

# Hand Held Load/Force/Pressure Meter Model HH4-WT

Measures from 4 wire 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 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
- 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
- 9V 216 type battery supplied
- Padded carry case (optional)
- Programmable auto turn off
- 2 year guarantee

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.

## 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 0.54 $\mu$ V to 0.0042 $\mu$ V 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:	20 $\mu$ A typical
Operating current:	20mA typical (excluding transducer current)

**ORDER CODE:** HH4-WT-5C

## OPTIONS:

CASE- HH-1 Padded carry case size 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

## PHYSICAL CHARACTERISTICS:

Connections:	9 pin D connector
Case size:	80 mm( w) x 145 mm( l) x 32 to 39 mm( d)
Weight:	250 gms including battery

HH4WT-2.4-0

**AMALGAMATED INSTRUMENT CO PTY LTD**

ACN: 001 589 439

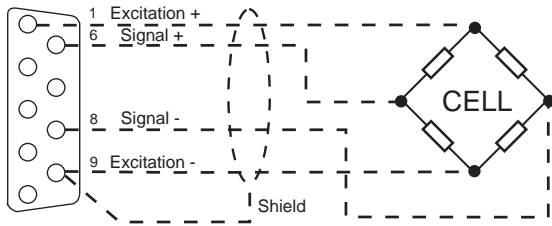
Unit 5, 28 Leighton Place Hornsby  
NSW 2077 AUSTRALIA

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

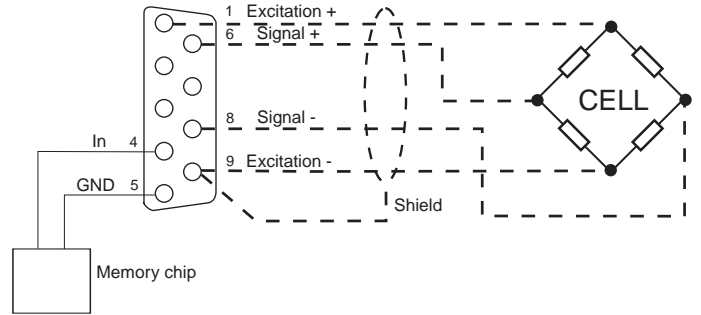
e-mail: sales@aicpl.com.au  
Internet: www.aicpl.com.au

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

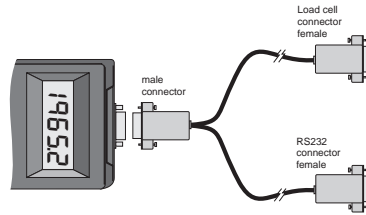
Plug in connector  
9 pin male "D" type



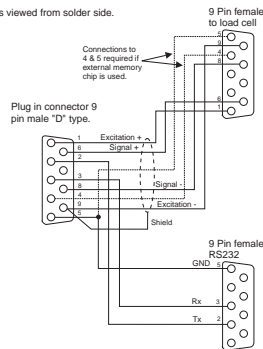
Connection with optional memory chip.



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

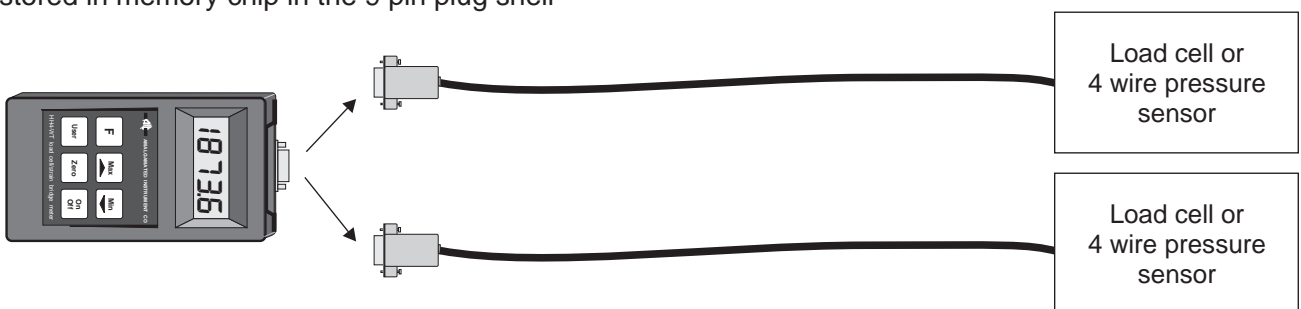


Connectors viewed from solder side.



## 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

