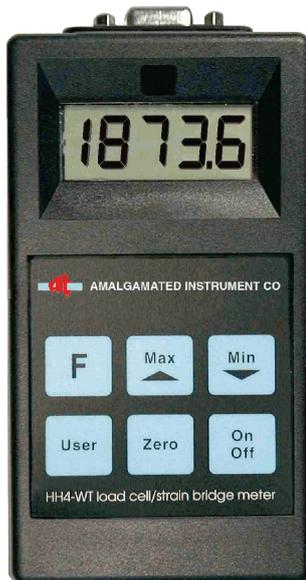


# Hand Held Load/Force/Pressure Meter

## Model HH4-WT-5C

### Measures from 4 wire mV/V load cells/transducers



#### 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.
- Pushbutton zero
- May be calibrated by entering the mV/V characteristics of the sensor or by applying a known load/pressure
- 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
- Padded carry case (optional)
- Programmable auto turn off
- 2 year guarantee

#### Description

The Intelligent HH4-WT-5C 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-5C 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-5C 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 (PC software optionally available). 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.



HH4WT-3.0-0

**AMALGAMATED INSTRUMENT CO**

ABN: 80 619 963 692

Unit 5, 28 Leighton Place Hornsby  
NSW 2077 Australia

Telephone: +61 2 9476 2244  
Facsimile: +61 2 9476 2902

e-mail: sales@aicpl.com.au  
Internet: www.aicpl.com.au

# Specifications

## Technical Specifications

**Input:** Ratiometric 4 arm strain bridge  
**Input sensitivity:** 0.5mV/V to 100mV/V selectable  
**ADC resolution:** Up to 22 bits depending on settings  
**Accuracy:** Up to 0.005% of full scale, dependant on mV/V range and sample rate  
**Sample Rate:** 5 to 100 per second selectable  
**Excitation:** 5VDC  
**Microprocessor:** MC68HC11 CMOS  
**Ambient temp:** 0°C to 50°C  
**Humidity:** 5% to 95% non condensing  
**Display:** 4.5 digit LCD 11.74mm  
**Battery:** 9V 216, (Alkaline recommended)  
**Quiescent current:** 20 uA typical  
**Operating current:** 20 mA typical excluding transducer current  
**Output (standard):** RS232

**Order Code:** HH4-WT-5C

## Options

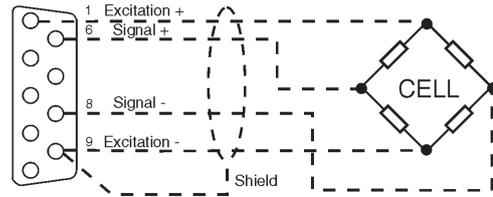
**CASE-HH1 :** Padded carry case 130 x 170 x 45 mm  
**HH4-OPT-DB9/DS1:** Memory chip in 9 pin D connector  
**HH4-OPT-DB9/MF1:** 2 way adaptor (sensor + RS232)  
**SOFT-DL1:** Software for PC comms.

## Physical Characteristics

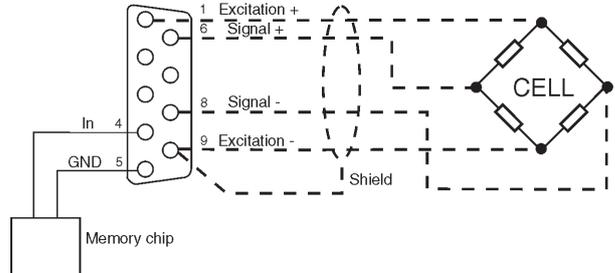
**Case size:** 80mm x 145mm x 32 to 39mm  
**Connections:** 9 pin D connector female  
**Weight:** 250g including battery

## 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.

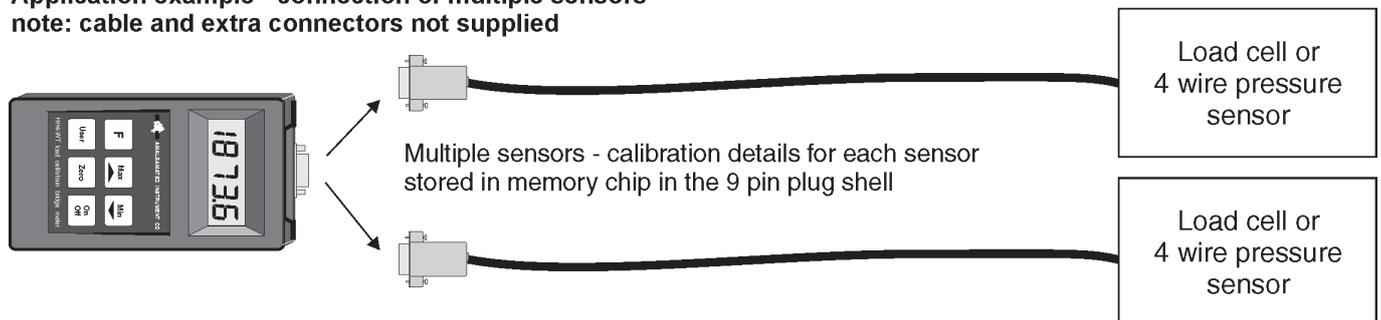


See instruction manual for RS232 wiring.

Accuracy HH4-WT over full scale							
% Accuracy to 3 decimal places (thermal drift 50ppm/degree C)							
Samples/sec.	0.5mV/V	1mV/V	2.5mV/V	5mV/V	10mV/V	20mV/V	>40 mV/V
5	0.010	0.008	0.006	0.006	0.005	0.005	0.005
10	0.013	0.009	0.007	0.006	0.005	0.005	0.005
15	0.013	0.009	0.007	0.006	0.005	0.005	0.005
20	0.014	0.010	0.007	0.006	0.006	0.006	0.006
30	0.016	0.011	0.007	0.006	0.006	0.006	0.006
50	0.039	0.032	0.021	0.020	0.017	0.018	0.024
100	0.078	0.062	0.042	0.040	0.034	0.036	0.048

Note these accuracy figures are for the display only and do not take into account the accuracy etc. of the sensor.

## Application example - connection of multiple sensors - note: cable and extra connectors not supplied



HH4WT-3.0-0