

# METRA-SMART DATA SHEET

- 5 Digit rate indication
- 8 Digit total
- 8 digit accumulated total
- IS option
- Analogue output
- 2 flow alarms
- Dual input A+B, A-B, A/B
- Simple programming
- 10 point linearisation
- Scaleable pulse output
- IP67 (Nema 4X)
- Clear 9mm LCD display
- Remote/local reset
- Long battery life
- 20 to 80 °C Operation
- Low battery indicator

**Ideal for**  
**Production lines**  
**Fuel consumption**  
**Process indicators**



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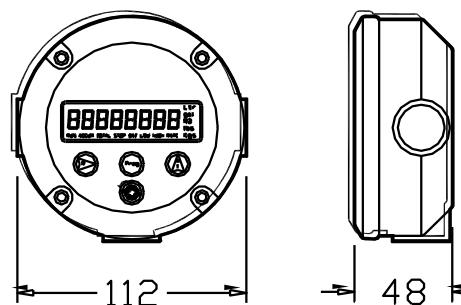
Web [www.flowmeters.co.uk](http://www.flowmeters.co.uk)

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Metra-smart

The **Metra-smart** was specifically designed for computing & displaying rates and totals as well as giving an analogue output proportional to flow. It can also give two pre-set flow switch points and calculate differential rates from two input sensors. The instrument will display Re-settable Total, Accumulated Total and Flow Rate in engineering units as programmed by the user. Simple PIN protected flow chart programming with English prompts guide you through the entire programming routine greatly reducing the need to refer to the instruction manual. The pulse output can be selected to act as an input pulse repeater serving as a signal conditioner module or may be programmed as a scaled pulse output for remote metering. There is a ten point linearisation for non-linear sensors. The analogue output and flow switch functions requires an external 8 - 24Vdc power supply. The robust housing is purposely designed to suit harsh indoor & outdoor industrial and marine environments. It is weatherproof to IP67 (Nema 4X) standards, UV resistant and uses glass reinforced nylon mouldings with stainless steel screws & viton O-ring.



## Specification

**Display** Custom multifunction LCD

**Signal inputs** Universal pulse-frequency input

**Signal output** 4-20 mA

**Flow set points** High & low flow switches

**Power** Battery and/or external 8-24Vdc (Up to 10 year battery life)

**Pulse output** Scalable

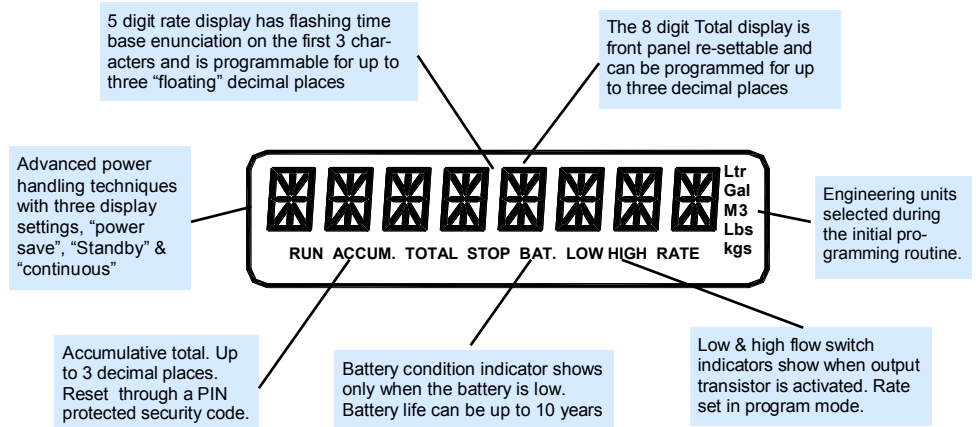
**Enclosure** IP66 (NEMA 4X)

**K Factor range** 0.001 to 9,999,999.999

**Rate time base** Seconds, minutes, hours or day

**Dual input** A+B, A-B or A/B

The drawing below shows all of the segments on the LCD display illuminated at approximately full size. This occurs for five seconds whenever the program mode is entered.



The LCD 8 digit alpha-numeric display has 9mm high main characters with engineering units & mode indicators plus a low battery indicator. Displays rate, total and accumulative total all with independently programmable decimal point positions. The programming prompts scroll in plain English for ease of use. The inputs are compatible with reed switch, Hall effect detector, magnetic coil (20mV P-P), Voltage pulse & Namur proximity detectors. Maximum input frequency 500 to 5Khz depending on sensor type, minimum 0Hz, (0.1Hz when used on internal power and for rate indication). A loop power of 4 to 20mA can be spanned anywhere within the flow range, 12~24 V dc into 750Ω loop load. Accuracy is ±0.1% FSD. A test output is activated during programming for a system function check. The two set points are NPN/PNP pulse outputs with selectable FET transistors programmable as high and low set points with dead bands. Maximum power is 100mA at 24V dc. Internal 3.6V Ultra lithium battery is used for internal battery powered use. There is an additional scale pulse output selectable NPN or PNP it has a maximum frequency of 100 Hz. @ 1A maximum. The housing is high impact glass reinforced nylon with a self drill cable gland in the base or rear. Operating temperature range -20°C to +80°C. When the unit is measuring flow rate the first 2 or 3 digits show the time base i.e. SEC, MIN, Hr or DAY.

## Order codes

Metra-smart - 380-101

Wall mounting bracket - 380-103

Intrinsically safe  
Metra-smart - 380-101 IS

## Mat'ls of construction

UV resistant glass reinforced nylon case, polycarbonate cover, viton seals and stainless steel screws.