Battery Powered Digital Datalogging Pressure Gauges

WLB-DDPG Series



- Accuracy <0.2% FS
- Ranges from -1 to 1000 bar
- 27000 data records per test
- Space for 10 tests max 48h each
- Recording rate up 100ms
- Compatible with the Watchlog Bluetooth mobile app
- Back-lit display with bar graph & min/max
- Selectable display of temperature
- 3 x 1.5Vdc AAA battery supply
- Compact and Rugged IP67
- 270° Rotatable Display

The ideal low cost solution to digital pressure testing and recording. With display of pressure, pressure peaks and recording up to 48 hours, digital datalogging pressure gauges offer excellent accuracy and traceability which a standard pressure gauge simply can not provide.
Also compatible with the free Watchlog Bluetooth monitoring and datalogging app, making this an even more powerful datalogging pressure gauge!

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Automotive

Plant engineering

Industrial machinery

Hydraulics & pneumatics

Off-road plant & vehicles

DESCRIPTION

WLB-DDPG series digital pressure gauges are designed for both stationary and mobile measurement, display and datalogging of pressure. They can be used as reference pressure gauges to simplify the checking, adjustment and calibration of other pressure measurement devices directly on site. Excellent protection against dust and moisture is provided by a membrane keypad with rubber buttons and rubber protective shroud.

DEVICE & OPERATION OVERVIEW

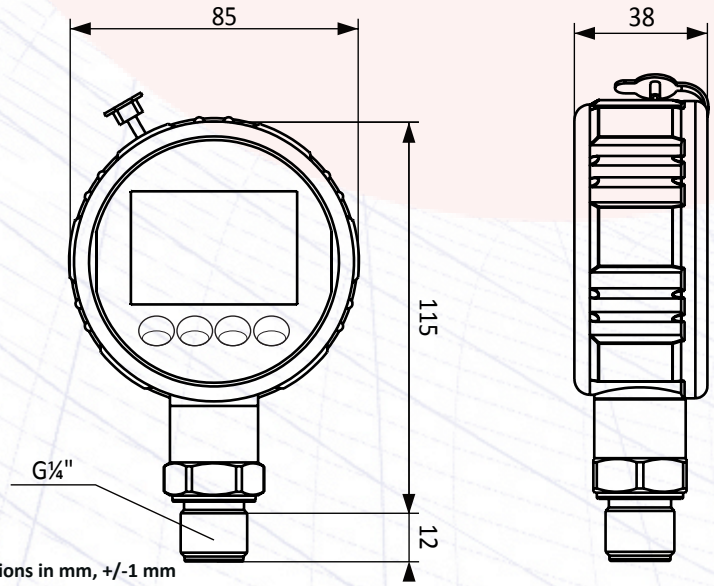


1. Bar graph display with maximum pointer function, 33 segments
2. Actual pressure display, digit height 15 mm
3. Unit display / recording series display
4. Data logger display, flashes during recording
5. Battery status display, 5 segments
6. Additional display MIN/MAX value, full scale pressure value or temperature (°C or °F) - digit height 8mm
7. USB-C connection to PC/laptop for data transfer and software updates
8. Control buttons

ON/OFF ⏻	Switch device on or off
LIGHT 💡	Backlighting (20s)
MENU	Device settings
UNIT	Select measurement units (see technical data)
ZERO	Zero point correction up to 5% of full scale pressure value
MODE	Show MIN/MAX, Temp (°C or °F) or gauge F.S.
REC	Start or stop data logger
SET	Delete MIN/MAX value or confirm input



TECHNICAL DRAWING



All dimensions in mm, +/-1 mm



Optional Minimess® Male or Female adaptor to allow for easy hand tight connection / disconnection to Minimess® test points or hoses (max working pressure 630 bar).

ORDERING CODE

Ordering code *	Measuring range	Resolution
WLB-DDPG-V016	-1...16 bar	10 mbar
WLB-DDPG-0060	0...60 bar	10 mbar
WLB-DDPG-0250	0...250 bar	100 mbar
WLB-DDPG-0400	0...400 bar	100 mbar
WLB-DDPG-0700	0...700 bar	100 mbar
WLB-DDPG-1000	0...1000 bar	100 mbar

Different measuring ranges and accuracies of ±0.1% and ±0.05% are available on request.

***-MM** after part number for Minimess® 1620 male adaptor fitted

-MF after part number for Minimess® 1620 female adaptor fitted



TECHNICAL DATA

Pressure ranges	Between -1...1000 bar
Accuracy ±(% of full scale pressure value)(FS)	0.2% (0.1% and 0.05% accuracies available on request)
Pressure units	bar/mbar, kPa/MPa, PSI, kg/cm2, mH2O, inH2O, ATM
Display type	Multifunctional LCD, 4 1⁄2 digit, with background lighting
Display functions	Bar graph, pressure unit, display filter, MIN/MAX value, Overpressure indicator 110% of full scale pressure value (FS)
Pressure measuring cell	≤ 10 bar piezo resistive, ≥ 20 bar thin film strain gauge
Temperature compensation	0...50°C
Temperature error	0.005% of full scale pressure value (FS) / K
Measuring rate actual value	10ms
Measuring rate bar graph	50ms
Thread ISO 1179-2	G1⁄4 with NBR gasket, AF27
Process connection material	Stainless steel 1.4404
Medium temperature	-20...80 °C
Housing connection	270° axially rotatable
Degree of protection DIN EN 60529	IP67
Dimensions	Ø 90 mm, D=45mm H=120mm with protection cap
Materials	Sensor Body 304L, Measuring Cell 316L
Ambient conditions	0...50 °C with air humidity ≤85 % r.h.
Weight	357g without 3xAA batteries fitted
Vibration resistance IEC 60068-2-6	5g up to 500Hz
Shock resistance IEC 60068-2-29	25g for 11ms
Auto-off function	Selectable switch-off time 5 minutes
Battery type	3x 1.5 V AAA
Battery operation	1500h
Datalogger max. data sets	27000 per recording series
Datalogger record series	1...10
Storage rate	0.1...6.4 s - automatic depending on recording duration
Max. recording duration	48 h
Data set information	time / actual pressure / MIN/MAX value
Digital data transmission	serial USB 2.0 via USB-C port
PC software	Detection as USB data storage device, spreadsheet program (Excel)
File format	.csv
Mobile device software	Compatible with Watchlog Bluetooth iOS and Android apps for display and datalogging
Linearisation	The factory linearisation is changed via OFFSET and INCREASE. A special programming adapter is required. Communication between PC/laptop and digital pressure gauge is via TTL level by means of a PC terminal program
Certificate (optional)	UKAS traceable certificate, works test certificate

Datalogger function

- 10 recording series possible.
- 27,000 data sets per recording series.
- Each data record contains time, date, actual pressure, and MIN/MAX value.
- Intelligent automatic measuring intervals mean the time between data-sets (storage rate) is selected automatically depending on the recording duration (see table below).

Recording duration (h)	Storage rate (s)	Maximum data-sets
0…0.5	0.1	18000
0.5…1	0.2	18000
1…2	0.4	18000
2…4	0.8	18000
4…8	1.6	18000
8…16	3.2	18000
16…48	6.4	27000

- A total of 640 MIN/MAX measurements are recorded between two storages with a storage rate of e.g. 6.4 seconds at a measuring rate of 10 ms. Any irregularities occurring due to pressure drop or pressure peaks are detected as MIN/MAX valued and stored in the data set.
- Summary of all MIN/MAX values per record series
- Plug & Play USB connection means no additional drivers or software required.
- Data stored and transferred in CSV (plain text) format so no need for conversion.
  Open directly in spreadsheets or databases (MS Excel, MS Access, Apple Numbers, LibreOffice, OpenOffice, etc).

Security of operation

- The gauge cannot be accidentally powered down when datalogging function is enabled.
- Non-volatile storage means that recordings are retained if batteries expire.
- Future-proof by transferring software updates via USB-C connection to PC/laptop.
- Recorded data is stored securely so overwriting your results is not possible.

Package contents

1. WLB-DDPG digital datalogging gauge.
2. Secure shipping box with sleeve wrap.
3. USB data stick for storage of CSV data files.
4. USB-C to USB-A connecting cable for data transfer to PC/laptop and software updates.

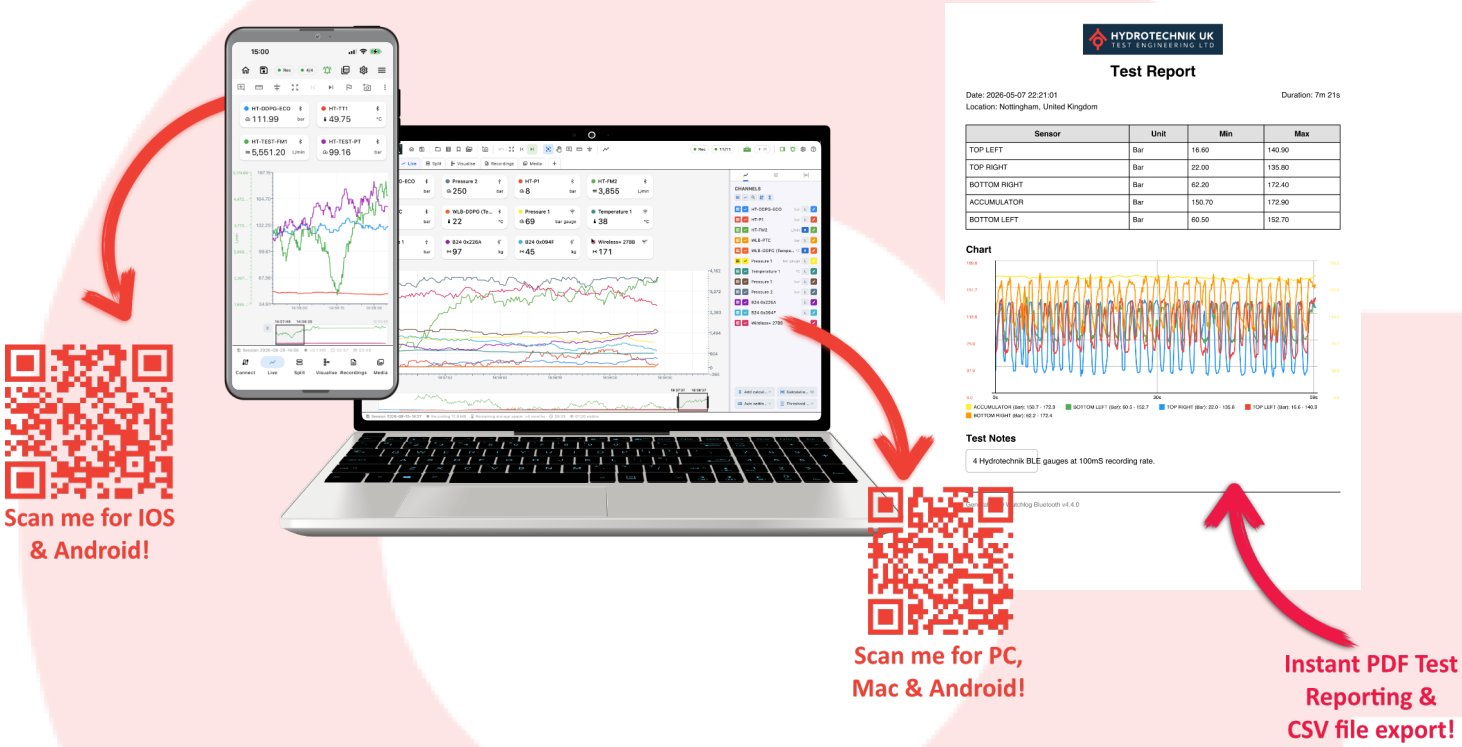


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SMARTPHONE, TABLET & PC APPS & SOFTWARE

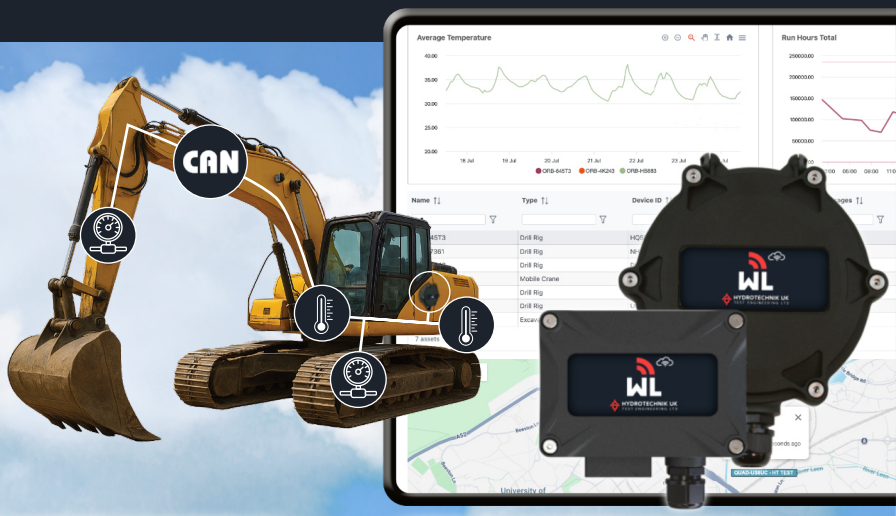
Our Watchlog Bluetooth apps & software is available for both Mac, Windows, iOS and Android platforms. Each version provides all connected sensors to be live monitored, recorded, and allows logged data to be edited, annotated and saved/shared in CSV & PDF formats.

Find out more about our standard iOS & Android monitoring & recording apps at hydrotechnik.co.uk/wlb-app
Find out more about our mobile, MAC & Windows advanced monitoring & recording software at hydrotechnik.co.uk/connect
Find out more about our MAC & Windows visualisation & reporting software at hydrotechnik.co.uk/visualizer



THE WATCHLOG® FAMILY

Safely & Easily Test, Monitor, Record, Control & Report



WATCHLOG PRO
Cloud based asset monitoring & control

Watchlog PRO connects industrial equipment to a secure cloud platform for unlimited remote monitoring and control. Access live data, historical trends and alarm notifications in real time from any internet-connected device. Control machines remotely to save money, time and help prevent expensive breakdowns.

WATCHLOG BLUETOOTH
Short range wireless sensors



Watchlog Bluetooth brings cable-free, safe monitoring of pressure, temperature, flow, RPM, force and many other sensor data to your smartphone, tablet, or desktop. With up to 50 metres of bluetooth transmission range, support for live visualisation of up to 24 sensors simultaneously. Ideal for simple, safe working.

WATCHLOG USB
High speed pressure monitoring



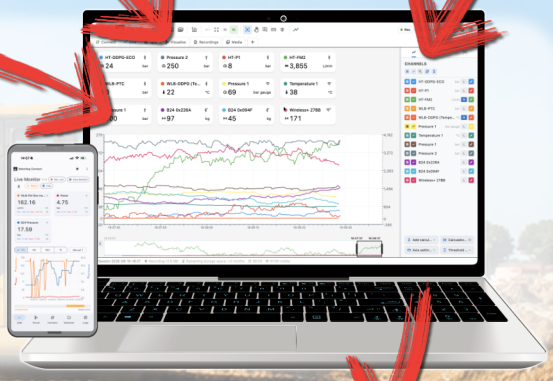
Watchlog USB delivers fast, reliable, wired pressure measurement for workshop, laboratory and field testing. Connect Watchlog USB pressure sensors to our Android Watchlog App or MAC's & Windows PC's running Watchlog Connect software.

WATCHLOG WIRELESS
Long range wireless sensors



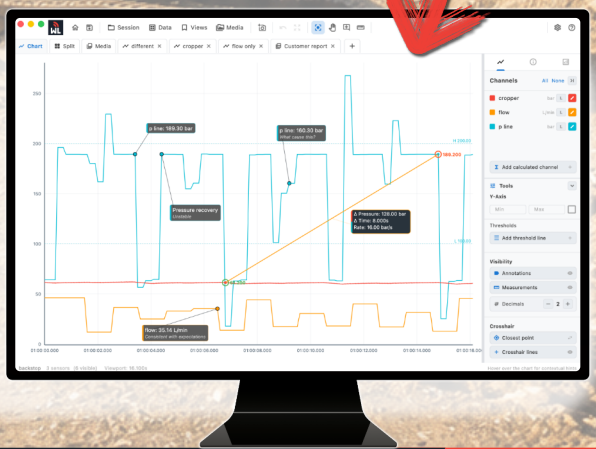
Watchlog Wireless delivers long-range wireless communication of up to 1.6 km for permanent monitoring of pressure, temperature, flow, level and much more. Live data, alarm management, local system integration and cloud connectivity keep you connected to your assets.

WATCHLOG CONNECT
Easy monitoring & logging cross-platform Software for USB, Bluetooth, Wireless and CAN bus sensors



Watchlog Connect is a powerful software tool for our Watchlog family of sensors. Monitor and record from multiple sensor types, all in 1 place, with a fully customisable view. Add calculation channels and measurements, annotations and spot-lines to your charts. Receive notifications based on custom parameters. Easily export your data as a CSV file or as a PDF report including charts and custom text.

WATCHLOG VISUALIZER
In-depth analysis, annotation & reporting software for multiple test data file types



Drag and drop many types of test file such as CSV, TXT & including CAN bus files to instantly create clear charts and professional reports. Add custom calculations in the powerful expression builder. Zoom, annotate, measure & and split traces for detailed analysis. Compare multiple data files graphically then merge the results into new reports. Easily create detailed PDF reports from your data and save all of your work into different sessions for future use.

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