

MK-E1005 Indicator

Description

General

This specification describes the MK-E1005 indicator, capable of stand-alone operation, or of integration into a larger system via serial interface. It is a microprocessor-based industrial weighing system with up to 100,000 displayed increments for analysing, displaying, storing and transmitting gross and net weight information. Up to four analogue load cells to be connected with the indicator. The MK-E1005 can be matched to almost any load cell system to achieve optimum accuracy, stability and repeatability. The indicator can control its surrounding process using configurable outputs.

Configurable Features

The MK-E1005 features a keyboard which allows any of the following functions to be configured during commissioning:

- Sensitivity to weight signal
- Scale capacity
- Number of divisions and increment size
- Weighing Unit
- Zero / back balance
- Decimal marker type - point or comma
- Position of decimal marker
- Filtering parameters
- Tare availability
- Time and date
- Animal weighing
- I/O operation

Applications

Parts Counting

Simple counting mode.

Static Checkweighing

Set limits, manually or by sample mode.

Peak Hold

Records maximum weight measured. Clear button resets memory.

Totalising

Single totals channel.

Remote Display Mode

Connect to, or use as a remote display.

Specifications

Electrical

Display

Type

Red LED display 0.8 inch. Displays up to six digits

Decimal Points

Configurable to any of six positions.



Units Displayed

kg, lb, custom.

Annunciators

Balance (Gross Zero), Motion, Gross, Tare, Net, lb, kg, custom Under/Target/Over, Print, Three Trip Outputs, Peak, Battery Status

Keypad

7 keys, addressing: Function Key, Dedicated Function Keys: Zero, Tare, Select, Print, Units, On/Off

Load Cell Input

Maximum Load Cells if 350Ω: Four

Connection of Input: Via 9-way, D-type connector.

Excitation: Direct current

Voltage: 5 V dc

Current: Up to 115 mA

Remote Sense:

Obtained from excitation, or linked directly to reference input connectors at the indicator

uV/ per Division: 0.5

Resolution: 30,000

Calibration

Full digital multi-point (five point) calibration. Theoretical calibration possible if parameters known. **Increment Multiplier:** 1, 2, 5, 10, 20, 50

Analogue to Digital Convertor

Display Update Rate: 1, 2, 5, 10 per second.
A to D Rate: 100 per second.
A to D Type: Delta Sigma.

Filter

Selectable averaging: fast, medium and slow.

Balance/Zero

Setting: Keyboard push button.
Size of Balance Range: Normally 10%, up to 100%.
Zero Indication: Within 2% of maximum capacity.
Under Range Indication: Displays "-----"
Zero Tracking: Configurable.

Range/Span

Range of Adjustment: 0 - 100,000 divisions
Over Range Indication: Displays "-----"

Tares

Push-Button (Semi Auto) Tare

Push-button operated, semiautomatic, with selectable negative weight display. Cumulative taring is possible.

Initialisation and Operation

When the item to tare on is applied, press the 'Tare' push button.

Indication

'Net' annunciator is illuminated.

Real Time Clock

The MK-E1005 is fitted with a real time clock which allows the user to display and print the time and date. This clock is battery-backed and will remain functional in the absence of mains power.

Communications

Serial Interface

One bi-directional asynchronous serial interface (RS232/485/422 and RS232/20mA current loop) as standard.

For comms to PC or printer, requires standard straight-through cable.

Finish

Enclosed in moulded ABS plastic case.

Mounting Options

The indicator will desk, wall or pole mount. Pole mounting requires optional adapter.

Options

- Isolated RS-232/RS-485
- Isolated 4-20mA Analog current output
- 2/4 set point
- Date & time function

Electrical Power Input

Voltage: 100 VAC - 230 VAC nominal, 50/60 Hz.

Tolerance: Voltage -15 to +10%, Frequency $\pm 10\%$.

Power Consumption: 20 VA maximum when used with full configuration of load cells

Cable length: 2 m.

Power Supply: External linear plug type.

Battery Operation: Internal battery provides on a single charge:

- 25 hours on single load cell.
- 15 hours on four load cells.

Isolation Protection: None. Mains earth lead must be connected to safety earth.

Environment

Resistance to Dirt and Moisture: Protected to IP54, in moulded ABS enclosure.

Electrical Disturbance: Immune to electrical disturbance, including RFI as detailed in EN 45501:1992.

Operating Temperature: -10°C to $+40^{\circ}\text{C}$

Service Temperature: -10°C to $+55^{\circ}\text{C}$

Storage Temperature: -40°C to $+70^{\circ}\text{C}$

Dimension

