

### Features

- \* Pushbutton calibration and setup
- \* Stores calibration of multiple load cells/transducers
- \* Recalls maximum and minimum readings
- \* Up to 22 bit resolution depending on settings e.g. at 2.5mV/V, 10 samples/sec. and digital filter setting of 2 resolution is 18.5 bits (0.034  $\mu$ Volts).
- \* Pushbutton zero
- \* Calibrated by entering mV/V characteristics of sensor or by applying a known load
- \* Selectable sample rate up to 100 samples/sec.
- \* User pushbutton may be programmed to any one of a selection of functions e.g. peak hold, display hold, tare or alternate calibration
- \* RS232 serial communications standard
- \* Digital filter improves stability
- \* Rugged construction
- \* Automatic low battery indication
- \* 9V 216 type battery supplied
- \* Padded carry case (optional)
- \* Programmable auto turn off

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The Intelligent HH4-WT hand held digital load/force meters are designed and manufactured to provide a rugged and reliable instrument for industrial and testing applications. The HH4-WT has a ratiometric input designed to interface with standard 4 wire strain bridge sensors.

The HH4-WT is intelligent yet simple to operate. The instrument may be scaled to read directly in your engineering units over the range of -19999 to 19999. A unique optional feature provides for external storage of the calibration scaling for multiple sensors. The calibration for each sensor is stored in a special optional memory chip within the sensor plug and automatically over-rides the calibration of the HH4-WT to match the connected sensor. This feature is ideal for testing load cells and calibration of weight or pressure over a wide range using a series of sensors. If required, the display may be set to zero by pressing the "Zero" pushbutton. The maximum and minimum readings may be recalled by pressing the "Max" or "Min" pushbuttons and may be reset by holding the button down for 2 seconds.

A "User" pushbutton allows for any one of a selection of operations such as peak hold, display hold, tare or alternate calibration. The alternate calibration allows the display to be cycled between preset calibrations and is ideal for unit conversion

e.g. kPa to PSI, kg to lbs or mV/V. The standard RS232 interface allows data to be stored and analysed on a PC or laptop computer. An automatic switch off function has been integrated into the design to switch the instrument off after a programmable preset time period - thus increasing the battery life.

**Hand Held Load Cell/Force Indicator** **Part Number: HH4-WT-5C**

**Technical Specifications**

Input: Ratiometric 4 arm strain bridge  
 Input sensitivity: 0.5mV/V to 100mV/V selectable  
 Accuracy: Up to 0.005% of full scale, dependant on mV/V range and sample rate  
 Sample rate: 5 to 100 samples per second  
 Resolution: Up to 22 bits depending on settings e.g. at 2.5mV/V range resolution can range from 0.54µV to 0.0042µV depending on sample rate and filter settings.  
 Excitation voltage: 5VDC  
 Microprocessor: MC68HC11 CMOS  
 Ambient temp: 0 to 50°C  
 Humidity: 5 to 95% non condensing  
 Display: 4½ digit LCD 11.75 mm  
 Output: RS232 serial data  
 Battery: 9V 216, (Alkaline recommended)  
 Quiescent current: 20µA typical  
 Operating current: 20mA typical (excl transducer current)

**Options**

CASE- HH-1 Padded carry case (170 x 130 x 45 mm)  
 HH4-OPT-DB9/DS1 Memory chip in 9 pin D connector  
 HH4-OPT-DB9/MF1 Two way cable adaptor  
 HH4-OPT-DB9/DS1 Memory chip in 9 pin D connector  
 HH4-OPT-DB9/MF1 Two way cable adaptor

**Dimensions**

Connections: 9 pin D connector  
 Case size: WxLxD 80 mm x 145 mm x32 to 39 mm  
 Weight: 250 gms including battery

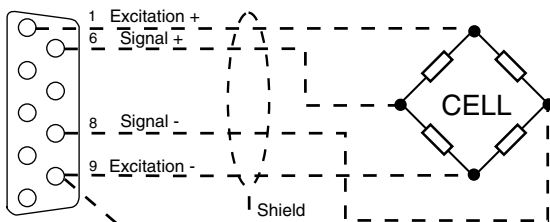
**Warranty**

24months

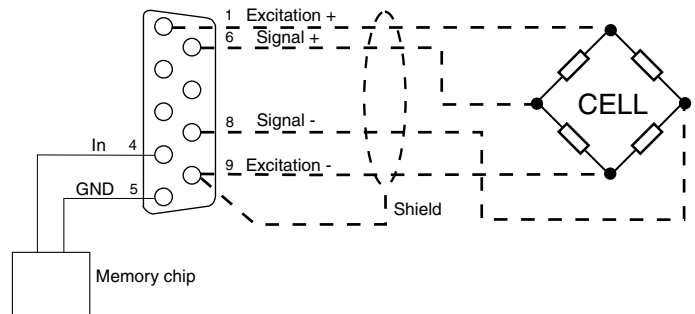


**Wiring to 9 pin plug - optional memory chip in 9 pin shell part number HH4-OPT-DB9/DS1**

Plug in connector  
 9 pin male "D" type

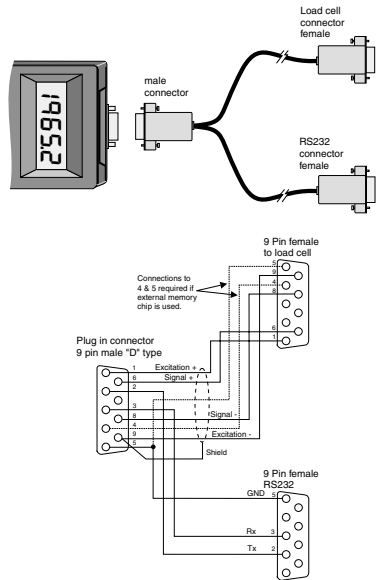


Connection with optional memory chip.



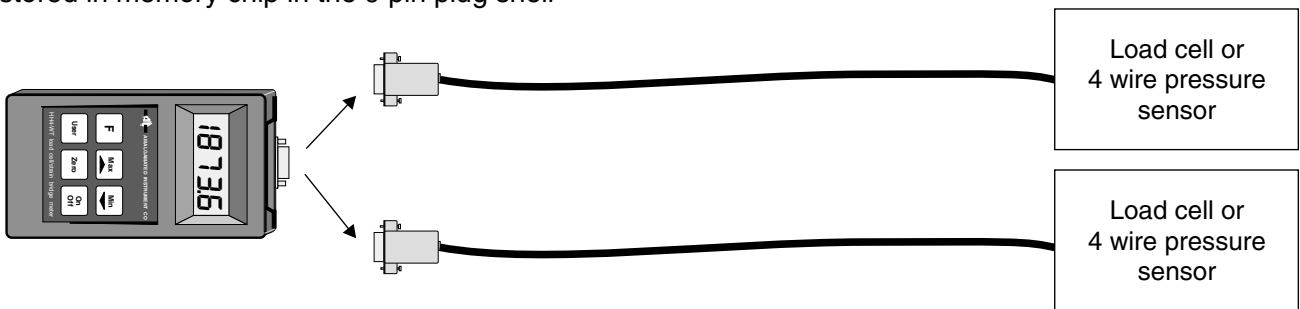
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**Wiring to load cell & RS232 - note: 200mm two way cable optional (part number HH4-OPT-DB9/MF1)**



**Application examples - connection of multiple sensors - note: cable not supplied**

Multiple sensors - calibration details for each sensor stored in memory chip in the 9 pin plug shell



**Multiple sensors - switched via switch box**

