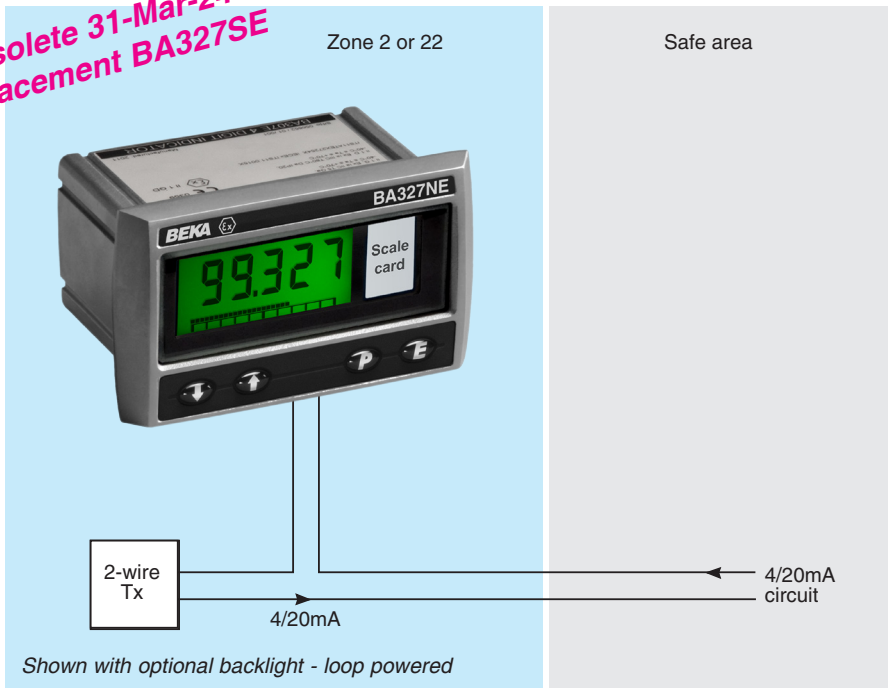


Obsolete 31-Mar-24  
Replacement BA327SE



The **BA327NE** loop powered, panel mounting Indicator has a rugged stainless steel enclosure allowing it to be safely installed in an Ex n, Ex p, Ex e or Ex tc panel enclosure located in Zone 2 or 22, without the need for Zener barriers or galvanic isolators. The indicator has a full 5 digit display plus a 31 segment analogue bargraph with guaranteed performance between -40 and 70°C. The scale card can easily be marked to show the units of measurement and can be installed on-site without dismantling the instrument or removing it from the panel.

The **main application** of the BA327NE is to display a measured variable in meaningful engineering units in Zone 2 or 22. The front of the indicator has certified impact and ingress protection allowing it to be installed in an Ex n, Ex p, Ex e or Ex tc panel enclosure without invalidating the panel's impact and ingress protection.

The **bold 12.7mm high 5 digit display** and 31 segment bargraph provide maximum contrast and have a wide viewing angle, allowing the BA327NE indicator to be read easily in most lighting conditions over a wide temperature range. An optional factory fitted backlight is available for applications in poorly illuminated areas. The five digits, with four decimal point positions and a negative sign, may be configured to display any variable between -99999 and 99999.

**IECEx and ATEX Ex nA non sparking certification** allows the BA327NE, when installed in an Ex n, Ex p or Ex e panel to be located in a Zone 2 gas hazardous area without the need for Zener barriers or galvanic isolators. For Zone 2 applications the BA327NE offers a less expensive alternative to intrinsically safe and flameproof indicators.

**Ex tc dust certification** also allows the BA327NE, when installed in an Ex tc panel enclosure, to be located in a Zone 22 dust hazardous area, again without the need for Zener barriers or galvanic isolators.

A **backlight** which may be loop or separately powered is available as a factory fitted option. It provides green background illumination allowing the display to be read at night or in poorly illuminated areas. When powered from the 4/20mA loop no additional field wiring is required but the indicator's voltage drop increases. Powering from a separate supply produces a brighter backlight but requires additional wiring.

**Optional dual alarm outputs** which can switch hazardous or safe area loads, such as sounders, beacons or solenoid valves are available as a factory fitted option. The two galvanically isolated solid state alarm outputs may be independently configured as high or low alarms with normally open or closed outputs. Annunciators on the display show the status of both outputs.

**Units of measurement** may be shown on the scale card which is visible through the window on the right hand side of the display. Instruments are supplied with the units legend requested when ordered, but the scale card may be easily changed on-site without removing the BA327NE from the panel or opening the instrument enclosure.

**Application Guide AG310** which explain how Ex nA certified instruments should be installed may be downloaded from the BEKA associates website, or requested from the BEKA sales office.

**Other models in this range include** the BA307NE which has a similar specification with four 15mm high digits.

# BA327NE

## Rugged 2-wire 4/20mA 5 digit indicator

*Ex nA and Ex tc certified for installation in Ex n, Ex e, Ex p or Ex tc panel enclosure located in Zones 2 or 22*

- ◆ Rugged IP66 stainless steel enclosure.
- ◆ Ex nA & Ex tc certification eliminates the need for Zener barriers and galvanic isolators.
- ◆ Loop powered only 1.2V drop.
- ◆ 5 digit 12.7mm high display & 31 segment bargraph.
- ◆ Optional backlight & alarms.
- ◆ Easy on-site scale card installation.
- ◆ Root extractor and 16 segment lineariser.
- ◆ 3 year guarantee

[www.beka.co.uk/ba327ne](http://www.beka.co.uk/ba327ne)



# BEKA

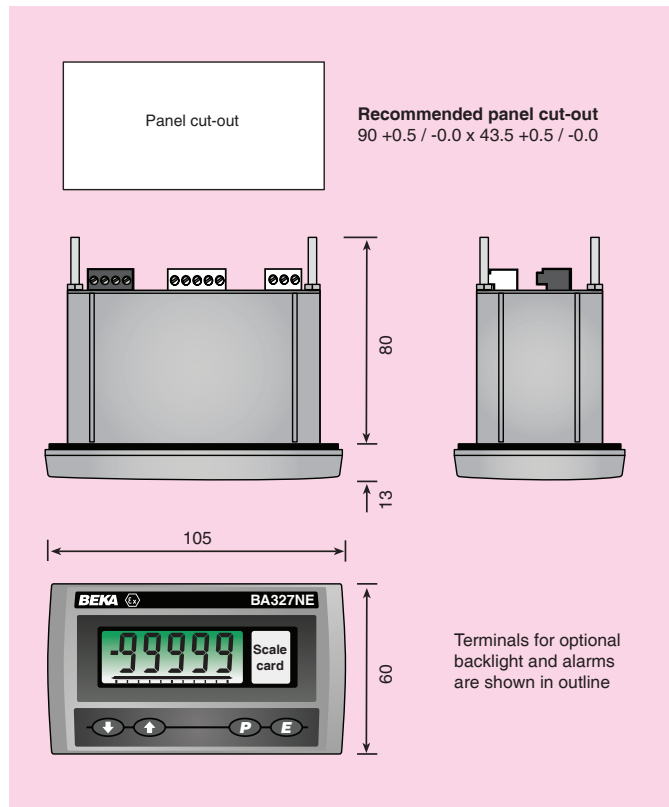
## associates

BEKA associates Ltd. Old Charlton Rd.  
Hitchin, Hertfordshire, SG5 2DA, U.K.  
Tel. (01462) 438301 e-mail [sales@beka.co.uk](mailto:sales@beka.co.uk)  
website: [www.beka.co.uk](http://www.beka.co.uk)

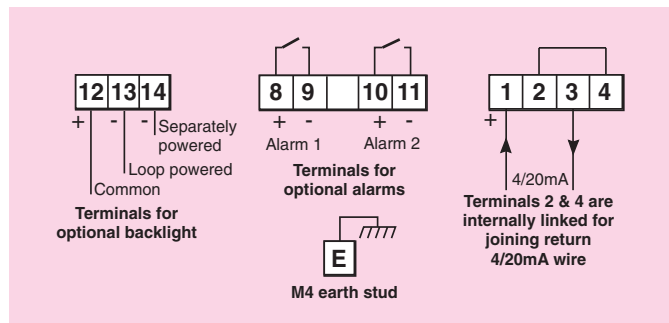
## SPECIFICATION

|                                     |  |
|-------------------------------------|--|
| <b>Input</b>                        |  |
| Current                             | 4 to 20mA HART® transparent  |
| Voltage                             | Less than 1.2V at 20°C<br>Less than 1.3V at -40°C<br>Less than 5V with optional loop powered backlight   |
| Over range                          | ±200mA or ±30V will not damage the indicator   |
| <b>Display</b>                      |  |
| Type                                | Liquid crystal, non-multiplexed 5 digit 12.7mm high & 31 segment bargraph.   |
| Span                                | Adjustable between 0 & ±99999 for a 4/20mA input.  |
| Zero                                | Adjustable between 0 & ±99999 with 4mA input   |
| Decimal point                       | 1 of 4 positions or absent   |
| Polarity                            | Automatic minus sign   |
| Zero blanking                       | Blanked apart from 0 in front of the decimal point   |
| Direction                           | Display may increase or decrease with increasing 4/20mA input.   |
| Reading rate                        | 2 per second   |
| Over range                          | 99999 or -99999 with flashing decimal points   |
| <b>Push buttons</b>                 |  |
| ▼                                   | Shows display with 4mA input   |
| ▲                                   | Shows display with 20mA input  |
| P                                   | Displays input in mA or as a % of span, has a modified function when alarms are fitted.  |
| E                                   | Used for Tare function   |
| <b>Accuracy at 20°C</b>             |  |
| Linear                              | ±0.02% of span ±1 digit  |
| Root extracting                     | ±16µA at input ±1 digit  |
| Temperature effect on:              |  |
| Zero                                | Less than 25ppm of span/°C   |
| Span                                | Less than 50ppm of span/°C   |
| Series mode rejection               | Less than 0.05% of span error for 1mA pk to pk 50 or 60Hz interference.  |
| <b>Hazardous area certification</b> |  |
| <b>International IECEx</b>          |  |
| Code                                | Ex nA ic IIC T5 Gc<br>Ex ic tc IIIC T80°C Dc<br>-40°C ≤ Ta ≤ 70°C<br><a href="#">IECEx ITS 14.0026X</a>  |
| Cert. No.                           |  |
| <b>Europe ATEX</b>                  |  |
| Code                                | (Special conditions permit installation in Ex n, Ex e, Ex p and Ex tc enclosures)<br>Group II Category 3GD<br>Ex nA ic IIC T5 Gc<br>Ex ic tc IIIC T80°C Dc<br>-40°C ≤ Ta ≤ 70°C<br><a href="#">ITS14ATEX48028X</a> |
| Cert. No.                           |  |
| <b>Environmental</b>                |  |
| Operating temperature               | -40 to 70°C  |
| Storage temperature                 | -40 to 85°C  |
| Humidity                            | To 95% at 40°C non-condensing  |
| Vibration                           | Report available   |
| Enclosure                           | Front IP66, rear IP20  |
| EMC                                 | Complies with 2014/30/EU   |
| <b>Mechanical</b>                   |  |
| Terminals                           | Screw clamp for 0.5 to 1.5mm² cable with removable terminal blocks.  |
| Weight                              | 0.85kg   |
| <b>Accessories</b>                  |  |
| Backlight                           | Green may be loop or separately powered  |
| Loop powered                        | Indicator input voltage increased to 5V max.   |
| Separately powered                  | 9V at 22mA   |
| Alarms                              | Two alarm outputs each of which may be independently configured as a high or low alarm contact with a NO or NC output.   |
| Output                              | Isolated solid state switch  |
| Ron                                 | 5Ω + 0.7V max  |
| Roff                                | 1MΩ min  |
| Printed scale card                  | Blank card fitted to each indicator can be supplied printed with specified units of measurement.   |

## DIMENSIONS (mm)



## TERMINAL CONNECTIONS



|                                  |   |
|----------------------------------|---|
| Pack of printed scale cards.     | Contains 26 common units of measurement and 2 blank cards.                          |
| Tag legend                       | Specified tag number or application information laser etched on rear of instrument. |
| BA495 rear cover and sealing kit | Provides impact and IP66 protection for rear of instrument. #                       |

# See accessory datasheet for details

## HOW TO ORDER

|                            |  |
|----------------------------|--|
| Model number               | BA327NE  |
| Display mode               | Linear, root or lineariser*  |
| Display at:                | XXXXX } Include position of decimal point & sign if negative. Together with intermediate points if linearisation is required.* |
| 4.000mA                    |  |
| 20.000mA                   |  |
| <b>Accessories</b>         |  |
| Display backlight          | Backlight  |
| Dual alarms                | Alarms   |
| Scale card                 | Legend required  |
| Tag                        | Legend required  |
| Rear cover and sealing kit | BA495  |

\* Will be set to display 0.00 at 4mA and 100.00 at 20mA with a linear display if calibration information is not supplied. Can easily be recalibrated on-site.