1. DESCRIPTION

The BA337E and BA338E are panel mounting, intrinsically safe, one input rate totalisers, primarily intended for use with pulse output flowmeters.

The two models are electrically similar, but have different size displays and enclosures.

Model	Displays	Bezel size
BA337E	8 digits 9mm high 5 digits 6mm high	96 x 48mm
BA338E	8 digits 18mm high 5 digits 12mm high	144 x 72mm

This abbreviated instruction sheet is intended to assist with installation, a comprehensive instruction manual describing safety certification, system design and configuration may be downloaded from the BEKA website or may be requested from the BEKA sales office.

Both models have IECEx (IECEx ITS 16.0004X) and ATEX (ITS16ATEX28408X) intrinsic safety certification for use in flammable gas atmospheres. ETL and cETL approval permits installation in the USA and Canada. The certification information label, which is located on the top of the instrument enclosure, shows the certification number and codes. Other certifications may be shown. Copies of certificates may be down loaded from the BEKA website.

Typical certification information label

Special conditions for safe use

The ATEX and IECEx certificates have an 'X' suffix indicating that special conditions apply for safe use.

WARNING

To avoid an electrostatic charge being generated instrument enclosure should only be cleaned with a damp cloth.

2. INSTALLATION

Both models have IP66 front of panel protection but they should be shielded from direct sunlight and severe weather conditions. The rear of both models have IP20 protection.

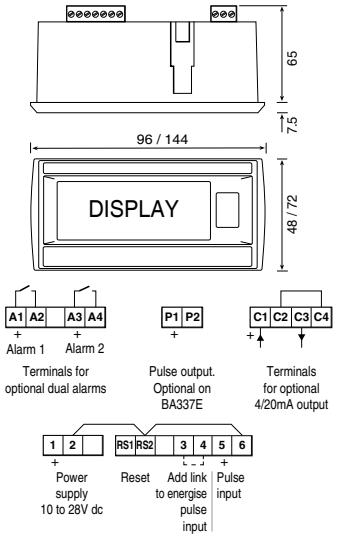
The BA337E and BA338E are CE marked to show compliance with the ATEX Directive 2014/34/EU and the EMC Directive 2014/30/EU.

Cut-out dimensions

Recommended for all installations. Mandatory to achieve IP66 seal between instrument and panel.

BA337E
90 +0.5/-0.0 x 43.5 +0.5/-0.0

BA338E
136 +0.5/-0.0 x 66.2 +0.5/-0.0

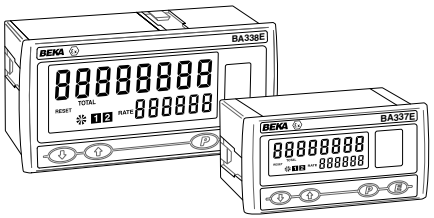


Support panel wiring to prevent vibration damage

Fig 1 Cut-out dimensions and terminals

Abbreviated instructions for

BA337E and BA338E One input intrinsically safe pulse input Rate Totalisers



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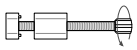
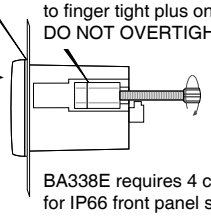
1. Align foot and body of panel mounting clamp by turning screw anticlockwise



2. Position gasket behind instrument bezel

3. Insert instrument into the panel from the front

4. Insert panel clamp into recess and gently pull it onto the dovetail. Engage screw & turn clockwise to tighten the clamp, fit the other clamp(s). Recommended tightening torque 22cNm (1.95lbf.in) Equivalent to finger tight plus one half turn. DO NOT OVERTIGHTEN



BA338E requires 4 clamps for IP66 front panel sealing

Fig 2 Installation procedure

EMC

For specified immunity all wiring should be in screened twisted pairs with screens earthed at one point within the safe area.

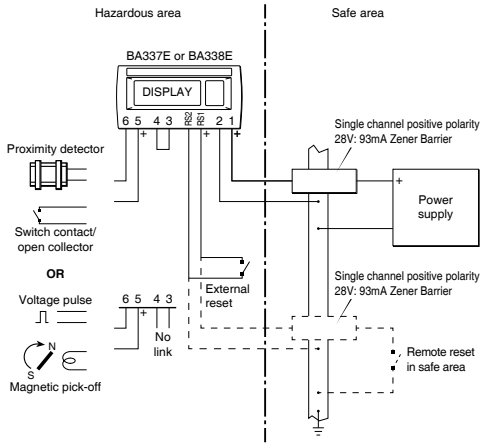


Fig 3 Use with Zener barriers

Scale card

The Rate Totaliser's units of measurement are shown on a printed scale card visible through a window at the right hand side of the display. The scale card is mounted on a flexible strip that is inserted into a slot at the rear of the instrument as shown below

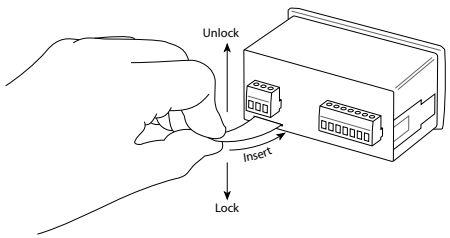
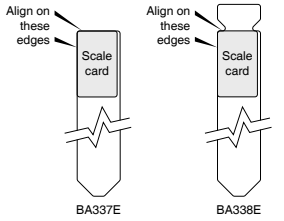


Fig 4 Inserting flexible strip carrying scale card into slot at the rear of Rate Totaliser.

Thus the scale card can easily be changed without removing the Rate Totaliser from the panel or opening the instrument enclosure.

New Rate Totalisers are supplied with a printed scale card showing the requested units of measurement, if this information is not supplied when the instrument is ordered a blank card will be fitted. A pack of self-adhesive scale cards printed with common units of measurement is available as an accessory from BEKA associates. Custom printed scale cards can also be supplied.

To change a scale card, unclip the protruding end of the flexible strip by gently pushing it upwards and pulling it out of the enclosure. Peel the existing scale card from the flexible strip and replace it with a new printed card, which should be aligned as shown below. Do not fit a new scale card on top of an existing card.



Align the self-adhesive printed scale card onto the flexible strip and insert the strip into the Rate Totaliser as shown.

Fig 5 Fitting scale card to flexible strip

3. OPERATION

The Rate Totalisers are controlled by four front panel push buttons. When in operating mode they have the following functions:

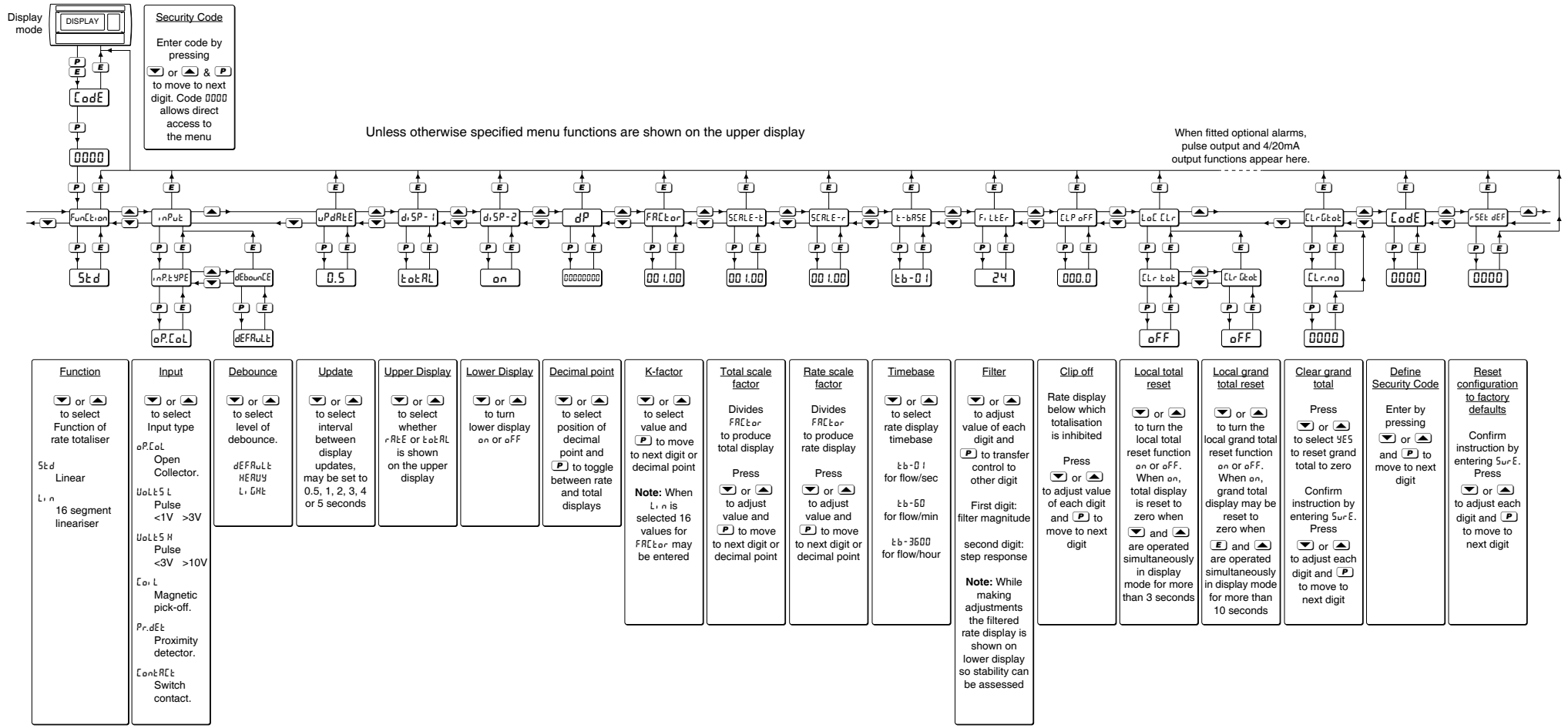
- E + ▼ Grand total - shows Lo followed by least significant 8 digits of the 16 digit grand total.
- E + ▲ Grand total - shows Hi followed by the most significant 8 digits of the 16 digit grand total.
- ▼ + ▲ If Local Total Reset CLr tot in the configuration menu has been activated, operating the ▼ + ▲ buttons for three seconds will reset the total display to zero and clear any pulses stored in the optional pulse output. The Grand Total is not reset.
- P + ▼ Shows in succession, firmware version number, instrument function totALi SE and any output accessories that are fitted:
  - A Dual Alarm Outputs
  - P Pulse output *fitted to all BA338E*
  - C 4/20mA output.
- P + ▲ When optional alarms are fitted provides direct access to the alarm setpoints if ASCP (access setpoints) has been enabled in the configuration menu.
- P + E Access to configuration menu.

4. CONFIGURATION

Rate Totalisers are supplied configured as requested at time of ordering, if not specified default configuration will be supplied but can easily be changed on-site.

Fig 6 shows the location of each function within the configuration menu with a brief summary of the function. Please refer to the full instruction manual for detailed configuration information and for description of linearisers and optional outputs.

Access to the configuration menu is obtained by pressing the P and E buttons simultaneously. If the Rate Totaliser's security code is set to default 0000 the first parameter FunCti on will be displayed. If the instrument is protected by a security code, CodE will be displayed. The four digit code must be entered to gain access to the menu.



Manuals, certificates and data-sheets can be downloaded from http://www.beka.co.uk/ba337_8e

Fig 6 Configuration menu