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BEKA BA584G General Purpose Field Mounting Two Input Rate Totaliser Instruction Manual

Contents

DESCRIPTION

The BA584G is a field mounting general-purpose, two-input Rate Totaliser that will function with a wide variety of sensors. The instrument can display rate of flow and total
flow of the two inputs and their sum or difference. 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.

INSTALLATION

The BA584G Rate Totaliser has a robust IP66 glass reinforced polyester (GRP) carbon loaded enclosure incorporating an armored glass window & stainless steel fittings. It is suitable for exterior surface mounting in most

industrial environments, or pipe mounting using an accessory kit.

If the enclosure is not bolted to an earthed post or structure, the earth terminal on the cable entry bonding plate, which may be assembled on the inside or outside of the enclosure, should be connected to local earthed metalwork or to the
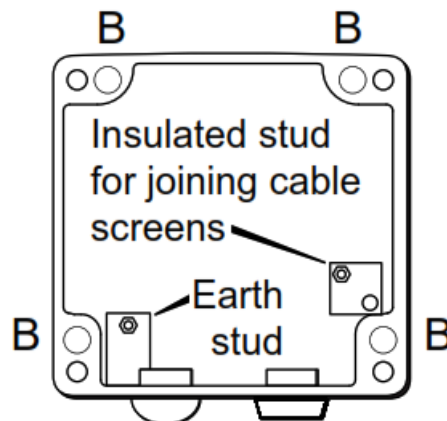plant's potential equalizing conductor.

Terminals A1, A2, A3, and A4 are only fitted when the Rate Totaliser includes optional alarms. Similarly, terminals C1, C2, C3, and C4 are only fitted when the instrument has an optional 4/20mA output. See full manual for details.
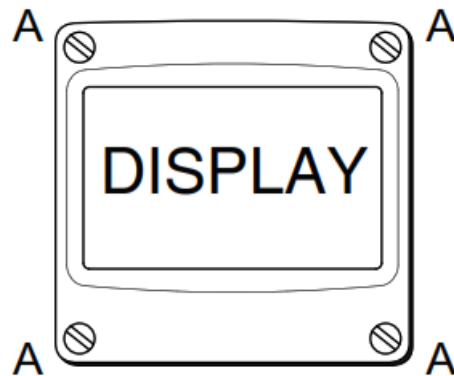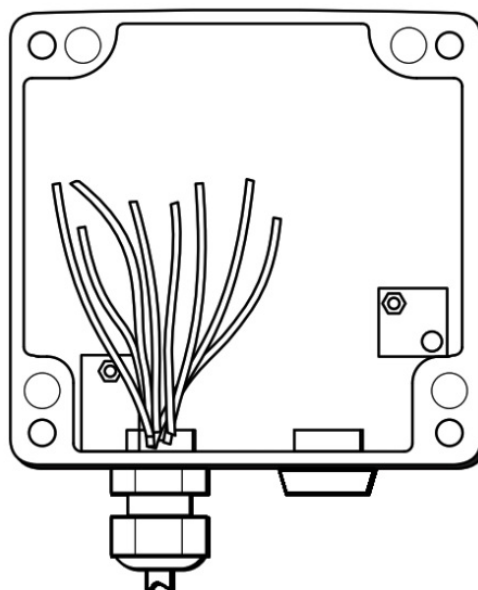

Step A
Unscrew the four captives 'A' screws and separate the indicator assembly and the back-box.
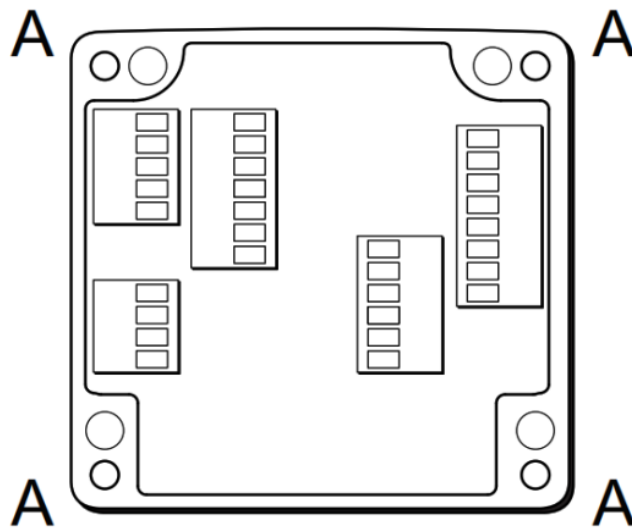

Step B
Secure the enclosure back-box to a flat surface with M6 screws through the four 'B' holes. Alternatively, use a pipe mounting kit.

Step C
Remove the temporary hole plug and install an appropriate IP-rated cable gland or conduit fitting. Feed the field wiring through the cable entry.
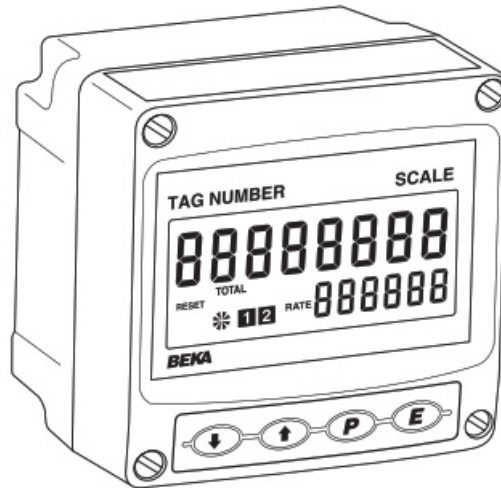
Step D
Terminate field wiring on the instrument assembly. Replace the assembly on the enclosure back-box and tighten the four 'A' screws.

Fig 1 BA584G installation procedure
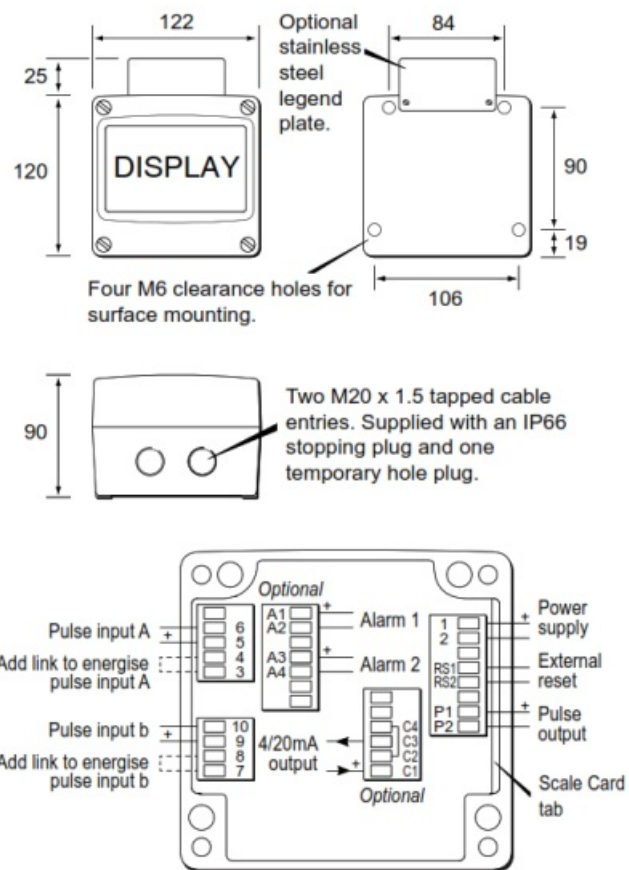**Abbreviated Instruction for BA584G general-purpose field mounting two input Rate Totaliser**

Fig 2 Dimensions and terminal connections

EMC

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

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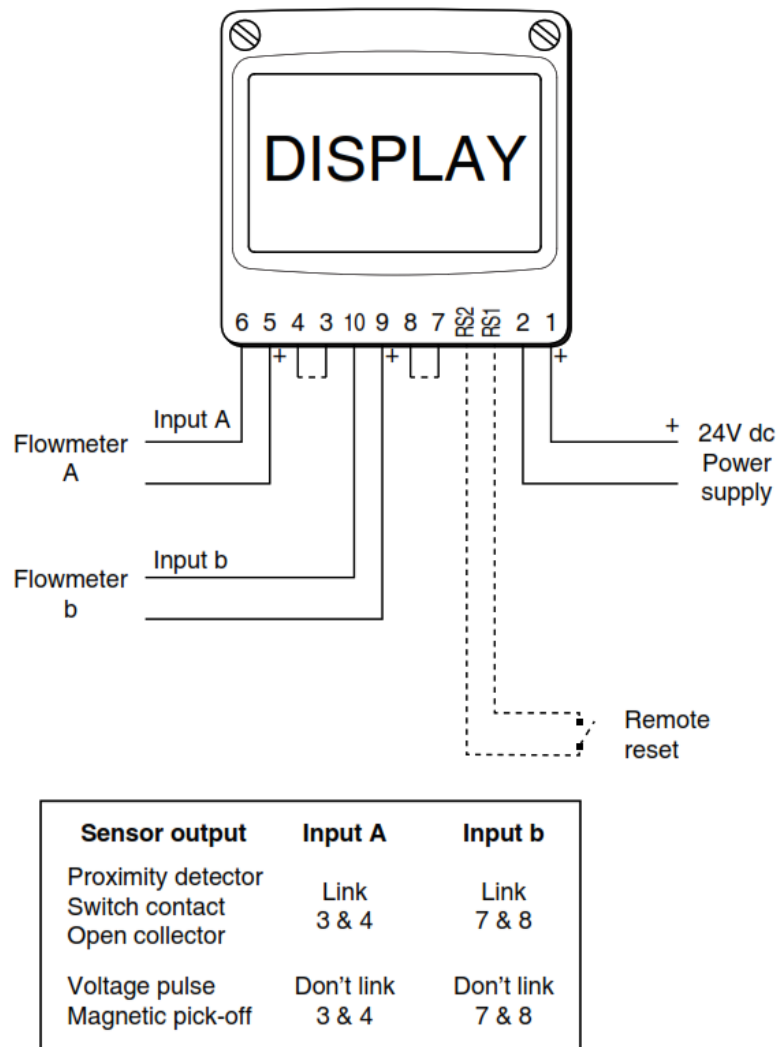
Fig 3 Typical measurement loop

Scale card

The instrument's units of measurement and tag information are shown above the display on a slide-in scale card. New instruments are fitted with a scale card showing the
information specified when the instrument was ordered, if this was not provided a blank scale card will be fitted which can easily be marked on-site. Custom printed scale cards are available from BEKA associates.
To remove the scale card carefully pull the tab perpendicularly away from the instrument assembly. See Fig 2 for the location of the scale card tab.
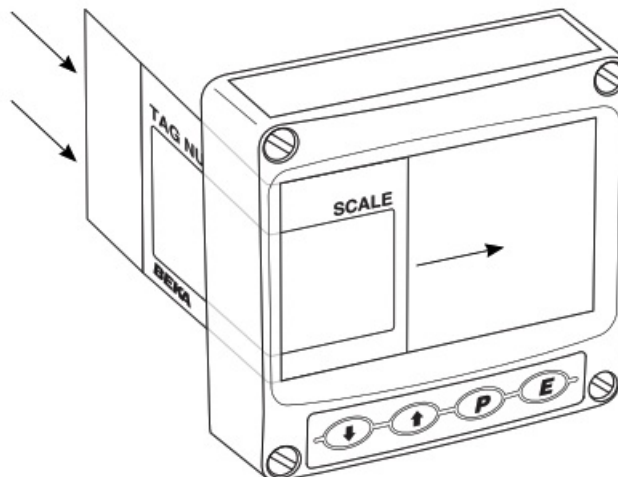

Fig 4 Inserting scale card into instrument assembly

To replace the scale card carefully insert it into the slot shown in Fig 2. Force should be applied evenly to both sides of the scale card to prevent it from twisting. The card should be inserted until about 2mm of the transparent tab remains protruding.

OPERATION

The BA584G is controlled and configured via four front panel pushbuttons. In the display mode i.e. when the instrument is displaying flow the push button functions are:
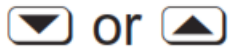
▼ or ▲ Scrolls both display between:

Input **A**
Input **b**
Input **A + b** or Input **A – b** which is configurable

E + ▼ Grand total – shows **Lo** followed by the least significant 8 digits of a 16 grand total.

E + ▲ Grand total – shows **Hi** followed by the most significant 8 digits of a 16 digit grand total. If buttons are pressed for longer than 10 seconds the grand total will be reset to zero if the grand total reset function `Clr tot` is enabled.

To reset the grand total to zero from the operating mode press the **E** and ▲ buttons for ten seconds until `Clr.no`. no is displayed. Using the & ▼ or ▲ button change the display to `Clr.YES`. YE5 and press **E** which will reset the grand total and restore the original display.

▼ + ▲ If the local total reset function `Clr tot` tot is enabled in the configuration menu, simultaneously pressing the ▼ and ▲ buttons for more than three seconds allows total A, total b or both totals to be selected by operating the ▼ or ▲ button. Operating the **E** button will then reset the selected total to zero and clear any stored output pulses.

P + ▼ Shows each for 2 seconds:
Firmware and version numbers
Function of instrument: 2chtotal
Options fitted
-A Alarm outputs
-P Pulse output (always fitted)
-C 4/20mA output

P + ▼ Provides direct access to the alarm setpoints when the Rate Totaliser is fitted with optional alarms and the AC5P setpoints function has been enabled.

P + **E** Access to the configuration menu

CONFIGURATION

Rate Totalisers are supplied configured as requested at the time of order, if not specified default configuration will be supplied but can easily be changed on-site. Fig 5 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 a description of 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 Function function will be displayed. If the instrument is protected by a security code, code will be displayed. The four-digit code **CodE** must be entered to gain access to the menu.
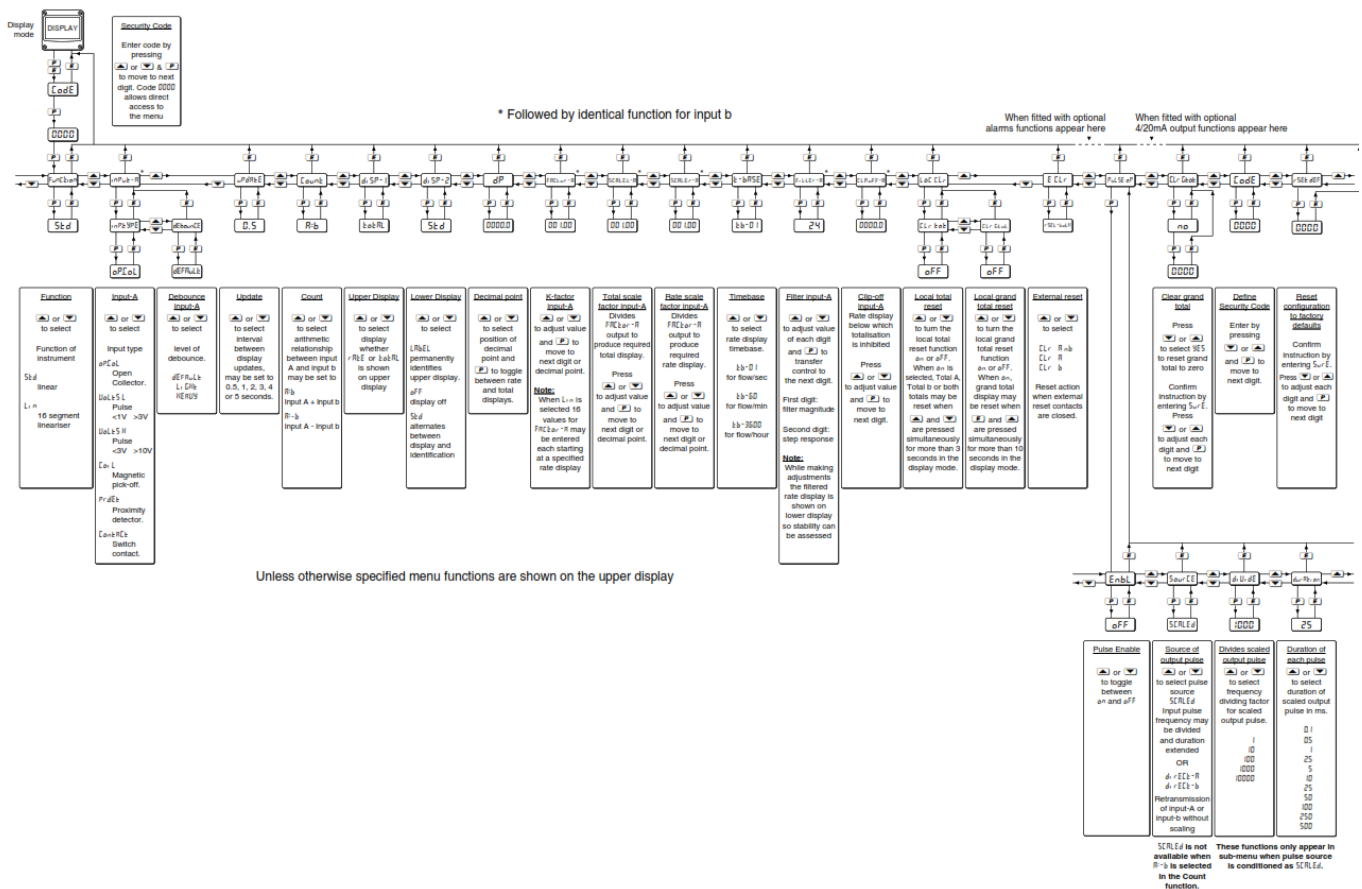

Fig 5 Configuration menu

http://www.beka.co.uk/ba584g
Manuals and datasheets
can be downloaded from
http://www.beka.co.uk/ba584g

Documents / Resources

	BEKA BA584G General Purpose Field Mounting Two Input Rate Totaliser [pdf] Instruction Manual BA584G, General Purpose Field Mounting Two Input Rate Totaliser

References

- Ⓑ **BEKA associates Ltd.**
- Ⓑ **BA534G and BA584G Pulse input Externally powered rate totalisers**