

# MTL ICC600 SERIES



## ICC601 and ICC602 3½-digit loop-powered indicators



- ◆ Loop-powered 4 to 20mA input
- ◆ 1in (25mm) LCD display
- ◆ DIN-standard panel-mounted versions
- ◆ Tough impact-resistant field units with separate terminal compartment
- ◆ User configurable range settings
- ◆ Linear/square root option
- ◆ <1.1V drop across display

The ICC601 and ICC602 are low-cost, 3½-digit, 1in LCD indicators for 4 to 20mA 2-wire signal loops. Each indicator is loop-powered from the 4 to 20mA signal, without any need for an external power supply, and drops less than 1.1V. The units indicate measurements in either linear or square root modes (optional) throughout the range. Configuration is carried out by DIP switches—for display mode (linear/square root), resolution, decimal point position and coarse adjustment. Fine adjustment of the range values is achieved through multiturn trim pots. The ICC601 is a field-mounting, 4 to 20mA loop-powered indicator, protected to IP66, and the ICC602 is a panel-mounting equivalent.

### COMMON SPECIFICATION

#### Display

1in (25mm), 3½digit LCD display

#### Display range

-1999 to +1999

#### Input range

4 to 20mA

#### Supply requirements

<1.1V under all conditions, loop powered

#### Operating modes

Linear                                    TI option\*  
Linear or square root    T2 option\*  
(user selectable)

\*See ordering information on back page

#### Zero and span

Zero and span: anywhere within the range

Zero and span control access:

ICC601: behind front fascia

ICC602: through an opening

provided at the rear of the unit

Needs a 4 to 20mA current source for calibration

#### Accuracy including non-linearity and hysteresis at 25°C

±1 digit

#### Root extraction error

±16µA at input or ±1digit (whichever is greater)

±1µA/°C at input for signals between 4.16 and 20mA

#### Out-of-range indication

Display of all decimal points and under-range arrow (←) for current input <3.9mA at 25°C

Display shows +1 or -1 for readings >±1999

#### Decimal point

All positions selected by a switch

#### Display scale

Normal/reverse, selected by a switch

#### Replaceable fuse

Rating: 63mA

Type: subminiature, 8.5mm dia

#### Ripple rejection

<1 digit error with 1mA peak-to-peak ripple at 50Hz

#### Temperature drift

±0.1% digits/°C,

±0.02% of elevation/suppression digits/°C, and

±0.02% of display span digits/°C

#### Ambient temperature limits

-20°C to +55°C (operating)

-40°C to +80°C (storage)

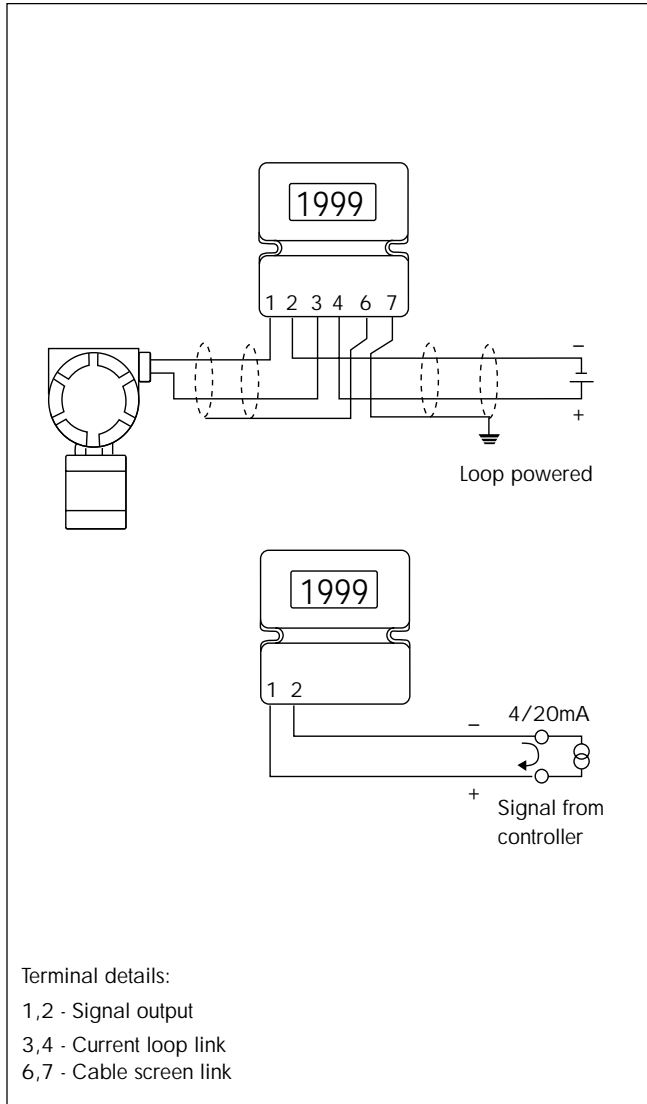
#### Humidity

5 to 95% RH, non-condensing

(For individual specifications see overleaf)

# ICC601 - FIELD MOUNTING INDICATOR

## System diagrams



## Terminals

Barrier terminal blocks accommodating 14 to 22 AWG wires

## Environment

Carbon-loaded glass-reinforced polyester (GRP) casing to IP66  
 Excellent resistance to hostile environments, saline atmospheres and impact damage

## Cable entry

Two ports, each providing a clearance hole of 20.5mm dia through the casing to fit cable glands. *(This allows user to fit any type of cable gland.)* Lock nuts are required to fix cable glands.

## Mounting

Direct mounting onto flat surfaces (wall or panel)  
 Pipe/post mounting, horizontally or vertically, with pipe mounting kit.

Mounting kit options:

- PM1 - pipe mounting kit, mild steel material
- PM2 - pipe mounting kit, stainless steel material

## Identification—engineering units

Labels supplied for fitting in a recess to the right of the display window

Pre-printed labels (black on silver): °C, °F, t, g, kg, lb, ml, l, l/s, gal, bar, mbar, psi, %, rpm

Blank labels for user-defined legends

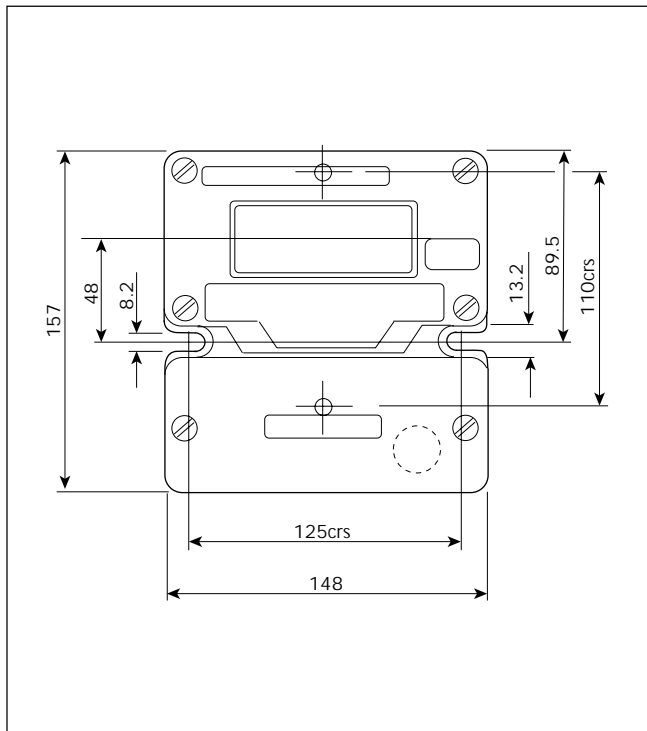
## Identification—tag number

Custom engraved and riveted stainless steel label fitted onto terminal block lid (10 characters maximum)

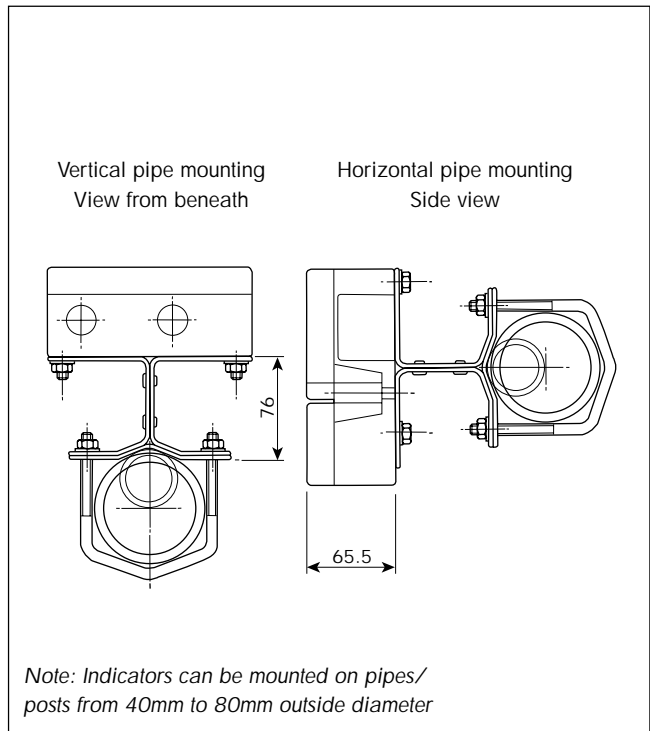
## Weight

- 1.3kg approximately
- 0.7kg (pipe/post mounting kit)

## Front panel dimensions (in mm)



## Mounting kit PM1 (MS) and PM2 (SS) (dimensions in mm)



# ICC602 - PANEL MOUNTING INDICATOR

## Terminals

Accommodate conductors up to 2.5mm<sup>2</sup>

## Environment

- Plastic (Noryl) casing with aluminium front panel to IP65
- Instrument-to-panel seal protected to IP40 (or better) with two panel screw clamps
- Instrument-to-panel seal protected to IP65 with optional kit

## Cable entry

Removable plug connector at rear, mating with shrouded header

## Mounting

Panel mounting onto DIN 43700, 72mm x 144mm front face

Mounting options:

M1: sealed to IP40

M2: sealed to IP65 with reduced panel cut-out (see figure)

## Identification—engineering units

Labels supplied for fitting to the right of the display window .

Pre-printed labels (black on silver ): °C, °F, t, g, kg, lb, ml, l, l/s, gal, bar, mbar, psi, %, rpm

Blank labels for user-defined legends

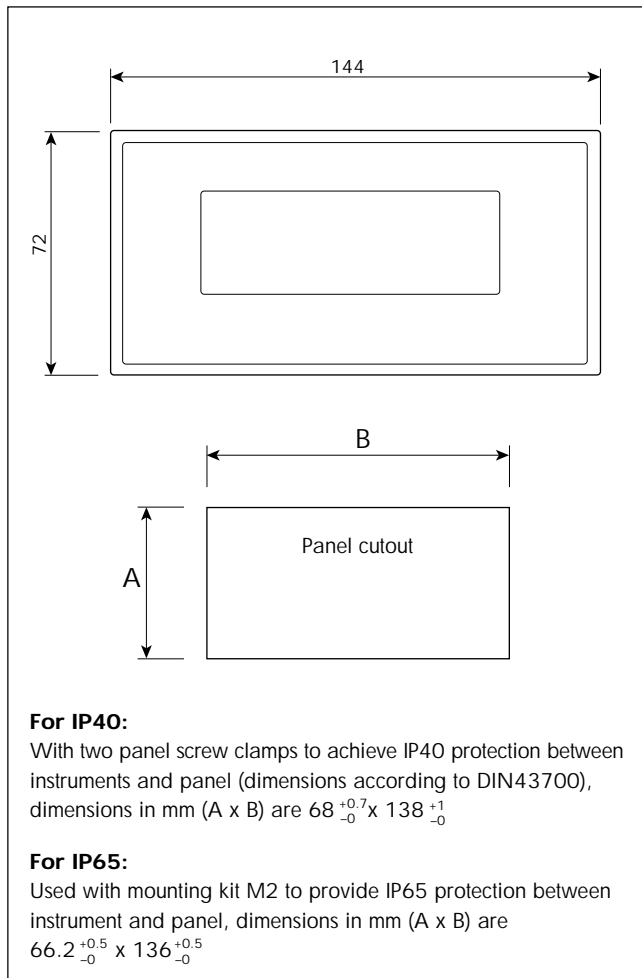
## Identification—tag number

Blank labels supplied for fitting at bottom right-hand corner of the display

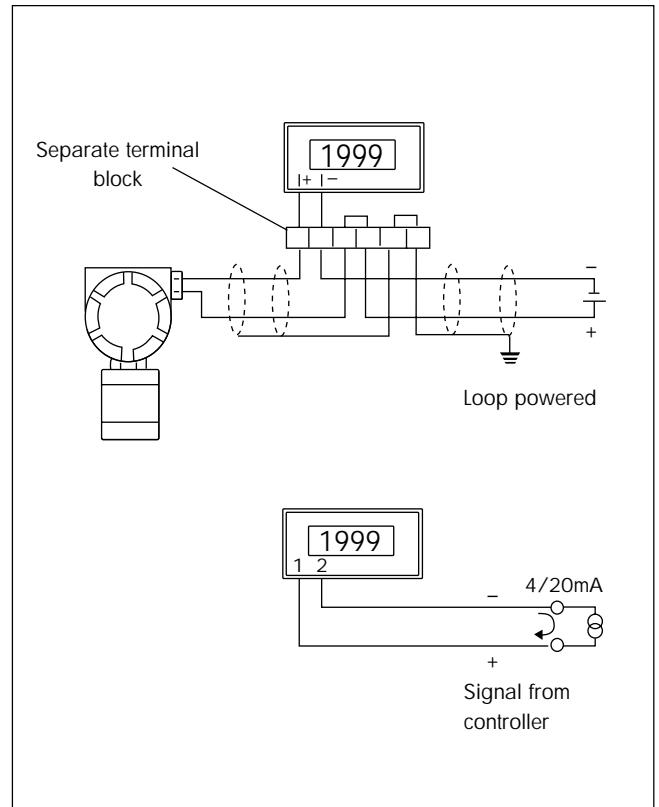
## Weight

0.4kg

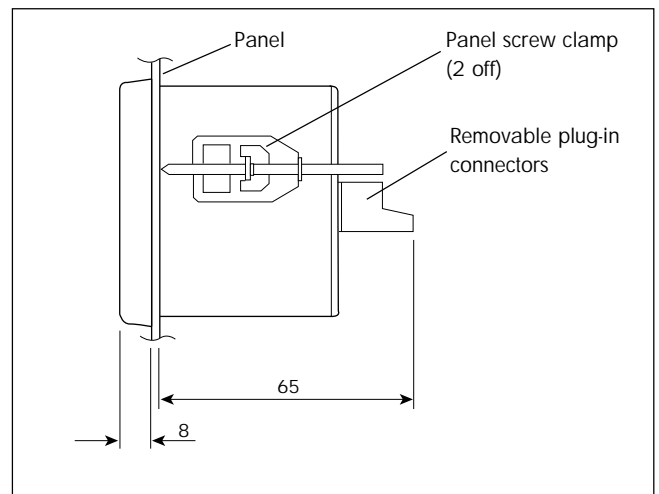
## Front panel dimensions (in mm)



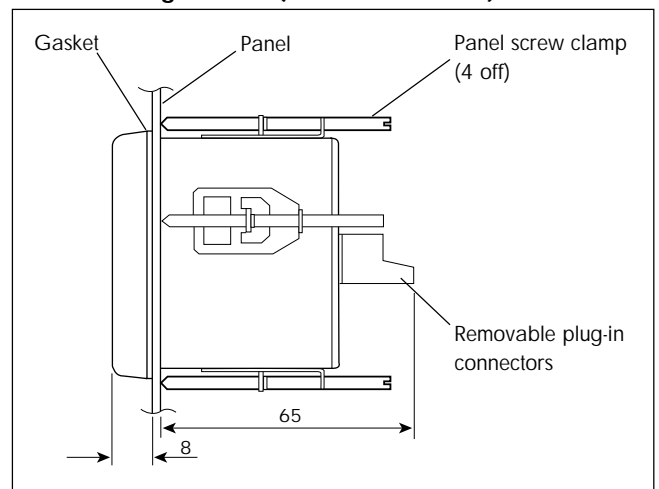
## System diagrams



## Standard mounting - M1 (dimensions in mm)



## IP65 mounting kit - M2 (dimensions in mm)



## TO ORDER:-

### ICC601 ORDER CODE

- ICC601 T1** Field-mounting indicator with linear mode display  
**ICC601 T2** Field-mounting indicator with linear and square root mode display  
**PM1** Pipe mounting kit – MS  
**PM2** Pipe mounting kit – SS

**For example:** ICC601-T2-PM1 refers to a field-mounting indicator with linear mode and square root mode display and with a pipe mounting bracket of MS material

**Note:** A custom engraved stainless steel tagging label is available for ICC601. Tagging details must be provided at time of order (maximum number of characters that can be engraved is 10)

## TO ORDER:-

### ICC602 ORDER CODE

- ICC602 T1** Panel-mounting indicator with linear mode display  
**ICC602 T2** Panel-mounting indicator with linear and square root mode display  
**M1** Standard mounting to IP40 protection  
**M2** Mounting kit for IP65 protection between display and panel

**For example:** ICC602-T1-M1 refers to a panel-mounting indicator with linear mode display and with a standard mounting to IP40 protection

### SPARES PACK

- FUS63M** 63mA replaceable miniature fuse (pack of 5)

*Specification subject to change without notice*

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