Zone 1, 2,11 or 22 Hazardous area

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 316 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.**

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.

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 ½ 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.

BEKA
associates

SPECIFICATION

Input
Current	4 to 20mA
Minimum operating	3.8mA
Maximum operating	20.2mA
Overrange	±100mA will not cause damage.
Voltage	Less than 2.3V

Display
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

Scale legend
Type	Liquid crystal 6mm high
Digits	Five alphanumeric upper case characters entered via configuration software.

Accuracy
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

Safety certification

Europe ATEX — ATEX flameproof certification applies to the loop powered indicator in both the aluminium and stainless steel enclosures.

Standards	IEC 60079-1; IEC 61241-1
Code	Group II Category 2GD Ex d IIC T6
Location	Zone 1, 2, 11 or 22
Cert. No.	ISSeP08ATEX035X

USA FM — FM Explosion Proof approval applies to the loop powered indicator in both the aluminium and stainless steel enclosures.

Standard	3600-1998 & 3615-1989
Code	CL I, II, III; Div 1 Group A, B, C, D, E, F & G. T6
Location	Division 1 or 2
File	3031755

Canada CSA — CSA explosion Proof component certification only applies to the stainless steel BR323SS enclosure.

Standard	C22.2 No 25-1966 & 30-M1986
Code	Class I, II, III; Div 1 Group A, B, C, D, E, F & G. T6
Location	Division 1 or 2
Certificate	1986492

Note: *The BR323AL, which has an aluminium enclosure, is not approved for use in Canada*

Environmental
|	
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	IP66, NEMA Type 4X
BR323AL	Aluminium, polyester powder coated.
BR323SS	316 stainless steel
EMC	In accordance with EU Directive 89/336/EU
Complies with	EN61326
Immunity	Less than 0.5% error for 20V/m field strength between 80MHz & 1GHz.
Emissions	Undetectable above background noise, Class B equipment

DIMENSIONS (mm)

'View' button

Two M20 x 1.5 cable entries (model number suffix 'M')~
or Two 1/2 inch NPT cable entries (model number suffix 'N')~
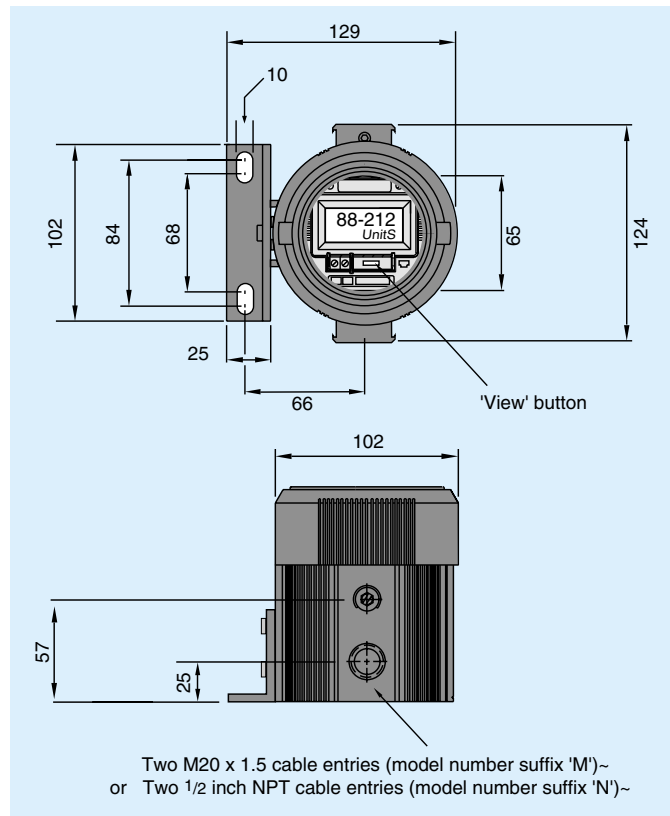
TERMINAL CONNECTIONS

| +IN | -IN |

4/20mA
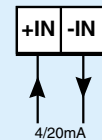
Mechanical
Terminals	Screw clamp for 0.5 to 1.5mm² cable.
Weight	
BR323AL	1.6kg
BR323SS	3.2kg

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

	Please specify
Model number	
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')
Calibration	
Display at 4mA	XXXXX ⎤ Include position of decimal point
Display at 20mA	XXXXX ⎦ and sign if negative.*
Units of measurement	XXXXX*
Accessories	**Please specify if required**
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 ½ inch NPT entries. Type of thread is shown on product certification label.

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