sylvac

Swiss manufacturer of precision measuring instruments since 1969

Catalogue_14

Bluetooth SMART

SWISS MADE

Presentation

SYLVAC CATALOGUE

A thriving 40 year history of constant progress in dimensional measurement.

Dear customer, Dear reader,

We are delighted and proud to present our catalogue in which you will find many novelties and innovations produced by Sylvac, including:

- Our new range of S_Dial Work digital comparators, which are already achieving huge success
- Our completely new Nano range comparators with a resolution of 0.1 micron
- A new version of comparators with an analogue display
- The first S_Dial Work comparators integrating the new Bluetooth® Smart technology for wireless transmission
- Our incredible multi-function D300S unit compatible with Bluetooth® Smart instruments, just like our Sylconnect software

Although our range has already grown by 30%, our engineers continue to further enhance this range by developing the most innovative instruments of tomorrow.

Why should you choose our products?

There are many sound arguments in our favour, particularly:

- More than 40 years' expertise and experience in the area of dimensional measurement.
- Products developed and made in Switzerland with the «Swiss Made» label, representing acknowledged proof of quality throughout the world.
- Innovative, ergonomic, durable instruments designed by professional designers.
- A global presence based on a network of efficient agents who are able to provide you with local support in more than 40 countries.
- Products that meet international standards (a number of them are instruments protected in accordance with IP67).

In order to meet an increasing demand for traceability of controls, our instruments are fitted with a data output for wired or wireless connection.
Comparators with data transmission by Bluetooth signal, developed by Sylvac, are presented in this catalogue for the first time. They mark the start of a new era in the area of quality control and confirm our position as leaders in this market.

We hope that you will enjoy looking through our catalogue and using our Sylvac instruments.
Thank you for your confidence in us. We remain faithfully at your service

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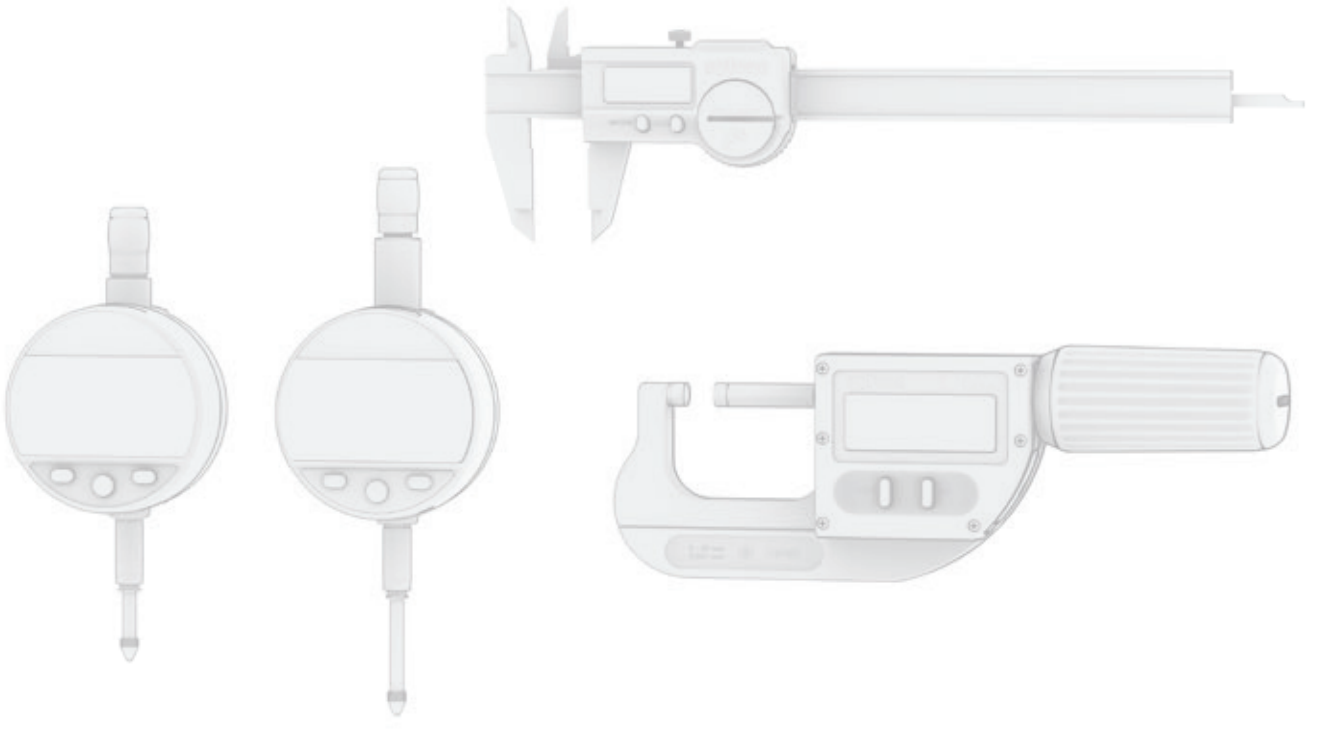
Sylvac SA

E. Schnyder

Managing Director

Content



Hand tools	**7 - 38**	Calipers, micron caliper, Ultra light calipers, micrometers, depth gauges, protractor
Dial gauges	**39-76**	Test indicators S234, Mini-dial gauges S233, S_Dial ONE, S_Dial WORK Basic, Advanced, BLUETOOTH® Smart, Nano and Analog
Internal measuring instruments	**77 - 90**	Internal measuring instruments with micrometer screw and pistol type
Scales and micrometer screws **Linear measuring system**	**91 - 100**	S_Scale WORK, micrometer screws and S_System LIN
Height gauges, probes and digital display units, measuring benches	**101 - 188**	Hi_Cal, Hi_Gage ONE, probes, digital display units D50S, D80S, D200S, D300S, D302 / 304, dial gauge testing stand M3, measuring benches PS15, PS16, PS17
Cables and softwares	**189 - 204**	Wireless transmission, cables, softwares

Certificates

SYLVAC PRODUCTS

SWISS TS

CERTIFICATE

The certification body of Swiss TS Technical Services AG
hereby confirms that the company

SYLVAC SA
CH-1023 Crissier
CH-2735 Malleray-Bévilard

has introduced and applies a management system for

Development, design, manufacturing and sales of measuring instruments

according to:

ISO 9001:2008 **Quality management**

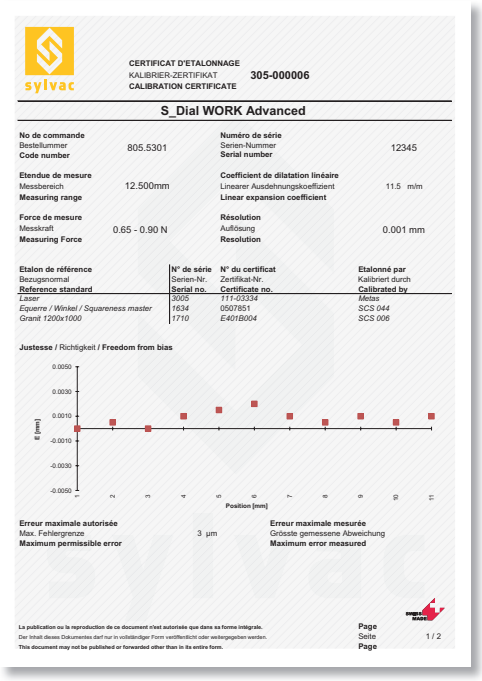
Registration number: 01-208-008
Initial certification: 05.04.2001
Recertification: 21.03.2013
Valid until: 04.04.2016

Heinrich A. Bieler
Head of the certification body

Wallisellen, 25.03.2013
The certification body
of Swiss TS Technical Services AG
A SVTI and TÜV SÜD company

SCESm013

ZERTIFIKAT ◆ CERTIFICATE ◆ ◆ CERTIFICADO ◆ CERTIFICAT



CERTIFICAT D'ETALONNAGE
KALIBRIER-ZERTIFIKAT 305-000006
CALIBRATION CERTIFICATE

S_Dial WORK Advanced

No de commande / Bestellnummer / Code number	805.5301	Numéro de série / Serien-Nummer / Serial number	12345
Etendue de mesure / Messbereich / Measuring range	12.500mm	Coefficient de dilatation linéaire / Linearer Ausdehnungskoeffizient / Linear expansion coefficient	11.5 m/m
Force de mesure / Messkraft / Measuring Force	0.65 - 0.90 N	Résolution / Auflösung / Resolution	0.001 mm

Etalon de référence / Bezugsnormal / Reference standard	N° de série / Serien-Nr. / Serial no.	N° du certificat / Zertifikat-Nr. / Certificate no.	Etalonné par / Kalibriert durch / Calibrated by
Laser	3005	111-03334	Metas
Equerre / Winkel / Squareness master	1634	0507851	SCS 044
Granit 1200x1000	1710	E401B004	SCS 006

Justesse / Richtigkeit / Freedom from bias

Erreur maximale autorisée / Max. Fehlergrenze / Maximum permissible error: 3 µm
Erreur maximale mesurée / Grösste gemessene Abweichung / Maximum error measured

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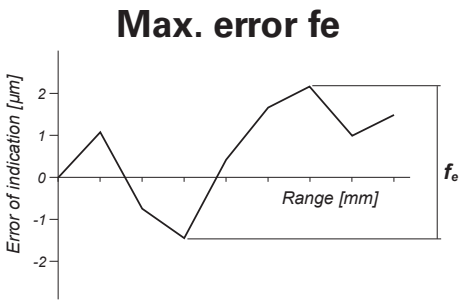
3-year guarantee :
The Sylvac brand is built on leading edge know-how in electronics, micro-electronics and micro-mechanics. Confident in the quality of its products, Sylvac offers a 3-year guarantee on its product range.

Error max :
The total error mentioned in our technical specifications corresponds to the maximum difference between the highest and lowest deviation from the true position within the instrument's measuring range.
A certificate of calibration is delivered for all our instruments with a resolution of 1µm and indicates the effective maximum error of the instrument, controlled in our laboratory.
The repeatability is defined as the maximum spread of series of measurements taken at the same position by the same operator and under the same conditions.



As for now, there is no standard for digital dial indicators. The Sylvac internal
standard is derived from existing standards for mechanical dial indicators.

Web site :
Up to date information as well as updated files and software can be downloaded on www.sylvac.ch

www.sylvac.ch http://www.filierepolymecanicien.ch/

General information

SYLVAC PRODUCTS

SYLVAC PRODUCTS :
The Sylvac patented inductive measuring system is insensitive to magnetic fields and liquids on the sensor or on the measuring scale. A very low consumption system keeps the zero setting even when switched "off". This system is particularly well adapted for measuring instruments such as calipers, indicators etc…
The Sylvac patented capacitive measuring system is used for the linear probe type of instruments where the sensor is integrated in the probe. As opposed to inductive half bridge and LVDT probes, the capacitive Sylvac system can be used over a large measuring range (up to 50mm) while preserving an excellent linearity (1µm/25mm) and repeatability (0.2µm).

WATER RESISTANT

Characterizes the instruments whose the electronic module and the measuring system are protected against liquids. The IPXX degree defines the protection rating of the instruments.

SIS Smart Inductive System

Characterizes instruments equipped with a Smart Inductive Sensor with an extremely low power sleeping mode, which keeps its origin (last zero setting) and automatically wakes up when a movement is detected.

IP54 / IP65 / IP67

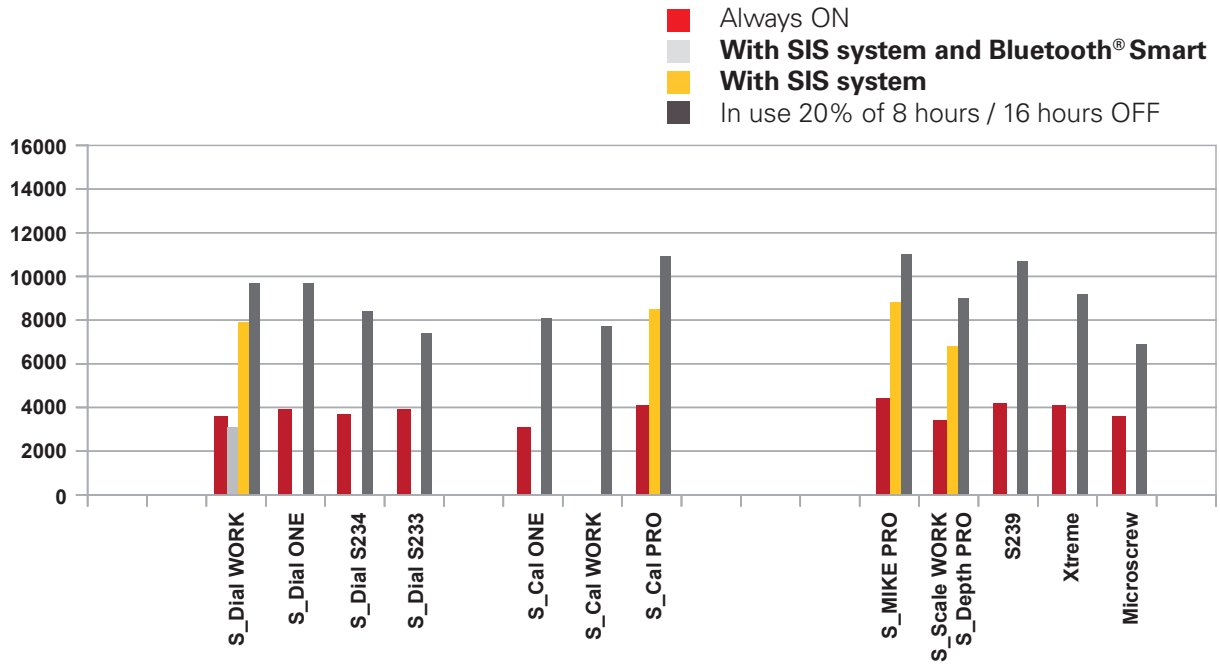
Characterizes instruments whose electronic module and measuring system are protected against liquids. The IPXX degree defines the protection rating according to IEC 60529.

IP54 : protected against dust. Protected against water spray from all directions
IP65 : completely sealed against dust, protected against water jets from all directions
IP67 : completely sealed against dust, protected against temporary total immersion

Power and battery life
All the handtools, indicators, scales and micrometer heads are powered with a Lithium battery CR2032. If equipped with a «Power» output, the connector replaces the battery and the power is given by the PC or the display unit.

Battery lives indicated below are based on the following data :

In use 20% of 8 hours per day



General information

SYLVAC PRODUCTS

Data output types

Instruments equipped with a Proximity data output. Contactless data transfer by inductive coupling through the plastic casing

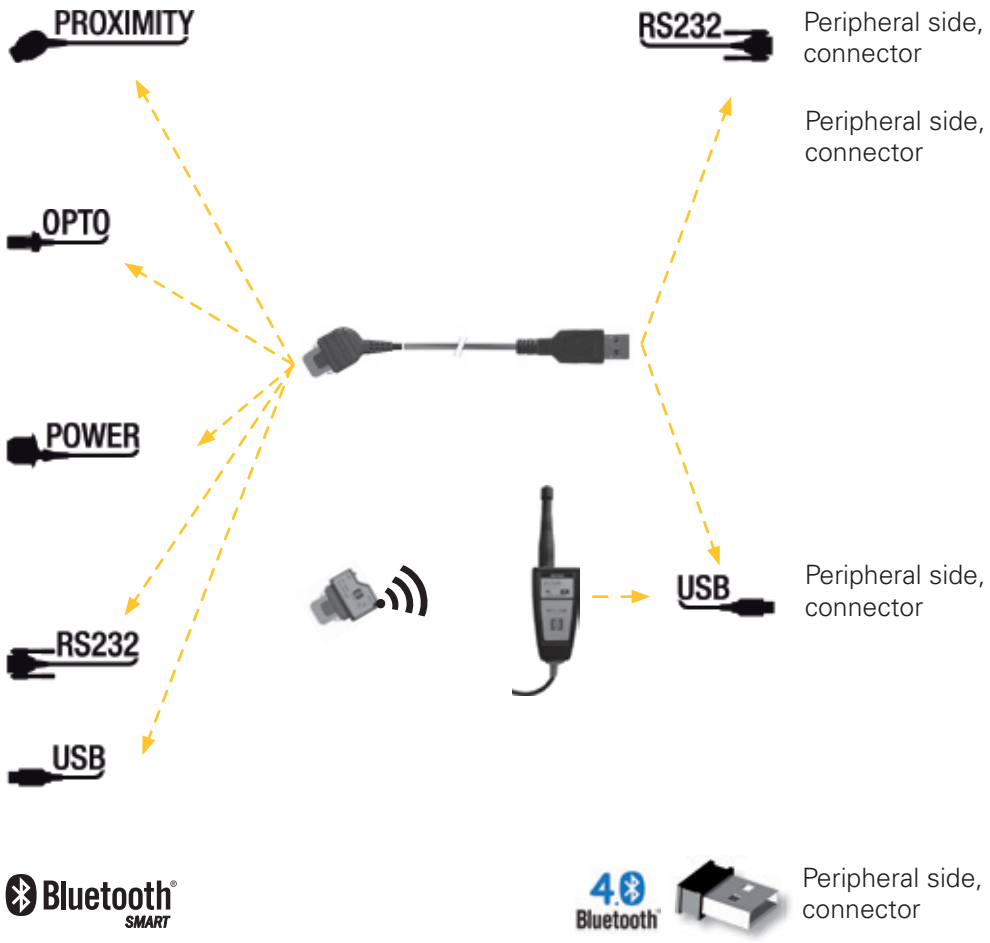
Instruments equipped with an Opto type data output. Contactless optical data transfer through a recessed window in the casing

Instruments equipped with a Power and Data connector. Data transfer is done by galvanic coupling, with power supplied to the instrument.

Instruments equipped with an RS232 data output (Sub-D9 pole connector)

Instruments equipped with an USB data output

Instruments with BLUETOOTH® Smart data output [1)]



[1)] Note: BLUETOOTH® Smart instruments and accessories are only available in countries for which certification has been obtained (UE, USA, JP, CN,TW etc.).
Look at our website, www.sylvac.ch, for the list of countries that have obtained certification. If your country is not on the list, please contact your local Sylvac reseller.

HAND TOOLS

In 1981, Sylvac launched the first caliper with digital read-out on the market. Quickly, other models followed and the market of these handtools took an incredible rise.

Today, Sylvac remains a leader in this market and offers a range of calipers with digital read-out of a measurement capacity from 150 to 3000 mm. Other handtools complete this range.

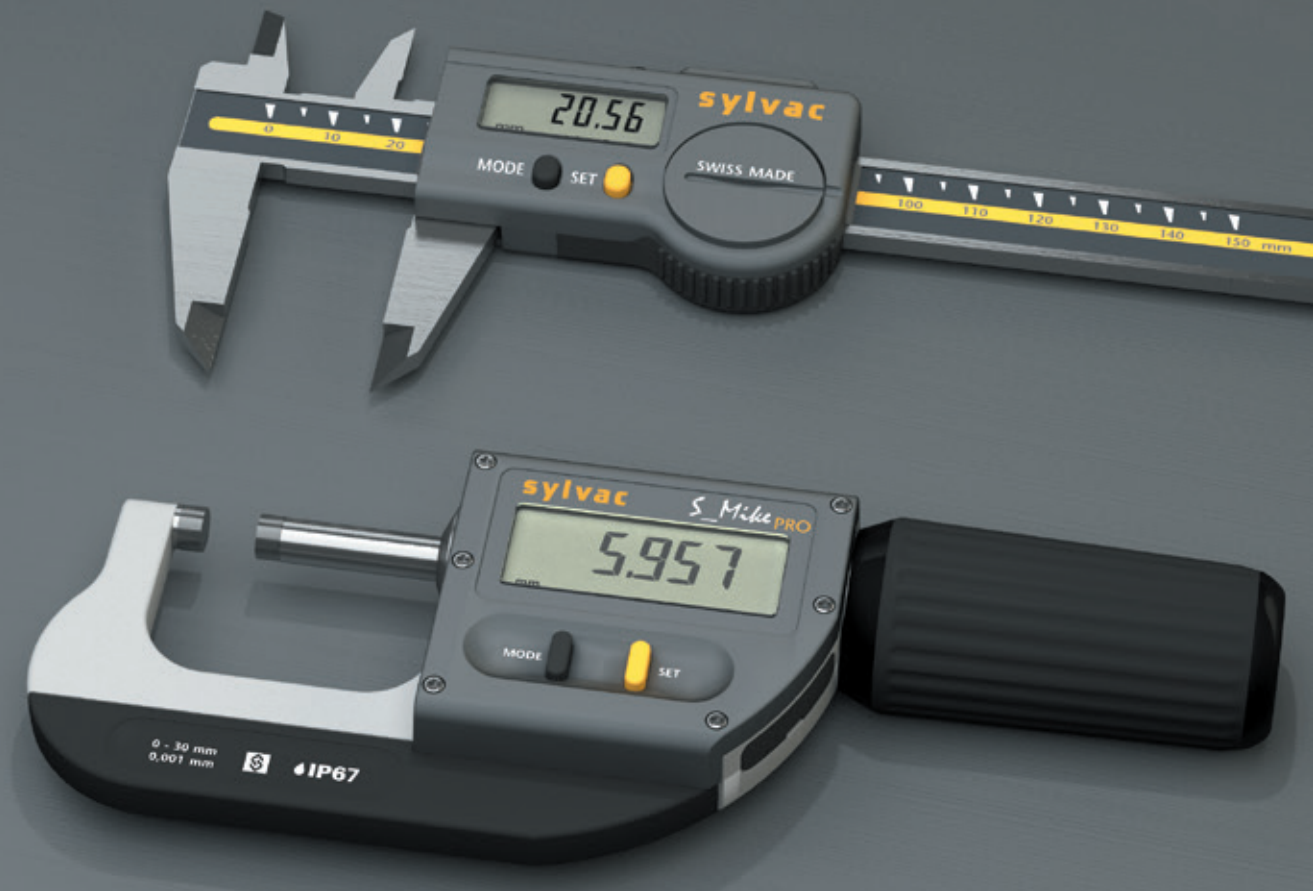
Sylvac inductive measuring system (patented)

Data output

Power supply: Lithium battery 3V, Type CR 2032

Operational temperature: +5 to +40°C

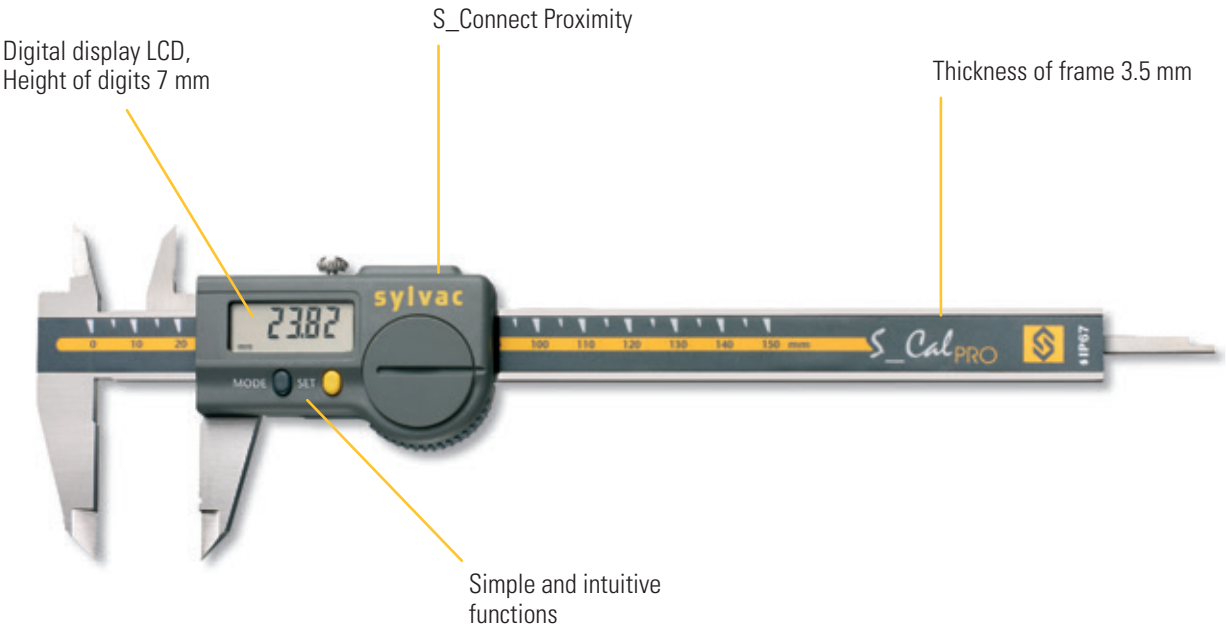
mm/inch selection



Professionnal Caliper S_Cal PRO

DESCRIPTION

- Water protected for heavy-duty work with coolants and lubricants, protection rating IP67 according to IEC 60529, **even connected**
- Automatic wake-up by moving the electronic on his frame. (system S.I.S)
- Sleeping mode after 20 min. of no use. (system S.I.S)
- Position memorized in sleeping mode (system S.I.S), **absolute system***
- Maximum speed of displacement : 2.5 m/sec
- Mechanical frame in stainless steel, hardened and ground
- Thumb wheel on request (see accessories)
- Great comfort of use thanks to its ergonomic frame



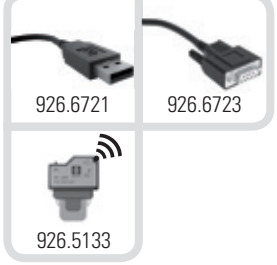
SWISS MADE

SIS Smart Inductive System

WATER RESISTANT

IP67

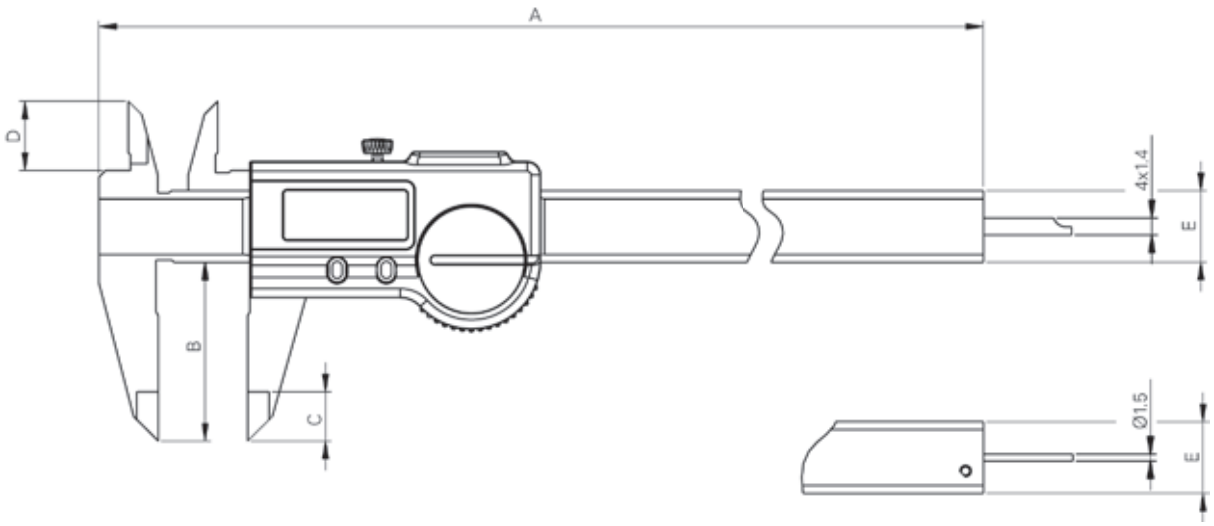
PROXIMITY



* SIS description on page 5

Professionnal Caliper S_Cal PRO

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

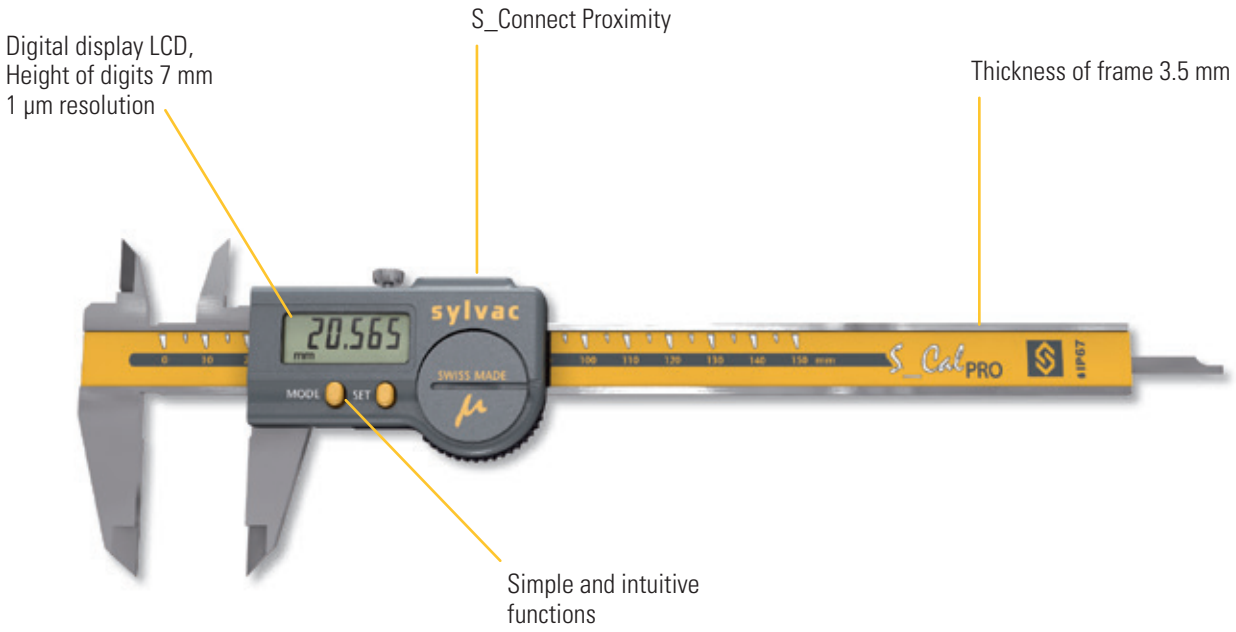
		910.1502	910.1507	910.1522	910.1532
Measuring range	mm	150	150	200	300
Max. Error G	µm	20[1)]	20[1)]	30	30
A	mm	234.5	234.5	290.5	388
B	mm	40	40	50	64
C	mm	11	11	14	14
D	mm	16	16	19	19
E	mm	16 x 3.5	16 x 3.5	16 x 3.5	16 x 4
Depth rod	mm	4 x 1.4	Ø 1.5	4 x 1.4	---
Protection rating according to IEC 60529		IP67 with or without connector			
S_Connect : Proximity		USB / RS232 / Wireless [2)]			
Zero setting		●			
Smart Inductive Sensor		●			

[1)] > 100 mm : 30 µm / DIN 862
[2)] see cables chapter

Micron Caliper S_Cal PRO µm

DESCRIPTION

- Water protected for heavy-duty work with coolants and lubricants, protection rating IP67 according to IEC 60529, **even connected**
- Automatic wake-up by moving the electronic on his frame. (system S.I.S)
- Sleeping mode after 20 min. of no use. (system S.I.S)
- Position memorized in sleeping mode (system S.I.S), **absolute system***
- Maximum speed of displacement : 2.5 m/sec
- Mechanical frame in stainless steel, hardened and ground
- Improved parallelism of internal jaws compared to version S_Cal PRO
- **Preset**
- **Resolution 0,001 or 0,00005”**
- **4µm repeatability**



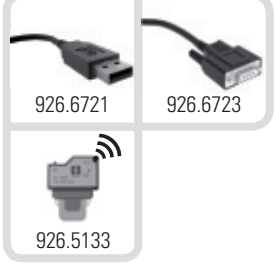
SWISS MADE

SIS Smart Inductive System

WATER RESISTANT

IP67

PROXIMITY

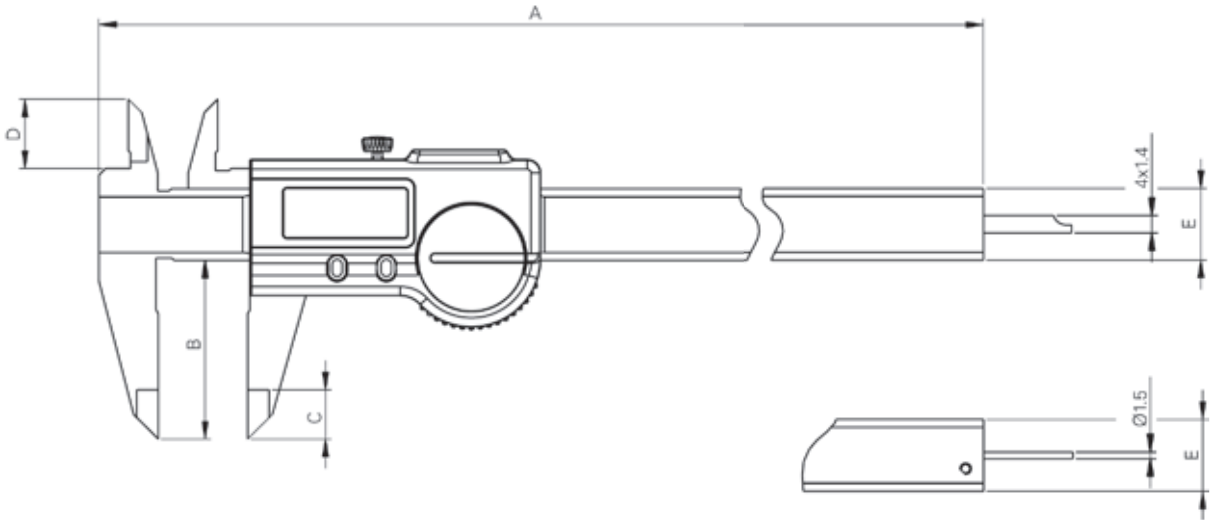


4µm repeatability

* SIS description on page 5

Micron Caliper S_Cal PRO µm

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

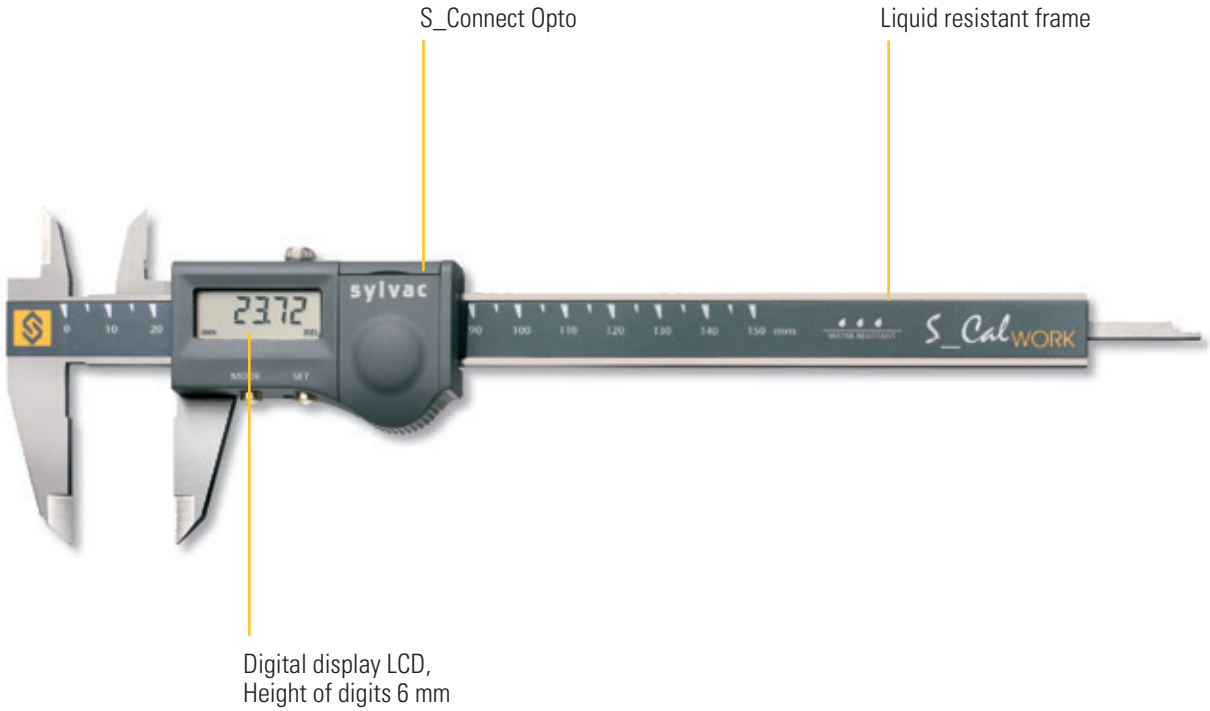
		910.9502	910.9507
Measuring range	mm	150	150
Max. Error G	µm	15[1)]	15[1)]
A	mm	234.5	234.5
B	mm	40	40
C	mm	11	11
D	mm	16	16
E	mm	16 x 3.5	16 x 3.5
Depth rod	mm	4 x 1.4	Ø1.5
Protection rating according to IEC 60529		IP67 with or without connector	
S_Connect : Proximity		USB / RS232 / Wireless [2)]	
Functions		mm/inch, preset, zero setting	
Smart Inductive Sensor		●	

[1)] < 100 mm: 15 µm / > 100 mm : 30 µm / DIN 862
[2)] see cables chapter

Workshop caliper S_Cal WORK

DESCRIPTION

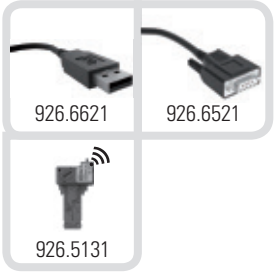
- Maximum speed of displacement : 2 m/sec
- Mechanical frame in stainless steel, hardened and ground
- Automatic switch off mode
- Thumb wheel on request (see accessories)



SWISS MADE

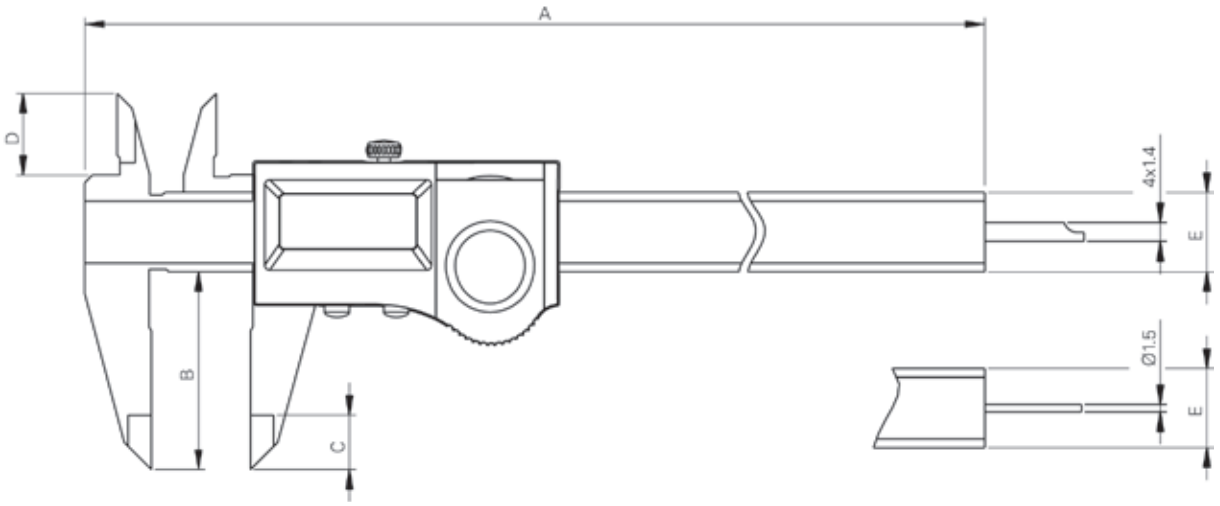
WATER RESISTANT

OPTO



Workshop caliper S_Cal WORK

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

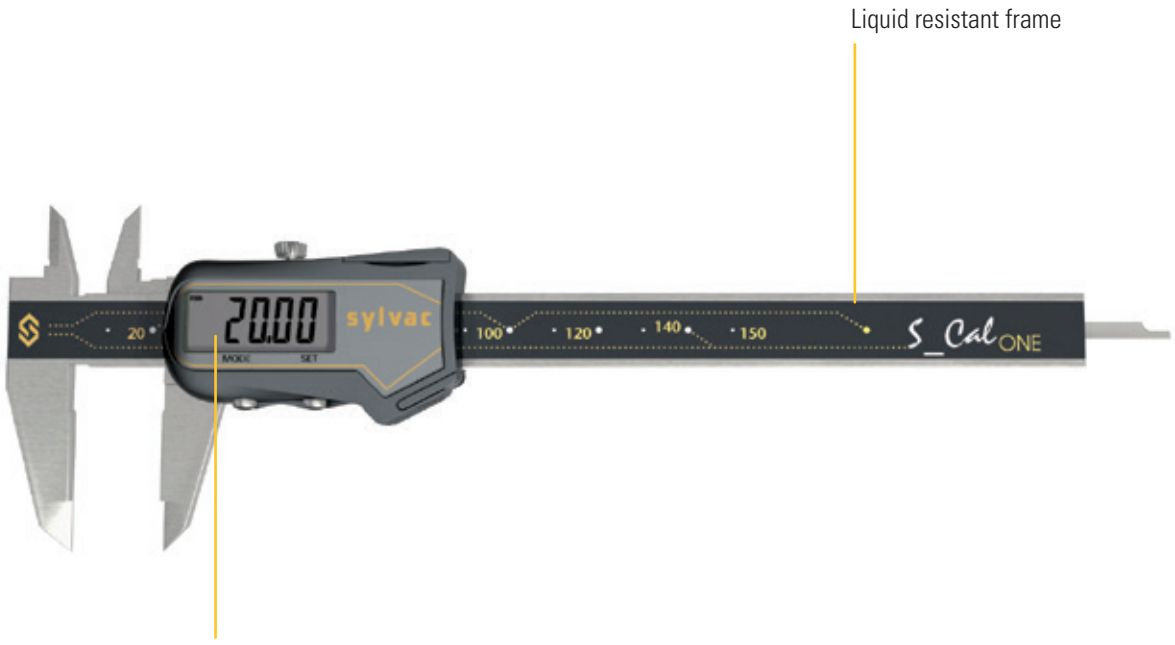
		910.0502	910.0507	910.0522	910.0532
Measuring range	mm	150	150	200	300
Max. Error G	µm	20[1)]	20[1)]	30	30
A	mm	233	233	290	385
B	mm	40	40	50	65
C	mm	10	10	14	14
D	mm	16	16	20	20
E	mm	16 x 3	16 x 3	16 x 3	16 x 4
Depth rod	mm	4 x 1.4	Ø 1.5	4 x 1.4	---
Protection rating according to IEC 60529		IP54 with or without connector			
S_Connect : Opto		USB / RS232 / Wireless [2)]			
Zero setting		●			
REL and ABS functions		●			

[1)] > 100 mm : 30 µm / DIN 862
[2)] see cables chapter

Workshop caliper S_Cal ONE

DESCRIPTION

- Maximum speed of displacement : 2 m/sec
- Mechanical frame in stainless steel, hardened and ground
- Thumb wheel on request (see accessories)
- Modern design
- Large digits

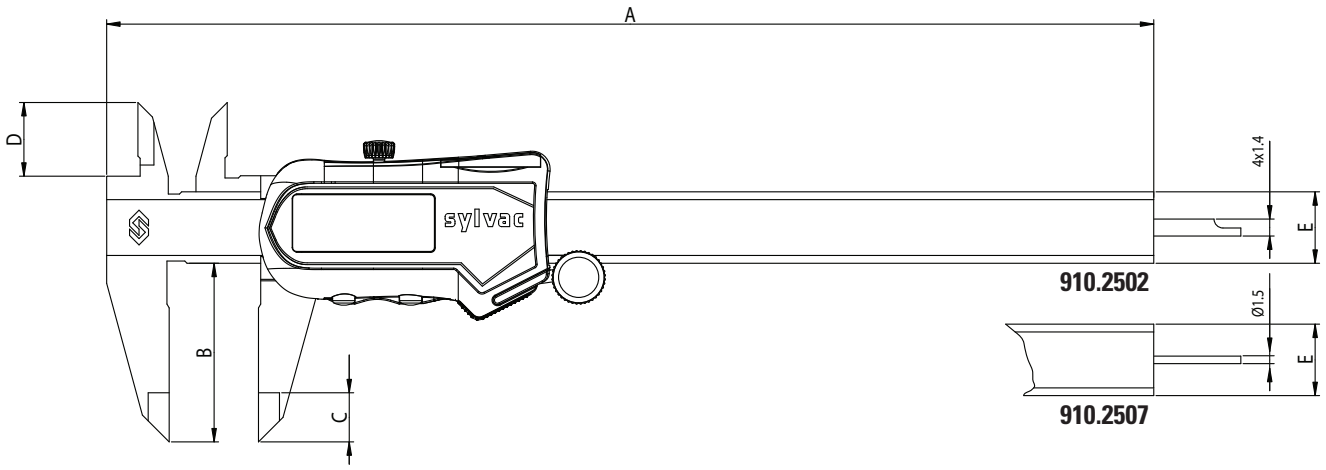


SWISS MADE

WATER RESISTANT

Workshop caliper S_Cal ONE

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		910.2502	910.2507
Measuring range	mm	150	150
Max. Error G	µm	20[1)]	20[1)]
A	mm	233	233
B	mm	40	40
C	mm	10	10
D	mm	16	16
E	mm	16 x 3	16 x 3
Depth rod	mm	4 x 1.4	Ø1.5
Thumb wheel device		optional	
Zero setting		●	

[1)] > 100 mm : 30 µm / DIN 862

S_Cal

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate (S_Cal PRO µm)

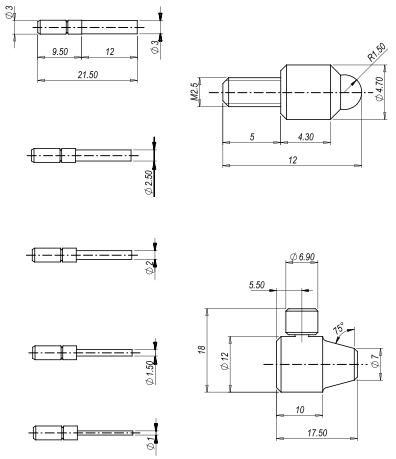
APPLICATIONS

Depth measurement

S_Cal with kit 910.2207
Depth measurement of small internal Ø

S_Cal PRO µm
Comparison measurement

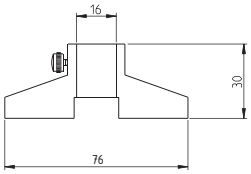
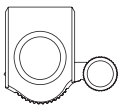
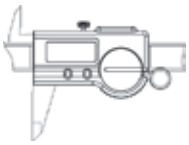
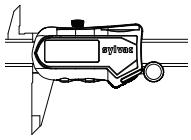
ACCESSORIES



		S_Cal PRO	S_Cal WORK	S_Cal ONE
910.2207	Accessory kit for S_Cal	●	●	●

S_Cal

ACCESSORIES

			S_Cal PRO S_Cal PRO µm	S_Cal WORK	S_Cal ONE
	**910.2205**	Base for Depth Measurement	●	●	●
	**810.2201**	Thumb wheel		●	
	**910.2201**	Thumb wheel	●		
	**910.2202**	Thumb wheel			●

Ultra light caliper S_Cal UL

DESCRIPTION

- Maximum speed of displacement : 1.5 m/sec
- Internal and external measurement
- This system ensures a perfect guidance and protects the beam against shocks
- Displays the upper and lower tolerances
- Extremely light instrument

SWISS MADE

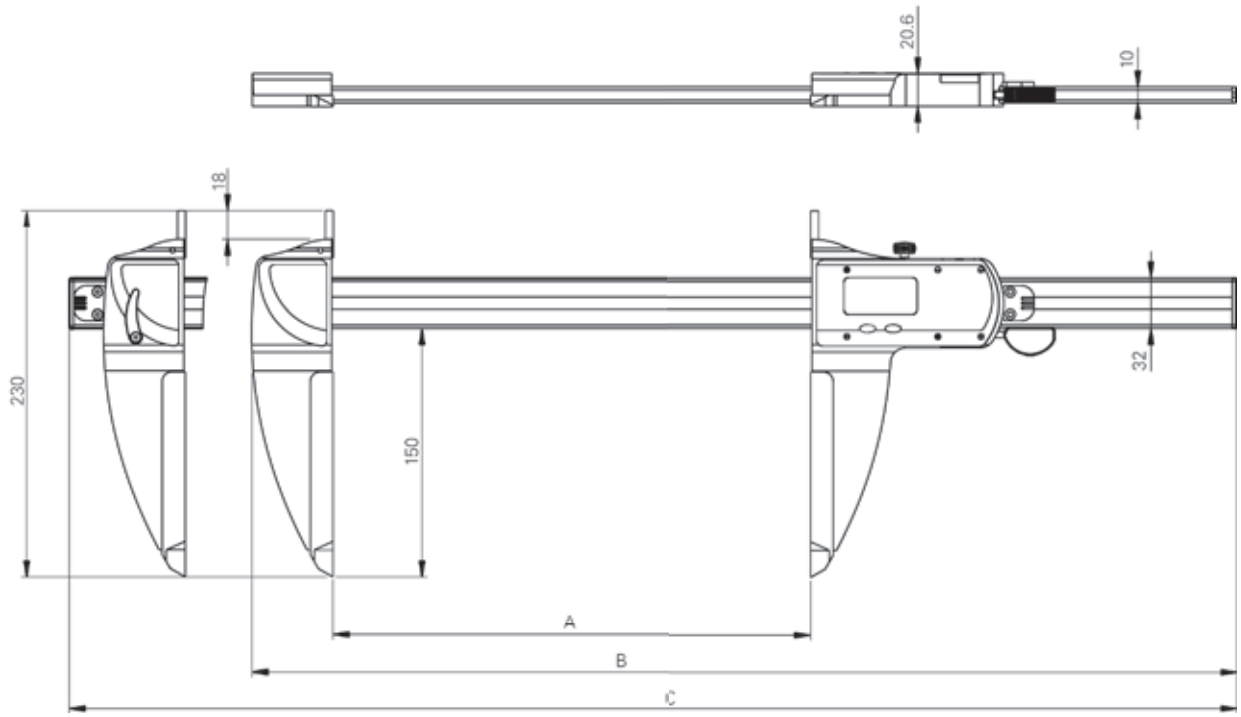
WATER RESISTANT

3m = 3kg

OPTO

Ultra light caliper S_Cal UL

DIMENSIONAL DRAWING



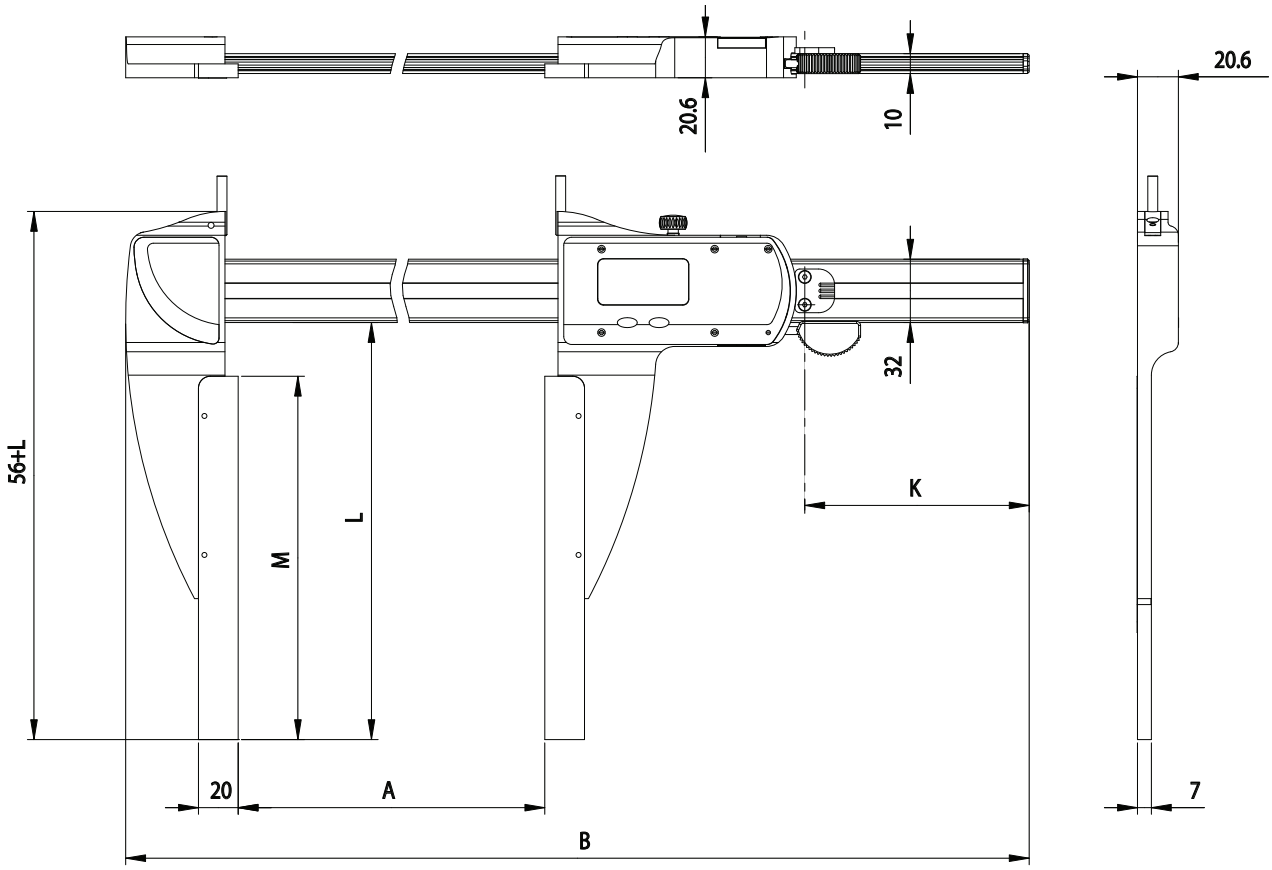
TECHNICAL SPECIFICATIONS

		911.1403	911.1406	911.1410	911.1415	911.1420	911.1425	911.1430
Measuring range	mm	300	600	1000	1500	2000	2500	3000
Max.Error	µm	30	40	60	120	150	200	250
Repeatability	µm	20	20	20	20	30	30	30
A	mm	330	630	1025	1525	2040	2545	3050
B fix	mm	618	918	[1]	[1]	[1]	[1]	[1]
C mobile	mm	[1]	[1]	1306	1806	2306	2806	3306
Weight	kg	**1.1**	**1.3**	**1.6**	**2**	**2.3**	**2.6**	**3**
S_Connect : Opto		USB / RS232 / Wireless [2]						
Setting by PC		●						
Memory set		●						
2 references		●						
RESET function		●						
Min/Max function		●						
Tolerance limit indicators		●						

[1] on request
[2] see cable chapter

Ultra light caliper S_Cal UL

SPECIAL EXECUTIONS | SPECIAL JAWS TYPE A



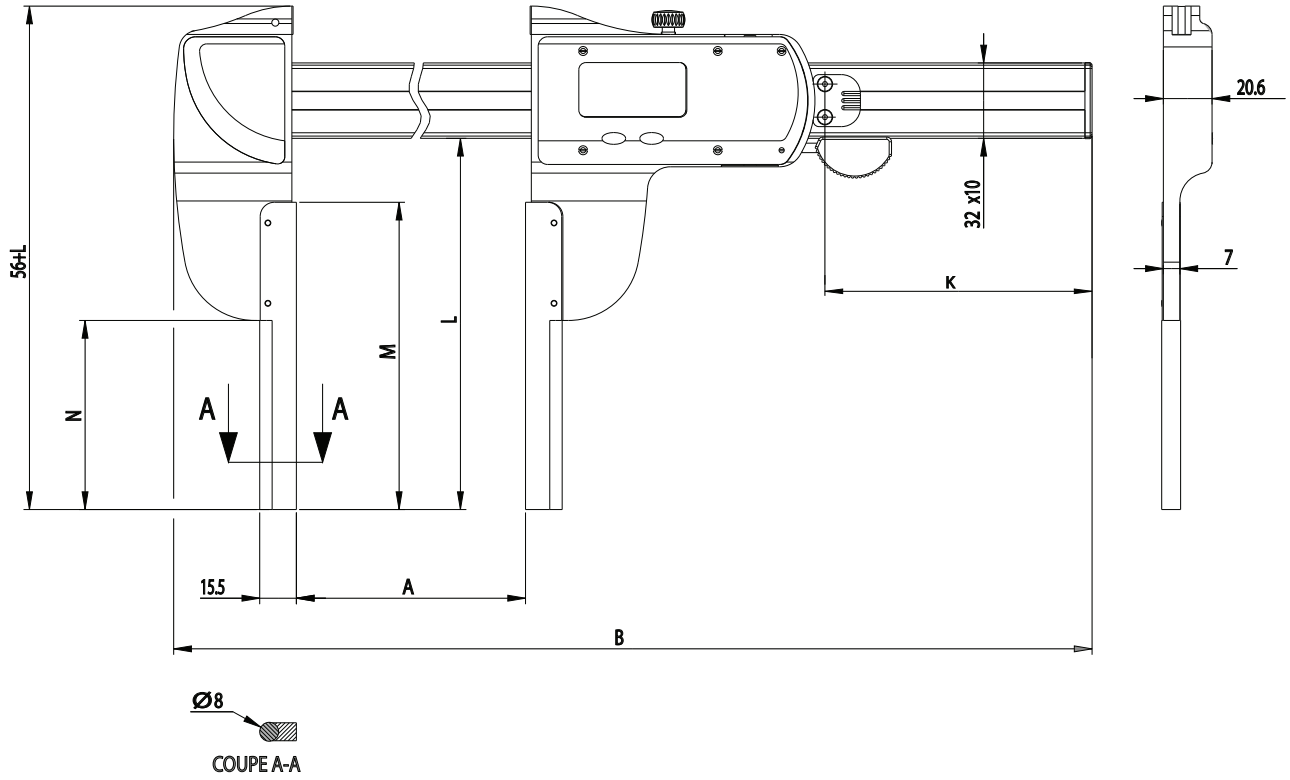
TECHNICAL SPECIFICATIONS

		911.2315.99	911.2316.99	911.2317.99
Special jaws (pair)		Lenght L to specify with order (max 400 mm)		
L	mm	≤ 200	≤ 300	≤ 400
M	mm	L - 25		

		UL 300	UL 600	UL 1000	UL 1500	UL 2000	UL 2500	UL 3000
UL specification		**Max. error. [µm] / Repeatability [µm]**						
With Jaws 911.2315.99		40 / 20	50 / 20	70 / 20	130 / 20	170 / 30	210 / 30	300 / 40
With Jaws 911.2316.99		50 / 30	60 / 30	90 / 30	150 / 30	200 / 40	300 / 40	400 / 50
With Jaws 911.2317.99		80 / 40	100 / 40	150 / 40	280 / 50	350 / 60	500 / 80	-
A	mm	320	602	1020	1530	2040	2520	3020
B	mm	618	918	1318	1818	2318	2818	3318
K	mm	110				90	110	

Ultra light caliper S_Cal UL

SPECIAL EXECUTIONS | SPECIAL JAWS TYPE C



TECHNICAL SPECIFICATIONS

		911.2319.99
Special jaws (pair)		Lenght L to specify with order (max 300 mm)
L max	mm	300
M	mm	L - 25
N	mm	80
//	µm	≤ 150 mm = 60 / ≤ 200 mm = 80 / ≤ 300 mm = 100

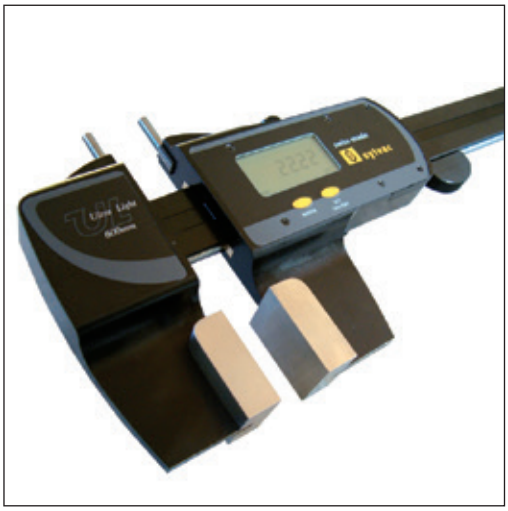
		UL 300	UL 600	UL 1000	UL 1500	UL 2000	UL 2500	UL 3000
UL specification		**Max. error. [µm] / Repeatability [µm]**						
With Jaws ≤ 150	mm	30 / 20	40 / 20	60 / 20	120 / 20	150 / 30	200 / 30	300 / 30
With Jaws ≤ 200	mm	40 / 20	50 / 20	70 / 20	130 / 20	170 / 30	210 / 30	300 / 40
With Jaws ≤ 300	mm	50 / 30	60 / 30	90 / 30	150 / 30	200 / 40	300 / 40	400 / 50
A	mm	344	644	1044	1544	2044	2544	3044
B	mm	618	918	1318	1818	2318	2818	3318
K	mm	110						

S_Cal UL

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate for ULIII up to 1500

APPLICATIONS



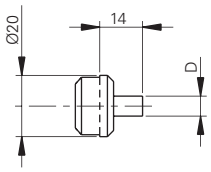
Special S_Cal UL with modified measuring jaws.

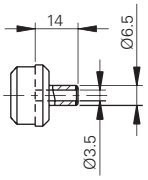
Special S_Cal UL with extended measuring jaws.

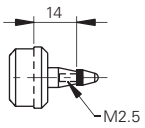
S_Cal UL, movable left jaw

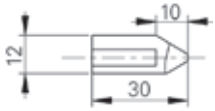
S_Cal UL

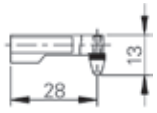
ACCESSORIES

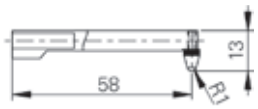






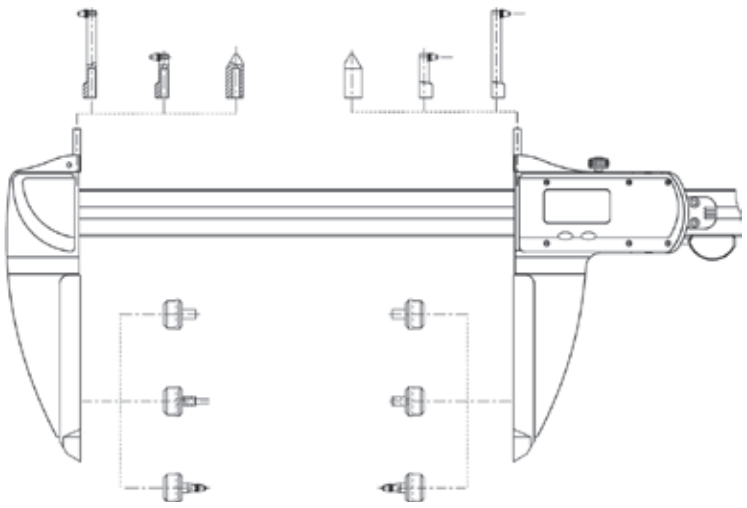






See also cables chapter

		UL300-3000
911.2301	Support Ø 6.35 mm for thread measurement wires in holders, (pair)	●
911.2302	Dito Ø 6.5 mm, (pair)	●
911.2303	Dito Ø 8 mm, (pair)	●
911.2304	Thread anvils holders for thread measurement., (pair)	●
911.2305	Support with int. thread M 2.5 for measuring anvils, (pair)	●
911.2307	Inserts in hardened steel, cone 60° for bore clearance measurement > 10 mm, (pair)	●
911.2308	Holder for dial gauge contact points for internal groove measurement, (pair)	●
911.2309	Dito height 58 mm, (pair)	●



Professional micrometer S_Mike PRO

DESCRIPTION CYLINDRICAL Ø6.5

- Automatic wake-up by moving the measuring spindle (system S.I.S)
- Sleeping mode after 20 min. of no use (system S.I.S)
- Position memorized in sleeping mode (system S.I.S), **absolute system***
- Water protected for heavy-duty work with coolants and lubricants, protection rating IP67 according to IEC 60529, **even connected**
- Measuring range 0-161 mm **covered with 5 instruments only**
- Set of 3 micrometers 0-102 mm available
- Quick displacement of the measuring spindle 12 mm / rotation
- Adjustable measuring force 5N / 10N (versions 903.030X)
- Repeatability and reproducibility never reached before
- Thimble in polyacetal-copolymer

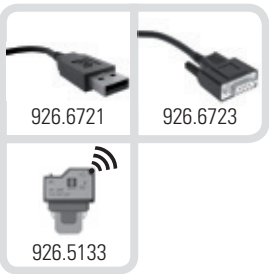
SWISS MADE

SIS Smart Inductive System

WATER RESISTANT

IP67

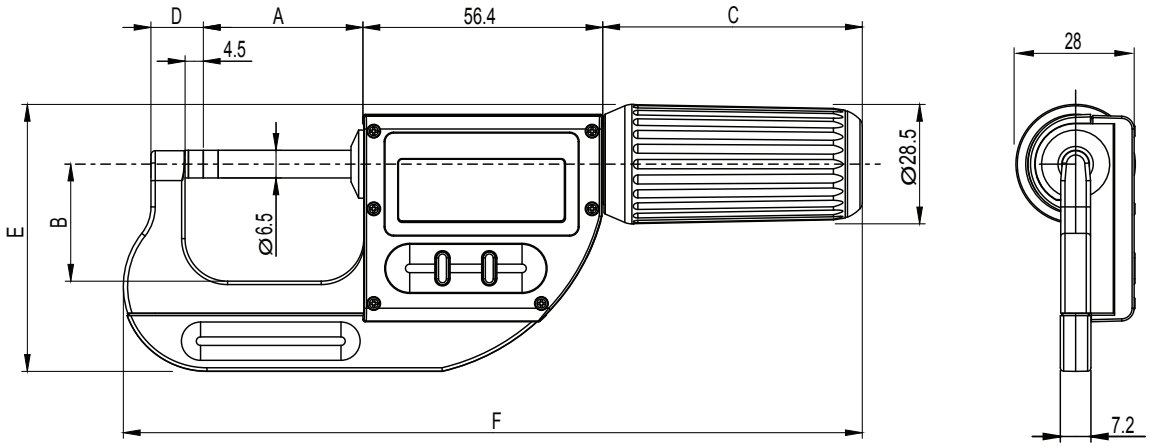
PROXIMITY



* SIS description on page 5

Professional micrometer S_Mike PRO

DIMENSIONAL DRAWING CYLINDRICAL Ø6.5



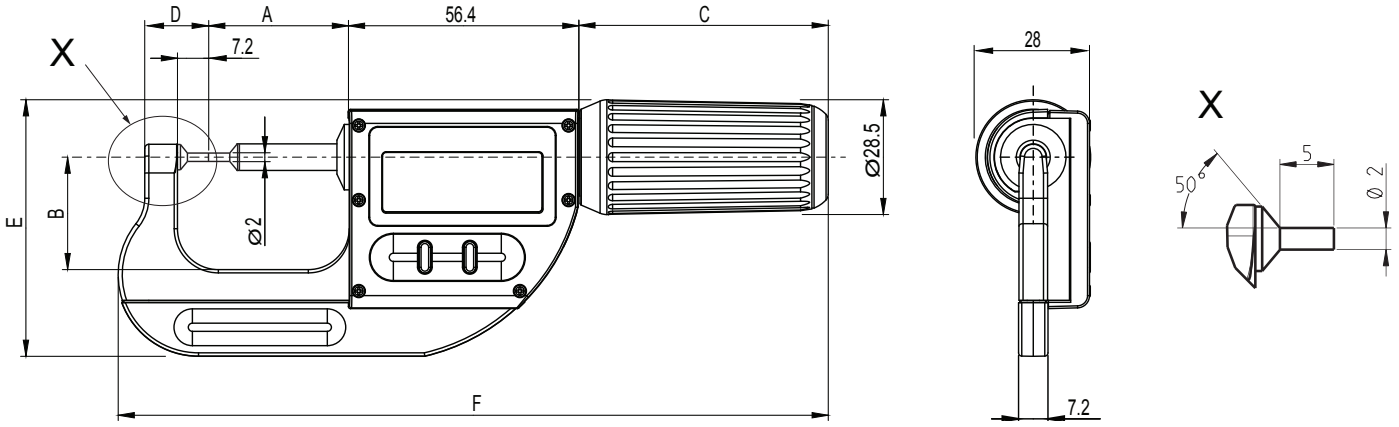
TECHNICAL SPECIFICATIONS

		903.0300	903.0600	903.1000	903.1360	903.1600
Measuring range	mm	0-30	30-66	66-102	100-136	125-161
Max. Error G [1]	µm	3	4	5	7	8
Repeatability [2]	µm	1	1	1	2	2
Anvils types		Ø6.5				
A	mm	37.3	73.3	109.3	143.3	168.3
B	mm	27.5	43	60	95	110
C	mm	62	74	74	74	74
D	mm	12.5	13.5	14.5	19.5	19.5
E	mm	63	86	106	151	169
F	mm	174	230	269	306	339
S_Connect : Proximity		USB / RS 232 / Wireless [3]				
Prot. rating accor. to IEC 60529		IP67 even connected				
Setting by PC		●				
Adjustable measuring force		5N / 10N	10N			
Non-rotating spindle		●				
Fast movement		●				
Preset function		●				
Smart Inductive Sensor		●				

[1] according to DIN 863
[2] ± 1 digit
[3] see cables chapter

Professional micrometer S_Mike PRO

DIMENSIONAL DRAWING CYLINDRICAL Ø2



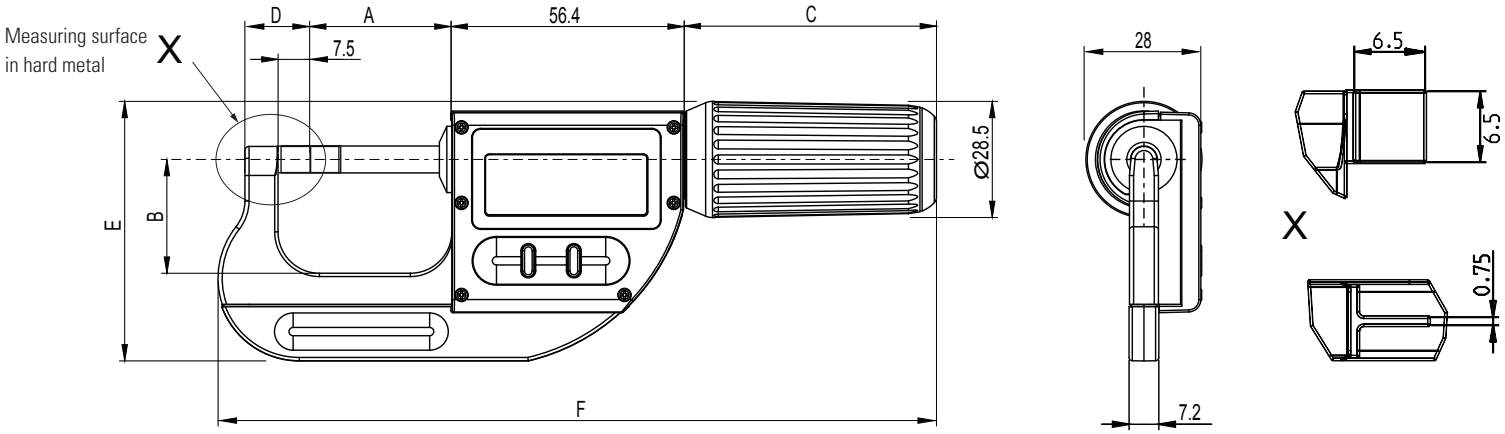
TECHNICAL SPECIFICATIONS

		903.0301	903.0601	903.1001	903.1301	903.1601
Measuring range	mm	0-25	25-60	60-95	95-120	120-145
Max. Error G [1]	µm	3	4	5	6	7
Repeatability [2]	µm	1	1	1	2	2
Anvils types		Ø2				
A	mm	34.6	70.6	106.6	140.6	165.6
B	mm	27.5	43	60	95	110
C	mm	62	74	74	74	74
D	mm	15.2	16.2	17.2	22.2	22.2
E	mm	63	86	106	151	169
F	mm	174	230	269	306	339
S_Connect : Proximity		USB / RS 232 / Wireless [3]				
Prot. rating accor. to IEC 60529		IP67 even connected				
Setting by PC		●				
Adjustable measuring force		5N / 10N	10N			
Non-rotating spindle		●				
Fast movement		●				
Preset function		●				
Smart Inductive Sensor		●				

[1] according to DIN 863
[2] ± 1 digit
[3] see cables chapter

Professional micrometer S_Mike PRO

DIMENSIONAL DRAWING KNIFE-SHAPED



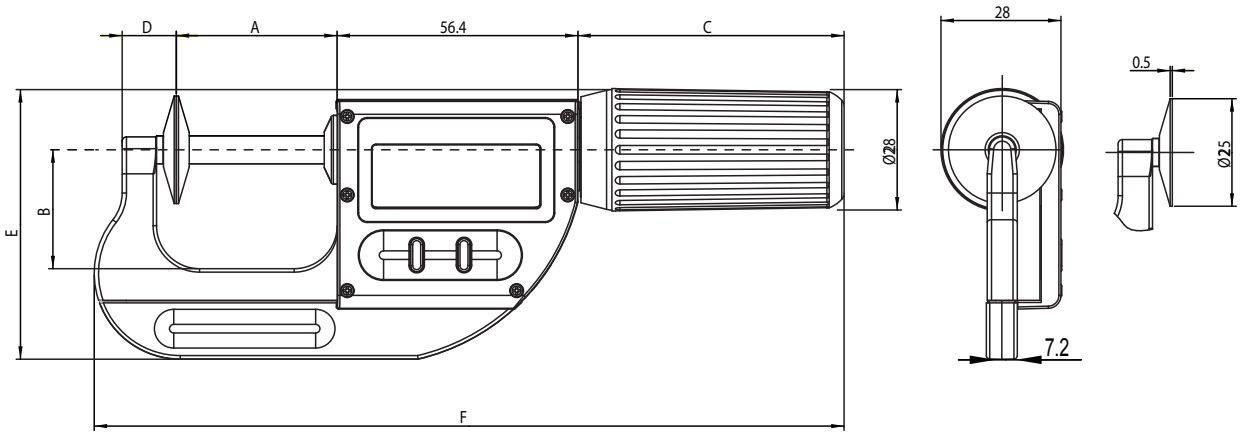
TECHNICAL SPECIFICATIONS

		903.0302	903.0602	903.1002	903.1302	903.1602
Measuring range	mm	0-25	25-60	60-95	95-120	120-145
Max. Error G [1]	µm	3	4	5	6	7
Repeatability [2]	µm	1	1	1	2	2
Anvils types		0.75x6.5				
A	mm	34.3	70.3	106.3	140.3	165.3
B	mm	27.5	43	60	95	110
C	mm	62	74	74	74	74
D	mm	15.5	16.5	17.5	22.5	22.5
E	mm	63	86	106	151	169
F	mm	174	230	269	306	339
S_Connect : Proximity		USB / RS 232 / Wireless [3]				
Prot. rating accor. to IEC 60529		IP67 even connected				
Setting by PC		●				
Adjustable measuring force		5N / 10N	10N			
Non-rotating spindle		●				
Fast movement		●				
Preset function		●				
Smart Inductive Sensor		●				

[1] according to DIN 863
[2] ± 1 digit
[3] see cables chapter

Professional micrometer S_Mike PRO

DIMENSIONAL DRAWING DISC-SHAPED



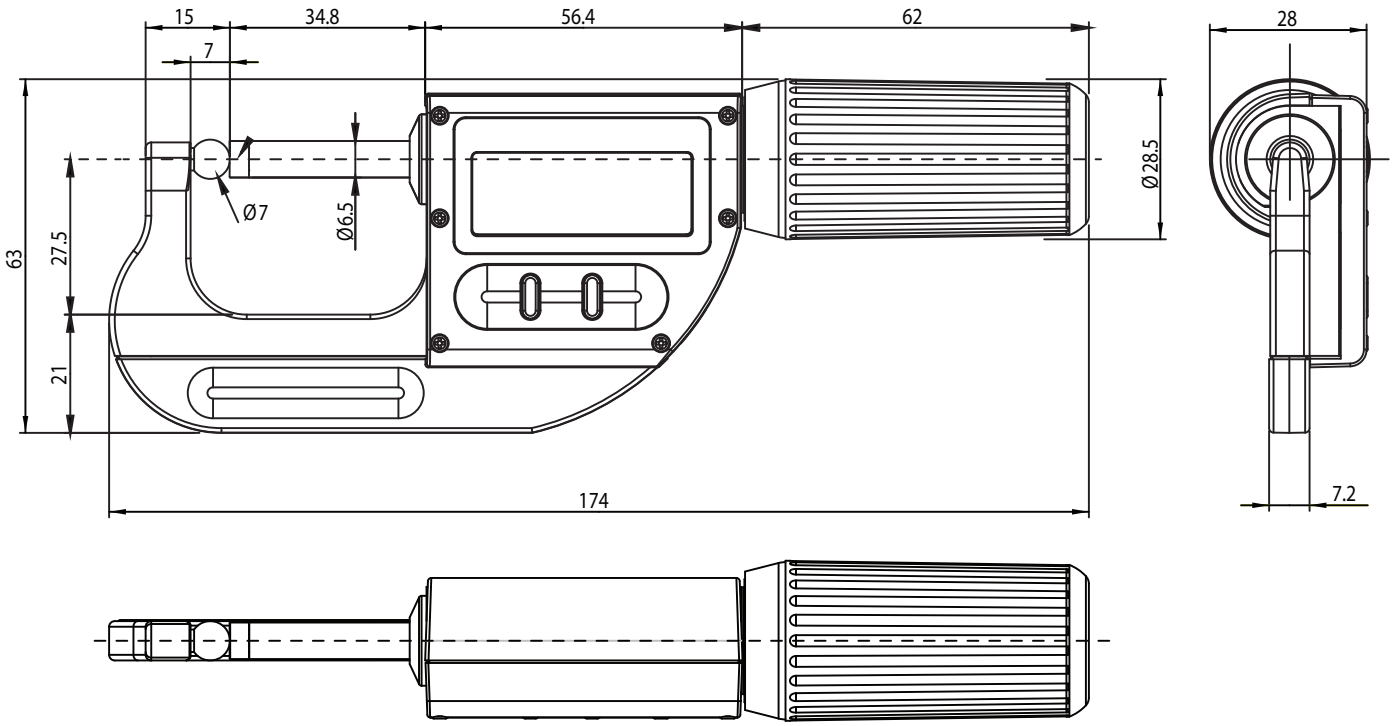
TECHNICAL SPECIFICATIONS

		903.0303
Measuring range	mm	0-30
Max. Error G [1]	µm	4 (full-touch-contact) / 10 (partial contact)
Repeatability [2]	µm	1
Flatness	µm	2
Parallelism	µm	5 (full-touch-contact) / 10 (partial contact)
Gear unit		Measurable module ≥ 0.5
Anvils types		Ø25
A	mm	37.3
B	mm	27.5
C	mm	62
D	mm	12.5
E	mm	63
F	mm	174
S_Connect : Proximity		USB / RS 232 / Wireless [3]
Prot. rating accor. to IEC 60529		IP67 even connected
Setting by PC		●
Adjustable measuring force		5N
Non-rotating spindle		●
Fast movement		●
Preset function		●
Smart Inductive Sensor		●

[1] according to DIN 863
[2] ± 1 digit
[3] see cables chapter

Professional micrometer S_Mike PRO

DIMENSIONAL DRAWING FLAT Ø6.5 / SPHERICAL Ø7



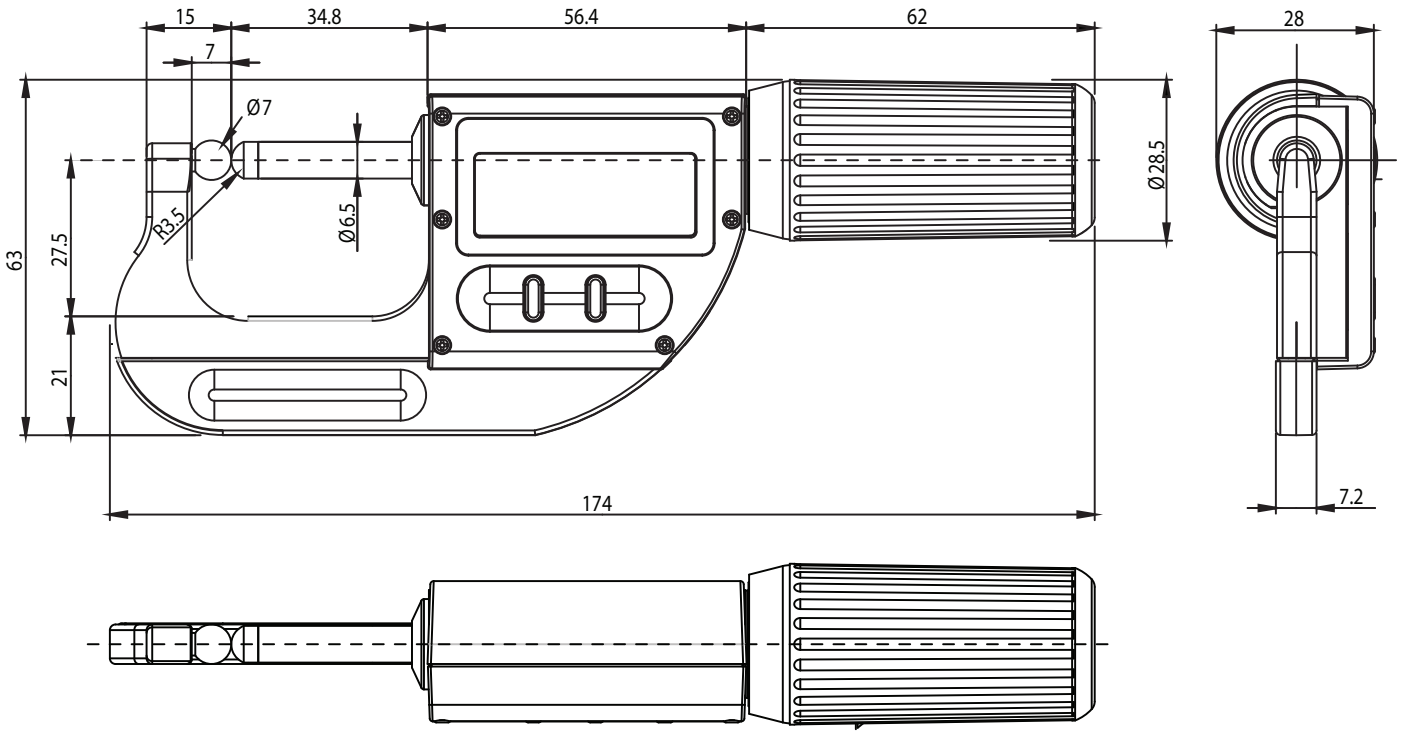
TECHNICAL SPECIFICATIONS

		903.0304
Measuring range	mm	0-25
Max. Error G [1]	µm	3
Repeatability [2]	µm	1
Parallelism	µm	1
Anvils types		Ø7 flat and Ø7 spherical
S_Connect : Proximity		USB / RS 232 / Wireless [3]
Prot. rating accor. to IEC 60529		IP67 even connected
Setting by PC		●
Adjustable measuring force		5N / 10N
Non-rotating spindle		●
Fast movement		●
Preset function		●
Smart Inductive Sensor		●

[1] according to DIN 863
[2] ± 1 digit
[3] see cables chapter

Professional micrometer S_Mike PRO

DIMENSIONAL DRAWING SPHERICAL Ø7



TECHNICAL SPECIFICATIONS

		903.0305
Measuring range	mm	0-25
Max. Error G [1]	µm	4
Repeatability [2]	µm	1
Anvils types		Ø7 2 spherical
S_Connect : Proximity		USB / RS 232 / Wireless [3]
Prot. rating accor. to IEC 60529		IP67 even connected
Setting by PC		●
Adjustable measuring force		5N / 10N
Non-rotating spindle		●
Fast movement		●
Preset function		●
Smart Inductive Sensor		●

[1] according to DIN 863
[2] ± 1 digit
[3] see cables chapter

Professional micrometer S_Mike PRO

BASIC INSTRUMENT

903.1301

910.1301 including:
910.1502, 903.0300 et 903.0330

		903.1300	903.1301	910.1301
Measuring rang	mm	0-102	0-102	150 / 0-30
Plastic case		●		
Aluminium case			●	●

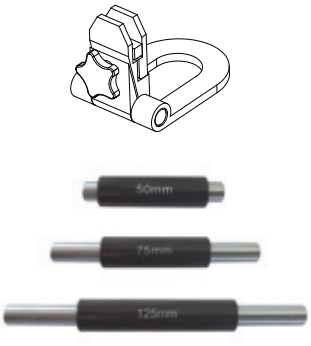
BASIC INSTRUMENT

- Instrument according to technical specifications
- Pin gauge 50 mm (for 903.060X)
- Pin gauge 75 mm (for 903.100X)
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate

MICROMETERS SETS

- 903.0300 / 0600 / 1000
- Pin gauge 50 mm
- Pin gauge 75 mm
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate

ACCESSORIES



903.0330	Stand
903.0620	Pin gauge 50 mm
903.1020	Pin gauge 75 mm
903.1620	Pin gauge 125 mm

Depth gauge

S_Depth PRO

DESCRIPTION

- PRESET function
- Automatic switching of measuring direction
- Setting of the «constant» for measurement with cylindrical or spherical anvils
- Additional bases available (see accessories)

Digital rotating display LCD

Automatic reference switching
(REFI/ REFII)
by the measurement inversion

Clamping knob

Base 100mm with clamping system for additional bases.

Measuring anvil with pin ø 4 mm
(measuring ball probe M2.5 in standard)

SWISS MADE

SIS Smart Inductive System

WATER RESISTANT

IP65

POWER

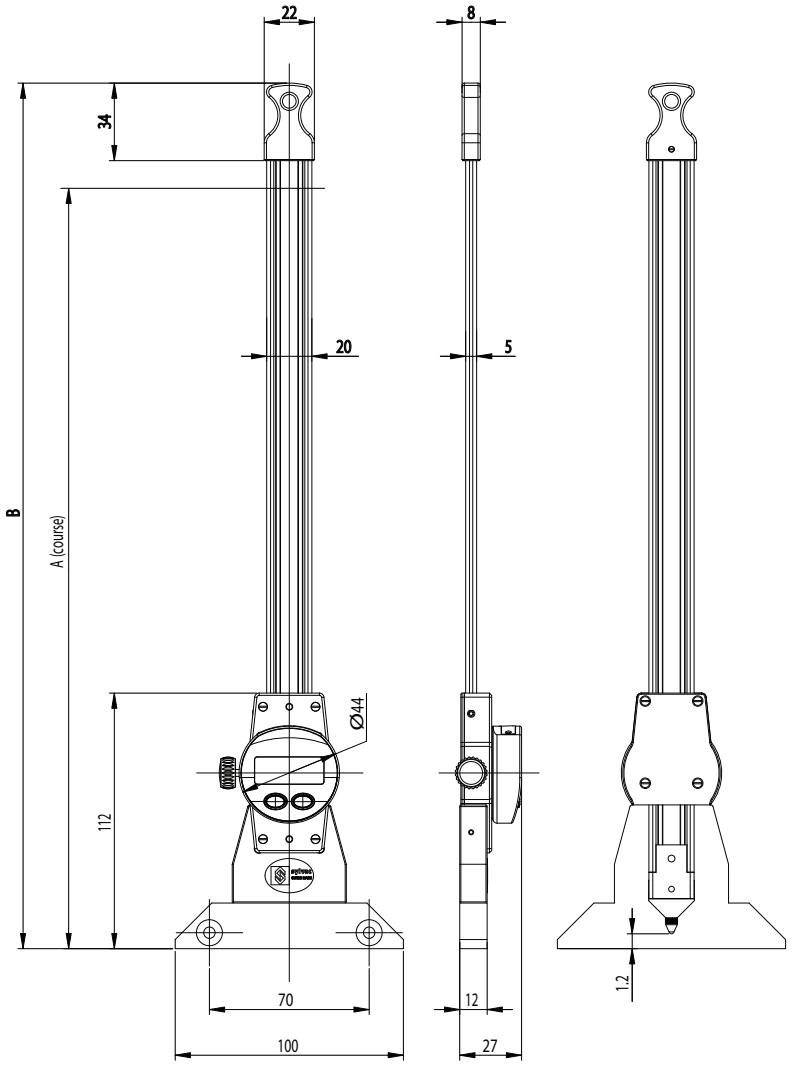
926.6821

905.4516

926.5132

Depth gauge S_Depth PRO

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		805.6005	805.6006
Measuring range	mm	300	600
Max. Error	µm	30	40
Repeatability [1]	µm	10	10
A	mm	335	483
L	mm	483	773
S_Connect : Power		USB / RS232 / Wireless [2]	
2 References		●	
PRESET function		●	

[1] ± 1 digit
[2] see cables chapter

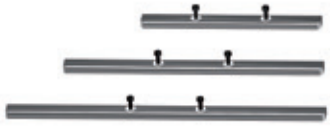
Depth gauge

S_Depth PRO

BASIC INSTRUMENT

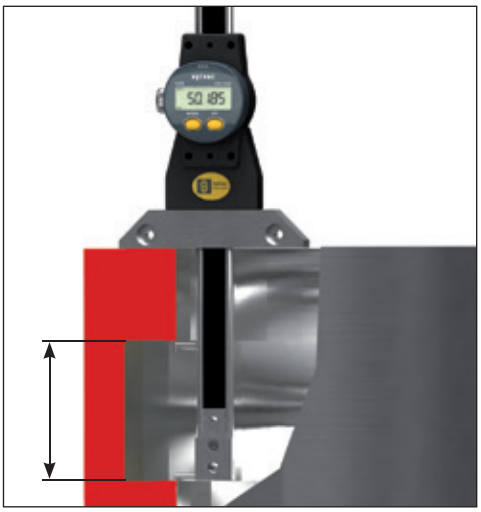
- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual

COMPATIBLE ACCESSORIES



		Length	Thickness
805.2180	Additionnal base	180 mm	8 mm
805.2260	Additionnal base	260 mm	8 mm
805.2320	Additionnal base	320 mm	8 mm
805.6101	Ball probe M2.5 (standard)		
805.6102	Anvils UP&DOWN		
805.6103	Anvil with pin Ø4 mm		

APPLICATIONS



Measure of an internal groove (height) thanks to the constant.

Protractor S239

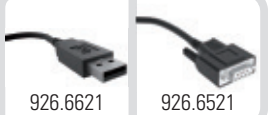
DESCRIPTION

- Measuring range 1x360°, 2x180°, 4x90°
- Mechanical parts in stainless steel

SWISS MADE

WATER RESISTANT

OPTO

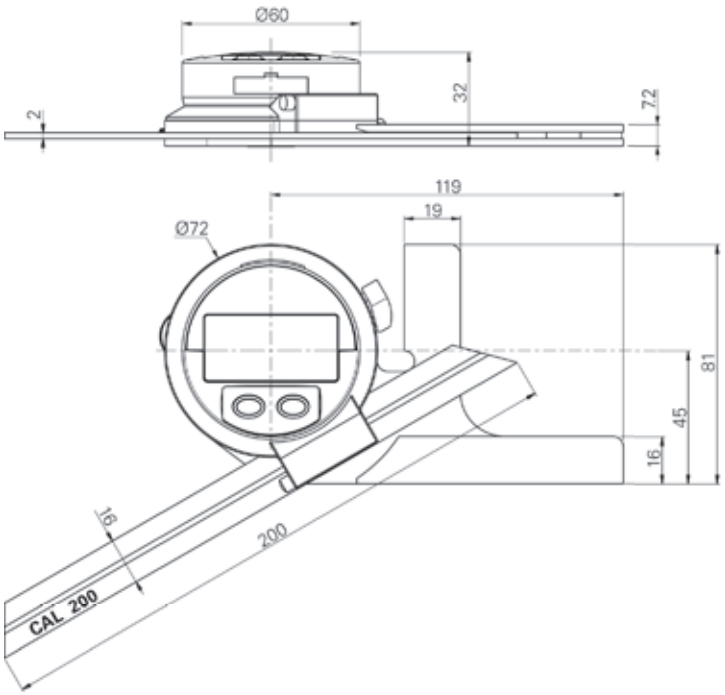

926.6621

926.6521

926.5131

Protractor S239

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		820.1700
Measuring range	mm	0-360°
Max. Error		4 minutes of arc
Resolution		1 minute of arc / 0.01°
Max. rotation speed		1080° / sec
Protection rating according to IEC 529		IP51
S_Connect : Opto		USB / RS232 / Digimatic / Wireless [1]
Selection of measuring direction		●

[1] see cables chapter

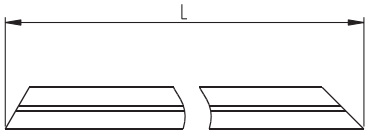
BASIC INSTRUMENT

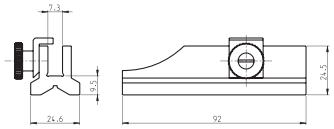
- Instrument according to technical specifications
- Wooden box [2]
- Scale 200 mm (820.2420)
- Lithium battery CR2032 included
- Instruction manual

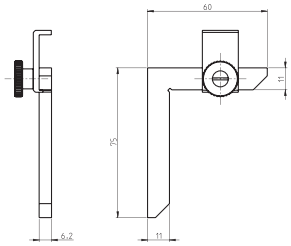
[2] Fumigated, compatible ISPM 15 and NIMP 15

Protractor S239

ACCESSORIES

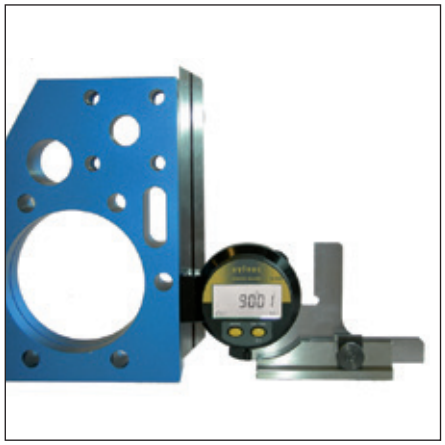






820.2420	Scale L 200 mm
820.2430	Scale L 300 mm
820.2450	Scale L 500 mm
820.2460	Stand for vertical application and small angular measurements
820.2461	Square for small angular measurements

APPLICATIONS



Measurement with accessory type 820.2460

Standard measurement

Measurement with accessory type 820.2461

DIGITAL INDICATORS
S_DIAL

The electronic indicators are equipped with a linear sensor and an engraved scale glued on the measuring spindle. A sensor replaces the gears. The analogic display is transformed into a digital display.

The SYLVAC electronic indicator program covers the entire range of mechanical indicators with resolutions 0.1 to 0.0001mm and measuring range up to 150mm, and with much better accuracy.

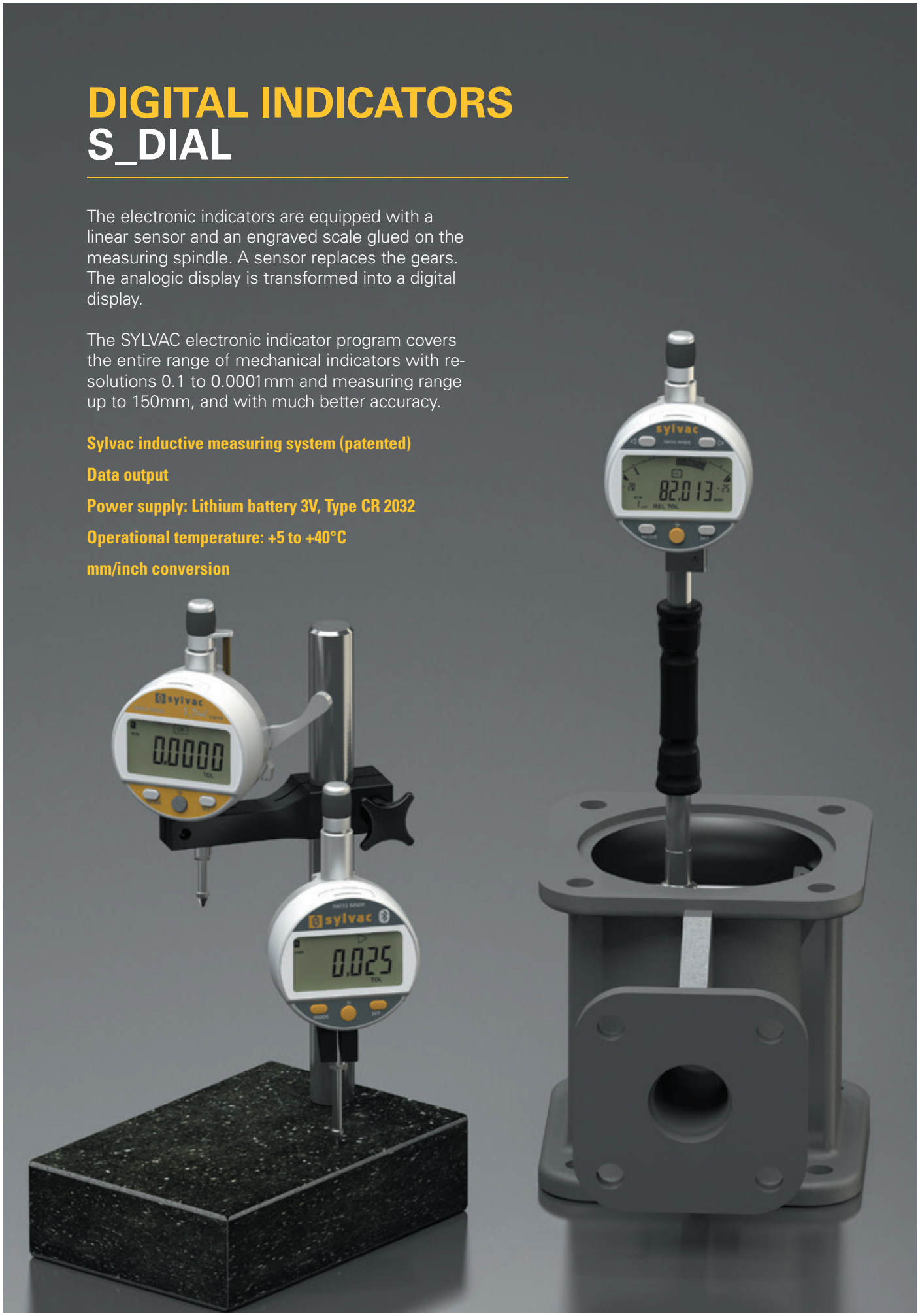
Sylvac inductive measuring system (patented)

Data output

Power supply: Lithium battery 3V, Type CR 2032

Operational temperature: +5 to +40°C

mm/inch conversion



Digital indicators

S_Dial

SUMMARY OF ALL TYPES

	S233									S234		S_Dial ONE						S_Dial WORK BASIC					
RANGE	905.4121	905.4125	905.4140	905.4521	905.4525	905.4540	905.4511	905.4515	905.4527	905.4321	905.4322	905.0121	905.0131	905.0141	905.0151	905.0161	905.0171	805.1201	805.1301	805.1401	805.1501	805.1601	805.1621
0.5 mm											●												
0.8 mm										●													
5 mm			●			●	●	●															
12.5 mm	●	●		●	●				●			●	●					●	●				
25 mm														●	●					●	●		
50 mm																●	●					●	●
100 mm																							
150 mm																							
RESOLUTION																							
0.01 mm	●	●	●									●		●		●		●		●		●	
0.001 mm				●	●	●	●	●	●	●	●		●		●		●		●		●		●
0.0001 mm																							
MECHANIC																							
Diameter 8 mm h6	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●
Diameter 25mm g7																							
Dove tail	●	●	●	●	●	●	●	●	●	●	●												
M1.4 contact point										●	●												
M2.5 contact point	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●
Rubber boot		●			●			●															
IP65 (IEC 60529)	●	●	●	●	●	●	●	●	●	●	●												
IP67 (IEC 60529)												●	●	●	●	●	●						
DIAL																							
Diameter 44 mm	●	●	●	●	●	●	●	●	●	●	●												
Diameter 60 mm												●	●	●	●	●	●	●	●	●	●	●	●
Rotating										●	●												
Vertical display			●			●																	
FUNCTIONS																							
mm/inch	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Preset	●	●	●	●	●	●			●			●	●	●	●	●	●	●	●	●	●	●	●
Preset onMin/Max																							
Measuring direction	●	●	●	●	●	●			●			●	●	●	●	●	●	●	●	●	●	●	●
Hold	●	●	●	●	●	●			●														
Min / Max / Delta							●	●		●	●												
Tolerances																							
Function (ABS)	●	●	●	●	●	●			●														
Absolute system*																		●	●	●	●	●	●
Auto off	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Analog display							●	●		●	●												
Setting by PC	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●
Programmable menus																							
Powered by connector	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Multiplication factor									●														

* SIS description on page 5

Digital indicators

S_Dial

SUMMARY OF ALL TYPES

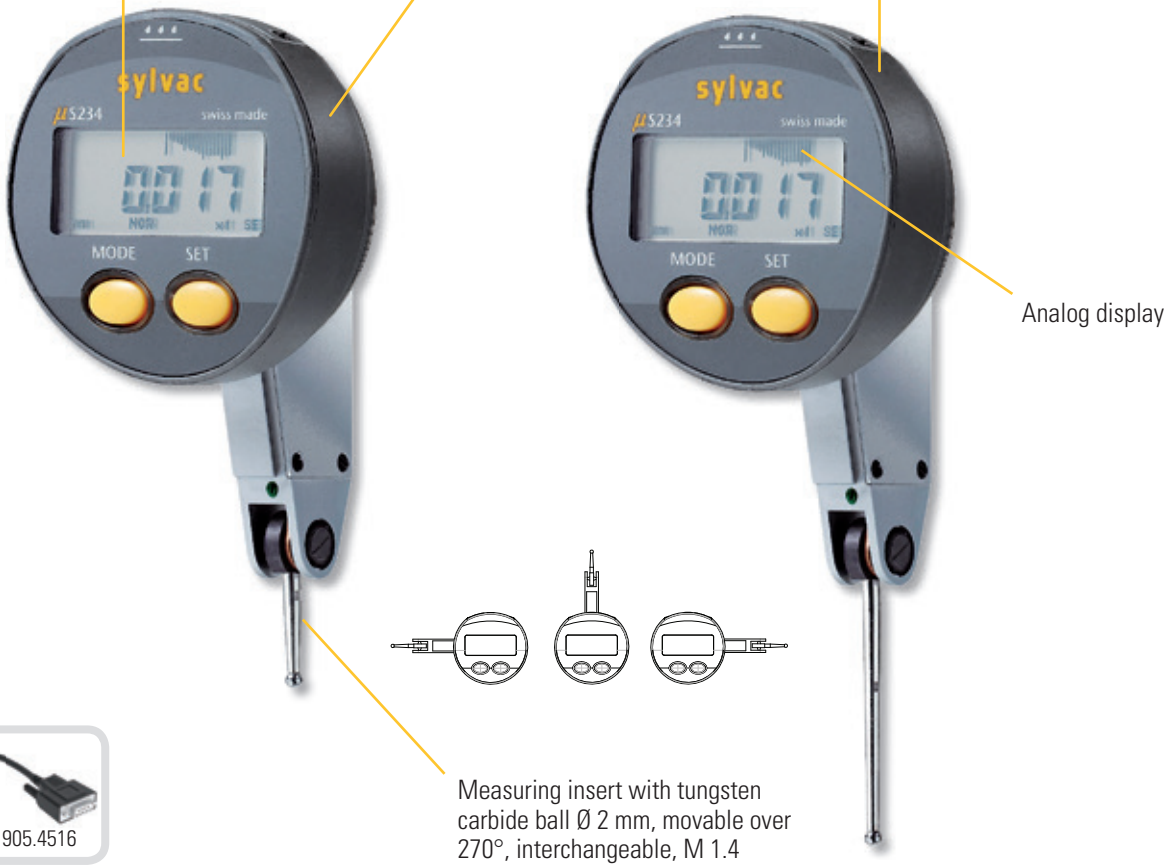
	S_Dial WORK																					S_Dial PRO			
	ADVANCED										ADVANCED IP67			BLUETOOTH® Smart				NANO & NANO BT				ANALOG		BASIC			
	805.5201	805.5301	805.5401	805.5501	805.5601	805.5621	805.5641	805.5661	805.5671	805.5681	805.5305	805.5505	805.5625	805.6301	805.6501	805.6621	805.6661	805.5306	805.5506	805.6306	805.6506	805.6306	805.6506	805.8601	805.8602	805.8701	805.8702
RANGE																											
0.5 mm																											
0.8 mm																											
5 mm																											
12.5 mm	●	●									●			●				●		●		●					
25 mm			●	●								●			●				●		●		●				
50 mm					●	●							●			●								●	●	●	●
100 mm							●	●									●										
150 mm									●	●																	
RESOLUTION																											
0.01 mm	●		●		●		●		●																		
0.001 mm		●		●		●		●		●	●	●	●	●	●	●	●					●	●				
0.0001 mm																		●	●	●	●			●	●	●	●
MECHANIC																											
Diameter 8 mm h6	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	
Diameter 25 mm g7																									●		●
Dove tail																											
M1.4 contact point																											
M2.5 contact point	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rubber boot											●	●	●														
IP65 (IEC 60529)																											
IP67 (IEC 60529)											●	●	●	●	●	●	●			●	●						
DIAL																											
Diameter 44 mm																											
Diameter 60 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rotating	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Vertical display																											
FUNCTIONS																											
mm/inch	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Preset	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Preset on Min/Max	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Measuring direction	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Hold	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Min / Max / Delta	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Tolerances	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Absolute system*	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Auto off	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Analog display																						●	●				
BLUETOOTH® Smart														●	●	●	●			●	●						
Setting by PC	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Programmable menus	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Powered by connector	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Multiplication factor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* SIS description on page 5

Digital test indicators S_Dial S234

DESCRIPTION

- Digital and analog display
- Water and coolant resistant
- Data output RS 232 combined with external power
- Automatic switch OFF
- Stem Ø 8 mm and dovetail back
- Rotating display over 360°

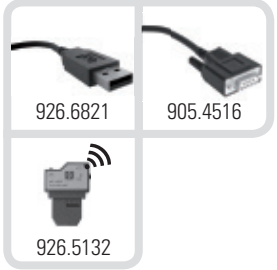


SWISS MADE

WATER RESISTANT

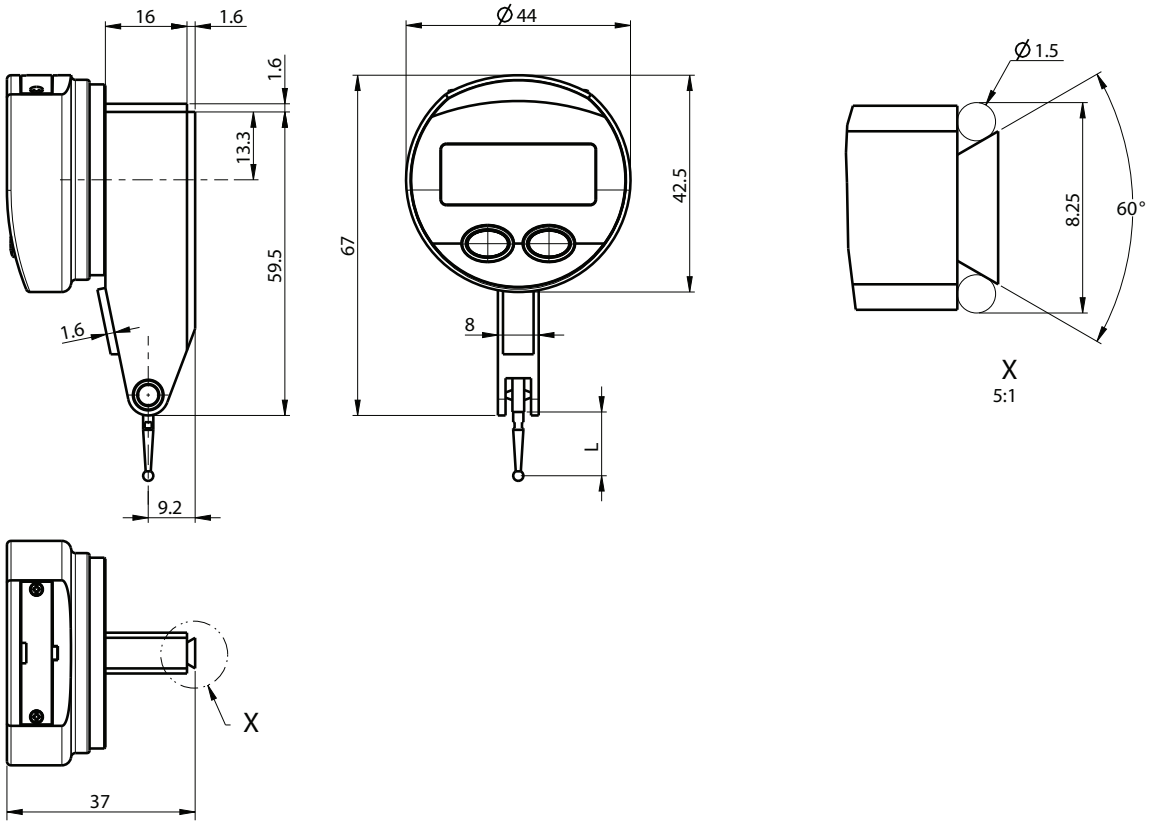
IP65

POWER



Digital test indicators S_Dial S234

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

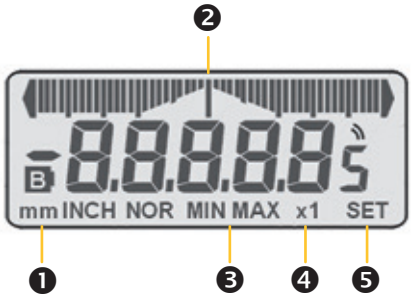
		905.4321	905.4322
Measuring range	mm	0.8	0.5
Probe length	mm	12.5	36.5
Max Error fe	µm	10	10
Hysteresis fu	µm	3[1)]	4[1)]
Resolution	mm	0.001	0.001
Repeatability	µm	3	3
Measuring force	N	0.13 ± 15%	0.07 ± 15%
Weight		75	75
Protection rating according to IEC 60529		IP65	
S_Connect : Power		USB / RS232 / Wireless [2)]	
Zero setting		●	
min / max / delta display		●	
Analog scale range ratio		●	
Selection of resolution		●	
Preset		max 99.999	

[1)] ± 1 digit
[2)] see cables chapter

Digital test indicators S_Dial S234

DISPLAY

1. **Direct mm/inch conversion**
2. **Analog display**
3. **Min/max/delta mode**
4. **Analogic resolution display**
5. **Zero setting**

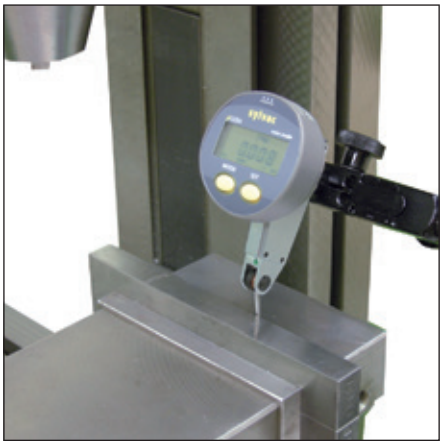


BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Stem Ø 8 mm

APPLICATIONS

Run-out measurement



Checking the alignment on milling machine.

Mini digital indicators S_Dial S233

DESCRIPTION

- Compact, small diameter (Ø44 mm)
- Water and coolant resistant, protection rating IP65 according to IEC 60529
- Data output RS 232 combined with external power supply.
- Interchangeable contact point M2.5
- Clamping stem Ø 8-h6 of hardened and ground stainless steel. Dovetail back
- Automatic power shut down

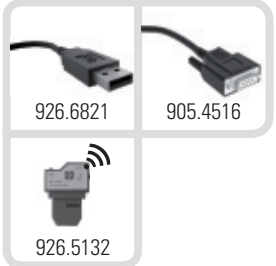
Standard

SWISS MADE

WATER RESISTANT

IP65

POWER



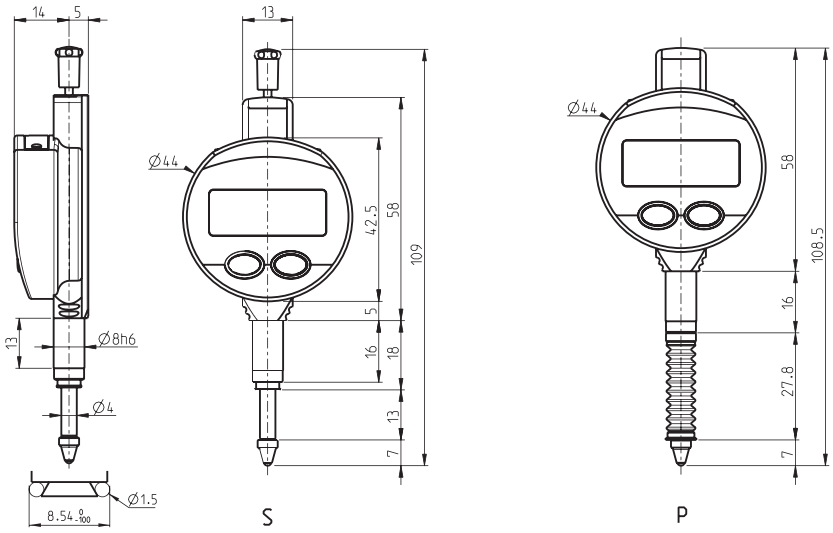
Analog

Vertical

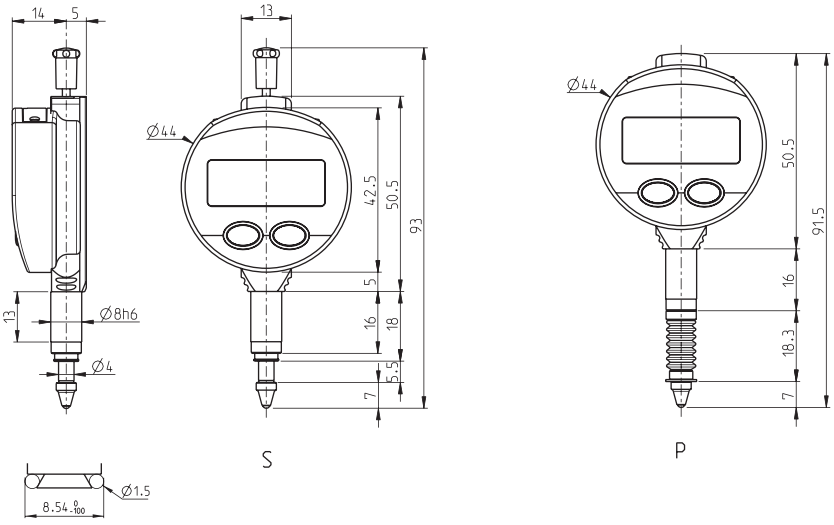
Mini digital indicators S_Dial S233

DIMENSIONAL DRAWINGS

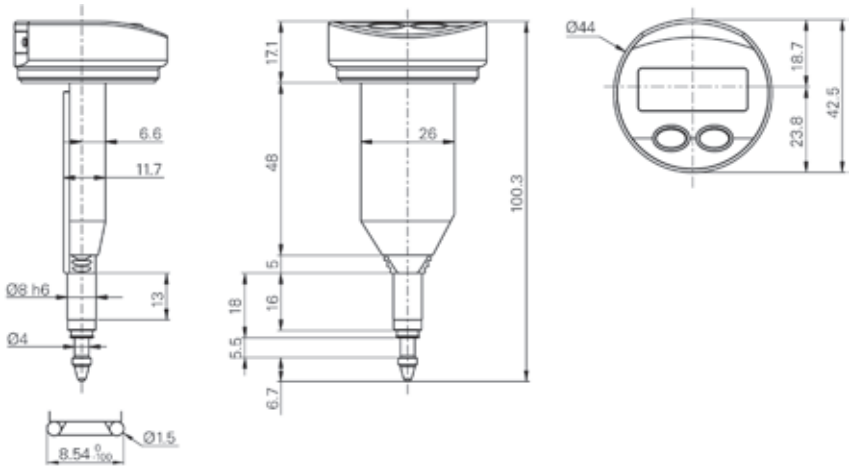
Standard



Analog



Vertical



S = standard

P = protected

Mini digital indicators S_Dial S233

TECHNICAL SPECIFICATIONS

		905.4140	905.4540	905.4511	905.4515
Measuring range	mm	5	5	5	5
Display 90°		●	●	---	---
Analog scale		---	---	●	●
Resolution	mm	0.01	0.001	0.001	0.001
Execution [3]		S	S	S	P
Max. Error fe	µm	10[1]	5	4	4
Repeatability	µm	2	2	2	2
Measuring force	N	0.50 - 0.65[2]	0.50 - 0.65[2]	0.50 - 0.65[2]	0.60 - 1.20[2]
Zero setting		●	●	●	●
REL and ABS measurement		●	●	---	---
Resolution selection		---	●	●	●
PRESET = (max. 130 mm)		●	●	---	---
Min / max / delta display		---	---	●	●
Selection of measuring direction		●	●	---	---
S_Connect : Power		USB / RS232 / Wireless [4]			

		905.4121	905.4125	905.4521	905.4525	905.4527
Measuring range	mm	12.5	12.5	12.5	12.5	12.5
Analog scale		---	---	---	---	---
Resolution	mm	0.01	0.01	0.001	0.001	0.001
Execution [3]		S	P	S	P	S
Max. Error fe	µm	10[1]	10[1]	5	5	5
Repeatability	µm	2	2	2	2	2
Measuring force	N	0.5 - 0.90 N	0.6 - 1.3 N	0.5 - 0.90 N	0.6 - 1.3 N	0.5 - 0.90 N
Zero setting		●				
REL and ABS measurement		●				
Resolution selection		---	---	●	●	●
PRESET = (max. 130 mm)		●				
Min / max / delta display		---				
Selection of measuring direction		●				
Multiplication factor		---				●
S_Connect : Power		USB / RS232 / Wireless [4]				

[1] ± 1 digit
[2] Values ± 20%, indicator in vertical position, outgoing measuring spindle
[3] S = Standard P = Protected
[4] see cables chapter

Mini digital indicators S_Dial S233

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate for instruments with resolution 0.001 mm

MEASURING FORCE FOR RANGE 12.5 mm

	S	P
Standard	0.5 - 0.90 N	0.6 - 1.3 N
Low [1)]	0.35 - 0.50 N	---
High [1)]	1.80 - 2.3 N	---

Tolerance ±20%, indicator in vertical position, spindle in outgoing measurement.
[1)] on request

APPLICATIONS

Checking of an internal Ø with a mechanical device

Measurent of the vertical displacement of an element

Measurement of internal chamfer

Digital indicators

S_Dial WORK

DESCRIPTION

BASIC

- Robust construction
- Water and coolant resistant
- **Standard functions (mm/inch, preset [3], direction of measurement)**
- Automatic wake-up and sleeping mode (S.I.S system), **absolute System***

PROXIMITY data output

Version 0.001 resolution

Programmable according to your needs

External power supply and data transfer using one cable only

Lifting cap

Version 0.01 resolution

Plastic case

Hardened steel clamping Ø 8-h6

Reinforced clamping shaft

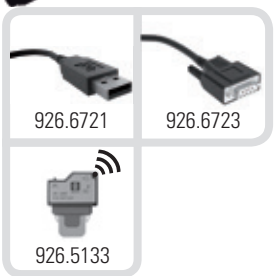
Interchangeable contact point M2.5, stainless steel with TC ball

SWISS MADE

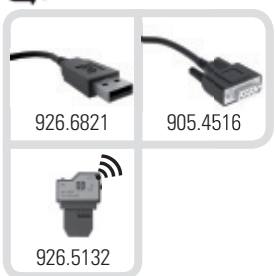
SIS Smart Inductive System

WATER RESISTANT

PROXIMITY



POWER



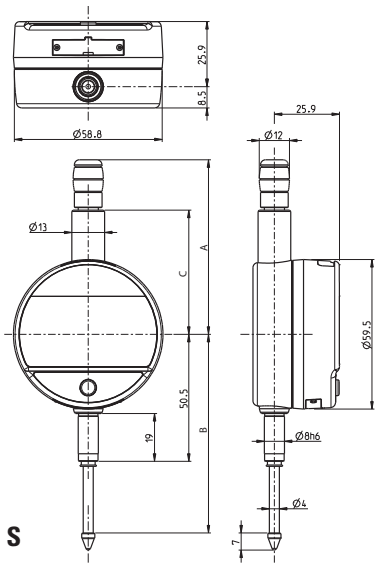
* SIS description on page 5

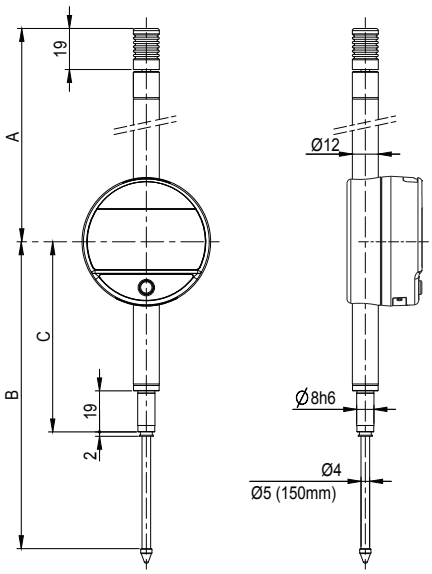
Digital indicators

S_Dial WORK

DIMENSIONAL DRAWINGS

BASIC





TECHNICAL SPECIFICATIONS

		805.1201	805.1301	805.1401	805.1501	805.1601	805.1621
Measuring range	mm	12.5	12.5	25	25	50	50
Resolution	mm	0.01	0.001	0.01	0.001	0.01	0.001
Max. Error fe	µm	10 [1]	**4**	10 [1]	**5**	20 [1]	**7**
Repeatability	µm	2					
Model type [2]		S					
A		56.7		69.4		121	
B		66.1		79		142	
C		36.6		49.4		88	
S_Connect : Proximity / Power		USB / RS232 / Wireless					
Programmable by PC		●					
Standard functions (customized by PC)		mm/inch, preset [3] (max 999.999), direction of measurement					

[1] ± 1 digit
[2] S = Standard
[3] Preset configuration only by PC

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate for instruments 0.001 mm

MEASURING FORCE

		S 12.5	S 25	S 50
Standard	N	0.65 - 0.90	0.65 - 1.15	1.4 - 2.9
Low [3]	N	0.4 - 0.55	0.45 - 0.9	---
High [3]	N	1.0 - 1.6	0.9 - 1.8	---

Tolerance ± 20%, spindle in outgoing measurement position.
[23] on request

Digital indicators

S_Dial WORK

DESCRIPTION

ADVANCED

- Robust construction
- Water and coolant resistant
- New technology with configurable menus
- **Broad choice of functions (MIN/MAX/DELTA, TOL, Factor, PRESET, AUTO OFF, etc.)**
- Automatic wake-up and sleeping mode (S.I.S system), **absolute System***
- **Maximum error of 3 µm**

SWISS MADE

SIS Smart Inductive System

WATER RESISTANT

PROXIMITY

926.6721 | 926.6723 | 926.5133

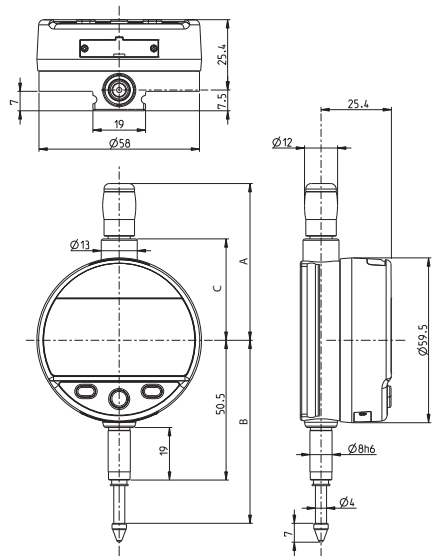
POWER

926.6821 | 905.4516 | 926.5132

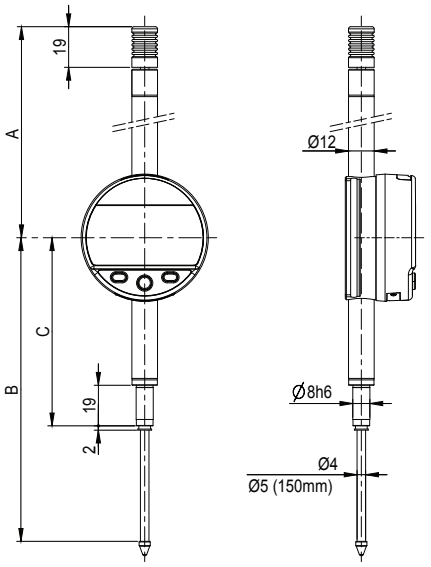
* SIS description on page 5

Digital indicators S_Dial WORK

DIMENSIONAL DRAWINGS ADVANCED



S 12.5-25mm



S 50-150mm

TECHNICAL SPECIFICATIONS

		805.5201	805.5301	805.5401	805.5501	805.5601	805.5621	805.5641	805.5661	805.5671	805.5681
Measuring range	mm	12.5	12.5	25	25	50	50	100	100	150	150
Resolution	mm	0.01	0.001	0.01	0.001	0.01	0.001	0.01	0.001	0.01	0.001
Max. Error fe	µm	10 [1]	**3**	10 [1]	**4**	20 [1]	**5**	20 [1]	**6**	20 [1]	**10**
Repeatability	µm	2									
Model type [2]		S									
A	mm	56.6		69.3		121		172		224	
B	mm	66.1		79		142		244		349	
C	mm	36.6		49.4		88		139		193	
S_Connect : Proximity / Power		USB / RS232 / Wireless									
Programmable by PC		●									
Standard functions (customized by PC)		mm/inch, ref I/II, preset (max 999.999) min/max/delta, toleances, resolution, direction of measurement, multiplication factor, automatic or manual switch off, key lock									

[1] ± 1 digit
[2] S = Standard

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate for instruments 0.001 mm

MEASURING FORCE

		12.5	25	50	100	150
Standard	N	0.65 - 0.9	0.65 - 1.15	1.4 - 2.9	1.8 - 3.8	2.6 - 5.7
Low [2]	N	0.4 - 0.55	0.45 - 0.9		---	---
High [2]	N	1.0 - 1.6	0.9 - 1.8		---	---

Tolerance ± 20%, spindle in outgoing measurement position.
[2] on request

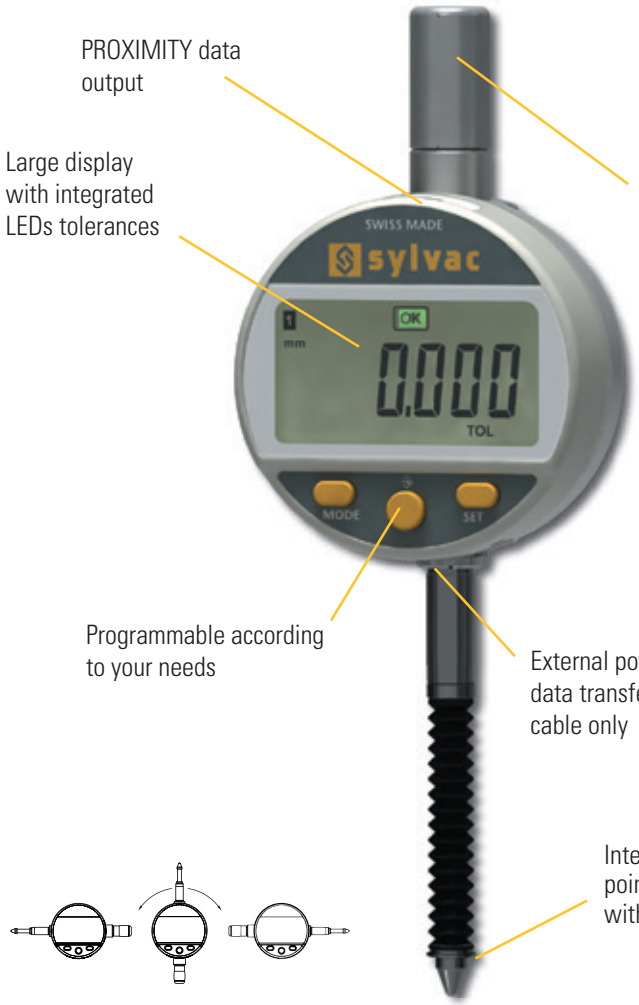
Digital indicators

S_Dial WORK

DESCRIPTION

ADVANCED IP67

- Robust construction
- Water and coolant resistant
- Protection rating IP67 according to IEC 60529, **even connected**
- New technology with configurable menus
- **Broad choice of functions (MIN/MAX/DELTA, TOL, Factor, PRESET, AUTO OFF, etc.)**
- Automatic wake-up and sleeping mode (S.I.S system), **absolute System**
- **Maximum error of 3 µm**

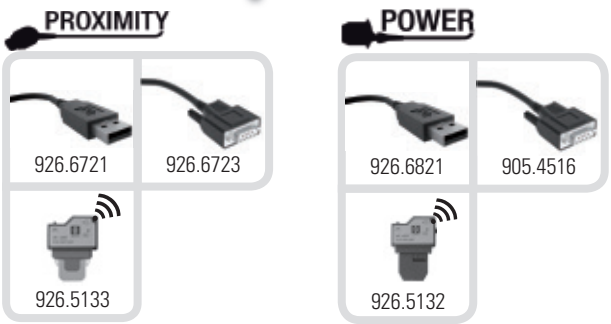


SWISS MADE

SIS Smart Inductive System

WATER RESISTANT

IP67



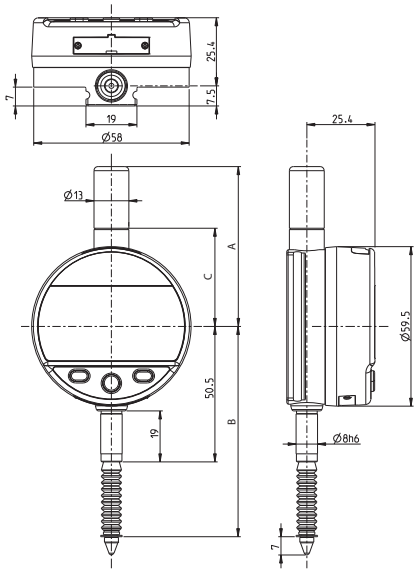
* SIS description on page 5

Digital indicators

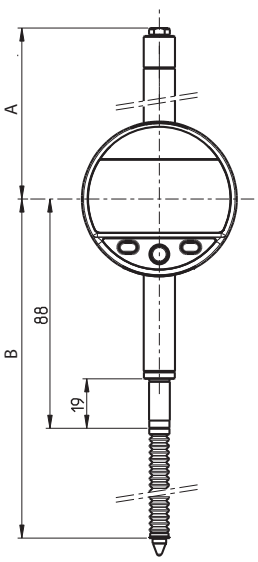
S_Dial WORK

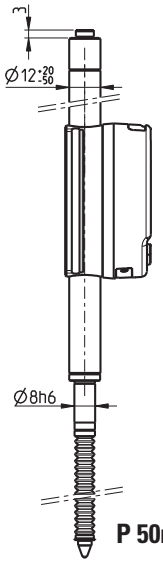
DIMENSIONAL DRAWINGS

ADVANCED IP67



P 12.5-25mm





P 50mm

TECHNICAL SPECIFICATIONS

		805.5305	805.5505	805.5625
Measuring range	mm	12.5	25	50
Resolution	mm	0.001	0.001	0.001
Max. Error fe	µm	**3**	**4**	**5**
Repeatability	µm	2		
Model type [2]		P		
IP67 (IEC 60529)		●		
A	mm	59.6	85.4	104.4
B	mm	78.4	100.2	175.4
C	mm	36.6	49.4	-
S_Connect : Proximity / Power		USB / RS232 / Wireless		
Programmable by PC		●		
Standard functions (customized by PC)		mm/inch, ref I/II, preset (max 999.999) min/max/delta, toleances, resolution, direction of measurement, multiplication factor, automatic or manual switch off, key lock		

[1] ± 1 digit
[2] P= Protected

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate for instruments 0.001 mm

MEASURING FORCE

		P 12.5	P 25	P 50
Standard	N	0.7 – 1.4	0.65 – 1.8	0.9 – 2.8
Low [2]	N	---	---	---
High [2]	N	---	---	---

Tolerance ± 20%, spindle in outgoing measurement position.
[2] on request

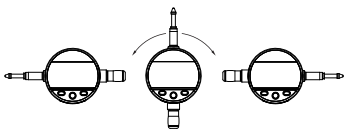
Digital indicators

S_Dial WORK

DESCRIPTION

BLUETOOTH® SMART IP67

- **Integrated Bluetooth® SMART data transmission**
- Robust construction
- **Protection rating IP67 according to IEC 60529, even connected**
- Water and coolant resistant
- New technology with configurable menus
- **Broad choice of functions (MIN/MAX/DELTA, TOL, Factor, PRESET, AUTO OFF, etc.)**
- Automatic wake-up and sleeping mode (S.I.S system), **absolute System***
- **Maximum error of 3 µm**



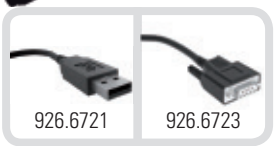
SWISS MADE

SIS Smart Inductive System

WATER RESISTANT

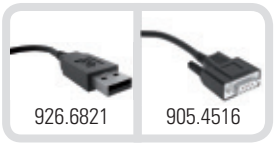
IP67

PROXIMITY



Bluetooth SMART

POWER



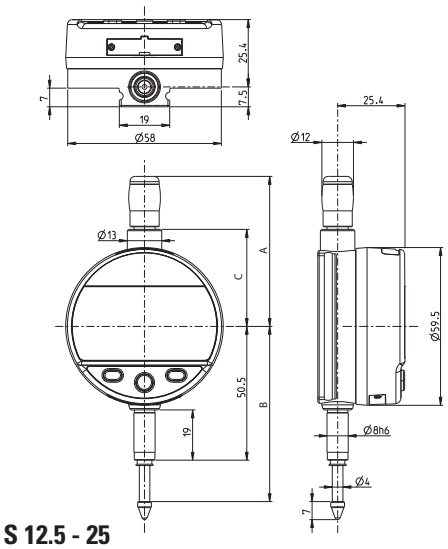
* SIS description on page 5

Digital indicators

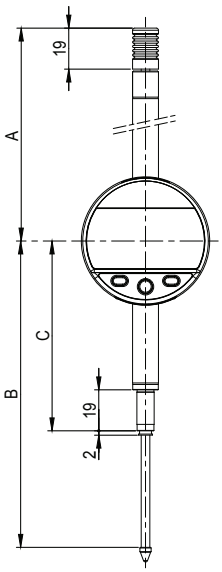
S_Dial WORK

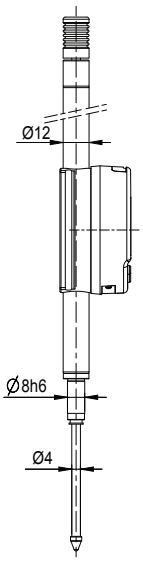
DIMENSIONAL DRAWINGS

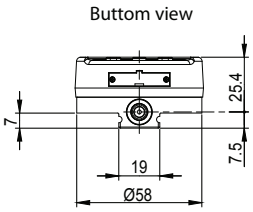
BLUETOOTH® SMART IP67



S 12.5 - 25







S 50 - 100

TECHNICAL SPECIFICATIONS

		805.6301	805.6501	805.6621	805.6661
Measuring range	mm	12.5	25	50	100
Resolution	mm	0.001	0.001	0.001	0.001
Max. Error fe	µm	**3**	**4**	**5**	**6**
Repeatability	µm	2			
Model type [1]		**S**			
IP67 (IEC 60529)		●			
A	mm	56.6	69.3	121	172
B	mm	66.1	79	142	244
C	mm	36.6	49.4	88	139
S_Connect : Proximity / Power		USB / RS232 / BLUETOOTH® Smart*			
Programmable by PC		●			
Standard functions (customized by PC)		mm/inch, ref I/II, preset (max 999.999) min/max/delta, toleances, resolution, direction of measurement, multiplication factor, automatic or manual switch off, key lock			

[1] S = Standard

*** 100% compatible with BLUETOOTH® Smart dongle 981.7100**

See page 6 for availability according to the country

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate for instruments 0.001 mm

MEASURING FORCE

		12.5	25	50	100
Standard	N	0.65 - 0.90	0.65 - 1.15	1.4 – 2.9	1.8 – 3.8
Low [2]	N	0.4 - 0.55	0.45 - 0.9	---	---
High [2]	N	1.0 - 1.6	0.9 - 1.8	---	---

Tolerance ± 20%, spindle in outgoing measurement position.

[2] on request

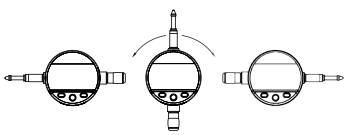
Digital indicators

S_Dial WORK

DESCRIPTION

ANALOG

- **Adaptive analog display (up to 0.2 µm per segment)**
- Robust construction
- Water and coolant resistant
- New technology with configurable menus
- **Broad choice of functions (MIN/MAX/DELTA, TOL, Factor, PRESET, AUTO OFF, etc.)**
- Automatic wake-up and sleeping mode (S.I.S system), **absolute System***
- **Maximum error of 3 µm**

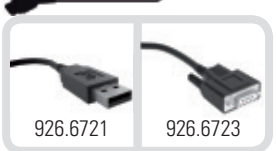


SWISS MADE

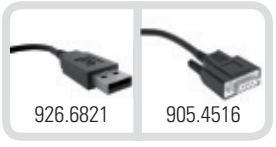
SIS Smart Inductive System

WATER RESISTANT

PROXIMITY



POWER



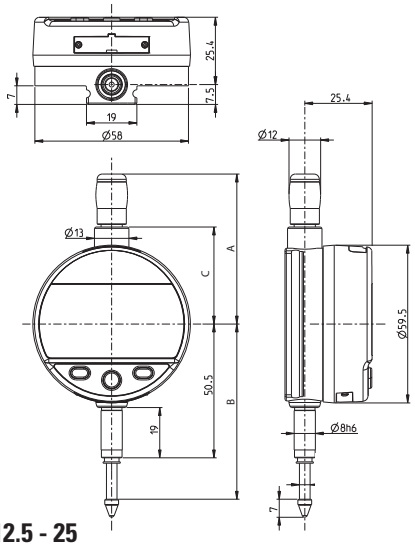
* SIS description on page 5

Digital indicators

S_Dial WORK

DIMENSIONAL DRAWINGS

ANALOG



S 12.5 - 25

TECHNICAL SPECIFICATIONS

		805.5307	805.5507
Measuring range	mm	12.5	25
Resolution	mm	0.001	
Max. Error fe	µm	**3**	**4**
Repeatability	µm	2	
Model type [1]		**S**	
A	mm	56.6	69.3
B	mm	66.1	79
C	mm	36.6	49.4
S_Connect : Proximity / Power		USB / RS232	
Programmable by PC		●	
Standard functions (customized by PC)		mm/inch, ref I/II, preset (max 999.999) min/max/delta, toleances, resolution, direction of measurement, multiplication factor, automatic or manual switch off, key lock	

[1] S = Standard

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate

MEASURING FORCE

		S 12.5	S 25
Standard	N	0.65 - 0.90	0.65 - 1.15
Low [2]	N	0.4 - 0.55	0.45 - 0.9
High [2]	N	1.0 - 1.6	0.9 - 1.8

Tolerance ± 20%, spindle in outgoing measurement position.

[2] on request

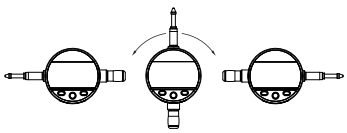
Digital indicators

S_Dial WORK

DESCRIPTION

NANO & NANO BLUETOOTH®

- **0,1 µm resolution**
- Robust construction
- Water and coolant resistant
- New technology with configurable menus
- **Broad choice of functions (MIN/MAX/DELTA, TOL, Factor, PRESET, AUTO OFF, etc.)**
- Automatic wake-up and sleeping mode (S.I.S system), **absolute System***
- **Maximum error of 1.8 µm**

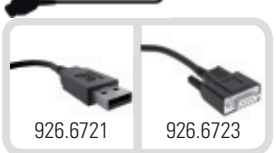


SWISS MADE

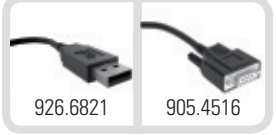
SIS Smart Inductive System

WATER RESISTANT

PROXIMITY



POWER



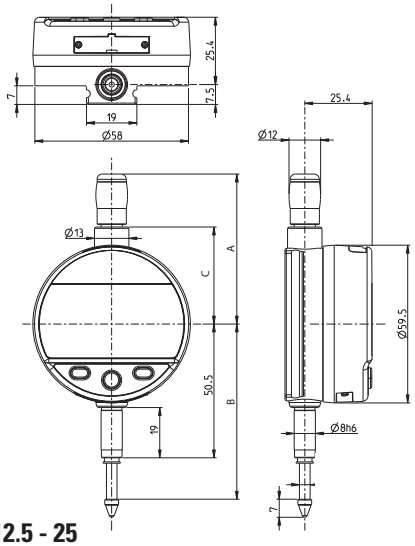
Bluetooth SMART

Max error 1.8 µm
Repeatability 0,5 µm

* SIS description on page 5

Digital indicators S_Dial WORK

DIMENSIONAL DRAWINGS NANO & NANO BLUETOOTH®



S 12.5 - 25

TECHNICAL SPECIFICATIONS

		805.5306	805.5506	805.6306	805.6506
Measuring range	mm	12.5	25	12.5	25
Resolution	mm	0.0001	0.0001	0.0001	0.0001
Max. Error fe	µm	**1.8**	**2.2**	**1.8**	**2.2**
Repeatability	µm	0.5			
Model type [1]		**S**			
A	mm	56.6	69.3	56.6	69.3
B	mm	66.1	79	66.1	79
C	mm	36.6	49.4	36.6	49.4
S_Connect : Proximity / Power		USB / RS232		USB / RS232 / BLUETOOTH® Smart*	
Programmable by PC		●			
Standard functions (customized by PC)		mm/inch, ref I/II, preset (max 999.999) min/max/delta, toleances, resolution, direction of measurement, multiplication factor, automatic or manual switch off, key lock			

[1] S = Standard

*** 100% compatible with BLUETOOTH® Smart dongle 981.7100**
See page 6 for availability according to the country

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate

MEASURING FORCE

		S 12.5	S 25
Standard	N	0.65 - 0.90	0.65 - 1.15
Low [2]	N	0.4 - 0.55	0.45 - 0.9
High [2]	N	1.0 - 1.6	0.9 - 1.8

Tolerance ± 20%, spindle in outgoing measurement position.
[2] on request

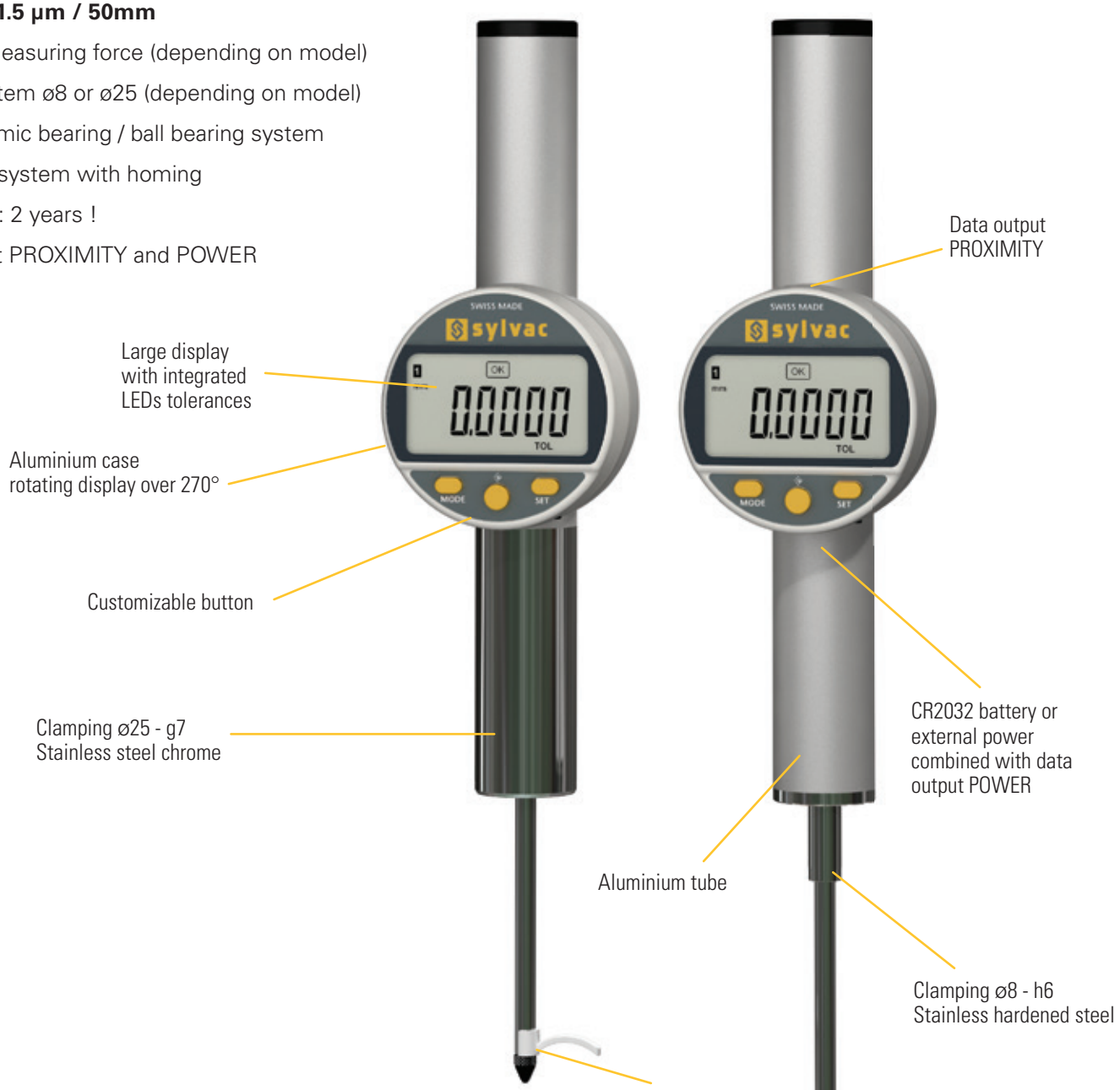
Digital indicators

S_Dial PRO

DESCRIPTION

BASIC

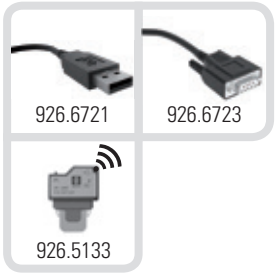
- Resolution of 0.1 µm
- Broad choice of functions (MIN/MAX/DELTA, TOL, Facteur, PRESET, AUTO OFF, etc.)
- **Max error 1.5 µm / 50mm**
- Constant measuring force (depending on model)
- Clamping stem ø8 or ø25 (depending on model)
- Mixed ceramic bearing / ball bearing system
- Measuring system with homing
- Battery life : 2 years !
- Data output PROXIMITY and POWER



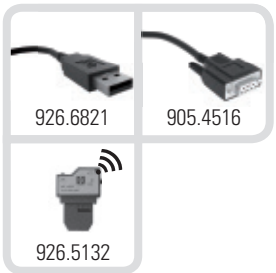
SWISS MADE

WATER RESISTANT

PROXIMITY

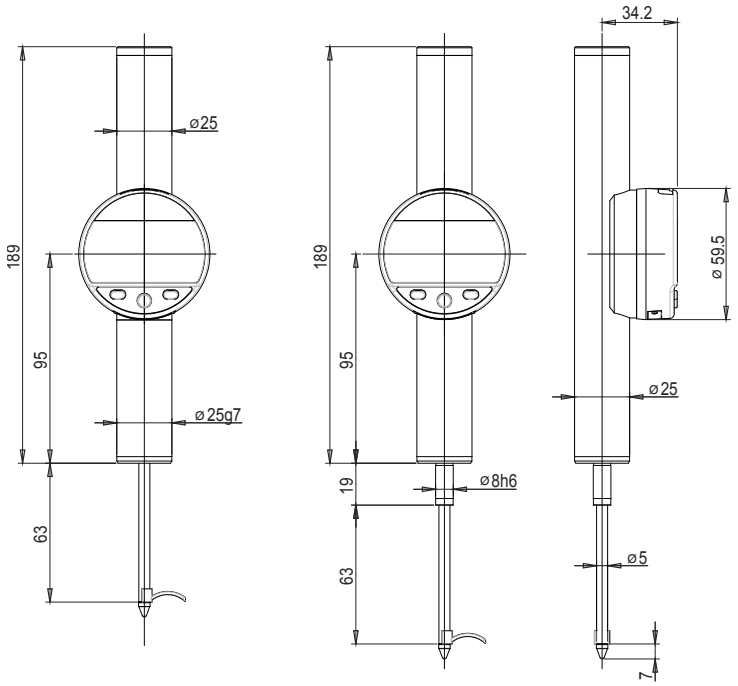


POWER



Digital indicators S_Dial PRO

DIMENSIONAL DRAWINGS BASIC



TECHNICALS SPECIFICATIONS

		805.8601	805.8602	805.8701	805.8702
Measuring range	mm	50			
Resolution	mm	0.0001			
Max. Error fe	µm	**1.5**			
Repeatability	µm	0.2			
S_Connect : Proximity /Power		USB / RS232			
Programmable by PC		●			
Clamping		ø8 h6	ø25 g7	ø8 h6	ø25 g7
Spring		●		[1]	
Measuring force	N	0.75 - 1.15 [2]		0.40 [2]	
Standard functions (customizable by PC)		mm/inch, ref I/II, preset (max 99.9999) min/max/delta, tolerances, resolution, measuring direction, multiplier, automatic extinction/manual, keylock			

[1] Model without spring : Constant measuring force, use only in a vertical position
[2] The values agree within ± 20% (vertical down, measuring rod outgoing)

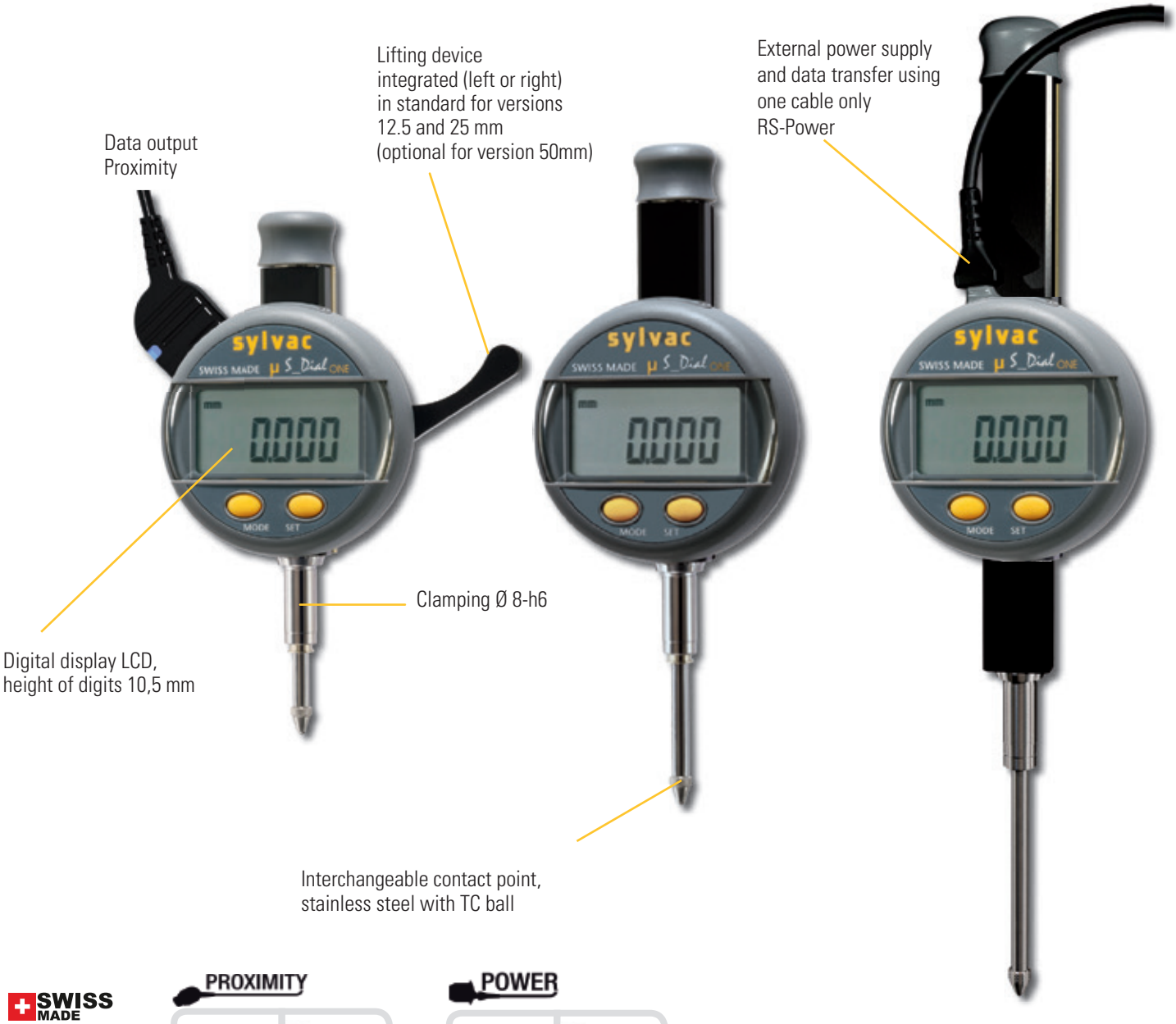
INSTRUMENT DE BASE

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Lifter included
- Manual
- Calibration certificate

Digital indicators S_Dial ONE

DESCRIPTION

- Strong construction
- Water and coolant resistant, protection rating IP67 according to IEC 60529, **even connected**
- Increased accuracy to 5 µm
- Automatic switch-off



SWISS MADE

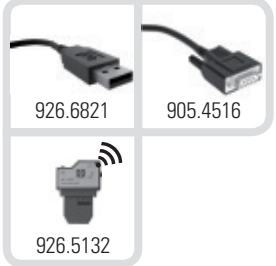
SIS Smart Inductive System

WATER RESISTANT

IP67

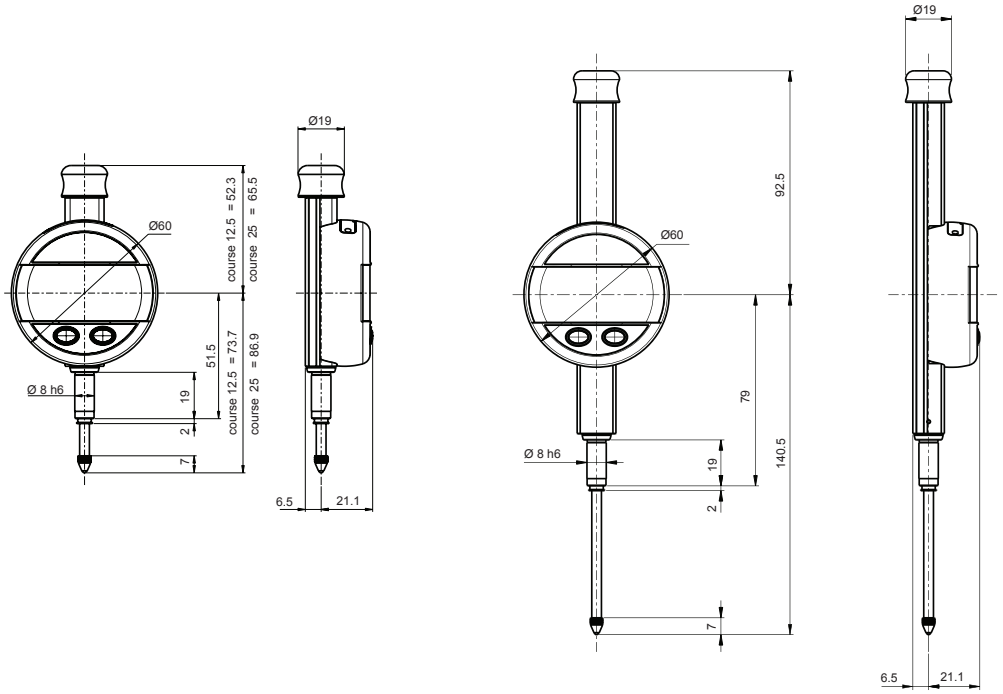
PROXIMITY

POWER



Digital indicators S_Dial ONE

DIMENSIONAL DRAWINGS



TECHNICAL SPECIFICATIONS

		905.0121	905.0131	905.0141	905.0151	905.0161	905.0171
Measuring range	mm	12.5	12.5	25	25	50	50
Resolution	mm	0.01	0.001	0.01	0.001	0.01	0.001
Max. Error fe	µm	10[1)]	5	10[1)]	6	20	8
Repeatability	µm	2					
S_Connect : Proximity / Power		USB / RS232 / Wireless					
Programmable by PC		●					
Zero setting		●					
Preset		max 199.999					
Selection of measuring direction		●					

[1)] ± 1 digit

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate for instruments 0.001 mm

MEASURING FORCE

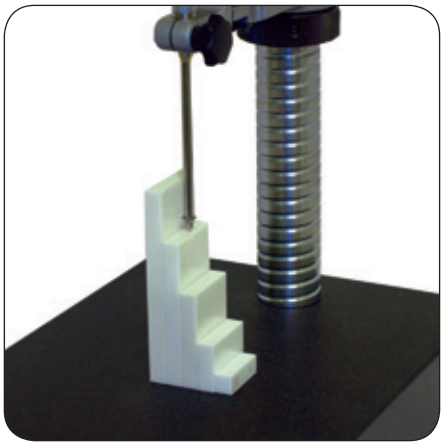
		12.5	25	50
Standard	N	0.6 - 0.90	0.6 - 1.20	0.7 - 1.4
Increased	N	0.7 - 1.15		-
Ultra-high	N	1.8 - 2.8 *	-	-

Tolerance ± 20%, spindle in outgoing measurement position.
* Be careful, do not pull and release quickly the lifting cap, otherwise it will unhooks. Only with Spring SPM 229.100.619.

Digital indicators S_Dial

APPLICATIONS

Measurement of a span with S_Dial WORK equipped with measuring ball probe 905.2207



Indicator S_Dial WORK, range 150 mm on stand

S_Dial WORK mounted on a Sylvac PS15 bench

S_Dial WORK BLUETOOTH SMART working in duplex mode and connected to D300S to measure concentricity, roundness, etc.

S_Dial WORK connected to a PLC

S_Dial WORK Analog used on bore gauge system

Digital indicators S_Dial

LIFTING DEVICES

Lower lifting lever, type 905.4214

Upper lifting device type 905.4215

Pneumatic lifting device type 905.2218

Vacuum lifting device type 905.2220

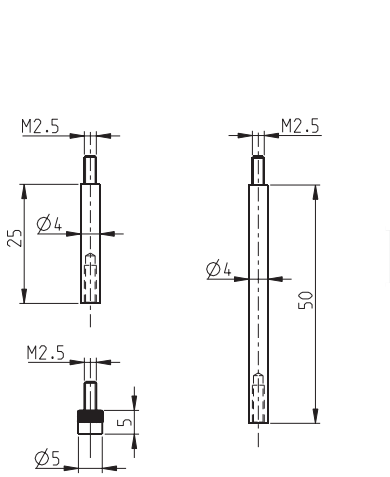
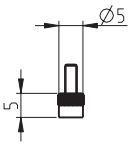
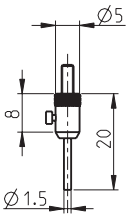
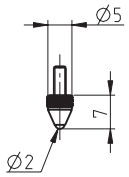
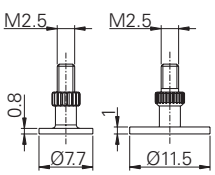
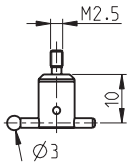
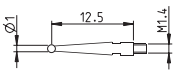
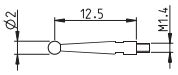
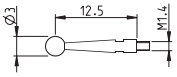
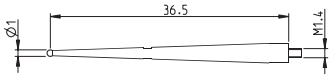
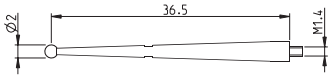
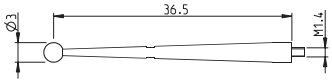
Lifting device with photo-cable type 905.2216

Lifting device type 905.2214

Upper lifting lever type, 905.2215

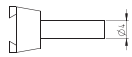
ACCESSORIES

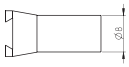
Contact points M2.5

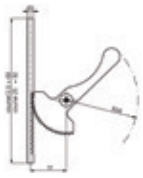
		S233	S234 (905.4321) S234 (905.4322)	S_Dial WORK 12,5 - 25 mm	S_Dial WORK 50 - 150 mm	S_Dial ONE
	**905.2206**	•		•	•	•
	**905.2201**	•		•	•	•
	**905.2202**	•		•	•	•
	905.2203	•		•	•	•
	**905.2204**	•		•	•	•
	**905.2205**	•		•	•	•
	**905.2207**	•		•	•	•
	**905.2240** Short probe, TC ball		•			
	**905.2241** Short standard probe, TC ball		•			
	**905.2242** Short probe, TC ball		•			
	**905.2243** Long probe, TC ball			•		
	**905.2244** Long standard probe, TC ball			•		
	**905.2245** Long probe, TC ball			•		

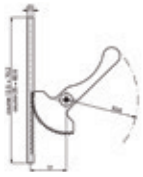
Digital indicators S_Dial

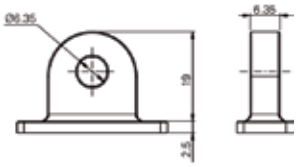
ACCESSORIES

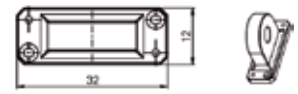


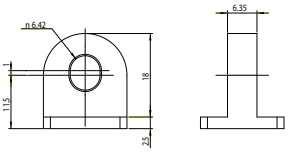


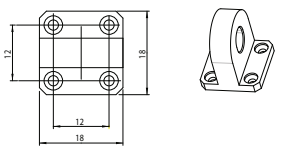












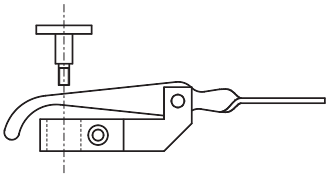
		S233	S234	S_Dial WORK 12,5 - 25 mm	S_Dial WORK 50 - 150 mm	S_Dial ONE
905.2246	Clamping stem	●	●			
905.2247	Clamping stem	●	●			
905.2248	Spanner for probe		●			
905.0214	Lifting device, range 12.5 mm					●
905.0215	Lifting device, range 25 mm					●
905.0216	Lifting device, range 50 mm					●
805.0214	Lifting device, range 12.5 mm			● [1]		
805.0215	Lifting device, range 25 mm			● [1]		
905.0211	Lug back					●
805.0211	Lug back			● [1]	● [1]	

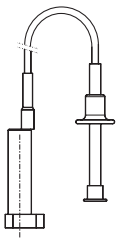
[1] Excepted S_Dial WORK Basic

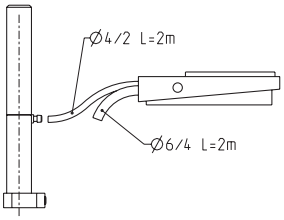
Digital indicators

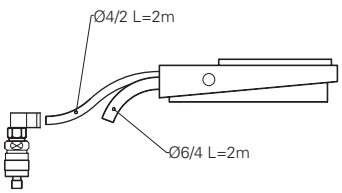
S_Dial

ACCESSORIES





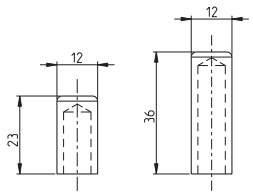


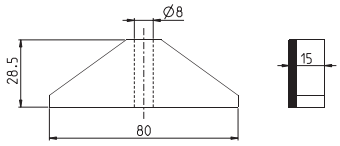


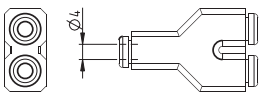
		S233	S234	S_Dial WORK 12,5 - 25 mm	S_Dial WORK 50 - 150 mm	S_Dial ONE
905.2214	Lifting device	●		●	●	●
905.2215	Upper lifting device			●		
905.2216	Lifting device with photo-cable			●		
905.2218	Pneumatic lifting device with foot pedal			●		
905.2217	Lifter only for 905.2218			●		
905.2219	Pneumatic foot pedal for 905.2218	●		●		
905.2220	Vacuum lifting device with foot pedal				●	
905.2227	Pressure controller				●	
905.2228	Vacuum foot pedal for 905.2220				●	

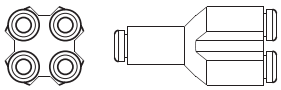
Digital indicators S_Dial

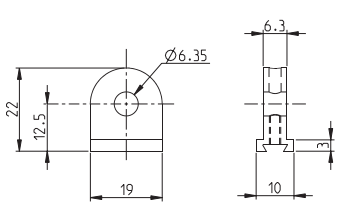
ACCESSORIES







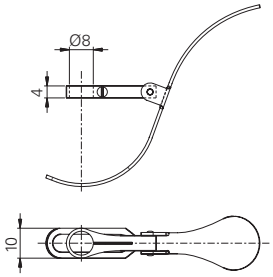


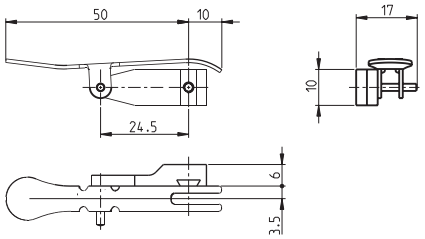


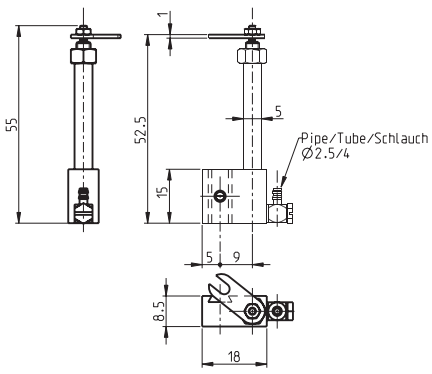
		S233	S234	S_Dial WORK 12,5 - 25 mm	S_Dial WORK 50 - 150 mm	S_Dial ONE
905.2221	Dust protection for indicator, range 12.5 mm			•		
905.2222	Dust protection for indicator, range 25 mm			•		
905.2223	Depth measuring base			•	•	•
905.2261	Snap connector for pneumatic lifter x2	•		•	•	
905.2262	Snap connector for pneumatic lifter x4	•		•	•	
905.4211	Center lug back	•	•			

Digital indicators S_Dial

ACCESSORIES







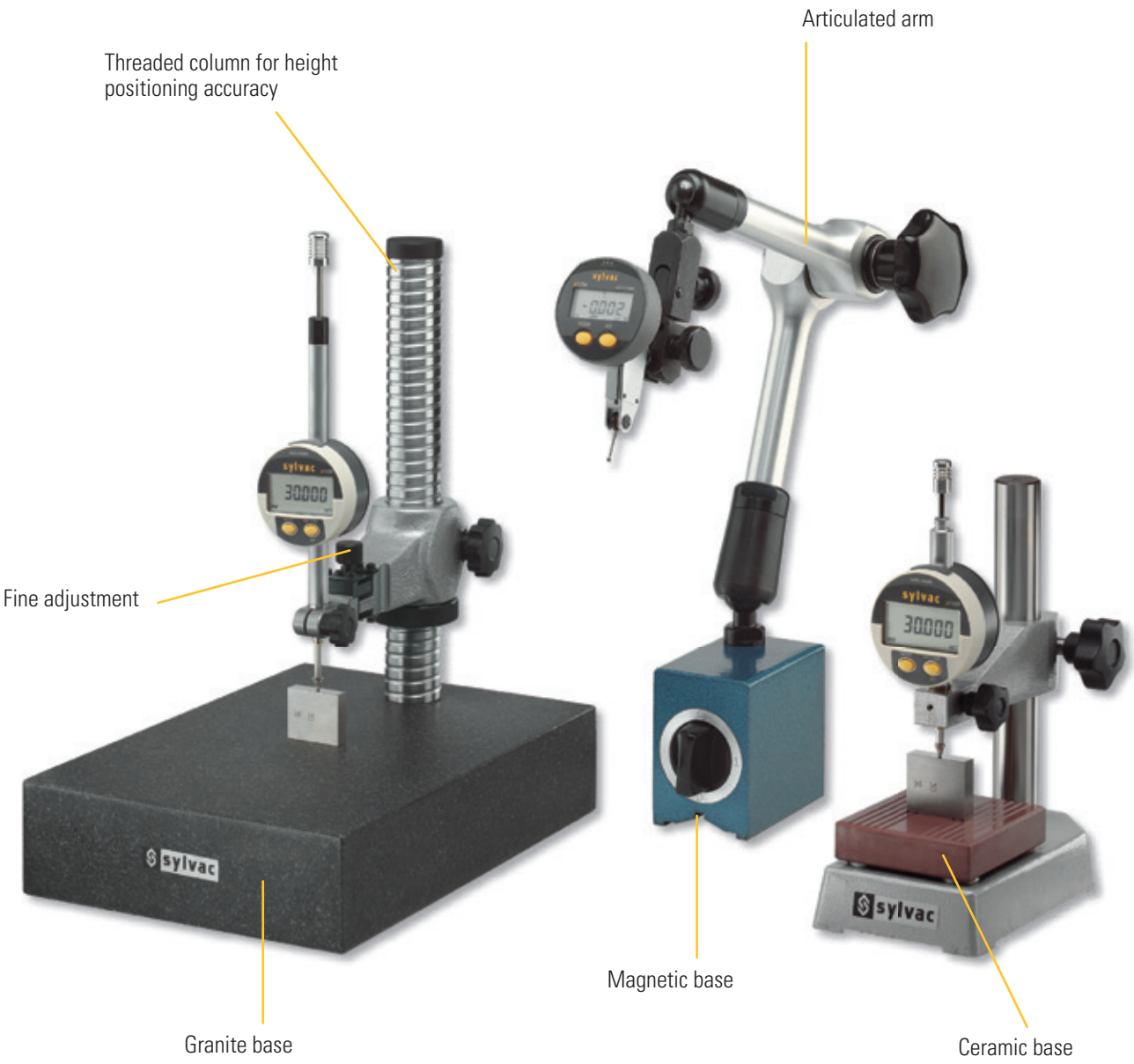
		S233	S234	S_Dial WORK 12,5 - 25 mm	S_Dial WORK 50 - 150 mm	S_Dial ONE
905.4214	Lower lifting device, range 12.5 mm	●	1)	1)	1)	1)
905.4215	Upper lifting device for S (Standard) execution, except vertical type	●				
905.4217	Pneumatic lifting device for standard type	●				

1) used on range 20 mm max

Measuring stands

DESCRIPTION

- A selection of universal measuring stands for fixing all probes, test indicators and dial gauges
- Clamping on Ø 8 mm or dovetail on magnetic stand



Measuring stands

TECHNICAL SPECIFICATIONS

908.1201

908.1206
908.1207

908.1209

908.1203

908.1204

	908.1201	908.1206	908.1207	908.1209	908.1203	908.1204
Base	magnetic [1]	granite grade 00	granite grade 00	cast iron, ceramic table	granite grade 00	granite grade 00
Base dimensions	70x46x65 mm	100x150x40 mm	200x130x40 mm	85x85x25 mm	240x140x50mm	300x210x60
Central locking	1 handle	---	---	---	---	---
Column	---	Steel Ø 20 mm	Steel Ø 20 mm	Chr.st. Ø 25 mm	Hard Chr. Ø 35 mm	Hard Chr. Ø 35 mm
Clamping dimension	Ø 8 mm	Ø 8 mm	Ø 8 mm	Ø 8 mm	Ø 8 mm	Ø 8 mm
Dist. Column.-meas. point.	---	60 mm	60 mm	78 mm	67 mm	100 mm
Measuring range	---	0 - 170 mm	0 - 170 mm	0 - 115 mm	0 - 150 mm	0 - 210 mm
Total height	430 mm	240 mm	240 mm	215 mm	280 mm	360 mm
Weight	2.2 kg	2.6 kg	2.6 kg	4.3 kg	8 kg	16 kg
Fine adjustment	---	---	---	---	●	●

[1] Gripping coefficient : 600N

INTERNAL MEASURING INSTRUMENTS

SYLVAC offers a large range of internal measuring instruments made of interchangeable 2 or 3 points mechanical heads and electronic units with digital display, integrated in the micrometer bodies or in pistol grips guaranteeing a sure and fast measurement.

The measuring range goes from 2 to 500mm in the Xtreme type and from 2 to 310mm in the Ultima type. Special executions are manufactured on request.

Sylvac inductive measuring system (patented)

Data output

Power supply: Lithium battery 3V, Type CR 2032

Operational temperature: +5 to +40°C

mm/inch conversion

Repeatability: ≤ 2 µm

≤ 500 mm

Bore gauges Xtreme

DESCRIPTION

- Great measuring range (2 - 300 mm)
- Blind bore measurement from 2 to 6 mm and from 12.5 mm
- Fixed anvils
- UKAS certificate included with all rings
- UKAS certificate included with each instrument
- Manufactured according to DIN863
- Memorization of 3 ring gauges values
- Water and coolant resistant, protection rating IP65 according to IEC 60529
- Programmable by PC
- S_Connect Power: RS232 / USB / Digimatic / Wireless

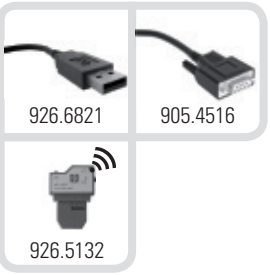
X_Treme XTD

X_Treme XTH

SWISS MADE

IP65

POWER



Bore gauges Xtreme

TECHNICAL SPECIFICATIONS INDIVIDUAL INSTRUMENTS XTD

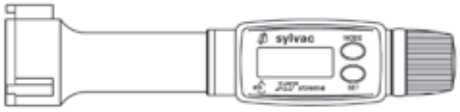
	950.1006	950.1007	950.1008	950.1009	950.1010	950.1011	950.1012	950.1013
Meas. range mm	2-2.5	2.5-3	3-4	4-5	5-6	6-8	8-10	10-12.5
Type	XTD1	XTD2	XTD3	XTD4	XTD5	XTD6	XTD8	XTD10
Depth mm	9	9	12	18	18	58	58	58
Max. Error µm	4	4	4	4	4	4	4	4
Ø Incl. ring mm	2.5	2.5	4.0	4.0	5.0	8.0	8.0	12.5

	950.1014	950.1015	950.1016	950.1017	950.1018	950.1019	950.1020	950.1021
Meas. range mm	12.5-16	16-20	20-25	25-35	35-50	50-65	65-80	80-100
Type	XTD12.5	XTD16	XTD20	XTD25	XTD35	XTD50	XTD65	XTD80
Depth mm	62	62	66	66	80	80	80	100
Max. Error µm	4	4	4	4	4	5	5	5
Ø Incl. ring mm	12.5	20.0	20.0	35.0	35.0	65.0	65.0	80.0

	950.1022	950.1023	950.1024	950.1025	950.1026	950.1027	950.1028	950.1029
Meas. range mm	100-125	125-150	150-175	175-200	200-225	225-250	250-275	275-300
Type	XTD100	XTD125	XTD150	XTD175	XTD200	XTD225	XTD250	XTD275
Depth mm	115	115	115	115	118	118	118	118
Max. Error µm	6	6	7	7	8	8	9	9
Ø Incl. ring mm	125.0	125.0	175.0	175.0	225.0	225.0	275.0	275.0

TECHNICAL SPECIFICATIONS INSTRUMENTS SETS SXTD

	951.1102	951.1103	951.1104	951.1105	951.1106	951.1107	951.1108	951.1109
Meas. range mm	2-6	6-10	10-20	20-50	50-100	100-150	150-200	100-200
Type	SXTD1	SXTD3	SXTD4	SXTD5	SXTD6	SXTD7	SXTD8	SXTD9
Number of heads	5	2	3	3	3	2	2	4
Numb. of rings µm	3	1	2	2	2	1	1	2
Meas. Force mm	8N	7N	15N	21N	28N	32N	32N	32N



Bore gauges Xtreme

TECHNICAL SPECIFICATIONS INDIVIDUAL INSTRUMENTS XTH

	954.1006	954.1007	954.1008	954.1009	954.1010	954.1011	954.1012	954.1013
Meas. range mm	2-2.5	2.5-3	3-4	4-5	5-6	6-8	8-10	10-12.5
Type	XTH1	XTH2	XTH3	XTH4	XTH5	XTH6	XTH8	XTH10
Depth	9	9	12	18	18	58	58	58
Max. Error µm	4	4	4	4	4	4	4	4
Ø Incl. ring mm	2.5	2.5	4.0	4.0	5.0	8.0	8.0	12.5

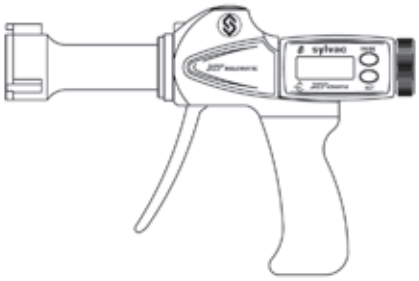
	954.1014	954.1015	954.1016	954.1017	954.1018	954.1019	954.1020	954.1021
Meas. range mm	12.5-16	16-20	20-25	25-35	35-50	50-65	65-80	80-100
Type	XTH12.5	XTH16	XTH20	XTH25	XTH35	XTH50	XTH65	XTH80
Depth	62	62	66	66	80	80	80	85
Max. Error µm	4	4	4	4	4	5	5	5
Ø Incl. ring mm	12.5	20.0	20.0	35.0	35.0	65.0	65.0	80.0

	954.1022	954.1023	954.1024	954.1025	954.1026	954.1027	954.1028	954.1029
Meas. range mm	100-125	125-150	150-175	175-200	200-225	225-250	250-275	275-300
Type	XTH100	XTH125	XTH150	XTH175	XTH200	XTH225	XTH250	XTH275
Depth	100	100	100	100	100	103	103	103
Max. Error µm	6	6	7	7	8	8	9	9
Ø Incl. ring mm	125.0	125.0	175.0	175.0	225.0	225.0	275.0	275.0

TECHNICAL SPECIFICATIONS INSTRUMENTS SETS SXTH

	955.1102	955.1103	955.1104	955.1105	955.1106
Meas. range mm	2-6	6-10	10-20	20-50	50-100
Type	SXTH1	SXTH3	SXTH4	SXTH5	SXTH6
Number of heads	5	2	3	3	3
Number of rings	3	1	2	2	2
Measuring Force	4N	9N	9N	19N	19N

	955.1107	955.1108	955.1114	955.1115	955.1116
Meas. range mm	100-150	150-200	6-20	20-100	100-200
Type	SXTH7	SXTH8	SXTH10	SXTH11	SXTH12
Number of heads	2	2	5	6	4
Number of rings	1	1	3	4	2
Measuring Force	22N	22N	9N	19N	22N



Bore gauges

Xtreme

BASIC INSTRUMENT XTD AND XTH INDIVIDUAL

- Instrument according to technical specifications
- Wooden box (XTD : from 150 mm = 2 box; XTH : from 200 mm = 2 box) [1)]
- Rings according to technical specifications + UKAS certificate
- 1 x digital display XTDU or XTPG
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate

[1)] Fumigated compatible ISPM 15 and NIMP 15

TECHNICAL SPECIFICATIONS ELECTRONIC UNITS XTDU AND XTPG

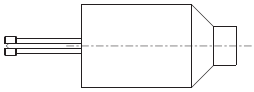
XTDU	**951.3001**	**951.3002**	**951.3003**	**951.3004**	**951.3005**	**951.3006**
Meas. range mm	2-6	6-10	10-20	20-50	50-100	100-300
Type	XTDU2	XTDU6	XTDU10	XTDU20	XTDU50	XTDU100
Thread	1/4"x 40 TPI	M5 x 0.5	5/16"x 40 TPI	5/8"x 24 TPI	5/8"x 24 TPI	5/8"x 24 TPI

XTPG	**955.3001**	**955.3002**	**955.3003**	**955.3004**
Meas. range mm	2-6	6-20	20-100	100-300
Type	XTPG1	XTPG2	XTPG3	XTPG4
Thread	1/4"x 40 TPI	5/16"x 40 TPI	5/8"x 24 TPI	5/8"x 24 TPI

Bore gauges Xtreme

TECHNICAL SPECIFICATIONS MEASURING HEADS XTHD

	953.2496	953.2497	953.2498	953.2499	953.2500
Meas. range mm	2-2.5	2.5-3	3-4	4-5	5-6
Type	XTHD1	XTHD2	XTHD3	XTHD4	XTHD5
Execution	2 points / ST	2 points / ST	2 points / ST	2 points / ST	2 points / ST



2 points head

	953.2501	953.2502	953.2503	953.2504	953.2505
Meas. range mm	6-8	8-10	10-12.5	12.5-16	16-20
Type	XTHD6	XTHD8	XTHD10	XTHD12.5	XTHD16
Execution	3 points / ST	3 points / ST	3 points / ST	3 points / TC	3 points / TC

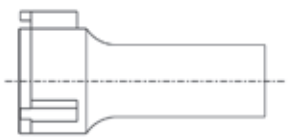
	953.2506	953.2507	953.2508	953.2509	953.2510
Meas. range mm	20-25	25-35	35-50	50-65	65-80
Type	XTHD20	XTHD25	XTHD35	XTHD50	XTHD65
Execution	3 points / TC	3 points / TC	3 points / TC	3 points / TC	3 points / TC

	953.2511	953.2512	953.2513	953.2514	953.2515
Meas. range mm	80-100	100-125	125-150	150-175	175-200
Type	XTHD80	XTHD100	XTHD125	XTHD150	XTHD175
Execution	3 points / TC	3 points / TC	3 points / TC	3 points / TC	3 points / TC

	953.2516	953.2517	953.2518	953.2519
Meas. range mm	200-225	225-250	250-275	275-300
Type	XTHD200	XTHD225	XTHD250	XTHD275
Execution	3 points / TC	3 points / TC	3 points / TC	3 points / TC

ST = steel
TC = tungsten carbide

All heads are compatible with the XTD and XTH systems.

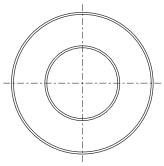


3 points head

Bore gauges Xtreme

TECHNICAL SPECIFICATIONS SETTING RINGS XTR

		953.2598	953.2599	953.2600	953.2601	953.2602	953.2603
Size	mm	2.5	4	5	8	12.5	20
Type		XTR2.5	XTR4	XTR5	XTR8	XTR12.5	XTR20



		953.2604	953.2605	953.2606	953.2607	953.2608	953.2609	953.2610
Size	mm	35	65	80	125	175	225	275
Type		XTR35	XTR65	XTR80	XTR125	XTR175	XTR225	XTR275

TECHNICAL SPECIFICATIONS EXTENSIONS SX

		953.2001	953.2002	953.2003	953.2004	953.2005
Meas. range	mm	6-10	10-12.5	12.5-20	20-50	50-300
Type		SX200	SX400	SX500	SX1	SX4
Length	mm	63	76	100	150	150

Other accessories

	953.2010	953.2011
Description	Stand	Depth stop
Meas. range mm	2-50	2-6

APPLICATIONS

Pistol measuring system

Measuring with ratchet XTD system

Measuring with pistol XTH system

Large bore gauges | XT500 Xtreme

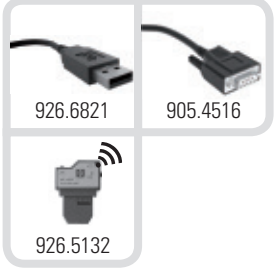
DESCRIPTION

- Great measuring range (300 - 500 mm)
- New digital display with constant measuring force
- Interchangeable anvils
- Anvils set covering 25mm (300-325, 325-350,...)
- Only 1 setting ring to calibrate the instrument (UKAS certificate included)
- UKAS certificate included with each instrument
- Manufactured according to DIN863
- Memorization of 3 ring gauges values
- Water and coolant resistant, protection rating IP65 according to IEC 60529
- Programmable by PC
- S_Connect Power: RS232 / USB / Digimatic / Wireless

SWISS MADE

IP65

POWER



Large bore gauges | XT500 Xtreme

TECHNICAL SPECIFICATIONS INDIVIDUAL INSTRUMENTS XT500

	950.1030	950.1031	950.1032	950.1033	950.1034	950.1035	950.1036	950.1037
Meas. range mm	300-325	325-350	350-375	375-400	400-425	425-450	450-475	475-500
Type	XTD300	XTD325	XTD350	XTD375	XTD400	XTD425	XTD450	XTD475
Depth mm	120							
Max. Error µm	15							
Repeatability µm	3							
Ring Ø mm	300							

TECHNICAL SPECIFICATIONS INSTRUMENTS SETS XT500

	951.1111	951.1112	951.1113
Meas. range mm	300-400	400-500	300-500
Type	SXTD300	SXTD400	SXTD500

ELECTRONIC UNIT XTDU

	951.3010
Meas. range mm	300-500
Type	XTDU 500

MEASURING HEAD

	953.2520 [1]
Meas. range mm	300-325
Type	XTHD300

1) anvils set 953.2319 included

SETTING RING

	953.2630
Dimension mm	300
Type	XTR300

INTERCHANGEABLE ANVILS SETS SXTA

	953.2319	953.2320	953.2321	953.2322	953.2323	953.2324	953.2325	953.2326
Meas. range mm	300-325	325-350	350-375	375-400	400-425	425-450	450-475	475-500
Type	SXTA300	SXTA325	SXTA350	SXTA375	SXTA400	SXTA425	SXTA450	SXTA475

TECHNICAL SPECIFICATIONS EXTENSIONS SX

	953.2005	953.2006
Meas. range mm	300-500	
Type	SX4	SX10
Length mm	150	1000

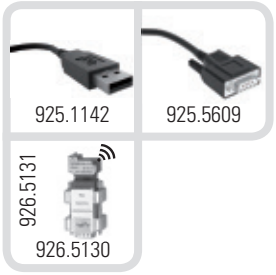
High accuracy internal measurement Ultima

DESCRIPTION

- Measuring range from 2 to 310 mm
- Resolution up to 0.0001 mm
- Mechanical repeatability : 1µm from 2 to 210 mm and 2 µm from 210 to 310 mm
- Robust construction designed for use by inspection and machine shop
- UKAS certificate supplied with each head
- UKAS certificate supplied with each setting ring.
- Rings manufactured according to DIN 2250 part 2 (standard)
- Blind bore measuring from 12 to 310 mm
- Compatible with all Sylvac digital display
- Special heads on request (threads, grooves, splines, slot width, etc...)

SWISS MADE

RS232



High accuracy internal measurement Ultima

TECHNICAL SPECIFICATIONS OF MEASURING HEADS

		960.1006	960.1007	960.1008	960.1009	960.1010	960.1011	960.1012	960.1013
Meas. range	mm	2.0-2.5	2.5-3	3-4	4-5	5-6	6-8	8-10	10-12
Ring Ø	mm	2.5	2.5	4	5	5	8	8	12
Depth	mm	9	9	12	18	18	60	60	61
Max. Error	µm	1	1	1	1	1	1	1	1

		960.1014	960.1015	960.1016	960.1017	960.1018	960.1019	960.1020	960.1021
Meas. range	mm	12-14	14-17	17-20	20-24	24-28	28-32	32-38	38-44
Ring Ø	mm	12	17	17	24	24	32	32	44
Depth	mm	61	61	61	69	69	69	72	72
Max. Error	µm	1	1	1	1	1	1	1	1

		960.1022	960.1023	960.1024	960.1025	960.1026	960.1027	960.1028	960.1029
Meas. range	mm	44-50	50-60	60-70	70-80	80-90	90-100	100-110	110-120
Ring Ø	mm	44	60	60	80	80	100	100	120
Depth	mm	72	80	80	80	80	80	80	80
Max. Error	µm	1	1	1.5	1.5	1.5	1.5	1.5	1.5

		960.1030	960.1031	960.1032	960.1033	960.1034	960.1035	960.1036	960.1037
Meas. range	mm	120-130	130-140	140-150	150-160	160-170	170-180	180-190	190-200
Ring Ø	mm	120	140	140	160	160	180	180	200
Depth	mm	80	80	80	80	80	80	80	80
Max. Error	µm	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

		960.1038	960.1039	960.1040	960.1041	960.1042	960.1043	960.1044	960.1045
Meas. range	mm	200-210	210-220	220-230	230-240	240-250	250-260	260-270	270-280
Ring Ø	mm	200	220	220	240	240	260	260	280
Depth	mm	80	80	2.5	80	80	80	80	80
Max. Error	µm	1.5	2	2	2	2	2	2	2

		960.1046	960.1047	960.1048
Meas. range	mm	280-290	290-300	300-310
Ring Ø	mm	280	300	300
Depth	mm	80	80	80
Max. Error	µm	2	2	2

Specifications are currently beeing amended.

High accuracy internal measurement Ultima

TECHNICAL SPECIFICATIONS SETS

	961.1102	961.1103	961.1104
Meas. range mm	2-6	6-10	10-20
Number of rings	3	1	2

	961.1107	961.1108	961.1109	961.1110
Meas. range mm	6-20	20-50	50-100	20-100
Number of rings	3	3	3	6

BASIC INSTRUMENT

Individual

- Instrument according to technical specifications (handle with integrated probe + head)
- Setting rings according to technical specifications
- Wooden box [1)]
- Instruction manual

Sets

- Instrument according to technical specifications (handle with integrated probe + head)
- Setting rings according to technical specifications
- Digital display D50S (804.1050)
- Wooden box [1)]
- Instruction manual

[1)] Fumigated compatible ISPM 15 and NIMP 15

TECHNICAL SPECIFICATIONS HANDLES

	961.3001	961.3002	961.3003	961.3004
Meas. range mm	2-6	6-20	20-100	100-310

Capacitive probe included

TECHNICAL SPECIFICATIONS EXTENSIONS

	961.2001	961.2002	961.2003	961.2004	961.2005	961.2006	961.2007
Meas. range mm	6-10	10-12	12-20	20-50	50-310	20-50	50-310
Length mm	63	75	100	50	50	150	150

High accuracy internal measurement Ultima

APPLICATIONS

Data output through RS232

Two Ultima gauges connected with one unit Sylvac D50S only

Adjustable depth stop (on request)

Set including 6 measuring heads, 3 master rings, 1 D50S, the handle and his probe, charging unit

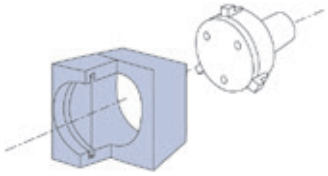
Bore gauges other applications

DESCRIPTION

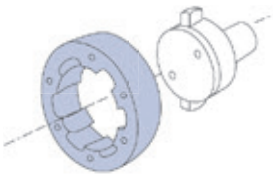
In spite of the fact that our range of interior measuring instruments is more complete, all the applications cannot be covered by the standard series. The illustrations below express the possibilities of special applications which we can carry out.

For instance, below some pictures of special applications :

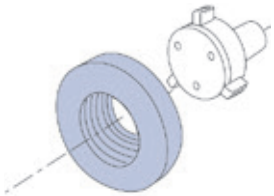
Grooves measurement



2-points head with spherical anvils

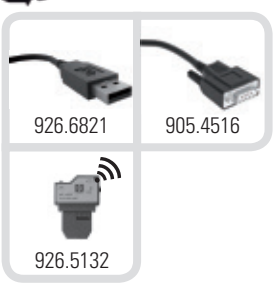


Threads measuring head

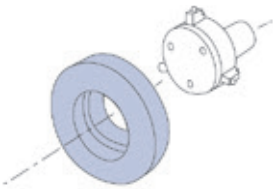


SWISS MADE

POWER



Threads measure-ment with ball anvils

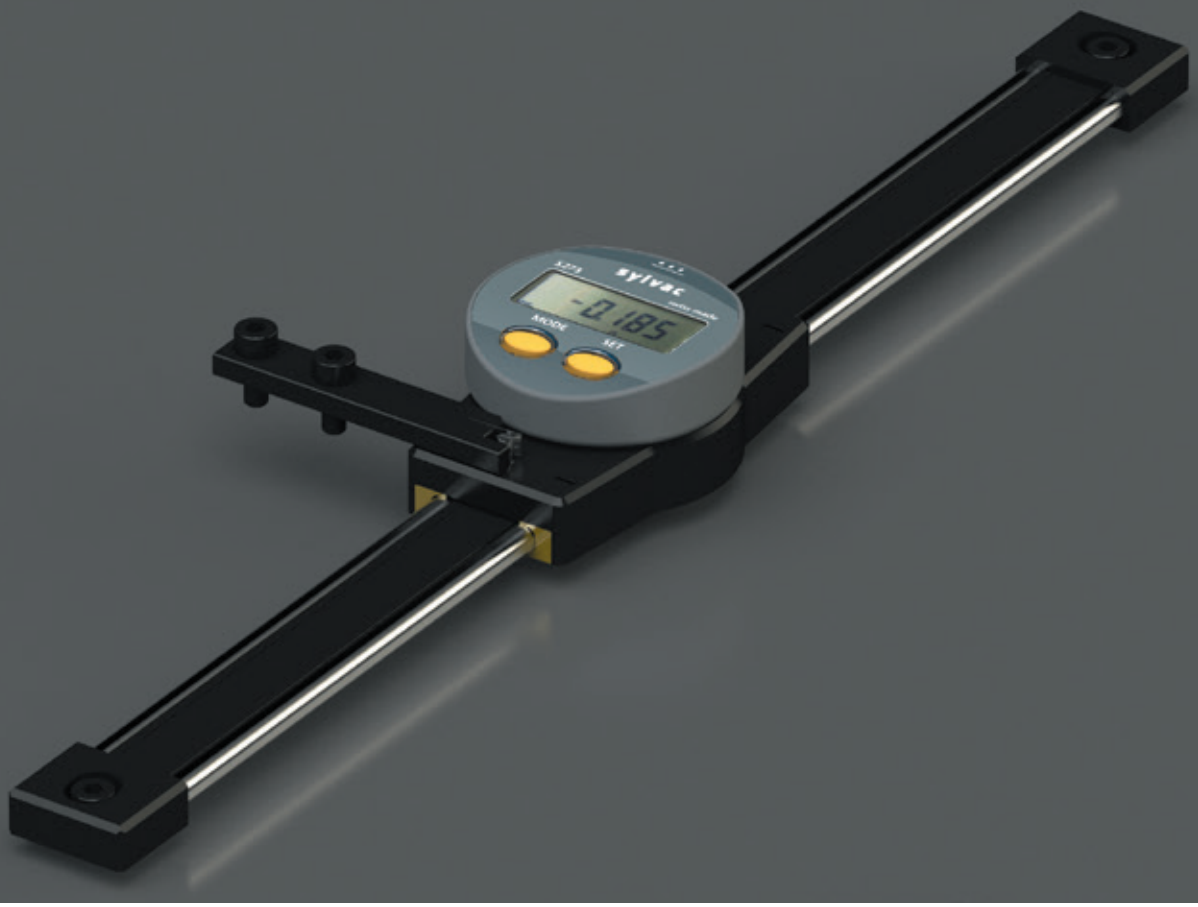


DIGITAL SCALES

SYLVAC manufactures horizontal and vertical digital scales. The measuring range goes up to 600mm, special measuring range on request. All the display units are equipped with a data output.

In complement with the digital scales, SYLVAC also offers two models of micrometer screws with digital display. They are conceived mainly for XY tables of microscopes and profile projectors. The 1µm resolution allows a high accuracy positioning.

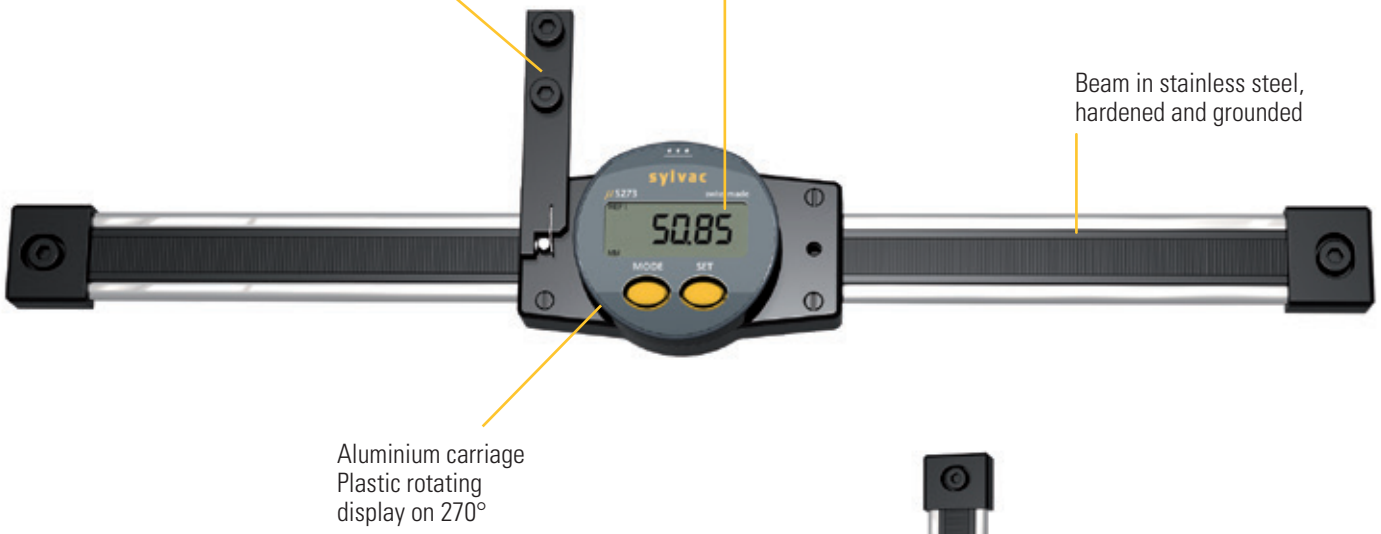
Power supply: Lithium battery 3V, Type CR 2032
Operational temperature: +5 to +40°C
mm/inch conversion



Digital scales S_Scale WORK

DESCRIPTION

- Max displacement speed: 2 m/sec
- RS232 or USB Data output
- External power supply by Power cable
- Easy to integrate in your projects



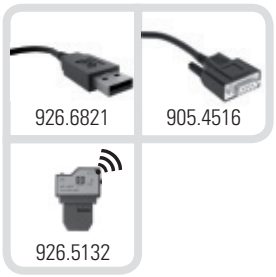
SWISS MADE

SIS Smart Inductive System

WATER RESISTANT

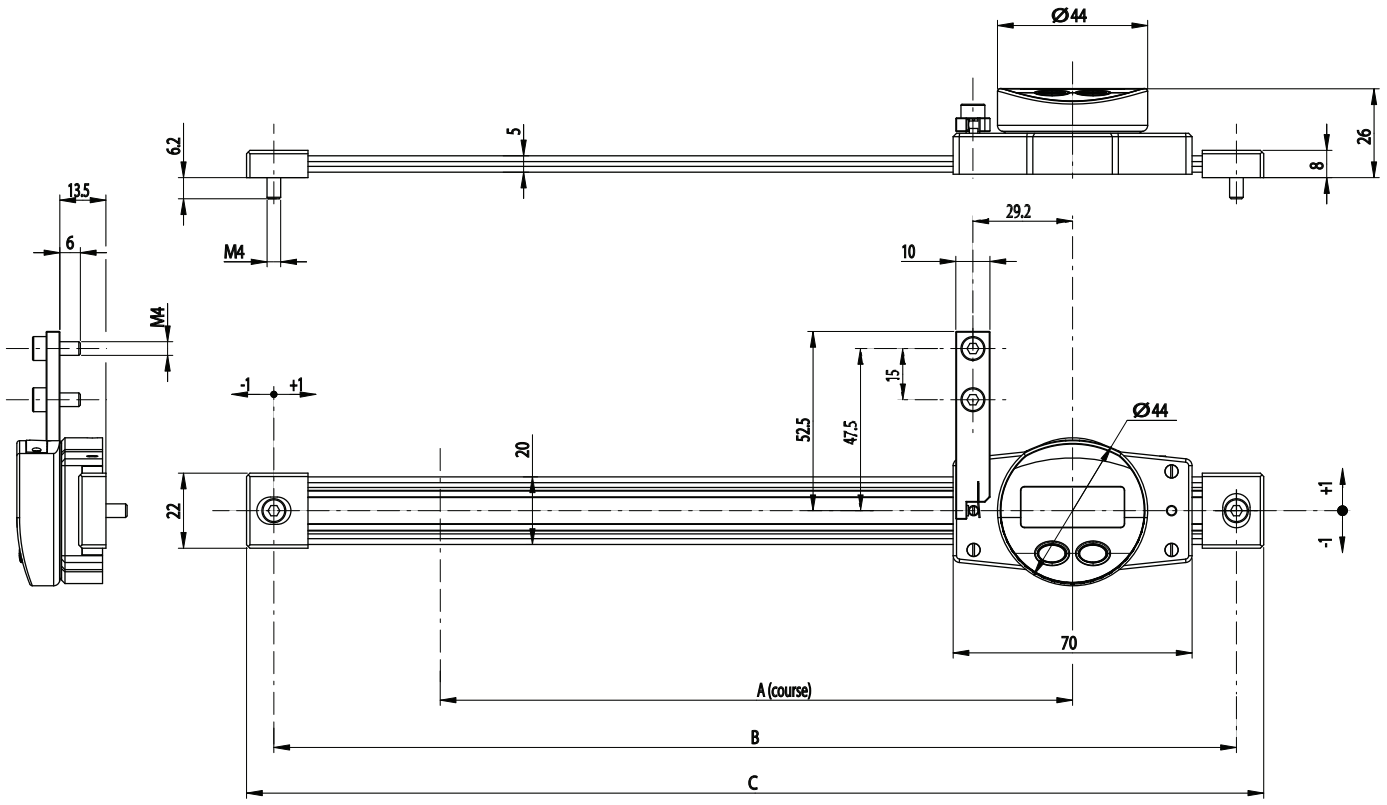
IP65

POWER



Digital scales S_Scale WORK

DIMENSIONAL DRAWINGS



TECHNICAL SPECIFICATIONS

		816.1015	816.1020	816.1030	816.1060
Measuring range	mm	150	200	300	600
Type		H / V	H / V	H / V	H / V
Max. Error	µm	20	20	30	30
Repeatability [1]	µm	10	10	10	10
Resolution mm		0.01	0.01	0.01	0.01
A	mm	185	235	335	665
B	mm	282	332	432	762
C	mm	298	348	448	778
S_Connect : Power		USB / RS232 / Wireless [2]			
Selection of measuring direction		•			
PRESET function		•			
2 references		•			

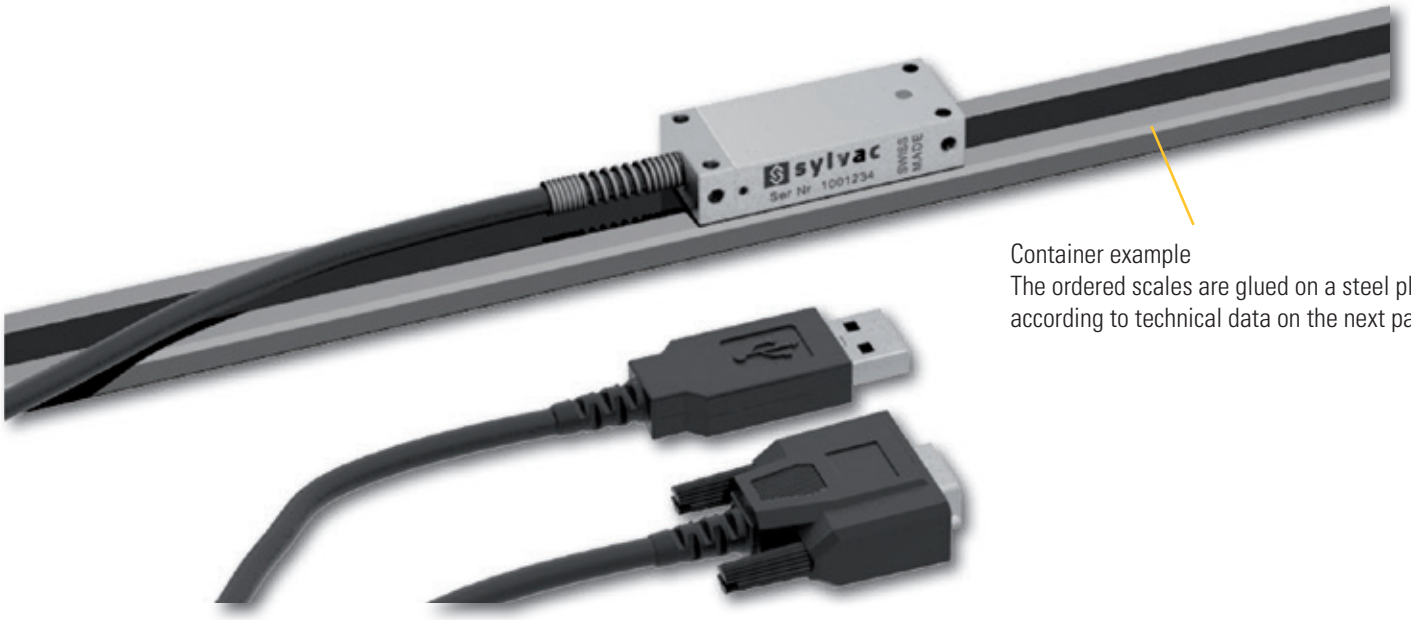
[1] ± 1 digit
[2] see cables chapter

Digital scales S_System LIN

DESCRIPTION

Precision measuring set for new development and retro-fitting

- Easy to integrate in your projects
- Small overall dimensions
- USB or RS-232 connectivity
- Software development kit
- Software included
- Scale up to 1140 mm
- Max error of device 7µm / 1m
- Programmable by PC



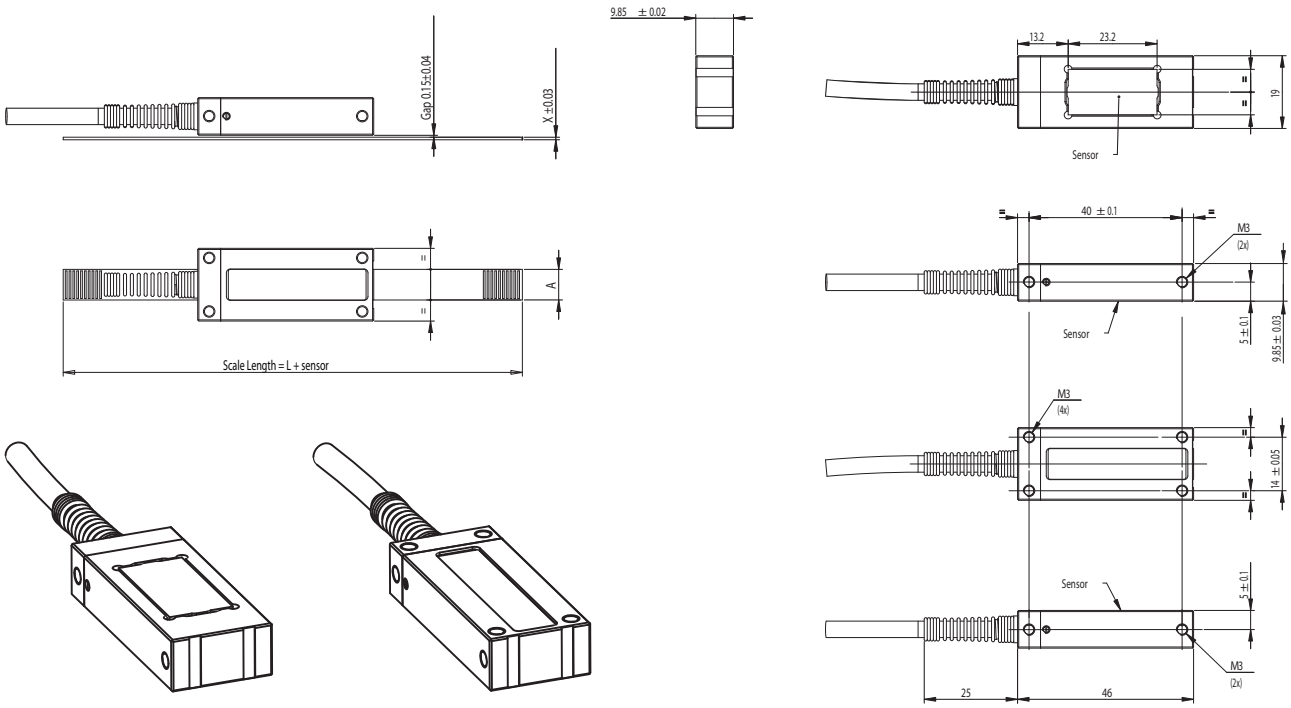
Container example
The ordered scales are glued on a steel plate according to technical data on the next page

SWISS MADE

IP67

Digital scales S_System LIN

DIMENSIONAL DRAWINGS



TECHNICAL SPECIFICATIONS

Sensors		813.1001	813.1011	813.1101	813.1111
Max. error [1]	µm	3	3	5	5
Repeatability [2]	µm	2			
Data output		USB	RS-232	USB	RS-232
Protection rating according to IEC 60529		IP 67			
Programmable by PC		●			

Scales		REGF 5.XXXX	REGG 5.XXXX	REGF 1.XXXX	REGG 1.XXXX
Max. error [1]	µm	L / 300	L / 300	L / 150	L / 150
Width A	mm	8	12.45	8	12.45
Thickness X	mm	0.68	0.58	0.68	0.58
Scale pitch	mm	1.000			
Max length L	mm	1140			

[1] Max error of a set = Max. error sensor + max. error scale (according to length)

[2] Repeatability of a set : 2 µm

Example: order number of scale: **REGF 5.0300**

Scale type — Lenght in mm

Digital scales

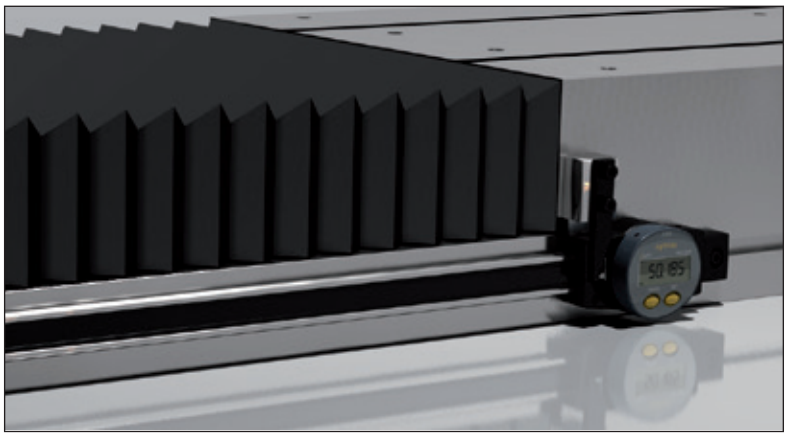
BASIC INSTRUMENT | DIGITAL SCALES

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Clamping device 916.1901

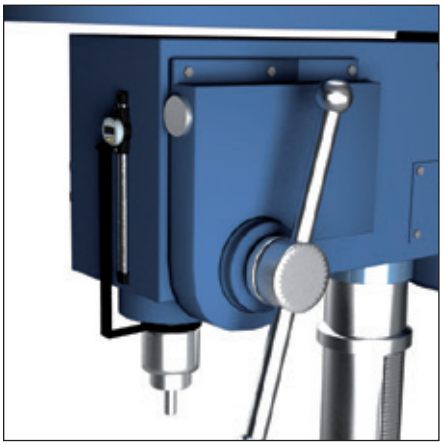
BASIC INSTRUMENT | S_SYSTEM LIN

- Instrument according to technical specifications
- Instructions of assembly
- Instruction manual

APPLICATIONS



S_Scale WORK mounted on a linear table

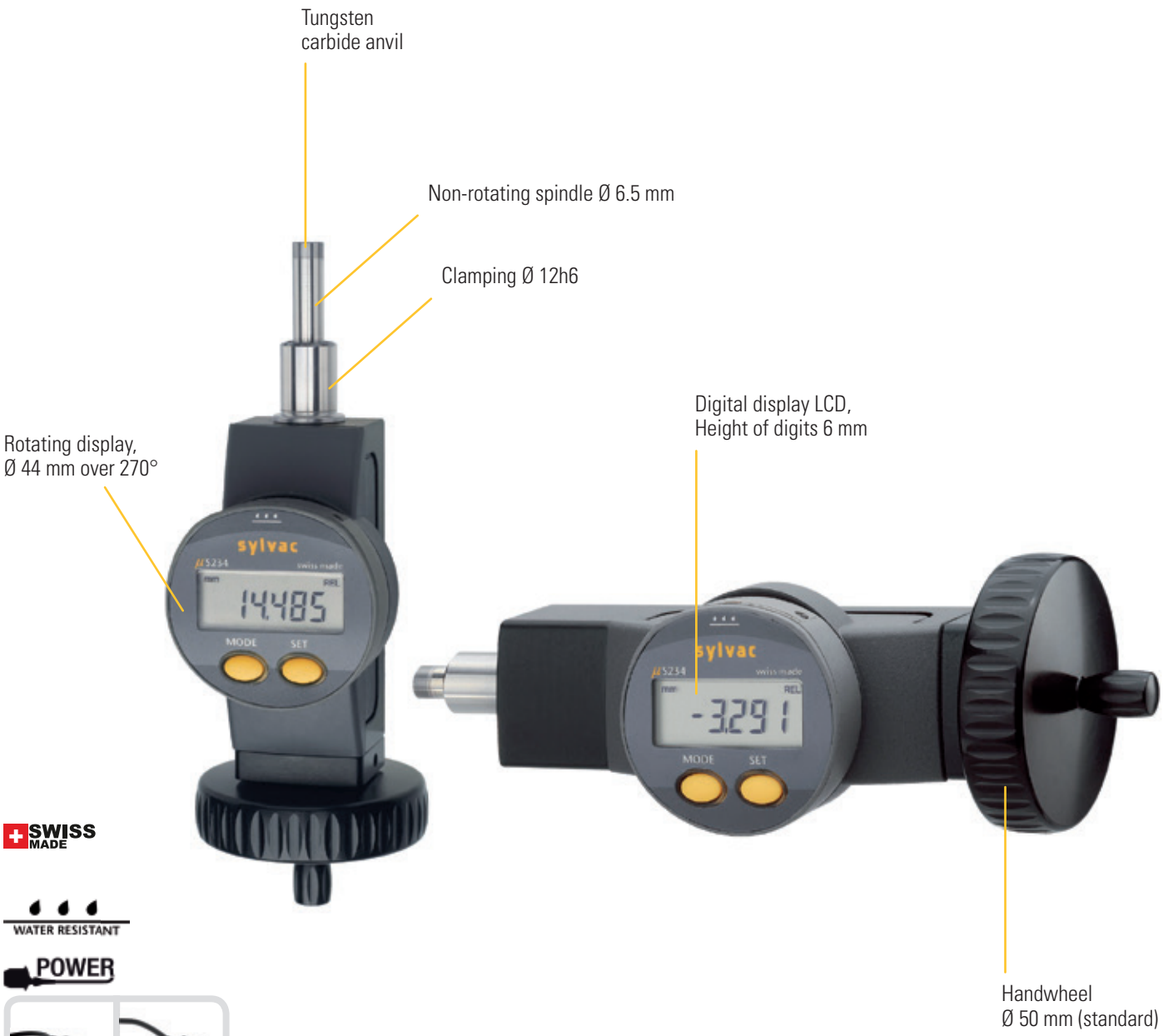


Retro-fitting on a column drilling machine with Z measuring axis

Digital micrometer screws

DESCRIPTION

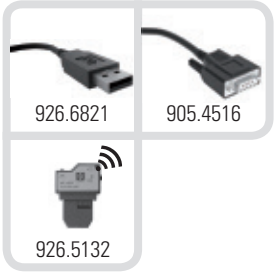
- Data output RS232, combined with external power supply
- Fine adjustment available (accessories)
- Horizontal and Vertical use (same type)
- Reduced dimensions (compact)
- Other handwheels on request



SWISS MADE

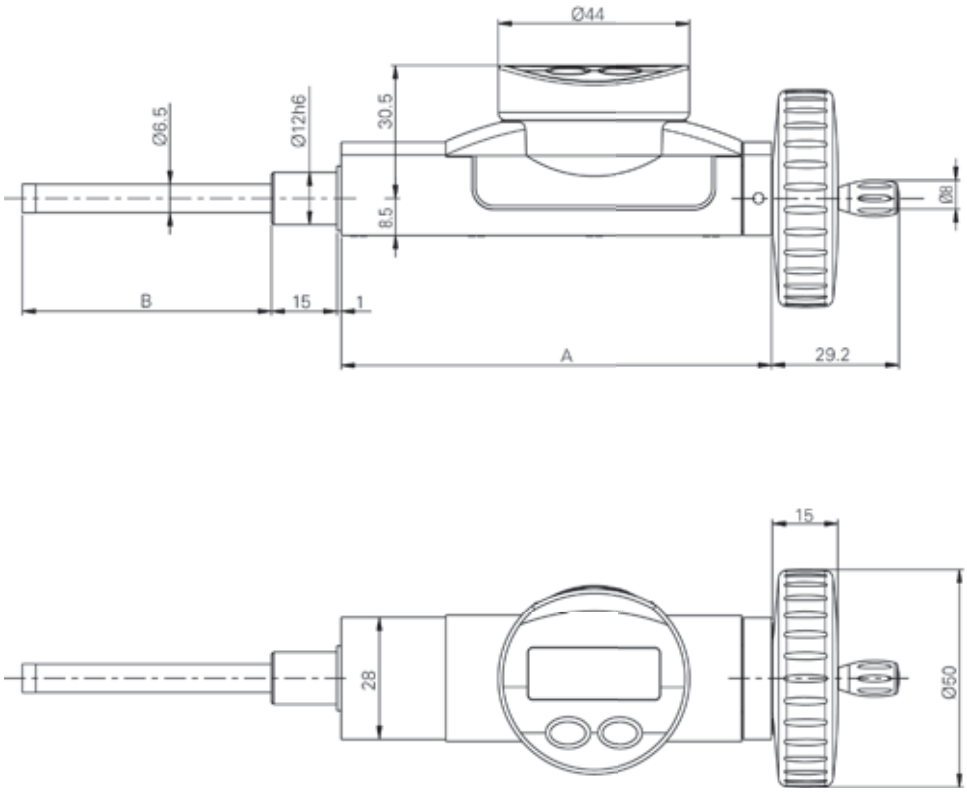
WATER RESISTANT

POWER



Digital micrometer screws

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		852.2001	852.2011
Measuring range	mm	0-25	0-50
Max. Error	µm	5	8
Repeatability	µm	2	2
Resolution	mm	0.001	0.001
A	mm	74.5	98.5
B	mm	33.1	57.1
S_Connect : Power		USB / RS232 / Wireless [1]	
Selection of measuring direction		●	
PRESET function		●	
Absolute or relative measurement		●	

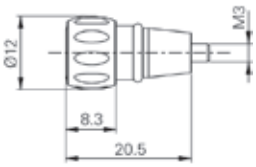
[1] see cables chapter

Digital micrometer screws

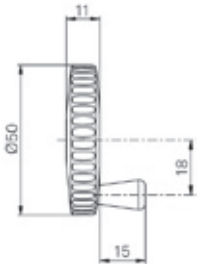
BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2032 included
- Instruction manual
- Handwheel Ø 50 mm (852.2311)
- Calibration certificate

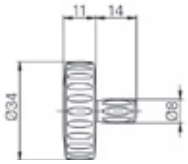
ACCESSORIES



852.2310	Fine adjustment device



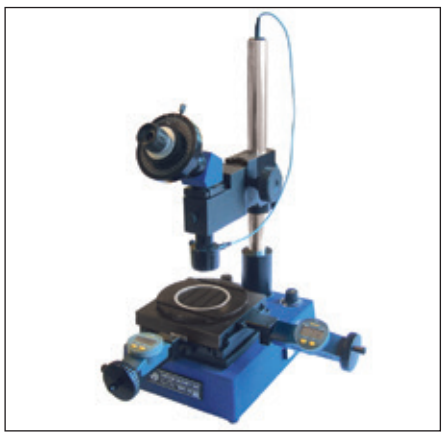
852.2311	Handwheel Ø 50 mm with crank handle for fast motion



852.2312	Handwheel Ø 34 mm

APPLICATIONS

Fine adjustment device type 852.2310



Use on measuring microscope

HEIGHT GAUGE
Hi_Cal & Hi_Gage ONE

Specially developed and optimized for use in production lines, HI_CAL offers a great efficiency thanks to its large screen which can simultaneously display diameters and centerlines.

Its principal advantages consist in its ease of use, reduced dimensions of its base, its great lightness, the compatibility of the accessories with the instruments of the previous generation and the two travel speeds which offer a great comfort during the measurement of small diameters.

Inductive Sylvac system (patented)

Automatic motorized probe (patented)

Data output RS232 – USB

mm/inch conversion

Height gauge

Hi_Gage ONE

DESCRIPTION

- Intuitive functions
- 400 and 600 mm versions
- Robust mechanics
- PROXIMITY and POWER data outputs

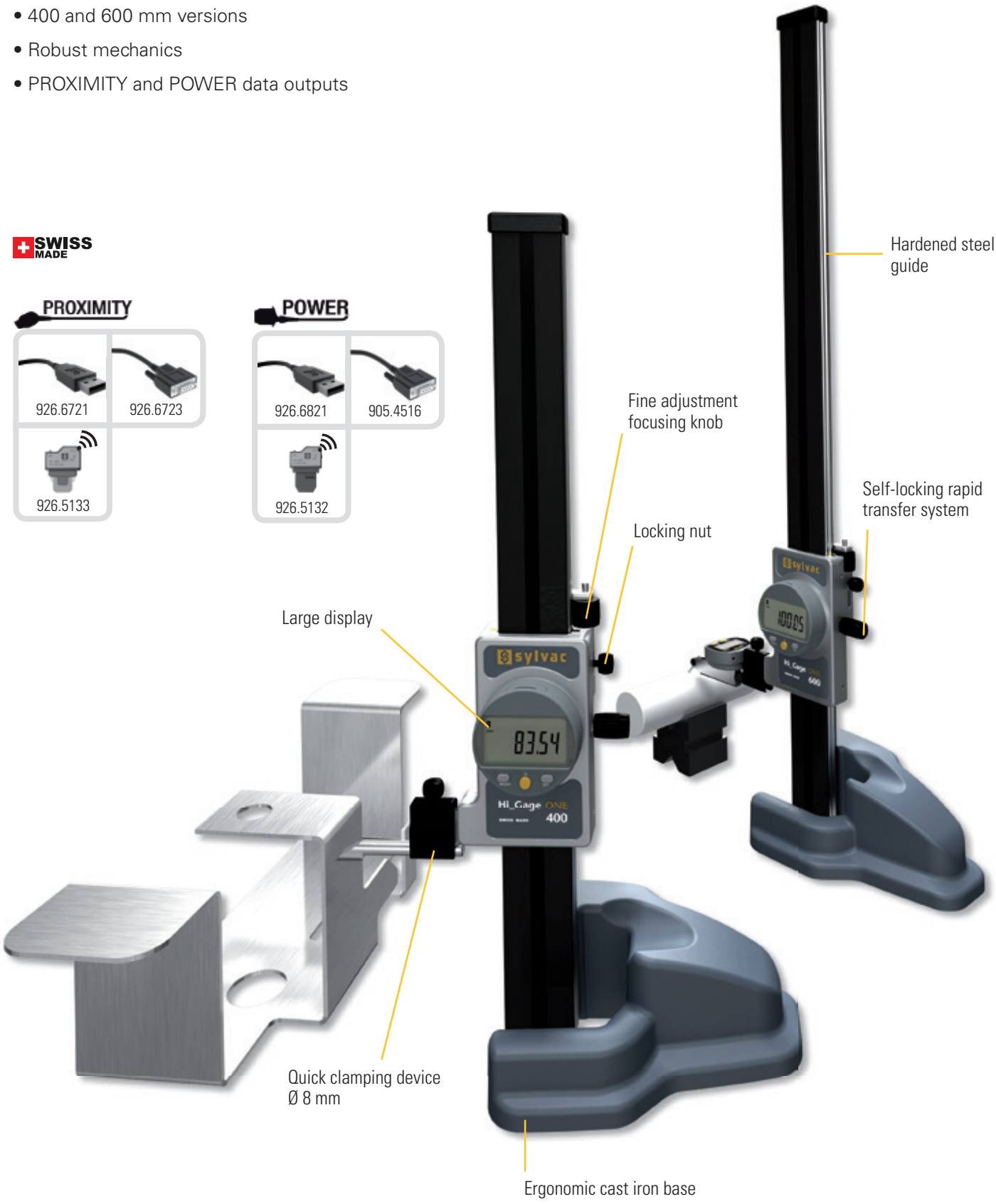
SWISS MADE

PROXIMITY

926.6721 926.6723 926.5133

POWER

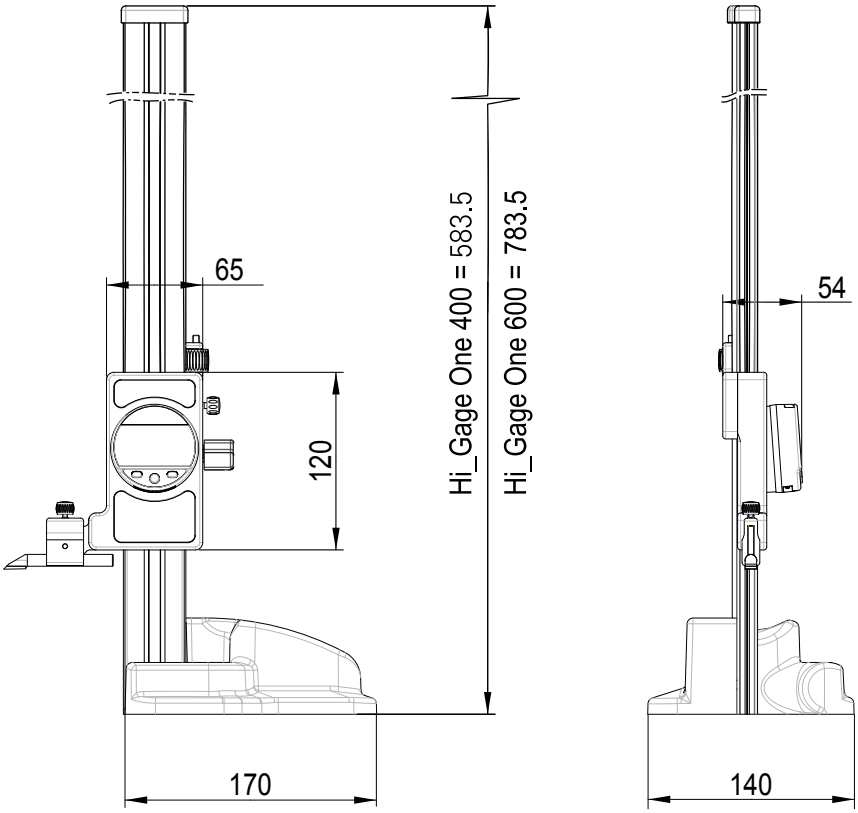
926.6821 905.4516 926.5132



Height gauge

Hi_Gage ONE

DIMENSIONAL DRAWINGS



TECHNICAL SPECIFICATIONS

	840.0400	840.0600
Measurement range mm	400	600
Resolution mm	0.01	0.01
Max. error µm	40	50
Repeatability µm	10 [1]	10 [1]
2 references	●	●
PRESET	9999.99	
Selection of measuring direction	●	
Smart Inductive Sensor (S.I.S)	●	
S_Connect : Proximity & Power	USB / RS232 / Digimatic / Wireless	

[1] ± 1 digit

ACCESSORIES

	Description
840.9001	Ball probe Ø8 mm
840.9002 [1]	Tracing probe
905.2247	Clamping stem

[1] supplied in standard

840.9001

840.9002

905.2247

Height gauge

Hi_Cal

DESCRIPTION

- Intuitive functions
- Great mobility
- Measurement of internal and external diameters, centerlines, heights, thicknesses, depths, surfaces
- 150 and 300 mm range
- Data output USB and RS232
- Extremely low and adjustable measuring force according to the probe
- No influence of the operator on the measurement results
- Battery life: 40 hours
- Probe constant value memorized even when switched off
- **New driving paddle for carriage displacement**

SWISS MADE

RS232

925.1142

925.5609

926.5131

926.5130

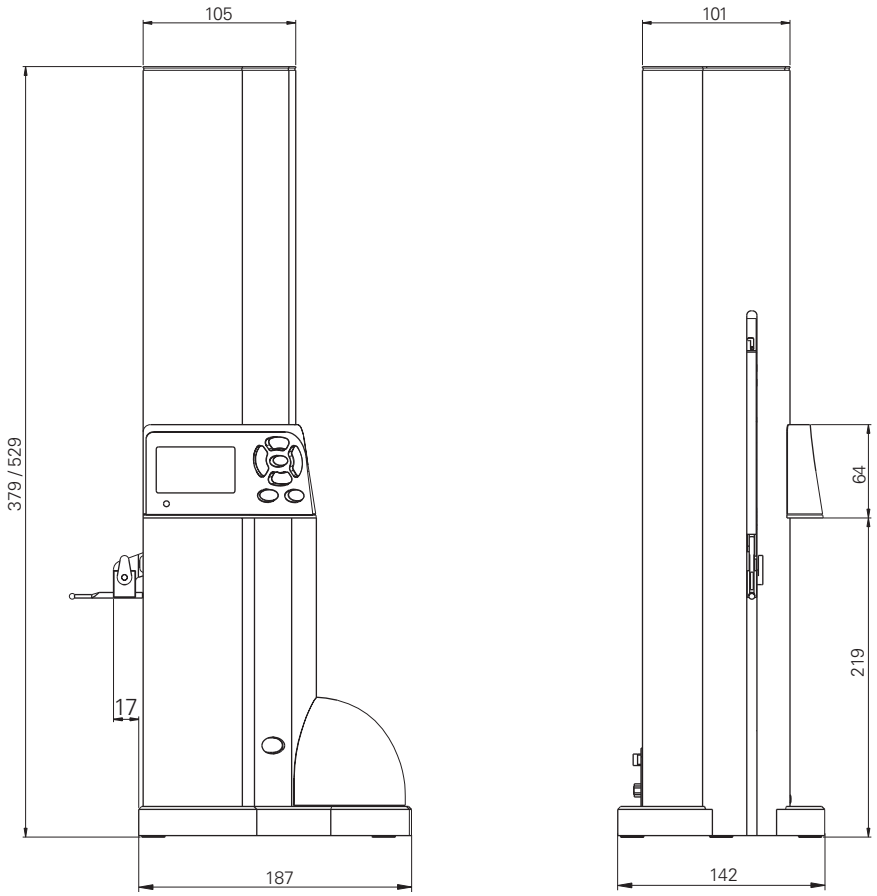
USB mini

926.6001

Switch on and measure!

Height gauge Hi_Cal

DIMENSIONAL DRAWINGS



DISPLAYS

❶	Measuring unit and actives reference
❷	Display of measuring value
❸	Active measuring mode
❹	Centerline display
❺	Dynamic measuring mode
❻	Diameter / height measurement
❼	Access to setting menu
❽	Selection of reference Ref I / Ref II
❾	ON / OFF Switch
❿	Ball probe constant
⓫	Validation / Initialization of min, max mode
⓬	Luminous indication of valide measurement

Height gauge Hi_Cal

TECHNICAL SPECIFICATIONS

		830.0150	830.0300
Measuring range	mm	150	300
Application range	mm	0 - 155	0 - 320
Max. Error	µm	2.5 + L / 175[1]	
Repeatability	µm	2	
Resolution	mm	0.01 / 0.001	
Velocity	mm/s	50 / 100	
Measuring force	N	0.2 - 0.3	
Self-contained use	h	> 40	
Height	mm	379	529
Weight	kg	3.9	4.6
S_Connect		USB / mini USB / RS232 [2]	
Programmable by PC		●	
Zero setting		●	
Min / max / delta		●	
PRESET function		●	
2 references		●	
Height measurement, Ø and centerlines		●	
2 types of progressive speed		●	

[1] With standard probe, in laboratory conditions
[2] see cables chapter

BASIC INSTRUMENT

- Loose cover HI_CAL 150
- Loose cover HI_CAL 300
- Charging set (930.4010[1]/11/12/13)
- Ruby ball probe Ø 3 mm
- Setting gauge
- Calibration certificate
- Instruction manual

[1] according to country

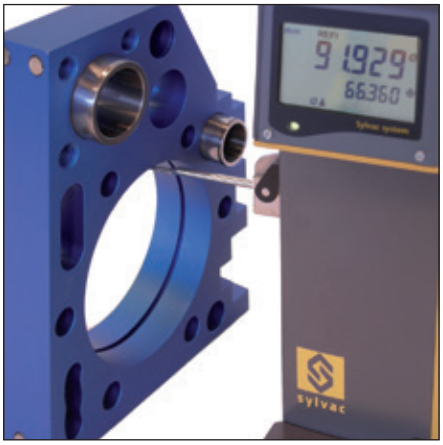
Height gauge

Hi_Cal

APPLICATIONS

Depth measurement with accessories 930.2108 and 930.2105

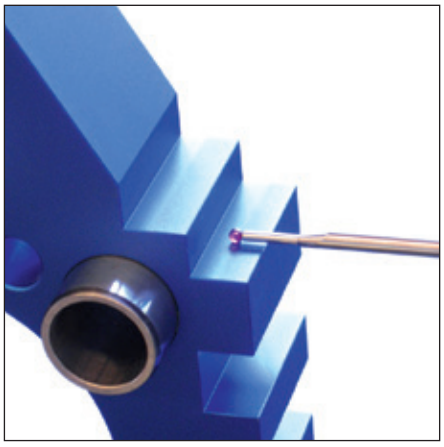
Depth measurement with accessories 930.2108 and 905.2204



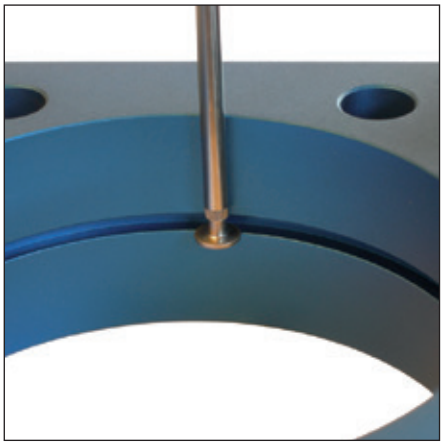
Internal measurement with ruby ball probe Ø 3 mm, 930.2101 (standard)

Internal groove measurement with accessories 930.2108, 930.2110 and 905.2207

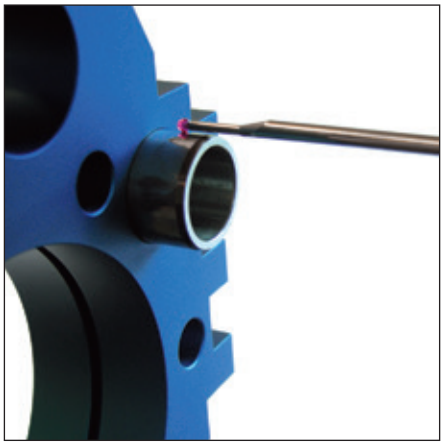
Taking the probe constant value with the setting bloc 930.2002 (standard)



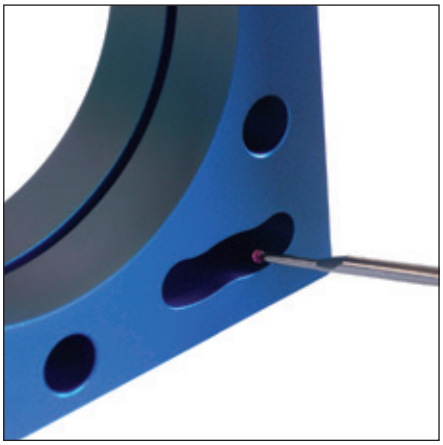
Heights and thicknesses measurements with the standard probe 930.2101



Internal groove measurement with accessories 930.2108, 930.2110 and 905.2205



External diameter measurement with the standard probe 930.2101

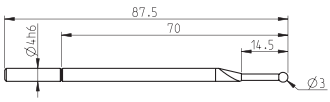


Min/Max/Delta measurements

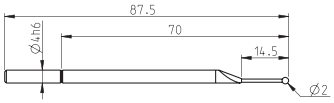
Height gauge

Hi_Cal

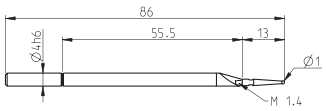
ACCESSORIES



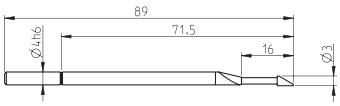
930.2101	Ruby ball probe Ø 3 mm



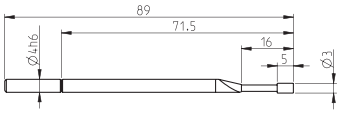
930.2103	Ruby ball probe Ø 2 mm



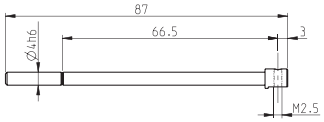
930.2104	Tungsten carbide ball probe Ø 1 mm



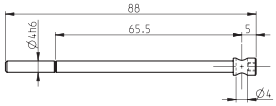
930.2105	Knife-edged measuring probe TC Ø 3 mm



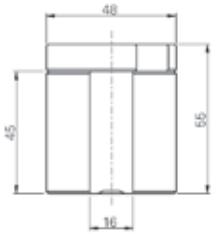
930.2106	Cylindrical measuring probe TC Ø 3 mm



930.2107	Probe holder 90° M2.5



930.2108	Probe holder 90° Ø 4 mm



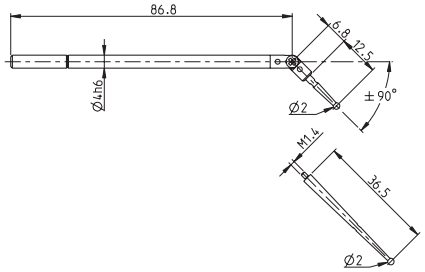
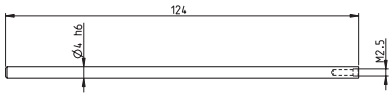
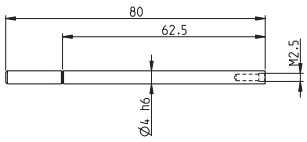
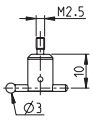
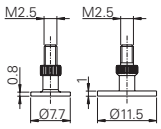
930.2002	Setting gauge

904.4000	Charging set 100-240V / 9V
904.4001	EUR cable included in 904.4000
904.4002	UK cable included in 904.4000
904.4003	USA/JPN cable included in 904.4000

Height gauge

Hi_Cal

ACCESSORIES

	**930.2102**	Swivelling tungsten carbide ball probe (M1.4)
	**930.2109**	Extension 124 mm M2.5
	**930.2110**	Extension 80 mm M2.5
	**905.2207**	Probe holder and ruby ball probe Ø 3 mm, M2.5
	**905.2205**	Disk shaped anvils Ø 7.7 mm and Ø 11.5 mm, M2.5
	930.2150	Full accessory set in wooden box Content : 930.2103, 930.2104, 930.2105, 930.2106, 930.2107, 930.2108, 930.2109, 930.2110, 905.2204, 905,2205, 905.2207
	930.2151	Basic accessory set in wooden box Content : 930.2103, 930.2104, 930.2105, 930.2106
	904.4101	External contact (foot-pedal)

MEASURING PROBES, DIGITAL DISPLAYS AND BENCH TABLES

The Sylvac linear probes are based on the capacitive principle characterized by a high degree of accuracy also on long measuring ranges up to 50mm. The probes are used as measuring elements to be placed on tables, supports, bench tables, special mechanical devices or multi-gauging fixtures.

The probe signal is processed in a display unit. Sylvac offers several of them.Benefiting from the high degree of accuracy of its probes and with the aim to measure small machined parts typically used in watches, Sylvac developed a whole series of benches and tables. These supports are conceived for the control of internal, external, heights, grooves etc, starting from a few tenths to 70mm.

Absolute capacitive measuring system

Digital display units RS232 and USB

Operational temperature 0 to +50°C

Measuring probes

LISTING OF ALL MODELS

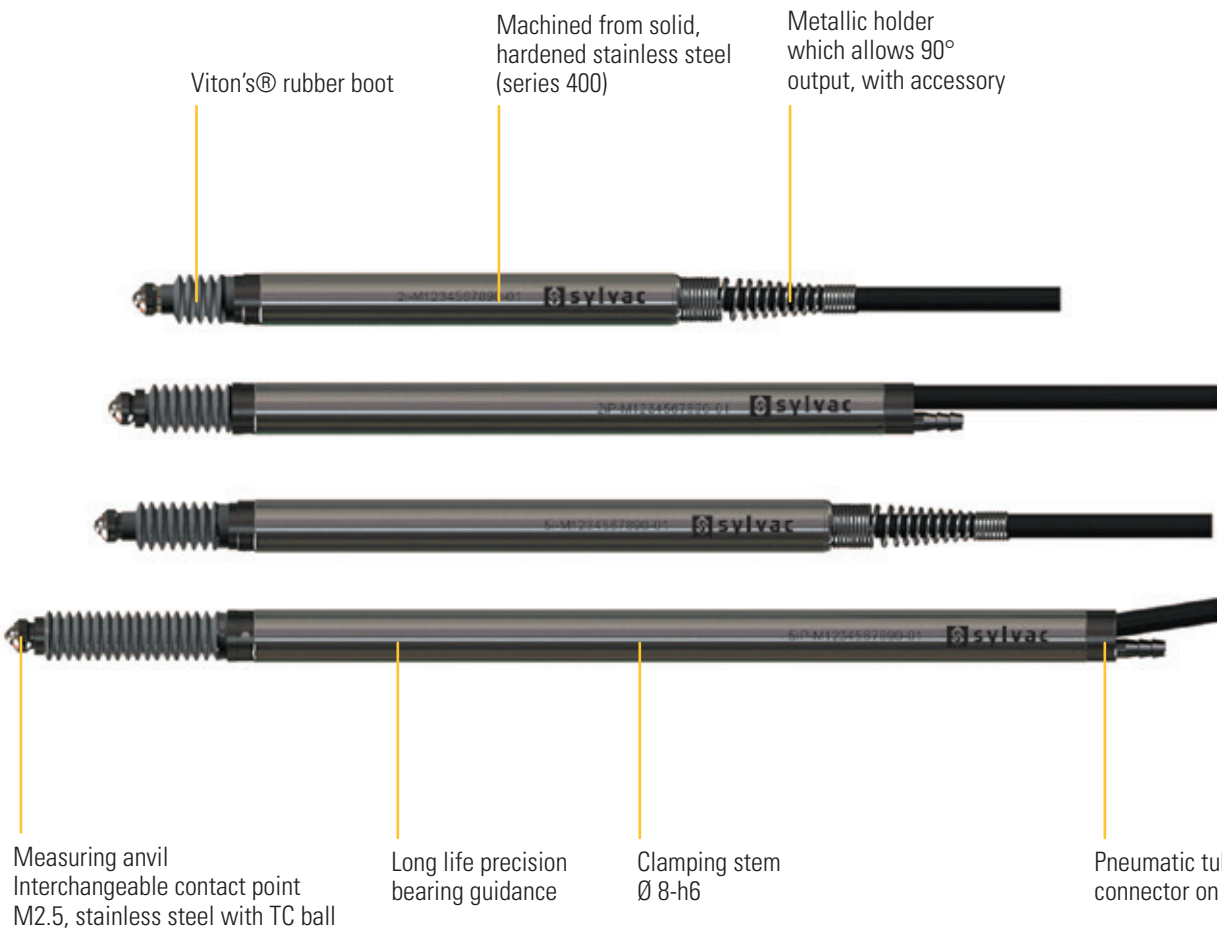
	INDUCTIVE				CAPACITIVE													
	900.1101 P2i	900.1102 P2iP	900.1111 P5i	900.1112 P5iP	900.1001 P5	900.1002 P5BL	900.1003 P5V	900.1004 P5B	900.1007 P5BVL	900.1006 P5L	900.1008 P5VL	900.1010 P10	900.1012 P10S	900.1014 P10L	900.1016 P10LS	900.1025 P25	900.1027 P25S	900.1050 P50
RANGE																		
±2 mm	●	●																
5 mm					●	●	●	●		●	●							
± 5 mm			●	●														
10 mm												●	●	●	●			
25 mm																●	●	
50 mm																		●
EXECUTION																		
Plain bearing					●		●			●	●	●	●	●	●	●	●	●
B- Ball bearing	●	●	●	●		●		●	●									
Pneumatic push		●		●														
V- Vacuum lifter							●		●		●							
L- 90 degrees cable	*		*			●			●	●	●			●	●			
S- with rubber boot	●	●	●	●	●	●	●	●	●	●	●		●		●		●	
MECHANIC																		
Diameter 8 mm h6	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Diameter 12 mm																●	●	●
Measuring anvil M2.5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
LIFTING																		
Integrated		●		●			●		●		●							
Separate accessories					●	●		●		●		●	●	●	●	●	●	
PROTECTION IP																		
Protection rating IP (IEC 60529)	65	65	65	65	64	64	64	64	64	64	64	40	50	40	50	40	50	40

* by accessories, see pages 121-122

Inductive measuring probes

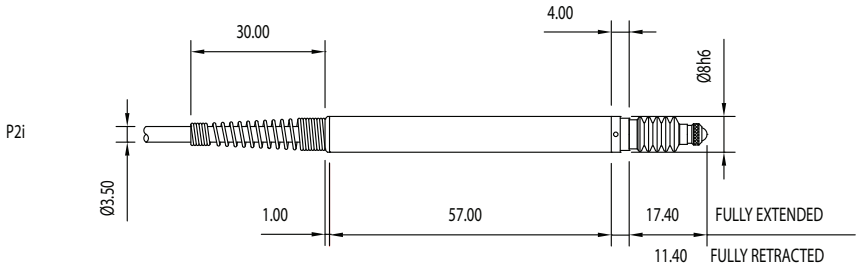
DESCRIPTION

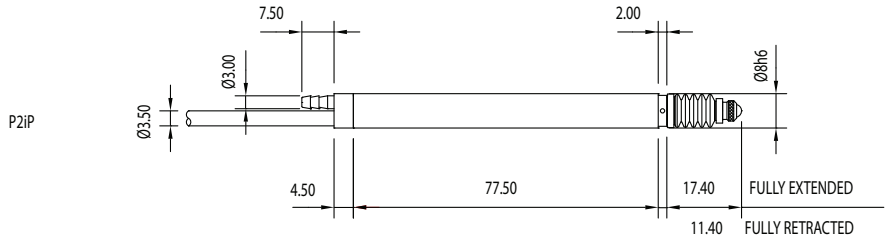
- Inductive measuring probes specially designed for measurement by comparison
- Available in 2 versions: spring push and pneumatic push
- Long life precision bearing guidance (tested up to 13 million cycles)
- Resolution <0.0001 mm
- Repeatability 0.15 µm
- Measuring range +/- 2mm and +/- 5 mm
- Compatible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

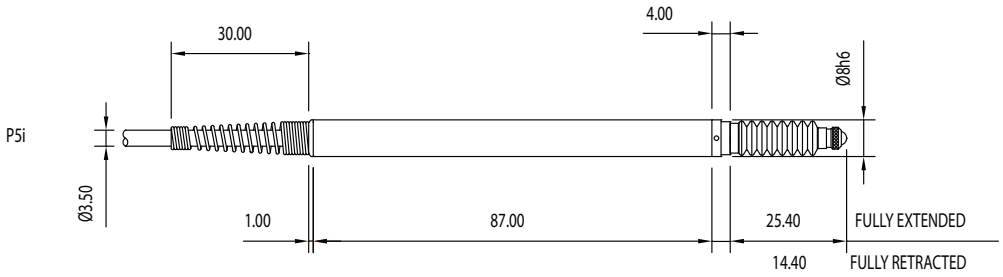


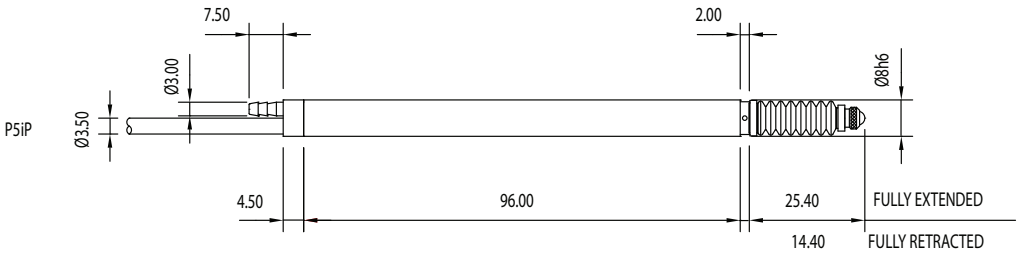
Inductive measuring probes

DIMENSIONAL DRAWINGS









Inductive measuring probes

TECHNICAL SPECIFICATIONS

	P2i	P2iP	P5i	P5iP
Travel mm	±2	±5	±2	±5
Pre-travel mm	0.15	0.3	0.15	0.3
Post-travel mm	0.85	0.85	0.7	0.7
Max. Error µm	2	2	5	5
Resolution	Digital : user selectable to <0.1um			
Repeatability µm	0.15	0.15	0.15	0.15
Moving mass g	3.4	3.4	3.7	3.7
Accuracy of reading %	0.3	0.3	0.3	0.3
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 / 0.8 Bar	0.7	0.85/0.4 Bar - 2/0.8 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.

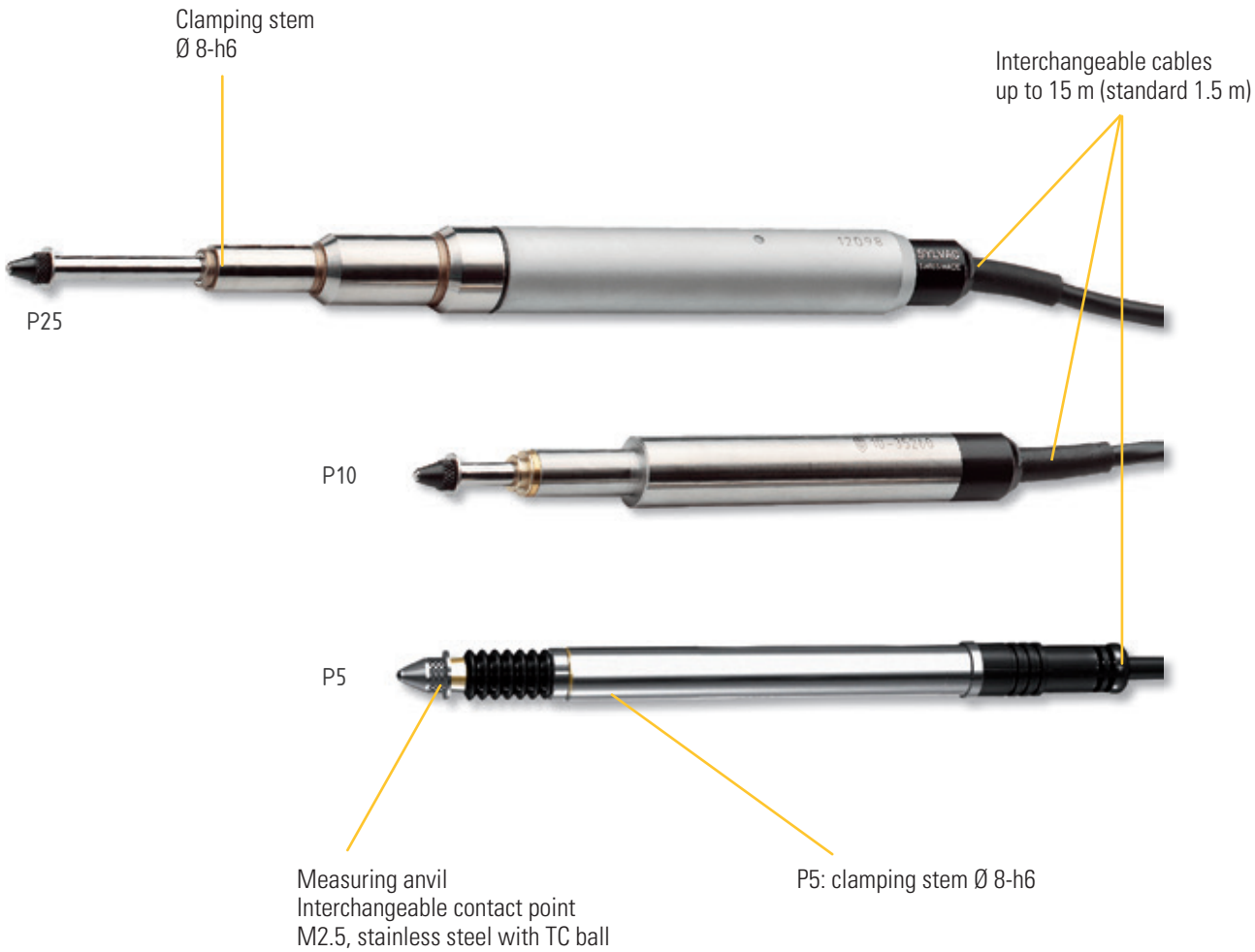
Inductives and Solartron probes connected to a M-Bus modul coupled with D400S.

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

Capacitive measuring probes

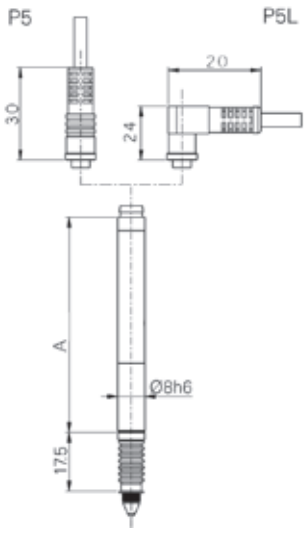
DESCRIPTION

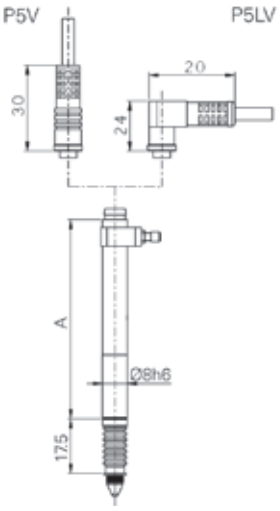
- Capacitive absolute measuring probes, plunger type
- Resolution 0.0001 mm
- Measuring range from 5 to 50 mm
- Plain bearing or ball bearing, integrated vacuum lifter on P5
- Compatible with all Sylvac digital units
- Excellent linearity
- Interchangeable cables on most types

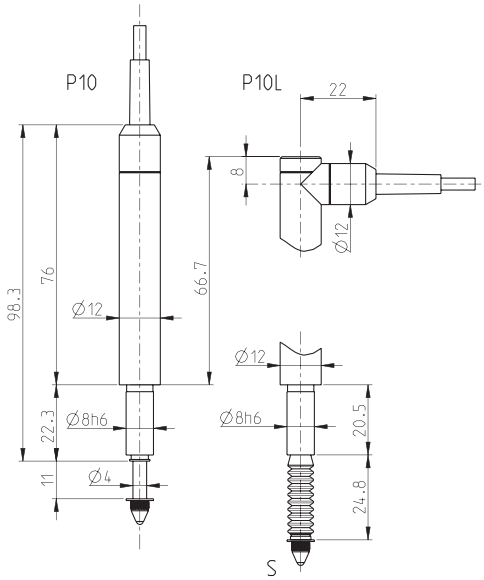


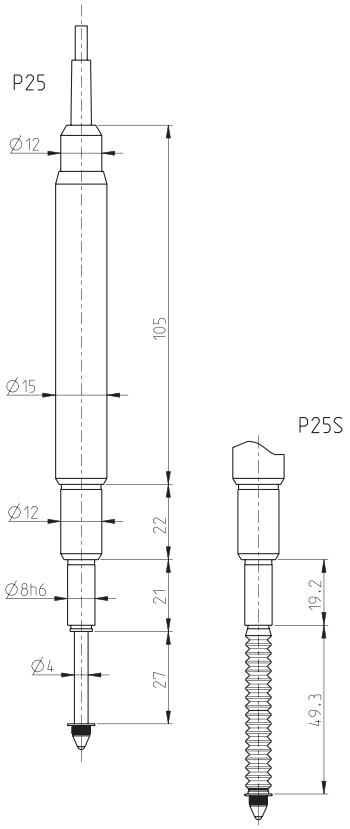
Capacitive measuring probes

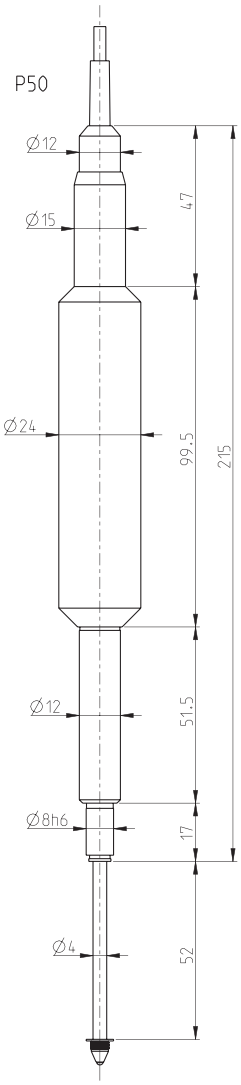
DIMENSIONAL DRAWINGS











P5/P5L - P5V/P5LV

Guiding axis	Measure A
Plain bearing	72
Ball bearing	64

Capacitive measuring probes

TECHNICAL SPECIFICATIONS

		P5	P10	P25	P50
Travel	mm	5	10	25	50
Pre-travel	mm	0.7	0.5	0.8	1
Max. Error [1]	µm	1	1	1.2	2.5
Repeatability	µm	0.2	0.2	0.2	0.4
Moving mass	g	3.7	4.1	9.6	15.3

[1] With Master unit. See as well the specifications of the pair Measuring probe/display unit.

MEASURING FORCE

		P5	P10	P10S	P25	P25S	P50
Standard	N	0.60-1.20	0.60-0.80	0.70-1.25	0.60-1.00	0.65-1.4	0.70 - 1.7
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	---	0.25

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

BASIC INSTRUMENT

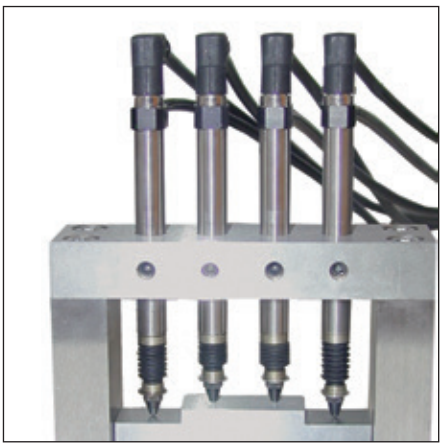
- Probe according to technical specifications
- Calibration certificate
- Cable 1.5 m
- Stainless steel contact point with tungsten carbide ball Ø 2 mm (905.2204)

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

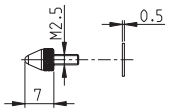
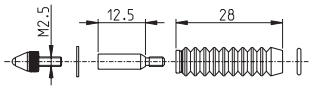
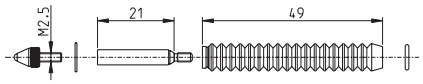
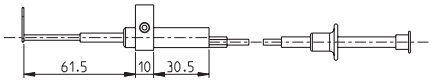
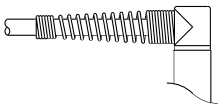


Combined probes for the measurement of several heights

Inductive probes connected to a D70S.

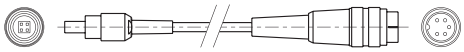
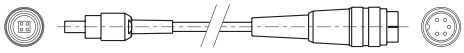
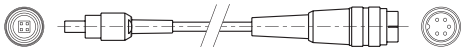
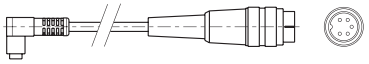
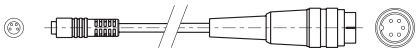
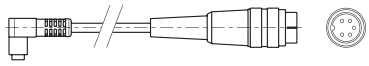
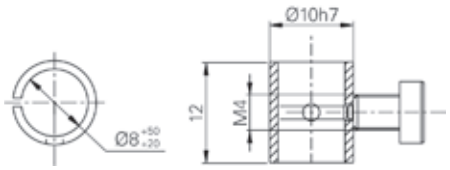
Measuring probes

ACCESSORIES

			P2i	P2iP	P5i	P5iP	P2	P5	P10	P25	P50
	**905.2204**	Stainless steel contact point M2.5 with TC ball probe (other contact points, see page 62)					●	●	●	●	●
	**901.2003**	Rubber boot and contact point set							●		
	**901.2004**	Rubber boot and contact point set								●	
	**901.2005**	Lifting device with photo-cable							●	●	
	901.2012	Tube Ø 4 mm / 2 mm, Length to be specified						●	●	●	●
	901.2013	Tube Ø 6 mm / 4 mm, Length to be specified						●	●	●	●
	901.2014	Double tube diameter 2 x 4 mm /2 mm, Length to be specified						●	●	●	●
	**901.5110**	Bridle 90°	●		●						

Measuring probes

ACCESSORIES

			P2i	P2iP	P5i	P5iP	P2	P5	P10	P25	P50
	**901.5002**	Cable 1.5 m							●		
	**901.5012**	Cable 1.5 m								●	
	**901.5022**	Cable 1.5 m									●
	**901.5032**	Cable 1.5 m bent							●		
	**901.5042**	Cable 1.5 m						●			
	**901.5052**	Cable 1.5 m bent						●			
	**905.2231**	Adapting socket + screw	●	●	●	●	●	●	●	●	●

Digital display

TABLE OF CORRESPONDENCES

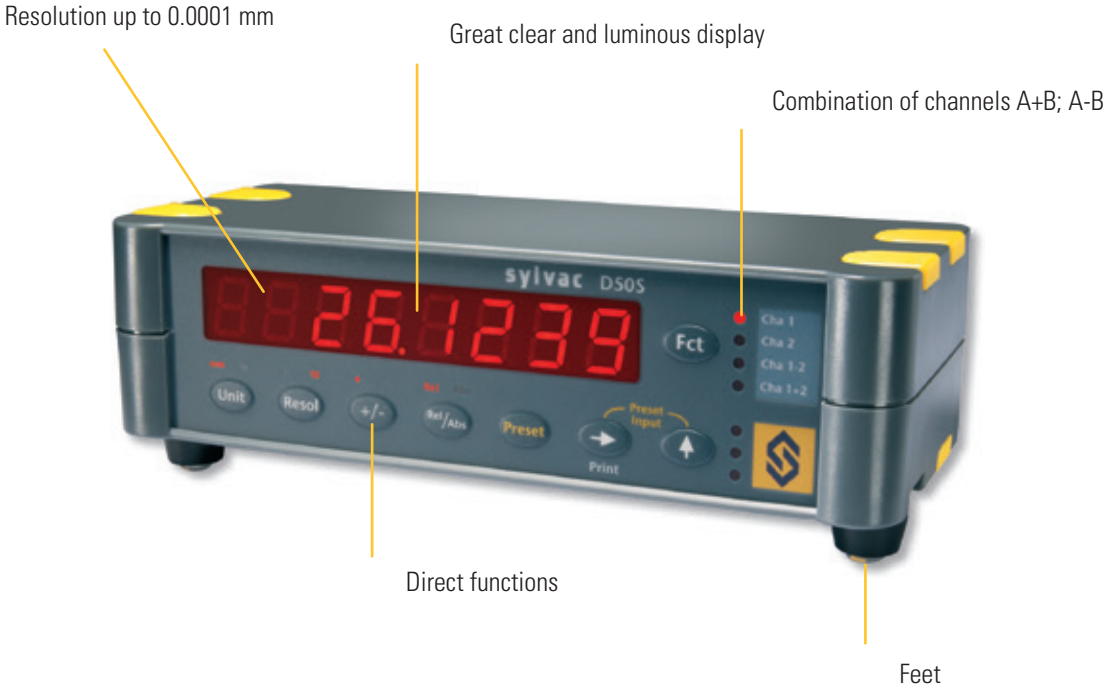
		D50S	D50S PRO	D60S PRO	D70S	D70H	D70I	D80S	D200S	D300S *)	D302	D302 a	D304	D304 a	D400S
Direct input	Capacitive probes	2	2	1	2 c)	2 H)	2 i)	1	8	2 (4)	2	2	4	4	0
	RS/USB instruments							1 / -	0	1 / 6					
	External contact	1	1	1	1	1	1	1	1	2	1	1	1	1	1
	Mbus									● 5)					●
Additional input	Probes							8 1)	24 2)	32 3)					99 9)
	USB instruments									30 4)					99 9)
	Analog display			1 5)	●	●	●								●
Output	RS 232	●	●	●	●	●	●	●	●	●					●
	RS 485									●	●	●	●	●	
	USB				● 10)	● 10)	● 10)		●	●	●	●	●	●	●
	Opto-coupled output								●	●	●	●	●	●	● 6)
	Analogic											●		●	
Functions	Direct zero setting	●	●	●	●	●	●	●	●	●					●
	Direct zero setting per channel	●	●	●	●	●	●	●	●	●					●
	Selection of resolution	●	●	●	●	●	●	●	●	●					●
	Selection of measuring direction	●	●	●	●	●	●	●	●	●					●
	PRESET	●	●	●	●	●	●	●	●	●					●
	Tolerance indicators			● 7)	●	●	●	●	●	●					●
	Classification (max 8 classes)									●					●
	Min, Max, Delta			●	●	●	●	●	●	●					●
	A ± B	●	●		●	●	●		●	●	●	●			●
	Mathematics functions								●	●			● 8)	● 8)	●
	Scanning				●	●	●		●	●					●
	Histogram									●					●
	Statistics									●					●
	Memorization								●	●					●
	Simultaneous display of the channels				●	●	●		●	●					●
	Dynamic measurement				●	●	●		●						●
	Calibration (max. 25 points)		●	●	●		●			●	●	●	●	●	●

1) with unit (s) additional (s) D108
2) with 3 D200S units
3) 32 probes with units D200S or maximum 32 with D302 / D304 or M-Bus
4) with USB-Hub powered
5) depending on model, see details on p.131
6) with modul MB-IO
7) with external display
8) A± B± C± D±, depending on model
9) Maximum 99 instruments on D400S through M-BUS
10) Mini-USB
c) capacitive, H) Heidenhain, i) 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)

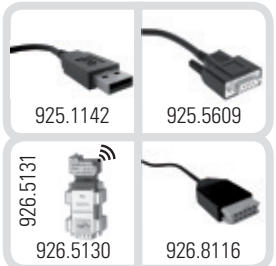


D50S PRO

Correction of linearity.
Higher precision

SWISS MADE

RS232

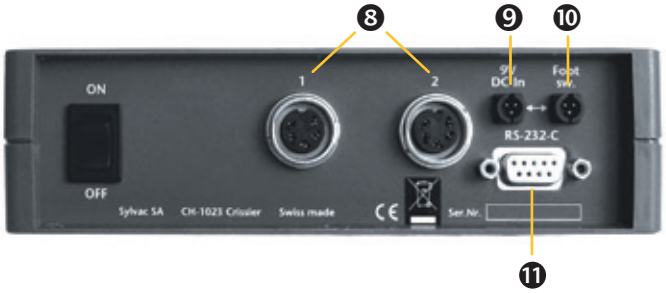


Digital display D50S

DISPLAY

- ❶ **Conversion mm/inch**
- ❷ **Selection of resolution**
- ❸ **Selection of measuring direction**
- ❹ **REL and ABS measurement**
- ❺ **PRESET function**
- ❻ **Data sending**
- ❼ **Selection of measuring mode: channel 1 ; channel 2 ; channel 1-2 ; channel 1+2**

- ❽ **Probe inputs**
- ❾ **Power supply connection**
- ❿ **External contact connection**
- ⓫ **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 / P50 : 3.9	P2 : 0.5 / P5 : 0.6 / P10 : 0.6 / P25 : 0.8 / P50 : 1.5
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2 / P50 : 0.4	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2 / P50 : 0.4
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 [1]	RS232 [1]
Programmable by PC		●	●

[1] see cables chapter

BASIC INSTRUMENT

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

Digital display D50S

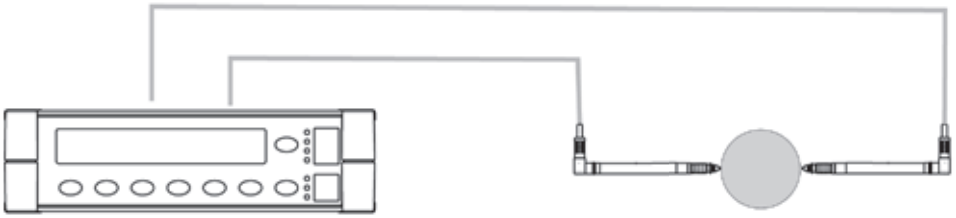
APPLICATIONS

Measuring a shaft with 2 probes (A+B)

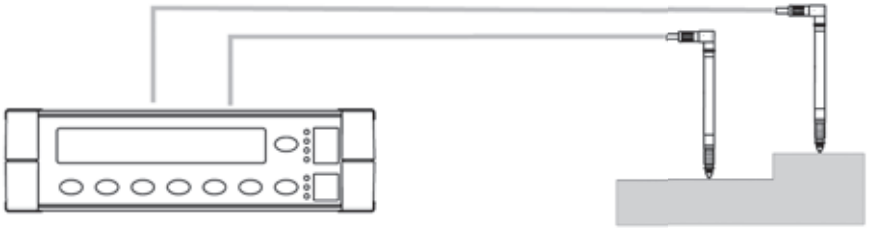
Simple measurement with one probe

COMBINATIONS OF PROBES

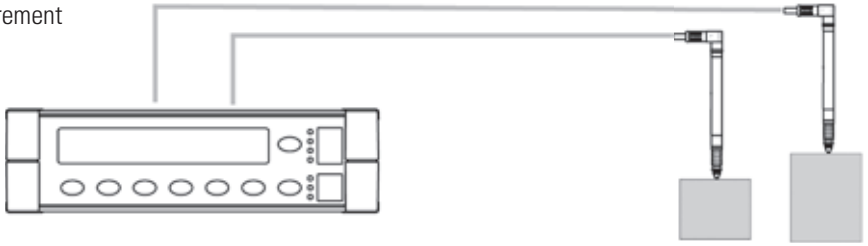
Diameter = 1+2



Difference = 1-2



Individual measurement

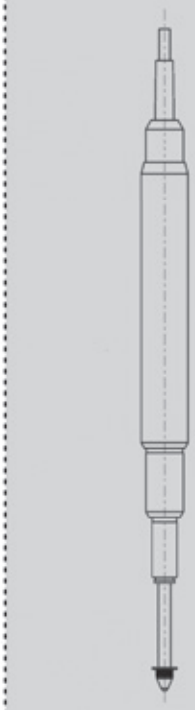


Digital display D50S

POSSIBILITIES OF CONNECTION

MAX. 2

2x



P2..P25P50

RS232C

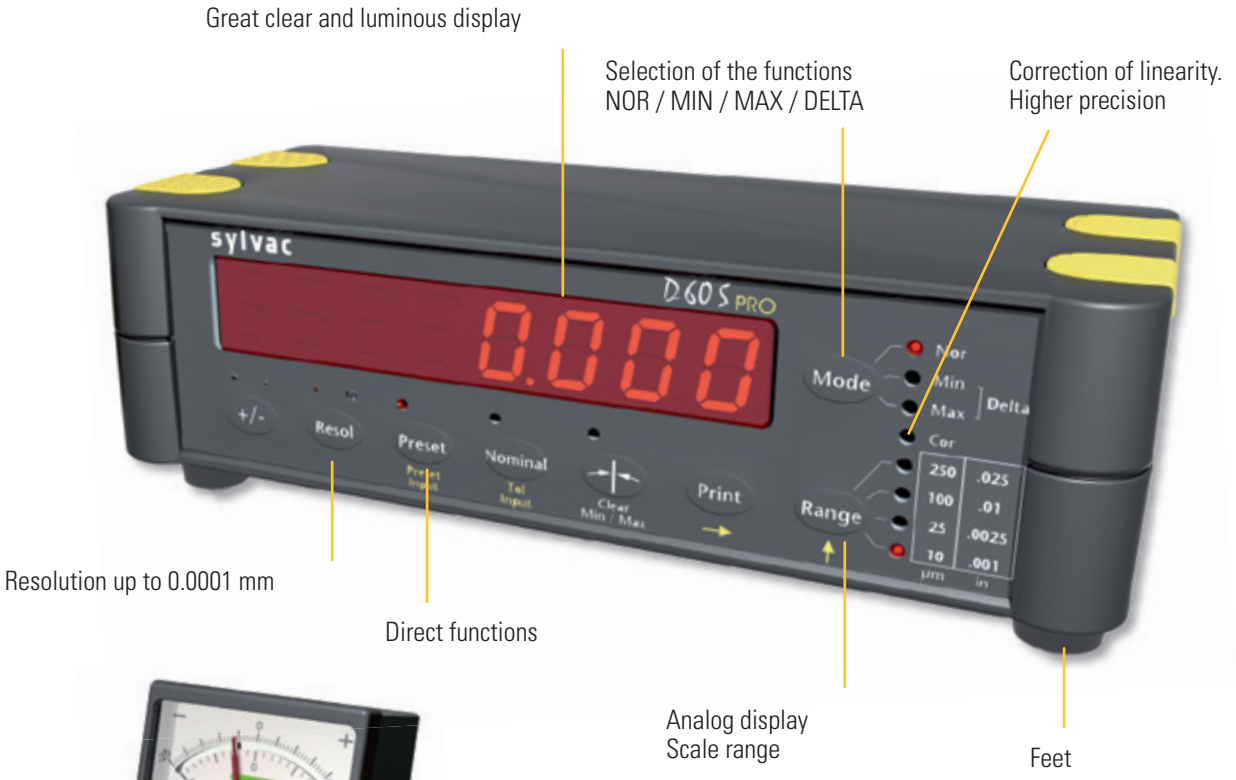
PROBE

SW1

Digital display D60S PRO

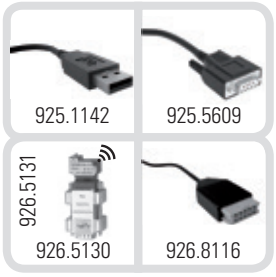
DESCRIPTION

- Digital display with 1 input for probe and 1 output for analog unit
- Data output RS232C
- Power supply by external unit
- Light and compact
- Ease of use
- Correction of linearity on probe channel



SWISS MADE

RS232

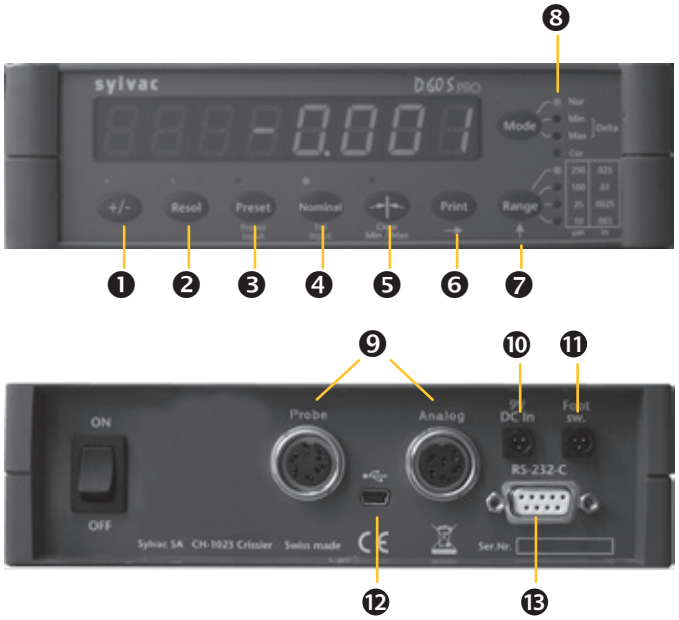


mini-USB

Digital display D60S PRO

DISPLAY

❶	**Selection of measuring direction**
❷	**Selection of resolution**
❸	**Preset function / Preset setting**
❹	**Nominal and tolerances setting**
❺	**Zero setting fo analog display or Min-Max**
❻	**Data transmission**
❼	**Tolerances range for analog display**
❽	**Probe measuring mode: NOR (static) / MIN / MAX /DELTA**
❾	**Probe input / Analog input**
❿	**Power supply connection**
⓫	**External contact connection**
⓬	**USB-mini**
⓭	**RS232 input / output**



TECHNICAL SPECIFICATIONS

		804.1070
Type		D60S PRO
Max. Error	µm	P2 :0.5 / P5 : 0.6 / P10 : 0.6 / P25 : 0.8 / P50 : 1.5
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2 / P50 : 0.4
Sizes	mm	Display unit: 180 x 75 x 50 Analog unit : 50 x 48.5 x 41.5
Weight	kg	0.3
Case		Terlend plastic
Protection according to IEC 60529		IP40
S_Connect		RS232 / USB mini [1]
Programmable by PC		●

BASIC INSTRUMENT

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

Digital display D60S PRO

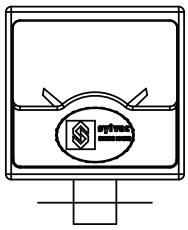
APPLICATIONS

Measuring stand with P2B, D60S PRO and analog display

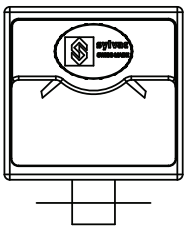
PS17 bench with D60S PRO and analog display

ANALOG UNIT

804.1071



804.1072



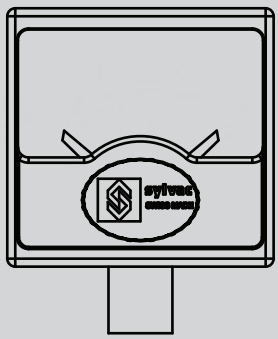
		804.1071	804.1072
Model		Needle axis at 6 o'clock	Needle axis at 12 o'clock
Overall dimensions	mm	50 x 48.4 x 41.5	
Case		Aluminium	
Protection according to IEC 60529		IP40	

Digital display D60S PRO

POSSIBILITIES OF CONNECTION

MAX.1

MAX.1

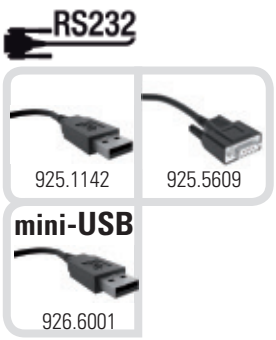


P2...P50

Digital display D70S/H/I

DESCRIPTION

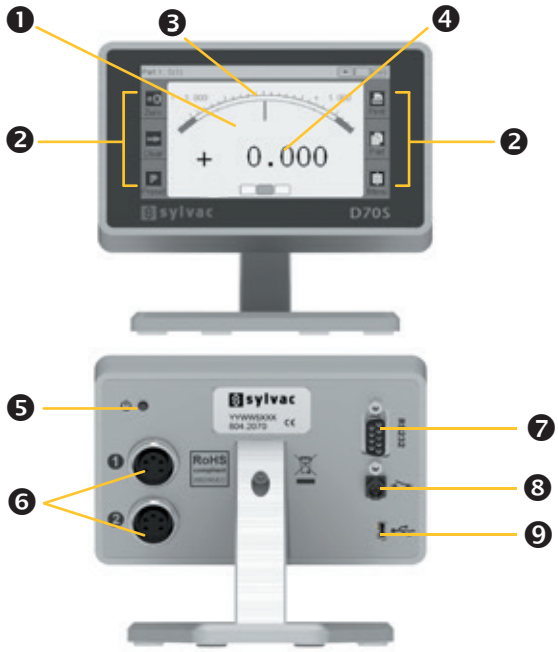
- 4"3 touch screen display
- Available in 3 versions:
  - D70S for Sylvac capacitive probes
  - D70I for Sylvac inductive probes (also compatible with Tesa and Mahr probes)
  - D70H for Heidenhain ST/MT probes (Mitutoyo and Magescale probes with adapter)
- All versions with 2 probe inputs
- Display resolution selectable up to 0.00001 mm
- 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

❶	**4.3" Touchscreen display**
❷	**User friendly interface**
❸	**Analogic display**
❹	**Digital display**
❺	**ON/OFF**
❻	**2 Capacitive / Inductive / 1VPP probes input (depending model)**
❼	**RS232 output**
❽	**1 external contact**
❾	**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
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
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
Programmable by PC		●

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

MAX.2

P10
P25
P50
...

D70S

MAX.2

Heidenhain
Spectro
I2 / 30
MT
I2/25
60/100
Certo
...

D70H

MAX.2

P2i
P5i
Tesa GT21
...

D70I

USB /RS232C

PROBES

SW1

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

SWISS MADE

RS232

925.1142

925.5609

926.5131

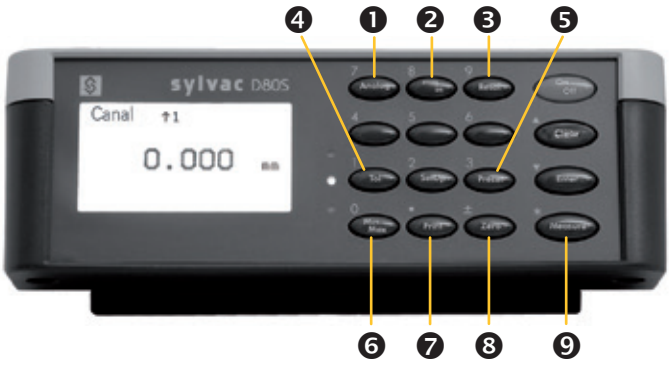
926.5130

926.8116

Digital display D80S

DISPLAY/SOFTWARE

❶	**Activation of analog display**
❷	**Selection of unit mm/inch**
❸	**Selection of resolution**
❹	**Tolerance indicators with LED**
❺	**PRESET function**
❻	**Display Min/Max/Delta**
❼	**Data sending**
❽	**Zero setting**
❾	**Configuration channel**
❿	**RS232 input/output**
⓫	**Analog and digital Opto-coupled output**
⓬	**External power supply connection**
⓭	**Capacitive probe input**
⓮	**Connection D102/D108 unit**
⓯	**External contact connection**



TECHNICAL SPECIFICATIONS

		804.1080
Type		D80S
Max. Error	µm	P2 : 1.5 / P5 : 1.6 / P10 : 1.6 / P25 : 1.9 / P50 : 3.9
Max. Error [1]	µm	P2 : 0.5 / P5 : 0.6 / P10 : 0.6 / P25 : 0.8 / P50 : 1.5
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2 / P50 : 0.4
Sizes	mm	227 x 77 x 132
Weight	kg	0.8
Case		Terlend Plastic
Protection rating according to IEC 60529		IP50
S_Connect		RS232 [2]
Programmable by PC		●

[1] Probe and unit calibrated
[2] see cables chapter

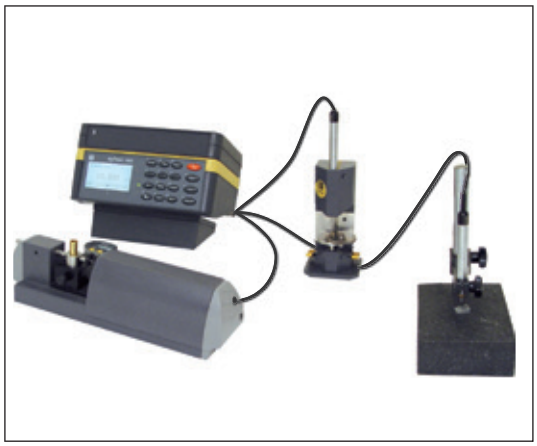
Digital display D80S

BASIC INSTRUMENT

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

APPLICATIONS

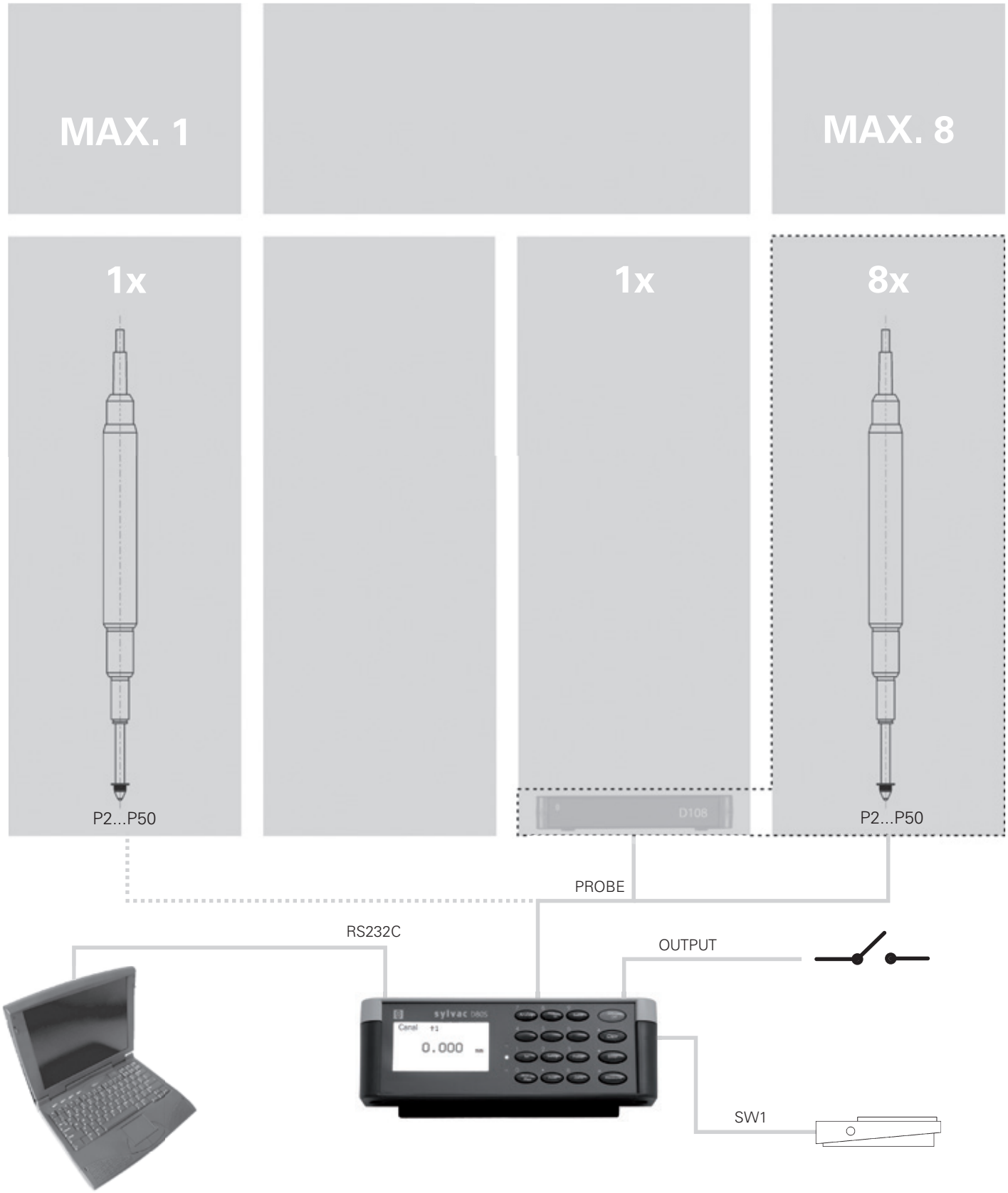
Measurement of 4 dimensions on 4 channels with one single probe



Using 3 measuring channels with 3 separated probes

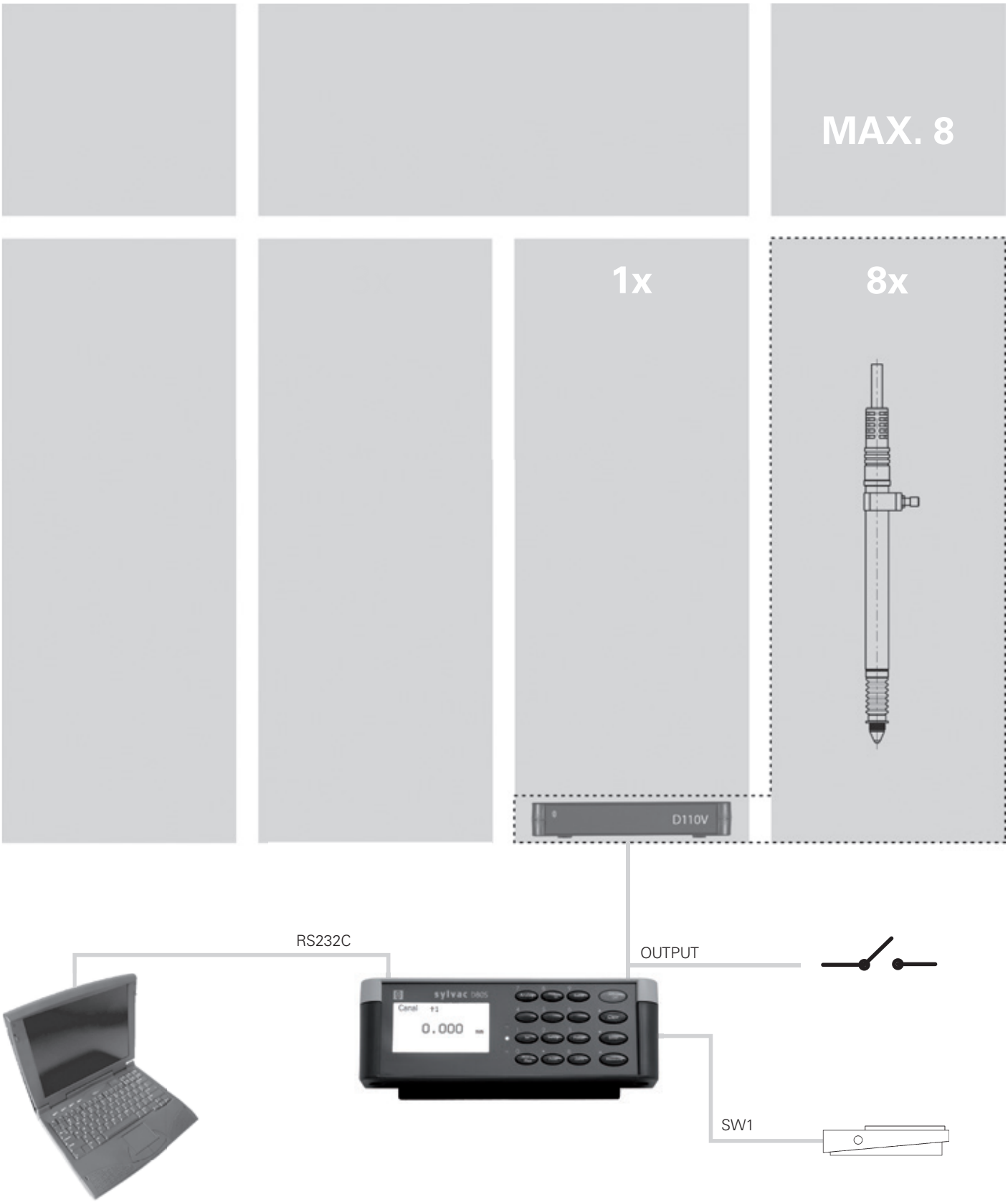
Digital display D80S

CONNECTION DIAGRAM



Digital display D80S

POSSIBILITIES OF D110V LIFTER



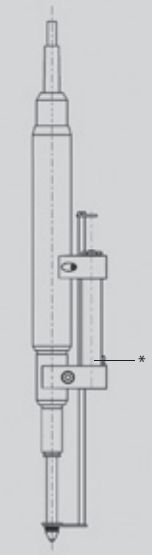
Digital display D80S

POSSIBILITIES OF D110 LIFTER

MAX. 8

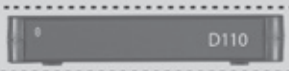
1x

8x



P10/P25 *901.2010

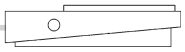
P50 *901.2011



RS232C

OUTPUT

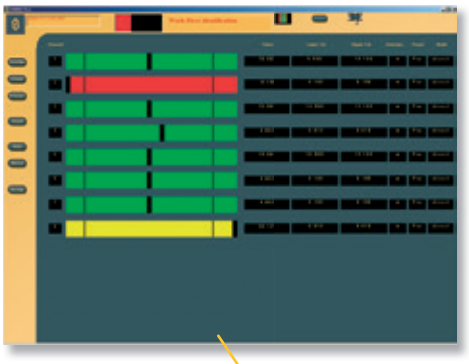
SW1



Multiplexer unit D200S

DESCRIPTION

- Multiplexer with 8 inputs (for Sylvac probes P2 to P50)
- 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

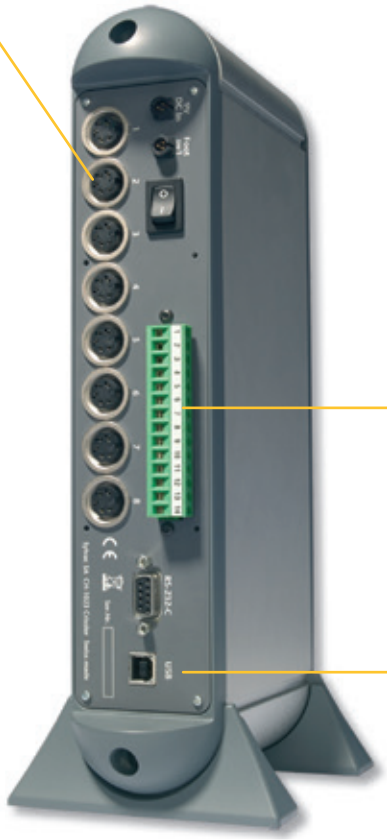


Software allowing the treatment of up to 24 channels simultaneously (bargraph)

8 inputs for Sylvac probes

Tolerance indicators

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



Opto-coupled digital output rack

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

SWISS MADE

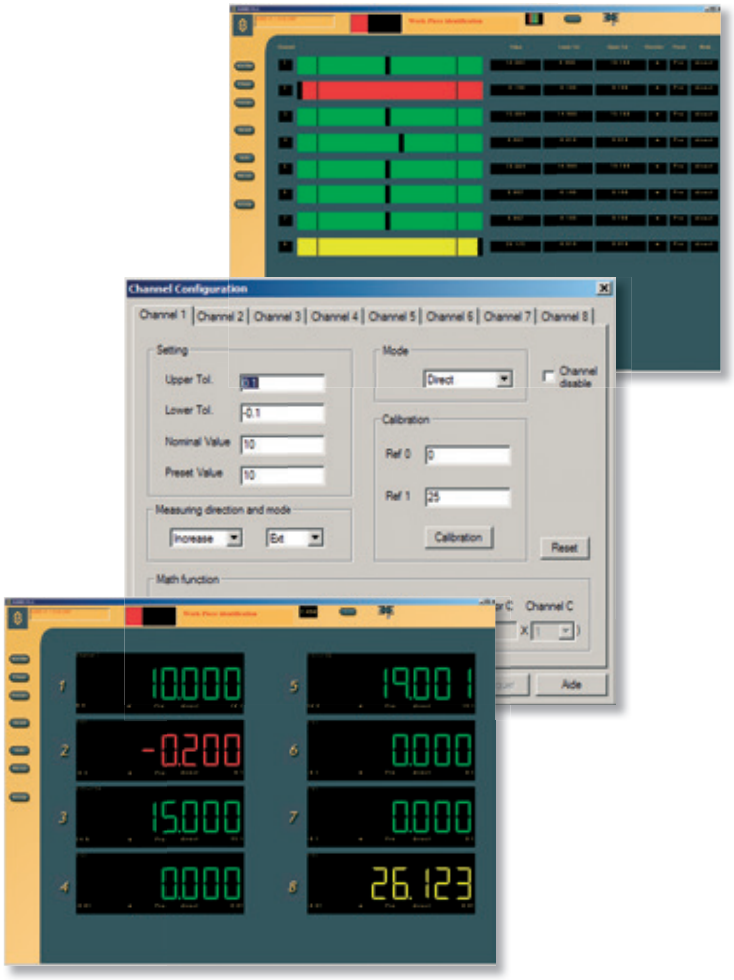
USB

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

		804.1200
Type		D200S
Max. Error	µm	P2 : 1.5 / P5 : 1.6 / P10 : 1.6 / P25 : 1.9 / P50 : 3.9
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2 / P50 : 0.4
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 [1]
Programmable by PC		●

[1] see cables chapter

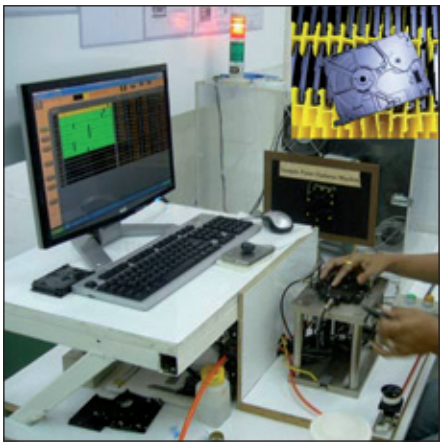
Multiplexer unit D200S

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

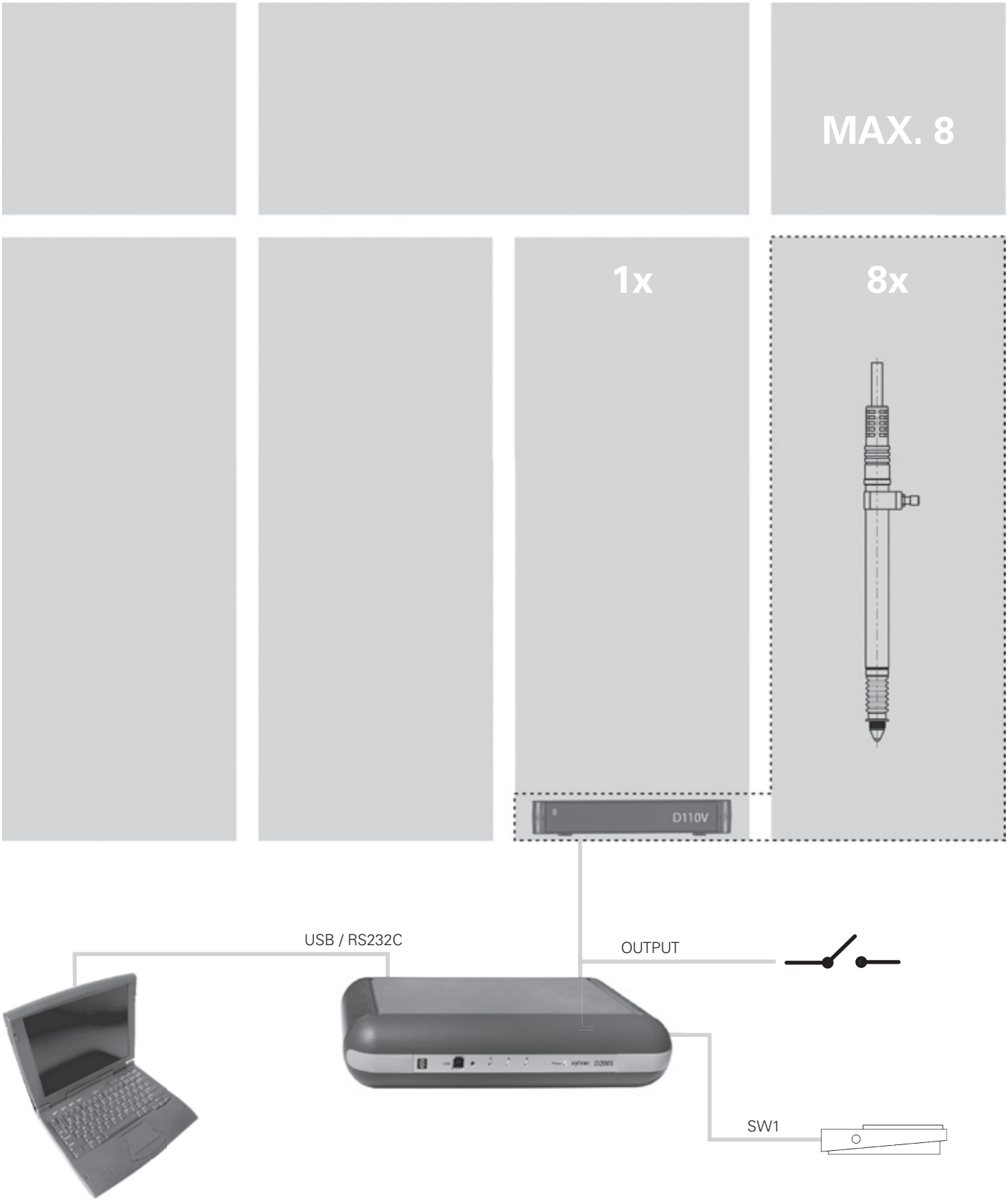
Dynamic measurement of several diameters, (OD and ID) of a shaft



Multi-gauging application

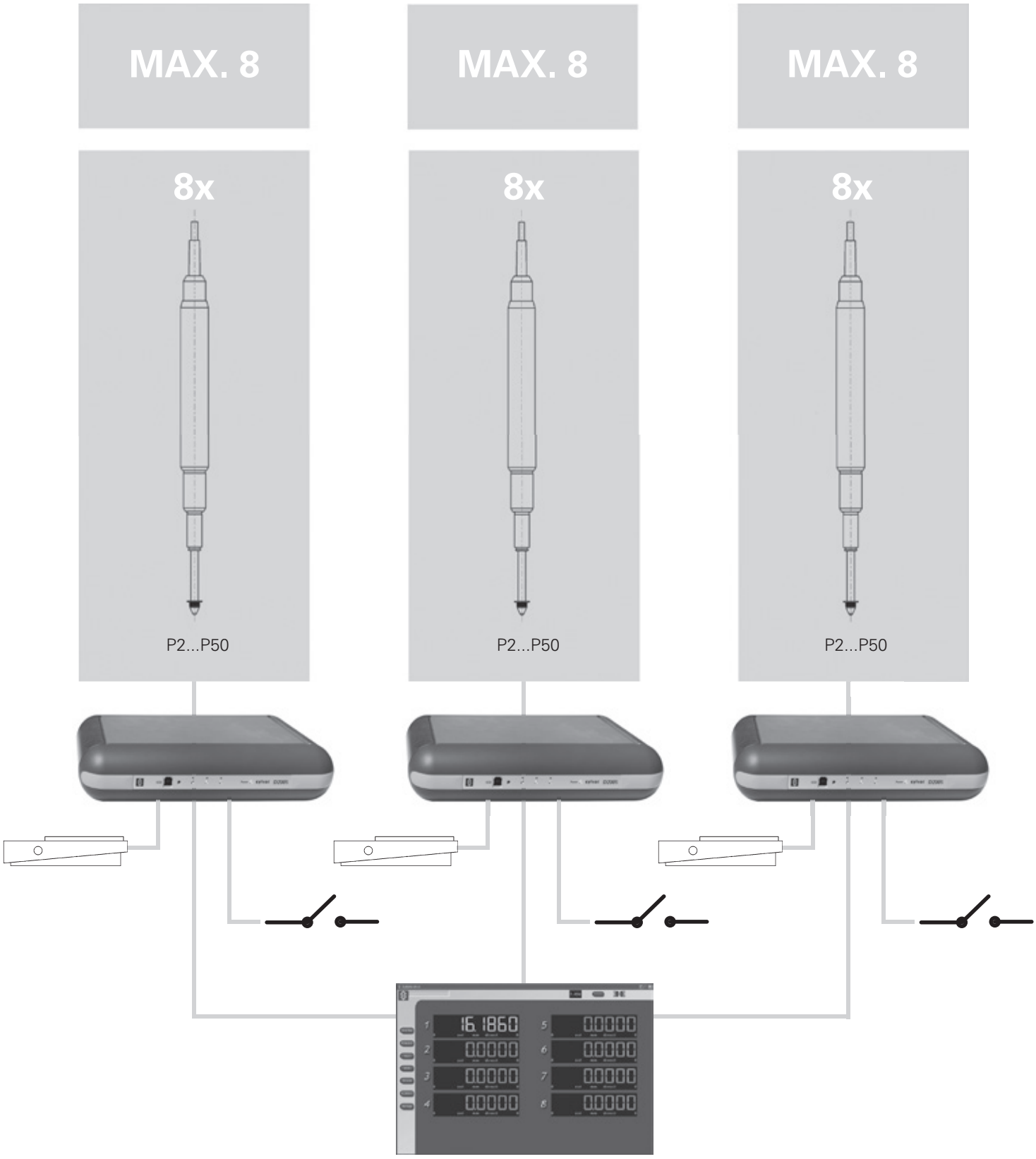
Multiplexer unit D200S

POSSIBILITIES OF D110V PNEUMATIC LIFTER



Multiplexer unit D200S

POSSIBILITIES OF CONNECTION



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 that 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® SMART instruments (USB dongle is required)

Large touchscreen 8.5" protected against liquids IP65

SWISS MADE

USB

804.1210

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

Ergonomic keyboard

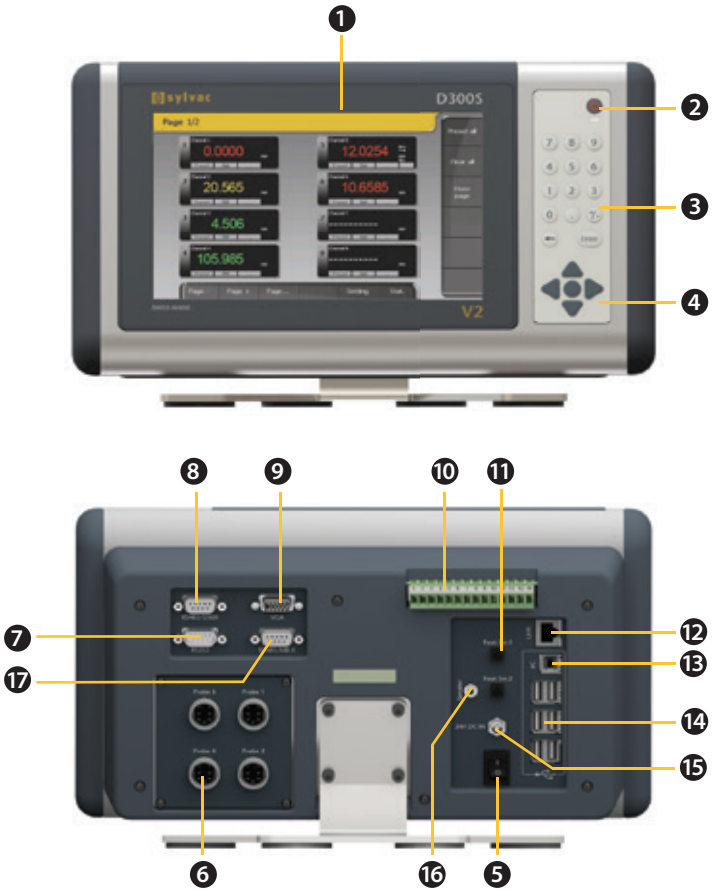
* Dongle Bluetooth® required

Digital display

D300S V2

INTERFACE | HARDWARE

❶	**Touchscreen 8.5 "**
❷	**ON/OFF button for LCD**
❸	**Numeric keyboard**
❹	**Navigation keyboard**
❺	**ON/OFF switch**
❻	**Capacitive probes inputs**
❼	**RS-232 instrument input**
❽	**RS-485 input**
❾	**VGA output**
❿	**Opto-coupled digital output**
⓫	**2 inputs for external contacts**
⓬	**RJ-45 Ethernet**
⓭	**USB Device connector**
⓮	**6 USB Host inputs**
⓯	**24VDC connector**
⓰	**Audio jack connector**
⓱	**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 / P50 : 3.9		P2i / P5i / P10i
Max. Error [1]	µm	P2 : 0.5 / P5 : 0.6 / P10 : 0.6 / P25 : 0.8 / P50 : 1.5		---
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2 / P50 : 0.4		---
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		●		

[1] Probe and unit calibrated
[*] Extandable 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

Digital display D300S V2

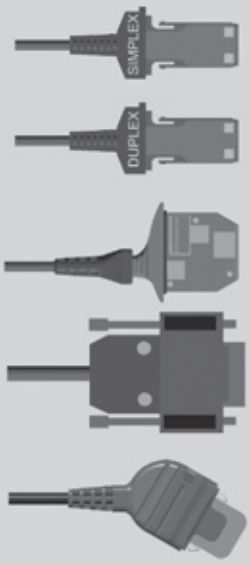
POSSIBILITIES OF CONNECTION WITH ACCESSORIES

MAX. 6
Power supplied by D300S

MAX. 30
Power supplied by USB-HUB

MAX. 30
Via D200S

6x USB
1x RS-232

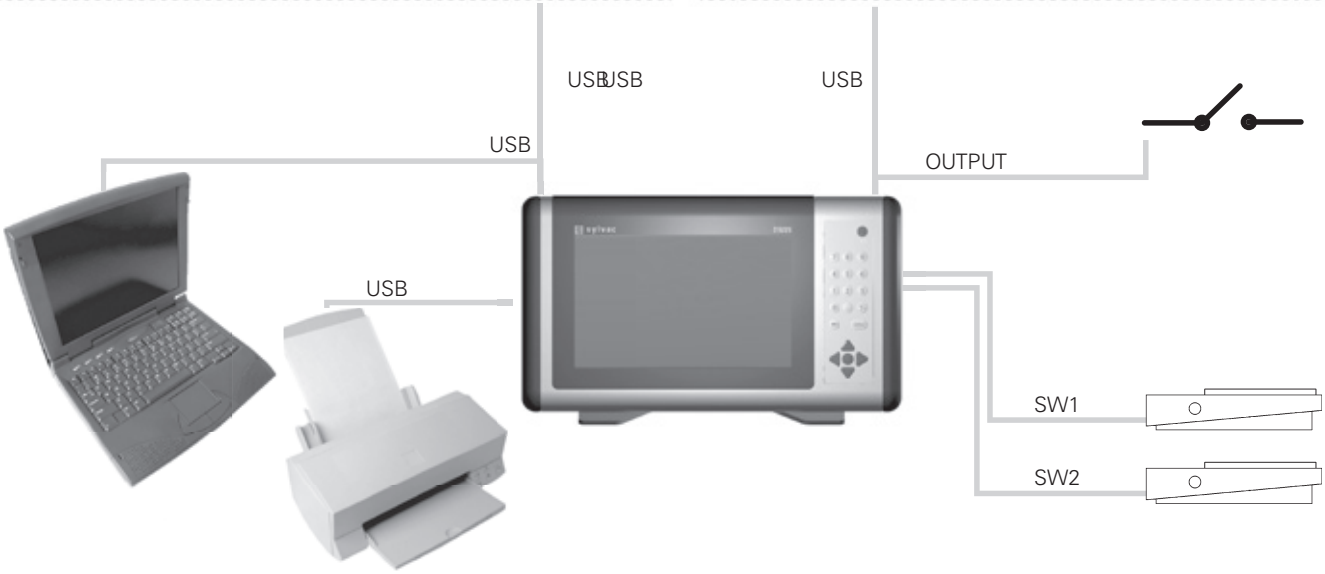


4x

D200S

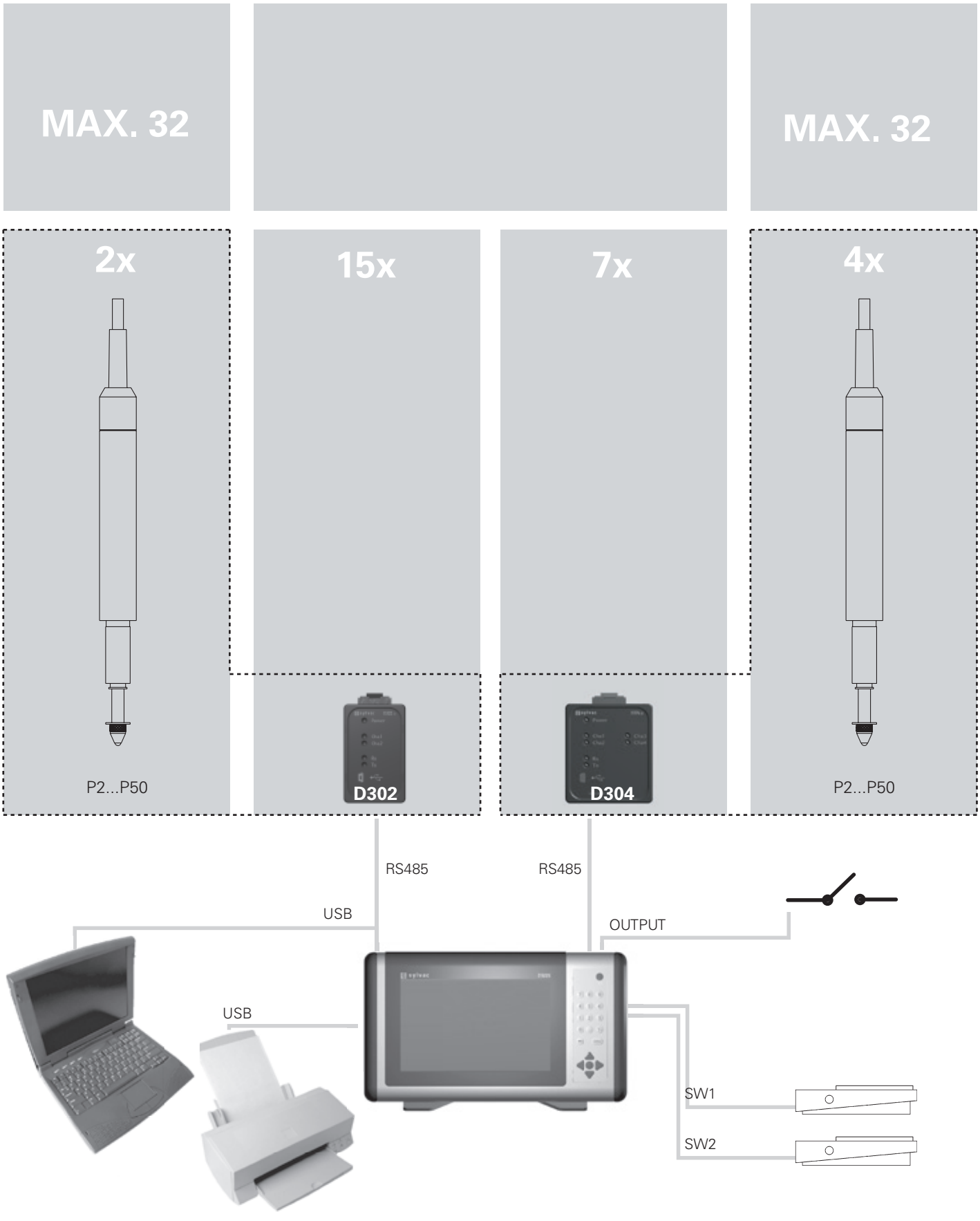
8x

P2...P50



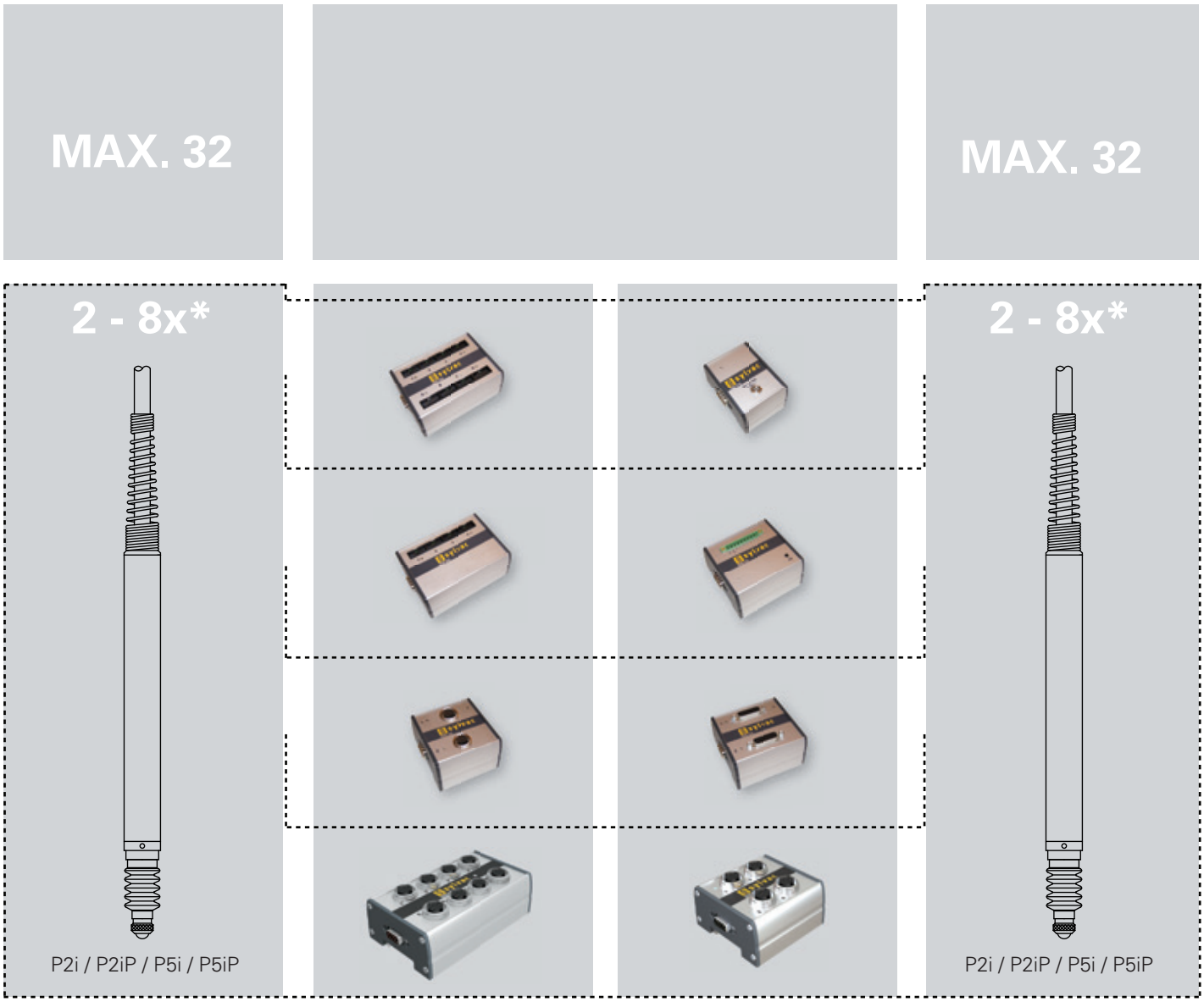
Digital display D300S V2

POSSIBILITIES OF CONNECTION WITH ACCESSORIES

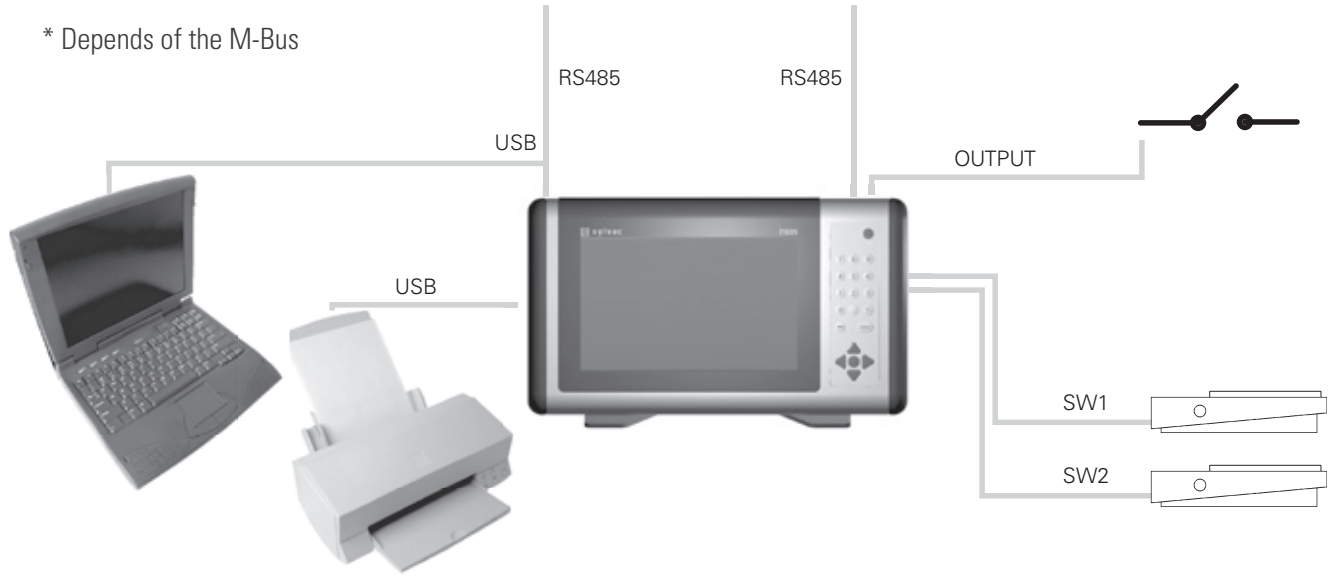


Digital display D300S V2

POSSIBILITIES OF CONNECTION WITH ACCESSORIES



* Depends of the M-Bus



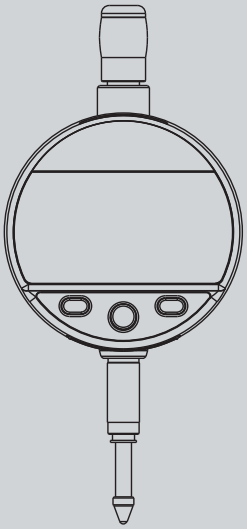
Digital display D300S V2

POSSIBILITIES OF CONNECTION WITH ACCESSORIES

MAX. 8

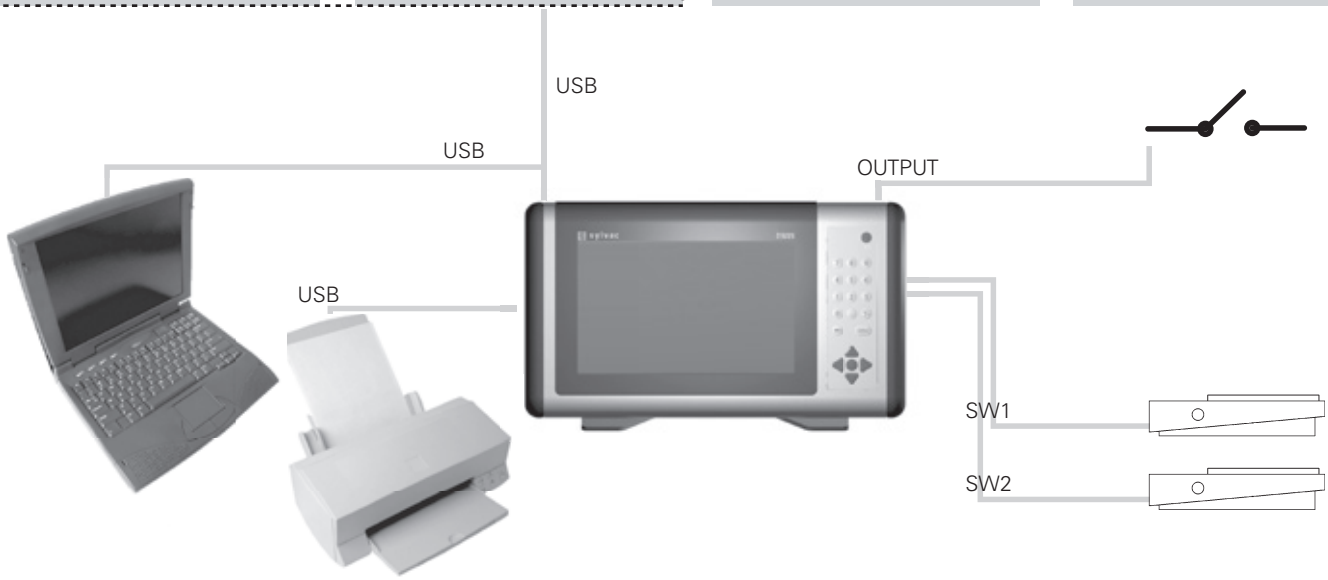
Instruments

Bluetooth SMART



1x

981.7100



Digital display D400S

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

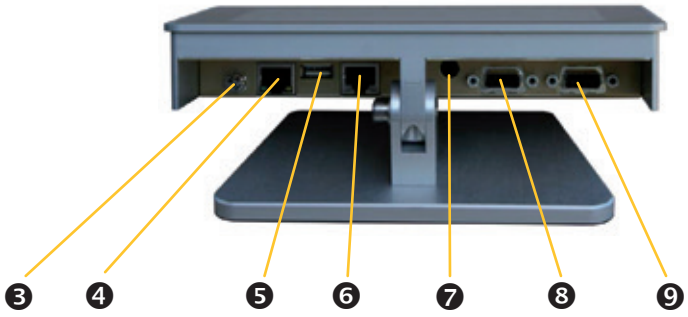
804.1210

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		●

Digital display D400S

BASIC INSTRUMENT

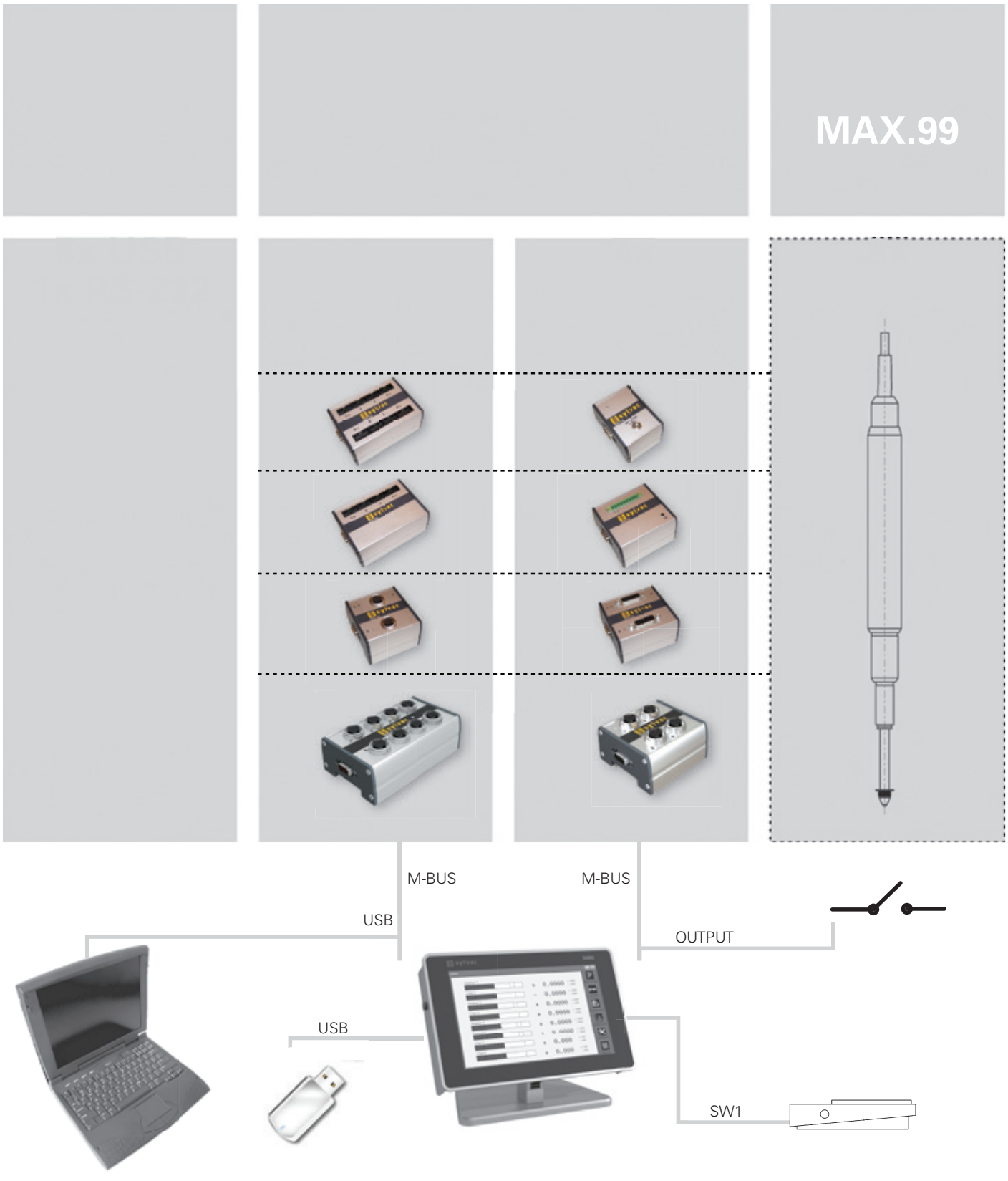
- Unit according to technical specifications
- External contact (foot-pedal)
- Charging unit
- Instruction manual

APPLICATIONS

Probes connection through M-BUS inputs

Digital display D400S

POSSIBILITIES OF CONNECTION WITH ACCESSORIES



Multiplexer unit D302 / D304

DESCRIPTION

- Multiplexing unit with 2 or 4 inputs for Sylvac probes P2 à P50
- Dynamic measurement (10 à 20 meas./Sec. according to resolution)
- Perfect solution for multi-gauging system
- Analog output for PLC connection
- Standalone use possible

SWISS MADE

RS-485

925.5609

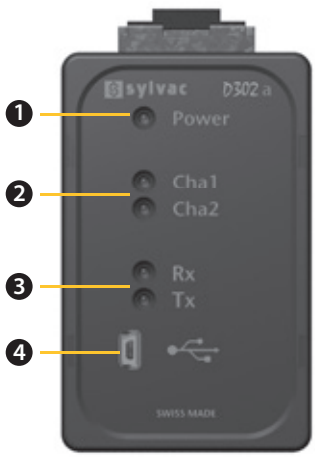
USB mini

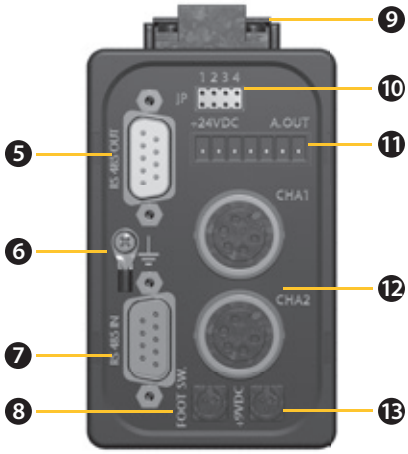
804.1210

Multiplexer unit D302 / D304

HARDWARE DESCRIPTION

1. **LED Power**
2. **LEDS 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. **Analogic 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 / P50 : 3.9			
Max. Error [1]	µm	P2 : 0.5 / P5 : 0.6 / P10 : 0.6 / P25 : 0.8 / P50 : 1.5			
Repeatability	µm	P2 : 0.2 / P5 : 0.2 / P10 : 0.2 / P25 : 0.2 / P50 : 0.4			
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

Multiplexer unit M-Bus

DESCRIPTION

- Muliplexer 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

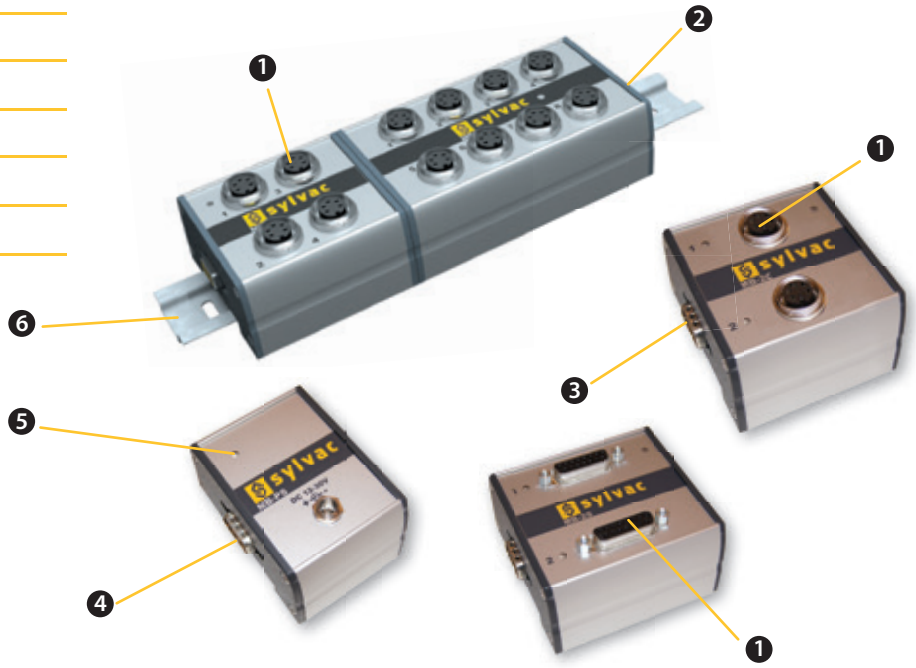
RS-485

925.5609

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

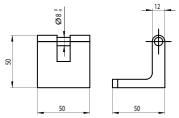
	804.2102	804.2104	804.2108	804.2122	804.2114	804.2118	804.2130	804.2140
Modele	MB-2C	MB-4C	MB-8i	MB-2S	MB-4D	MB-8D	MB-IO	MB-PS
Instrument type	Sylvac capacitive probes		Inductive	Heidenhain probes	Digimatic			
Overall dimensions mm	57x74x42	82x74x42	131x74x44	82x74x43	107x74x39	107x74x39	82x74x39	52x74x42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

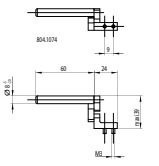
BASIC INSTRUMENT

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

Display units

ACCESSORIES





		D50S	D60S	D70S	D70H	D70I	D80S	D200S	D300S	D302 D304	D400S
904.1108	D108-additional 8 input unit for probes							●			
904.1112	D110V-control unit with 16 vacuum outputs							●	●	●	
904.4000	Charging set 100-240V / 9V		●	●				●	●		●	
904.4001	EUR cable included in 904.4000		●	●				●	●		●	
904.4002	UK cable included in 904.4000		●	●				●	●		●	
904.4003	USA/JPN cable included in 904.4000		●	●				●	●		●	
804.4000	Charging set 100-240V / 24V									●		
904.4001	EUR cable included in 804.4000									●		
904.4002	UK cable included in 804.4000									●		
904.4003	USA/JPN cable included in 804.4000									●		
804.4010	Charging set 100-240V / 24V											
904.4011	EUR cable included in 804.4000											●
904.4012	UK cable included in 804.4000											
904.4013	USA/JPN cable included in 804.4000											
904.4101	External contact (footpedal)		●	●	●			●	●	●	●	
904.4102	Footpedal (jack)					●	●					●
904.6001	Dust cover							●		●		
804.1211	Connection cable D200S - D110/V								●			
804.1073	Table stand for D60S analog display 804.1071 and 804.1072			●								
804.1074	Arm to fix D60S analog display on PS17 bench			●								

Dial gauge testing stand M3

DESCRIPTION

- Suitable for testing dial gauges plunger type and test indicators
- Allows the use of 2 calibrated measuring probes (like P10 and P50) (P10 calibrated on channel 1 and P50 calibrated on channel 2)
- Testing system according to ABBE principle
- Can be used in vertical and horizontal position
- Ceramic gauges blocs
- Direct status from the instrument during checking
- Integrated standards
- Creation of personalized certificates of inspection
- Fast and slow approach speeds
- Visualization at any time of the control status
- Control of digital instruments with direct connection

SWISS MADE

RS232

926.6621 926.5609

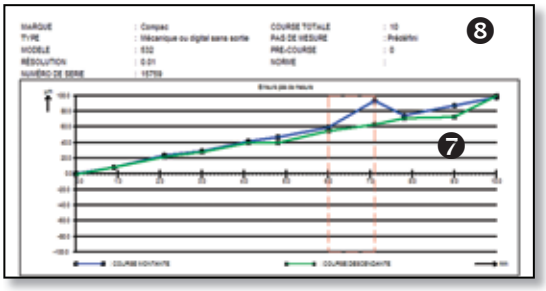
1) PC not included

Dial gauge testing stand M3

DISPLAY/SOFTWARE

1. **Display the curves of measurement**
2. **Check the error and repeatability**
3. **Creation and management of instrument groups**
4. **Fast access to all of stored instruments**
5. **Integrated standards**
6. **Personalisation of the standards**
7. **Display the measured values**
8. **Possibility to customize the certificate**

❶



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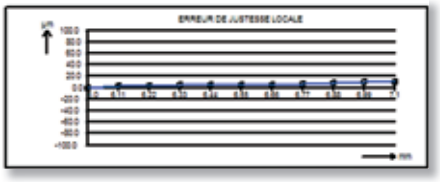
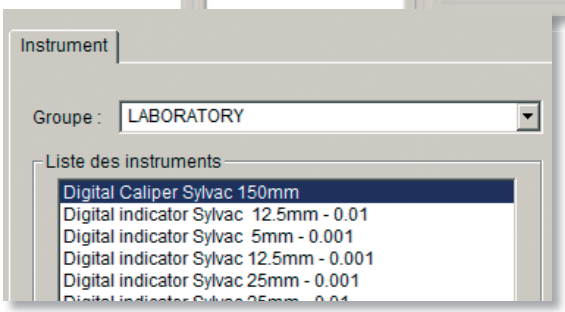
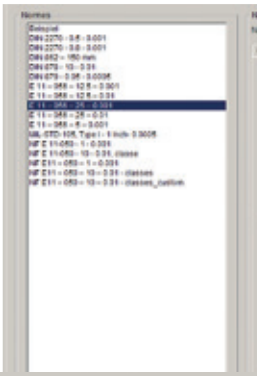


❸



❹

❺



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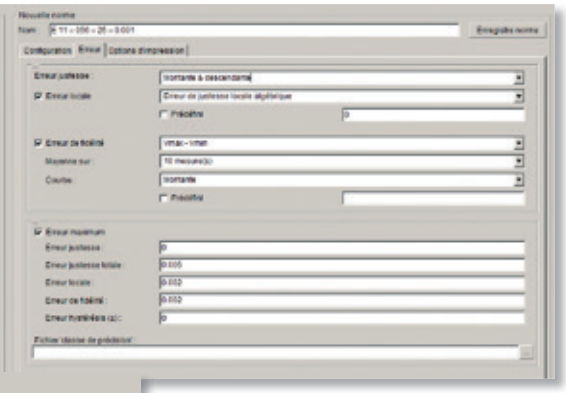


TECHNICAL SPECIFICATIONS

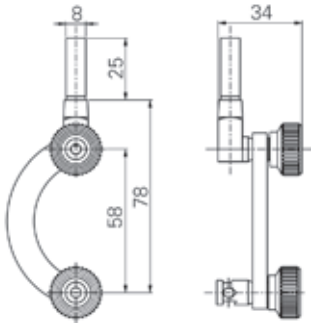
		809.1303	809.1301	809.1302
Measuring range	mm	M3 Kit 10 mm	M3 Kit 25 mm	M3 Kit 50 mm
Max. Error	µm	0.6	0.8	1.5

Dial gauge testing stand M3

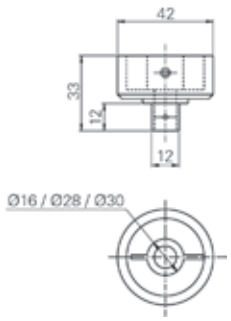
BASIC INSTRUMENT

- Stand M3 (909.1300)
- Ceramic bloc gauges
- Thermal protection of the probe reference
- D50S PRO + probe, calibrated
- Cable RS232C (925.5609)
- Charging unit according to country (904.4010 / 11 / 12 /13)
- External contact (foot-pedal 904.4101)
- CD- with inspection software SYCOPRO II (981.7124)
- Accessory for lever indicators (909.2010)
- Instruction manual

ACCESSORIES



909.2010	Clamping device for test indicator



909.2011	Clamping device for dial gauges Ø 16 / 28 / 30 mm

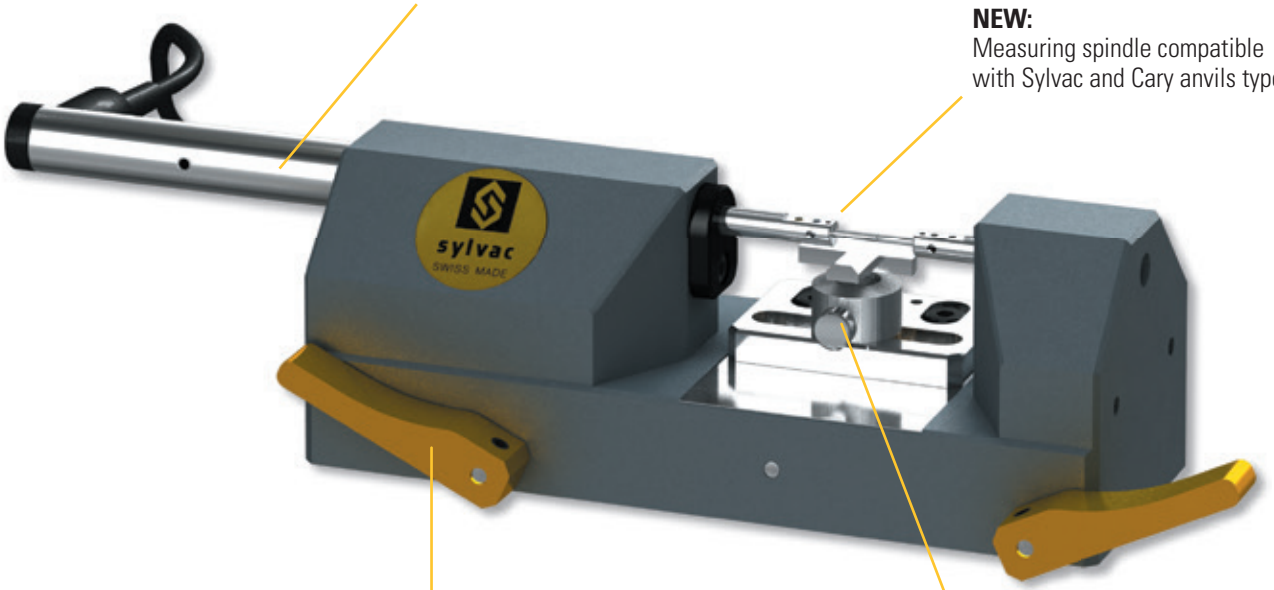
Measuring bench table PS15

DESCRIPTION

- Small horizontal or vertical bench table designed to easily and quickly check small parts up to 20 mm
- **Measuring spindle guided by linear ball bearing**
- The measured value will be displayed either by a Sylvac digital dial gauge range 12.5mm, up to 0.0001mm resolution or by a Sylvac measuring probe P10 (P10L) linked to a digital display unit. Using a pair display unit / measu ring probe an overall accuracy of 0.6 µm and a repeatability of 0.2 µm can be reached.
- This bench table can be equipped with different kind of tables as well as with several types of anvils of any shapes
- Wide choice of special applications can be found on our specific flyer «Measuring benches PS15-16-17»

Flexible device thanks to the Ø 8 mm

NEW:
Measuring spindle compatible with Sylvac and Cary anvils type



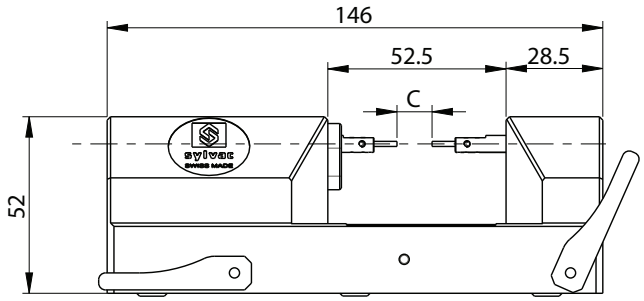
Equipped with two retraction levers (left and right)

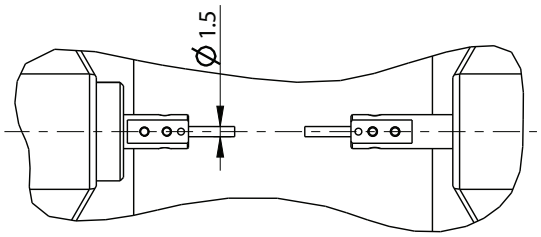
3 axis adjustable table (option)

SWISS MADE

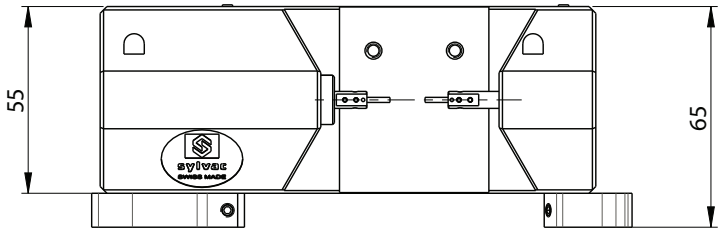
Measuring bench table PS15

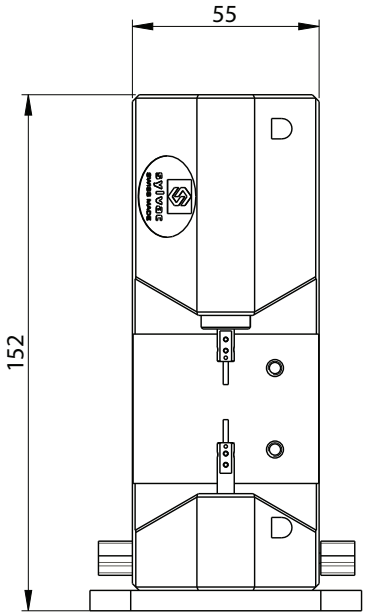
DIMENSIONAL DRAWINGS

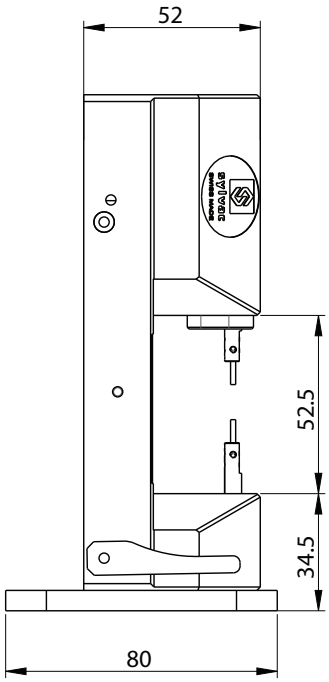


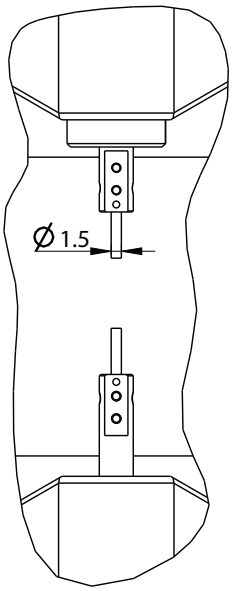


PS15 BH

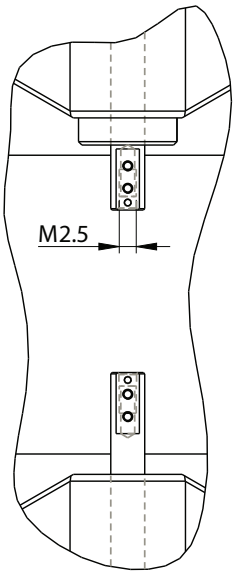








PS15 BV+



PS15 BV

C = Capacity range (see following page)

Measuring bench table PS15

TECHNICAL SPECIFICATIONS

		808.1215	808.1216	808.1218
Type		PS15BH	PS15BV	PS15BV +
Max. capacity C	mm	20	20	20
Measuring range	mm	10	10	10
Adjustable measuring force	N	0.3 - 1.0	0.3 - 1.0	0.3 - 1.0
Weight	kg	1.8	1.8	1.8
Measuring direction		Horizontal	Vertical	Vertical
Anvils fixation		Ø 1.5 mm	M2.5	Ø 1.5 mm
Cary Compatibility		●	●	●

BASIC INSTRUMENT

PS15BH

- Instrument according to technical specifications
- Instruction manual
- Measuring anvils Ø 1.5 mm (908.2175)
- Allen keys 2 and 2.5 mm

PS15BV+

- Instrument according to technical specifications
- Instruction manual
- Measuring anvils Ø 1.5 mm (908.2175)
- Allen keys 2 and 2.5 mm

PS15BV

- Instrument according to technical specifications
- Instruction manual
- Measuring anvils Ø 5 mm, M 2.5 (905.2201)
- Allen keys 2 and 2.5 mm

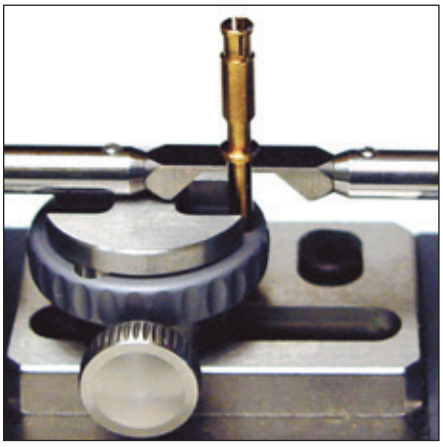
The standard anvils are not supplied with special orders including specific anvils

TABLES AND ANVILS

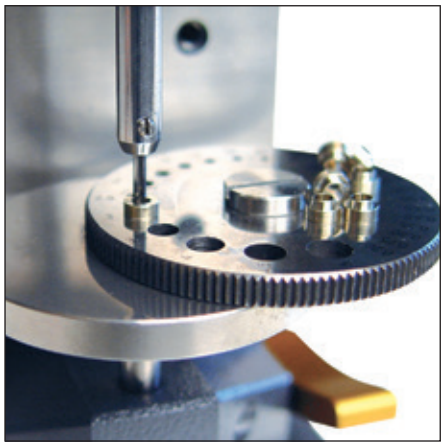
Refer to pages 158-162

Measuring bench table PS15

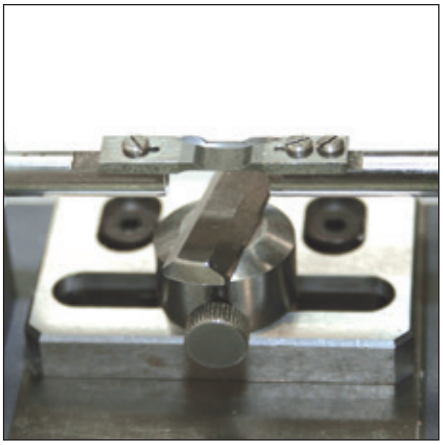
APPLICATIONS



XYZ table with plate with fine adjustment. On request



Measurement of small parts with PS15V+and rotation 25 holes support



Special anvils

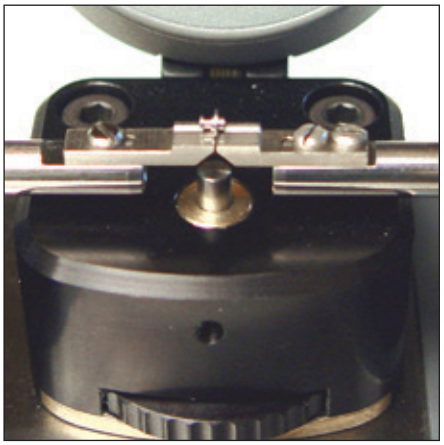
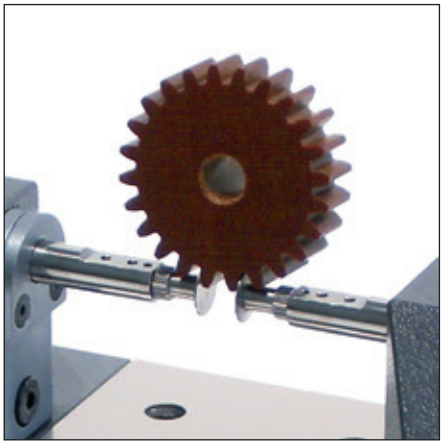
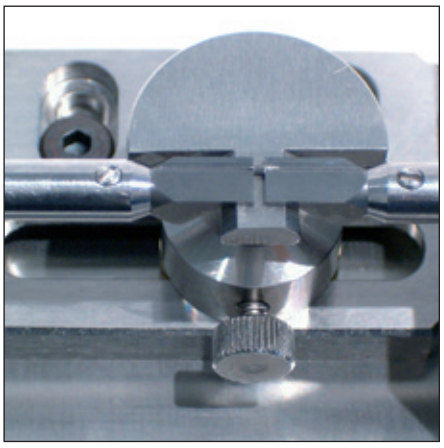


Table with plate Ø 3 mm and fine adjustment. Indication of the height with S233

Multi-functional measuring station



Gear measuring anvils. On request



Standard XYZ table and knife-shape anvils with V

Measuring bench table PS16

DESCRIPTION

- The bench tables "to size" PS16 are designed to check internal dimensions up to 70 mm and external up to 50 mm
- The VS and LVS versions have an integrated display as well as an opto - RS232 output
- The VP and LVP versions have an integrated P25 or P50 Sylvac probe. The measured value will be displayed on a D50S, D80S and D100S display unit
- These bench tables can be equipped with different kind of tables to fit your needs as well as with several types of anvils of any shapes
- A ball bearing, an adjustable and reversible measuring force, as well as many other features and accessories make these tables a must for your workshop or your inspection room
- Adjustable measuring force
- Data output Opto-RS/ USB
- Standard measuring anvils Ø 6.5 mm
- A wide choice of special applications can be found on our specific flyer «Measuring benches PS15-16-17»

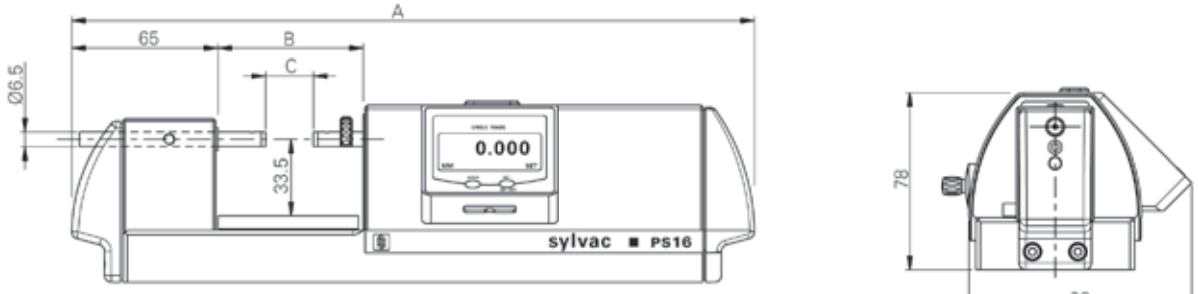
SWISS MADE

OPTO VS

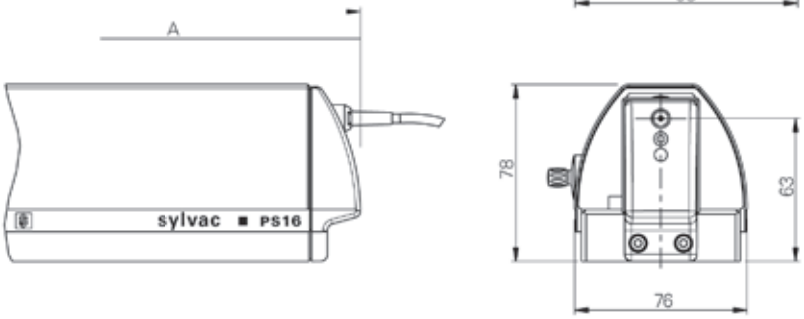
Measuring bench table PS16

DIMENSIONAL DRAWINGS

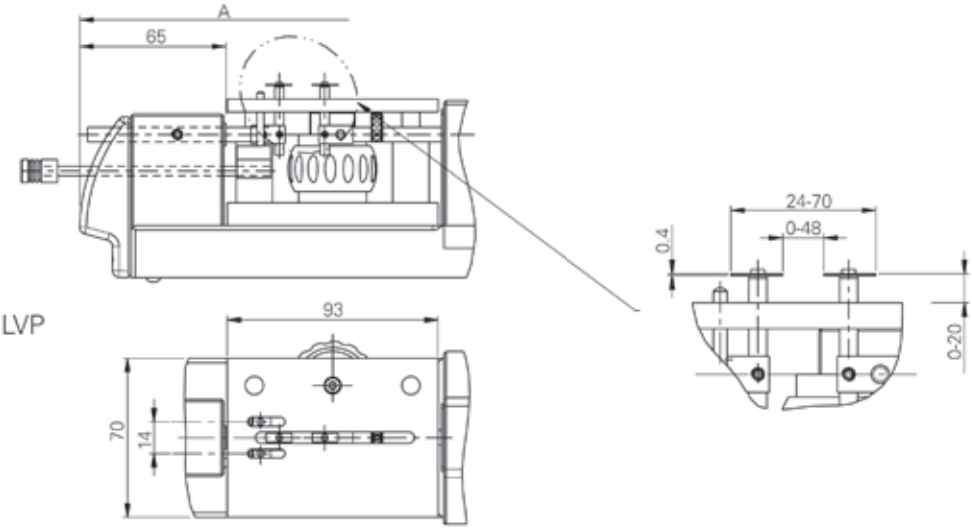
VS



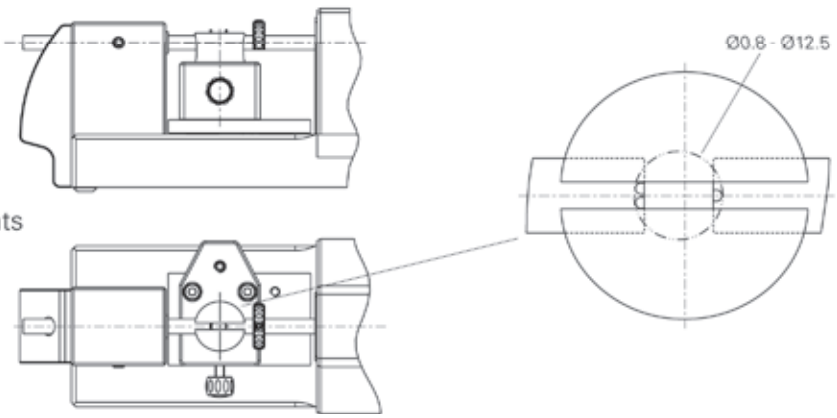
VP



LVS / LVP



VP25 / 3 points



Dimensions A, B, C (see following page)

Measuring bench table PS16

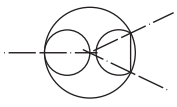
TECHNICAL SPECIFICATIONS

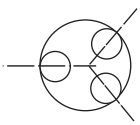
External and internal measurement		908.1221	908.1231	908.1222	908.1232
Type		VS25	VP25	VS50	VP50
Measuring capacity C	mm	38	38	68	68
Measuring range	mm	25	25	50	50
Max. Error	µm	5	1.5	7	2.5
Repeatability	µm	1	0.3	1	0.4
Resolution	µm	1	0.1	1	0.1
Measuring force (Adjustable)	N	0.2 - 1.0[1)]	0.2 - 1.0[1)]	0.2 - 1.0[1)]	0.2 - 1.0[1)]
Weight	kg	5	5	6.5	5.5
Anvils clamping dimension	mm	Ø 1.5	Ø 1.5	Ø 1.5	Ø 1.5
A	mm	301	301	401	401
B	mm	65	65	96	96

2- points Internal measurement with centering pins		908.1223	908.1224	908.1233	908.1234
Type		LVS50	LVS50	LVP50	LVP50
Internal measuring capacity	mm	12 - 64	24 - 70	12 - 64	24 - 70
External measuring range	mm	48	48	48	48
Max. Error	µm	10	10	6	6
Repeatability	µm	4	4	2	2
Resolution	µm	1	1	0.1	0.1
Measuring force (Adjustable)	N	0.2 - 1.0[1)]	0.2 - 1.0[1)]	0.2 - 1.0[1)]	0.2 - 1.0[1)]
Weight	kg	7	7	7	7
Thickness of anvils	mm	0.4	0.4	0.4	0.4
Anvils clamping dimension					
Adjustable range of the table	mm	20	20	20	20
A	mm	418	418	418	418
B	mm	96	96	96	96

[1)] ± 20%

3 - points Internal measurement		908.1235	908.1236	908.1237	908.1238	908.1239
Measuring range	mm	0.8-1.3	1.3-2.5	2.5-4	4-8	8-12.5
Max. Error, Repeatability, Measuring force, dimensions		VP25	VP25	VP25	VP25	VP25
Measuring pins	mm	Ø 0.5	Ø 0.5	Ø 1.0	Ø 1.5	Ø 1.5
Master ring gauges	mm	0.8 & 1.3	1.3 & 2.5	2.5 & 4.0	4 & 8	8 & 12.5





Measuring bench table PS16

BASIC INSTRUMENT

PS16 VS/VP

- Instrument according to technical specifications
- Instruction manual
- Calibration certificate
- Table not included
- Anvils Ø 6.5 mm included

PS16 LVS/LVP

- Instrument according to technical specifications
- Instruction manual
- Calibration certificate
- Table included
- Anvils Ø 6.5 mm included

PS16 VP25 3 - points Internal measurement

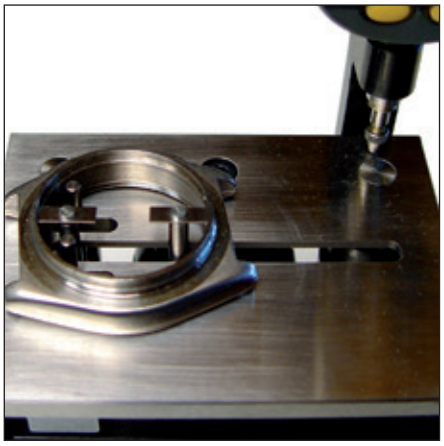
- Instrument according to technical specifications
- Instruction manual
- Calibration certificate LVP
- Table according to technical specification and anvils 908.2184
- Set of master ring gauges
- Special Digital display D100S for 3 – points measurement

TABLES AND ANVILS

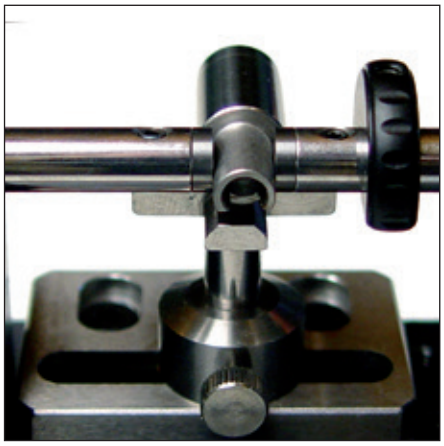
Refer to pages 158-162

Measuring bench table PS16

APPLICATIONS



Internal measurement in 2 – points with auto-centering of the part on LVS 50



External measurement with anvils Ø 6.5 and XYZ table

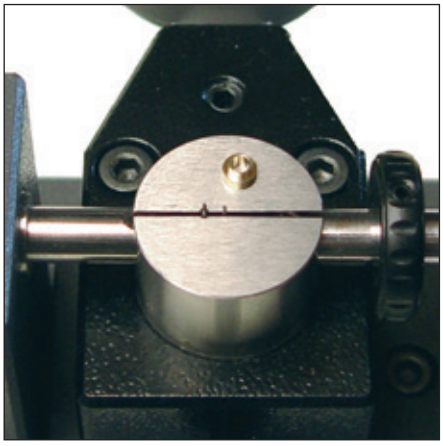


Table and anvils for internal measurement in 3 - points 1.3 - 2.5 mm

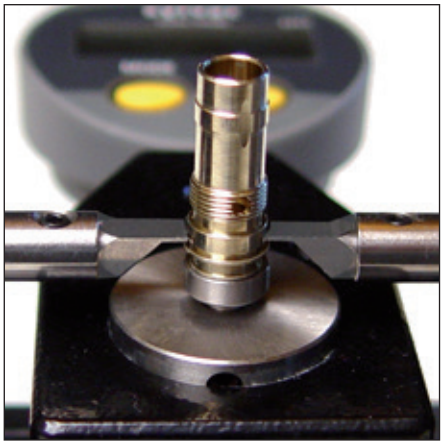
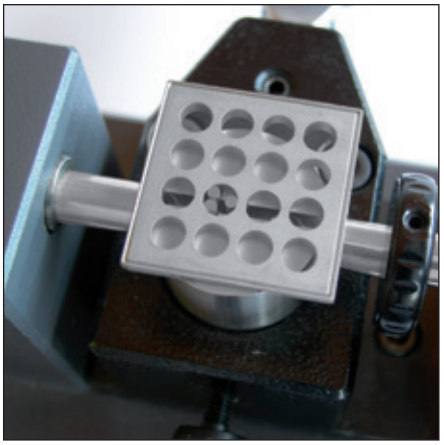


Table with adjustable plate (height). Different Ø plates available



3 – points internal measurement

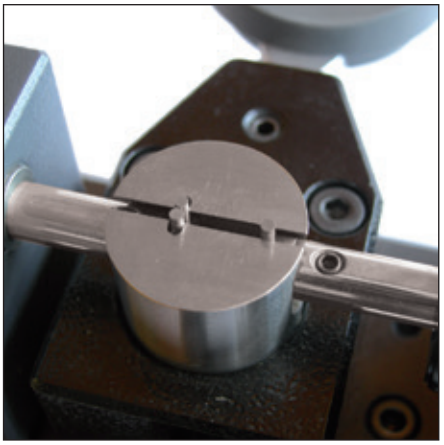
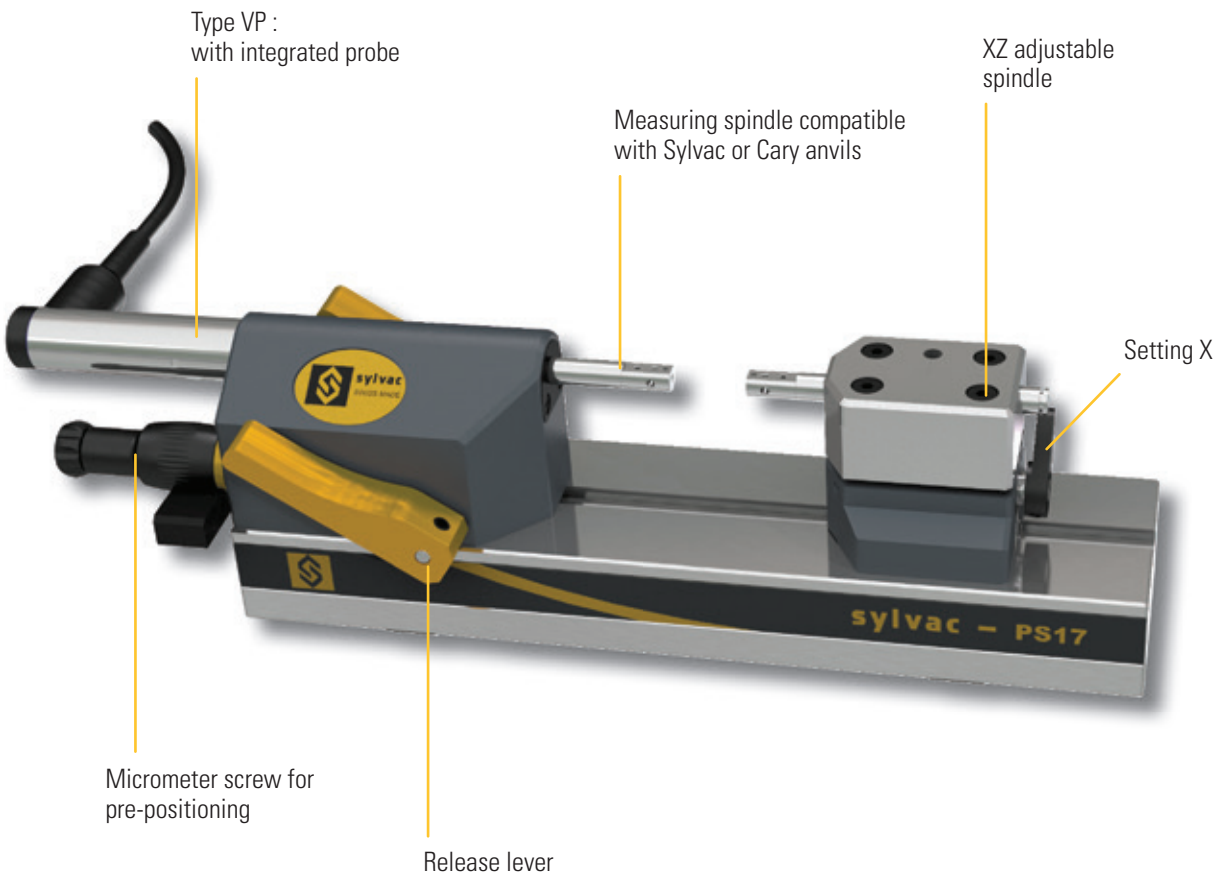


Table and anvils for internal measurement in 3 - points 2.5 - 4 mm

Measuring bench table PS17

DESCRIPTION

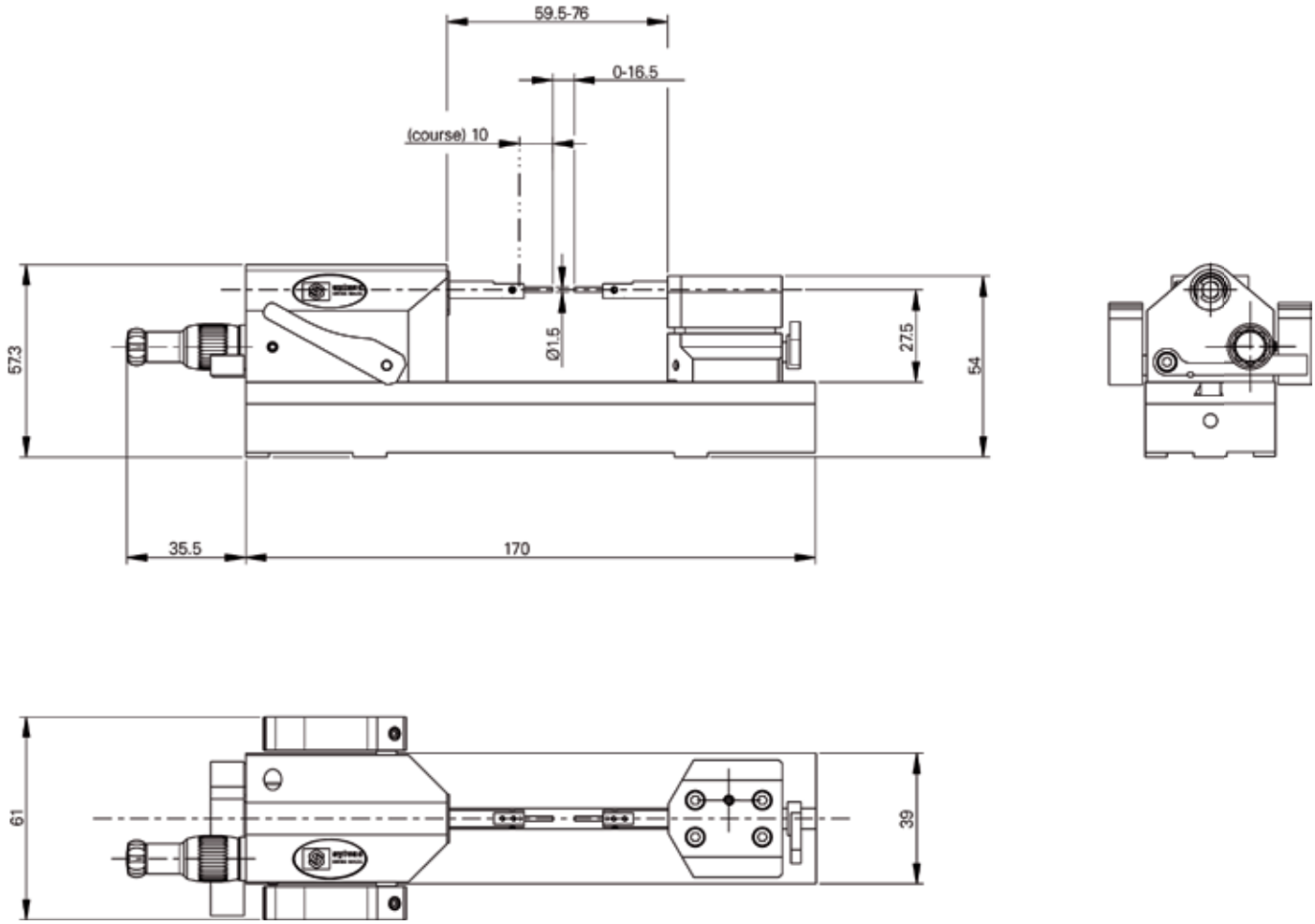
- Measuring bench with great flexibility of use
- Adjustable spindle in X and Z axis
- Accurate micrometer screw for pre-positioning
- Compatibility with Sylvac anvils (Ø1.5mm) and Cary type anvils
- Several accessories available
- 2 models :
  - Integrated P10 capacitive probe (VP)
  - Ø8mm bore to locate any other measuring devices (VS)
- A wide choice of special applications can be found on our specific flyer «Measuring benches PS15-16-17»



SWISS MADE

Measuring bench table PS17

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		908.1240	908.1241
Type		VS [1]	VP [1]
Measuring system		Dial gauges [2]	Integrated P10 capacitive probe
Application range	mm	37	
Measuring range	mm	10	
Adjustable measuring force	N	0.2 - 1.0	
Weight	kg	1.4	1.5
Clamping anvils Ø 1.5 mm		●	
Compatibility with Cary		●	
Micrometer screw		●	

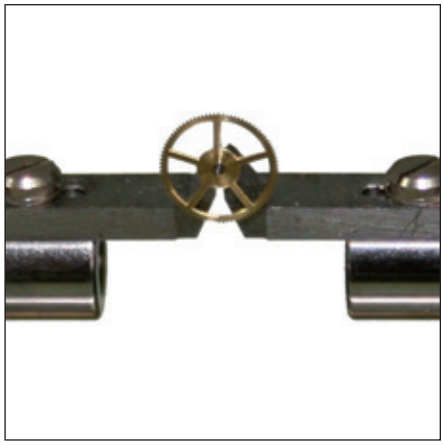
[1] Standard delivery with measuring anvils Ø 1.5 mm
[2] not included

Measuring bench table PS17

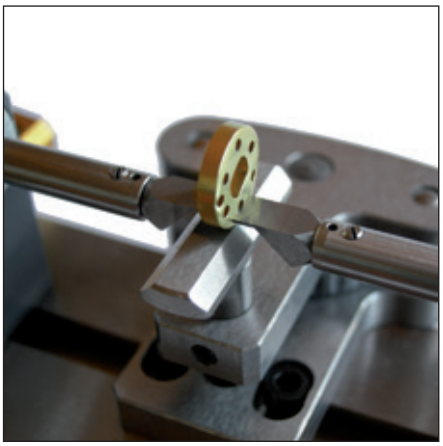
BASIC INSTRUMENT

- Instrument according to technical specifications
- Instruction manual
- Measuring anvils Ø 1.5 mm (908.2175)
- Calibration certificate for VP

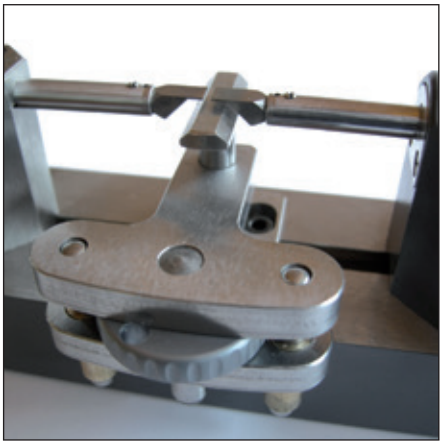
STANDARD SPECIFICATIONS



Special anvils for PS17. On request



Knife-shape anvils, thickness 0.4 mm and standard XYZ table



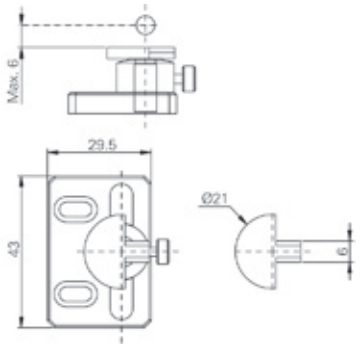
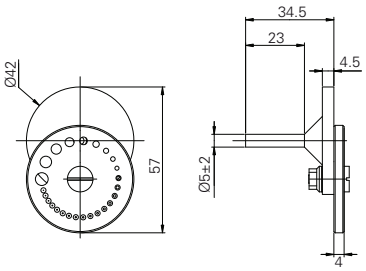
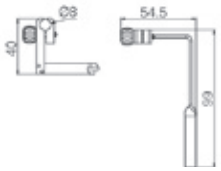
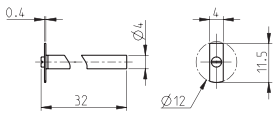
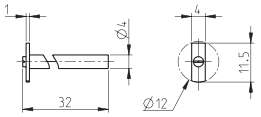
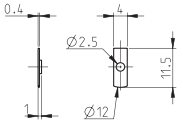
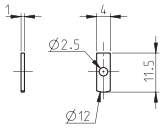
Special table with height adjustment system

TABLES AND ANVILS

Refer to pages 158-162

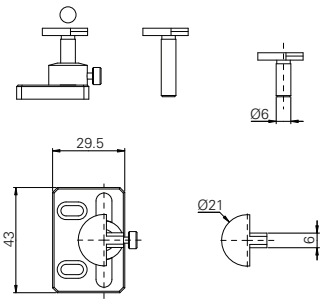
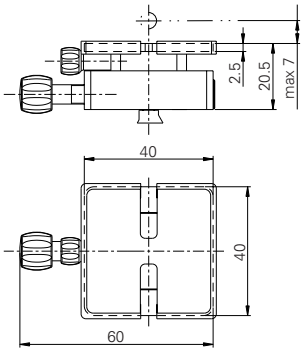
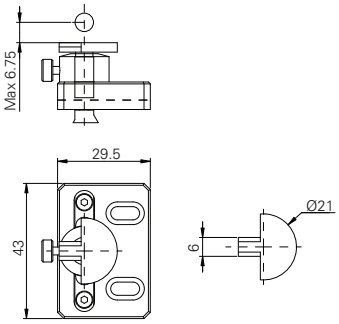
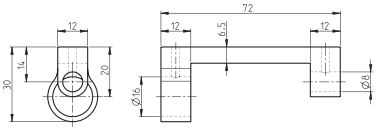
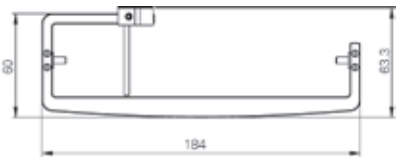
Measuring bench table

ACCESSORIES

		PS15 H	PS15 V	PS16 VS/VP	PS16 LVS/LVP	PS17
	**908.2170**	Supporting table adjustable in XYZ	•				
	**908.2172**	Rotating-table with 25 bores from 0.2 to 5 mm		•			
	**908.2150**	Releasing lever			•	•	
	**908.2184**	Knife-shaped anvils 0.4 mm TC with clamping shaft				•	
	**908.2185**	Knife-shaped anvils 1 mm TC with clamping shaft				•	
	**908.2186**	Knife-shaped anvils 0.4 mm				•	
	**908.2187**	Knife-shaped anvils 1 mm				•	

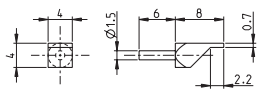
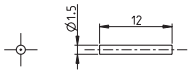
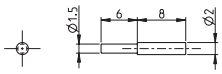
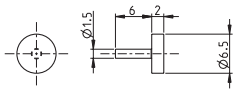
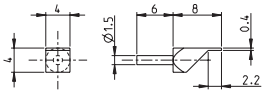
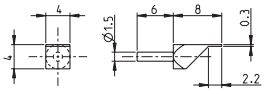
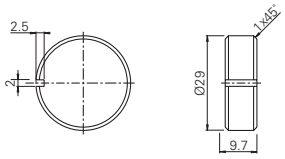
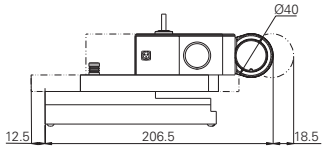
Measuring bench table

ACCESSORIES

		PS15 H	PS15 H +	PS15 V	PS15 V +	PS16 VS/VP	PS16 LVS/LVP	PS17
	**908.2190** Supporting table adjustable in XYZ					•		
	**908.2301** Table XZ supporting plate in H shape							•
	**908.2290** Supporting table adjustable in XYZ							•
	**908.2194** Dial gauge holder (display height / depth)						•	
	**908.2195** Lifting device							•

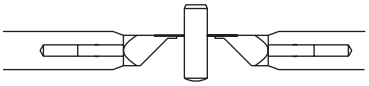
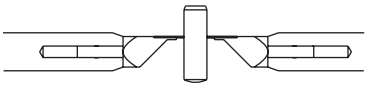
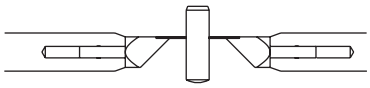
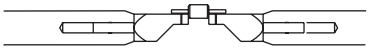
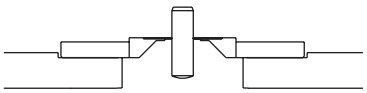
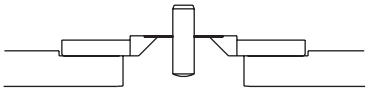
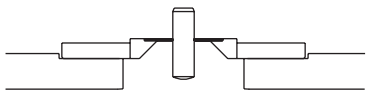
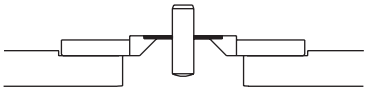
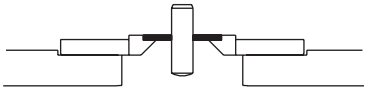
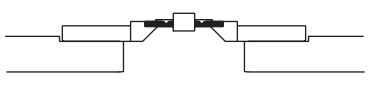
Measuring bench table

ACCESSORIES

			PS15 H	PS15 H +	PS15 V	PS15 V +	PS16 VS/VP	PS16 LVS/LVP	PS17
	**908.2174**	Knife – shaped anvils 0.7 mm TC		●		●	●		●
	**908.2175**	Cylindrical anvils TC, Ø 1.5 mm		●		●	●		●
	**908.2176**	Cylindrical anvils TC, Ø 2 mm		●		●	●		●
	**908.2177**	Cylindrical anvils TC, Ø 6.5 mm		●		●	●		●
	**908.2178**	Knife-shaped anvils 0.4 mm TC		●		●	●		●
	**908.2179**	Knife-shaped anvils 0.3 mm TC		●		●	●		●
	**908.2198**	Replacement lapping stone for 908.2199							
	**908.2199**	Lapping device (3 stones and lapping liquid included)	●	●			●		●

Measuring bench table

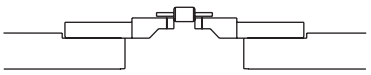
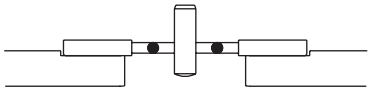
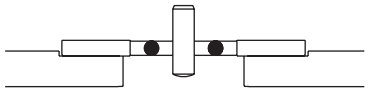
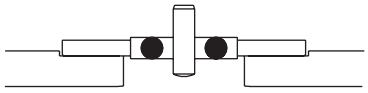
ACCESSORIES

			PS15 H	PS15 H +	PS15 V	PS15 V +	PS16 VS/VP	PS16 LVS/LVP	PS17
	**908.2180**	Knife-shaped anvils standard 0.2 mm		●		●	●		●
	**908.2181**	Knife-shaped anvils standard 0.14 mm		●		●	●		●
	**908.2182**	Knife-shaped anvils standard 0.1 mm		●		●	●		●
	908.2201	Knife-shaped anvils standard 0.7 mm / V		●		●	●		●
	**908.2202**	Knife-shaped standard 1.5 mm		●		●	●		●
	**908.2215**	Knife-shaped anvils 0.14 mm[1)]	●		●				●
	**908.2216**	Knife-shaped anvils 0.2 mm[1)]	●		●				●
	**908.2217**	Knife-shaped anvils 0.3 mm[1)]	●		●				●
	**908.2218**	Knife-shaped anvils 0.4 mm[1)]	●		●				●
	**908.2219**	Knife-shaped anvils 0.7 mm[1)]	●		●				●
	**908.2220**	Knife-shaped anvils 0.7 mm[1)] with V	●		●				●

[1)] Compatible Cary

Measuring bench table

ACCESSORIES

		PS15 H	PS15 H +	PS15 V	PS15 V +	PS16 VS/VP	PS16 LVS/LVP	PS17
	**908.2222**	Knife-shaped standard 1.5 mm[1)]	●		●				●
	**908.2223**	Cylindrical anvils Ø 1.5 mm[1)]	●		●				●
	**908.2224**	Cylindrical anvils Ø 2.0 mm[1)]	●		●				●
	**908.2225**	Cylindrical anvils Ø 3.0 mm[1)]	●		●				●

[1)] Compatible Cary

For further information about our mini benches please download the bench catalogue on our website www.sylvac.ch

CONNECTION & SOFTWARE

In the modern technical world, the capability of measuring instruments is not limited to the display of measured values. With connection and software abilities, our devices transform into even more precise, efficient, and productive machines.

Thanks to a great choice of connecting cables, the Sylvac instruments are compatible with the majority of data acquisition systems.

RS232, USB or Wireless data output

Wireless transmission BLUETOOTH

DESCRIPTION

- Possibility to connect up to 8 instruments
- Duplex data transmission
- Easy programming
- Individual identification of each instrument
- Confirmation of transmission

Bluetooth SMART

TECHNICAL SPECIFICATIONS

		981.7100
USB		●
Coupled instruments per module		8 [1]
Automatic detection of instrument		●
Instruments and software compatibility		D300S & SylConnect
Transmission distance [2]	m	15

[1] 1 module per instrument is required when used with SylConnect (up to 8 modules)
[2] depending on the environnement

Wireless transmission

DESCRIPTION

- Possibility to connect up to 120 instruments on only one receiver
- Choice of modules according to the instruments
- Transmission on long distances
- Easy programming
- Individual identification of each instrument
- Confirmation of transmission
- Battery life : 2 years in standard use

926.5131

926.5132

926.5110

TECHNICAL SPECIFICATIONS

		926.5110
USB		●
Confirmation of transmission OK/KO		●
Attribution of the addresses of the modules by software		●
Software interfaces and configuration menu		●
Transmission distance [1]	m	200

[1] with large antenna

Cables

S_Connect

CONNECTION

		Standard 2 m	Standard 3 m	≤15 m	Bi-directional	Programmable by PC
	Opto RS	926.5521	--	926.5535		
	Opto RS	926.6521	--	926.6535	●	
	Opto RS	926.6538	--	926.6542	●	
	Opto RS	926.6539	--	926.6543	●	
	Opto USB	926.6621	--	[1]	●	
	Power RS	905.4516	--	905.4519	●	
	Power RS (bent)	905.4538	--	[1]	●	
	Power USB	926.6821	--	[1]	●	
	Power USB (bent)	926.6838	--	[1]	●	

[1] on request

Cables

S_Connect

CONNECTION

S_Cal Pro / S_Mike Pro	S_Cal Work, Ultra UL	S_Depth PRO S_Scale WORK	Protractor	S_Dial S233 / S234	S_Dial ONE / S_Dial WORK Hi_Gage ONE	Xtreme	Digital microscrew	Hi_Cal	PS16 VS	S_View D50S / D80S PC output	S_View D200S	D300S instr. input	D300S output PC	D302 / D304	D400S	D70S/H/I	PC input
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Cables

S_Connect

CONNECTION

		Standard 2 m	Standard 3 m	≤15 m	Bi-directional	Programmable by PC
	Proximity RS232	--	926.6723	[1]	●	
	Proximity USB	--	926.6721	[1]	●	
	RS232 1:1	--	925.5609	[1]	●	
	USB-USB	--	804.1210	--	●	
	Mini USB-USB	--	926.6001	--	●	
	Adaptator RS-USB	925.1142	--	--	●	
	Booster + footswitch	--	925.1143[2]	--	●	
	Booster	--	925.1150	--	●	

[1] on request
[2] must be connected with bi-directional cables only

Cables S_Connect

CONNECTION

S_Cal Pro / S_Mike Pro	S_Cal Work, Ultra UL	S_Depth PRO S_Scale WORK	Protractor	S_Dial S233 / S234	S_Dial ONE / S_Dial WORK Hi_Gage ONE	Xtreme	Digital microscrew	Hi_Cal	PS16 VS	S_View D50S / D80S PC output	S_View D200S	D300S instr. input	D300S output PC	D302 / D304	D400S	D70S/H/I	PC input
●				●	●	●						●					
●				●	●	●						●					
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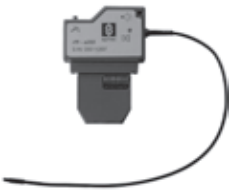
3)	3)	3)	3)	3)	3)	3)	3)	3)	3)	●	●	●			● 5)	● 5)	
3)	3)	3)	3)	3)	3)	3)	3)		3)								

3) must be connected with RS232 cables
4) For MB-XX module and RS232 PC connections
5) RS232 connection to PC (S version only) way.
Versions I/H require a crossover RS232 cable

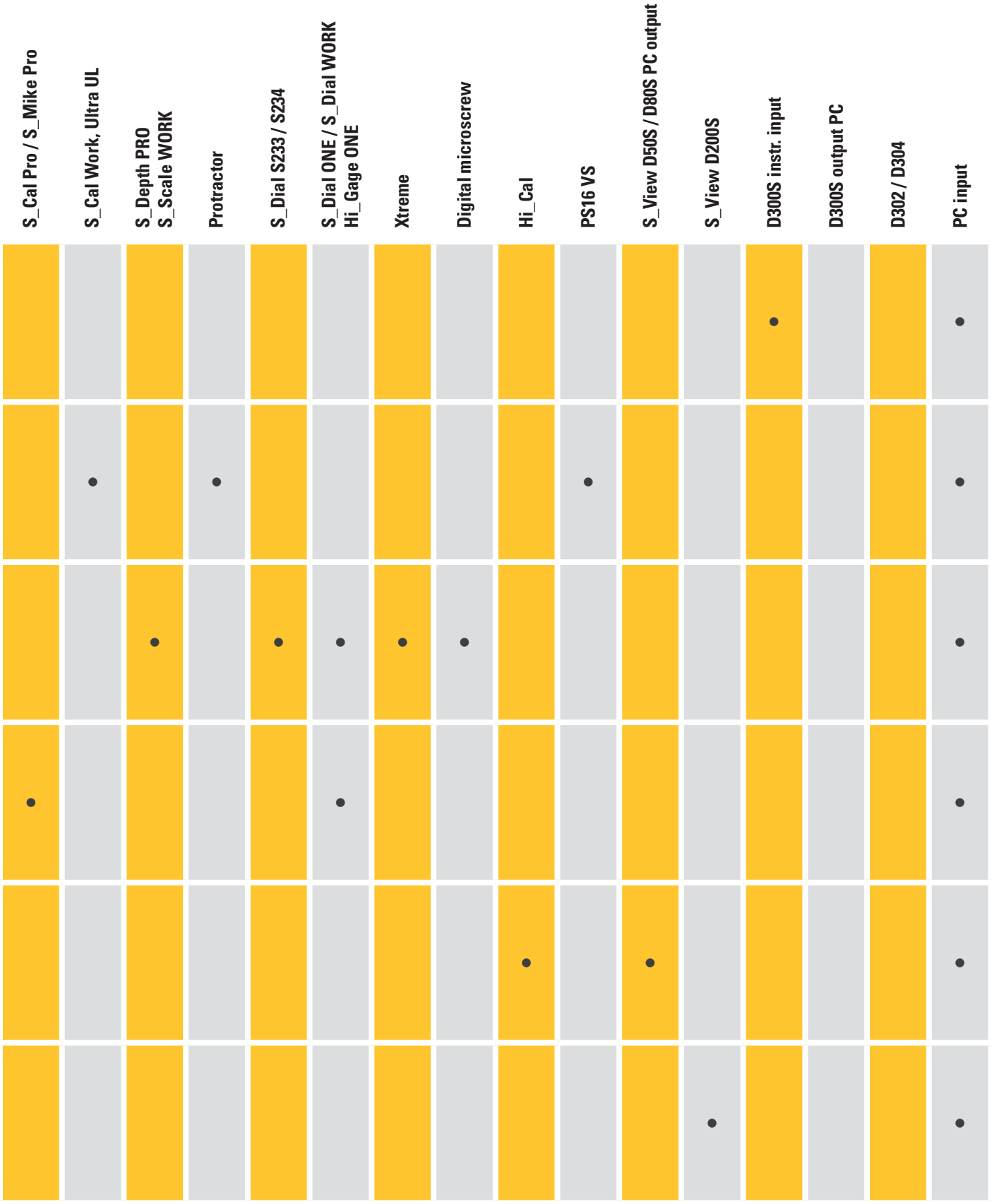
Wireless transmission

CONNECTION

		Bi-directional	Programmable by PC
	USB Bluetooth Smart Receiver 981.7100	•	
	Opto module + USB receiver 926.5131 926.5110		
	RS Power module + USB receiver 926.5132 926.5110		
	Proximity module + USB receiver 926.5133 926.5110		
	Adapter RS232/Opto + Opto module + USB receiver 926.5130 926.5131 926.5110		
	RS232 module + USB receiver 926.5120 926.5110		

Wireless transmission

CONNECTION



Various softwares

DATA TRANSFER

Gage wedge

Allows to send data in the usual applications of a computer from any instruments having the following standard RS232 Sylvac transmission parameters: 4800 bauds, 7 data bits, even parity, 2 stop bits.

Available (free) on www.sylvac.ch

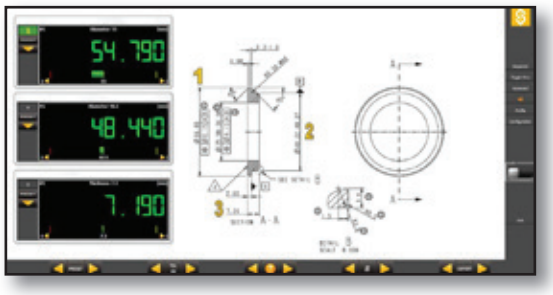
Win wedge

In addition to Gage wedge, allows to modify the RS232 parameters in order to adapt them to the instrument to be connected. It also makes it possible to send remote command to create keyboard short cuts to simplify programming and so on...

SYLCONNECT

Software allowing the connection of up to 16 Sylvac handtools to a computer, using USB cable.
No specific interface is required! The instruments can be directly connected to the USB port or via USB-Hubs available on the market.
Automatic recognition and USB port setting for every new connected instrument. A digital or analog window is automatically created for each instrument.
Jpeg picture importation function and window value resizing
Exportation into Excel in a specific sheet. Possibility to connect the needed USB footpedals to drive different instruments.

Trail version 30-days is available on www.sylvac.ch



Channel screen displayed

Multi channels screen with tolerances displayed in colour

Multi channels screen displayed in analog mode

Automatic instrument detection and configuration window

SylConnect and Vmux Software are supplied on USB Key. The dongle is the license manager.

Vmux

Virtual Multiplexer to connect and organize the entire range of SYLVAC Bluetooth SMART and USB products.
Up to 32 instruments are supported by the software. For the BLUETOOTH connection, 981.7100 dongle is required and must be connected to the PC via a USB port.

Up to 8 instruments BLUETOOTH per dongle!
The protocol ensures compatibility with all SPC software using the transmission and / or the query data via the COM ports.

Sending data in EXCEL is integrated.

Try the free version Vmux LITE available on our website www.sylvac.ch

	Order number
Winwedge	981.7140
Vmux	981.7160
Dongle	981.7100

	Order number
Sylconnect / Software Licence	981.7110
Sylconnect / USB Licence	981.7111
USB pedal	981.7020

Applications

DATA TRANSFER

Sylvac BT Smart Android

Enables the display of data from Bluetooth® SMART instruments on touchpads and smartphones Android 4.3 version, equipped with Bluetooth® 4.0 Low Energy.

Ability to save data on the touchpad or smartphone into a PDF or Excel and export the data in Google Drive.

Available for free on the Google Play Store.

Sylvac BT Smart Apple and Windows 8.1

Soon available on the App Store and the Windows Store.

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