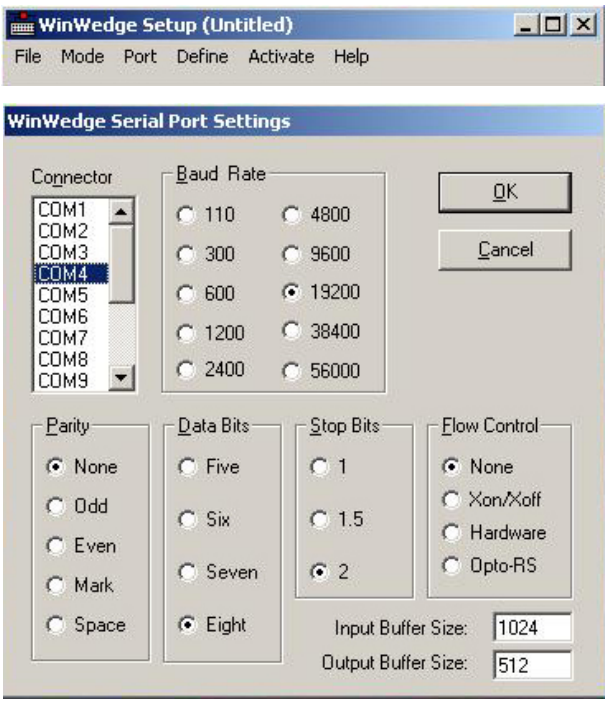
6 Communication protocol (remote commands)

The unit can work without the software D200S. The D200S unit can receive retro-commands and thus modify the parameters of its configuration. The user can use a serial software of communication (e.g. Winwedge...) to fulfilled simple functions or to create his own software.

The D200S unit transmits by using the following parameters:

Baud rate	19'200
Stop bit	2
Data bit	8
Parity	(No parity)

6.1 Example of communication with software Winwedge 32



Start the software Winwedge 32

Select the port used

Example : **COM4**

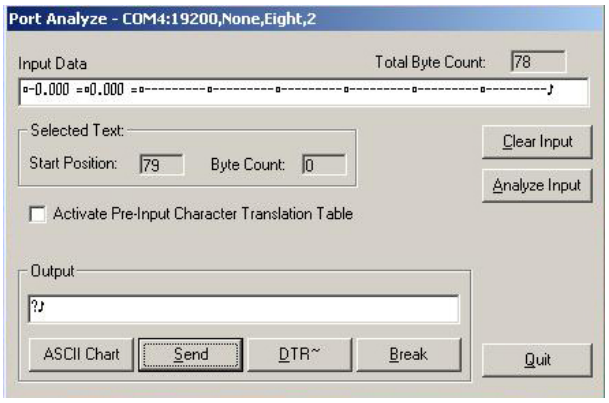
Select the communication parameters.

Baud Rate : **19200**
Parity : **None**
Data Bits : **Eight (8)**
Stops : **2**
Flow Control : **None** (Non)

Then click OK



Select "Analyze"



ut"
? » **print**
eturn

value of the 8 channels

Enter into the window "Output values
ls are

the remote command «

followed by « **CR** » carriage r

The unit sends the value of the selected channel

6.2 Code for remote commands

Code	Function
• **?**	Print out of the displayed value (8 Channels.)
• **?X** X : 1-8	.g. : « **?6** » the value of channel 6 will be sent)
• **?X-Y** 1-8	he unit sends the values of the range of the 6 will be ent)
•	resolution 01 in : in
• **MM**	tre unit
• **IN**	it
• **Lcal ?**	f the last calibration
• **Ncal ?**	e next calibration
• **CDir**X1X2X3X4X5X6X7X8 **X1,X2…,X8** : 0 or 1 **X1** configure channel 1 **X2** configure channel 2 ….. **X8** configure channel 8	**00** » the measuring direction is gative for
• CMod**X1X2X3X4X5X6X7X8** **X1,X2,…,X8** : 0 or 1 gure channel 2 **X8** configure channel 8	**0101010** » configure channels 2,4,6,8
• T+**xmmm.mmmm** **x** : channel n° (1 to 8) m : upper Tol.	annel X (eg : « **T+3.0.0013** », the lower tolerance of channel 3 is -0.0013 mm) (eg : « **T+30.0016** », the upper tolerance of channel 3 is 0.0016 mm)
• T**- xmmm.mmmm** **x** : channel n° (1 to 8) m : lower Tol.	Insert the lower tolerance on channel X

- **X** : channel n° (1 to 8)
  m : Preset value

  P+**xmmm.mmmm**

  (eg : « **P**
  is 16.15
  Insert the Preset value on channel X
  Insert the
  (eg : « **TN616.150** », the nominal value of channe
  6 is 16.150 mm)
  +516.150 », The Preset value of channel 5
  0 mm)
- TN**xmmm.mmmm**
  x : channel n° (1 to 8)

  Program the
  nominal value on channel X
- Syn
  m : Nominal value

  Synchroni
  u
  l
- FactRes

  C
  Configure the concerned contact
  a
  flash memory
  b = Preset
  c = Change digital output setting
  e = Clear
  f = D110 lifting
  g
  zation: return the configuration of the
  nit.
  harge the factory setting configuration.
  h = Pause enable
  i = Hold disable
  j = Hold toggle
  k = Pause disable
  l
  = Print
- Pr1
  SW2**X** (S

  X : a,
  seq2,…,seq8,_NOFCT

  EXT**X** (External contact),
  SW1**X** (Switch 1),
  witch 2)

  b,c,e,f,g,h,i,j,k,l,m,n,seq1,

  n = D110 toggle
  = Hold enable

  = Pause toggle
  m = D110 lowering

  seq1,…,seq8 = Print seq1…8
  _NOFCT = No function

  (ex: « **EXTa** », the external contact is configured in print mode, the action of the contact sends the data to the PC.)
- Mtl**X**
  X : <,=,>

  (eg: « **Mtl=** » , Switch ON the green led tolerance of the D200s unit)
  See chapter 4.1.4
  Modify the status of tolerances LED'S
- Out**X**
  X : 0,1

  Configure the digital output
  0 : canal tol
  1 : Master tol

  (eg : « **Out1** », the digital ouptputs are configured in Master Tol, see chapter 2.3)

- MMC**X1X2X3X4X5X6X7X8**
  X1, X2, .., X8 : 0 to 5
  X1 configure channel 1
  X2 configure channel 2
  ….
  X8 configure channel 8

  Select the measuring mode
  0 : direct
  1 : max
  2 : min
  3 : delta
  4 : mean

  (eg : « **MMC00010300** » the measuring mode is configured in direct mode for channels 1,2,3,5,7,8, in max mode for channel 4 and delta mode for the channel 6)

- MinMax**X1X2X3X4X5X6X7X8**
  X1,X2,…,X8 : 0 or 1
  X1 configure channel 1
  X2 configure channel 2
  ….
  X8 configure channel 8

  Activate the min/max mode on the selected channels

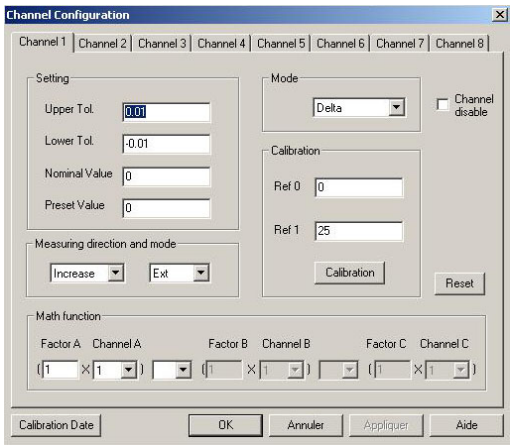
  (ex : « **MinMax10000100** », activate the min/max mode measurement on channels 1 and 6)

- MaxEnd
  Disable the MinMax mode
- Cle
  Erase the me
- Pre
  Charge the memorized preset value
  monized value in min/max mode
- Ver ?
  Display the software version.

All remote commands sent to the unit must by ended by a carriage return "**CR**".

7 Calibration of the unit

The calibration of unit D200S is made by the manufacturer. If a re-calibration is necessary, proceed as follows:



1) Fix the probe P2, P5, P10, P25 or P50 on a vertical support.
2) Select a resolution of 0.0001 mm or 0.00001 in.
3) The probe completely open, perform a zero setting
4) Position the probe mechanically on the reference base so that the display indicates a value included:

   For a P2 between 0.2 and 0.3 mm
   P5 between 0.7 and 0.8 mm
   P10 between 0.4 and 0.5 mm
   P25 between 0.8 and 0.9 mm
   P50 between 1.0 and 1.2 mm

5) Open "**Channel Setup**" and introduce into the field "**Ref1**" the exact value of the master which will be used for the calibration.
6) Move the probe on its reference base (value 0), then click calibration.
7) Move the probe to the calibration master then click again calibration.
   repeat if necessary points 5), 6) and 7) for the other channels.
8) Save the calibration into the unit by using the menu "**Transfer + Save**" (see. chapter 4.1.12).

C F R ifications

ase	Aluminium
Dront panel	Plastic ABS, Front plate : Aluminium
Dear panel	Plastic ABS, Rear plate : Aluminium varnish
W Simensions	Width: 304 mm, depth: 171 mm, height: 61 mm
Oegreeing IP Protection	IP50
eight	1.2 kg
Ttorage temperature	Between –20°C and +45°C
wp temperature	Between +5°C and +40°C
Fhermal stabilization mhen Switching ON	30 minutes minimum.
D requency of easurement	P2/5/10/25/50 : 200 measures/s
ynamic measurement	τ = 10ms for 10 µm range, τ= 30ms for 100 µm range.
Inigital output	Signals of class (according to tolerances) *Signals for pneumatic D110 unit on opto-copler.
PC Connection puts	USB/RS232 cable to connect to digital inputs from a PC.

Accuracy D200S + probes

Type of probe	Error average	Repeatability (+/- 2σ)
P2	1.5 µm	0.3 µm
P5	1.6 µm	0.3 µm
P10	1.6 µm	0.2 µm
P25	1.9 µm	0.2 µm
P50	3.9 µm	0.4 µm

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EU DECLARATION OF CONFORMITY (DoC)

We, Sylvac SA, hereby declare under our sole responsibility that the product

Name	D200S
Description	Multiplexer unit D200S
Part Numbers	804.1200

has been submitted to a conformity assessment and fulfils the essential requirements of the following European directives

2001/95/EC	General product safety
2014/30/EU	EMC
2011/65/EU & 2015/863/EU	RoHS

and complies with the following harmonized standards or other normative documents

EN 61010-1:2010	Safety requirements for electrical equipment for measurement, control and laboratory use
EN 61326-1:2013	Electrical equipment for measurement, control and laboratory use – EMC requirements
EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Person authorized to compile the technical file and issue the declaration of conformity: Eric Schnyder

Place and date of issue	Yverdon-Les-Bains, September 12, 2019
Name (position)	Eric Schnyder (CEO)
Signature	