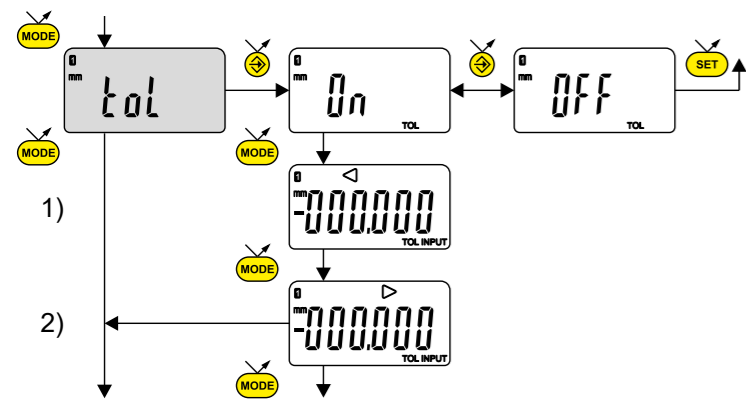


Inputting tolerance limits

To input or modify the tolerance limits, **tol** → **On** mode should be selected, followed by a short press on :

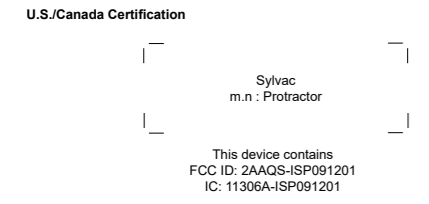


- 1) Input the lower tolerance limit
 - 2) Inputting the upper tolerance limit
- Next digit 0...9 save tolerance limits

Note:
Because of 360° rotating system, tolerance indicators work in Go-NoGo mode:
Inside tolerances limits (green light)
Outside limits: NoGo indicators

Certificates

The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Sylvac is under license. Other trademarks and trade names are those of their respective owners.



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 secundário, isto é, não tem direito a 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.

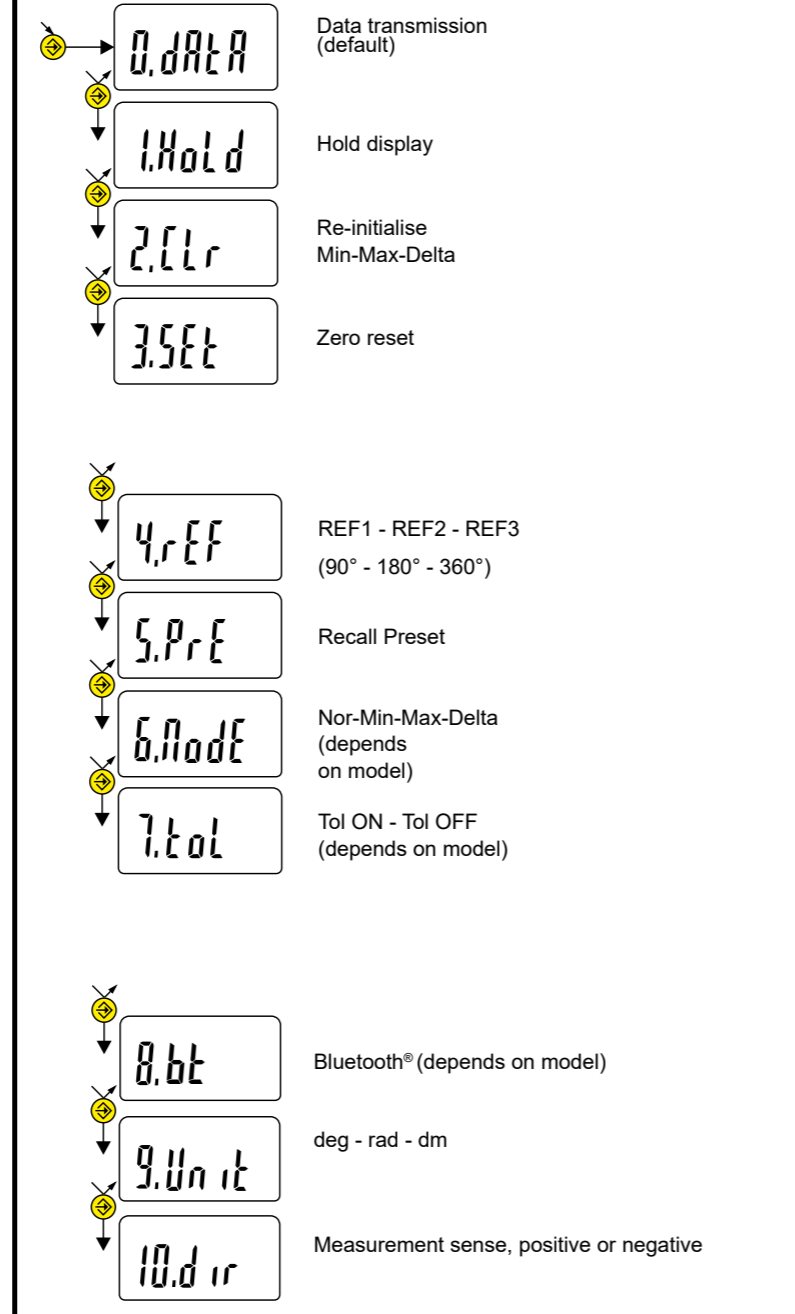
Korea South certification
MSIP-CRM-iNs-ISP091201
Class A Equipment (Industrial Use)
이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의해서가 바라며, 가정 외의 지역에서 사용되는 것을 목적으로 합니다.

Japan certification
 001-A06167

Taiwan certification
警告
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。
CCAH18LP2040T6

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:



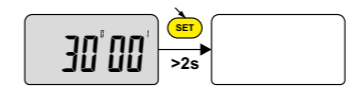
Validation of selection: By a prolonged press on or a short press on or

Note: a function can also be assigned via RS232 using the command <FCT + Function No.> (FCT 0..9, A) example: Toggle unit = <FCT9>, reverse measuring direction = <FCTA>.

Switching off

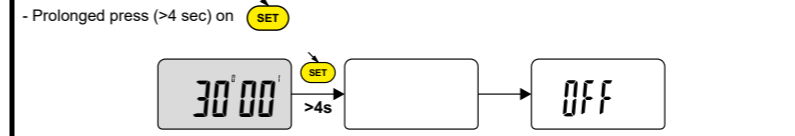
The protractor goes automatically into stand-by if not used for 20 minutes, unless automatic switch-off mode has been turned off (see «Second level functions»)

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



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 a 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):



List of the main commands (depends on instrument)

Selection and configuration
CHA+ / CHA- Change measurement direction
FCT0 ...9...A...F Assign «favourite» function
DEG / DMIN / RAD Change measurement unit
KEY0 / KEY1 Lock / unlock keypad
PRE +/-xxx.xxx Modify preset value
REF1 / REF2 / REF3 Change active reference (90°, 180°, 360°)
STO1 / STO0 Activate / de-activate HOLD
TOL1 / TOL0 Activate / de-activate tolerances
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) Serial number
TOL +/-xxx.xxx +/-yyy.yyy Inputting tolerance limits
MIN /MAX /DEL /NOR Selecting MIN, MAX, Delta, Normal mode
CLE Re-initialisation of MIN, MAX or Delta
UNI1 / UNIO Activate / de-activate change of units
OUT1 /OUT0 Activate / de-activate contin. data transmission
PRE ON / PRE OFF Activate / de-activate Preset function
PRE Recall Preset
SET Zero reset
SBY xx xx number of minutes before stand-by

BT0/BT1 Activate / de-activate Bluetooth® module
BTRST Reset pairing information

Interrogation
CHA? Measurement sense?
FCT? «favourite» function active?
UNI? Measurement unit active?
KEY? Keypad locked?
PRE? Preset value?
REF? Reference active?
TOL? Current tolerance limit values?
ECO? Current economic mode?
LCAL? Date of last calibration?
NCAL? Date of next calibration?
NUM? Serial number?
? Current value (mode Tol, value followed by <.=)
MOD? Active mode (MIN, MAX, Delta or Normal)?
SET? Main instrument parameters?
ID? Instrument identification code?
SBY Put instrument in stand-by (SIS)

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 ?

Re-initialising the instrument

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

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 Proximity or Power RS / USB cable, or Bluetooth® (depends on model)).

Possibilities :
- Enable or disable the required functions
- Modify access to the second level functions (direct access)

Connecting the instrument

The instrument can be connected to a peripheral via a Proximity (RS or USB), Power (RS or USB) cable or Bluetooth®. See «installing and replacing the battery» for connecting the Power cable.

Measured values can be transmitted and the instrument driven using predefined commands (see «List of the main commands»)

Note:
In Tolerance mode, the tolerance limit light remains lit only for a few seconds while the measurement stabilises. On the other hand, it will remains lit continuously if the instrument is connected to, and powered by, the Power RS (USB) cable.



Specifications

Measuring range	1x360°, 2x180°, 4x90°
Resolution	0.01° / 1 minute of arc (0°01') / 0.0001rad
Accuracy	4 minutes of arc / 0.06° / 0.0012 rad
Repeatability	0.01°
Maximum operation speed	1080° / s
Display refresh rate	8 / s
Measuring unit	deg / rad / deg-min
Measuring system	Sylvac Inductive System (patented)
Stand-by SIS (automatic after 10')	Keep origin, wake up with movement or command
Power	1 lithium battery 3V type CR2032, capacity min : 220mAh
Battery life	Average battery life: 7'000 hours / Bluetooth® enabled, see Bluetooth® specifications
Working temperature	+5 to +40° C / +41 to 104° F
Output	Compatible RS232, Proximity connection, Bluetooth® (depends on model, see chapter Bluetooth® configuration)
Protection according to IEC 529	IP51 (IEC 529)
Weight	410g