

Zone 1, 2, 11 or 22 Hazardous area



The **BR323AL** and **BR323SS** are flameproof field mounting loop powered indicators that only introduces a 2.3V drop making them suitable for inclusion in almost any 4/20mA loop. The two instruments are electrically identical but have different enclosure materials. The BR323AL is housed in an epoxy painted aluminium enclosure and the BR323SS in a 316 stainless steel enclosure. Both provide IP66 and NEMA Type 4X protection.

The **main application** of both instruments is to display a process variable or control signal in a hazardous process area. The zero and span are independently adjustable so the indicator may be calibrated to display any variable represented by a 4/20mA current, such as temperature, pressure or level. A fully adjustable lineariser is included which enables almost any non linear variable to be displayed in linear engineering units. For use with differential flow transmitters, a square root function is included with the lineariser.

**ATEX flameproof certification** allows the BR323AL and the BR323SS to be installed throughout Europe in Zones 1 and 2 gas hazardous and in Zones 21 and 22 dust hazardous areas.

**Indicator configuration** and calibration is performed for no additional charge so indicator arrives ready for use. Reconfiguration can easily be performed on-site using simple Windows® compatible software running on a personal computer connected to the instrument via a temporary serial communications cable. The free of charge software may be downloaded from the BEKA

website, or is available on CD. A cable for temporarily connecting the indicator to an RS232 serial port and a USB to serial port converter are available from BEKA.

The **'View' button** on the front of the indicator adjacent to the terminals provides a rapid check of loop function and instrument calibration with no risk of the calibration being accidentally changed. The first operation of the button changes the display from normal engineering units to the loop current in milliamps, subsequent operations of the button display the instrument calibration at 4 and 20 mA.

**Units of measurement** can be displayed by the BR323AL and BR323SS indicators. Up to five upper case alphanumeric characters may be entered via the configuration software, these are stored by the indicator and appear below the main instrument display.

A **128 segment lineariser** is contained in the configuration software which can accurately linearise almost any curve. Data can be imported as a comma delimited csv file or typed point by point into a table. Again the software is very easy to use.

**Both robust enclosures** provide IP66 and NEMA 4X protection and have two M20 or 1/2 inch NPT tapped entries. The BR323AL, which has an aluminium enclosure, is suitable for general industrial application, whereas the BR323SS 316 stainless steel enclosure is intended for use in corrosive and marine environments. Both enclosures are available with an optional pipe mounting kit.

# BR323AL and BR323SS

## 2 wire 4/20mA 5 digit indicators

*Flameproof enclosure  
for use in gas & dust  
hazardous areas*

- ◆ **Loop powered**
- ◆ **± 99999 display**  
10mm high.
- ◆ **IP66, NEMA Type 4X enclosures**  
**BR323AL aluminium**  
**BR323SS 316 stainless steel.**
- ◆ **No additional charge for Configuration and calibration.**
- ◆ **ATEX certification**
- ◆ **Root extractor and lineariser.**
- ◆ **Programmable units of measurement legend.**
- ◆ **3 Year guarantee**



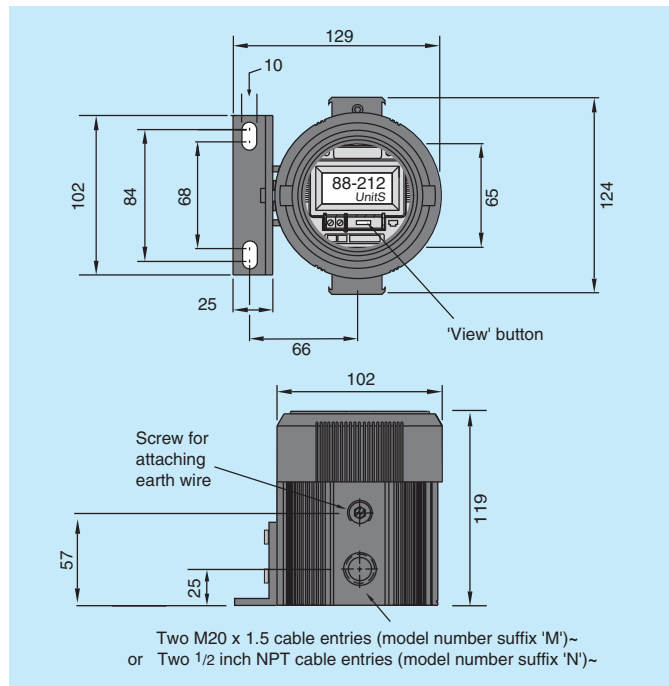
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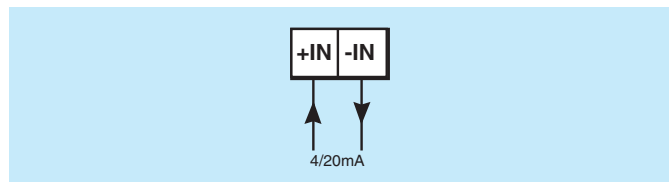
## SPECIFICATION

<b>Input</b>	
Current	4 to 20mA
Minimum operating	3.8mA
Maximum operating	20.2mA
Overrange	±100mA will not cause damage.
Voltage	Less than 2.3V
<b>Display</b>	
Type	Liquid crystal 10mm high -99999 to 99999
Resolution selectable	None, one or two digits after the decimal point, or maximum number possible.
Polarity	Automatic minus sign
Direction	Display may increase or decrease with increasing current.
Reading rate	10 per second
<b>Scale legend</b>	
Type	Liquid crystal 6mm high
Digits	Five alphanumeric upper case characters entered via configuration software.
<b>Accuracy</b>	
At 20°C	±0.0012% of input
Temp effect.	±0.015% of span/°C max
Stability	
1 year	0.08mA
2 year	0.14mA
5 years	0.18mA
<b>Safety certification</b>	
<b>Europe ATEX</b>	ATEX flameproof certification applies to the loop powered indicator in both the aluminium and stainless steel enclosures.
Standards Code	IEC 60079-1; IEC 61241-1 Group II Category 2GD Ex d IIC T6
Location Cert. No.	Zone 1, 2, 21 or 22 ISSeP08ATEX035X
<b>Environmental</b>	
Operating temp	-20 to 60°C
Certification temp ATEX	-20 to 60°C
Storage temp	-45 to 85°C
Humidity	To 95% non condensing
Enclosure BR323AL BR323SS	IP66, NEMA Type 4X Aluminium, polyester powder coated. 316 stainless steel
EMC Complies with Immunity	In accordance with EU Directive 89/336/EU EN61326 Less than 0.5% error for 20V/m field strength between 80MHz & 1GHz.
Emissions	Undetectable above background noise, Class B equipment
<b>Mechanical</b>	
Terminals	Screw clamp for 0.5 to 1.5mm <sup>2</sup> cable.
Weight BR323AL BR323SS	1.6kg 3.2kg
<b>Accessories</b>	
Tag strip	Thermally printed label
Tag plate	Etched tie-on stainless steel label

## DIMENSIONS (mm)



## TERMINAL CONNECTIONS



Pipe mounting kit	304 stainless steel 'U' bolt to fit up to 50mm outside diameter pipe.
RS232 cable	Connects BR323 indicator to serial communications port or to USB serial converter.
USB to serial converter	Chipi-X10 cable converts USB to RS232 serial port. USB port must be configured as COM 1, 2, 3 or 4. RS232 cable is also required.

## HOW TO ORDER

<b>Model number</b>	<b>Please specify</b>
Aluminium enclosure	BR323AL
Stainless steel enclosure	BR323SS
Entry threads~	M20 x 1.5 (model number suffix 'M') or ½ inch NPT (model number suffix 'N')
<b>Calibration</b>	
Display at 4mA	XXXXX Include position of decimal point
Display at 20mA	XXXXX and sign if negative.*
Units of measurement	XXXXX*
<b>Accessories</b>	<b>Please specify if required</b>
Tag strip	Legend
Tag plate	Legend
Pipe mounting kit	BR391 Pipe mounting kit
RS232 cable	RS 232 cable
USB to RS232 converter	Chipi-X10 Cable (RS232 cable also required)

\* Will be set to display 0.00 at 4mA and 100.00 at 20mA with 'PCT' as units of measurement if calibration information is not supplied.

~ Unless otherwise requested indicators supplied in the UK will have M20 entries.