

## APPLICATIONS

- Platform scales
- Silo weighing
- Tank weighing
- Check weighing

## SPECIAL FEATURES

- High accuracy
- Compact panel mount design (144 x 72 x 100mm), fits in shallow panels

## FEATURES

- Simple to use
- Excitation for up to 8 x 350W loadcells
- Update rate 100 times per second for high accuracy batching systems
- 14mm main LED display clearly visible at up to 6m
- 7mm sub display provides prompts for adjusting set-points and calibration settings
- Key locks prevent unauthorised operation
- Keypad beeper and tactile keys give positive feel of operation
- Pluggable screw terminals are easy to wire to and easy to disconnect
- IP65 facia for use in dusty or wet conditions
- Non trade applications

## OPTIONS

- Relay output
- Analog output
- Communications RS232 or RS422/485 with clock and Device Net module

### Relay Option

Two types of relay are available. OP-R1 is a 3 relay option and OP-R2 is an 8 relay, 8 switch input option.

These options provide up to 8 programmable setpoints for limits, batching and check weighing.

Each of the setpoint values can be operator adjustable or pre-set. The relay contacts may be set to open or close at setpoint. Four of the

setpoint relays have adjustable hysteresis, an optional delay to operate and a latch at setpoint option.

### Analog Output Option

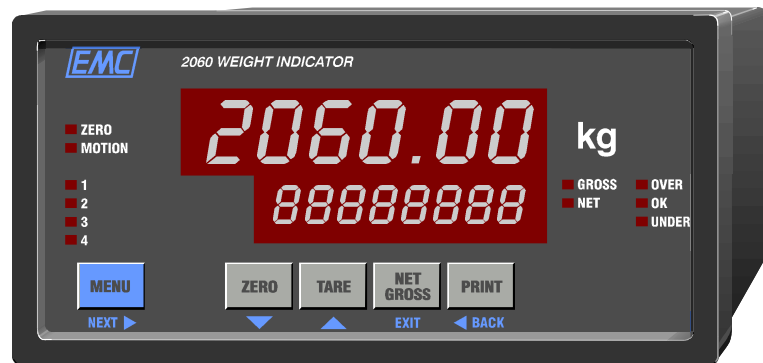
The analog output gives a programmable current output. It can also be used for voltage output.

The displayed weight, gross weight or net weight can be selected for output.

### Communications Option

The serial option cards can be used as a fully programmable printer output or can be used for communications with computer or PLC. RS422/485 provide multi-drop capability.

A clock allows printing of time and date.



The EMC 2060 Weight Indicator is a state of the art weighing instrument that can be used with any loadcell based weighing system. As standard it provides a clear display of weight and has keys to tare and zero the weighing system. Calibration may be done with known weights or by entering loadcell capacity and sensitivity.

With simple user fitted options, the EMC 2060 can be expanded to provide connection to a PLC, computer and remote display or printer.

Key locks allow unrequired key functions to be disabled.

Three switch inputs allow remote control of the instrument.

The EMC 2060 may be used with intrinsic safety barriers for hazardous area applications.

# SPECIFICATIONS

## Inputs

### LOADCELL INPUT

- Input Range:  $\pm 33\text{mV}$ .
- Excitation: 10Vdc  $\pm 10\%$ , 240mA maximum current. (current reduces as more options are added).
- Signal processing rate: 100Hz (response time setting  $\leq 0.5\text{s}$ ). (120Hz at 60Hz mains frequency).
- Input sensitivity: 0.5 $\mu\text{V}$ /division maximum.
- Zero range:  $\pm 25\text{mV}$ .
- Zero drift:  $\pm (0.25\mu\text{V} + 0.0005\%$  of deadload)/ $^{\circ}\text{C}$  typical.
- Span drift:  $\pm 0.0005\%$ / $^{\circ}\text{C}$  typical.
- Non-linearity:  $< 0.006\%$  of FS.
- Input noise: 0.5 $\mu\text{V}$ p-p typical.
- Filtering: 3<sup>rd</sup> order digital filter. Adjustable response times of 0.05s to 5.0s.
- Input impedance:  $> 1000\text{M}$  ohms.
- Sense input: 99k input impedance. Voltage range 5-10V.
- AD conversion: 24bit sigma-delta.
- SWITCH INPUTS** Designed for connection to potential free, low voltage switch contacts. The inputs have 4k7 pullup resistors to 5V.

## Relay Option

- RELAY OUTPUTS** Isolated clean contact rated at 250Vac 2A for general use.
- SWITCH INPUTS** Isolated 12-24Vac/dc inputs. An external power source is required.

## Analog Output Option

**ANALOG OUTPUT** Isolated 0 to 20mA/10.5V maximum range (max. load 500 ohms for 4-20mA). User calibrated within these limits. An external resistor is used to convert mA to volts. For example 560 ohms gives 10V at 17.9mA. Resolution better than 1 in 5000. Non-linearity  $< 0.01\%$ . Drift  $< 2\mu\text{A}/^{\circ}\text{C}$ . Response time = response time setting + 20ms.

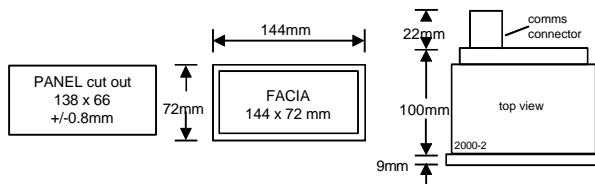
## Communications Option

**INTERFACE** Isolated RS232 serial with handshaking or RS422/485. Baud rate selectable between 300, 600, 1200, 2400, 4800 and 9600. Includes real time clock.

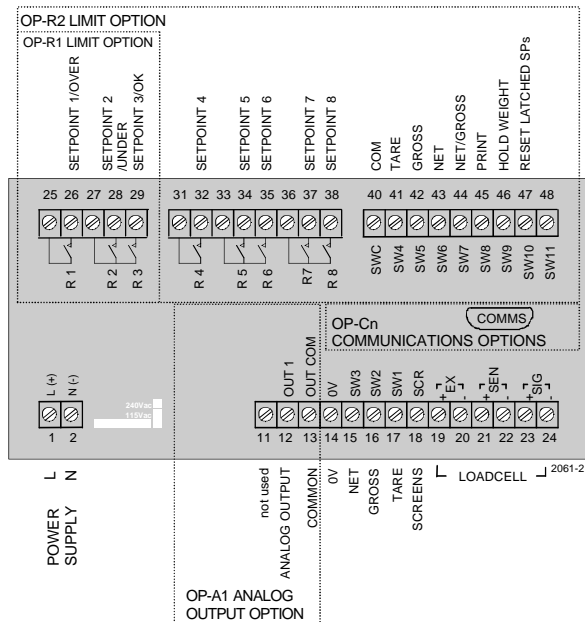
## General

- DISPLAY** 6 digit LED display with 14mm high digits. Sub display is 8 digit LED with 7mm high digits. Weight reading in 100 to 15,000 divisions. Count by 1, 2, 5, 10, 20 or 50.
- HOUSING** Panel mounted according to DIN 43700. Facia covering is polyester membrane which is dust and splash proof to IP65. Connections are made via pluggable terminals at the rear. Shipping weight  $< 1.0\text{kg}$ .
- ENVIRONMENT** Ambient temperature range -10 to 40 $^{\circ}\text{C}$ . Humidity  $< 90\%$  (non-condensing).
- POWER SUPPLY** Standard option is 240Vac  $+10\%$  -15%. Refer to order code for other available options.

## DIMENSIONS



## CONNECTIONS



## ORDERING

To order, specify the type code and any options that are required.

### PRODUCT

Weight Indicator **2060**

### POWER SUPPLY

240Vac  $+10\%$  - 15% **A**  
 115Vac  $+10\%$  -15% **B**  
 24Vac  $+10\%$  -15% **C**  
 10 to 35Vdc (un-isolated, -ve supply connected to 0V) **L**

### OPTIONS (user installable)

Analog output (isolated) **OP-A1**  
 Relays (3 relay outputs) **OP-R1**  
 Relays (8 relays, 8 switch inputs) **OP-R2**  
 Communications (isolated RS232) **OP-C0**  
 Communications (isolated RS232, clock & pulse output) **OP-C1**  
 Communications (isolated RS422/485, clock & pulse output) **OP-C2**

Only one of each type of option may be fitted.

### EXAMPLE OF ORDER CODE **2060-A, OP-R1**

### Other units in the EMC2060 Weighing Series

**EMC 2061 Weight Indicator** - basic weight indicator suitable for trade approved applications.

**EMC 2063 Weight Processor** - enhanced capabilities including totalising, peak hold, rate of change signal, tare value entry, etc. Relay, analog output and communications options.

**EMC 2064 Weigh Batch Controller** - weight indicator with batch control features. Analog output and communications options.

**EMC 2065 Continuous Weigh Batcher** - optimised for continuous batching such as bagging systems and process weighers. Batch continuously, to a set weight or to a set batch number. Allows for flowrate measurement and control. Analog output and communications options.

### Available from

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## EMC INDUSTRIAL GROUP LTD

As we are continuously improving our products, changes to this specification may occur without notice.