DM-SENSORS

Universal Process Calibrators

Automatic Pressure Calibrators

SMART CALIBRATORS

CMMS - ERP

Field Service version

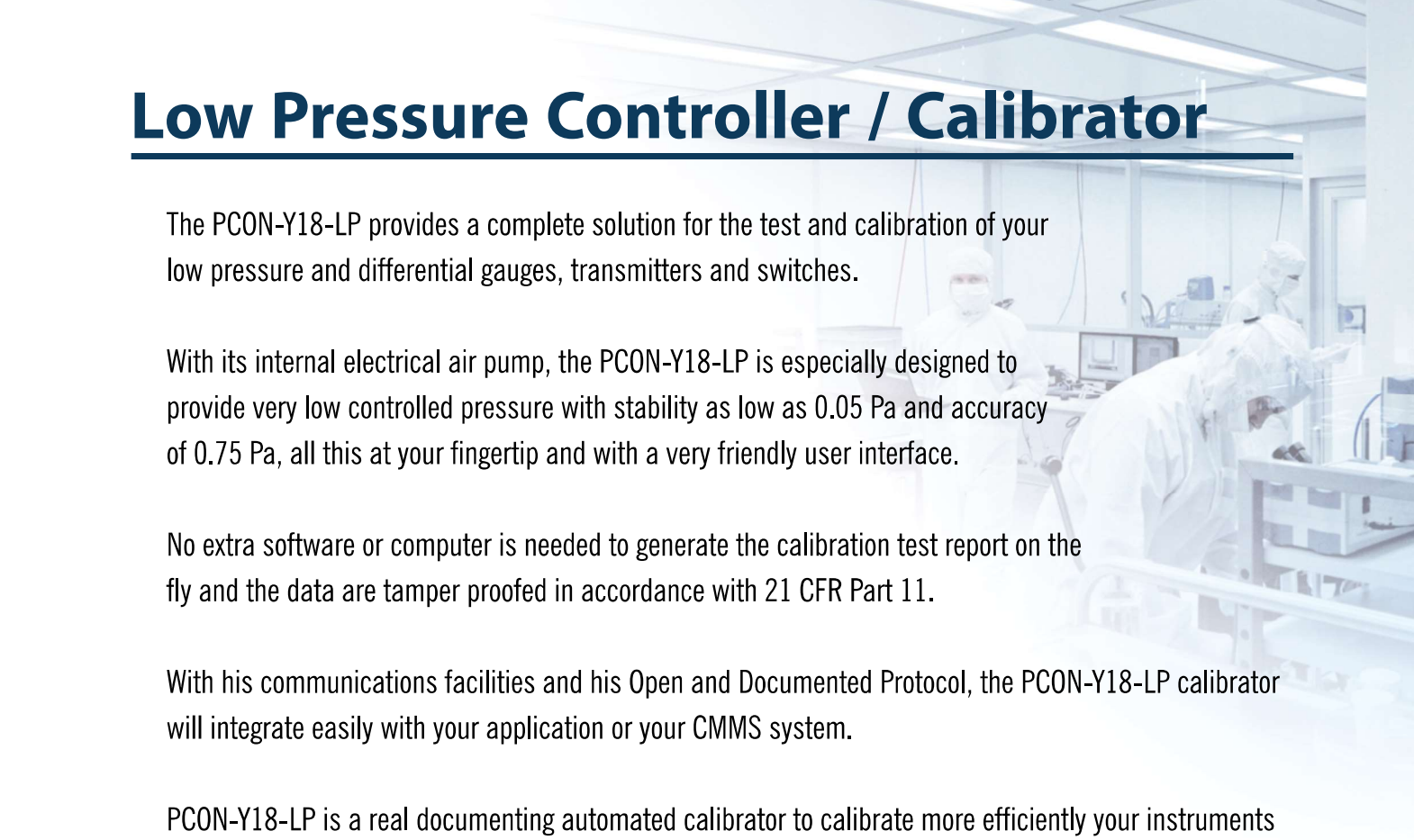
Desktop version

PCON-Y18-LP

Automatic Low Pressure Calibrator

www.dm-sensors.de

Low Pressure Controller / Calibrator



The PCON-Y18-LP provides a complete solution for the test and calibration of your low pressure and differential gauges, transmitters and switches.

With its internal electrical air pump, the PCON-Y18-LP is especially designed to provide very low controlled pressure with stability as low as 0.05 Pa and accuracy of 0.75 Pa, all this at your fingertip and with a very friendly user interface.

No extra software or computer is needed to generate the calibration test report on the fly and the data are tamper proofed in accordance with 21 CFR Part 11.

With his communications facilities and his Open and Documented Protocol, the PCON-Y18-LP calibrator will integrate easily with your application or your CMMS system.

PCON-Y18-LP is a real documenting automated calibrator to calibrate more efficiently your instruments in the areas of clean room, filtration and ventilation that will become quickly an indispensable tool in your day to day work allowing real gains of productivity.

PCON-Y18-LP-FS features

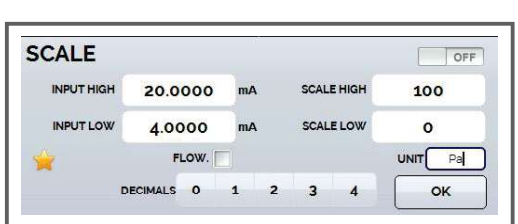
- 5.7" Touch Screen Color Display. Dual Core 1 GHz processor and Flash memory of 16 GB.
- Ethernet, Wi-Fi via USB/Ethernet router adapter, Serial USB with SCPI protocol.
- Integrated WebServer, client-server technology to pick-up tasks on remote server.
- Host/Device USB port.
- Optional HART® Communication.
- Pressure switch automatic testing.
- Input Current: -1 to 24.5 mA, ± 0.01% FS.
- Transmitter Power Supply: 24 Vdc regulated.
- Leak test.
- Temperature compensated accuracy from 0°C to 50°C.
- User selectable pressure unit: Pa, hPa, kPa, MPa, bar, mbar, psi, mmHg@0°C,cmHg@0°C, mHg@0°C, inHg@0°C, inH_2O@4°C, mmH_2O@4°C, cmH_2O@4°C, mH_2O@4°C, mmH_2O@20°C, cmH_2O@20°C, mH_2O@20°C, kg/m^2, kg/cm^2, mtorr, torr, atm, lb/ft^2.
- Control speed: 10 s (for 10 % FS pressure increase in a 50 ml test volume).
- Integrated electric pump for positive and negative pressure generation.

User-friendly Interface

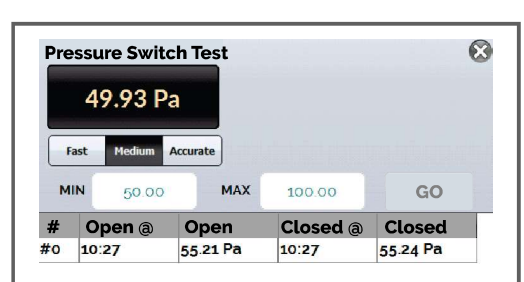
With an easy, clear and intuitive interface, available in different languages, you will be ready to do your first calibration after a few minutes.

Inputs

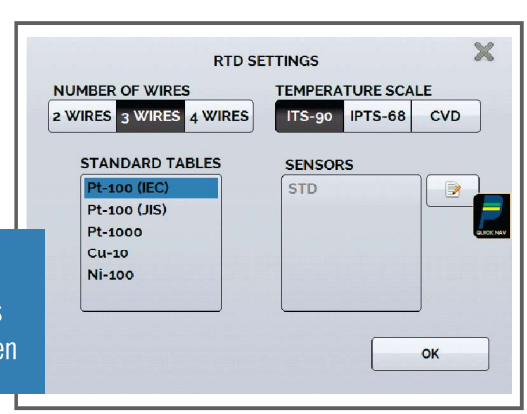
The PCON-Y18-LP is equipped with an internal high-performance calibrator to read inputs signals such as mA, mV, V, RTD and pressure switches as well as HART and Profibus digital signals. You don't need another extra calibrator to read the electrical signals in order to perform the automatic calibration of your pressure transmitters or pressure switches.



The 4-20 mA pressure transmitters can be calibrated showing directly the scaled pressure that will be displayed jointly with the measured current value.



Test of your pressure switches can be performed automatically.



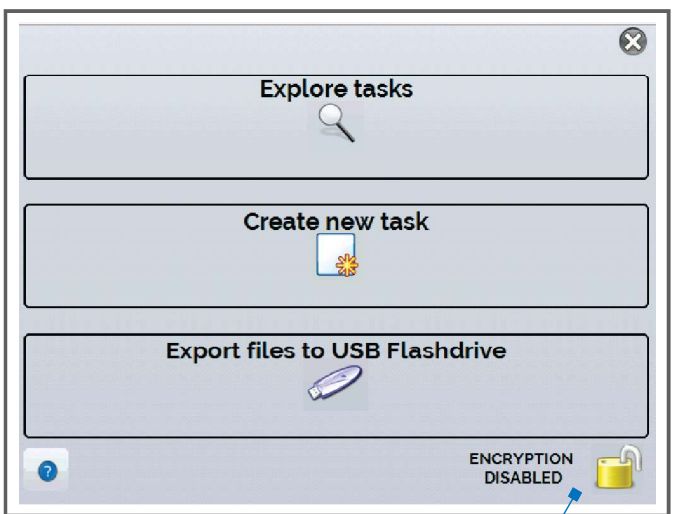
RTD can be connected with 2,4 or 4 wires and you can select various tables such as the IEC 60751, JIS or Callender Van Dussen

Automatic Pressure Cycling and Tasks

Automatic tasks can be easily created and executed to issue a final calibration report with your Advanced PCON-Y18-LP Pressure calibrator.

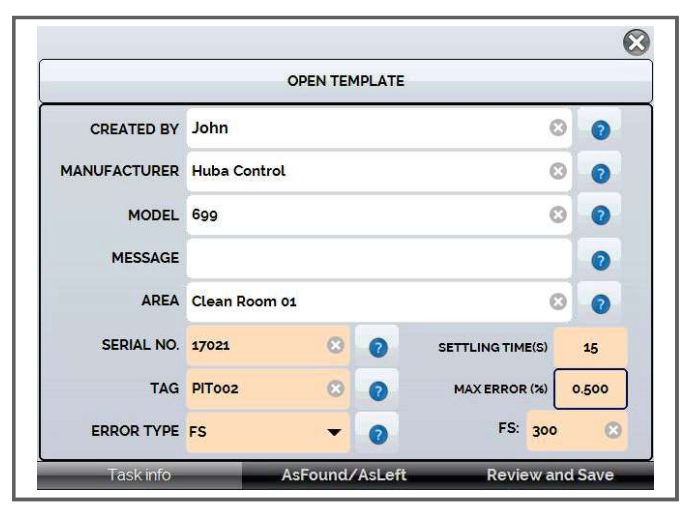
See for yourself how easy and fast can be an automatic pressure calibration !

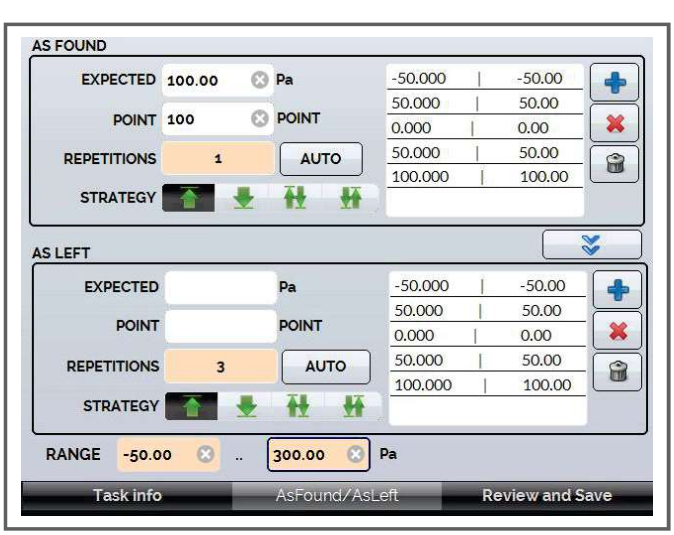
First step is to create a task by entering the relevant data of the calibration you will perform.



You can create tasks using the touch screen display or by connecting the PCON-Y18 to your computer. Other methods are also possible such as sending task from your application using our XML description or from an existing Excel™ application. The PCON-Y18-LP can also pick-up a task directly on a remote server. All these possibilities are described and documented in our communication manual.

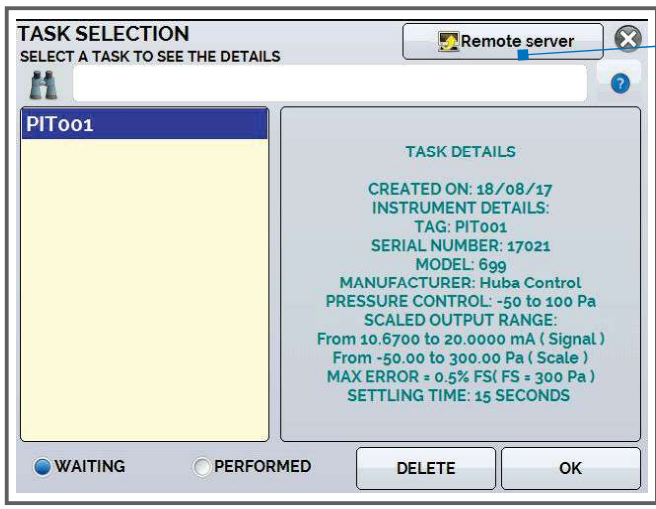
Communication with your calibration software applications such as ISOPLAN® are encrypted to assure the integrity of your calibration data in accordance with 21 CFR Part 11. When activated by the administrator, the XML data file with calibration information will be encrypted.





Information about your DUT can be entered such as the model, location, serial number, TAG name and the accepted tolerance.

You can define the temperature setpoints and expected results, different type of cycles, up, down, up and down, down and up and the number of cycles that you want the calibrator to perform.



Access to Remote Server

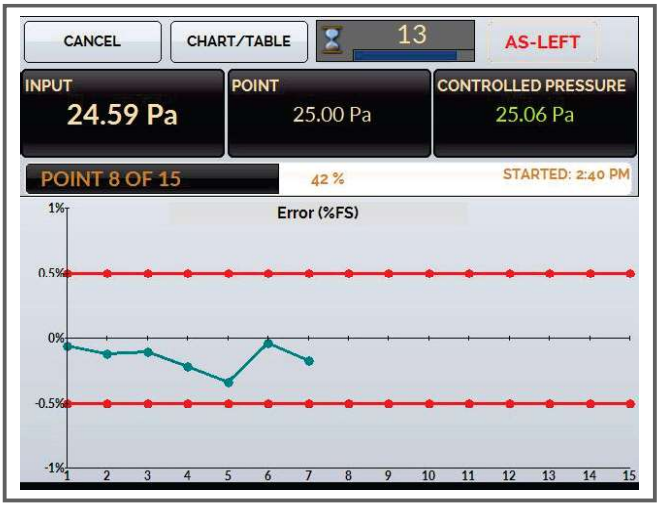
When you task has been created, you can go to the task list to be performed and choose the task you need to execute.

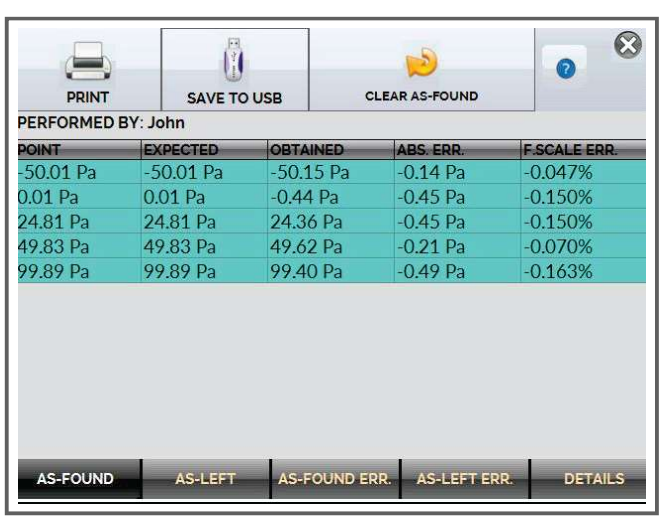
During the execution of the tasks, the PCON-Y18 will display the status of the execution showing the setpoint, the value of the reference and the auxiliary measured input.

When the PCON-Y18 is reaching the pressure setpoint, it will wait the defined stabilization time before registering the auxiliary input value.

Graphic is showing the values and the defined error limits.

You can switch easily during the execution from the graphic display to the values.

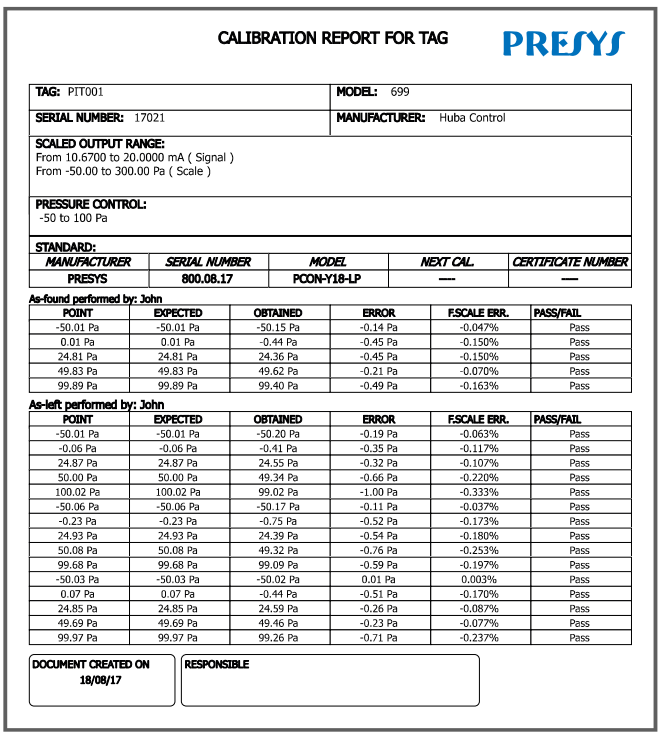




When the task is finished, several actions can be taken. You can print the report directly to the connected printer.
The calibration report will contain all the DUT information, the calibration information of your PCON-Y18 and the calibration results.

It can be complemented with your company logo and your signature that are stored in the calibrator.

Other possibilities are offered:
- Sending the results to a USB pendrive (PDF, XML and CSV).
- Accessing with our Web Server application.
- Sending back the results to a Remoter Server.
- Access to internal file storage system through the USB or Ethernet/Wifi connection.



CALIBRATION REPORT FOR TAG

PRESYS

TAG: PIT001	**MODEL:** 699
SERIAL NUMBER: 17021	**MANUFACTURER:** Huba Control

SCALED OUTPUT RANGE:
From 10.6700 to 20.0000 mA (Signal)
From -50.00 to 300.00 Pa (Scale)

PRESSURE CONTROL:
-50 to 100 Pa

STANDARD:

MANUFACTURER	*SERIAL NUMBER*	*MODEL*	*NEXT CAL.*	*CERTIFICATE NUMBER*
PRESYS	800.08.17	PCON-Y18-LP	----	----

As-found performed by: John

POINT	EXPECTED	OBTAINED	ERROR	F.SCALE ERR.	PASS/FAIL
-50.01 Pa	-50.01 Pa	-50.15 Pa	-0.14 Pa	-0.047%	Pass
0.01 Pa	0.01 Pa	-0.44 Pa	-0.45 Pa	-0.150%	Pass
24.81 Pa	24.81 Pa	24.36 Pa	-0.45 Pa	-0.150%	Pass
49.83 Pa	49.83 Pa	49.62 Pa	-0.21 Pa	-0.070%	Pass
99.89 Pa	99.89 Pa	99.40 Pa	-0.49 Pa	-0.163%	Pass

As-left performed by: John

POINT	EXPECTED	OBTAINED	ERROR	F.SCALE ERR.	PASS/FAIL
-50.01 Pa	-50.01 Pa	-50.20 Pa	-0.19 Pa	-0.063%	Pass
-0.06 Pa	-0.06 Pa	-0.41 Pa	-0.35 Pa	-0.117%	Pass
24.87 Pa	24.87 Pa	24.55 Pa	-0.32 Pa	-0.107%	Pass
50.00 Pa	50.00 Pa	49.34 Pa	-0.66 Pa	-0.220%	Pass
100.02 Pa	100.02 Pa	99.02 Pa	-1.00 Pa	-0.333%	Pass
-50.06 Pa	-50.06 Pa	-50.17 Pa	-0.11 Pa	-0.037%	Pass
-0.23 Pa	-0.23 Pa	-0.75 Pa	-0.52 Pa	-0.173%	Pass
24.93 Pa	24.93 Pa	24.39 Pa	-0.54 Pa	-0.180%	Pass
50.08 Pa	50.08 Pa	49.32 Pa	-0.76 Pa	-0.253%	Pass
99.68 Pa	99.68 Pa	99.09 Pa	-0.59 Pa	-0.197%	Pass
-50.03 Pa	-50.03 Pa	-50.02 Pa	0.01 Pa	0.003%	Pass
0.07 Pa	0.07 Pa	-0.44 Pa	-0.51 Pa	-0.170%	Pass
24.85 Pa	24.85 Pa	24.59 Pa	-0.26 Pa	-0.087%	Pass
49.69 Pa	49.69 Pa	49.46 Pa	-0.23 Pa	-0.077%	Pass
99.97 Pa	99.97 Pa	99.26 Pa	-0.71 Pa	-0.237%	Pass

DOCUMENT CREATED ON	RESPONSIBLE
18/08/17	

Connectivity and Communication

Various ways to communicate for the user and from applications are available on the PCON-Y18. By connecting your PC on the USB port, the calibrator will behave as a Mass Storage Device allowing you to retrieve tasks in XML, PDF or CSV format.
Connecting the PCON-Y18 on your IP network, several ways are available to get access to the PCON-Y18 system.

Ready for the Industry 4.0

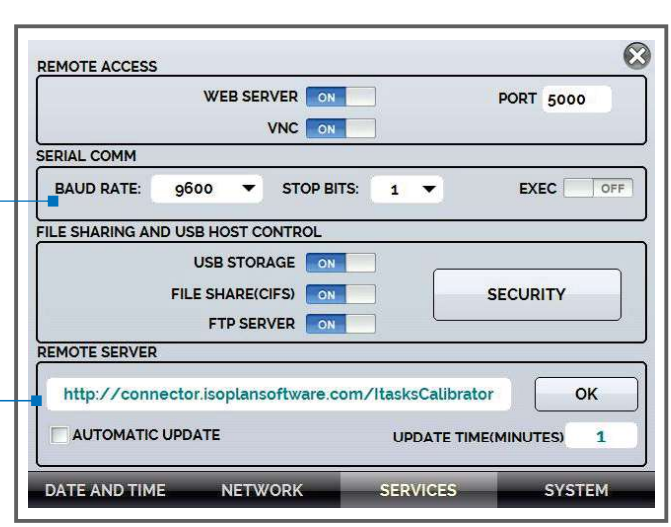
- You can access the task folder using the standard network Windows® File System.
- Sending and retrieving tasks file can be done through the HTTP protocol using a WebApi programming interface.
- Remote access from your computer using VNC Software.
- Access the Calibrator using a standard browser through the integrated Web Server.
- Access with FTP.
- Access to a Remote Server.

All these functions can be activated or desactivated in the configuration menu and also protected by a password.

The PCON-Y18 can also communicate with our other Presys Advanced Calibrators such as the MCS-XV Universal Process Calibrator to share resource such as a Profibus® interface.
These extended connectivity features make our PCON-Y18 a calibrator ready for the Industry 4.0 able to communicate with any CMMS application.

Communication USB/SERIAL SCPI Protocol

Remote Server Access Path



Connectivity and Communication

APPLICATION LAYER

- **ISOPLAN**
- **WEBSERVER BROWSER**
- **REMOTE SERVER**
- **CLIENT APPLICATION**
- **VIRTUAL NETWORK COMPUTING INTERFACE**

SERVICE LAYER

FILE SYSTEM
- Allows access to task files, videos, DD Hart®.

F S

WEB SERVICE
- Set of messages for data acquisition and reposition

Web Service

REMOTE FRAME BUFFER PROTOCOL
- Remote control and display sharing

RFB

PHYSICAL LAYER

UNIVERSAL SERIAL BUS
- Point to point connection

USB

ETHERNET
- Network cable and TCP/IP protocol.

LAN

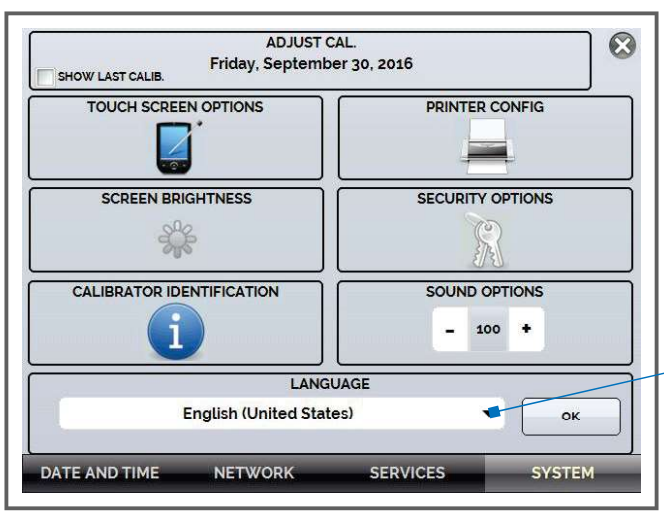
WIRELESS FIDELITY
- Depends of Wi-Fi availibility and router with 3G/4G Hotspot.

Wi-Fi

DATA LAYOUT

- **EXTENSIBLE MARKUP LANGUAGE** — XML
- **PORTABLE DOCUMENT FORMAT** — PDF
- **COMMA SEPARATED VALUE** — CSV
- **XML ENCRYPTED** — XML

Configuration



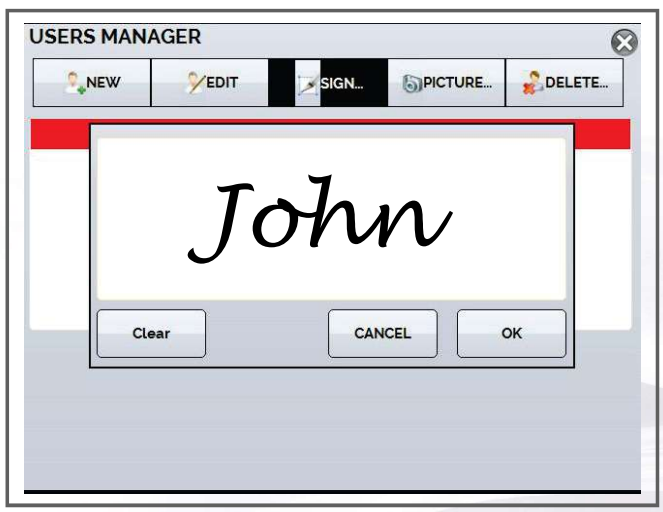
We provide a protected access to the calibration menu of the PCON-Y18-LP so that you can send it to any good calibration laboratory in case an adjustment is needed.

Several languages availables

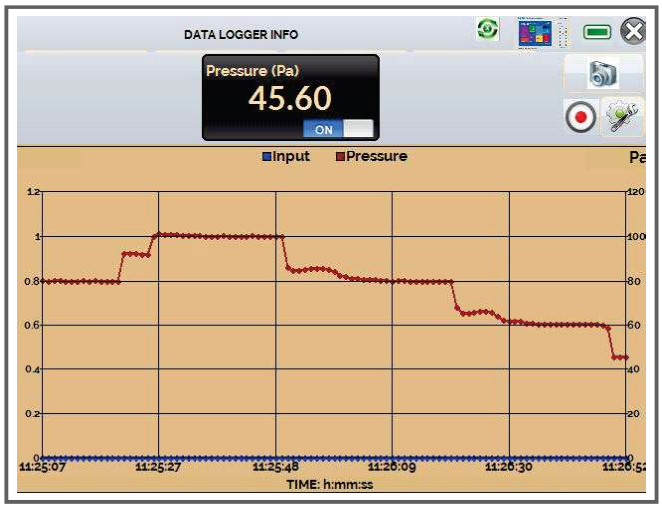
User access can be defined with different types of rigths such as operator, technician or administrator.

Their signature that appears on the reports can be entered directly on the touch screen.

The user with operator right will have a limited acces to some functions such as the creation of calibration tasks.



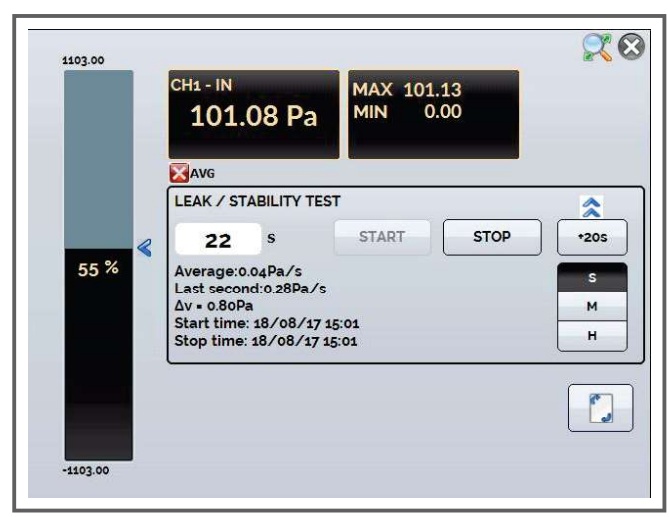
Data Logger



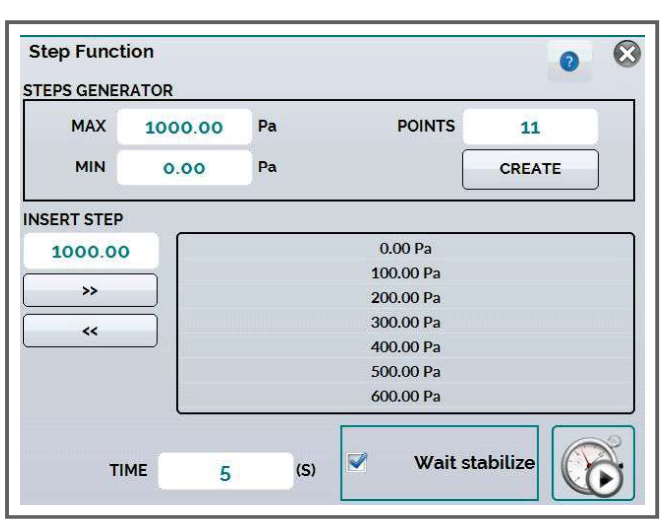
PCON-Y18-LP allows you to record series of measurements overtime to display in chart or table format.

Leak test

PCON-Y18-LP has a function to detect the drop of pression in the system during a defined laps of time.



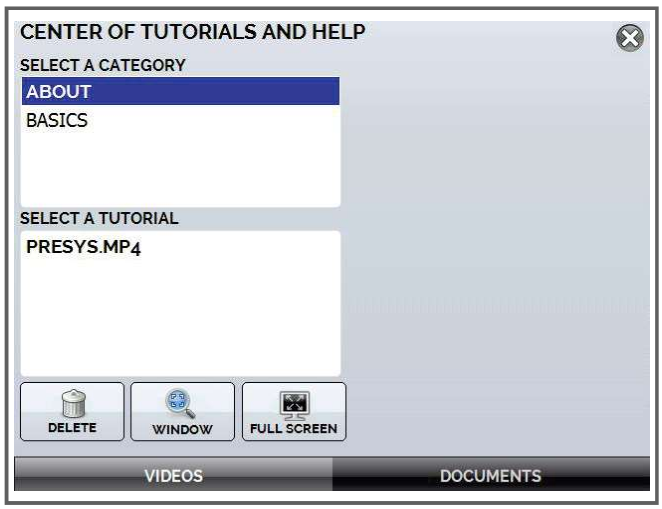
Predefined Steps



Predefined steps can be easily defined (division of span by a defined number of points, or values defined by the user). These steps are automaticaly executed by the pressure controller respecting the defined step duration.

Procedures and Tutorials

Videos or documents in JPEG format can be stored on your PCON-Y18 allowing a immediate access of the technician to specific technical informations or procedures.



Inverted Calibration

During a pressure gauge calibration execution, the keys + and – allow to increase or decrease the pressure of a defined value in order to reach a cardinal point of the gauge to avoid the reading of the pressure value on the DUT.

Technical Specifications

Order Code

PCON-Y18-LP – FS – □□ – □

Mounting Version
FS - Field Service in Rugged Polypropylene Case

Hart® Communication
NH - Without Hart® Communication.
CH - Hart® Calibrator (basic commands: zero, span, trim mA).
FH - Full-Hart® Configurator, with DD library from *FieldComm Group*.

Pressure Controller Range

Ranges	SI-Pascal	bar	Resolution	Control Stability* (better than)		Acuracy
(1)	-1000 to 1000 Pa	-10 to 10 mbar	0.01 Pa	100 ppm	0.1 Pa	± 0.075 % FS
(2)	-2500 to 2500 Pa	-25 to 25 mbar	0.01 Pa	100 ppm	0.25 Pa	± 0.050 % FS
(3)	-7000 to 7000 Pa	-70 to 70 mbar	0.1 Pa	40 ppm	0.28 Pa	± 0.025 % FS
(4)	-35000 to 35000 Pa	-350 to 350 mbar	1 Pa	40 ppm	1.4 Pa	± 0.0125 % FS

* depends on volume

Pneumatic Connections: connector for hose diameter 6 mm.
Battery: Lithium Polymer 4200 mAh.
Case Body: Polypropylene

Charger Power Supply: 100 to 240 Vac 50/60 Hz.
Operating Ambient: 0 to 50 °C, 90 % maximum relative humidity.
Dimensions: 200 x 300 x 260 mm (HxWxD).
Weight: 6,1 kg.
Warranty: 1 year.

Note: Hart® is a Fieldcomm Group trademark.

Standard Delivery

Our PCON-Y18-LP Calibrators are delivered standard with the following accessories:

- 01 x Power Charger
- 01 x Lead cable kit
- 01 x Pvc tube 6 mm x 2 meters
  02 x Pvc tube 6 mm x 1 meter
  + T for atmosphere output
- 01 x Technical Manual
- 01 x Traceable Calibration Certificate

Technical Specifications

Order Code

PCON-Y18-LP – ☐ – ☐☐ – ☐

Mounting Version

DT - Desktop Version (for Workbench use)
RM - Rack Mounting Version (Fixed in a 19" Rack or Workbench)

Hart® Communication

NH - Without Hart® Communication.
CH - Hart® Calibrator (basic commands: zero, span, trim mA).
FH - Full-Hart® Configurator, with DD library from *FieldComm Group.*

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(1)	-1000 to 1000 Pa	-10 to 10 mbar	0.01 Pa	100 ppm 0.1 Pa	± 0.075 % FS
(2)	-2500 to 2500 Pa	-25 to 25 mbar	0.01 Pa	100 ppm 0.25 Pa	± 0.050 % FS
(3)	-7000 to 7000 Pa	-70 to 70 mbar	0.1 Pa	40 ppm 0.28 Pa	± 0.025 % FS
(4)	-35000 to 35000 Pa	-350 to 350 mbar	1 Pa	40 ppm 1.4 Pa	± 0.0125 % FS

* depends on volume

Pneumatic Connections: connector for hose diameter 6 mm.

Charger Power Supply: 100 to 240 Vac 50/60 Hz.
Operating Ambient: 0 to 50 °C, 90 % maximum relative humidity.
Dimensions: 125 mm x 300 mm x 265 mm (DT Version) /
132 mm x 483 mm x 300 mm (RM Version) (HxWxD).
Weight: 6.2 kg (DT Version) / 8.5 kg (RM Version) nominal.
Warranty: 1 year.

Note: Hart® is a Fieldcomm Group trademark.

Standard Delivery

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- 01 x Power cable
- 01 x Lead cable kit
- 01 x Pvc tube 6 mm x 2 meters
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- 01 x Technical Manual
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PRESYS Instruments

Is a leading manufacturer and developer of calibrators for temperature, pressure and process signals as well as calibration software offering a complete solution for process calibration needs.

Presys has an ISO/IEC 17025 accredited laboratory issuing accredited certificates in accordance with international standards.

HART COMMUNICATION PROTOCOL · PROFIBUS® · FOUNDATION · CE

DM-SENSORS
Druck • Feuchte • Weg • Kraft • Messtaster
Drehmoment • Temperatur

MANAGEMENT SYSTEM TÜVRheinland Brasil NBR ISO 9001 QUALITY

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EF0655-01