

## 1. DESCRIPTION

The BA568E is a two input, general purpose panel mounting Counter which will function with a wide variety of sensors.

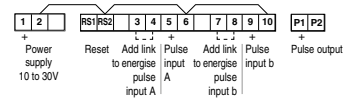
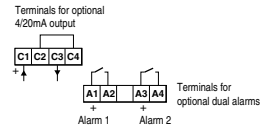
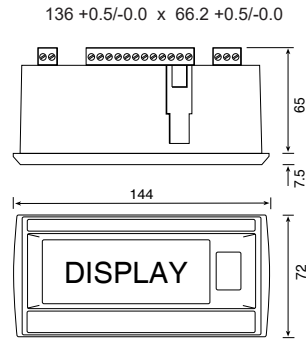
This abbreviated instruction sheet is intended to assist with installation, a comprehensive instruction manual describing system design and configuration may be downloaded from the BEKA website or may be requested from the BEKA sales office.

## 2. INSTALLATION

The BA568E Counter has IP66 front of panel protection but it should be shielded from direct sunlight and severe weather conditions. The rear of the instrument has IP20 protection.

### Cut-out dimensions

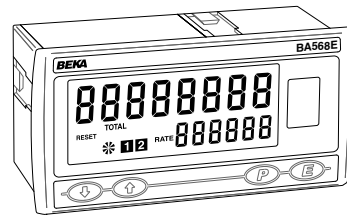
Recommended for all installations. Mandatory to achieve IP66 seal between instrument and panel.



Support panel wiring to prevent vibration damage

Fig 1 Cut-out dimensions and terminals

**Abbreviated instructions for  
BA568E two input general purpose  
panel mounting Counter**



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The BA568E is CE marked to show compliance with the EMC Directive 2014/30/EU. It is also UKCA marked to show compliance with UK Electromagnetic Compatibility Regulations UKSI 2016:1091 (as amended)

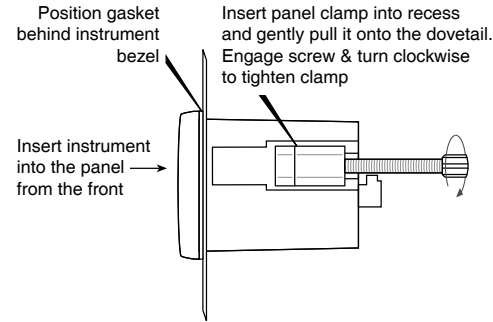
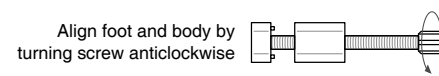
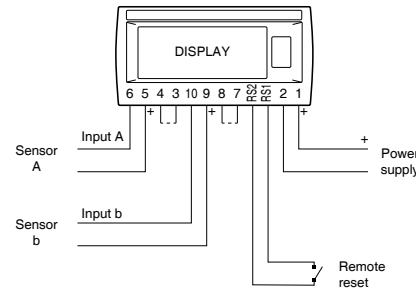


Fig 2 Installation procedure

### EMC

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



Sensor output	Input A	Input b
Proximity detector	Link	Link
Switch contact	3 & 4	7 & 8
Open collector		
Voltage pulse	Don't link	Don't link
Magnetic pick-off	3 & 4	7 & 8

Fig 3 Typical system

### Scale card

The Counter'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

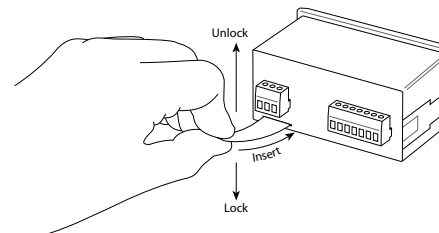


Fig 4 Inserting flexible strip carrying scale card into slot at the rear of Counter.

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

New Counters are supplied with a printed scale card showing the requested units of measurement, if this information is not supplied when the counter 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.

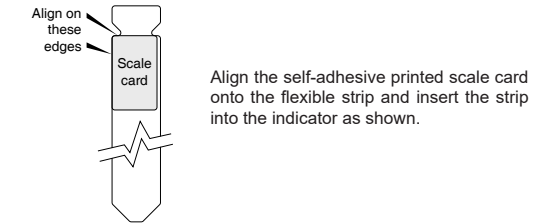


Fig 5 Fitting scale card to flexible strip

## 3. OPERATION

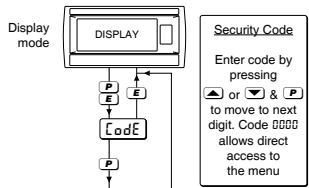
The Counter is controlled by four front panel push buttons. When in the operating mode they have the following functions:

- [P] + [E]** Access to configuration menu
  - [E] + [V]** Grand total - shows L<sub>o</sub> followed by least significant 8 digits of the 16 digit grand total.
  - [E] + [A]** Grand total - shows H<sub>i</sub> followed by the most significant 8 digits of the 16 digit grand total.
- If Local Grand Total Reset [L<sub>r</sub> G<sub>t</sub> R<sub>t</sub>] in the instrument configuration menu has been activated, operating the [E] and [A] buttons simultaneously for ten seconds will result in [L<sub>r</sub>.no] being displayed with the no flashing. Operating the [A] or [V] button will change the display to [L<sub>r</sub>.9E5], the [E] button will then reset the grand total to zero which will be confirmed by a brief display of G<sub>t</sub> L<sub>r</sub> d.

- [V] + [A]** If the Local Total Reset function [L<sub>r</sub> L<sub>o</sub> R<sub>t</sub>] in the instrument configuration menu is enabled, operating the [V] and [A] buttons simultaneously for more than 3 seconds allows total A, total b or both totals and any stored pulses in the pulse output to be reset to zero by operating the [E] push button.

- [P] + [V]** Shows in succession, firmware version number, instrument function [L<sub>o</sub> n<sub>t</sub>] and any output accessories that are fitted:
  - R Dual Alarm Outputs
  - C 4/20mA output.

- [P] + [A]** When optional alarms are fitted provides direct access to the alarm setpoints if R<sub>5</sub> E<sub>P</sub> (access setpoints) has been enabled in the configuration menu.



#### 4. CONFIGURATION

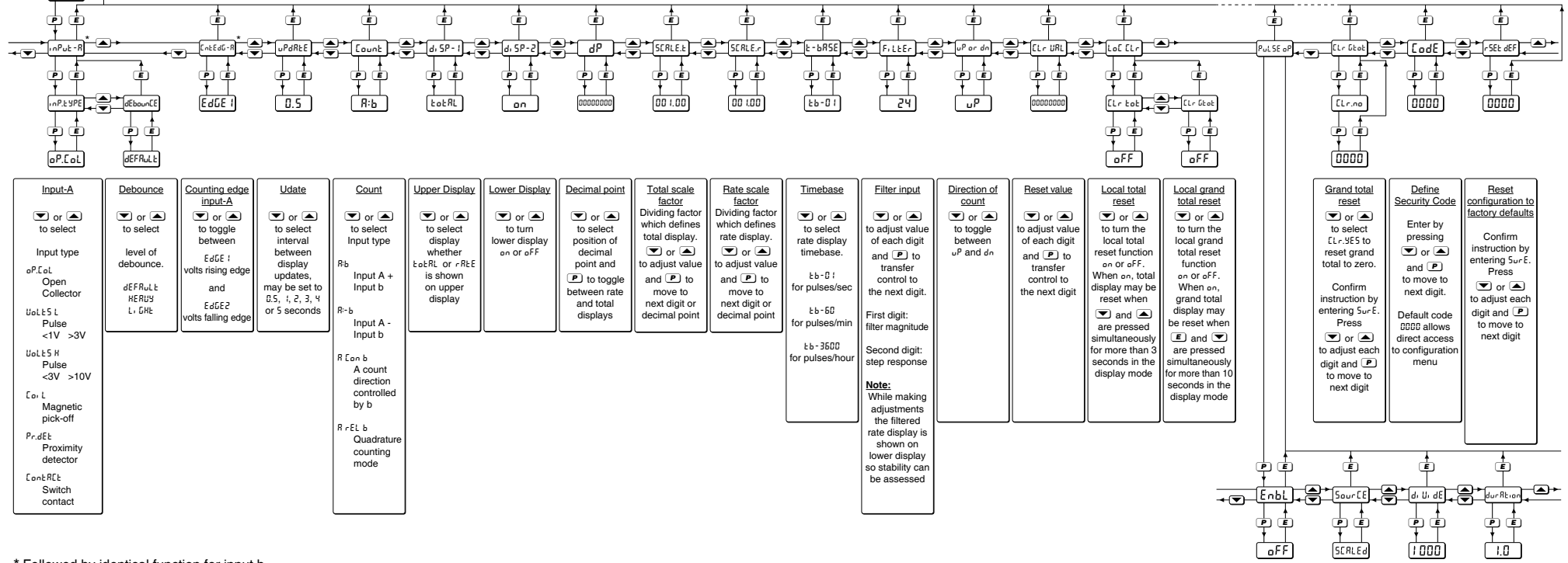
Counters are supplied configured as requested at time of ordering, if not specified default configuration will be supplied but can easily be changed on-site.

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 optional outputs.

Access to the configuration menu is obtained by pressing the **P** and **E** buttons simultaneously. If the Counter's security code is set to default 0000 the first parameter **Input-R** 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.

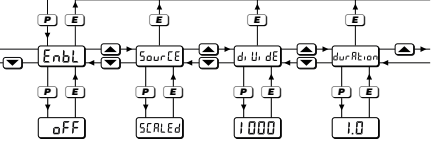
Unless otherwise specified menu functions are shown on the upper display

When fitted with optional alarms functions appear here  
When fitted with optional 4/20mA output functions appear here



<b>Input-A</b> ▼ or ▲ to select Input type oP,CoL Open Collector uoLt5 L Pulse <1V >3V uoLt5 H Pulse <3V >10V CoL Magnetic pick-off Pr,dEt Proximity detector CoNrCLt Switch contact	<b>Debounce</b> ▼ or ▲ to select level of debounce. dEFRAuLt HERUy L, dHt	<b>Counting edge Input-A</b> ▼ or ▲ to toggle between EdGE 1 volts rising edge and EdGE2 volts falling edge	<b>Update</b> ▼ or ▲ to select interval between display updates, may be set to 0.5, 1, 2, 3, 4 or 5 seconds	<b>Count</b> ▼ or ▲ to select Input type Rb Input A + Input b R-b Input A - Input b R Co n b A count direction controlled by b R r EL b Quadrature counting mode	<b>Upper Display</b> ▼ or ▲ to select display whether t-o b RL or r REE is shown on upper display	<b>Lower Display</b> ▼ or ▲ to turn lower display on or off	<b>Decimal point</b> ▼ or ▲ to select position of decimal point and P to toggle between rate and total displays	<b>Total scale factor</b> Dividing factor which defines total display. ▼ or ▲ to adjust value and P to move to next digit or decimal point	<b>Rate scale factor</b> Dividing factor which defines rate display. ▼ or ▲ to adjust value and P to move to next digit or decimal point	<b>Timebase</b> ▼ or ▲ to select rate display timebase. t-b-0 1 for pulses/sec t-b-50 for pulses/min t-b-3600 for pulses/hour	<b>Filter input</b> ▼ or ▲ to adjust value of each digit and P to transfer control to the next digit. First digit: filter magnitude Second digit: step response <b>Note:</b> While making adjustments the filtered rate display is shown on lower display so stability can be assessed	<b>Direction of count</b> ▼ or ▲ to toggle between uP and dn	<b>Reset value</b> ▼ or ▲ to adjust value of each digit and P to transfer control to the next digit	<b>Local total reset</b> ▼ or ▲ to turn the local total reset function on or off. When on, total display may be reset when ▼ and ▲ are pressed simultaneously for more than 3 seconds in the display mode	<b>Local grand total reset</b> ▼ or ▲ to turn the local grand total reset function on or off. When on, grand total display may be reset when ▼ and ▲ are pressed simultaneously for more than 10 seconds in the display mode	<b>Grand total reset</b> ▼ or ▲ to select CLr SE5 to reset grand total to zero. Confirm instruction by entering 5ur.E. Press ▼ or ▲ to adjust each digit and P to move to next digit	<b>Define Security Code</b> Enter by pressing ▼ or ▲ and P to move to next digit. Default code 0000 allows direct access to configuration menu	<b>Reset configuration to factory defaults</b> Confirm instruction by entering 5ur.E. Press ▼ or ▲ to adjust each digit and P to move to next digit
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\* Followed by identical function for input b  
Unless otherwise specified menu functions are shown on the upper display



<b>Pulse Enable</b> ▼ or ▲ to toggle between on and off	<b>Source or output pulse</b> ▼ or ▲ to select pulse source. SCRLEd Instrument generates one pulse each time the least significant digit of Total display changes. The frequency of this pulse may be divided or the duration changed. OR d1rELt R Retransmission of input A OR d1rELt b Retransmission of input b	<b>Divides scaled output pulse</b> ▼ or ▲ to select frequency dividing factor for scaled output pulse	<b>Duration of each pulse</b> ▼ or ▲ to select duration of scaled output pulse in ms 0.1 0.5 1.0 2.5 5.0 10 25 50 100 250 500
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These functions only appear in sub-menu when SCRLEd is selected in the SourCE function

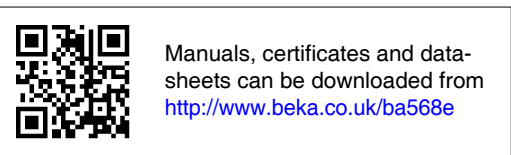


Fig 6 Configuration menu

SCRLEd is not available when R-b is selected in the Count function.