## 1. DESCRIPTION

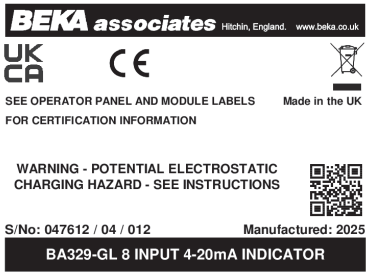
The BA329 is an 8 channel, 4/20mA panel mounting, intrinsically safe digital indicator. It displays each input channel in engineering units together with individual tag information and units of measurement.

There are two electrically similar models:

| Model | Application |
|---|---|
| **BA329-GL** | For intrinsic safety applications in, Zones 0, 1, 2, 20, 21 and 22. Has a toughened glass display window surrounded by a stainless steel front panel. |
| **BA329-PC** | For intrinsic safety applications when mounted in an Ex e or Ex t enclosure. The impact resistant front ensures that the enclosure's apparatus certification is not invalidated. The BA329-PC has a scratch resistant polycarbonate display window surrounded by a stainless steel front panel. |

The BA329-GL and the BA329-PC Indicators are constructed from three IECEx, ATEX and UKEX Ex ia intrinsic safety certified modules, each with an individual intrinsic safety apparatus certificate specifying that they may be safely interconnected within a hazardous area.

The eight 4/20mA inputs are galvanically isolated from each other and from the power supply. They have zero output safety parameters that comply with the requirements for *simple apparatus* specified in EN 60079-11 which, together with the low voltage drop introduced by each input, simplifies application and documentation.




BA329-GL label

**Special conditions for safe use** - see full manual and certificates
All the certificate numbers for the BA329 have an 'X' suffix indicating that special conditions for safe use apply.

- non-metallic parts of the enclosure may generate an ignition-capable level of electrostatic charge, therefore such surfaces shall only be cleaned with a damp cloth.
- The metal bezel of the equipment shall be connected to earth via the integral earth stud.
- For installations requiring EPL Da, Db, or Dc, the BA329 shall be mounted to an enclosure which provides a minimum degree of protection of IP5X.

## 2. INSTALLATION

Both models have IP66 front of panel protection, but should be shielded from continuous direct sunlight and severe weather conditions. The front panel touch buttons should not be exposed to salt water. The rear of both indicators have IP20 protection.

Cut-out dimensions 230.6 +0.5 / -0.0 X 166 +0.5 / -0.0

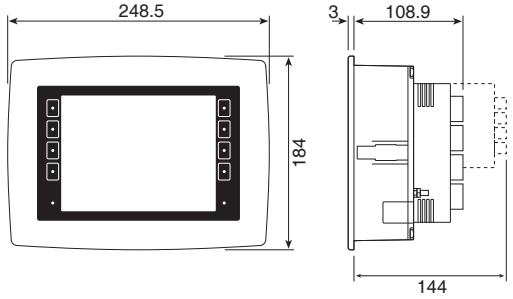



Fig 1 Cut-out dimensions and terminals

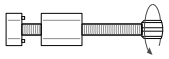
**Abbreviated Instruction for**

**BA329 series indicators**


Issue 1
28th April 2025

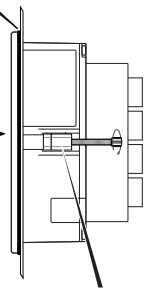
**BEKA associates Ltd**. Old Charlton Rd, Hitchin, Hertfordshire, SG5 2DA, UK Tel: +44(0)1462 438301 e-mail: sales@beka.co.uk
web: www.beka.co.uk

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



**b.** Position gasket behind instrument bezel

**c.** Insert BA329 Indicator into the panel from the front



**d.** Place a clamp in the recess on each side of the BA329 Indicator, pulling gently to slide them onto the dovetails. Push the knurled screws slightly forward to engage the threads and tighten by turning clockwise until both are just finger tight. When both clamps are fitted, ensure that the gasket behind the front panel bezel remains correctly positioned before fitting the remaining six panel mounting clamps. Finally, fully tighten all the panel clamps to secure the instrument. The maximum recommended clamp tightening torque is 25cNm (2.2lbf in) which is approximately equivalent to finger-tight plus one half turn.

**DO NOT OVERTIGHTEN.**

Fig 2 Installation procedure

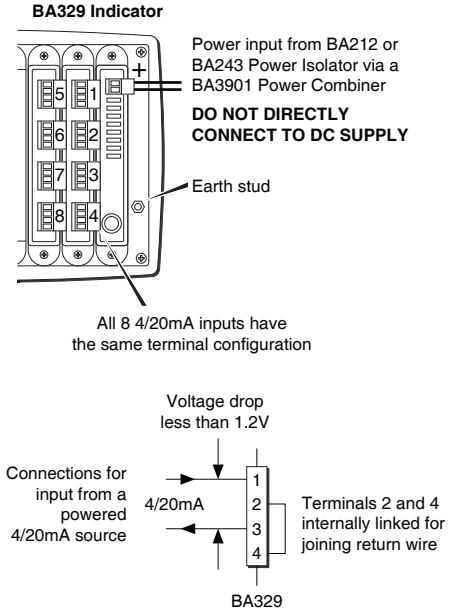



Fig 3 Terminal connections

## EMC

The BA329 indicator complies with the requirements of the European EMC Directive and the UK EMC statutory requirements. For specified immunity all wiring should be in screened twisted pairs, with the screens earthed at one point within the safe area.

## 3. OPERATION

When power is applied to a BA329 indicator, the power indicator shown in Fig 4, will initially be red. After 100 seconds the indicator will be green and the screen will show the operating display. The start up sequence is shown overleaf.

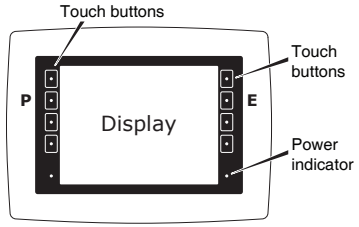



Fig 4 Front panel

When a BA329 Indicator is operating, the function of each touch button is shown by the colour of the button backlight.

**Green**

The touch button controls how the adjacent input is displayed. For screen layouts where the display(s) are not adjacent to the touch buttons, the buttons are in the same vertical order as the displays.

When continuously touched, the button changes the associated digital display from units of measurement to the input current in milliamps, or to a percentage of full scale depending upon how the indicator has been configured.

Button backlight will flash if associated display is under or overranged.

**Amber**

Pressing the button transfers the display to an associated screen, such as when 1, 2 or 4 inputs are displayed together on a common screen. For example if inputs 1, 2, 3 & 4 are displayed together on a common screen, pressing the button will change the display to the second screen showing inputs 5, 6. 7 and 8.

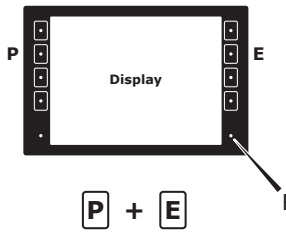
**No backlight**

The button has no function on this screen.

## 4. CONFIGURATION

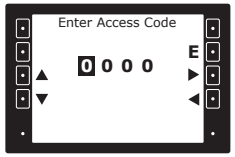
Access to the configuration menu, which may be protected by an access code, is obtained by pressing the **P** and **E** touch buttons simultaneously at any time after completion of the start up sequence.

### Start-up Sequence When Power Applied




| Elapsed time seconds | Power indicator lamp | Screen shows |
|---|---|---|
| 0 to 40 | Red | Blank |
| 40 to 100 | Red | Model number |
| 100 | Green | Operating display |

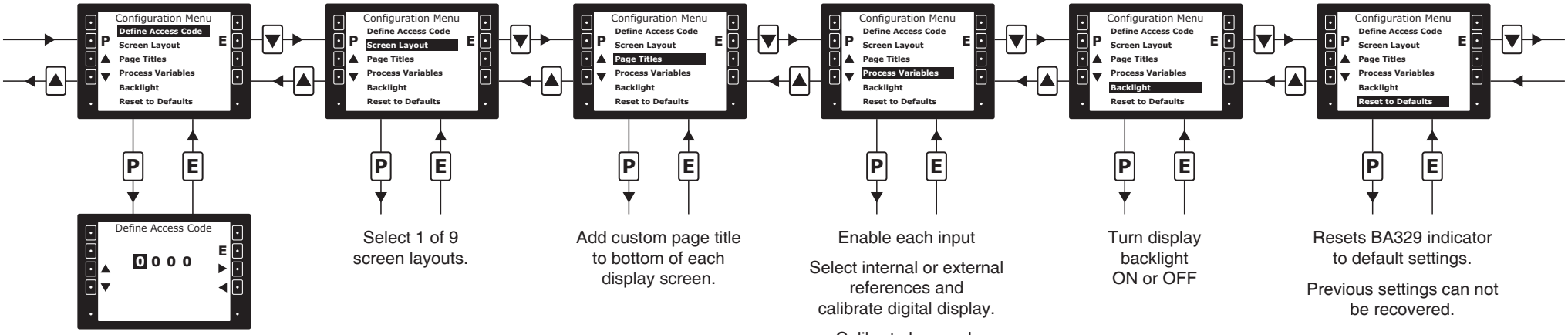
P + E




**Access Code**

Enter code by pressing ▲ or ▼ and ► or ◄ to move to next digit. Code 0000 allows direct access to the Configuration Menu.

E




**Follow the Instructions in Sub-Menus to Complete Indicator Configuration**

Manuals and datasheets can be downloaded from http://www.beka.co.uk/ba329

Fig 5 Configuration menu