

# S\_Probe P25D

## Smart



**Instruction manual**



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## Description

The P25D Smart probe is a long-range, high-precision inductive measurement probe with built-in Bluetooth® wireless technology. The rugged design and wireless connectivity allow the probe to be used in harsh conditions and hard-to-reach locations.

The low power architecture means long operating times and infrequent battery changes. In addition, the common battery size means that replacements can be found quickly.

## Connection

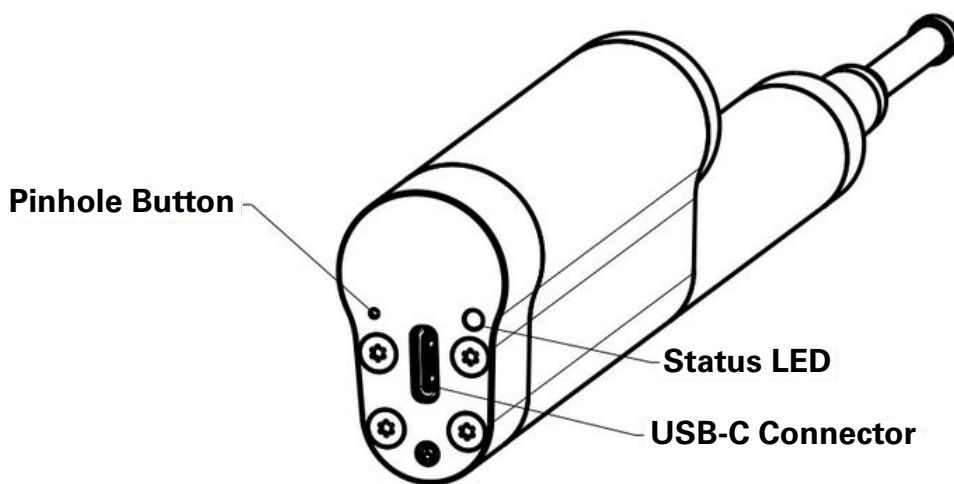
### Bluetooth®

The P25D probe only transmits data via a Bluetooth® Low Energy wireless connection (Bluetooth® 4.0 or higher). The device starts advertising as soon as the battery is installed. Please use Sylcom, Vmux or Sylvac Anywhere (mobile application) to communicate with your probe through the Sylvac Metrology SIMPLE profile (PAIR profile available through Sylcom, HID profile not available).

### USB-C

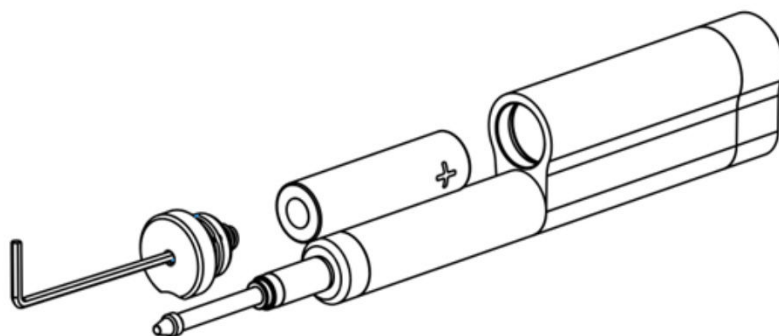
The USB-C connector can only be used to supply power to the probe (using the probe without battery, not to recharge the battery). No data can be transferred on the USB port.

## Interface



## Battery

Remove the battery compartment cover using a 2mm hexagonal key (Allen wrench), insert a 1.5V AA (LR06) battery and replace the cover. Make sure the battery is inserted correctly, observing the polarity as shown.



The use of 1.5V AA alkaline batteries is strongly recommended for best performance. Rechargeable AA batteries can be used, but the charge level indicator may not work properly. Calibration is based on 1.5V for a fully charged battery.

## Reset button

The reset button is located on the top of the probe. Use a small tool such as a paper clip to press it.

### Bluetooth® reset

A short press on the reset button (< 1s) will reset the Bluetooth® connection.

### Instrument reset

A long press on the reset button (> 1s) will apply a factory reset of the instrument (Bluetooth® name and profile selection are preserved).

## Status LED

A Light Emitting Diode (LED) is used to indicate the status of the probe. The following table gives an overview of the possible codes and their meanings.

LED status	Description
Blue LED on for 3s	A Bluetooth® connection has been established
Blue LED flashing at 1Hz	Device is advertising for a connection / reconnection
Blue LED flashing once in 7s	Device is advertising for a reconnection
Green LED on for 3s	Device is powered by USB
Green LED flashing once in 5s	Device is active and connected
Red LED flashing once in 5s	Low battery, replace battery
Red LED flashing at 1Hz	General error. Perform a reset



## Main commands

The following table lists the main commands that can be used with a P25D Smart probe. Every command must be terminated by a carriage return character (0x0D).

Command	Description
?	Get current position
DIR +/-	Change measuring direction
DIR?	Get measuring direction
ECO1/0	Enables economical mode, else back to normal running mod
ID?	Get the device identifier
MAC?	Get Bluetooth® MAC address
MIN / MAX / DEL / NOR	Select MIN, MAX, DELta or NORmal mode
MM / IN	Set measuring unit to millimeters / inches
MOD?	Get active mode
PERF1/0	Enables performance mode, else back to normal running mode
RST	Re-initialize the probe
SBY xx	Set delay until standby (minutes), SBY 0 disables standby mode
SBY ?	Get delay until standby
SET	Set origin (zero) at the current position
SN?	Get serial number
UNI?	Get current measuring unit
VER?	Get firmware version

## Specifications

Specifications	801-1626	801-1636
Type	P25D Smart	P25D Smart CF
Force	0.7 - 1.3N	0.15N ±20% (only vertical use)
Measuring range	25.4mm	
Resolution	0.01µm	
Max error.	0.8µm	
Repeatability	0.08µm	
IP rating	IP54	
Operating temperature (storage)	+5 à +40°C (-10° à +60°C)	
Weight	141g (without battery)	140g (without battery)
Power supply	1.5V AA (LR06) battery (rechargeable 1.2V battery can be used) 4.5 – 5.5V on USB-C port	
Battery life	Up to 5000h (primary 1.5V battery, 2700mAh) <sup>1)</sup>	
Clamping shaft	Ø8h6 (3/8")	



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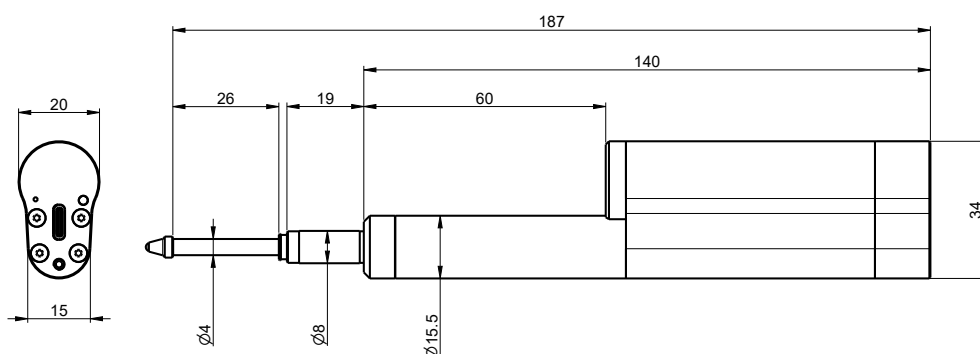
Connection	Bluetooth®
Data rate	Standard mode 8d/s (default) - ECO mode 6d/s - PERF* mode 50d/s <sup>2)</sup>

<sup>1)</sup> 8/24h, 5/7d connected, otherwise standby advertising (Disconnected, master side switched OFF)

<sup>2)</sup> For demanding applications, requires custom software not available from Sylvac

## Dimensions

Mechanical drawing (all dimensions in millimeters) :



## Accessories

The following accessories are available for P25D Smart probes. Refer to the manufacturer's website for a complete list of compatible accessories.

Accessory	Order number	Description
	905-2201	Flat contact point M2.5
	905-2203	Rounded contact point M2.5
	905-2204	Ballpoint contact point M2.5
	905-2224	Plastic lifting lever
	905-2225	Plastic lifting ring

See general catalogue (available on [www.sylvac.ch](http://www.sylvac.ch)) for dimensions and more accessories.



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## Maintenance

Carefully dry all mechanical parts of the instrument after contact with liquids to ensure correct operation and avoid corrosion. Do not use aggressive products (alcohol, trichloroethylene, etc.) to clean plastic parts. Do not expose the instrument to direct sunlight, heat or moisture.

## Calibration

### CALIBRATION CERTIFICATE

Because our instruments are manufactured in batches, you may find that your calibration certificate appears to be out of date. Please be assured that your instruments are certified at the point of manufacture and then stored in our warehouse in accordance with our ISO 9001 Quality Management System. The recalibration cycle should start from the date of receipt.

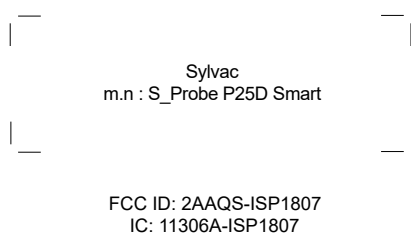
## Conformity

### 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.

## Bluetooth® radio

### U.S./Canada certification



### 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.

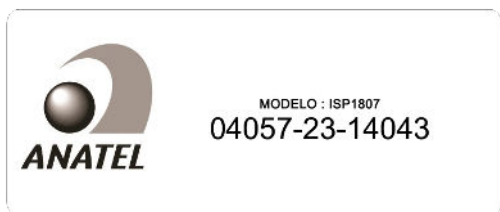


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#### Brazil certification

##### Description:

The module ISP1807 is based on Nordic Semiconductor nRF52840 Bluetooth LE system on chip. The nRF52840 is a Bluetooth 5.x SoC that integrates a 64 MHz Arm Cortex-M4 CPU with ultra-low power consumption and Flash/RAM memory.



Este equipamento opera em caráter secundário, 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.

#### Korea South certification

R-C-iNs-ISP1807

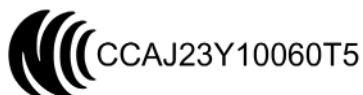
##### Class A Equipment (Industrial Use)

이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

#### Japan certification



#### Taiwan certification



##### 警語

經型式認證合格之低功率射頻電機,非經許可,公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻電機之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用。

前項合法通信,指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。



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[www.sylvac.ch](http://www.sylvac.ch)

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