PRESYS®

SMART CALIBRATORS

Automatic Pressure Calibrators

Process Calibrators

Dry Block

HART
COMMUNICATION PROTOCOL

PCON Battery Pack

PRESYS
PCON Battery Pack

20.0008mA
13.000

20.0008mA
13.000

PCON Kompressor-Y18
Field Automatic Pressure Calibrator

www.presys.com.br

Pressure Controller / Calibrator

The PCON Kompressor-Y18 provides a complete and autonomous solution for test and calibration on the field of your pressure gauges, transmitters and pressure switches.

With his oil-free and low power consumption internal air compressor, the PCON-Y18 provides high level of productivity for your day to day calibration tasks without the use of manual pumps.

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

The PCON-Y18 is a real documenting automated pressure calibrator to calibrate more efficiently and accurately all your pressure instruments that will become quickly an indispensable tool in your day to day work allowing real gains of productivity.

PCON Kompressor-Y18 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.
- ➤ Client-Server technology to pick-up tasks on remote server.
- ➤ Cloud Server access to send back calibration reports.
- ➤ Host/Device USB port.
- ➤ HART® Communication standard.
- ➤ Pressure switch automatic testing.
- ➤ Input Current: -1 to 24.5 mA, $\pm$ 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, $inH_2O@20°C$.
- ➤ Control speed: 20 s (for 10 % FS pressure increase in a 50 ml test volume).
- ➤ Windowed Static Control Mode, reduce use of the electric pump and save battery.
- ➤ Integrated electric pump for positive (up to 70 bar) and negative pressure (-0.9 bar) generation.
- ➤ Support of secondary Digital Pressure sensor on USB port to increase accuracy at lower pressure ranges or use as a standard pressure calibrator.
- ➤ Dual Pressure Range.

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.

Vent

Measure mode

Control mode

Pressure Reset

Access to the control parameters

Pressure unit

Controlled or measured pressure.

Selected pressure range

Stability indicator

Selected Input

Selected electrical signal (mA,mV,...)

SETTINGS RESET PRESS VENT MEASURE CONTROL

-1   7

240 s
2σ: 0.0001

6.0002   bar G

RANGE HIGH

RANGE LOW

SP= 6.0000   STEP   PRESET   NUDGE

SIGNAL: mA   NO SPECIAL FUNCTION

19.9950 mA

HART

INPUT   SPECIAL FUNCTIONS   HELP

Inputs

The PCON-Y18 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® digital signal. 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.

SCALE   OFF

INPUT HIGH   20.0000   mA   SCALE HIGH   100
INPUT LOW   4.0000   mA   SCALE LOW   0
                FLOW.   UNIT Pa
DECIMALS   0   1   2   3   4   OK

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

Pressure switch test

PRESSURE SWITCH INFORMATION
TAG   TEST PARAMETERS
                             MIN   6.0000   MAX   12.0000
SERIAL NUMBER   TRIP 10.0000   TRIP ERROR 1.0000
                             DEADZONE 2.0000 DEADZONE ERROR 1.0000
MODEL   RATE 0.1000

7.7333 bar
7.5000   Start

PRESSURE SWITCH CONTACT AT START: CLOSE
OPEN
9.6135 bar   DEADZONE = 1.4670 bar
                8.1465 bar
                CLOSE

End of the pressure switch test!

TRIP	TRIP ERROR	DEADZONE	DEADZONE ERROR	PASS/FAIL
9.6135 bar	-0.3865 b			

Test of your pressure switches can be performed automatically.

RTD SETTINGS

NUMBER OF WIRES   TEMPERATURE SCALE
2 WIRES 3 WIRES 4 WIRES   ITS-90 IPTS-68 CVD

STANDARD TABLES   SENSORS
Pt-100 (IEC)   STD
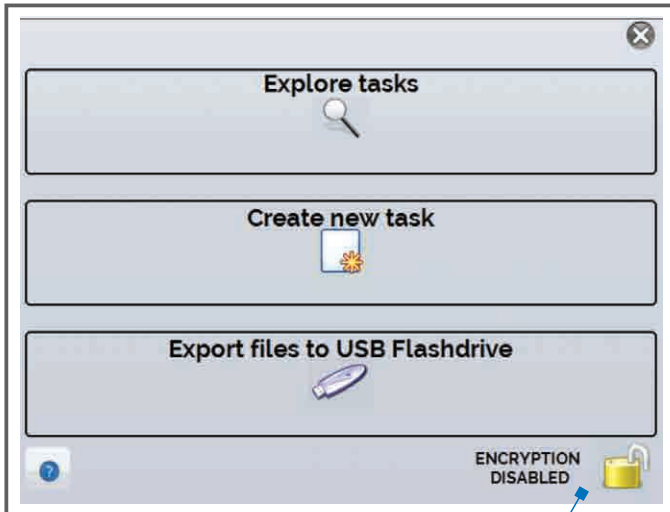Pt-100 (JIS)
Pt-1000
Cu-10
Ni-100

OK

RTD can be connected with 2, 3 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 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 can also pick-up a task directly on a remote server. All these possibilities are described and documented in our communication manual.
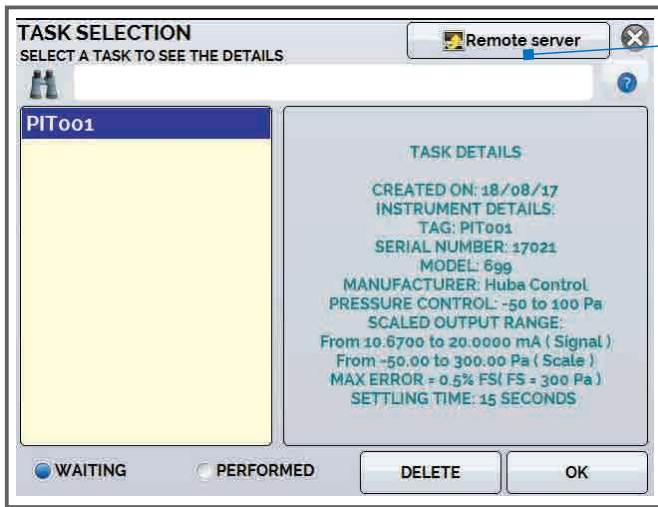
Communication with your calibration software applications such as ISOPLAN® are encrypted to assure the integrity of your calibration data in accordance with 21 CFR Part 11. When activated by the administrator, the XML data file with calibration information will be encrypted.
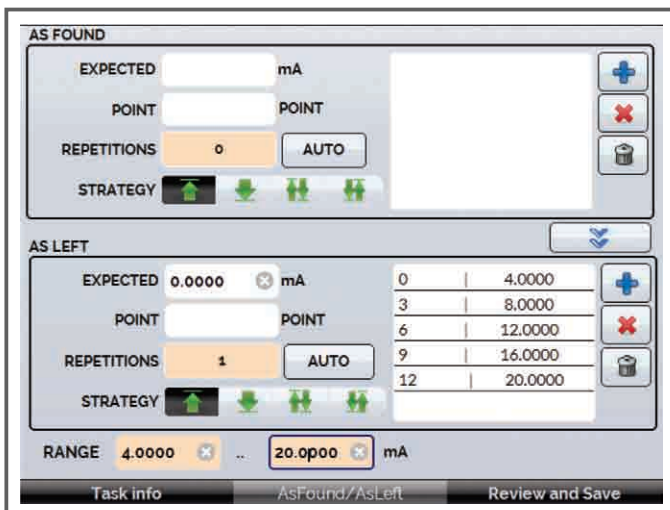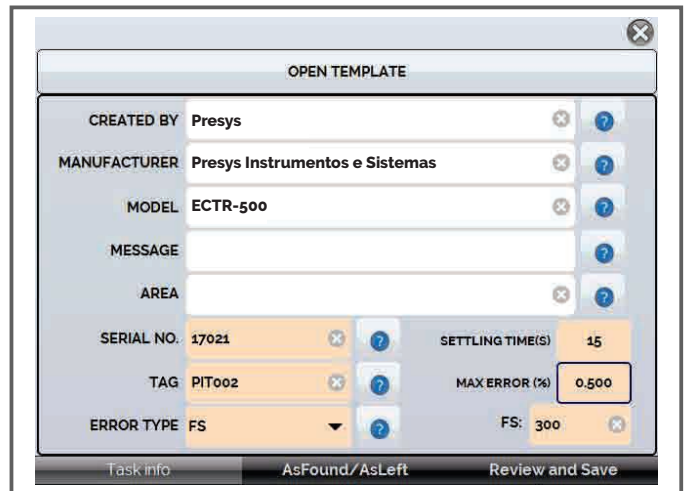
Information about your DUT can be entered such as the model, location, serial number, TAG name and the accepted tolerance.

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.

TASK SELECTION
SELECT A TASK TO SEE THE DETAILS

Remote server

PIT001

TASK DETAILS

CREATED ON: 18/08/17
INSTRUMENT DETAILS:
TAG: PIT001
SERIAL NUMBER: 17021
MODEL: 699
MANUFACTURER: Huba Control
PRESSURE CONTROL: -50 to 100 Pa
SCALED OUTPUT RANGE:
From 10.6700 to 20.0000 mA (Signal)
From -50.00 to 300.00 Pa (Scale)
MAX ERROR = 0.5% FS(FS = 300 Pa)
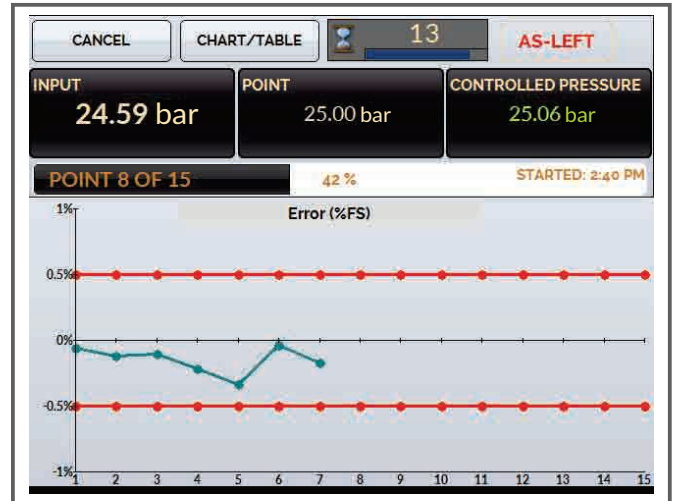SETTLING TIME: 15 SECONDS

○ WAITING   ○ PERFORMED   DELETE   OK

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.

CANCEL   CHART/TABLE   13   AS-LEFT

INPUT	POINT	CONTROLLED PRESSURE
24.59 bar	25.00 bar	25.06 bar

POINT 8 OF 15   42 %   STARTED: 2:40 PM

Error (%FS)

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.

PRINT   SAVE TO USB   CLEAR AS-LEFT

PERFORMED BY:

POINT	EXPECTED	OBTAINED	ABS. ERR.	SPAN ERR.
0.0000 bar	4.0000 mA	3.9998 mA	-0.0002 mA	-0.001%
2.9994 bar	7.9992 mA	7.9998 mA	0.0006 mA	0.004%
6.0012 bar	12.0016 mA	11.9996 mA	-0.0020 mA	-0.012%
9.0007 bar	16.0009 mA	15.9994 mA	-0.0015 mA	-0.009%
12.0002 bar	20.0003 mA	19.9992 mA	-0.0011 mA	-0.007%

AS-FOUND   AS-LEFT   AS-FOUND ERR.   AS-LEFT ERR.   DETAILS

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 pen drive (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/Wi-Fi 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	—	—

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 18/08/17	RESPONSIBLE

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.

- 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.

Ready for the Industry 4.0

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-Y18 a calibrator ready for the Industry 4.0 able to communicate with any CMMS application.
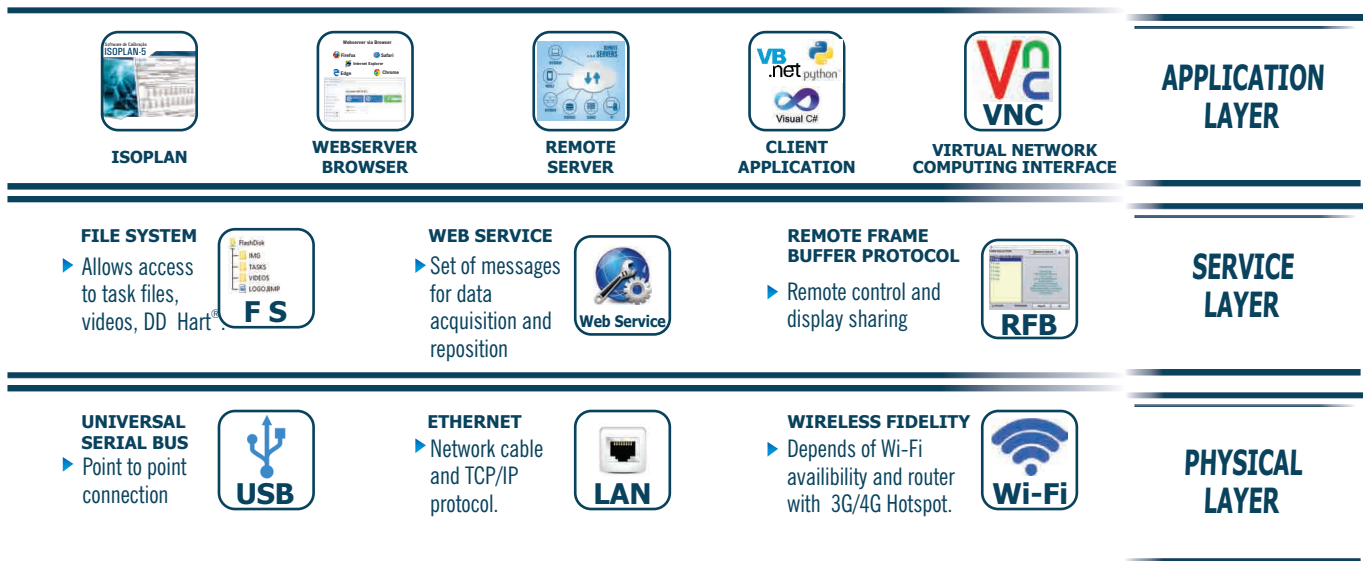
Communication USB/SERIAL SCPI Protocol

Remote Server Access Path

Connectivity and Communication

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

FILE SYSTEM ▶ Allows access to task files, videos, DD Hart®. **F S**	**WEB SERVICE** ▶ Set of messages for data acquisition and reposition	**REMOTE FRAME BUFFER PROTOCOL** ▶ Remote control and display sharing **RFB**	**SERVICE 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**	**PHYSICAL LAYER**

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 so that you can send it to any good calibration laboratory in case an adjustment is needed.

ADJUST CAL.
Friday, September 30, 2016
SHOW LAST CALIB.

TOUCH SCREEN OPTIONS	PRINTER CONFIG
SCREEN BRIGHTNESS	SECURITY OPTIONS
CALIBRATOR IDENTIFICATION	SOUND OPTIONS − 100 +

LANGUAGE
English (United States)   OK

DATE AND TIME   NETWORK   SERVICES   SYSTEM

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.

USERS MANAGER
NEW   EDIT   SIGN...   PICTURE...   DELETE...

John

Clear   CANCEL   OK
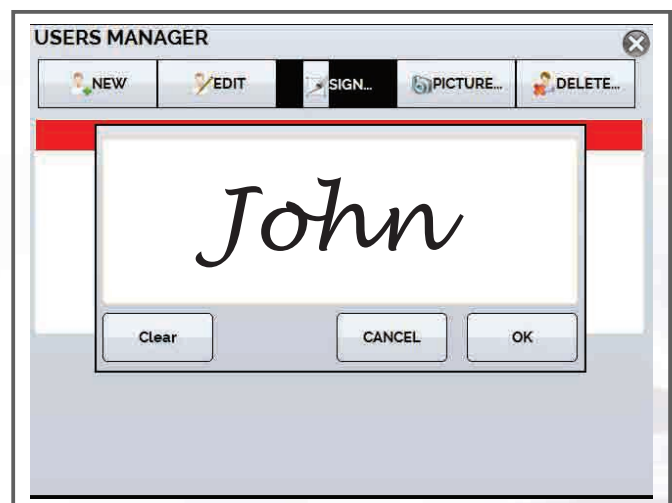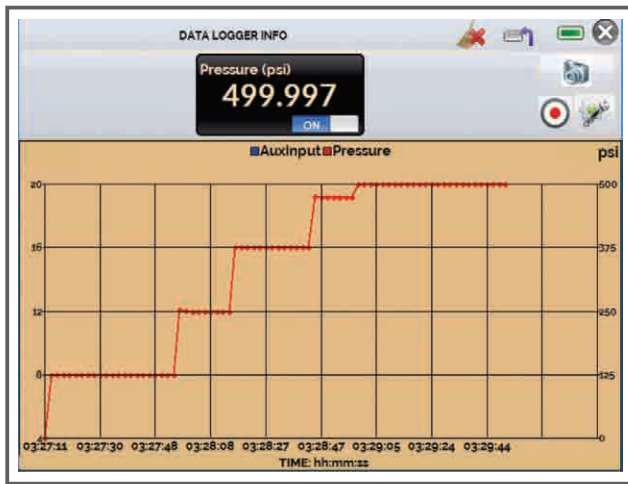
Data Logger

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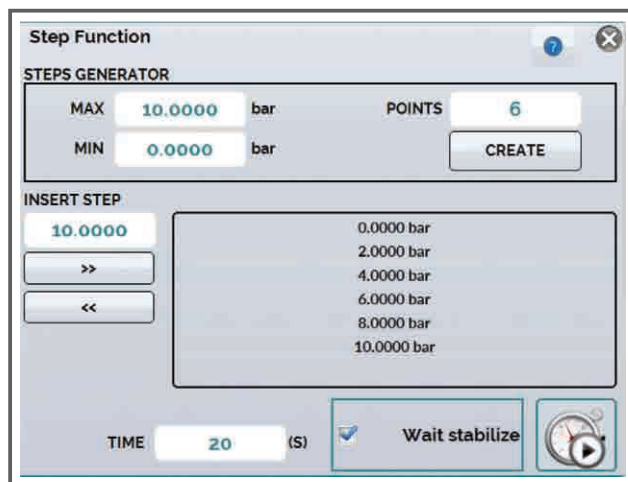
Predefined Steps

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.
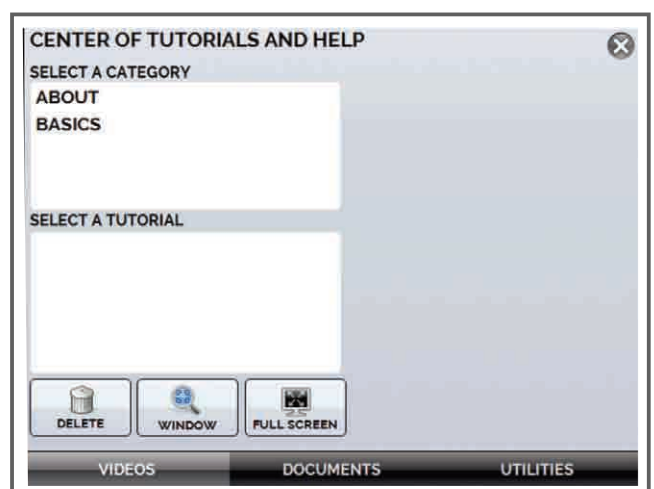
Switch

Easily test your pressure switches. The PCON-Y18 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.
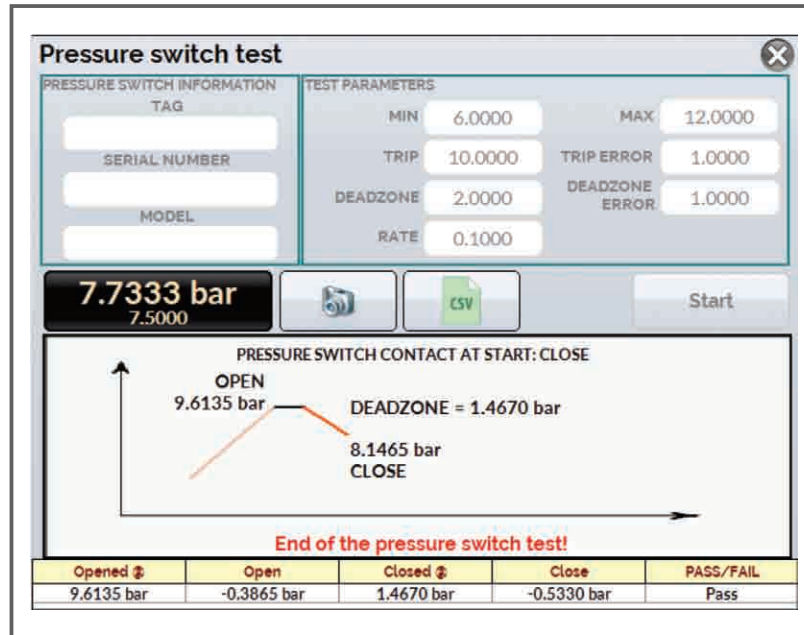
Inverted Calibration

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
optional accessory

Manifold
optional accessory
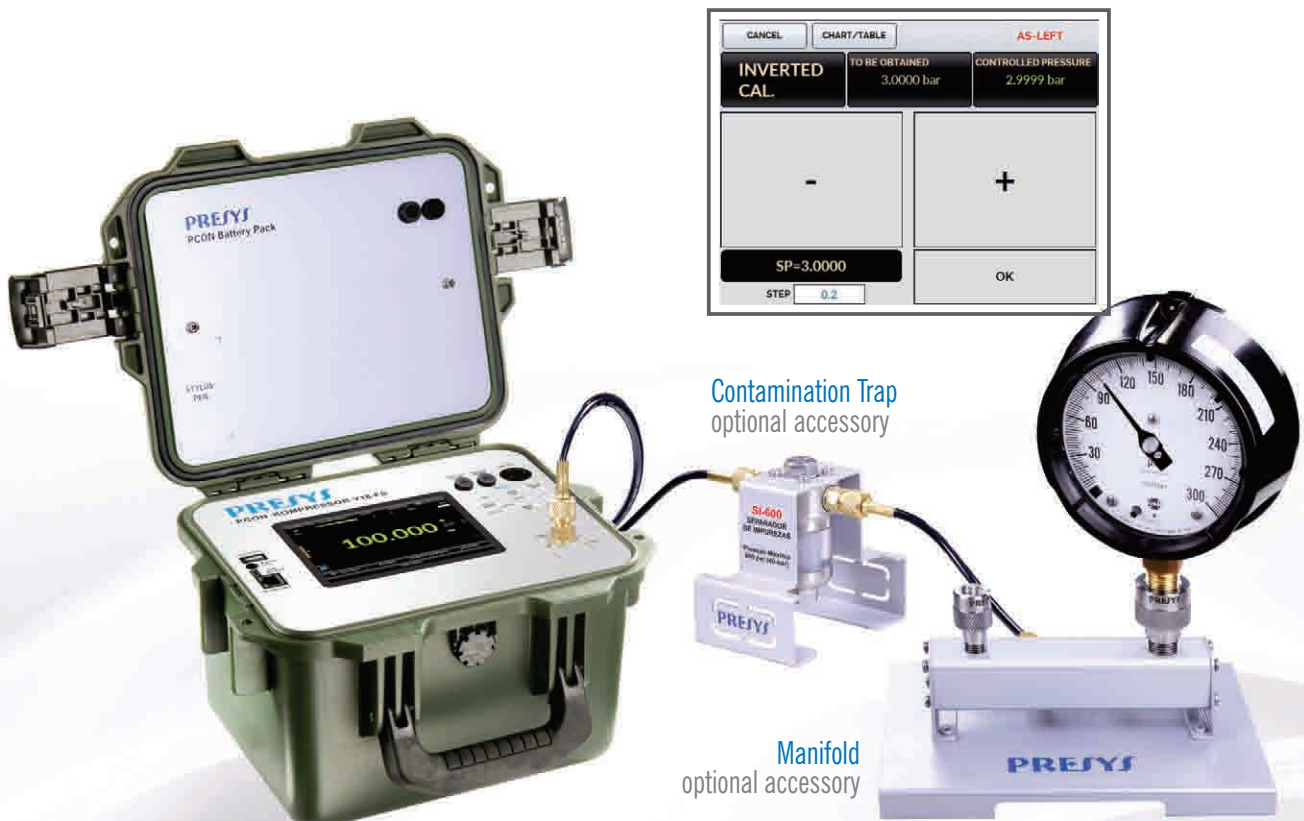
Kit Manifold

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.

Contamination Trap - SI-1000

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.

Model: SI-1000
Order Code: **06.08.0103-00**
Maximum Pressure: **1000 psi (70 bar)**

MPYA - External Digital Pressure Module

The PCON-Y18-Kompressor supports different types of External Digital Pressure Sensor connected directly to the USB port.
You can use these sensors to increase the accuracy at lower ranges or use your PCON as a standard pressure calibrator with an external pressure supply. We have Digital Pressure Sensors for all your needs, from very low pressure up to very high pressure of 4000 bar (60000 psi).

Technical Specifications
Order Code

Pressure Range | Reference Barometric (Optional)

PCON Kompressor-Y18 – ⌐FS⌐ – ⌐CH⌐ – ⌐ ⌐ – ⌐ ⌐

Mounting Version

FS - Field Service (Field Service in Rugged Polypropylene Case)

Hart® Communication

CH - Hart® Calibrator (basic commands: zero, span, trim mA). (Standard Included)
FH - Full-Hart® Configurator, with DD library from *FieldComm Group* (Optional).

Pressure Range

Code	Pressure Range	Range 1 - Low	Range 2 - High
3-C-5-G	-0.9 to 7 bar	-0.9 to 1 bar	0 to 7 bar
4-C-5-G		-0.9 to 2.5 bar	0 to 7 bar
3-C-6-G		-0.9 to 1 bar	0 to 25 bar
4-C-6-G	-0.9 to 25 bar	-0.9 to 2.5 bar	0 to 25 bar
5-C-6-G		-0.9 to 7 bar	0 to 25 bar
3-C-7-G		-0.9 to 1 bar	0 to 40 bar
4-C-7-G	-0.9 to 40 bar	-0.9 to 2.5 bar	0 to 40 bar
5-C-7-G		-0.9 to 7 bar	0 to 40 bar
3-C-8-G		-0.9 to 1 bar	0 to 70 bar
4-C-8-G	-0.9 to 70 bar	-0.9 to 2.5 bar	0 to 70 bar
5-C-8-G		-0.9 to 7 bar	0 to 70 bar
6-C-8-G		-0.9 to 25 bar	0 to 70 bar

Accuracy
± 0.012 % FS of selected range

Control Stability
± 0.002 % FS of selected range

Optional

BR - Barometric Reference to measure and emulate absolute pressure
   Accuracy 0.16 mmHg / 0.2 mbar

Pneumatic Connections: 1/8" Female BSPP.

Battery: Lithium Polymer   1x Rechargeable Batteries 25.2 Vcc 4.2Ah (up to 25 bar).

   2 x Rechargeable Batteries 25.2 Vcc 4.2Ah (above 25 bar).

Charger Power Supply: 100 to 240 Vac 50/60 Hz.

Operating Ambient: 0 to 40 °C, 90 % maximum relative humidity.

Dimensions: 210 mm x 320 mm x 280 mm (up to 25 bar) /

   360 mm x 420 mm x 230 mm (above 25 bar)

Weight: 7.0 kg (up to 25 bar) / 10.0 kg (above 25 bar) nominal.

Warranty: 18 months - see general warranty conditions at /www.presys.com.br/warranty

Note: Hart® is a Fieldcomm Group trademark.

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.

PRESYS

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Brasil
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MANAGEMENT SYSTEM
QUALITY

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