

# SMW Wall Mounting Weighing Indicator/Controller

## Features

- Large 8 Digit LCD Display
- Variable gain load cell sensitivity from 0.5 to 200mV/V
- Simple one pass Auto Calibration
- Gross, Net, Tare and Print function keys
- 4-20mA and 0-10V outputs (isolated)
- IP65 wall mounting case
- 10V @ 170mA excitation to drive up to 6 x 350 ohm load cells
- High accuracy & Stability
- Wide range of power

## Typical Applications

- Vessel weighing
- Silo weighing
- Platform weighing
- Vehicle weighing
- Batching plant
- Conveyor weighing

## Description

The SMW surface mounted strain gauge display is housed in a light grey ABS case, sealed to IP65 with external dimensions of 200 x 120 x 75mm.

The unit comprises an 8 digit 12.7mm LCD display, on an intelligent base unit with user configurable 4-20mA and 0-10volt analogue outputs.

'Plug-in' module positions are available for power supply, relay and communications options.

The relay module provides for two set points, together with In Flight compensation. Relays can be inverted and latched, all of these facilities being set in engineering units. Both relay and analogue outputs have a high level of isolation.

A facility is available to alter the default display for Gross or Net values.

The optional communications RS232 and multi drop RS485 connections to a PC, PLC or mainframe. This allows for the input variable to be taken and the set up parameters changed.

Communications protocol options include ASCII, MODBUS RTU and MANTRABUS.

The RS232 port is also available for a Time/Date or Data only printer to be connected, to log all the desired activities.

Baud speeds of 300 to 19200 are programmable. Power supplies options of 115 or 230VAC and 9 to 32VDC are available.



## Specification

### Input Details

Strain Gauge Input	The input is suitable for any full wheatstone bridge sensor. A transducer excitation voltage of 9.6 volts @ 160mA
Compensation	±sense wires for cable/safety barrier losses down to 3V excitation.
Load cell sensitivity	is preset via DIL switches to 0.5, 0.8, 1.0 1.25, 1.5, 2.0, 2.5, 3.5, 5, 10, 20, 50, 100 or 200 mV/V.
Initial offset	≤± 0.15mV (15µV/V) which is cancelled during auto calibration.
Zero Temperature Coefficient	≤0.002%FSO/°C typical with 2.5 mV/V sensitivity selected
Span Temperature Coefficient	≤0.005%reading/°C
Excitation	9.6V DC nominal, 170mA maximum
Repeatability	≤0.01% reading over 90 days
Display Update Rate	Selectable between 0.1 and 25.5 seconds
Display Average	Set by programmer keypad, up to 64 standard up dates
Display resolution	1:32,000

### Analogue Outputs

Drive	4-20mA up to 1Kohm and 0-10 volts up to 2mA.
Accuracy	4-20mA ±0.15% of range (typically). 0-10V ±2% before calibration.
Resolution	13 bit (Settling time 0.25 secs to 1% of step change)
Isolation	±130V RMS or DC max to analogue input or any other port.

## Calibration

A simple input Auto Calibration is achieved by entering the values of the lowest and highest weights used. Analogue output is pre calibrated and can be ranged over any part of the displayed range. Both input and output are calibrated via the front panel keypad. Gross, Net and Tare are activated by front panel function keys. Peak Hold is actioned by volt free contacts.

## 'Plug in' Output options include

Relay Set Points	Programmed in engineering units, with In Flight compensation and hysteresis settings available for control or alarm purposes.
Communications	To read any value, change set points or any other parameter via:RS232/RS485 (LC3)
Format	MANTRABUS, ASCII, MODBUS RTU
Printers	Activated by a function key or contact this will allow the user to print, the current live value, with header message, engineering units, auto incrementing batch number and in real time if required
Options	9-32V DC power supply (LS3) Remote display module LCD display back lighting DIN rail mounting for the Motherboard Fast Analogue Output Module High Speed Strain Gauge input.

## Data Retention/Protection

Retention:	10 years for set up values, minimum of 100,000 write cycle
Protection of data & function:	Watchdog timer giving repeat auto resets. Impending power detection and hold off. Keypad security and time out.

## CE & Environmental

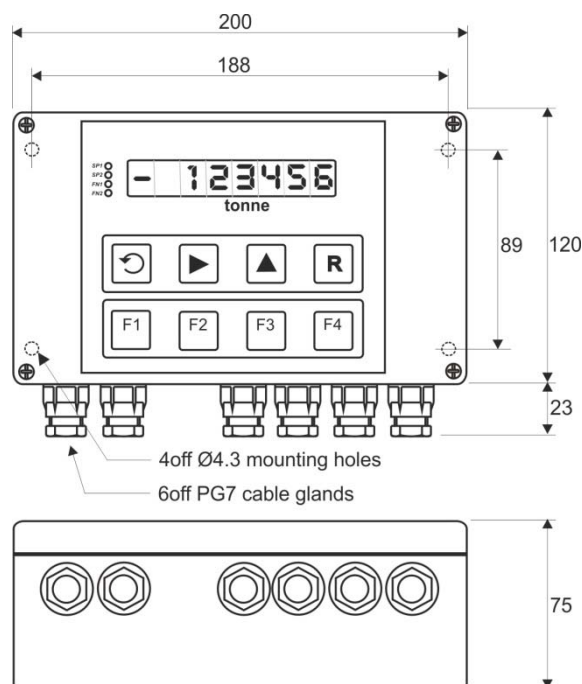
Storage temperature	-20 to +70°C
Operating temperature	-10 to 50°C
Relative humidity	95% maximum non condensing
Low Voltage Directive	2006/95/EC
EMC Directive	2004/108/EC

## Options Available

2 set points	Output through 5A, 230V AC SPCO relays, with latching option
Communications Port	For data transfer via RS232/RS485 or print via RS232 :-
RS485	Enabling up to 32 units to be multi dropped.
RS232	For 1 to 1 connection to a PC or printer.
Printer Operation	By front panel function key.
Baud Rates	300, 600, 1200, 2400, 4800, 9600 (19200 MANTRABUS only) (9600 only for MODBUS)
Back Lighting	For the LCD display
DIN Rail Mounting	For the CPU, PSU and output option modules
DC Powering	9-32V DC
Remote Mounting	Display module, for panel mounting.

## Mechanical Dimensions

All dimensions in millimeters



Unit 15,  
Newport Business Park  
Barry Way, Newport,  
Isle of Wight,  
PO30 5GY  
United Kingdom  
Tel: +44 (0) 1983 249264  
Fax: +44 (0) 1983 249266  
sales@lcmsystems.com

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