sylvac

Experts in connected metrology !

MICROMETER SCREW WITH BLUETOOTH® TECHNOLOGY

SMART



IOT READY

SWISS MADE

SIS Smart Inductive System

Bluetooth®

Discover our brand new
S_Screw Smart :
Now with Bluetooth® technology.

Ø45

Small diameter

Small dial diameter 45mm with larger display for easy reading.



Rotating display

Display rotating on 270°.



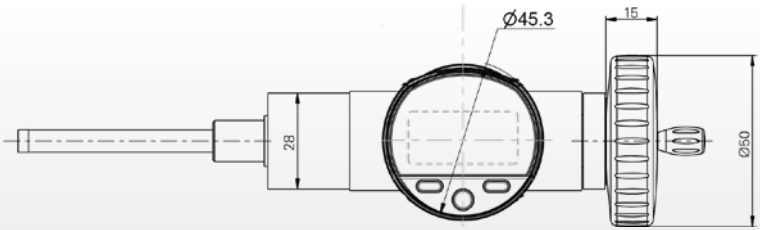
Ref1 / Ref2 / Ref3 / Ref4

4 references available.

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FEATURES

- Bluetooth® technology integrated
- Additional Power output for USB/RS232 wired connection
- Horizontal and Vertical use (same type)
- Reduced dimensions (compact)
- Other handwheel and fine adjustment device available as option
- Tungsten carbide anvil
- Non-rotating spindle Ø6.5mm
- Clamping Ø12h6



DATA

		852-2601	852-2611
Measuring range	mm	0-25	0-50
Type		Horizontal & vertical	
Max. error	µm	5	8
Repeatability	µm	2	
Resolution	mm	0.001	
Data output		Bluetooth® wireless Technology/USB/RS232	
4 references		✔	
PRESET function		✔	
Selecting of measuring direction		✔	
Rotating display 270°		✔	
Absolute or relative measurement		✔	

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INSTRUCTIONS

MODE D'EMPLOI

BEDIENUNGSANLEITUNG

MANUALE D'USO

INSTRUCCIONES DE USO

MICROMETER SCREW **E**

VIS MICROMÉTRIQUE **F**

MIKROMETERSCHRAUBE **D**

VITE MICROMETRICA **I**

TORNILLO MICROMÉTRICO **S**

Assembly of the instrument / Montage de l'instrument / Gerätemontage / Montaggio dello strumento / Montaje del instrumento

Tighten the Ø12h6 fixing barrel in a slotted bush. If this is not possible, tighten moderately with a flathead screw. The hard metal measuring face is flat. The bearing surface on the table to be moved should have the largest possible spherical radius.

Serrer le canon de fixation Ø12h6 dans une douille fendue. Si ce n'est pas possible, serrer modérément avec une vis à bout plat. La face de mesure en métal dur est plane. La surface d'appui sur la table à déplacer doit avoir un rayon sphérique le plus grand possible.

Ziehen Sie die Ø12h6-Befestigungshülse in einer geschlitzten Buchse fest. Falls dies nicht möglich ist, mit einer Flachkopfschraube mäßig anziehen. Die Hartmetall-Messfläche ist flach. Die zu bewegende Auflagefläche auf dem Tisch muss einen möglichst großen Kugelradius aufweisen.

Serrare il barilotto di fissaggio Ø12h6 in una boccola scanalata. Se ciò non è possibile, serrare moderatamente con una vite a testa piatta. La superficie di misura in metallo duro è piatta. La superficie del cuscinetto sulla tavola da spostare deve avere il raggio sferico più ampio possibile.

Apriete el barril de fijación de Ø12h6 en un casquillo ranurado. Si esto no es posible, apriete moderadamente con un tornillo de cabeza plana. La cara de medición de metal duro es plana. La superficie de apoyo de la mesa a mover debe tener el mayor radio esférico posible.

Steering wheel change / Changement du volant / Wechseln des Lenkrads / Cambio del volante / Cambiar el volante

Unscrew and remove the screw (20), remove the handwheel. To insert the handwheel, position the hole in relation to the flat of the drive shaft and insert the pressure pin (21) and tighten the screw (20) (see p2).

Dévisser et enlever la vis (20), retirer le volant. Pour mettre en place celui-ci, positionner le trou par rapport au plat de l'axe d'entraînement et mettre en place la goupille de pression (21) puis serrer la vis (20) (voir p2)

Die Schraube (20) lösen und entfernen, das Handrad abnehmen. Zum Einsetzen des Handrads positionieren Sie die Bohrung in Bezug auf die Abflachung der Antriebswelle, setzen den Druckstift (21) ein und ziehen die Schraube (20) an (siehe S2).

Svitare e rimuovere la vite (20), rimuovere il volantino. Per inserire il volantino, posizionare il foro rispetto al piano dell'albero di trasmissione e inserire il perno di pressione (21) e serrare la vite (20) (vedi p2).
Desenrosque y retire el tornillo (20), retire el volante. Para insertar el volante, posicione el agujero en relación con el plano del eje de transmisión e inserte el pasador de presión (21) y apriete el tornillo (20) (ver p2).

Fine adjustment (accessory) / Réglage fin (accessoire) / Feineinstellung (Zubehör) / Regolazione fine (accessorio) / Ajuste fino (accesorio)

Can be mounted on either side of the body. Screw in and tighten the screw (23). If the operation is not correct, loosen the screw (20) and remove the handwheel slightly to have a correct drive in the depressed position of the fine adjustment.

Peut se monter d'un coté ou de l'autre du corps. Visser et serrer la vis (23). Si le fonctionnement n'est pas correct, desserrer la vis (20) et retirer légèrement le volant pour avoir un entrainement correct en position enfoncée du réglage fin.

Kann auf beiden Seiten des Gehäuses montiert werden. Die Schraube (23) einschrauben und festziehen. Wenn der Betrieb nicht korrekt ist, Schraube (20) lösen und das Handrad leicht entfernen, um den korrekten Antrieb in der versenkten Position der Feineinstellung zu gewährleisten.

Può essere montato su entrambi i lati del corpo. Avvitare e serrare la vite (23). Se il funzionamento non è corretto, allentare la vite (20) e rimuovere leggermente il volantino per garantire un azionamento corretto nella posizione incassata della regolazione fine.

Se puede montar a ambos lados del cuerpo. Enrosca y aprieta el tornillo (23). Si el funcionamiento no es correcto, afloje el tornillo (20) y retire ligeramente el volante para asegurar el accionamiento correcto en la posición de empotramiento del ajuste fino.

E

1. Operating features of the instrument

- MODE The instrument has two operating modes: basic functions (direct access) and advanced functions. In addition to the configuration functions, you can select 4 references plus input of multiplication factor other than 1:1 (see chaps. 3 and 4).

- The «favourite» key gives direct access to the function used most often (see chap. 6).

- SET Sets a Preset value, verifies a selection, and controls switching off the instrument. By default, SIS mode enables automatic switch-off with no loss of origin (see chap. 7)

- **Personalising the functions**
  It is possible to activate or de-activate certain functions of the instrument via Power RS/USB cable or Bluetooth® (see chap. 9).

- **Data transmission parameters**
  4800Bds, 7 bits, even parity, 2 stop bits.

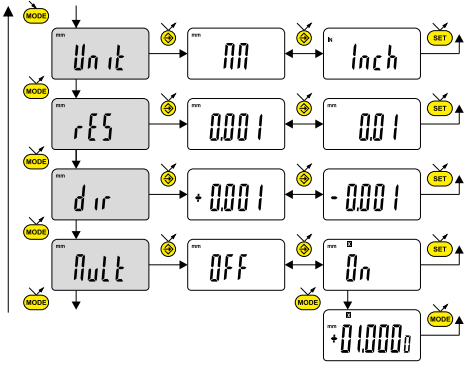
2. Start

Press a button.
For a *Bluetooth®* connection (see chap. 5).

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4. Advanced functions

Prolonged pressure (>2s) on MODE gives access to the advanced functions. Then, each short press on MODE accesses the required function:



Unit selection (mm or inch)

Choice of resolution 0.01 / 0.001
(only for 0.001mm version)

Choice of measurement direction
(positive or negative direction)

Multiplication factor, enable or disable multiplication factor

(value can be modified if On is confirmed by MODE button)

Input of multiplication factor, next digit SET 0....9

MODE save MULT

E

5. *Bluetooth*® configuration

The connection procedure has been designed to be simple and is signalled by the following three states:

- Symbol ᛒ off..... disconnected mode
- Symbol ᛒ blinking..... advertising mode
- Symbol ᛒ on..... connected mode

The following options can be selected to control the *Bluetooth*® module.

On	Enable *Bluetooth*® module (start advertising mode).
OFF	Disable *Bluetooth*® module (terminate active connection).
rESEt	Clear pairing information.
MAC	Display the MAC (Media Access Control) address.

Three Bluetooth® profiles are available.

SIMPLE	Profile without pairing (default).
PAIr	Paired and secured profile.
HId	Virtual keyboard mode (compatible with recent equipment without driver installation).

Note:
- *Bluetooth*® pairing information is cleared when the profile is changed.

Connection :

1° Activate *Bluetooth*® compatible software and hardware (Master : PC, Display Unit).

2° Start the instrument. By default the *Bluetooth*® module is active and the instrument is available for connection (advertising mode).

3° If no connnection is established during the advertisement period reactivate the *Bluetooth*® module using the bt / On menu.

4° Instrument is ready to communicate (connected mode.)

Only with paired profile :

Pairing with master is automatically done at first connection.
To connect the instrument to a new master (new pairing), pairing information on the instrument must be cleared using the bt / rESEt menu.

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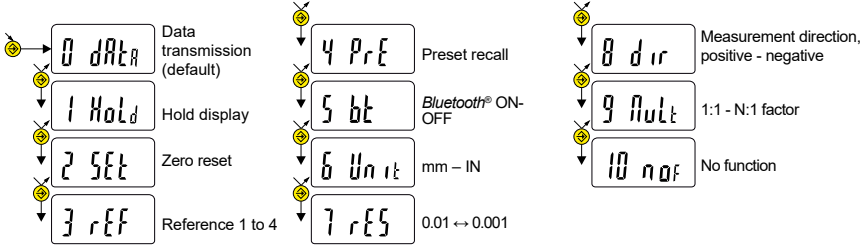
5.1 *Bluetooth*® specifications

Frequency Band	2.4GHz (2.402 - 2.480GHz)
Modulation	GFSK (Gaussian Frequency Shift Keying)
Max Output Power	Class 3: 1mW (0dBm)
Range	Open space: up to 15m Industrial environment: 1-5m
Battery life	Continuous : up to 2 months - Always connected with 4 values /sec. Saver : up to 5 months - The instrument sends value only when the position has changed. Blind/Push : up to 7 months - Value is sent from the instrument (button) or requested from the computer.

Other specifications on the manufacturer's website.

6. Favourite key

The «favourite» key gives direct access to a predefined function, and can be configured according to the needs of the user. In order to assign a function to the «favourite» key, give a prolonged press on , and then select the required function :



Validation of selection: By a prolonged press on or a short press on SET or MODE .

Note :

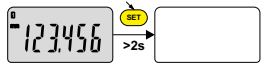
- A function can also be assigned via RS232 using the command <FCT + Function No.> (FCT 0..9 A..F) example : Unit change= <FCT6>, no function =<FCTA>.

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7. Switching off

The dial gauge goes automatically into stand-by if not used for 10 minutes, unless automatic switch-off mode has been turned off (see Chap. 4, advanced functions).

Stand-by mode can be forced by a prolonged press (> 2 sec) on SET :



In stand-by mode, the value of the origin is retained by the sensor (SIS mode), and the instrument automatically restarts with any movement of the measurement probe, RS command, *Bluetooth*® request or press on button.

The instrument can be switched off completely for a long period of non-use, but this will necessitate a zero reset on restart (the origin will be lost):

- Prolonged press (>4 sec) on SET :



8. Re-initialising the instrument

The initial instrument settings can be restored at any time by a prolonged press (>4 sec) simultaneously on MODE and SET until the message rESEt is displayed.

9. Personalising the instrument

Access to the functions of your instrument can be personalised, for more information see manufacturer's website (requires you to connect your instrument via Power RS / USB cable, or *Bluetooth*®).

Possibilities:

- Enable or disable the required functions.
- Modify access to the advanced functions (direct access).

10. Connecting the instrument

The instrument can be connected to a peripheral via a Power (RS or USB) cable or *Bluetooth*®. See page 5 for connecting the Power cable.

Measured values can be transmitted and the instrument driven using predefined commands (see chap. 11 for a list of the main commands).

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11. List of the main commands

Selection and configuration

CHA+ / CHA-	Change measurement direction
FCT0 ...9...A...F	Assign «favourite» function
MM / IN	Change measurement unit
KEY0 / KEY1	Lock / unlock keypad
MUL [+/-]xxx.xxxx	Modify multiplication factor
PRE [+/-]xxx.xxx	Modify preset value
STO1 / STO0	Activate / de-activate HOLD
ECO1 / ECO 0	Activate / de-activate economic mode
LCAL dd.mm.yy	Modify last calibration date
NCAL dd.mm.yy	Modify next calibration date
NUM x...x (up to 20chars)	Modify the instrument number
UNI1 / UNI0	Activate / de-activate change of units
OUT1 /OUT0	Activate / de-activate contin. data transmission
REF1/REF2/REF3/REF4	Active reference change
PRE ON / PRE OFF	Activate / de-activate Preset function
PRE	Recall Preset
SET	Zero reset
RES1 / RES2	Change of resolution
SBY xx	xx number of minutes before stand-by
BT0/BT1	Activate / de-activate *Bluetooth*® module
BTRST	Clear pairing information

Interrogation

?	Current value?
CHA?	Measurement direction?
FCT?	«favourite» function active?
UNI?	Measurement unit active?
KEY?	Keypad locked?
MUL?	Multiplication factor?
PRE?	Preset value?
STO?	Status of HOLD function?
ECO?	Current economic mode
LCAL?	Date of last calibration?
NCAL?	Date of next calibration?
NUM?	Instrument number?
SET?	Main instrument parameters?
ID?	Instrument identification code?
REF?	Active reference?

Maintenance functions

BAT?	Battery status (BAT1 = OK, BAT0 = low battery)
OFF	Switch-off (wake up using a button or RS)
RST	Re-initialisation of the instrument
SBY	Put instrument in stand-by (SIS)
VER?	Version No. and date of firmware
MAC?	*Bluetooth*® MAC address ?

CERTIFICATE OF CONFORMITY
We certify that this instrument has been manufactured in accordance with our Quality Standard and tested with reference to masters of certified traceability by the federal institute of metrology.

CERTIFICAT DE CONFORMITE
Nous certifions que cet instrument a été fabriqué et contrôlé selon nos normes de qualité et en référence avec des étalons dont la traçabilité est reconnue par l'institut fédéral de métrologie.

QUALITÄTSZEUGNIS
Wir bestätigen, dass dieses Gerät gemäss unseren internen Qualitätsnormen hergestellt wurde und mittels Normalen mit anerkannter Rückverfolgbarkeit, kalibriert durch das eidgenössische Institut für Metrologie, geprüft worden ist.

CERTIFICATO DI CONFORMITÀ
Con il presente si certifica che questo strumento è stato prodotto secondo il nostro standard sulla qualità e controllato rispetto a campioni di riferibilità riconosciuta dall'instituto federale di metrologia.

CERTIFICADO DE CONFORMIDAD
Certificamos que este instrumento ha sido fabricado conforme a nuestras normas de calidad y ha sido controlado en relación con patrónes de trazabilidad reconocida por la oficina nacional de metrología.

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U.S./Canada Certification

Sylvac

m.n. Micrometer screw

This device contains
FCC ID: 2AAQS-ISP091201
IC: 11306A-ISP091201

NOTICE :
Changes or modifications made to this equipment not expressly approved by Sylvac may void the FCC authorization to operate this equipment.

NOTICE:
This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions.
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE:
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Radiofrequency radiation exposure Information:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Brazil Certification

Description:

This module is based on Nordic Semiconductor nRF8001 µBlue *Bluetooth*® Low Energy Platform. The nRF8001 is a single chip transceiver with an embedded baseband protocol engine, suitable for ultra-low power wireless applications conforming to the *Bluetooth*® Low Energy Specification contained within v4.0 of the overall *Bluetooth*® specification. The nRF8001, used in the current revision of ISP091201, is a production product using a RoM for the baseband protocol engine.

Este equipamento opera em caráter secondário, isto é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.



Mexico certification

Contiene modulo inalámbrico
Marca: Sylvac
Modelo: ISP091201D
IFT: RCPSYIS14-0655

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

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EU DECLARATION OF CONFORMITY (DoC)

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

Name	Digital micrometer screws
Description	Digital micrometer screws
Part Numbers	852.2001, 852.2011

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

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

and complies with the following harmonized standards or other normative documents

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

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

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

