

# MEASURING PROBES AND DIGITAL DISPLAYS

Depending on the domain of application, Sylvac proposes two types of probes. The capacitive type offers a high accuracy on all the probe's range and a high repeatability. Coupled to the Sylvac display units, a linearisation can be performed to decrease the sampling error up to  $0.4\ \mu\text{m}$ . They perfectly fit for applications on granite stands and Sylvac measuring benches. The inductive type proposes some probes with minimal dimensions and a very high repeatability. Insensitive to the dust, their IP65 rating allow them to be used in heavy-duty work. They are the solution for multigauging applications from 2 to 255 probes.

The Sylvac display units allow to connect a large range of products like linear probes, linear scales, handtools and dial gauges.

**Absolute capacitive measuring system**

**Digital display units RS232 and USB**

**Operational temperature 0 to  $+50^{\circ}\text{C}$**



# Measuring probes

## LISTING OF ALL MODELS

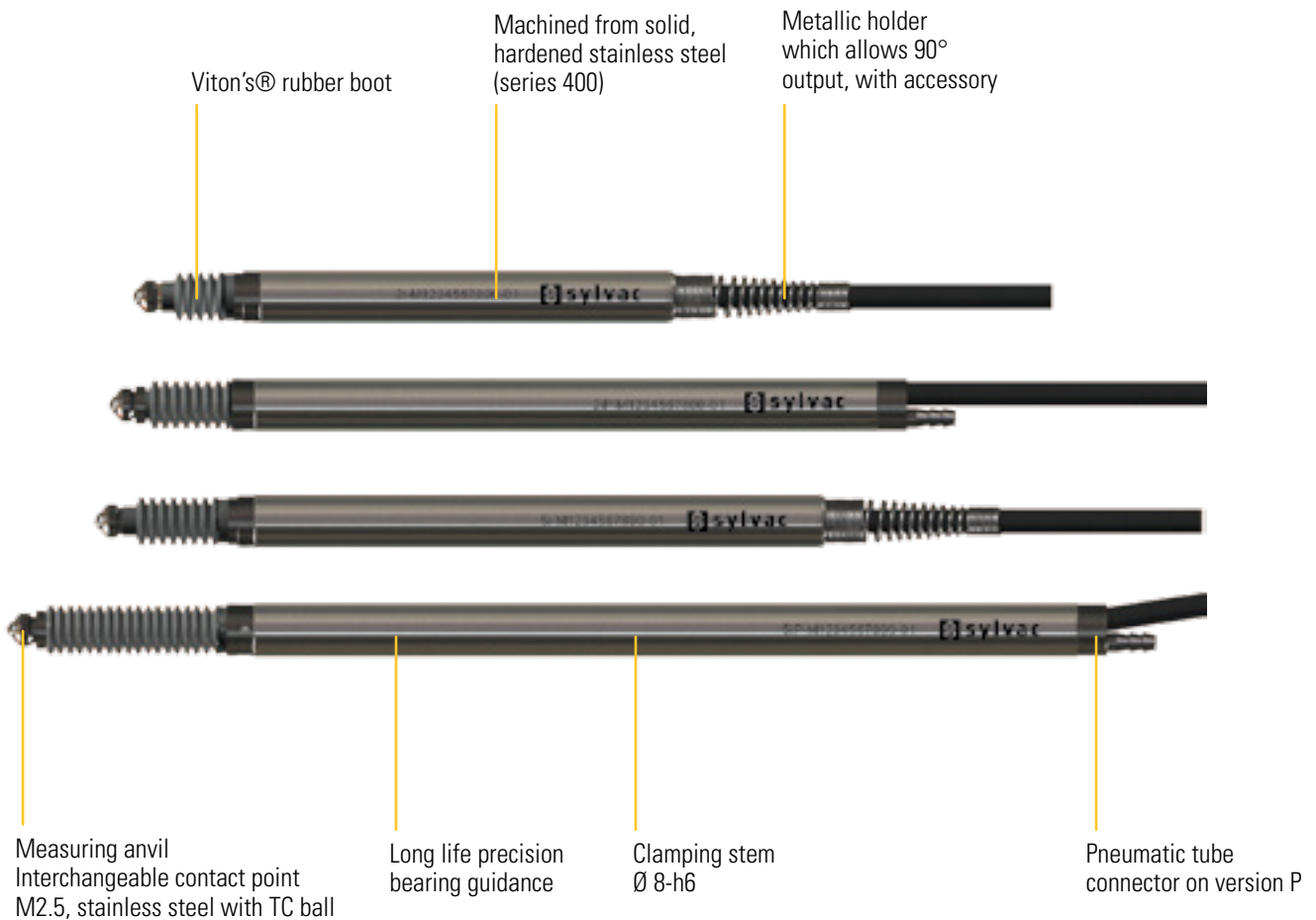
	INDUCTIVE				CAPACITIVE												
	900.1101 P2i	900.1102 P2iP	900.1111 P5i	900.1112 P5iP	900.1001 P5	900.1002 P5BL	900.1003 P5V	900.1004 P5B	900.1007 P5BVL	900.1006 P5L	900.1008 P5VL	900.1010 P10	900.1012 P10S	900.1014 P10L	900.1016 P10LS	900.1025 P25	900.1027 P25S
<b>RANGE</b>																	
±2 mm	•	•															
5 mm					•	•	•	•		•	•						
± 5 mm			•	•													
10 mm												•	•	•	•		
25 mm																•	•
<b>EXECUTION</b>																	
Plain bearing					•		•			•	•	•	•	•	•	•	•
B- Ball bearing	•	•	•	•		•		•	•								
Pneumatic push		•		•													
V- Vacuum lifter							•		•		•						
L- 90 degrees cable	*		*			•			•	•	•			•	•		
S- with rubber boot	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•
<b>MECHANIC</b>																	
Diameter 8 mm h6	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Diameter 12 mm																•	•
Measuring anvil M2.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>LIFTING</b>																	
Integrated		•		•			•		•		•						
Separate accessories					•	•		•		•		•	•	•	•	•	•
<b>PROTECTION IP</b>																	
Protection rating IP (IEC 60529)	65	65	65	65	64	64	64	64	64	64	64	40	50	40	50	40	50

\* by accessories, see next pages

# Inductive measuring probes

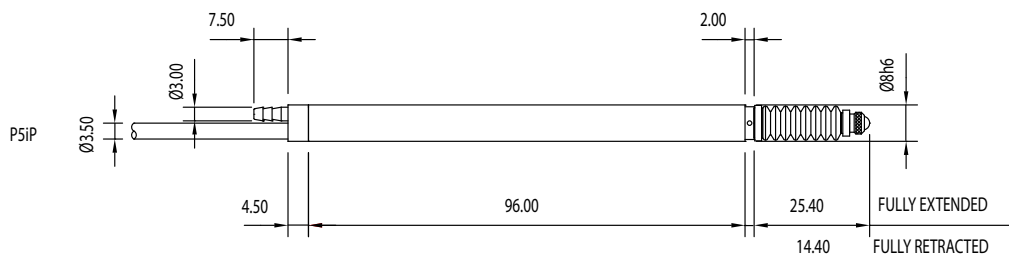
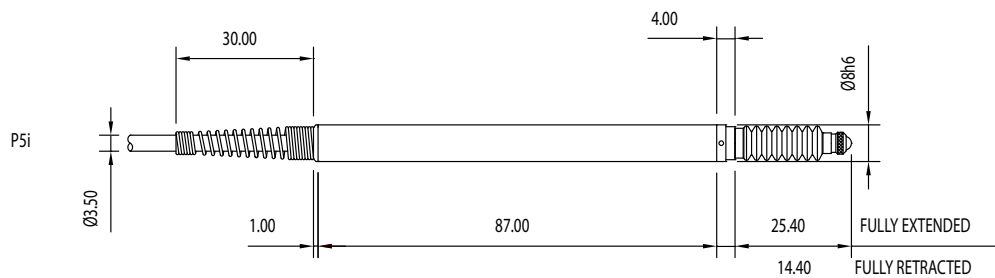
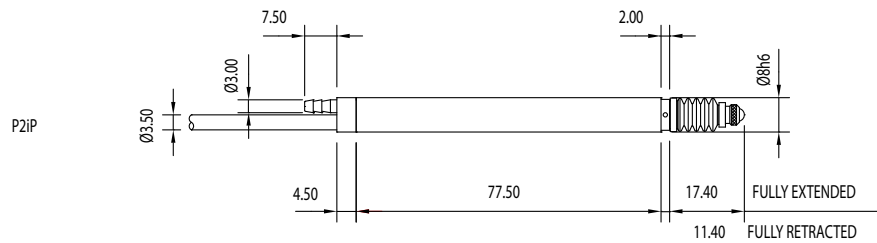
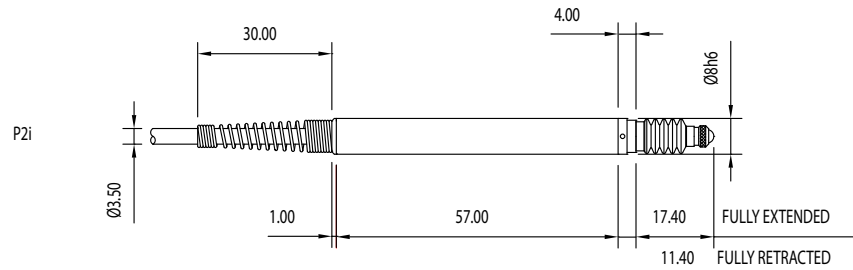
## DESCRIPTION

- Inductive measuring probes specially designed for measurement by comparison
- Available in 2 versions: spring push and pneumatic push
- Long life precision bearing guidance (tested up to 13 million cycles)
- Resolution <math><0.0001\text{ mm}</math>
- Repeatability  $0.15\ \mu\text{m}$
- Measuring range  $\pm 2\text{mm}$  and  $\pm 5\text{mm}$
- Compatible with D300SV2, D70i and D400S units through M-Bus multiplexer units
- High data speed
- Operating temperature  $+10$  to  $+80^\circ\text{C}$
- IP65 protected



# Inductive measuring probes

## DIMENSIONAL DRAWINGS



# Inductive measuring probes

## TECHNICAL SPECIFICATIONS

		P2i	P2iP	P5i	P5iP
Travel	mm	±2	±2	±5	±5
Pre-travel	mm	0.15	0.3	0.15	0.3
Post-travel	mm	0.85	0.7	0.85	0.7
Max. Error	µm	2	2	5	5
Resolution		Digital : user selectable to <0.1µm			
Repeatability	µm	0.15	0.15	0.15	0.15
Moving mass	g	3.4	3.4	3.7	3.7
Accuracy of reading %		0.5	0.5	0.5	0.5
Body diameter	mm	8h6			
IP rating		IP65			
Temperature	%FS/°C	0.01			

## MEASURING FORCE

		P2i	P2iP	P5i	P5iP
Standard	N	0.7	0.85 / 0.4 bar - 2.5 / 1 bar	0.7	0.70 / 0.4 bar - 2.5 / 1 bar
Feather touch	N	0.3	0.18 / 0.3 bar - 1.1 / 1 bar	0.3	0.18 / 0.3 bar - 1.1 / 1 bar
Jet	N	-	0.85 / 1 bar	-	0.85 / 1 bar

Tolerance ± 20%, measuring probe in middle course, outgoing spindle.

## PNEUMATIC PROBES

Pneumatic probes are fully retracted when they are not supplied with air. For continual reliable operation and to maximise working life, the air supply should be clean and dry. 60% maximum relative humidity, filtered to better than 2µm particle size. Air pressure : 0.4-0.8 bar, don't go over 0.8 Bar because the rubber boot can be damaged.

## BASIC INSTRUMENT

- Probe according to technical specifications
- Calibration certificate
- Cable 2 m
- Stainless steel contact point with tungsten carbide ball Ø 2 mm (905.2204)

# Inductive measuring probes

## APPLICATIONS



Inductives probes connected to a D70I.



Inductives and Solartron probes connected to a M-Bus modul coupled with D400S.

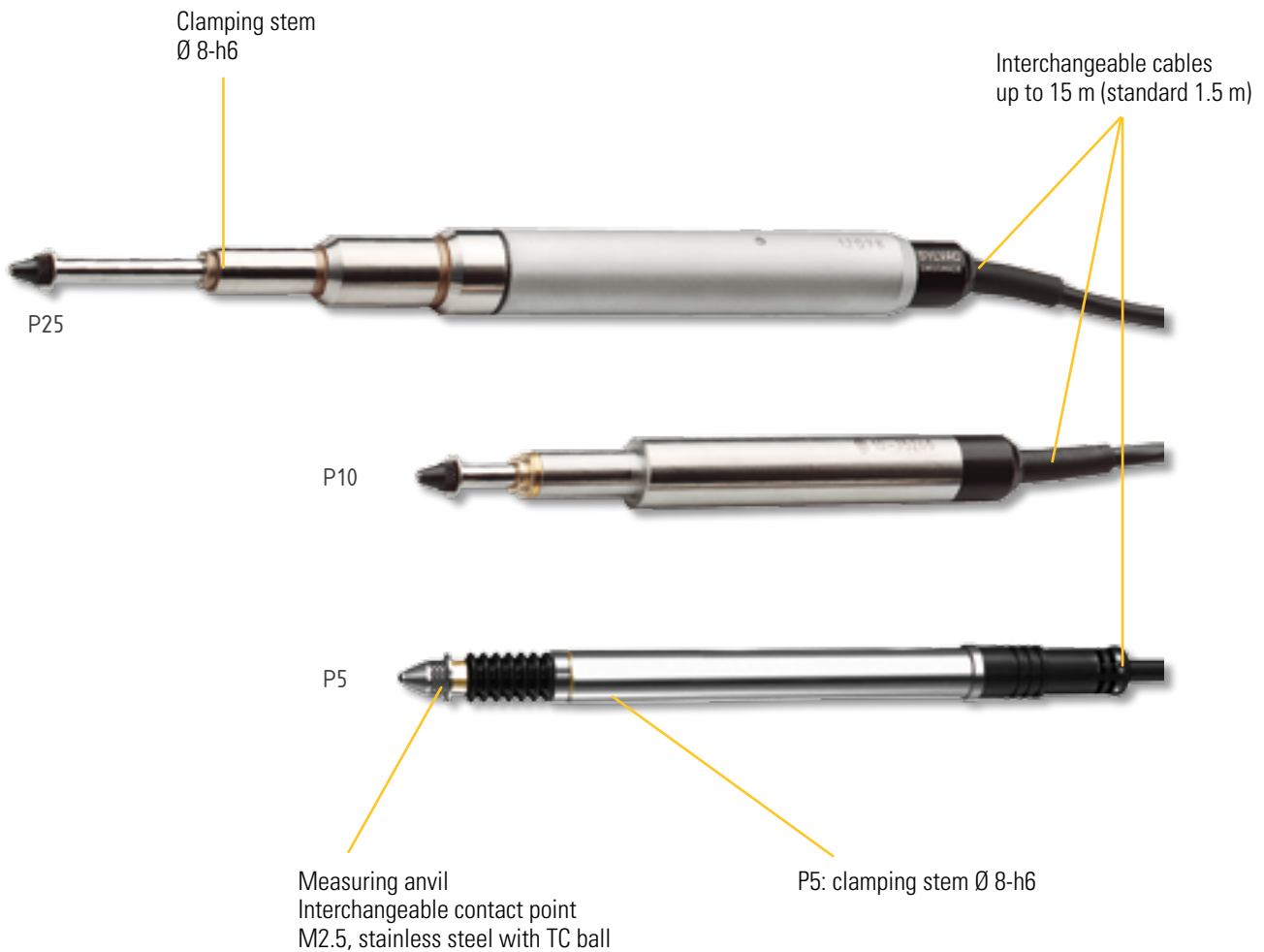


Inductives probes connected to a M-Bus modul coupled with D300S.

# Capacitive measuring probes

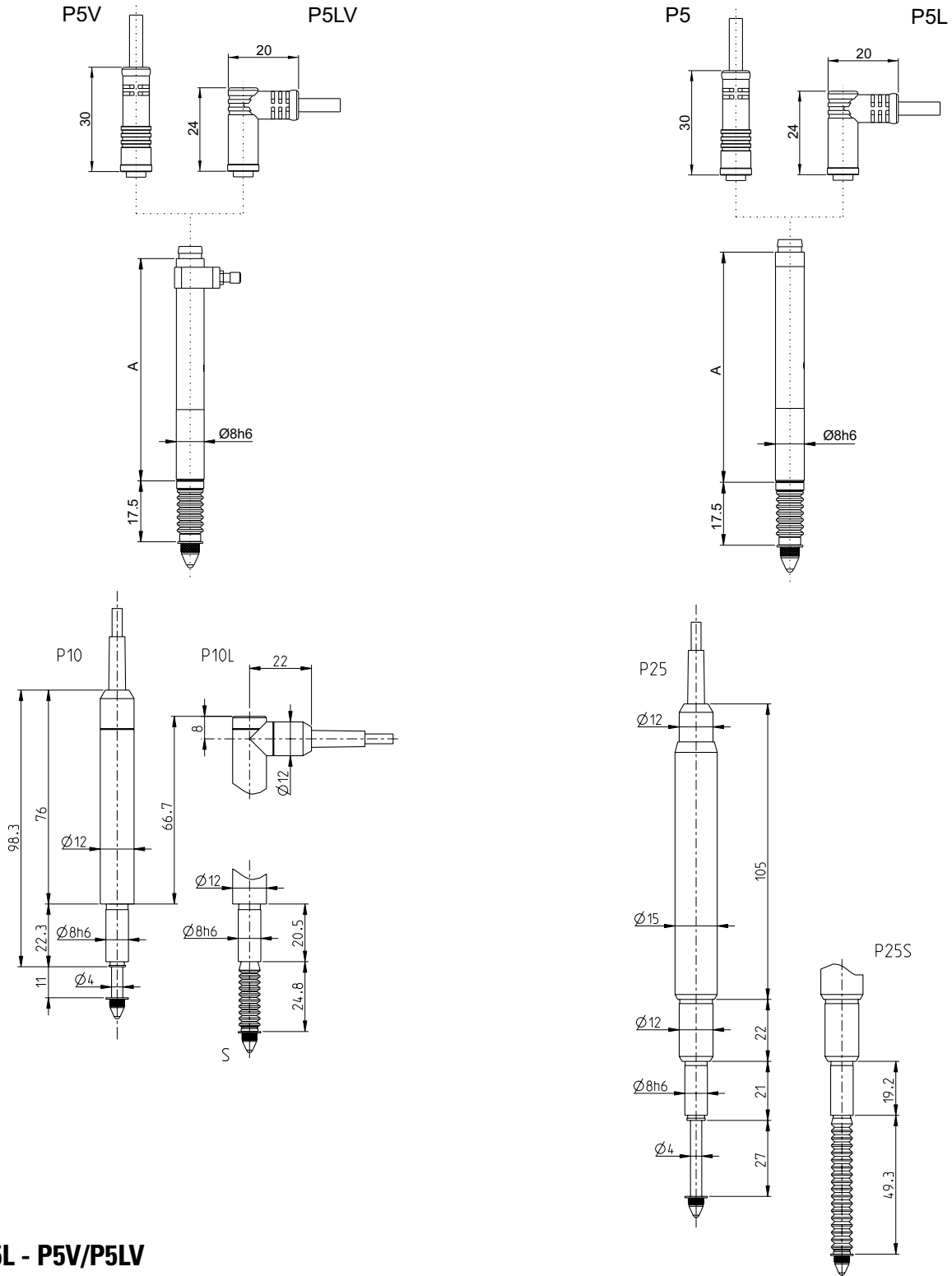
## DESCRIPTION

- Capacitive absolute measuring probes, plunger type
- Resolution 0.0001 mm
- Measuring range from 5 to 25 mm
- Plain bearing or ball bearing, integrated vacuum lifter on P5
- Compatible with all Sylvac digital units
- Excellent linearity
- Interchangeable cables on most types



# Capacitive measuring probes

## DIMENSIONAL DRAWINGS



### P5/P5L - P5V/P5LV

Guiding axis	Measure A
Plain bearing	72
Ball bearing	64

# Capacitive measuring probes

## TECHNICAL SPECIFICATIONS

		P5	P10	P25
Travel	mm	5	10	25
Pre-travel	mm	0.7	0.5	0.8
Max. Error <sup>1)</sup>	µm	1	1	1.2
Repeatability	µm	0.2	0.2	0.2
Moving mass	g	3.7	4.1	9.6

<sup>1)</sup> With Master unit. See as well the specifications of the pair Measuring probe/display unit.

## MEASURING FORCE

		P5	P10	P10S	P25	P25S
Standard	N	0.60-1.20	0.60-0.80	0.70-1.25	0.60-1.00	0.65-1.4
Minimum	N	---	< 0.10	---	< 0.15	---
Low	N	0.20-0.25	0.20-0.25	---	0.20-0.30	---
High	N	1.00-1.80	0.70-1.50	---	0.70-1.60	---
Lateral max	N	0.70	0.60	---	0.30	---

Tolerance ± 20%, measuring probe in vertical position, outgoing spindle.

## BASIC INSTRUMENT

- Probe according to technical specifications
- Calibration certificate
- Cable 1.5 m
- Stainless steel contact point with tungsten carbide ball Ø 2 mm (905.2204)

# Capacitive measuring probes

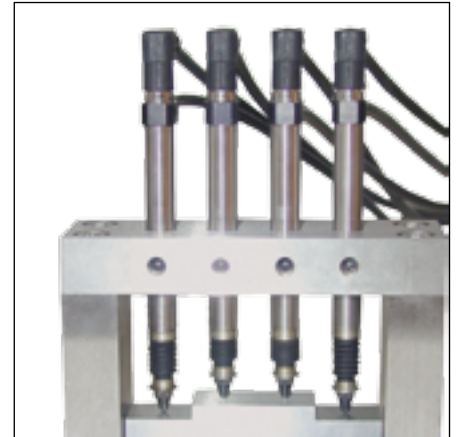
## APPLICATIONS



P5 probes connected to a D302 coupled with D300S for OD, concentricity and cylindricity measurements



P5 probes connected to a D50S unit measuring the external diameter of a shaft



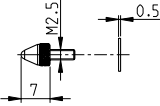
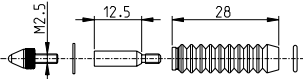
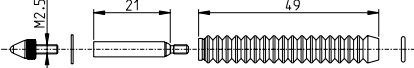
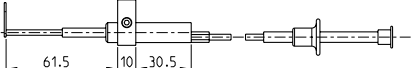
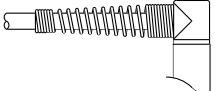
Combined probes for the measurement of several heights



Inductive probes connected to a D70S.

# Measuring probes

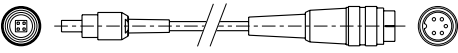
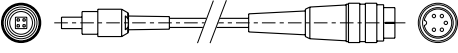
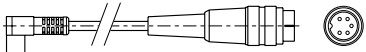
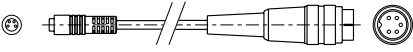
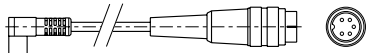
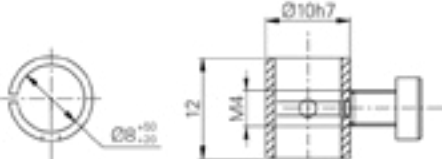
## ACCESSORIES

		P2i	P2iP	P5i	P5iP	P2	P5	P10	P25
	<b>905.2204</b>					•	•	•	•
	<b>901.2003</b>							•	
	<b>901.2004</b>							•	
	<b>901.2005</b>							•	•
	<b>901.2012</b>						•	•	•
	<b>901.2013</b>						•	•	•
	<b>901.2014</b>						•	•	•
	<b>901.5110</b>	•	•						

E














# Measuring probes

## ACCESSORIES

		P2i	P2iP	P5i	P5iP	P2	P5	P10	P25
	<b>901.5002</b> Cable 1.5 m							•	
	<b>901.5012</b> Cable 1.5 m								•
	<b>901.5032</b> Cable 1.5 m bent							•	
	<b>901.5042</b> Cable 1.5 m						•		
	<b>901.5052</b> Cable 1.5 m bent						•		
	<b>905.2231</b> Adapting socket + screw	•	•	•	•	•	•	•	•

# Digital display

## TABLE OF CORRESPONDENCES

														
		D50S	D50S PRO	D70S	D70H	D70I	D80S	D200S	D300S <sup>*)</sup>	D302	D302 a	D304	D304 a	D400S
Direct input	Capacitive probes	2	2	2 <sup>c)</sup>	2 <sup>H)</sup>	2 <sup>I)</sup>	1	8	2 (4)	2	2	4	4	0
	RS/USB instruments						1 / -	0	1 / 6					
	External contact	1	1	1 <sup>p)</sup>	1 <sup>p)</sup>	1 <sup>p)</sup>	1	1	2	1	1	1	1	1
	Mbus								● <sup>5)</sup>					●
Additional input	Probes						8 <sup>1)</sup>	24 <sup>2)</sup>	32 <sup>3)</sup>					99 <sup>9)</sup>
	USB instruments								30 <sup>4)</sup>					99 <sup>9)</sup>
	Analog display			●	●	●								●
Output	RS 232	●	●	●	●	●	●	●	●					●
	RS 485								●	●	●	●	●	
	USB			● <sup>10)</sup>	● <sup>10)</sup>	● <sup>10)</sup>		●	●	●	●	●	●	●
	Opto-coupled output							●	●	●	●	●	●	● <sup>6)</sup>
	Analogic										●		●	
Functions	Direct zero setting	●	●	●	●	●	●	●	●					●
	Direct zero setting per channel	●	●	●	●	●	●	●	●					●
	Selection of resolution	●	●	●	●	●	●	●	●					●
	Selection of measuring direction	●	●	●	●	●	●	●	●					●
	PRESET	●	●	●	●	●	●	●	●					●
	Tolerance indicators			●	●	●	●	●	●					●
	Classification (max 8 classes)								●					● <sup>11)</sup>
	Min, Max, Delta			●	●	●	●	●	●					●
	A ± B	●	●	●	●	●		●	●	●	●			●
	Mathematics functions							●	●			● <sup>8)</sup>	● <sup>8)</sup>	●
	Scanning			●	●	●		●	●					●
	Histogram								●					●
	Statistics								●					●
	Memorization							●	●					●
	Simultaneous display of the channels			●	●	●		●	●					●
	Dynamic measurement			●	●	●		●	●					●
	Calibration (max. 25 points)		●	●			●			●	●	●	●	●

<sup>1)</sup> with unit (s) additional (s) D108

<sup>2)</sup> with 3 D200S units

<sup>3)</sup> 32 probes with units D200S or maximum 32 with D302 / D304 or M-Bus

<sup>4)</sup> with USB-Hub powered

<sup>5)</sup> depending on model, see details on pages D300S

<sup>6)</sup> with modul MB-IO

<sup>8)</sup> A± B± C± D±, depending on model

<sup>9)</sup> Maximum 99 instruments on D400S through M-BUS (MB-4D & MB-8D digimatic)

<sup>10)</sup> Mini-USB

<sup>11)</sup> Up to 16 classes for 1 channel only

<sup>p)</sup> Binder 3 poles for D70S or Binder Jack for D70H and D70I

<sup>c)</sup> capacitive, <sup>H)</sup> Heidenhain, <sup>I)</sup> inductive

\* Maximum 62 mixed on the D300S instruments

# Digital display

# D50S

## DESCRIPTION

- Digital display with 2 probe inputs
- Data output RS232C
- Power supply by external unit
- Light and compact
- Ease of use
- Correction of linearity on both channels (D50S PRO)

Resolution up to 0.0001 mm

Great clear and luminous display

Combination of channels A+B; A-B

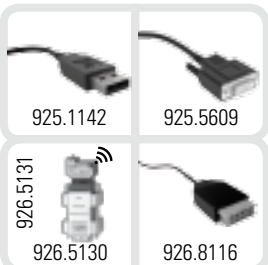


Direct functions

Feet

**SWISS  
MADE**

RS232



**D50S PRO**

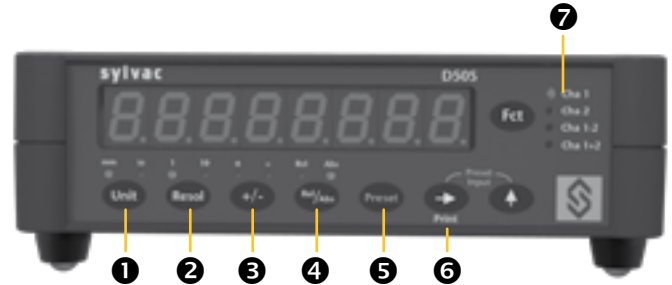
Correction of linearity.  
Higher precision

# Digital display

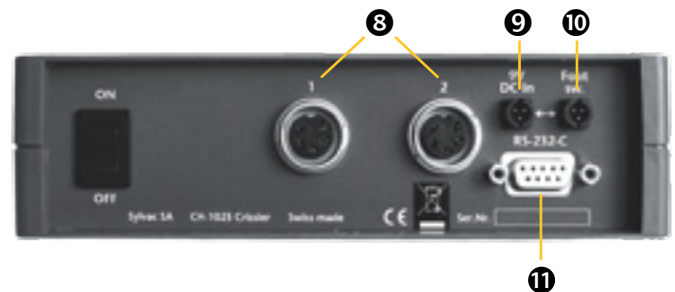
# D50S

## DISPLAY

- ① Conversion mm/inch
- ② Selection of resolution
- ③ Selection of measuring direction
- ④ REL and ABS measurement
- ⑤ PRESET function
- ⑥ Data sending
- ⑦ Selection of measuring mode: channel 1 ; channel 2 ; channel 1-2 ; channel 1+2



- ⑧ Probe inputs
- ⑨ Power supply connection
- ⑩ External contact connection
- ⑪ RS232 input/output



## TECHNICAL SPECIFICATIONS

		804.1050	804.1060
Type		D50S	D50S PRO
Max. Error	μm	P2 : 1.5 / P5 : 1.6 / P10 : 1.6 / P25 : 1.9	P2 : 0.5 / P5 : 0.6 / P10 : 0.6 / P25 : 0.8
Repeatability	μm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2
Sizes	mm	180 x 75 x 50	180 x 75 x 50
Weight	kg	0.3	0.3
Case		Terblend Plastic	Terblend Plastic
Protection according to IEC 60529		IP40	IP40
S_Connect		RS232 <sup>1)</sup>	RS232 <sup>1)</sup>
Programmable by PC		●	●

<sup>1)</sup> see cables chapter

## BASIC INSTRUMENT

- Unit according to technical specifications
- Feet (pair)
- Charging unit according to country (904.4000)
- Instruction manual

## APPLICATIONS



Measuring a shaft with 2 probes (A+B)

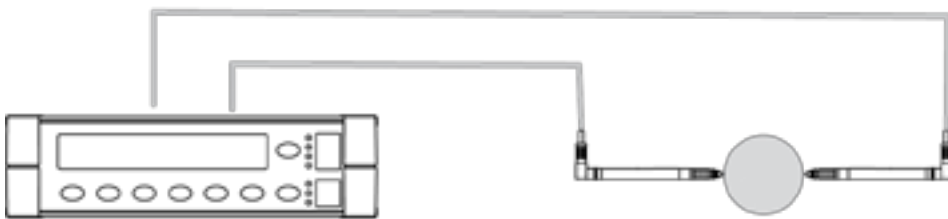


Simple measurement with one probe

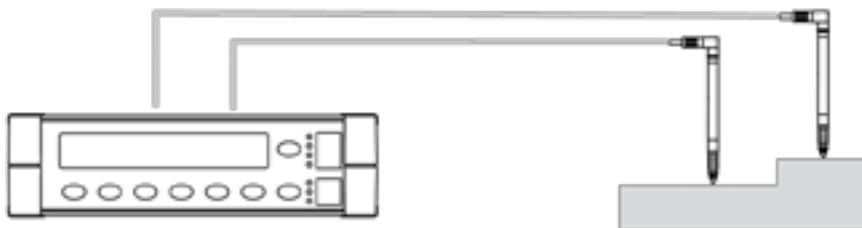
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## COMBINATIONS OF PROBES

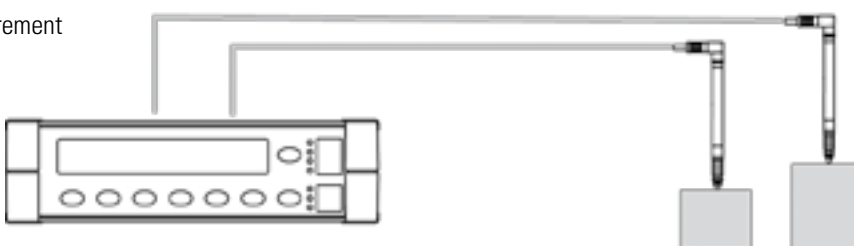
Diameter = 1+2



Difference = 1-2



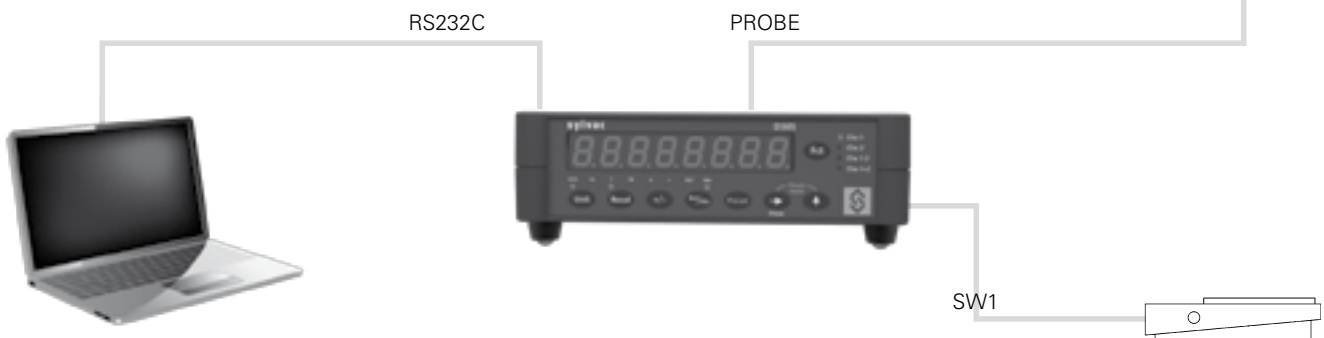
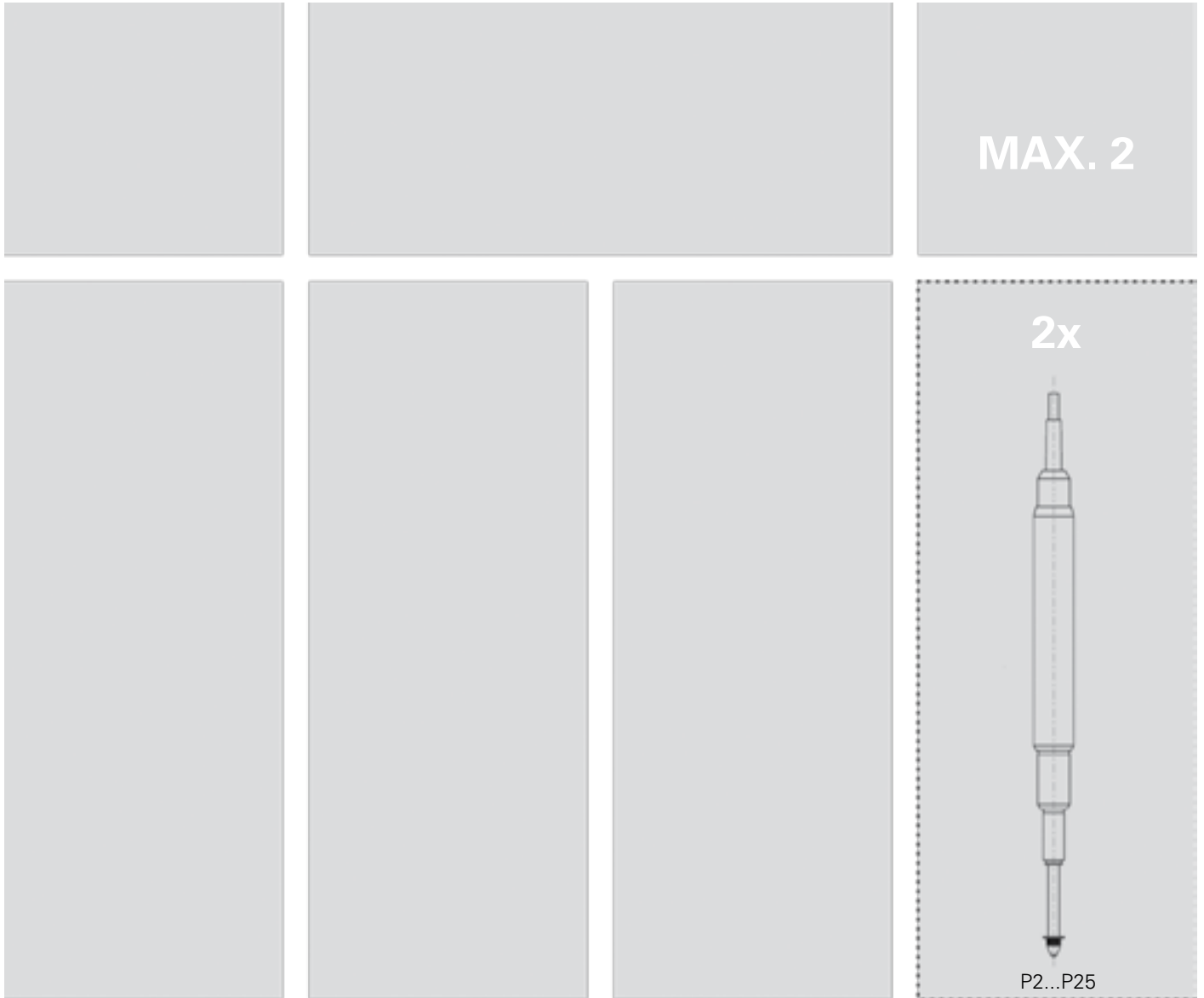
Individual measurement



# Digital display

# D50S

## POSSIBILITIES OF CONNECTION



# Digital display

# D70S/H/I

## DESCRIPTION

- 4"3 touch screen display
- Available in 3 versions:
  - D70S for Sylvac capacitive probes
  - D70I for Sylvac inductive probes (also compatible with Tesa and Mahr probes)
  - D70H for Heidenhain ST/MT probes (Mitutoyo and Magescale probes with adapter)
- All versions with 2 probe inputs
- Display resolution selectable up to 0.00001 mm (on D70H)
- Simple or double display with bargraph, needle or no-tolerances
- Probe's combination : (C1, C2, C1-C2 ...)
- Direct measurement or Min, Max, Average, Max-Min...
- User friendly interface
- Very robust construction (Aluminium)
- USB connection «Keyboard» unidirectional and RS232 bidirectional
- No driver, no software to be installed
- Compatibility Excel and SPC
- Powered by the computer when connected by USB cable

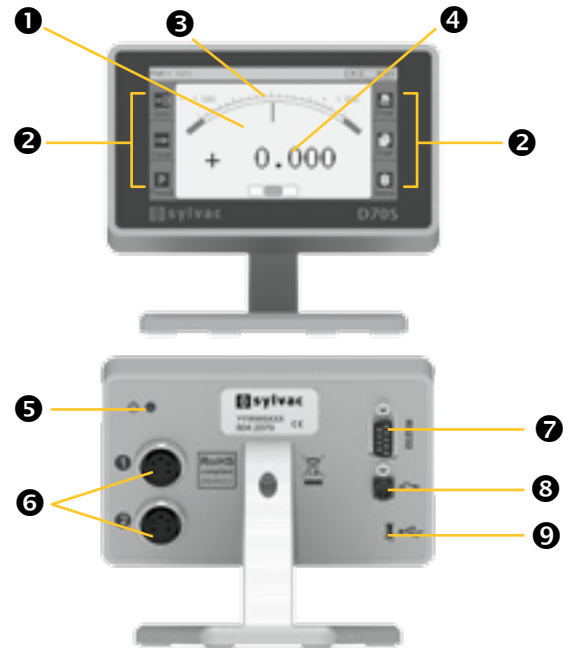


# Digital display

# D70S/H/I

## DISPLAY

- ① 4.3" Touchscreen display
- ② User friendly interface
- ③ Analogic display
- ④ Digital display
- ⑤ ON/OFF
- ⑥ 2 Capacitive / Inductive / 1VPP probes input (depending model)
- ⑦ RS232 output
- ⑧ 1 external contact
- ⑨ Mini-usb and and supply/data



## TECHNICAL SPECIFICATIONS

		804.2070
Type		D70S
Sizes	mm	140x105x111
Weight	kg	0.6
Case		Aluminium
Protection according to IEC 60529		IP40
S_Connect		mini-USB / RS232
Probes		Sylvac Capacitive probes
Programmable by PC		●

		804.2072
Type*		D70H
Sizes	mm	140x105x111
Weight	kg	0.6
Case		Aluminium
Protection according to IEC 60529		IP40
S_Connect		mini-USB / RS232
Probes		Heidenhain ST/MT probes (Mitutoyo & Magescale with adapter)
Programmable by PC		●

\* Not available in Switzerland

# Digital display

# D70S/H/I

## TECHNICAL SPECIFICATIONS

		804.2071
Type		D70I
Sizes	mm	140x105x111
Weight	kg	0.6
Case		Aluminium
Protection according to IEC 60529		IP40
S_Connect		mini-USB / RS232
Probes		Sylvac Inductive probes (Tesa & Mahr compatible)
Programmable by PC		●



D70S : Capacitive probes



D70I : Inductive probes



D70H : Heidenhain probes

## APPLICATIONS



D70S with capacitive Sylvac probes



D70H with Heidenhain probes



D70I with inductive Sylvac probes

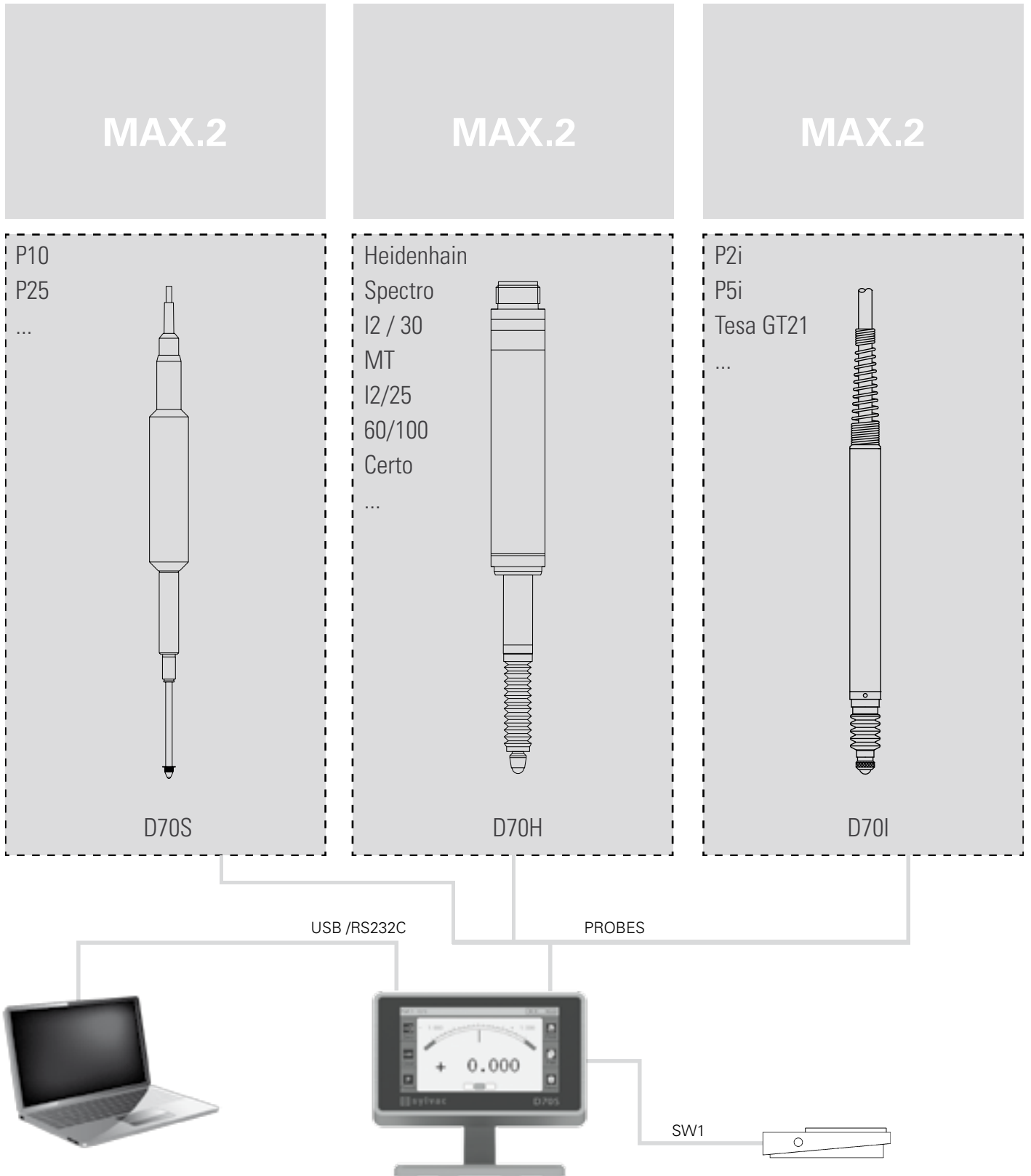
## BASIC INSTRUMENT

- Unit according to technical specifications
- Table base
- Charging unit
- Instruction manual (CD-ROM)

# Digital display

# D70S/H/I

## POSSIBILITIES OF CONNECTION



E

# Digital display

# D80S

## DESCRIPTION

- Digital unit with 1 probe input (8 channels)
- Resolution up to 0.0001 mm
- Data output RS232C
- Opto-coupled output (command signals)
- Command for pneumatic lifting unit
- Selection of measuring direction
- Possibility of increasing the precision by calibrating the unit with the probe
- Powered by charging unit



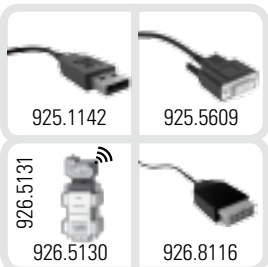
CCFL graphic display with backlight

Ergonomic keyboard

Adjustable base

**SWISS MADE**

RS232

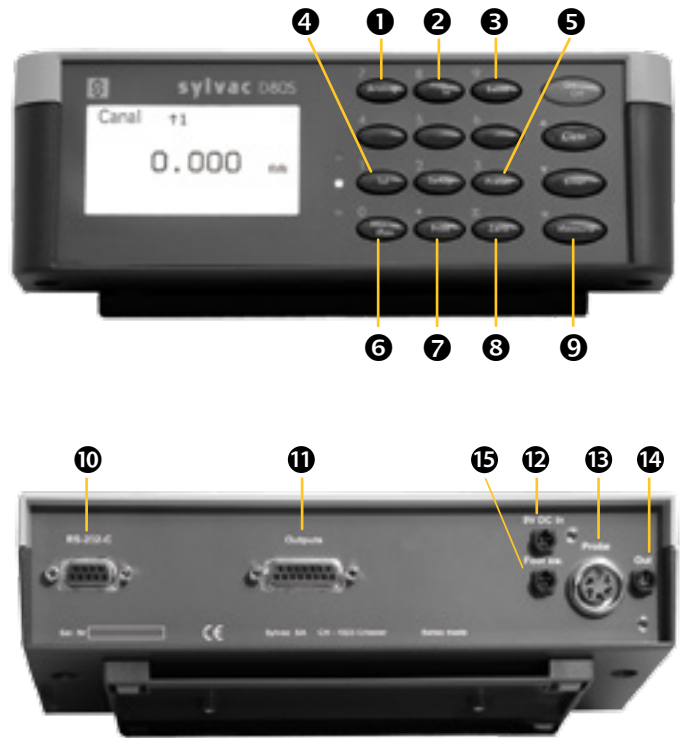


# Digital display

# D80S

## DISPLAY/SOFTWARE

- ① Activation of analog display
- ② Selection of unit mm/inch
- ③ Selection of resolution
- ④ Tolerance indicators with LED
- ⑤ PRESET function
- ⑥ Display Min/Max/Delta
- ⑦ Data sending
- ⑧ Zero setting
- ⑨ Configuration channel
- ⑩ RS232 input/output
- ⑪ Analog and digital Opto-coupled output
- ⑫ External power supply connection
- ⑬ Capacitive probe input
- ⑭ Connection D102/D108 unit
- ⑮ External contact connection



## TECHNICAL SPECIFICATIONS

		804.1080
Type		D80S
Max. Error	µm	P2 : 1.5 / P5 : 1.6 / P10 : 1.6 / P25 : 1.9
Max. Error <sup>1)</sup>	µm	P2 : 0.5 / P5 : 0.6 / P10 : 0.6 / P25 : 0.8
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2
Sizes	mm	227 x 77 x 132
Weight	kg	0.8
Case		Terlend Plastic
Protection rating according to IEC 60529		IP50
S_Connect		RS232 <sup>2)</sup>
Programmable by PC		•

<sup>1)</sup> Probe and unit calibrated

<sup>2)</sup> see cables chapter

## BASIC INSTRUMENT

- Unit according to technical specifications
- Base
- External contact (foot-pedal)
- Charging unit according to country (904.4000)
- Instruction manual

## APPLICATIONS



Measurement of 4 dimensions on 4 channels with one single probe

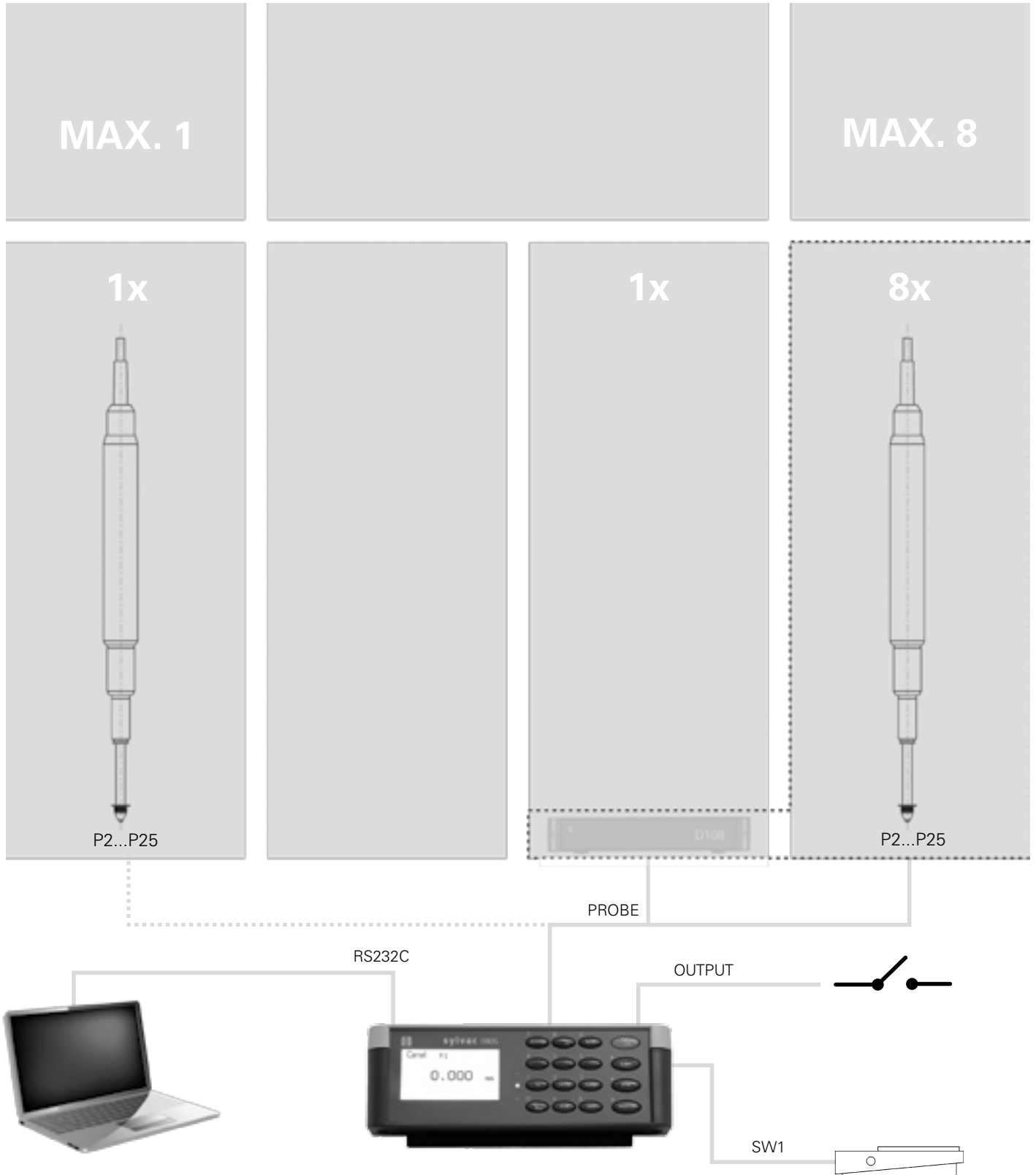


Using 3 measuring channels with 3 separated probes

# Digital display

# D80S

## CONNECTION DIAGRAM

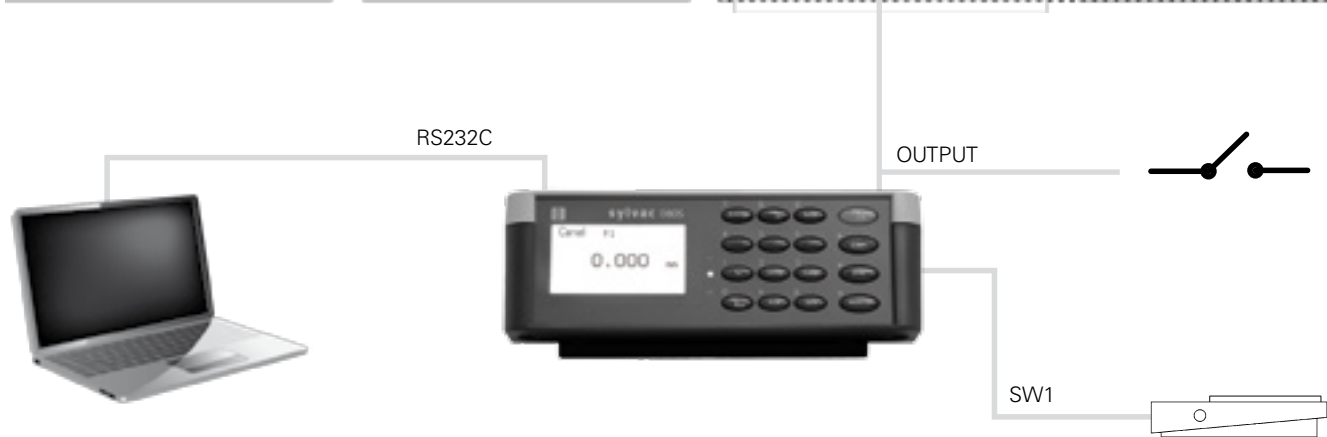
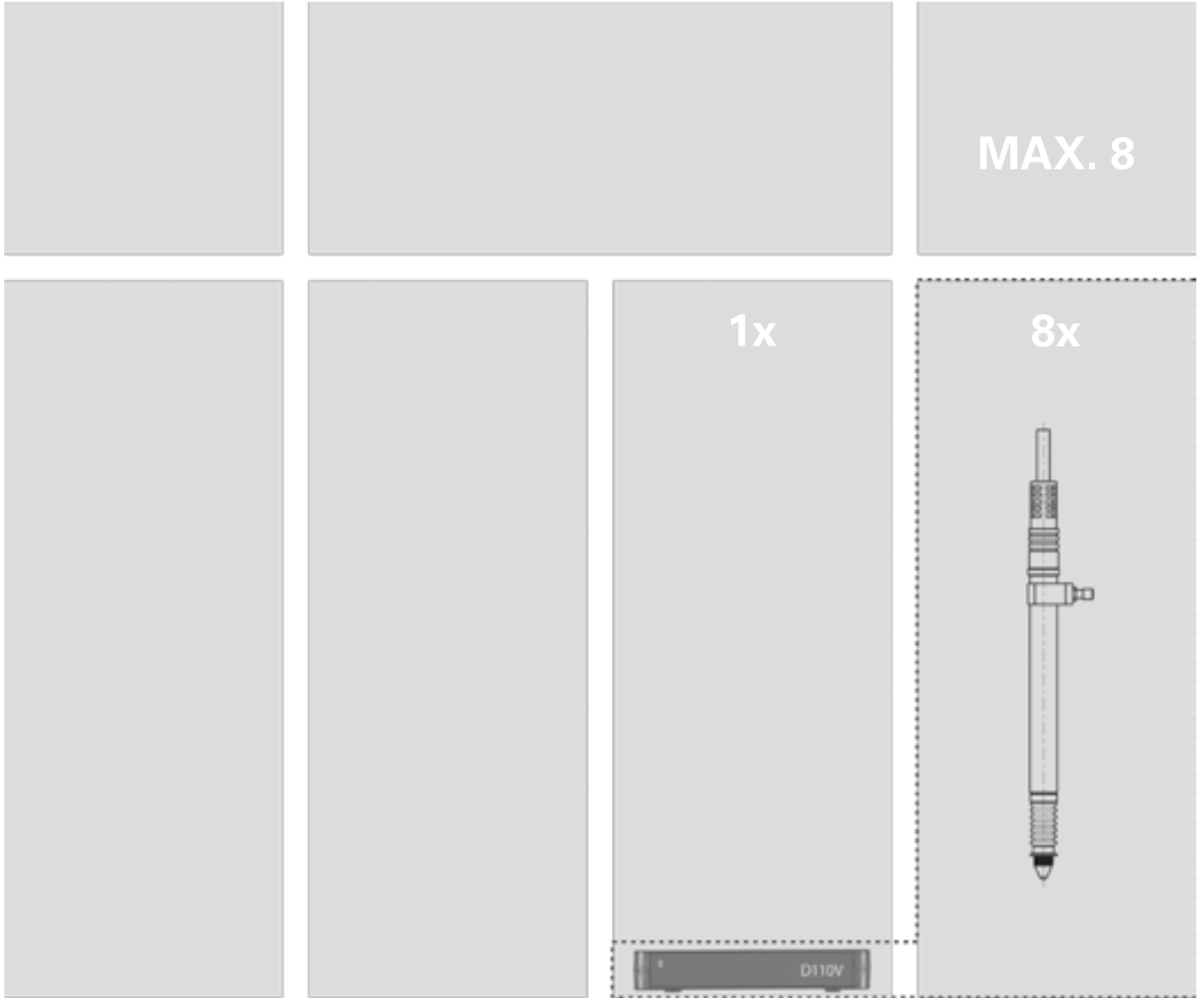


E

# Digital display

# D80S

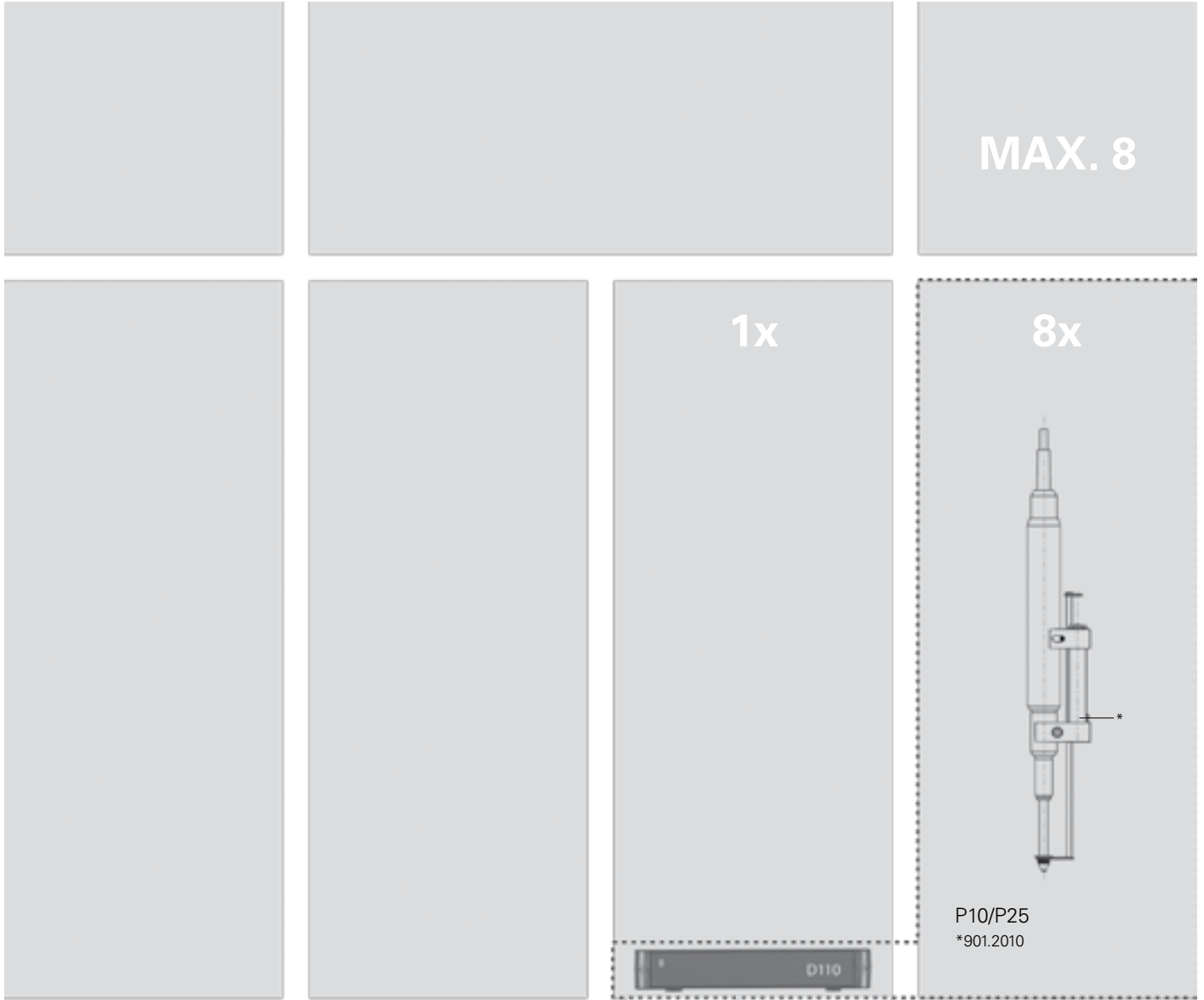
## POSSIBILITIES OF D110V LIFTER



# Digital display

# D80S

## POSSIBILITIES OF D110 LIFTER



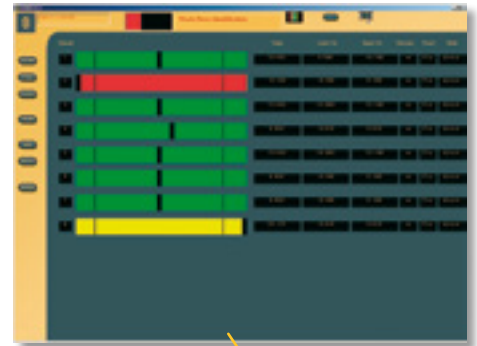
E

# Multiplexer unit

# D200S

## DESCRIPTION

- Multiplexer with 8 inputs (for Sylvac probes P2 to P25)
- Dynamic measurement (200 mes/s)
- Ideal for the layout conception of multi-gauging
- Command for pneumatic lifting unit
- Software allowing the treatment of up to 24 channels simultaneously (bargraph)
- Sending of the measured values into Excel, notepad or in specific files
- Creation of sequences for sending data
- Mathematic combinations between channels
- Standalone use possible



8 inputs for Sylvac probes

Software allowing the treatment of up to 24 channels simultaneously (bargraph)

Tolerance indicators

Connection by USB (2x) or RS232 (1x)

Opto-coupled digital output rack

Connection by USB (2x) or RS232 (1x)

 **SWISS MADE**

USB



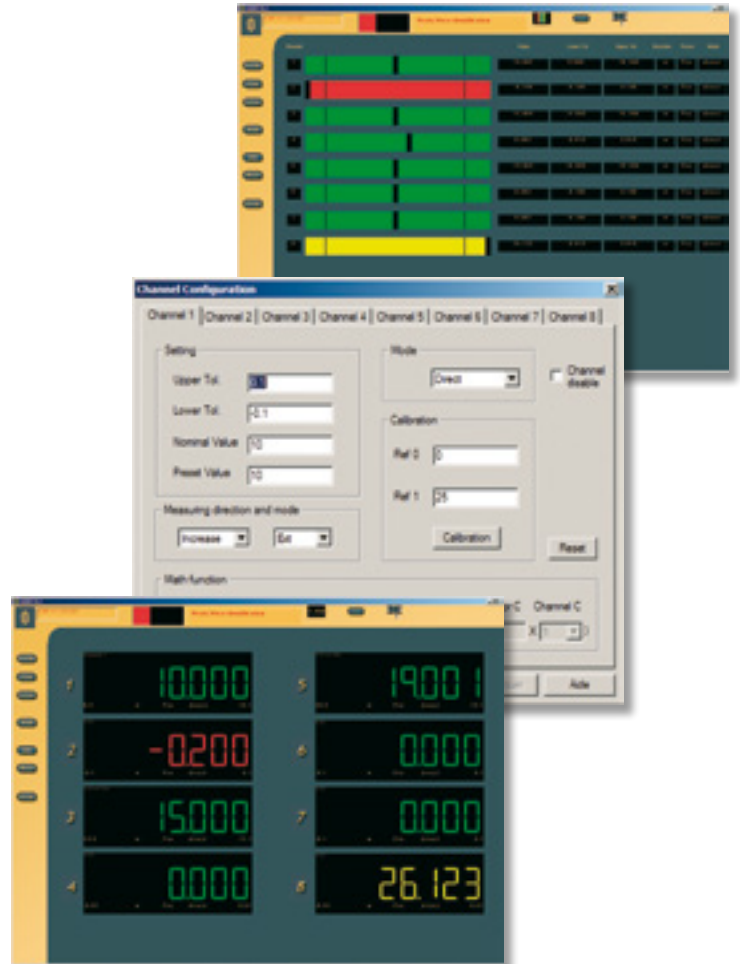
804.1210

# Multiplexer unit

# D200S

## DISPLAY/SOFTWARE

- Selection of unit mm/inch**
- Selection of resolution**
- PRESET function**
- Sending Data**
- Tolerance indicators with LED**
- Min/Max/Delta display**
- Individual selection of measuring direction**
- Switchable digital/bargraph display**
- Global tolerance status of the measured part**
- Programming channels screen**
- Sending Sequences of Data**
- External contact configuration**
- Electrical external contact configuration**
- Open / Save configurations**
- Transfer configuration to D200S unit**



## TECHNICAL SPECIFICATIONS

		<b>804.1200</b>
Type		D200S
Max. Error	µm	P2 : 1.5 / P5 : 1.6 / P10 : 1.6 / P25 : 1.9
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2
Frequency of measurement		200 values /second
Sizes	mm	304 x 171 x 61
Weight	kg	1.2
Case		Aluminium profile, Terlend plastic, ABS and aluminium vanished
Protection rating according to IEC 60529		IP50
S_Connect		USB / RS232 <sup>1)</sup>
Programmable by PC		•

<sup>1)</sup> see cables chapter

# Multiplexer unit

# D200S

## BASIC INSTRUMENT

- Instrument according to technical specifications
- Feet for use in vertical position
- Charging unit according to country (904.4000)
- PC Connection cable type USB (804.1210)
- CD with D200S software
- Instruction manual

## APPLICATIONS



Dynamic measurement of several diameters, (OD and ID) of a shaft

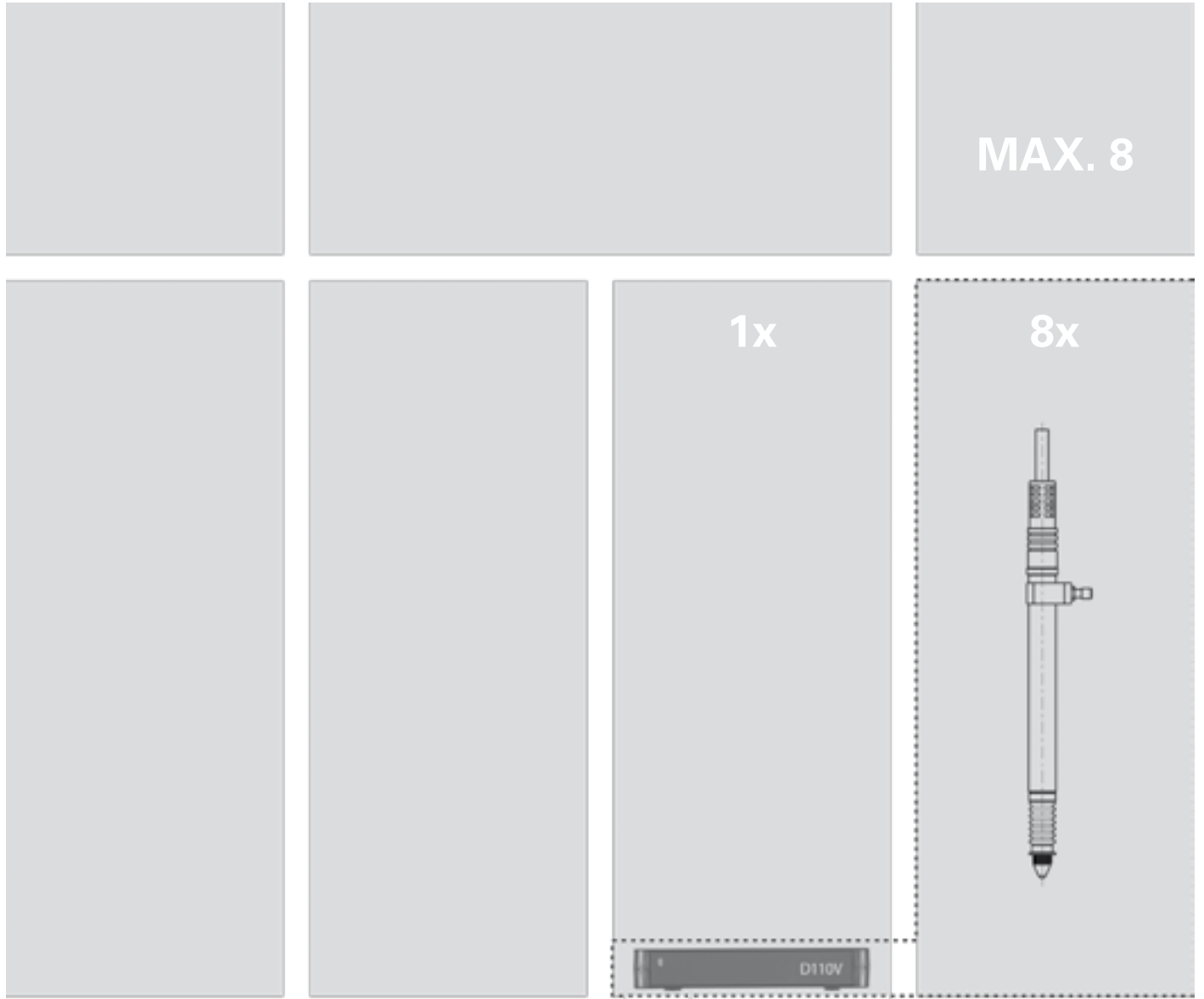


Multi-gauging application

# Multiplexer unit

# D200S

## POSSIBILITIES OF D110V PNEUMATIC LIFTER



E

# Multiplexer unit

# D200S

## POSSIBILITIES OF CONNECTION

MAX. 8

8x



P2...P25

MAX. 8

8x



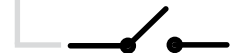
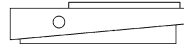
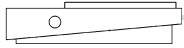
P2...P25

MAX. 8

8x



P2...P25




E

# Digital display

# D300S V2

## DESCRIPTION

- Digital display with 8.5" touchscreen
- Available in 3 versions :
  - 6 USB and M-Bus
  - 6 USB and 2 Sylvac capacitive probe input
  - 6 USB and 4 Sylvac capacitive probe input
- Automatic detection of connected instruments
- New CPU unit (5 times faster than previous version)
- OS based on Windows 7 embedded
- Display and page setting fully configurable (up to 8 channels per page, up to 64 pages)
- Memorizing of setups and values
- RJ-45 Ethernet connector
- General or individual Preset
- Math functions for each channel
- Numeric, analog and statistic display
- Compatible with  **Bluetooth**<sup>®</sup> instruments (USB dongle is required)

E



Large touchscreen 8.5" protected against liquids IP65

 **SWISS MADE**



Fully configurable user interface allowing to define the number of displayed channels per screen

Ergonomic keyboard

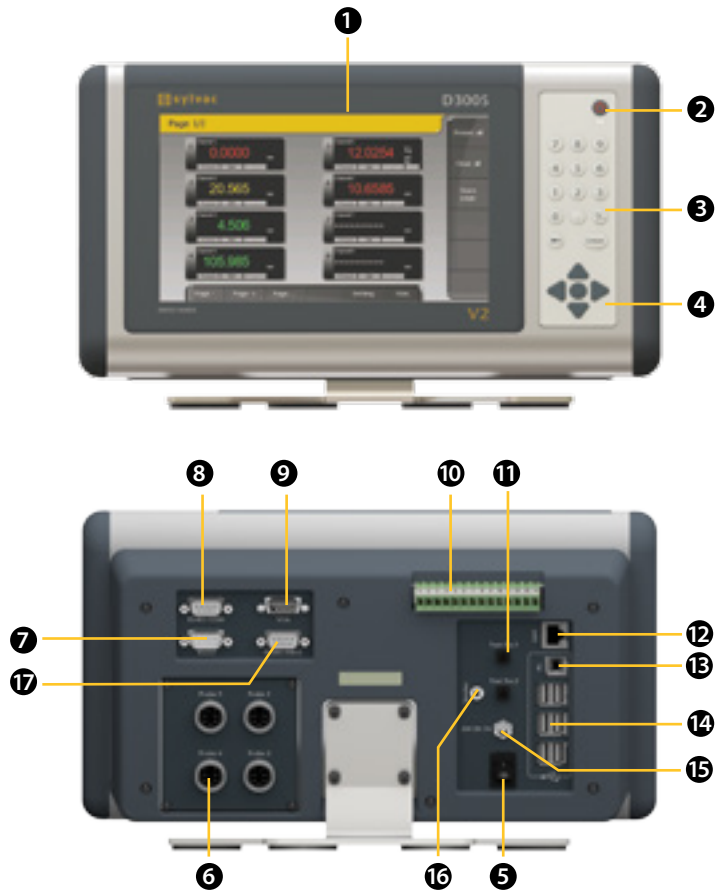
\* Dongle Bluetooth<sup>®</sup> required

# Digital display

# D300S V2

## INTERFACE | HARDWARE

- ① Touchscreen 8.5"
- ② ON/OFF button for LCD
- ③ Numeric keyboard
- ④ Navigation keyboard
- ⑤ ON/OFF switch
- ⑥ Capacitive probes inputs
- ⑦ RS-232 instrument input
- ⑧ RS-485 input
- ⑨ VGA output
- ⑩ Opto-coupled digital output
- ⑪ 2 inputs for external contacts
- ⑫ RJ-45 Ethernet
- ⑬ USB Device connector
- ⑭ 6 USB Host inputs
- ⑮ 24VDC connector
- ⑯ Audio jack connector
- ⑰ RS485 connector for connecting MB-X modules



## TECHNICAL SPECIFICATIONS

		804.1300	804.1320	804.1310
Model		D300S-2	D300S-4	D300S
Inputs *		2 probes / 6 USB	4 probes / 6 USB	M-BUS / 6 USB
Max error	µm	P2 : 1.5 / P5 : 1.6 / P10 : 1.6 / P25 : 1.9		P2i / P5i / P10i
Max. Error <sup>1)</sup>	µm	P2 : 0.5 / P5 : 0.6 / P10 : 0.6 / P25 : 0.8		---
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2		---
Overall dimensions	mm	330 x 175 x 77		
Weight	kg	3.3		
Case		Steel / Plastic		
Protection rating according to IEC 60529		IP40		
S_Connect		RS232 / USB		
Programmable by PC		•		

<sup>1)</sup> Probe and unit calibrated

<sup>1)</sup> Extensible to 32 probes and 30 USB instruments (see pages 152-155)

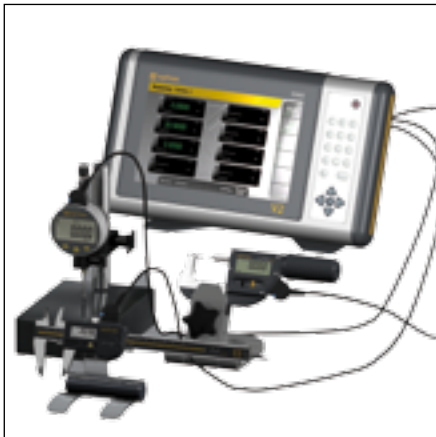
# Digital display

# D300S V2

## BASIC INSTRUMENT

- Unit according to technical specifications
- Table base
- External contact (foot-pedal)
- Charging unit according to country (804.4000)
- Instruction manual

## APPLICATIONS



Many instruments connected to the D300S with live displayed colored values to indicate the tolerances



Multi-gauging measurement using D200S interface and D300S display



Measurement using PS17 bench Automatic detection of measuring channel and automatic switch to the right window



Multiple instruments connection through Bluetooth®



Multiple instruments connection through M-BUS inputs

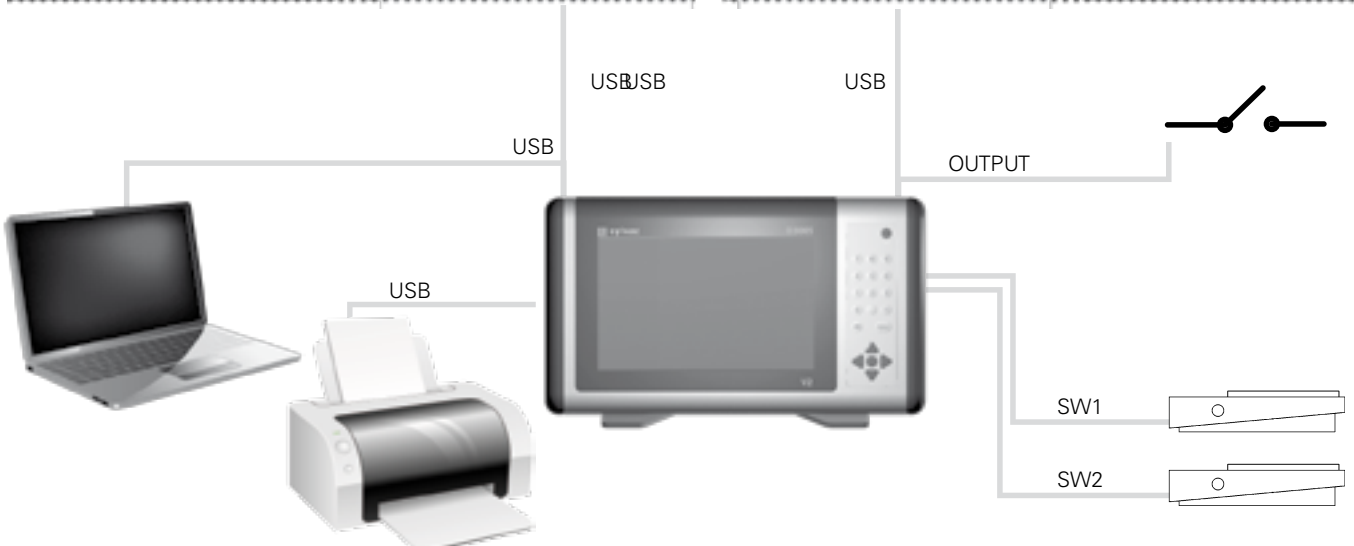
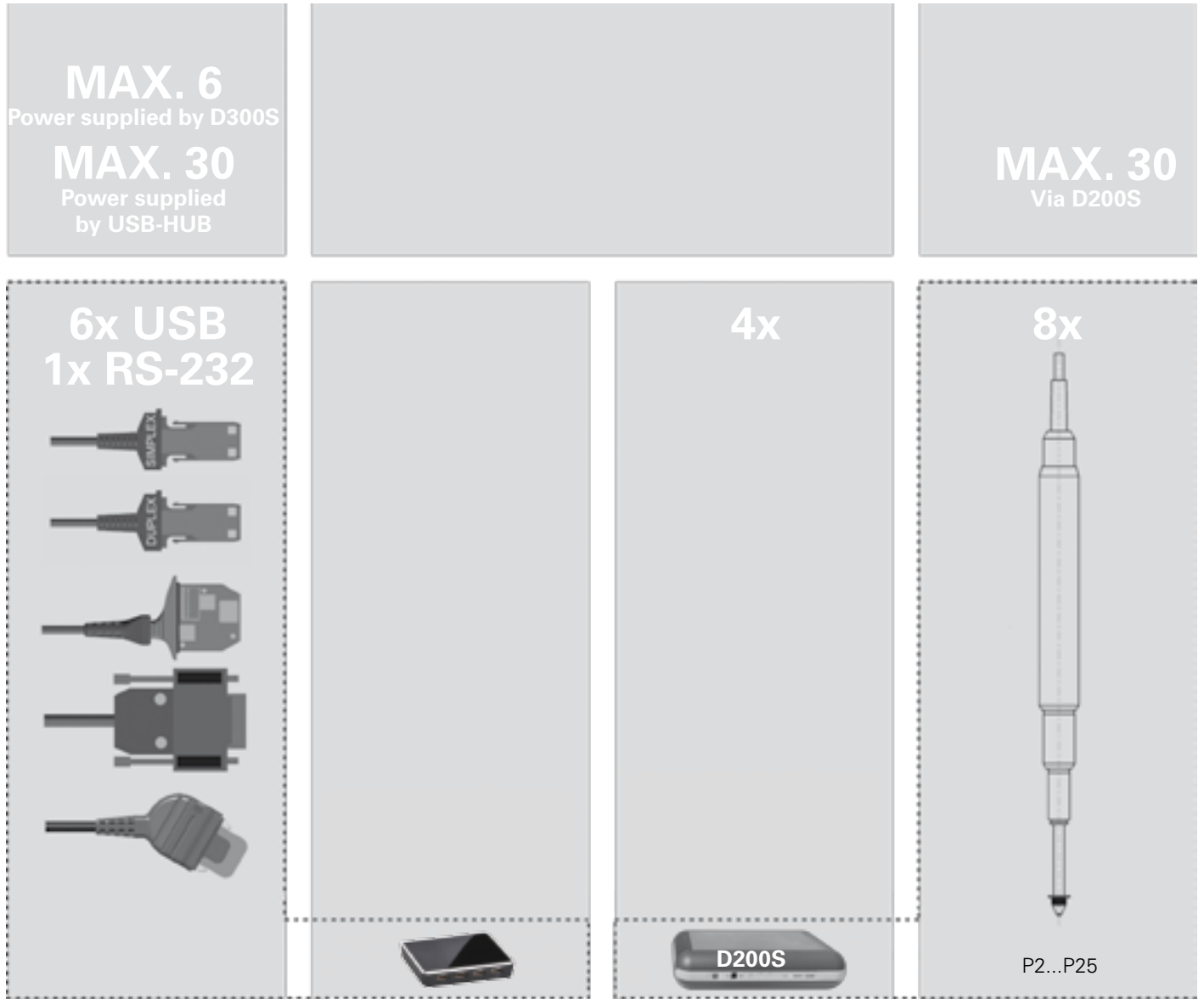


Bluetooth® Dial gauges connected to D300S

# Digital display

# D300S V2

## POSSIBILITIES OF CONNECTION WITH ACCESSORIES

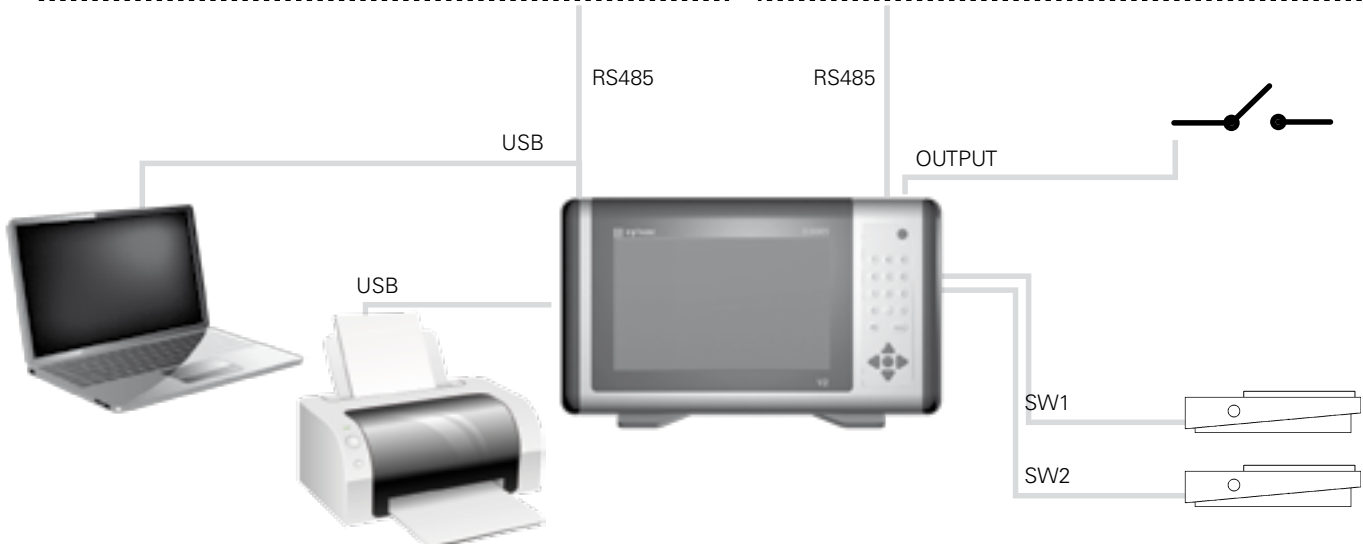
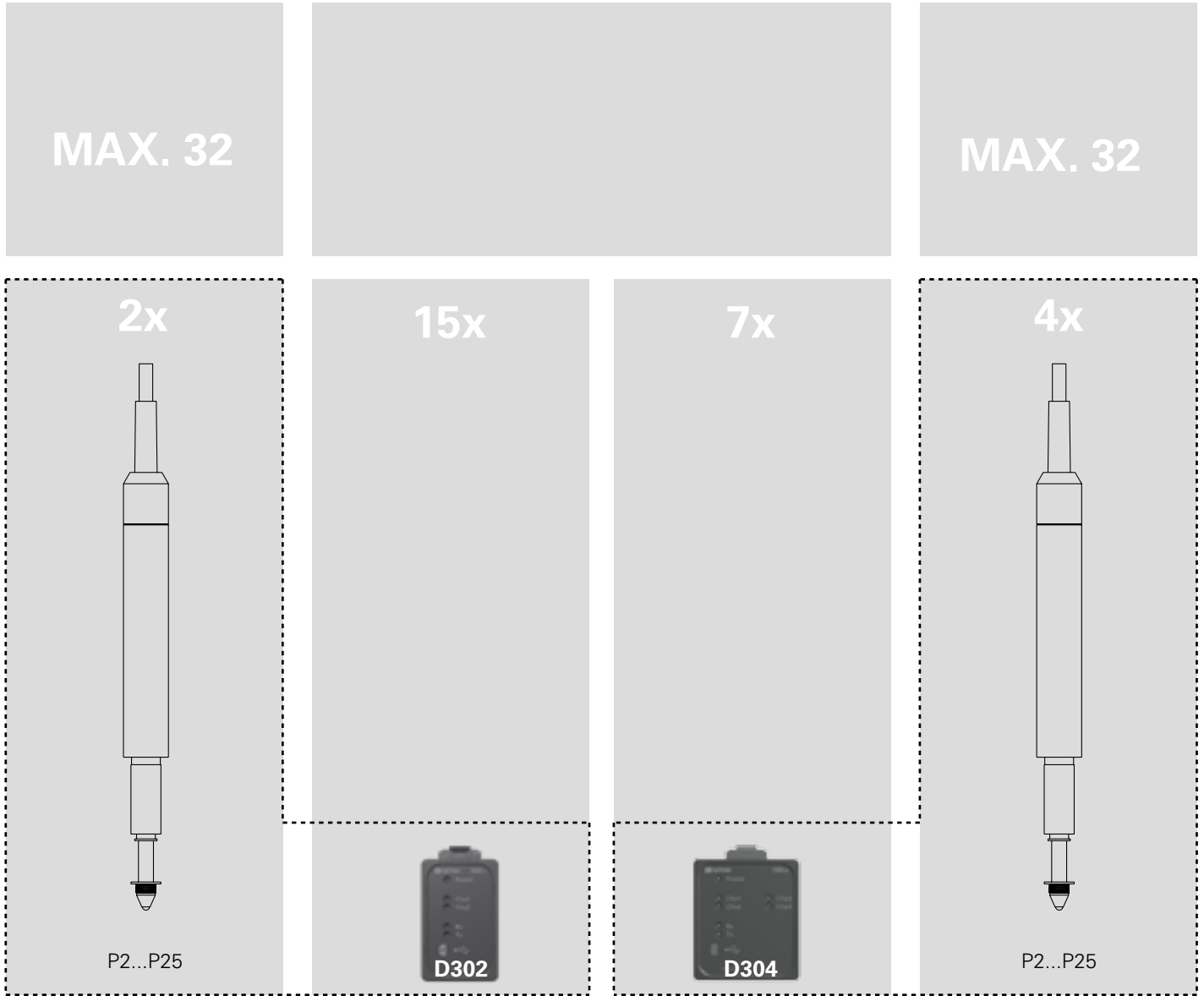


E

# Digital display

# D300S V2

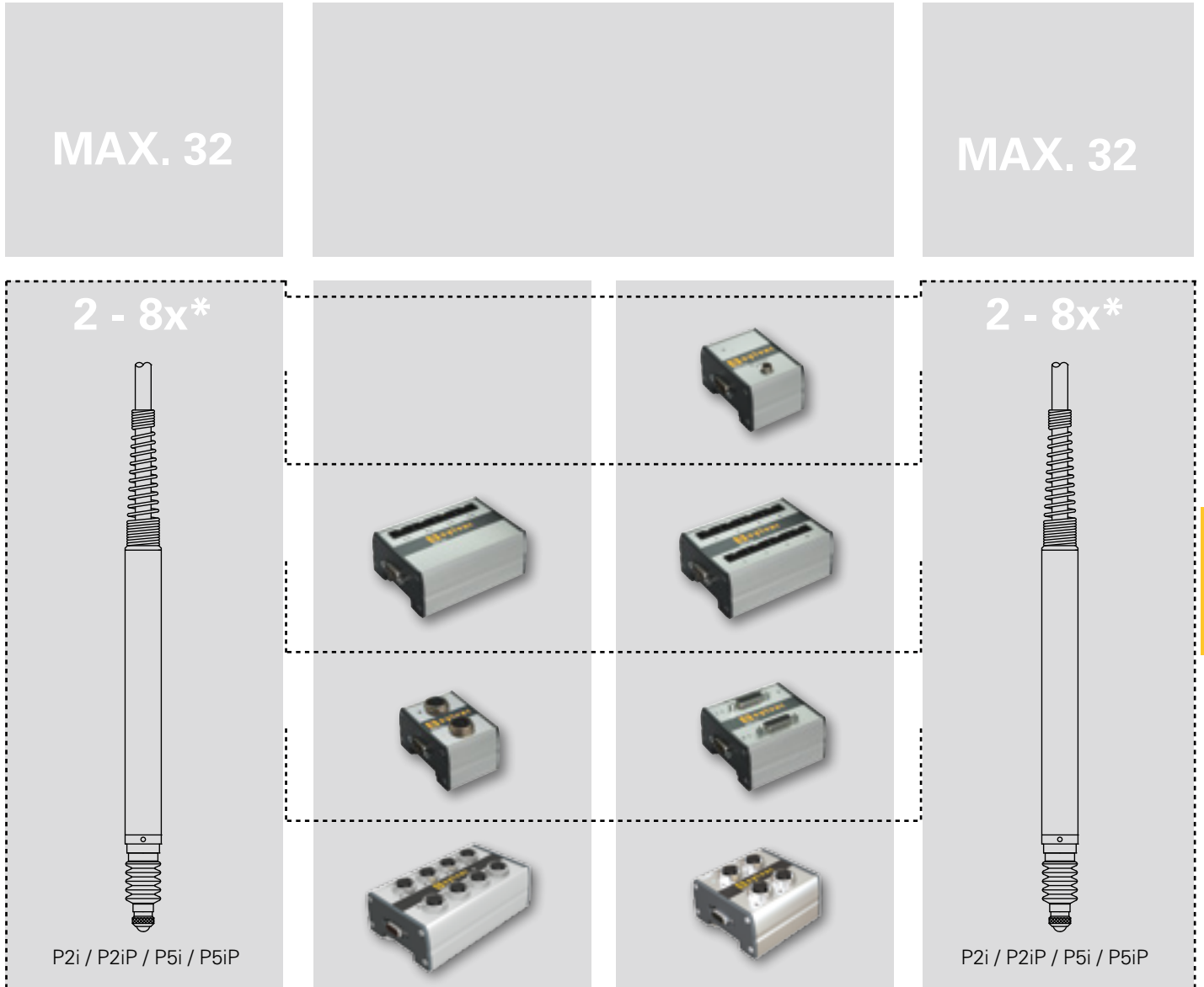
## POSSIBILITIES OF CONNECTION WITH ACCESSORIES



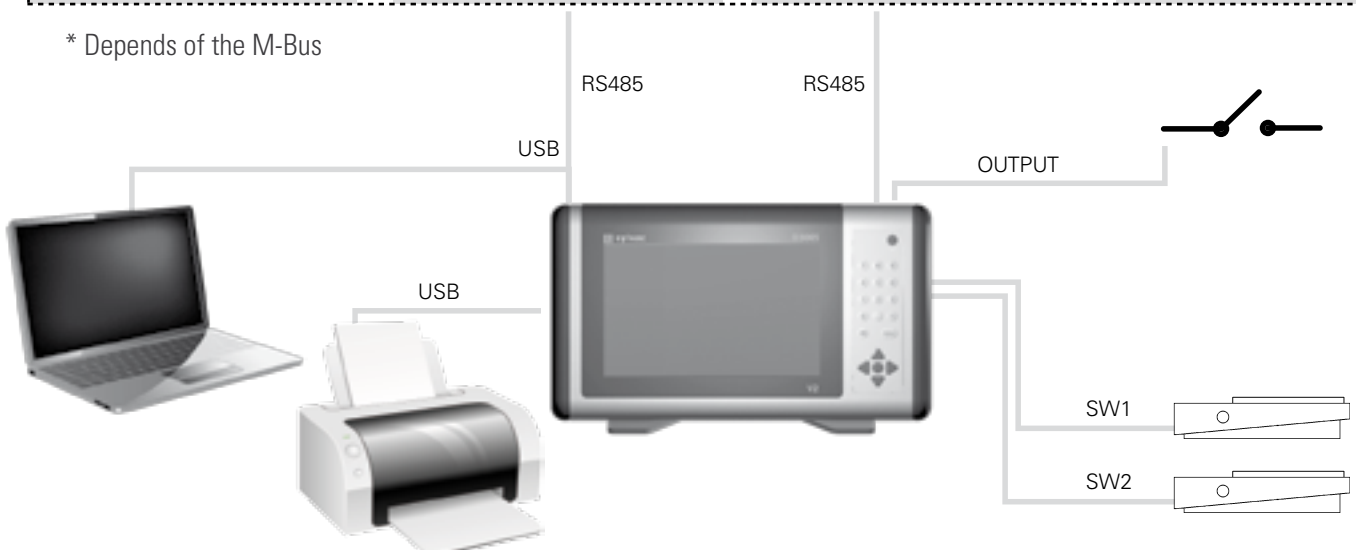
# Digital display

# D300S V2

## POSSIBILITIES OF CONNECTION WITH ACCESSORIES



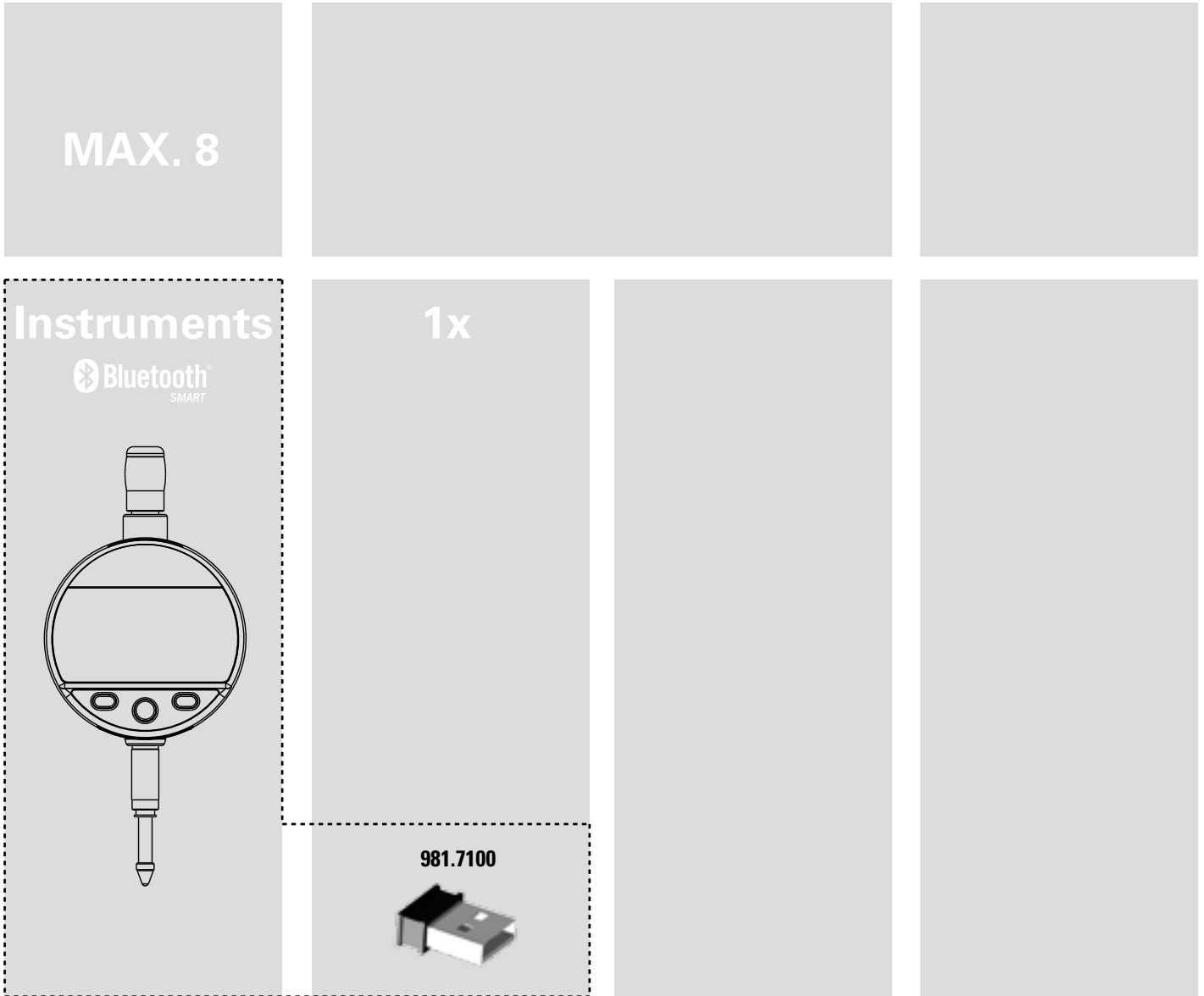
\* Depends of the M-Bus



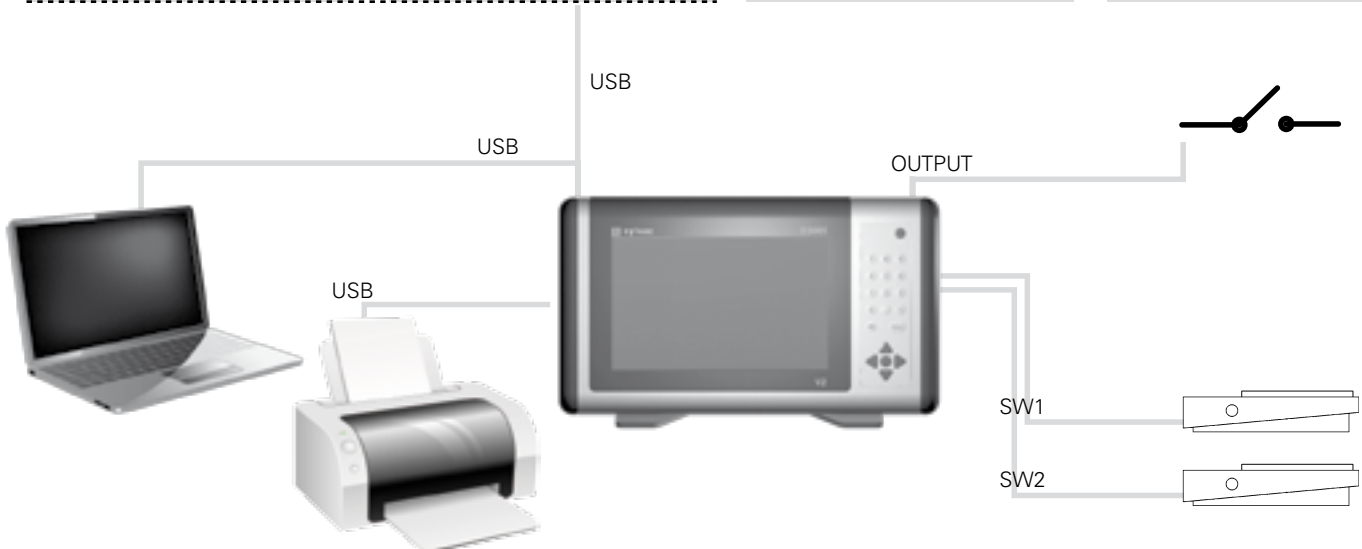
# Digital display

# D300S V2

## POSSIBILITIES OF CONNECTION WITH ACCESSORIES



E



## DESCRIPTION

- Digital multifunctional unit with 7" touch screen display
- Multi-brands compatible through M-BUS multiplexers (possibility to mix the brands)
- Designed for multigauging applications
- Up to 99 input (probes, instruments, I/O) through M-BUS multiplexers
- Automatic detection of connected instruments
- Storage of up to 128 different parts configurations
- Up to 30'000 measurements can be saved by configuration
- Display of up to 32 channels simultaneously (on the same screen) or distributed up to 32 pages
- Single or multi-gauging display mode
- SPC functions (run chart, pareto, histogram with Gauss curve, etc.)
- PLC functions and PLC communication protocols
- Formula editor, free combination between all instruments connected to the M-BUS
- Configurable by PC
- Ethernet connection with Modbus TCP
- Multifunction footpedal input
- User friendly interface
- Very robust construction (Aluminium)
- table or panel mounting

Large touchscreen 7" protected against liquids IP65



USB



804.1210



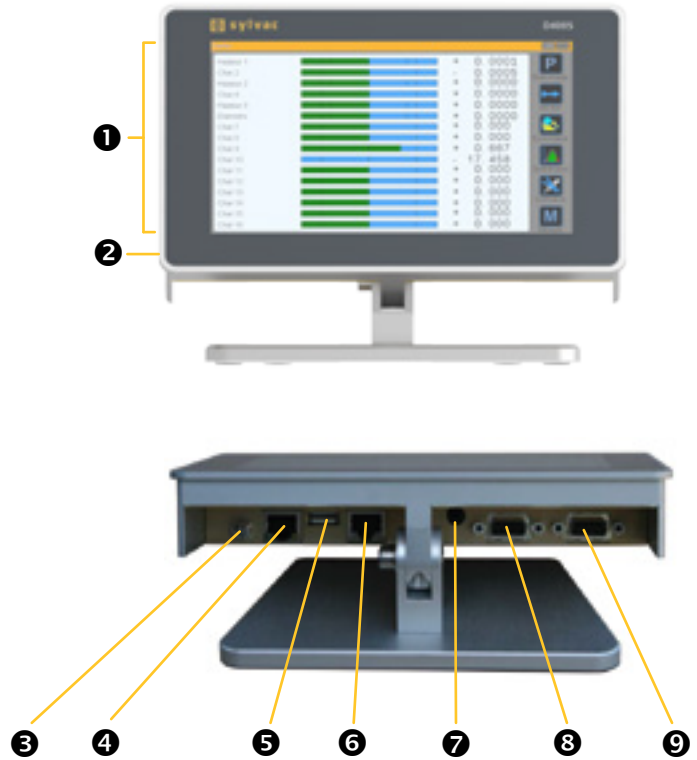
925.5609

# Digital display

# D400S

## INTERFACE | HARDWARE

- ① Customizable display interface
- ② Aluminium body
- ③ 12VDC/30VDC Power supply
- ④ RJ-45 Ethernet TCP4
- ⑤ USB host (for usb key)
- ⑥ USB device (virtual keyboard)
- ⑦ Footswitch
- ⑧ M-bus
- ⑨ RS232



## TECHNICAL SPECIFICATIONS

		804.2400
Model		D400S
Overall dimensions	mm	200x143x151.6
Weight	kg	1.3
Case		Aluminium
Protection rating according to IEC 60529		IP65 (front face)
S_Connect		mini-usb / RS232
Programmable by PC		●

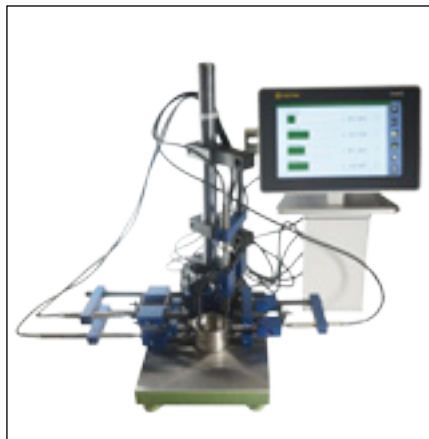
## BASIC INSTRUMENT

- Unit according to technical specifications
- Charging unit
- Instruction manual

## APPLICATIONS



Probes connection through M-BUS inputs



Inductive probes connection on a jig



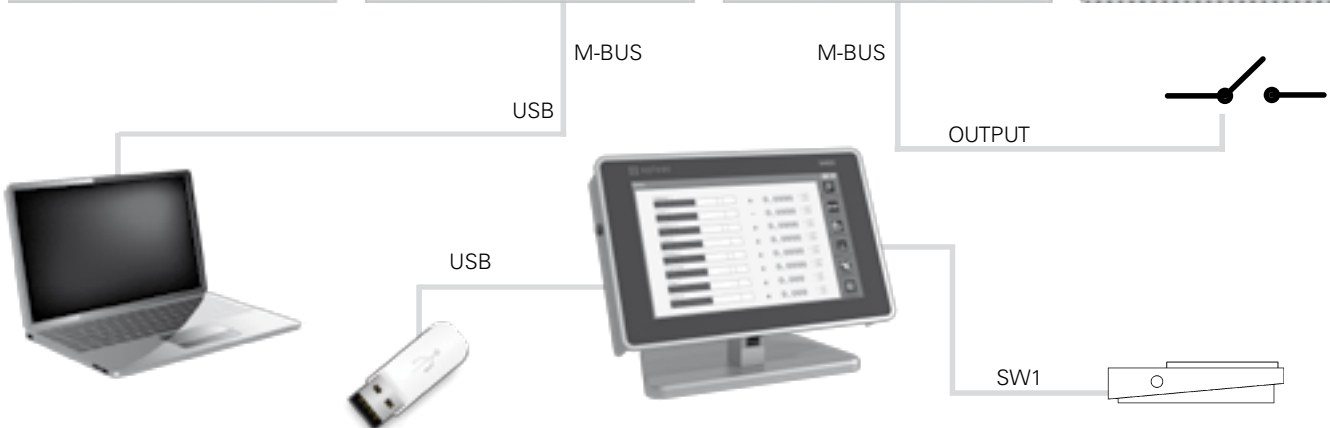
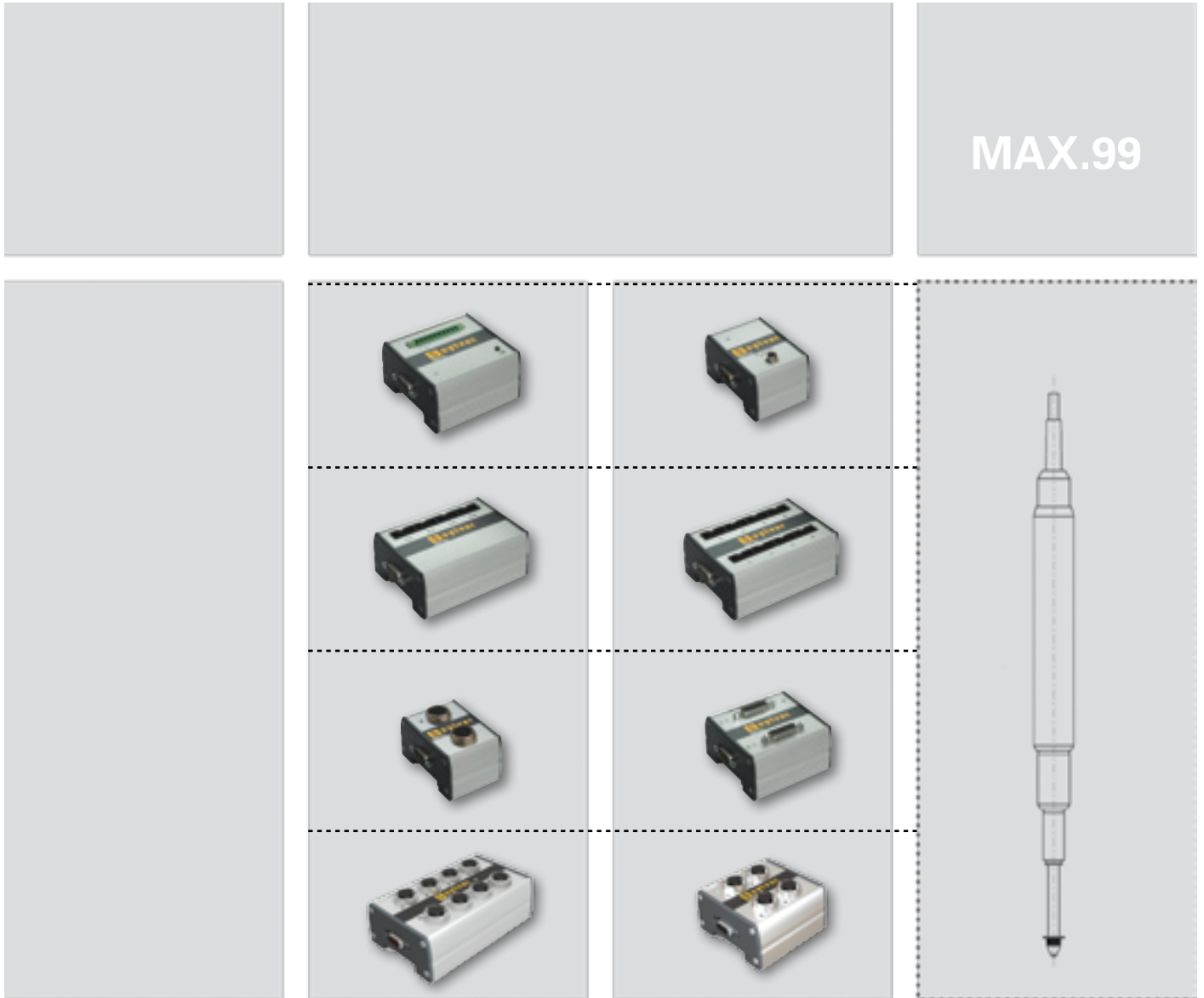
Probes and indicators connection through M-BUS inputs

# Digital display

# D400S

## POSSIBILITIES OF CONNECTION WITH ACCESSORIES

MAX.99



E

# Multiplexer unit

# D302 / D304

## DESCRIPTION

- Multiplexing unit with 2 or 4 inputs for Sylvac probes P2 à P25
- Dynamic measurement (10 à 20 meas./Sec. according to resolution)
- Perfect solution for multi-gauging system
- Analog output for PLC connection
- Standalone use possible

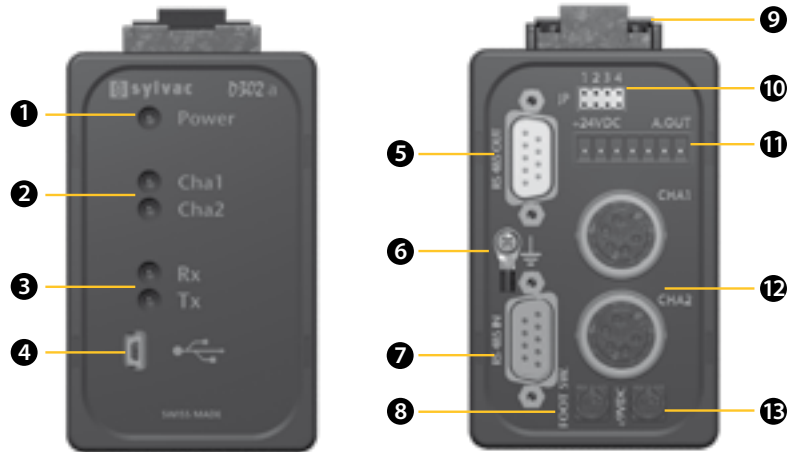


# Multiplexer unit

# D302 / D304

## HARDWARE DESCRIPTION

- 1 LED Power
- 2 LED channel
- 3 LED RS 485 activity
- 4 USB port for PC connection
- 5 RS 485 output
- 6 Ground connector
- 7 RS 485 input
- 8 External connector
- 9 Standard clamping (DIN 35mm)
- 10 Jumpers
- 11 Analog output / 24 VDC (only version a)
- 12 Probes input
- 13 9V power supply input



## TECHNICAL SPECIFICATIONS

		804.1302	804.1303	804.1304	804.1305
Modele		D302	D302a	D304	D304a
Max error	µm	P2 : 1.5 / P5 : 1.6 / P10 : 1.6 / P25 : 1.9			
Max. Error <sup>1)</sup>	µm	P2 : 0.5 / P5 : 0.6 / P10 : 0.6 / P25 : 0.8			
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2			
Overall dimensions	mm	95 x 88 x 55		95 x 88 x 77	
Weight	kg	0.3			
Case		Aluminium profil / plastic TA 6			
Protection rating according to IEC 60529		IP40			
S_Connect		USB / RS 485			
Programmable by PC		•			
Analog output signal			-10V ... +10V		-10V ... +10V

## BASIC INSTRUMENT

- Unit according to technical specifications
- Feet (pair)
- RS232/RS485 cable
- Charging unit according to country (904.4000)
- Instruction manual

## DESCRIPTION

- Multiplexer units allowing to connect different kind and brands of instruments to our D300S V2 and D400S display units
- Possibility to connect and mix different brands together
- RS485 based protocol
- The different units can be mounted on a DIN rail
- Robust construction

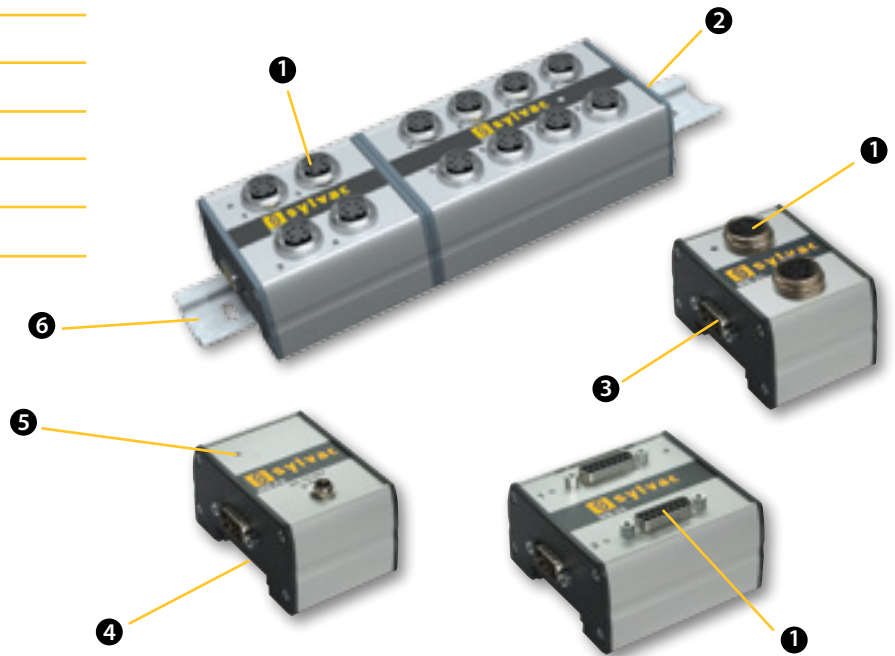


# Multiplexer unit

# M-Bus

## HARDWARE DESCRIPTION

- ① Probes input
- ② M-Bus input
- ③ M-Bus output
- ④ DIN mounting groove
- ⑤ LED / Power module
- ⑥ DIN rail



## TECHNICAL SPECIFICATIONS

		804.2102	804.2104	804.2108	804.2122	804.2114	804.2118	804.2130	804.2140	804.2160
Modele		MB-2C	MB-4C	MB-8i	MB-2S	MB-4D	MB-8D	MB-IO	MB-PS	MB-RS
Instrument type		Sylvac capacitive probes		Inductive	Heidenhain probes	Digimatic		PLC I/O	Measuring bench	Computer
Overall dimensions	mm	57x74x42	82x74x42	131x74x44	82x74x43	107x74x39	107x74x39	82x74x39	52x74x42	82x43x74
Weight	kg	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Inputs		2	4	8	2	4	8	8	12-30 VDC	254
Case		Anodized aluminium profile								
S_Connect		RS 485								

## BASIC INSTRUMENT

- M-Bus module according to technical specifications
- Instruction manual

# Multiplexer unit

## APPLICATIONS



Probes connection through M-BUS inputs



Probes connection on PC through MB-RS



Probes and indicators connection through M-BUS inputs

E



Probes connection on a D300S through D302 multiplexer units

# Display units

## ACCESSORIES



		D50S	D70S	D70H	D70I	D80S	D200S	D300S	D302 D304	D400S
<b>904.1108</b>	D108-additional 8 input unit for probes					•				
<b>904.1112</b>	D110V-control unit with 16 vacuum outputs					•	•	•		
<b>904.4000</b>	Charging set 100-240V / 9V	•				•	•		•	
<b>904.4001</b>	EUR cable included in 904.4000	•				•	•		•	
<b>904.4003</b>	UK cable included in 904.4000	•				•	•		•	
<b>904.4002</b>	USA/JPN cable included in 904.4000	•				•	•		•	
<b>804.4000</b>	Charging set 100-240V / 24V							•		
<b>904.4001</b>	EUR cable included in 804.4000							•		
<b>904.4003</b>	UK cable included in 804.4000							•		
<b>904.4002</b>	USA/JPN cable included in 804.4000							•		
<b>804.4010</b>	Charging set 100-240V / 24V									
<b>804.4011</b>	EUR cable included in 804.4010									•
<b>804.4013</b>	UK cable included in 804.4010									•
<b>804.4012</b>	USA/JPN cable included in 804.4010									•
<b>904.4101</b>	External contact (footpedal)	•	•			•	•	•	•	•
<b>904.4102</b>	Footpedal (jack)			•	•					
<b>904.6001</b>	Dust cover					•		•		
<b>804.1211</b>	Connection cable D200S - D110/V						•			

E