PRESYS

Desktop
version

19" Rack Mounting
version

PCON-Y17

Pressure Controller / Calibrator

Pressure Controller / Calibrator

The PCON-Y17 Pressure Controller/Calibrator provides a complete solution for the test and calibration of your pressure gauges, transmitters as well as pressure switches.

The generation of pressure and measuring of the DUT signal (analog or digital) is fully automatic without the need of a computer or other signal calibrator.

The controller provides a pressure with stability as low as 0,002 % FS and with an accuracy of 0,012 % FS, all this at your fingertip and with a very friendly user interface.

When equipped with the secundary pressure sensor, the PCON-Y17 offers an outstanding accuracy on all the control range.

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-Y17 calibrator will integrate easily with your application or your CMMS system.

PCON-Y17 is a real documenting automated calibrator to calibrate more efficiently all your pressure instruments and will become quickly an indispensable tool in your day to day work allowing real gains of productivity.

PCON common features

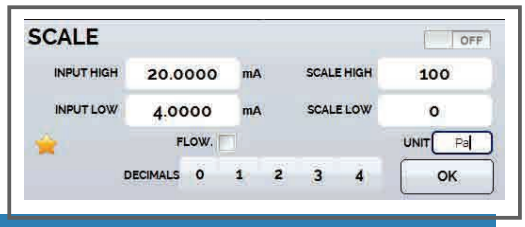
- Dual Range capability.
- Control speed: 10 s (for 10 % FS pressure increase in a 50 ml test volume).
- 5.7" Touch Screen Color Display. Dual Core 1 GHz processor and Flash memory of 16 GB.
- Ethernet, Wi-Fi via USB/Ethernet router adapter, Serial USB with SCPI protocol.
- Client-server technology to 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.
- Windowed Static Control Mode.
- Media: clean gas (air or inert), pressure input 50 % to 120 % of full scale.
- Support of secondary Digital Pressure sensor on USB port to increase accuracy at lower pressure ranges or use as a standard pressure calibrator.

User-friendly Interface

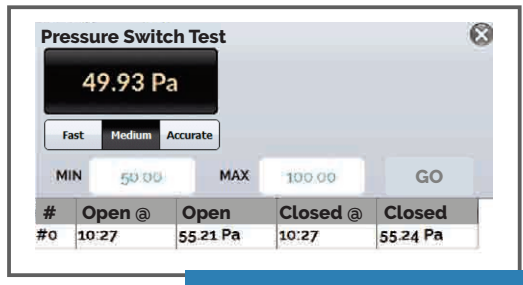
With an easy,clear and intuitive interface, available in different languages, you will be ready to do your first calibration after a few minutes.

Inputs

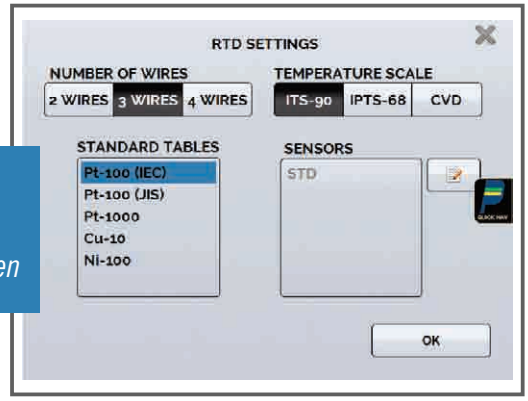
The PCON-Y17 is equipped with an internal high-performance calibrator to read inputs signals such as mA, mV, V, RTD and pressure switches as well as HART and Profibus digital signals. You don't need another extra calibrator to read the electrical signals in order to perform the automatic calibration 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.



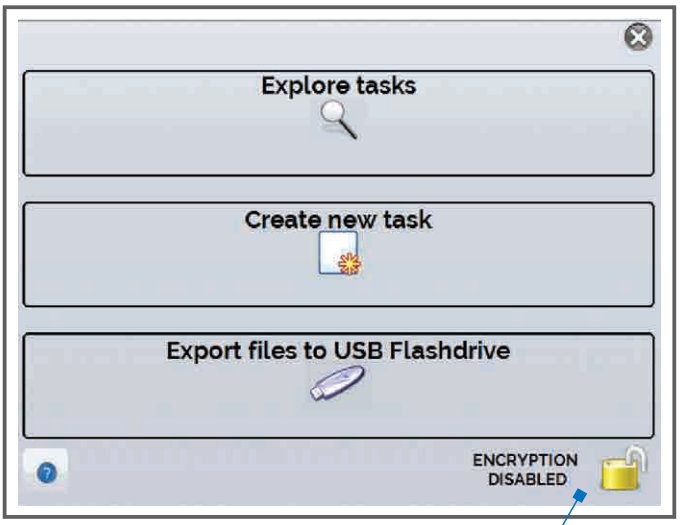
RTD can be connected with 2,4 or 4 wires and you can select various tables such as the IEC 60751, JIS or *Callender-Van Dussen*

Automatic Pressure Cycling and Tasks

Automatic tasks can be easily created and executed to issue a final calibration report with your Advanced PCON-Y17 Pressure calibrator.

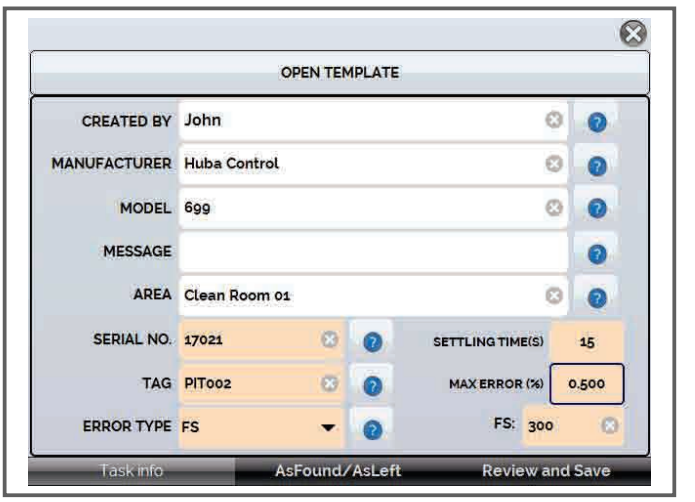
See for yourself how easy and fast can be an automatic pressure calibration !

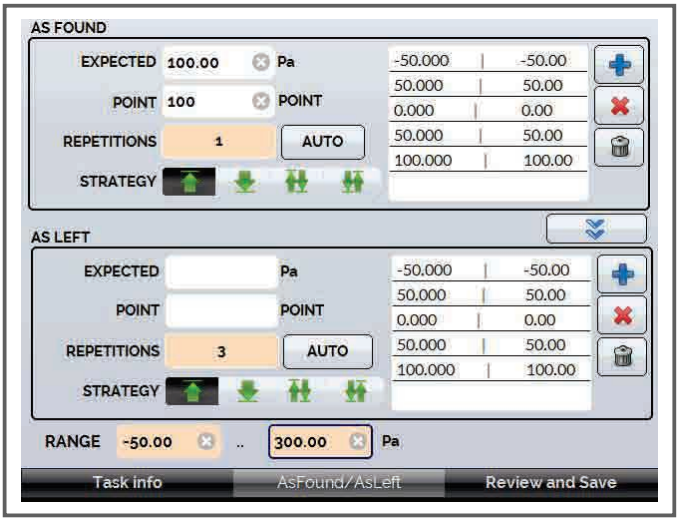
First step is to create a task by entering the relevant data of the calibration you will perform.



You can create tasks using the touch screen display or by connecting the PCON-Y17 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-Y17 can also pick-up a task directly on a remote server. All these possibilities are described and documented in our communication manual.

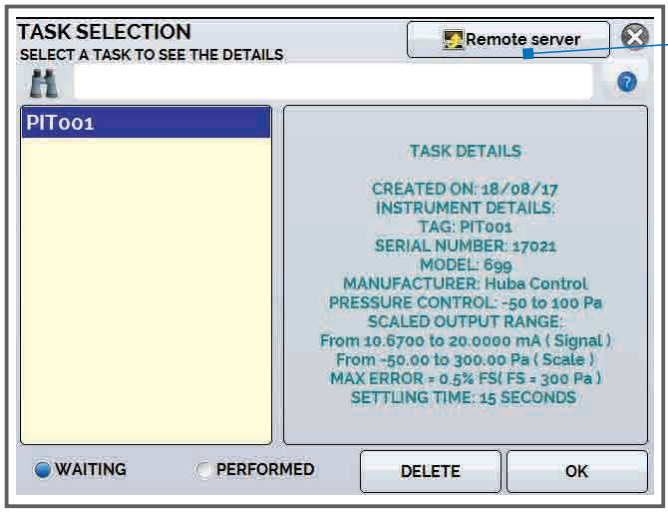
Communication with your calibration software applications such as ISOPLAN® are encrypted to assure the integrity of your calibration data in accordance with 21 CFR Part 11. When activated by the administrator, the XML data file with calibration information will be encrypted.





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

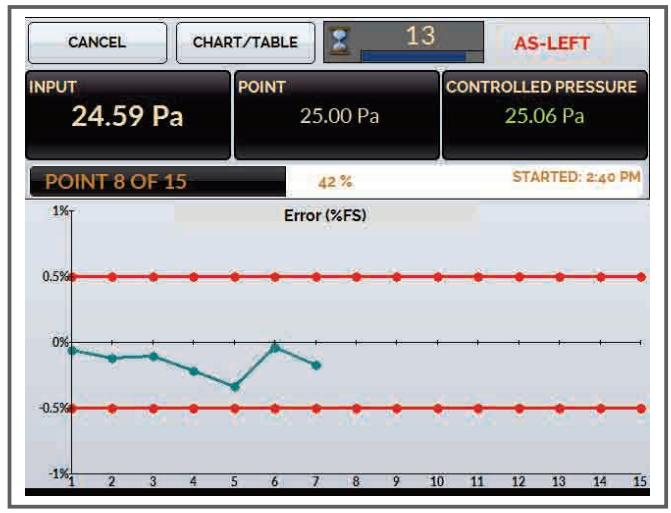
You can define the temperature setpoints and expected results, different type of cycles, up, down, up and down, down and up and the number of cycles that you want the calibrator to perform.



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-Y17 will display the status of the execution showing the setpoint, the value of the reference and the auxiliary measured input.

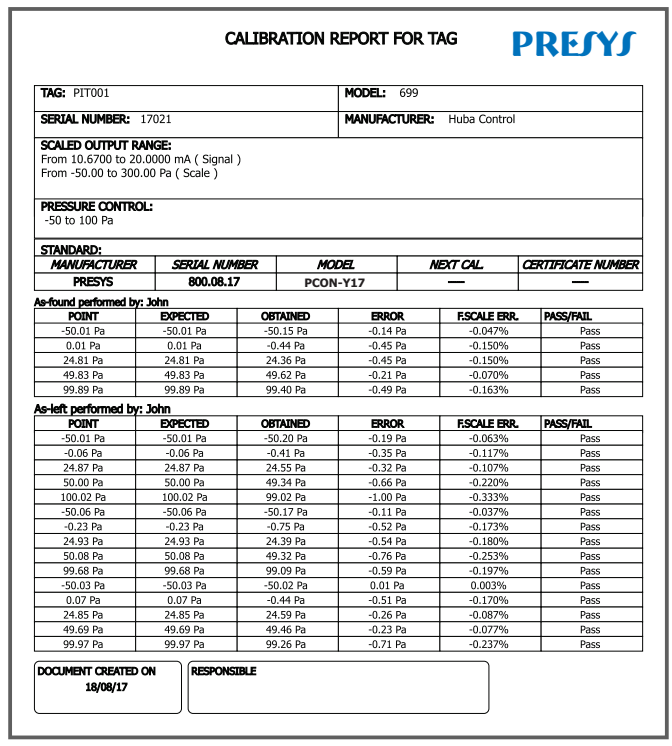


When the PCON-Y17 is reaching the pressure setpoint, it will wait the defined stabilization time before registering the auxiliary input value.

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-Y17 and the calibration results.



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-Y17	—	—

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	

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 appplication.
- Sending back the results to a Remoter Server.
- Access to internal file storage system through the USB or Ethernet/Wifi connection.

Connectivity and Communication

Various ways to communicate for the user and from applications are available on the PCON-Y17. 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-Y17 on your IP network, several ways are available to get access to the PCON-Y17 system.

Ready for the Industry 4.0

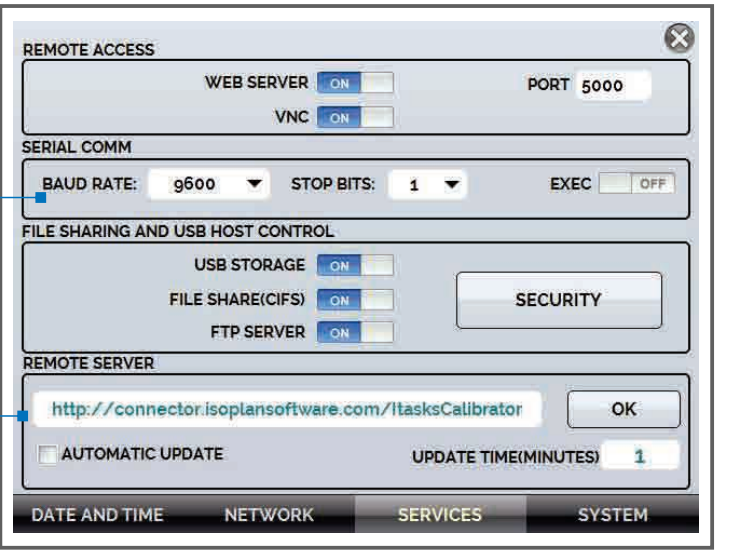
- You can access the task folder using the standard network Windows® File System.
- Sending and retrieving tasks file can be done through the HTTP protocol using a WebApi programming interface.
- Remote access from your computer using VNC Software.
- Access the Calibrator using a standard browser through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

These extended connectivity features make our PCON-Y17 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

ISOPLAN

WEBSERVER BROWSER

REMOTE SERVER

CLIENT APPLICATION

VIRTUAL NETWORK COMPUTING INTERFACE

APPLICATION LAYER

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

WEB SERVICE
- Set of messages for data acquisition and reposition

REMOTE FRAME BUFFER PROTOCOL
- Remote control and display sharing

SERVICE LAYER

UNIVERSAL SERIAL BUS
- Point to point connection

ETHERNET
- Network cable and TCP/IP protocol.

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

PHYSICAL LAYER

DATA LAYOUT

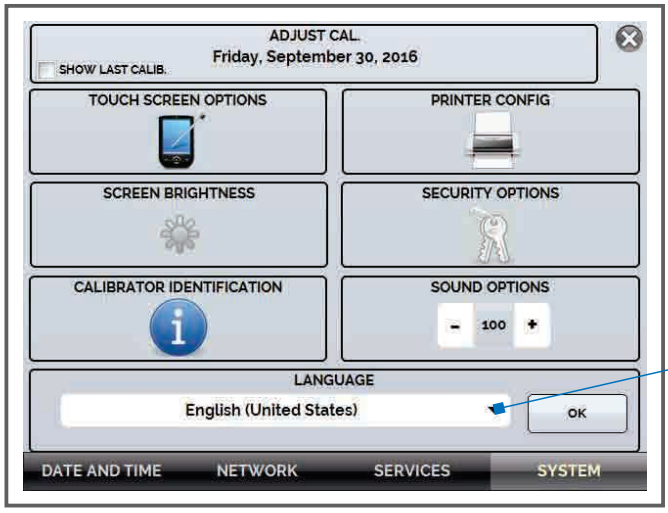
EXTENSIBLE MARKUP LANGUAGE

PORTABLE DOCUMENT FORMAT

COMMA SEPARATED VALUE

XML ENCRYPTED

Configuration



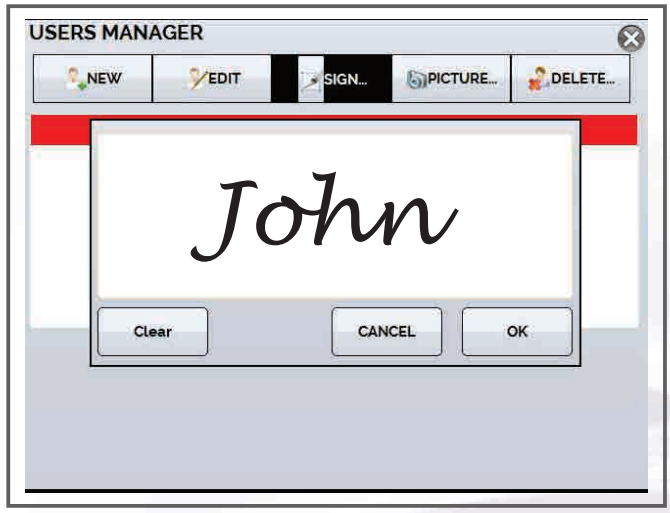
We provide a protected access to the calibration menu of the PCON-Y17 so that you can send it to any good calibration laboratory in case an adjustment is needed.

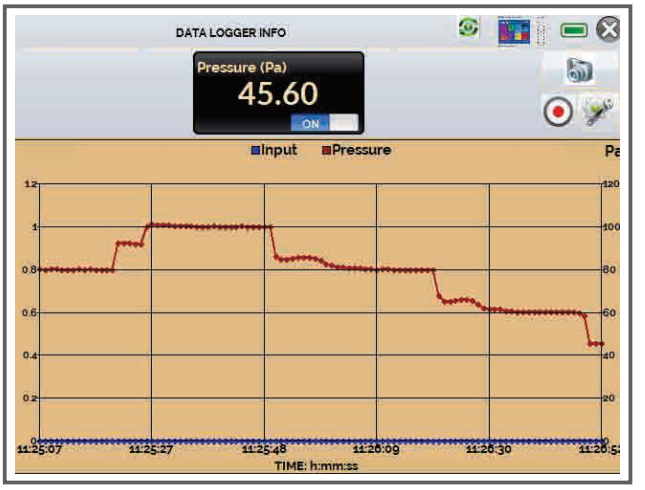
Several languages availables:
English, Spanish, French, Portuguese, Italian, Russian, Simplified Chinese, Ukranian.

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.





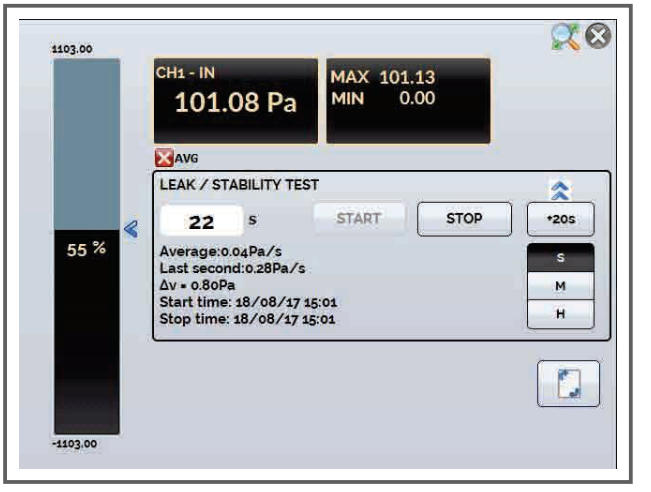
Data Logger

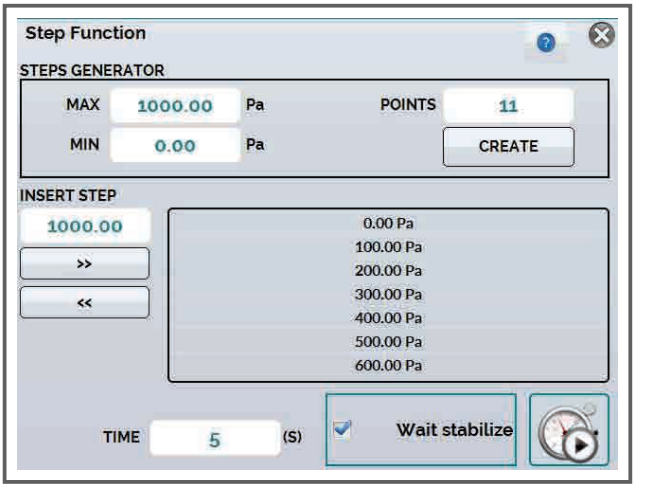
PCON-Y17 allows you to record series of measurements overtime to display in chart or table format.

The data is saved in internal memory and can also be saved in PEN DRIVE and even exported to a .csv file.

Leak test

PCON-Y17 has a function to detect the drop of pression in the system during a defined laps of time.



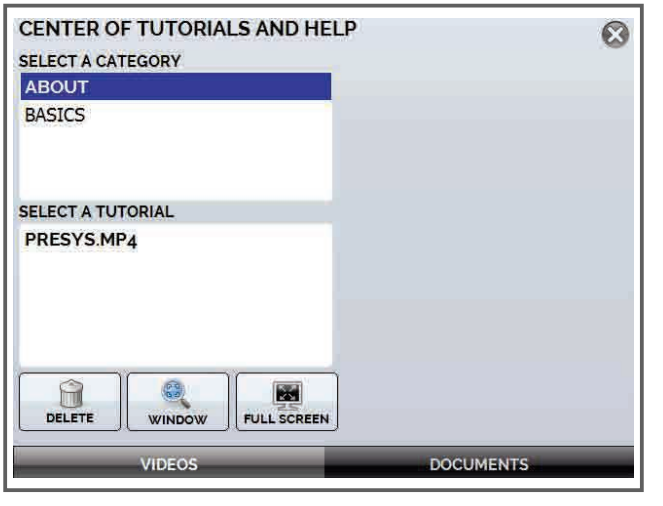


Predefined Steps

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.

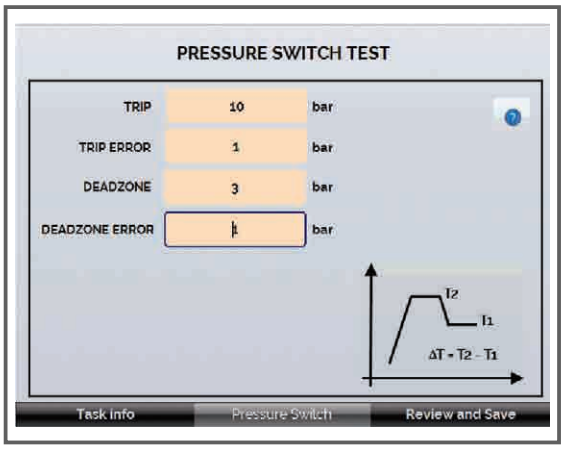
Procedures and Tutorials

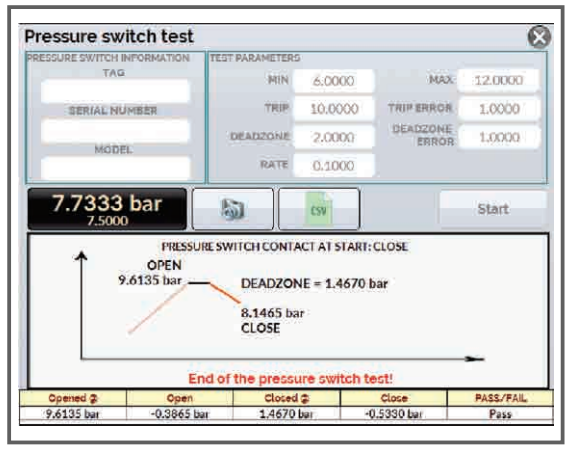
Videos or documents in JPEG format can be stored on your PCON-Y17 allowing a immediate access of the technician to specific technical informations or procedures.



Switch

Easily test your pressure switches. The PCON automatically generates a ramp at the pressure output and monitors through the auxiliary input the electrical contact, indicating the Trip (contact change) and Dead Zone (Hysteresis) values obtained.

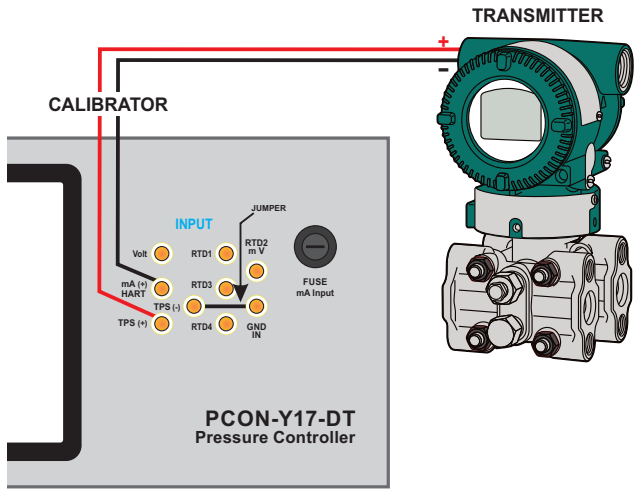




Hart®/ Profibus® Communication (Optional)

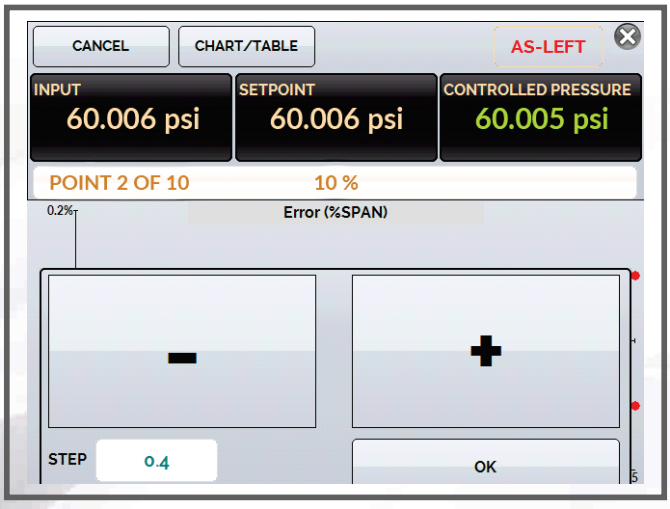
The PCON-Y-17 Calibrators can be used to read and adjust the parameters of DUT equipped with a Hart® modem or Profibus® interface.

An automatic calibration reading directly the Hart® digital or Profibus® Process Variable value can be performed eliminating the need of another Communicator.



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.



Contamination Trap
SI-600 / SI-3000

Model: SI-600
Order Code: **06.08.0090-00**
Maximum Pressure: **600 psi (40 bar)**

Model: SI-3000
Order Code: **06.08.0095-00**
Maximum Pressure: **3000 psi (210 bar)**

Used to protect the pressure generators, they avoid contamination of the internal system of the calibrator / controller by liquids (water, oil, etc.) from the process instruments during the calibrations.

- **Material:** Stainless steel, polycarbonate and nitrile rubber seals.
- **Connection**: 2 x Adapters 1/8 "BSP male brass with sealed system for high-pressure hose, polyurethane and nitrile rubber seal.

Kit Manifold

Facilitates the attachment of pressure transmitters and manometers for the realization of your calibrations.
Distance of 116 mm between the connections allowing the simultaneous display of 2 manometers.

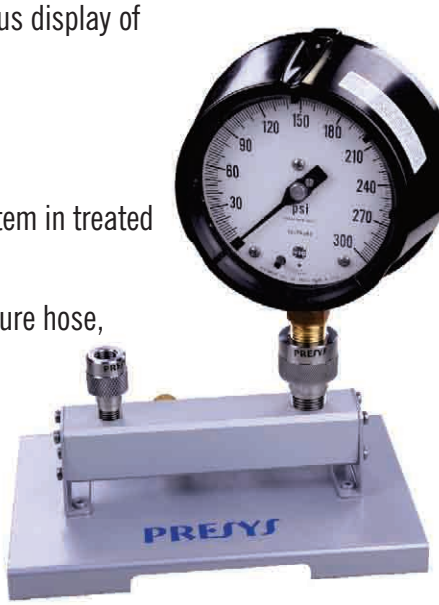
- Material: anodized aluminum block and painted aluminum support.

- Connexions:

- 1 x 1/2 "NPT Female + 1 x 1/4" NPT Female with quick sealing system in treated steel, polyurethane seals, nitrile rubber and Teflon (PTFE).
- 2 x 1/4 "NPT male brass adapter with sealing system for high-pressure hose, polyurethane seals, nitrile rubber and a plug with chain.

- Maximum Pressure: 200 bar.

Included accessories: ¼ "NPT hexagonal plug, ½" NPT hexagonal plug and extension kit for another Manifold connected in series.



Kit for Vacuum

This kit is used with our pressure controllers with a negative supply (vacuum pump) to prevent positive pressure discharges from damaging the vacuum pump or reducing its efficiency when changing the setpoint.

Model: KIT-RS-P-BP-AC-PCON
Ordering code: 02.09.0154-21

Technical Specifications

Order Code

PCON-Y17 – □□ – □□ – □ – □ – □ – □ – □□

Pressure Control Module (C1) | Secundary Pressure Module (C2) | Barometric reference (Optional)

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*.

Pressure Controller Range (C1)

Ranges	bar	psi	SI-Pascal	Control* Stability	Accuracy	
(3)	1 bar	0-15 psi	100 kPa	± 0.002 % FS	± 0.012 % FS	Group G1
(4)	2 bar	0-30 psi	200 kPa	± 0.002 % FS	± 0.012 % FS	
(5)	7 bar	0-100 psi	700 kPa	± 0.002 % FS	± 0.012 % FS	
(6)	20 bar	0-250 psi	2.5 MPa	± 0.002 % FS	± 0.012 % FS	
(7)	35 bar	0-500 psi	3.5 MPa	± 0.002 % FS	± 0.012 % FS	Group G2
(8)	70 bar	0-1000 psi	7 MPa	± 0.002 % FS	± 0.012 % FS	
(9)	210 bar	0-3000 psi	21 MPa	± 0.003 % FS	± 0.012 % FS	

* using 2 σ method

Pressure Type (C1)
G - Gage
V - Vacuum (Only for range 3)
C - Compound*** (From range 3 to 8)

Note: For **Absolute** Pressure, must be included the **BR** optional (Barometric Reference)

Secundary* Pressure Range (C2)**

Pressure Type (C2)**
G - Gage
V - Vacuum (Only for range 3)
C - Compound*** (From range 3 to 8)

(*) The secundary pressure range needs to be in the same group (G1 or G2) than the Primary Pressure control range (**) Same code as (C1) (***) From -15 psig to the range full scale

Optional
BR - Barometric Reference to measure and emulate absolute pressure
Accuracy 0,16 mmHg / 0,2 mbar

Pneumatic Connections (Pressure Control Module - C1): 1/8" Female BSPP (Supply (+) / Supply (-) / Output / Reference).

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

Standard Delivery

Our PCON-Y17 Calibrators are delivered standard with the following accessories:

- 01 x Power cable
- 01 x Lead cable kit
- 01 x Pneumatic Connection Kit
- 01 x Technical Manual
- 01 x Traceable Calibration Certificate

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

CE

PRESYS

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MANAGEMENT SYSTEM TÜVRheinland Brasil NBR ISO 9001 QUALITY

Your Distributor:

EF0576-09