

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 11mm 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.

**ATEX, IECEx and ETL 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 11mm high display & 31 segment bargraph.
- ◆ Optional backlight & alarms.
- ◆ Easy on-site scale card installation.
- ◆ Root extractor and 16 segment lineariser.
- ◆ 3 year guarantee



# BEKA

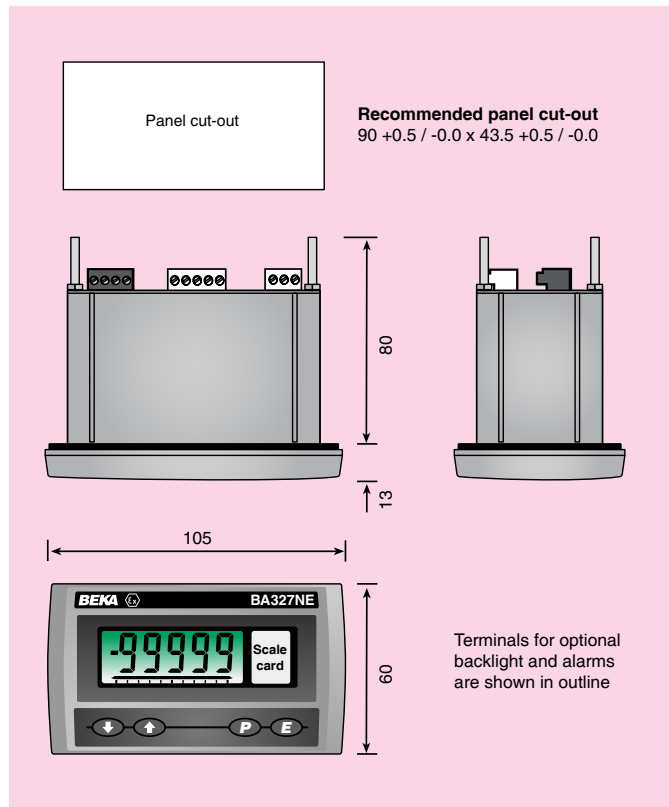
## associates

Sales & Support Distributor:-  
Stockshed Limited. Stonecroft House,  
Mud Lane, Eversley. Hampshire.  
RG27 0QS. U.K. Tel. (0118) 9734955  
e-mail info@stockshed.com

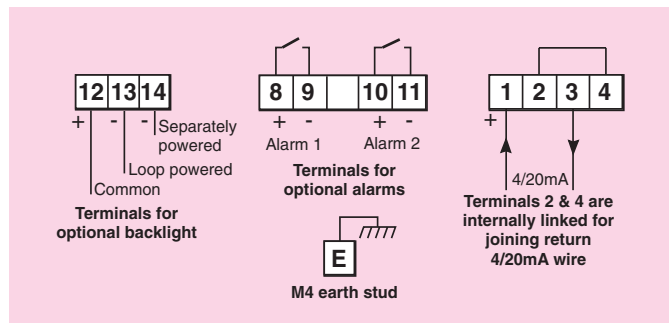
## SPECIFICATION

<b>Input</b>	
Current	4 to 20mA HART® transparent
Voltage	Less than 1.2V at 20°C Less than 1.3V at -40°C 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 11mm 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>Europe ATEX</b>	
Code	(Special conditions permit installation in Ex n, Ex e, Ex p and Ex tc enclosures) Group II Category 3GD Ex nA ic IIC T5 Gc Ex ic tc IIIC T80°C Dc -40°C ≤ Ta ≤ 70°C ITS14ATEX48028X
Cert. No.	
<b>International IECEx</b>	
Code	Ex nA ic IIC T5 Gc Ex ic tc IIIC T80°C Dc -40°C ≤ Ta ≤ 70°C IECEx ITS 14.0026X
Cert. No.	
<b>USA &amp; Canada ETL &amp; cETL</b>	
Code	Class I, Zone 2, AEx nA ic IIC T5 Gc } USA Zone 22, AEx ic tc IIIC T80°C Dc -40°C ≤ Ta ≤ 60°C
	Ex nA ic IIC T5 Gc: Ex n IIC T5 Gc } Canada Ex ic tc IIIC T80°C Dc -40°C ≤ Ta ≤ 60°C
ETL control No.	4008610
<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

## DIMENSIONS (mm)



## TERMINAL CONNECTIONS



Printed scale card	Blank card fitted to each indicator can be supplied printed with specified units of measurement.
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	<b>Please specify</b> 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.