sylvac

Universal display unit
Unité d'affichage universelle
Universelle Anzeigeeinheit

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D300S V2



User guide
Manuel d'utilisation
Bedienungsanleitung

Software version V3.00
OS V2.4

Summary

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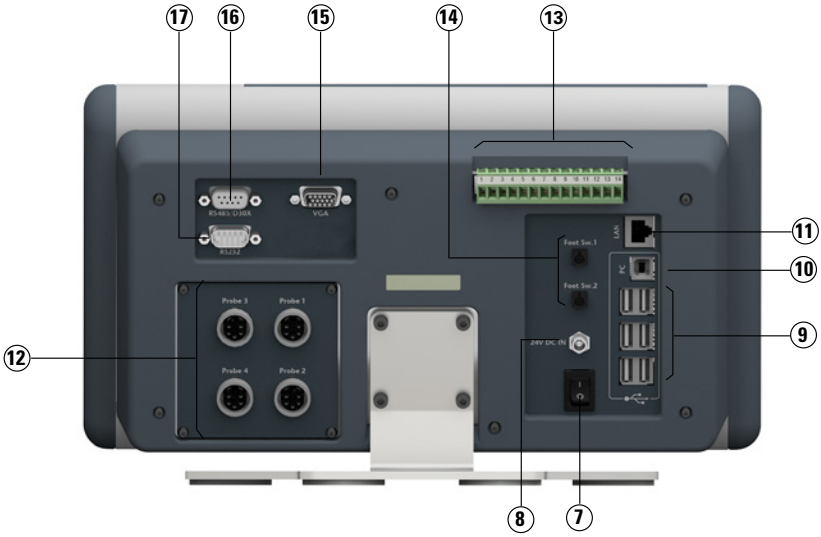
General description

The D300S is a display unit enabling the visualisation of the entire Sylvac hand instrument range and P2, P5, P10, P25, P50 probes. The intuitive interface enables the user to easily configure the device and solve most measurement problems met in production or in laboratory.

Front panel



Back panel



Input/output explanations

USB Host
Enables measurements sending to a PC. Depending on the operating system, a driver may be required. It can be downloaded directly from the www.ftdichip.com website.

The default communication parameters are as follows:

Baud Rate	4800
Parity	Even
Data Bits	7
Stop Bits	2
Flow Control	None

The list of retro-commands recognised by the D300S are found in the « Retro-command codes list » chapter, P. 24.

USB Device
Enables the connection of measurement instruments through a usb cable (Proximity-USB, Opto-USB, Power-USB, …). It is possible to extend the number of USB ports using a usb hub.
30 USB instruments at the most can be connected at the same time.

Power Switch
Allows the complete switching off of the unit

Sustain pedal input
Two pedals can be connected. Two extra external contacts are also available on the screw terminal (Switch 1 and 2).

Network connection (RJ45)
The connection to a local network enables amongst other things the retrieval of recorded data (ex: recorded measurements, configuration files, ...)

VGA output
Enables the connection of the D300S to an external screen or projector.
Note : The resolution stays identical to the unit's one, i.e. 800x400. It cannot be modified.

RS485
Enables the connection of the D302 and D304 probe modules.

RS232
Enables the connection of a RS232 instrument with a Duplex cable.

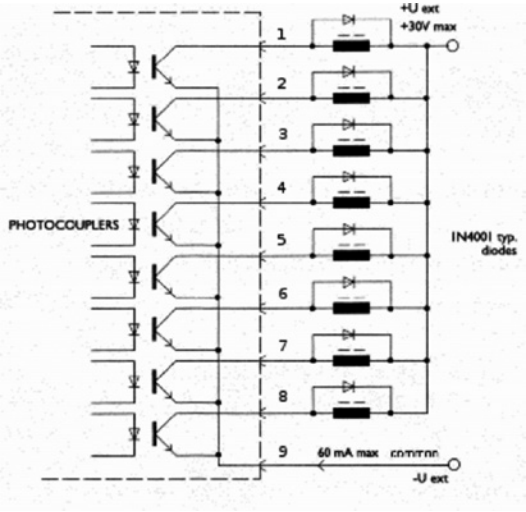
Probe input
Enables the connection of the Sylvac probes (P2, P5, P10, P25, P50).

Digital outputs



N°	Function
1	Output isolated by optocoupler
2	Output isolated by optocoupler
3	Output isolated by optocoupler
4	Output isolated by optocoupler
5	Output isolated by optocoupler
6	Output isolated by optocoupler
7	Output isolated by optocoupler
8	Output isolated by optocoupler
9	Common for the 8 optocoupler outputs
10	Switch 1
11	Switch 2
12	External power supply +24V (input)
13	GND
14	Internal power supply +24V (output)

Schematic representation

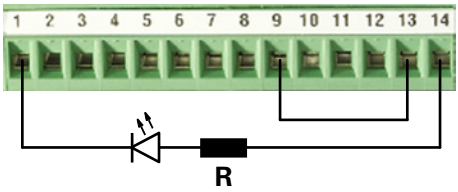


The maximum voltage is 30V and the maximum current is 60mA per output.

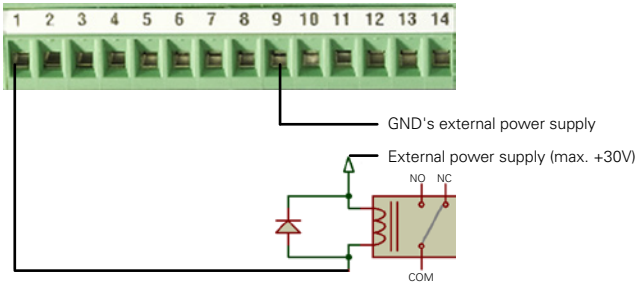
The supply voltage of the optocoupler outputs are normally brought from the outside, the negative pole on the common transmitters (pin 9)

The protective diode is indispensable in case of inductive load (solenoid valve, relay, ...)

Example to connect a LED on the n°1 digital output

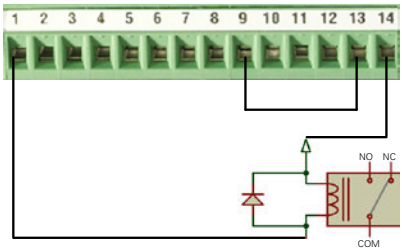


Example to connect a relay on the n°1 digital output (external power supply)



Note: a protective diode must be added in parallel of the relay if it isn't integrated.

Example to connect a relay on the n°1 digital output (internal power supply)



Note: a protective diode must be added in parallel of the relay if it isn't integrated.

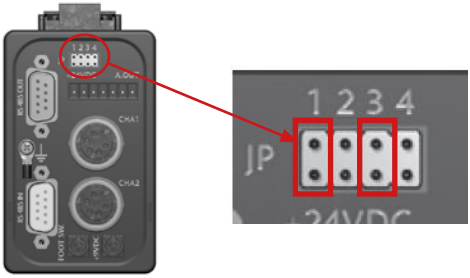
Example to connect an external contact on the Switch 1 input



RS485/D30X connections

These two inputs allow an increase in the number of probes connected to the D300S.

The RS485/D30X input
This input is exclusively used for the D302 and D304 modules.
The capacitive probes (P5, P10, P25, P50) can be connected to these modules.

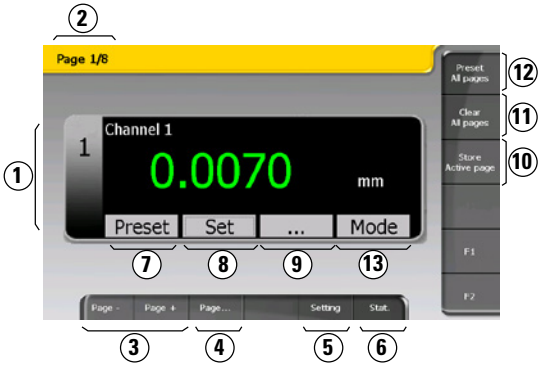


Remark : the configuration jumpers must be placed on JP1 and JP3 so that the module is correctly detected by the D300S.

User interface

When you first switch on your D300S unit, the default interface will be active as shown below.

1	Window showing details of channel X
2	Active page indicator
3	Select page X/X
4	Configuration of number of pages (8. max.)
5	General configuration
6	Display type (shift to static mode)
7	Channel individual preset
8	Channel reset
9	Channel configuration
10	Measurement recording (of the active page)
11	Clear all displayed channels
12	Preset all displayed channels
13	Activate the Min/Max extent

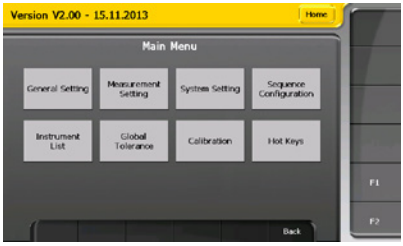


While the unit switches off, all parameters are automatically saved. It is also possible to save your configurations in order to use your D300S for several different workstations.

When an instrument is connected, it is automatically assigned a channel. The cable's identification address is registered by the unit.
It is therefore vital not to switch it with other instruments. If you disconnect the cable from the unit and use a different USB port when you next connect it, the same channel will be reassigned to it.

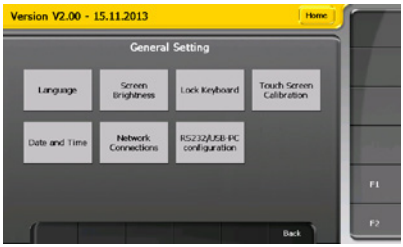
The Setting menu

This menu enables the modification of all system parameters.



General setting

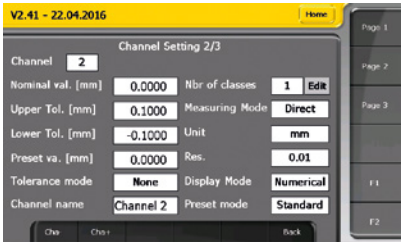
This menu allows you to configure the general parameters of your unit.



It is, amongst other things, possible to:

- Select the language
- Modify display brightness
- Lock the keyboard and tactile screen
- Modify the date and time
- ...

Channel setting



Configuration of a channel's measurement parameters, such as tolerances or preset values.



Instrument allocation and measurement type selection thanks to the mathematical functions.

Channel allocation

To allocate an instrument to a channel automatically (by movement of the measurement probe) or manually (by selecting it in a list). If the "manual" option is chosen it is then possible to select either an instrument in the list, or a channel on which a calculation has already been configured, for example.



Exclusion from automatic detection

It is possible to exclude a channel from automatic instrument detection when this is moving. This is useful, when for example, the same instrument is allocated to different channels. In this case, when the instrument moves, it is no longer possible to know what channel must be selected. To avoid this problem it is possible to deactivate automatic detection on certain channels.

Tolerance mode
This option enables the modification of colours used to indicate statuses.

<=>	red – green – yellow
GO NOGO	red – green – red
<=> (int)	yellow – green – red (interior measure)

Number of classes

Selection of the number of classes wanted for the classification of measured values. It is possible to choose up to 8 classes. The classes are spread out proportionally between higher tolerance and lower tolerance.

Display mode

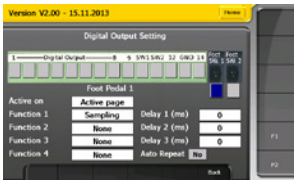
Digital : displays the digital value
Bargraph : displays the measurement as a bargraph

Measurement mode

Direct	: displays the value live
Max	: displays the maximum value
Min	: displays the minimum value
Delta	: displays the difference (maximum - minimum)
Mean	: displays the average (maximum + minimum)/2
Delta (sampling)	: Displays the difference over a given number of samples
Mean (sampling)	: Displays the mean over a given number of samples

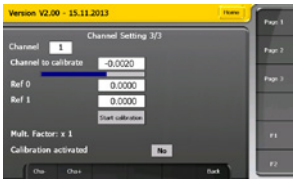
To use Delta (sampling) or Mean (sampling) mode, the channel measurement mode must be configured, then the sampling function selected for the desired external contact, for example pedal 1. In this configuration, every time pedal 1 is pressed the channel value is temporarily recorded (n indicates the number of values recorded) and the delta or mean is calculated as a function of the recorded values. This allows a delta to be produced at several points using a single instrument.



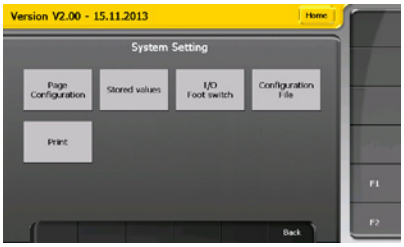


Channel calibration at 2 points

It is possible to calibrate the channel at two reference points. A multiplication factor is then calculated so allowing the measurement of diameters on V or the calibration of a channel depending on the reference block. This multiplication factor can then be activated or deactivated. This calibration only affects the channel and not the instrument allocated to the channel.



System setting



This menu enables access to the unit's global configuration :

- Display configuration
- Digital output configuration
- Configuration recording
- Recorded measures visualisation
- Modify printing options

Digital outputs

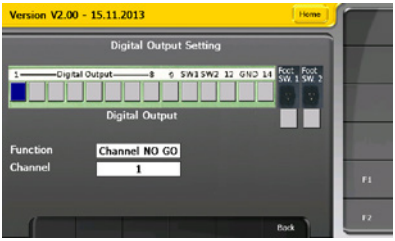
It is possible to configure the digital outputs as a function of the tolerance of a specific channel, or generally.

Function: allows configuration of which condition activates the output:

- NO GO channel: when the channel value is outside tolerances
- GO channel: when the channel value is within tolerances
- Global Tol <: when the general measurement is less than the defined tolerances

- Global Tol = : when the general measurement is within the defined tolerances
- Global Tol > :when the general measurement is more than the defined tolerances
- D110 lifting : allows control of the D110 unit (lifting)
- D110 lowering : allows control of the D110 unit (lowering)

Channel: allows channel selection when the Channel GO or Channel NO GO mode is selected.

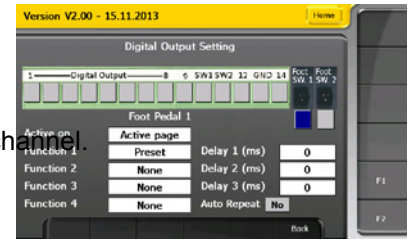


External contact

The external contacts can combine up to 4 different functions.

Active on: allows configuration of the channels on which the external contact action will act.

- All pages: acts on all the defined channels.
- Active page: acts only on the active page channels.
- Active channel: acts only on the active channel.
- Sequences: acts on the channels configured according to the "Sequence" menu.



Function: Pedal function configuration. Up to 4 different functions can be combined. A delay between each of the functions can be defined in milliseconds.

Delay: Configuration of waiting time between 2 functions in milliseconds

Auto Repetition. : Activates or deactivates automatic repetition of functions configured on the external contact. This typically permits recording of a measurement every x seconds.

Printing
Page 1

The information that will be printed can be configured. Up to 4 different fields and 4 field separators can be configured by the user.

The printable information is as follows:

- Value (##.###) : the value with a ". " as decimal separator.
- Value (##,###): the value with a "," as decimal separator.
- Date and time: the date and time that the measurement was taken.
- Counter: the part counter. Can be reset to zero using the "reinitialise part counter" button.
- Channel name: the channel name can be modified by the user in the "measuremer
- Channel number
- Min/max value: the min, max, delta and mean values will be printed.
- Tolerance: the measurement tolerance status (<, =, >).
- None: no information to be printed.

The field separators are as follows:

- {TAB}: a tab.
- {SPACE}: a space.
- {CR}: a carriage return.
- {CR}+{LF}: a carriage return followed by a line feed.
- { :} : two points.
- { :}+{TAB}: two points followed by a tab.

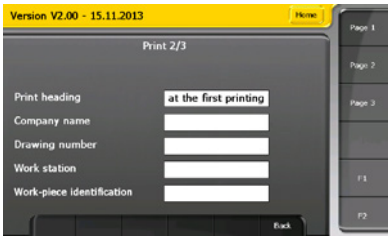


Page 2

The user can define a header that will be printed with the values. An option allows definition of whether the header is printed on each printing or only on the first printing.

The different header information is as follows:

- Company name
- Drawing number
- Work station
- Part identification



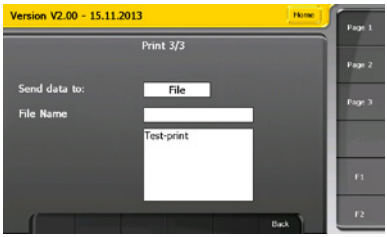
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Page 3

It is possible to choose the destination for the printed values.

The different options are as follows:

- Printer: The values are sent to the printer. For this a USB printer must be connected to the D300S.
- PC: The values are sent to the PC via the USB-PC port. A virtual COM port is creat
- File: The values are sent to a file whose name can be entered by the user. The file System parameter Recorded values



Configuration of sequences

This menu allows the allocation of a certain number of channels to a sequence with the aim of executing a function (e.g.: print, preset, store...) on a defined channel or channels. These functions are configured on one of the external contacts and it is possible to configure up to 3 sequences.

Action: configures whether the external contact acts on all the defined channels or on one channel.

- Manual: pressing the external contact acts on one channel at a time and selects the next channel.
- Auto: pressing the external contact acts on all the channels at the same-time. All the channels defined are selected.

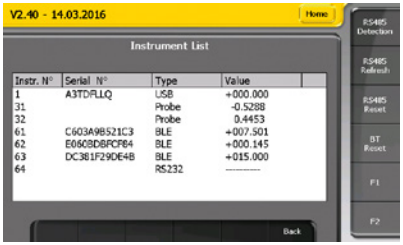
Trigger : selects the external contact that activates the sequence

Remark: The "sequence" option must be configured at the external contact in the System parameters --> Pedal I/O menu.



Allows to select the action to be performed

List of instruments



This menu allows display of all the instruments connected to the unit. The different instrument types are:

- USB: the instruments connected using the USB cable (proximity-usb, optoRS-usb, …).
- D200S: the D200S equipment connect through the USB port
- S_SCALE: the USB measurement axes
- RS232: the instruments connected using an RS232 cable
- Probe: Symac capacitive probes. The "E" symbol appears **Remark** by point correction is active.
- BLE: Bluetooth® instruments

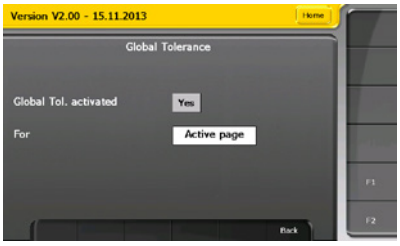
It is also possible to configure the modules connected by RS485:

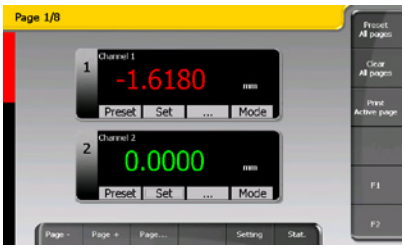
- RS485 Detection: activates the detection of a new RS485 module connected to the unit. A probe movement is sufficient to make the configuration.
- RS485 Refresh: searches for all the RS485 modules connected to the D300S and makes them appear in the list of instruments.
- RS485 Reset: deletes the RS485 modules present in the list of instruments

Detection of Bluetooth® instruments is also done from this menu. (See chapter "Example of configuration with three Bluetooth® Smart" instruments)

Global tolerance

It is possible to add a global tolerance for the measured part. It can be defined

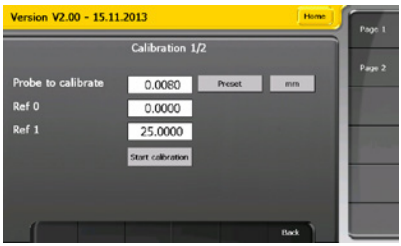




Calibration

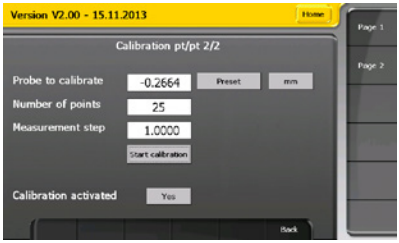
The unit is calibrated in the factory. If recalibration is necessary, the calibration menu allows it to be done.

Remark: The calibration menu can be accessed by holding the digital keypad "Enter" and by selecting at the same time the button calibration on the digital display.



Page 1: allows calibration at 2 reference points.

Page 2: allows a linearity correction using 2 to 25 points. The number of points and the measurement step can be entered. The value of the calibration blocks can be modified during the calibration procedure if it does not correspond to the measurement step.



Hot Keys

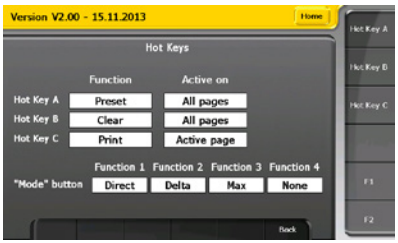
The functions of the 3 buttons on the right of the screen (see user interface chapter, point 10, 11 & 12) can be configured by the user. It is also possible to define whether the functions act on the active page, all the pages or the active channel.

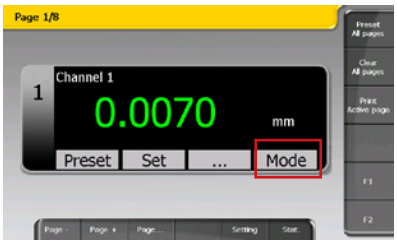
The mode button can also be configured. 4 functions can be defined by each press on the mode button, the different functions are selected successively.

The different functions:

- Direct
- Min
- Max
- Delta
- Mean
- Delta (sampling)
- Mean (sampling)
- Light mode: switches between the min/max/delta/mean/direct modes
- Full mode: switches between the min/max/delta/mean/delta(sampling)// mean(sampling)/direct modes

Remark: if the "light mode " or "full mode" function is selected the other functions are ignored.

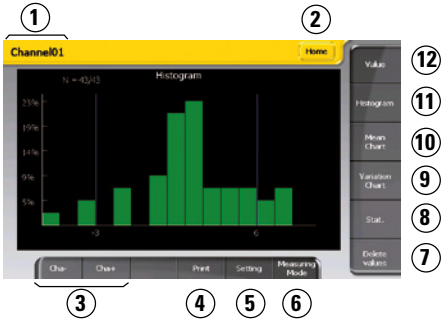




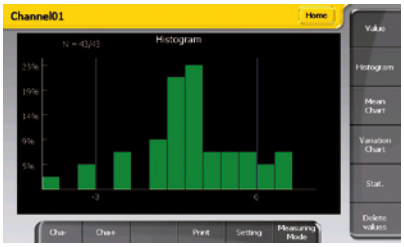
Statistics

This mode enables the display of statistics. They are calculated individually per channel and are based on the values recorded by the user.

1	Window showing details of channel X
2	Return to default screen
3	Displays the statistics of the next channel
4	Prints the statistics
5	General configuration
6	Display type (shift to measure mode)
7	Erase the recorded values of the active channel
8	Display the statistics table
9	Display the chart over the range (R)
10	Display the chart of the average (Xbar)
11	Display the histogram
12	Display the recorded value



The Histogram



The number of classes of the histogram is fixed at 9. On the vertical axis (Y axis) we have the amount in % of recorded values in each class.
The lower and higher tolerance limits are indicated on the X axis. The values beyond the tolerance limits of over 3 classes are not displayed. N indicates the number of values displayed in the histogram over the total amount of values.

The chart of the average (Xbar)



UCL : Upper control limit
$X+A_2$* R, with A_2=0.577 for n=5

LCL : Lower control limit

$X-A_2$* R, with A_2=0.577 for n= 5

Values beyond the control limits are indicated in red.
Values within the control limits are indicated in green.

The chart over the range (R)



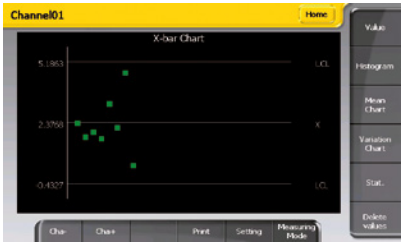
UCL : Upper control limit
D_4* R, with D_4=2.114 for n=5

LCL : Lower control limit

D_3* R, with D_3=0 for n=5

Values beyond the control limits are indicated in red.
Values within the control limits are indicated in green.

The statistics table



N : the amount of recorded values
Xmax : maximum recorded value
Xmin : minimum recorded value
R (Range) : Xmax – Xmin

Xbar (average) : $\frac{\sum_{i=1}^{N} X_i}{N}$

σ (sigma) = standard-deviation:

$$\sqrt{\frac{\sum_{i=1}^{N} (X_i - \overline{X})^2}{N}}$$

S (standard deviation) = population standard-deviation based on a sample :

$$\sqrt{\frac{\sum_{i=1}^{N} (X_i - \overline{X})^2}{N-1}}$$

-3s : $\overline{X} - 3s$ (lower regulation or intervention limit)

+3s : $\overline{X} + 3s$ (upper regulation or intervention limit)

-NG : amount of recorded measures below the lower tolerance limit

+NG : amount of recorded measures above the upper tolerance limit

%Def : $\frac{(-NG)+(+NG)}{N} \cdot 100$ (percentage of faulty measures)

Cp (process capability) : $\frac{Tsup - Tinf}{6\sigma}$

Cm (machine capability) : $\frac{Tsup - Tinf}{6\,s}$

s calculated over a sample at time instant t

Cmk (centring capability): the lowest value between the 2 following formulas $\frac{Tsup - \overline{X}}{3s}$ & $\frac{\overline{X} - Tinf}{3s}$

Cpk (centring capability process) : the lowest value between the 2 following formulas $\frac{Tsup - \overline{X}}{3\sigma}$ & $\frac{\overline{X} - Tinf}{3\sigma}$

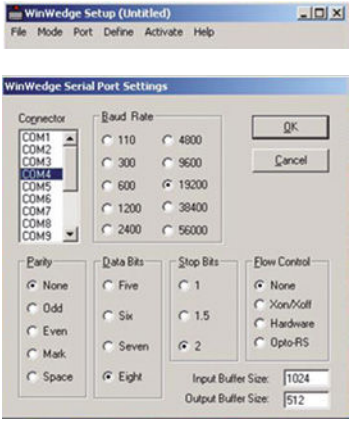
Communication with a PC

The D300S can be managed from a PC via the « USB-PC » port. Retro-commands are used to this end, they enable, amongst other things, the modification of the unit's parameters and the request of values from different channels.

Communication parameters are as follows:

Baud Rate	4800
Parity	Even
Data Bits	7
Stop Bits	2
Flow Control	None

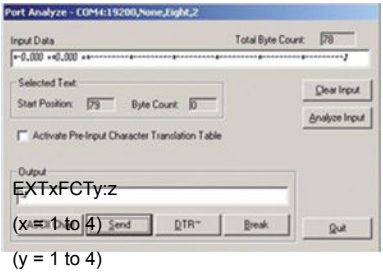
Communication example with Winwedge 32 software



Startup the Winwedge 32 software

Select the port used
Example : COM4
Select the communication parameters.
Baud Rate : 4800
Parity : Even
Data Bits : Seven (7)
Stop Bits : 2
Flow control : None
Then click OK





Select Analyse

Type in the "output" window the retro-command " ? " followed by the "CR" carriage return ASCII (13) character to display the value of active channels.

Click on the "send" button

In the Input Data window, the channel value is displayed.

EXTxFCTy:z

(x = 1 to 4)

(y = 1 to 4)

(z = 1 to 10)

Z=0: none
Z=1: preset
Z=2: clear
Z=3: print
Z=4: store
Z=5: D110 lowering
Z=6: D110 lifting
Z=7: D110 lowering/lifting
Z=8: Hold ON

Y=4: function 4

Ex : « FS4 » activates the Foot Pedal 2 function

Y=3: function 3

Configuration of the concerned external contact.

X = 4: Foot Pedal 2

4 functions can be allocated to a same external contact.

Y=2: function 2

A delay between the different functions can be entered thanks to the « EXTxFCTy:z » command.

X = 3: Foot pedal 1

Y=1: function 1

X = 2: switch 2

X = 1: switch 1

Retro-command codes list

VER?	Displays the version of the software
SCREEN?	Returns active page number.
?	The unit sends all values of the active page
?x	Sends only the value of channel x is sent
SCREENx	Activates the selected page
(x = 1 to 8)	
?x-y	Sends only the values of the active page are up to date.
x = channel nb (1 to 64)	
CHAx	Activates the selected channel
(x = 1 to 64)	
Fsx	Activate the external contact function
(x = 1 to 4)	

	Z=9: Hold OFF Z=10: Hold ON/ OFF Ex : « VIEW2channel1 » displays the channel1 histogram. Ex: « EXT3FCT1:1 » configures pedal 1 with the Preset function Y=2: delay 2 between the execution of function 1 and 2 of pedal 1.
#xx#1 KEY0 #xx#DELAYy:z (x = 1 to 4) (y = 1 to 3) (xx : 1 to 64) (z = 100 to 99999999) #xx#RES1 #xx#RES2 #xx#RES3 #xx#RES4 #xx#BAR #xx#NUM KEY1 #xx#MAX STO?x #xx#MIN (x = name listed in the file menu of the va- #xx#REC #xx#VIEWQ #xx#MM #xx#IN #xx#PRE? (x = 1 to 5 and y = file name)	Activates the delay in ms between the execution of the X = 5: displays the statistics table (statistics mode) different functions of the channel. This instruction must specify the channel on which the com- mand is carried out. X = 1: switch 1 Y=1: delay 1 If the channel number is not specified, the command is exe- X = 2: switch 2 X = 4: displays the chart on the range (static mode) X = 3: Foot pe- dal 1 Changes the resolution: 0.0001 X = 4: Foot Pe- Changes the resolution: 0.001 dal 2 X = 3: displays the chart on average (statistic mode) Changes the resolution: 001 Changes the resolution: 0.1 Selects the bargraph display mode X = 2: displays the histogram (statistic mode) Selects the digital display mode Locks the keyboard and tactile screen Only works in static mode Selects the maximum measure mode Returns recorded values of the requested channel Selects the minimum measure mode Selects the delta measure mode (max-min) Selects the normal measure mode Select the measure mode or the static mode Sets the measure unit in millimetres Sets the measure unit in inches Returns the Preset value

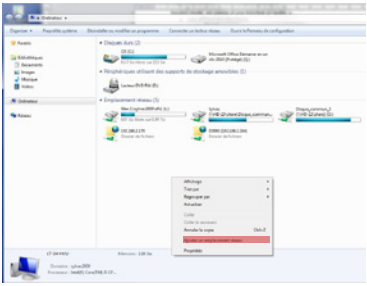
#xx#PRE+xxx.xxx	Configures the Preset value Ex : « #06#+1.0-0.5+0.5 » the following configuration is entered for channel 6 : Nominal value = +1.0 Lower tolerance value = -0.5 Upper tolerance value = +0.5
#xx#PRE	Loads the recorded Preset value
#xx#TOL?	Returns the recorded tolerance values
#xx#CLA?	Returns the amount of classes used.
#xx#TOLabc (a = Nominal value) (b = lower tolerance) (c = upper tolerance)	Configures the tolerance values.
#xx#CLAx (x = 1 to 8)	Configures the amount of classes. 8 classes maximum can be introduced.

All these commands must end by a carriage return « CR »

Network connection

It is possible to connect to the D300S through the network and collect certain files such as the configuration files or the recorded values.
The D300S includes an ftp server and it is sufficient to use the native Windows ftp client to connect. The procedure is described below:

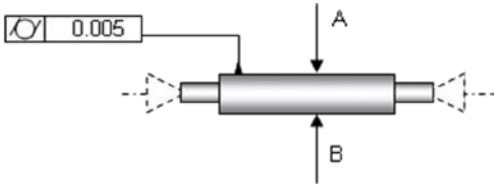
- Open the work station, right click and select "open a network location".
- Click "next".
- Select "add a personalised network location", then "next".
- Enter "ftp://xxx.xxx.xxx.xxx/.
- xxx.xxx.xxx.xxx represents the IP address for the D300S. To recover this address, check that the D300S is correctly connected to the company network and got to the "setting ➡ general parameters ➡ Network connection" menu.



Remark: the PC and D300S must be connected to the same network.

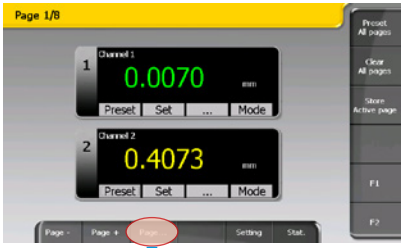
- Check the "open an anonymous session" box.
- Enter a name for the network short cut. The D300S will appear under this name in the work station.
- Click "finish"

Configuration example with two measurement points



Step 1 : Display configuration

We start by configuring the number of pages and channels to display.



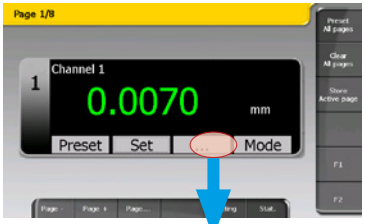
To do this, use the « page… » button (also accessible through the Setting ➡ System Setting menu).

For our example, we will display 1 channel per page. Once the data is entered, use the « Home » or « back » button to exit the « Setting » menu. The modifications are automatically saved.

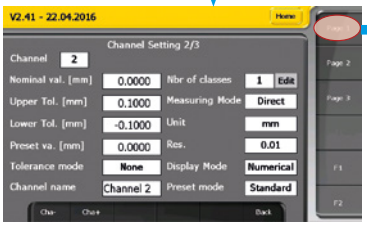


Step 2 : Channel attribution and configuration

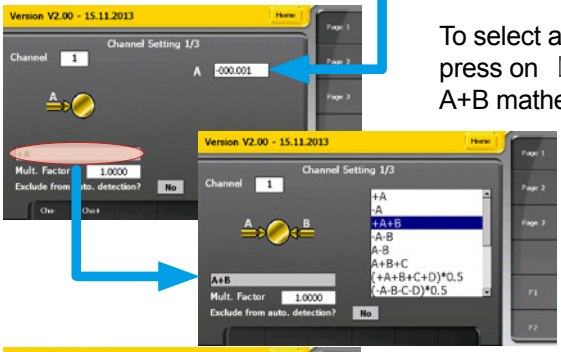
Once the display is configured, we can select the instruments that will be allocated to the different channels and enter the tolerance and Preset values.



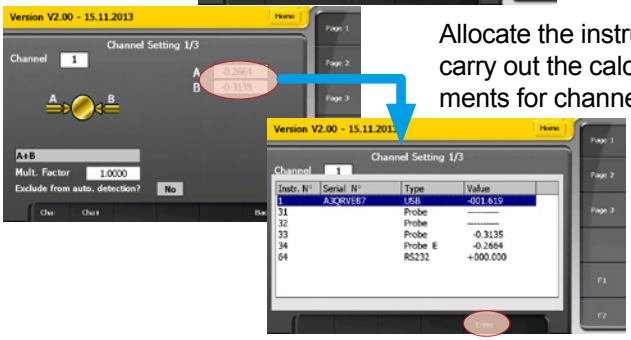
To do this, use the « … » button (also accessible through the Setting ➡ Measurement Setting menu).



In this menu, parameters such as Preset values, tolerances, ... can be entered. Then to access the mathematical functions menu, click on « Page 1 ».



To select a mathematical function, press on +A , then chose the A+B mathematical function.



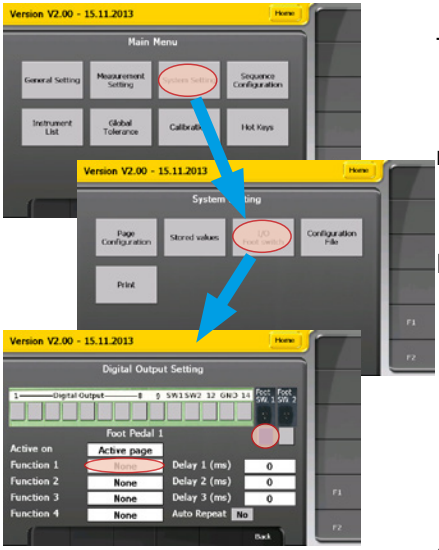
Allocate the instruments to be used to carry out the calculation. Select the instruments for channel A then channel B.



By moving the instrument, the value will also move on the A and B displays. This enables one to check the instrument selection. To finish press « Home » to exit the configuration menu.

Step 3 : External contacts configuration

Two pedals will be used, one to create a Preset and the other to record the values.



To do this, you must enter the « Setting » ➡ menu then select System setting I/O Foot Pedal.

In the « digital output Setting » menu :

- Select « Foot SW 1 » then chose under « Function 1 » Preset.
- Select « Foot SW 2 » then chose under « Function 1 » Store.
- Exit through the « Home » or « Back » button

Step 4 : The measurement



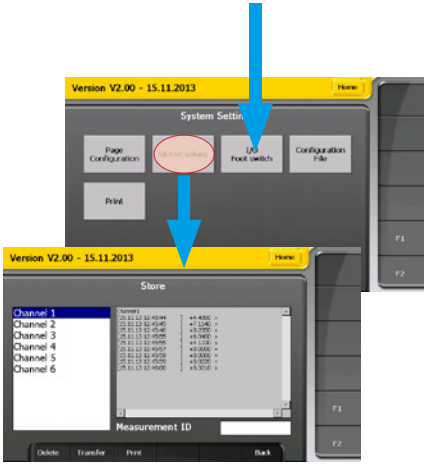
At present, channel 1 is configured to display the A+B value of the two selected instruments and the colour indicates the measurement's status (according to the entered tolerances).

Pedal 1 presets channel and
Pedal 2 records the value.

Step 5 : Visualisation of recorded values



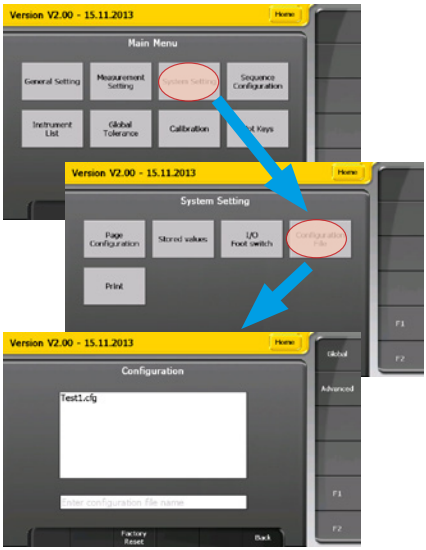
To visualise the recorded values, you must select the System Setting ➡ Stored values menu).



In this menu, it is possible to choose to visualise the backup file. The name of the file corresponds to the channel name (can be modified by the user in the Measurement Setting ➡ Page 2 menu).

This file can then be transferred on a USB key in .CSV format. To do this, simply connect a USB key then click on the « Transfer » button.

Step 6 : Save the configuration



All the unit's configuration parameters (tolerances, presets, setups, ...) can be saved or restored.

To save a configuration, simply enter the file name in the intended field and click on the « Save » button. The name of the file will appear in the selectable configurations list.

To restore a configuration, simply select the file to recall and click on « Open ». Then you will have to wait a few seconds while the configuration loads.

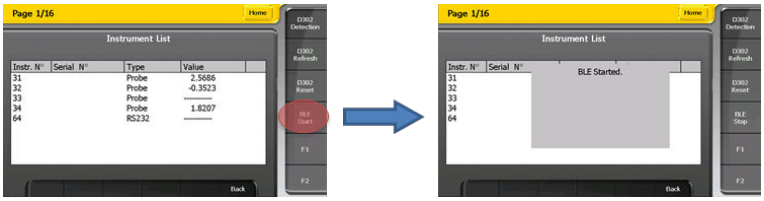
Example of configuration with three *Bluetooth®* instruments

Step 1: Activate the Bluetooth® connection



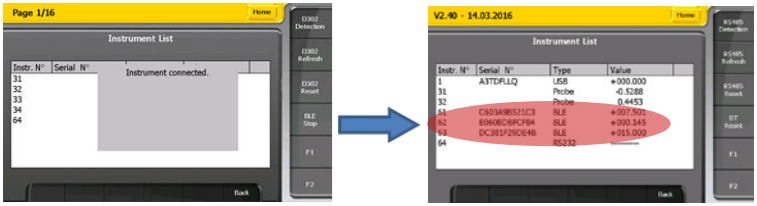
Connect the Bluetooth® receiver to a USB port on the D300S then switch on the unit. The connection activates automatically and the following message appears when the unit starts up.

Remark: If the Bluetooth receiver is connected after switching on the D300S. The connection must then be activated manually. To do this you must go to the menu Setting ➡ Instrument List and press the "BLE Start" button.



Step 2: Connect the *Bluetooth®* Smart instruments

A new Bluetooth® Smart instrument can only be connected from the "Instrument List" menu. This is to avoid other Bluetooth® instruments being able to connect to the D300S in measurement mode.
To initiate the measurement, Bluetooth® mode must be activated on the instrument (see instrument operating manual). The Bluetooth® symbol must flash. Once this has been done the instrument will be recognised, then connected to the D300S. Once connected, the Bluetooth® symbol on the instrument no longer flashes. Repeat the same procedure to connect other Bluetooth® instruments, then quit the "Setting" menu using the "Home" or "Back" button.



Step 3: Channel allocation



To allocate the Bluetooth® instrument to a channel, it is sufficient to select the channel, then use the « … » button (also accessible through the **Setting** ➡ **Measurement Setting** menu).



In this menu, parameters such as the value of Preset, the tolerances, …can be entered. Then, to select the instrument to be allocated to a channel, click "**Page 1**".



Select the instrument by clicking the white

box as indicated in the figure.



It is possible to select the instrument to be used manually or automatically, by moving the measurement probe.

Bluetooth® instrument already connected

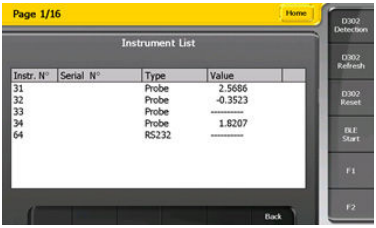
Automatic connection from the "measurement" mode.



By quitting the "Setting" menu, the instrument MAC address is recorded.

New Bluetooth® instrument

Connection possible from the "Instrument List" menu. Reset the BT from instrument side.



Using the 3 points

Procedure

1.From the main screen, click on «...»



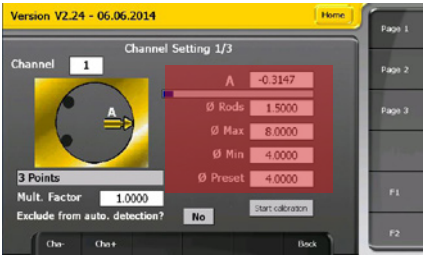
2. Select the menu Page 1 from the channel configuration



3. Select the mathematical function « 3 points »



4. Set the parameters : dia rods, dia Max, dia Min and preset and click the button «Calibration»



5.Insert the large ring on the instrument and click OK on the D300S



6. Insert the small ring on the instrument and click OK on the D300S



7. The 3 points calibration is over, click on OK



8. Back to the main screen



CERTIFICATE OF CONFORMITY
Sylvac certifies that this instrument has been manufactured in accordance with our Quality Standard and tested with reference to masters of certified traceability by the Swiss Federal Office of Metrology.

CERTIFICAT DE CONFORMITE
Sylvac certifie que cet instrument a été fabriqué et contrôlé selon ses normes de Qualité et en référence avec des étalons dont la traçabilité est reconnue par l'office fédéral suisse de métrologie.

QUALITÄTSZEUGNIS
Sylvac bestätigt, dass dieses Gerät gemäss seinen internen Qualitätsnormen hergestellt wurde und mittels Normalen mit anerkannter Rückverfolgbarkeit, kalibriert durch das Schweizerische Bundesamt für Metrologie, geprüft worden ist.

Calibration certificate
Because we make our Sylvac instruments in batches, you may find that the date on your calibration certificate is not current. Please be assured that your instruments are certified at point of production and then held in stock in our wa-rehouse in accordance with our Quality Management System ISO 9001. Re-calibration cycle should start from date of receipt..

Certificat d'étalonnage
En raison de la fabrication de nos instruments par lots de production, il est possible que la date de votre certificat d'étalonnage ne soit pas actuelle. Nous garantissons que nos instruments sont certifiés au moment de leur fabrication puis stockés conformément à notre système de gestion de la qualité ISO 9001. Le cycle de réétalonnage peut commencer à partir de la date de réception.

Zertificat
Da wir unsere Instrumente in Serien herstellen, kann es sein, dass das Datum auf dem Zertifikat nicht aktuell ist. Die Instrumente sind jedoch ab der Herstellung zertifiziert und werden dann gemäß unserem Qualitätsmanagementsystem ISO 9001 in unserem Lager aufbewahrt. Der Nachkalibrierungszyklus kann ab dem Empfangsdatum beginnen..

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EU DECLARATION OF CONFORMITY (DoC)

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

Name	D300S V2
Description	Digital display D300S V2
Part Numbers	804.1300, 804.1310, 804.1320, 804.1330, 804.1340

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
1999/5/EC(1)	R&TTE (Radio and telecommunications terminal equipment)

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
EN 300 328 V1.7.1(1)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems

(1) Only applicable when used with BT Smart dongle 981.7100

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	