

Hand-Held Service Instrument Model CPH 6200

Test and Calibration equipment

Digital instrument with
pressure transmitter

- Pressure ranges from 0 ... 400 mbar to 0 ... 600 bar pressure and vacuum, absolute pressure
- Differential pressure by means of 2 sensors
- Available accuracies: 0.2% (opt. 0.1%) FS; reference condition: 20° C
- Data logger function
- Peak detection (10 msec.)
- Min/max alarm
- User-friendly

Service intended

This hand-held service instrument is used for checking of current pressures in all hydraulic and pneumatic applications or calibration of gauges and transmitters. Due to the portable design of the instrument it is especially useful for commissioning, maintenance and service in the following fields:

- Service industry
- Instrument and control workshops
- Industry (laboratory, workshop and production)
- Quality assurance
- Calibration laboratories

General features

The **CPH 6200** is a service instrument that may be used for a great variety of different tasks. As digital instruments are 2 versions available: the CPG 6200 with one sensor connection and the CPG6200-D with two sensor connections, so that differential pressure can be measured, if 2 sensors are connected.

Pressure sensors with ranges of 0 ... 400 mbar to 0 ... 600 bar are available. The measured value can be displayed in the unit psi, bar, mbar, Pa, kPa, MPa or mmH with an accuracy of up to 0.2% FS (optional 0.1%). For adaption to different connection threads a variety of common adapters can be offered.

The excellence of the easy-to-use and light-weight instrument is complemented by an extremely ergonomic design.

This instrument may also be used for mobile calibration. Therefore, we offer pumps as an optional addition to this instrument to cover the respective measuring range for generating the required testing pressure. For safe transport and storage of the instrument and its accessories, rugged service-cases are available. Combined sets with instruments to measure both temperature and pressure can also be offered.

The system will be supplied with a factory calibration certificate. On request, a DKD calibration certificate can be supplied, instead.



Please see data sheet TE 89.09 for information on the hand-held thermometer with temperature sensor, model CTH 6450

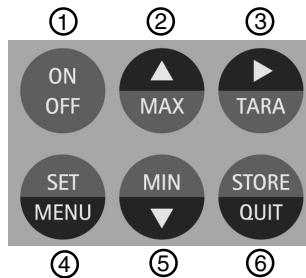
CPH 6200 - Digital instrument with pressure transmitter

The digital instrument is the heart of the hand-held service instrument system. It allows connection to pressure transmitters model CPH 6200 with pressure ranges of 0 ... 400 mbar to 0 ... 600 bar.

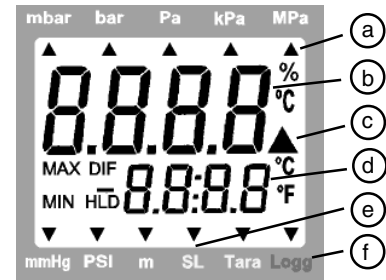
The sensor will automatically be detected, the measurement range settings are set in accordance with the sensor data.

Specifications	CPH 6200
Digital instrument Sensor connections Pressure range Accuracy Display Range of display Units Pick up rate "slow" "fast" "peak-detect" Key-functions Power-off function Min/max alarm SL (Sea level corr. for barom.) Data logger Memory space Cycle time CYCL Real time clock Power supply Charging rate Change battery signal Interface Housing (digital instrument) Ingress protection Dimensions EMC / CE-conformity	for one pressure sensor (optional: for 2 pressure sensor) depending on sensors used 0.2%FS (optional 0,1%) 2 four-digit LCD displays for actual value as well as min/max value, hold function, etc. max. -1999 to 9999 digit, depending on sensors used can be selected from the following: mbar, bar, Pa, kPa, MPa, mmHg, psi (dependent on range) 4 per second (slow) > 100 per second (fast) > 100 per second (fast and not filtered) Min, Max, Hold, Tara Device will be automatically switched off if no key is pressed/no interface communication takes place for the time of the power-off delay. The power-off delay can be set to values between 1 and 120 min.; it can be completely de-activated. The measuring value is constantly monitored for the min. and max. limits set. Alarm is given by integrated horn, display and interface. The measured absolute pressure is corrected to sea level (only 1 channel-version) 2 functions: individual value logger ("Func-Stor") and cyclic logger ("Func-CYCL") Stor: 99 ; CYCL: 5400 and 1800 for a model with up to two sensors 1 to 3600 seconds integrated clock with date and year 9V battery, type IEC 6F22 (included in scope of delivery) as well as additional power supply pin jack (1.9 mm inside diameter) for external stabilised 10.5 - 12V direct-current voltage (see accessories for suitable power-supply) cycle time slow: < 1.5 mA, cycle time fast: < 3.0 mA, low-power logger: < 0.1 mA warning sign and 'bAt' serial interface. Connection to RS232-interface via suitable electrically insulated interface adapter (accessories). impact-resistant ABS, membrane keyboard, transparent panel front side IP 65 142 x 71 x 26 mm (L x W x D) The CPH 6200 device corresponds to the essential protection ratings established in the regulations of the Council for the Approximation of Legislation of the member countries regarding electromagnetic compatibility (89/336/EWG)
Sensors Sensor Electrical connection Type of pressure Pressure ranges in bar Overpressure safety Pressure connection Material wetted parts Material case Power supply Response time (10 ... 90%) Linearity Hysteresis Repeatability 1 year stability Admissible medium temperature ambient temperature storage temperature Compensated range Temperature coefficients in compensated temp. range: mean T_C of zero signal mean T_C of span Electrical connection Ingress protection Dimensions	all sensors of CPHxxxx series only 6-pin DIN plug with locking device up to 25 bar: absolute and gauge, over 25 bar: absolute pressure only 0.4 1 4 6 10 16 25 40 60 100 160 250 400 600 4 times the pressure range for most ranges, but max. 600 bar G1/2 A diaphragm 1.4435, thread 1.4301 1.4301 5 VDC (supplied by digital instrument) ≤ 1.5 ms ≤ 0.1% (electrical adjustment) % of span ≤ 0.1% % of span ≤ 0.05 % % of span 0.2 % at reference conditions % of span -25 to + 70°C 0 to + 70°C -40 to + 80°C -25 to + 70°C 0.2% / 10 K 0.2% / 10 K 1m PVC connection cable screened with integral 6-pin MINI-DIN-plug, lockable IP 65 see drawings

Operating instructions digital instrument



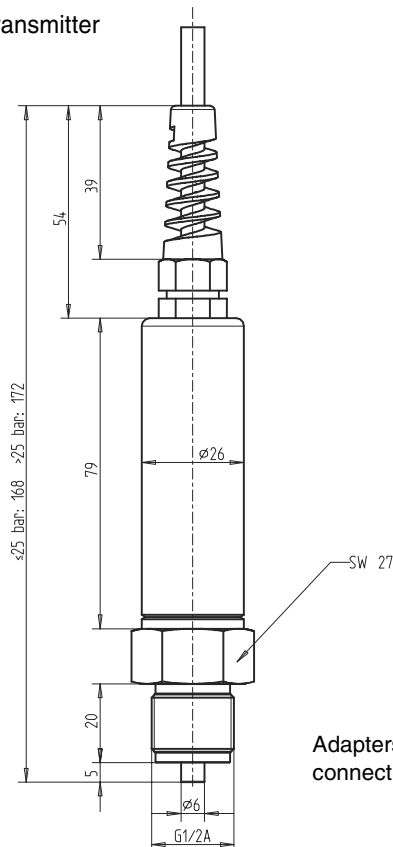
- 1) On/off switch
- 2) and 5) Min/max: Showing the min. or max. memory
- 3) Tara: Calling of tara function, zero point adjustment.
- 4) Set / Menu: Calling of configuration.
(if 2 channel version) switch CH2 <-> DIF
- 6) Store / Quit: Calling of hold function resp. calling of logger functions



- a) An arrow points to the chosen measuring unit
- b) Main display shows value of channel 1.
- c) Signals weak battery or other warnings.
- d) Secondary display shows value of channel 2 (CH2) or difference (DIF= CH1-CH2); if only 1 channel version display will show min., max. or hold value.
- e) SL appears if sea-level correction is activated
(m) in preparation and then can be used tank level measurements.
- f) Logg appears, if logger function is chosen and flashes when logger is running.

Dimensions in mm

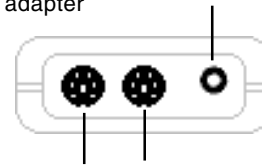
Pressure transmitter



Adapters for all common connections are available

Connections digital instrument

Interface: Connection for el. insulated interface adapter



CH1 CH2 (only if 2 channel version)
Connection for pressure sensors of the CPH family.

The mains adapter socket is located at the left side of the device.

Hand pump for model PCS-L

General features

Pressures from - 800 mbar to + 25 bar can be generated with this hand pump. The system includes a switch to select between pressure and vacuum, a volume control for fine adjustment and an adjustable stroke for pressure generation and overpressure protection.

Specifications:

Output pressure: -800 mbar to +25 bar
Testing medium: air
Connections: 3/8" BSP parallel female connection for master instruments
e.g. digital or analogue gauge calibrators
1/4" BSP parallel female connection to suit adapters / calibration item
Materials: bright nickel plated brass, clear anodised aluminium
Adjustment: fine volumetric pressure / vacuum adjuster
Dimensions: 220 mm (L) x 105 mm (W) x 63 mm (D)
Weight: 650 gram
Accessories: An attachment 3/8" male on knurled nut M28x1.5 with threaded insert G 1/2 B (standard) is available for calibration item connection.



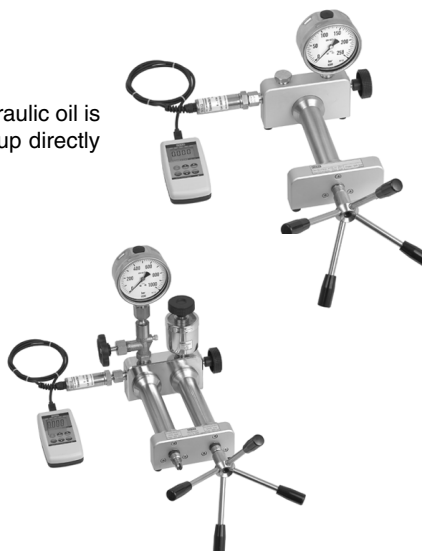
Spindle pumps for model PCS-H

General features

These spindle pumps are used for generating pressures up to 1000 bar. Hydraulic oil is used as standard testing medium. The device under test can be connected up directly to the manifold of the pump or through a flexible hose (model H 250 only)

Specifications:

One-cylinder spindle pump: output pressure 0 to 250 bar
Double-cylinder spindle pump: output pressure 0 to 1000 bar
Setting: by hand spindle
Connections: G1/2 B female thread per DIN 16288
Testing medium: hydraulic oil, others on request.
Dimensions: 250 mm (L) x 220 mm (W) x 96 mm (D)
Weight: model H 250 approx. 3.7 kg
model H 1000 approx. 7.7 kg
Accessories: If testing medium is not sufficient, a reservoir including shut-off valve is available (see picture).



Further pressure generation systems are available on request !

Additional accessories

Please see our price list for connection adapter, "Minimesh" snap-fit couplings, power supply (9V battery, plug power pack, accumulator 9V, charging set, etc.), interface adapter and software.

Complete systems:

If required, we supply complete systems in robust carrying cases. For your order, please select the individual components such as digital instrument, pressure transmitter, accessories, etc. in accordance with our price list. In cases where an ordering code or the article number is not available, the desired equipment may be specified in the form of a plain text.

Specifications, components, software, dimensions and materials given in this leaflet represent the state of engineering at the time of printing. Modifications may take place and materials, components or software may be replaced by others without prior notice.



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