

Zone 1, 2, 11 or 22 Hazardous area



The new 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 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.

**FM explosion proof approval** also permits installation of both the BR323AL and the BR323SS loop powered indicators in Divisions 1 and 2 classified areas in the USA. For applications in Canada, the stainless steel BR323SS has CSA explosion proof enclosure approval.

**Configuration and calibration** of the BR323AL and BR323SS is performed via simple Windows® compatible software running on a personal computer connected to the instrument via a temporary communications cable. This free of charge software may be downloaded from the BEKA web site or is

available on a CD. A cable for temporarily connecting the indicator to a serial port on a personal computer is included with every order. This easy to use software enables the zero, span, resolution and damping of the instrument display to be adjusted.

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 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 indicator

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

- ◆ Loop powered
- ◆ ± 99999 display  
10mm high
- ◆ IP66, NEMA Type 4X  
enclosures  
BR323AL aluminium  
BR323SS stainless  
steel
- ◆ ATEX & FM certification
- ◆ BR323SS has CSA  
flameproof enclosure  
approval
- ◆ Root extractor and  
lineariser
- ◆ Programmable units of  
measurement legend
- ◆ Configurable via free  
Windows® compatible  
software.



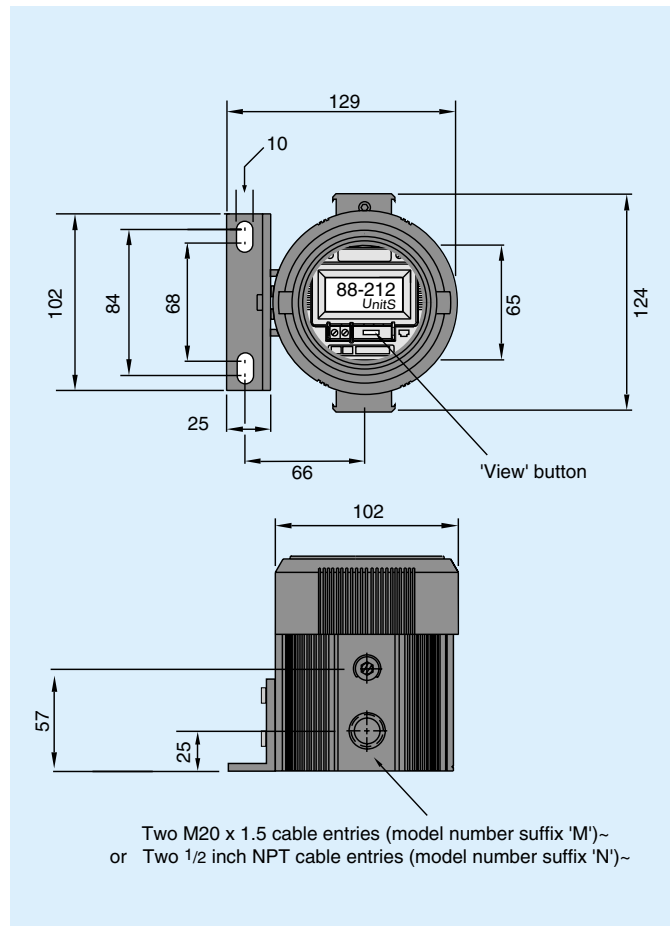
# BEKA associates

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## SPECIFICATION

<b>Input</b>	
Current	4 to 20mA
Minimum operating	3.8mA
Maximum operating	20.2mA
Ovrrange	±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, 11 or 22 ISSeP08ATEX035X
<b>USA FM</b>	
	FM Explosion Proof approval applies to the loop powered indicator in both the aluminium and stainless steel enclosures.
Standard Code	3600-1998 & 3615-1989 CL I, II, III; Div 1 Group A, B, C, D, E, F & G. T6
Location File	Division 1 or 2 3031755
<b>Canada CSA</b>	
	CSA explosion Proof component certification only applies to the stainless steel BR323SS enclosure.
Standard Code	C22.2 No 25-1966 & 30-M1986 Class I, II, III; Div 1 Group A, B, C, D, E, F & G. T6
Location Certificate	Division 1 or 2 1986492
	<b>Note:</b> The BR323AL, which has an aluminium enclosure, is not approved for use in Canada
<b>Environmental</b>	
Operating temp	-20 to +60 °C
Certification temp	
ATEX	-20 to +60 °C
FM & CSA	-40 to +60 °C
Storage temp	-45 to +85 °C
Humidity	To 95% non condensing
Enclosure	
BR323AL	IP66, NEMA Type 4X Aluminium epoxy painted.
BR323SS	Stainless steel
<b>EMC</b>	
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

## DIMENSIONS (mm)



### Mechanical

Terminals	Screw clamp for 0.5 to 1.5mm <sup>2</sup> cable.
Weight	
BR323AL	1.6kg
BR323SS	3.2kg

### Accessories

Tag strip	Thermally printed label
Tag plate	Etched stainless steel label
Pipe mounting kit	Stainless steel 'U' bolt to fit up to 50mm outside diameter pipe.

## 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	1/2 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	BR323 Pipe mounting kit

\* 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 and those supplied in North America will have 1/2 inch NPT entries. Type of thread is shown on product certification label.