

BR323AL/BR323SS Flameproof 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

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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.

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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.

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 4-20mA input
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
Temperature effect	±0.0012% of span/°C max
Stability	
1 year	0.08mA
2 years	0.14mA
3 years	0.18mA

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Safety Certification

Europe ATEX

Standards	ATEX flameproof certification applies to the loop powered indicator in both the aluminium and stainless steel enclosures
Code	IEC 60079-1; IEC 61241-1
	Group II Category 2GD
	Ex d IIC T6
Location	Zone 1, 2, 21 or 22
Cert. No.	ISSeP08ATEX035X

Environmental

Operating Temperature	-20 to 60°C
Certification Temperature	
ATEX	-20 to 60°C
Storage Temperature	-40 to 85°C
Humidity	to 95% at 40°C noncondensing
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

Mechanical

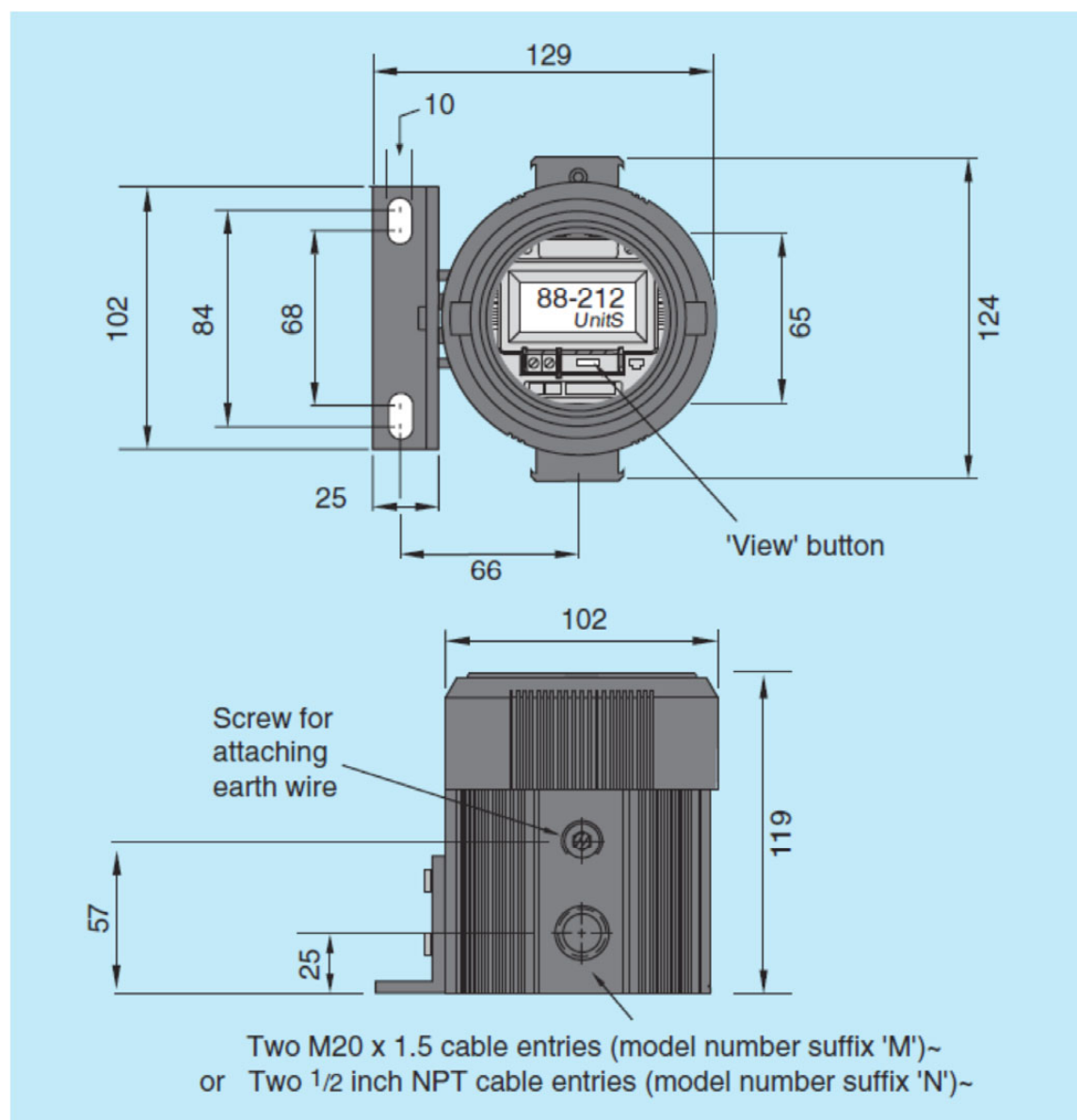
Terminals	Screw clamp for 0.5 to 1.5mm ² cable
Weight	
BR323AL	1.6kg
BR323SS	3.2kg

Accessories

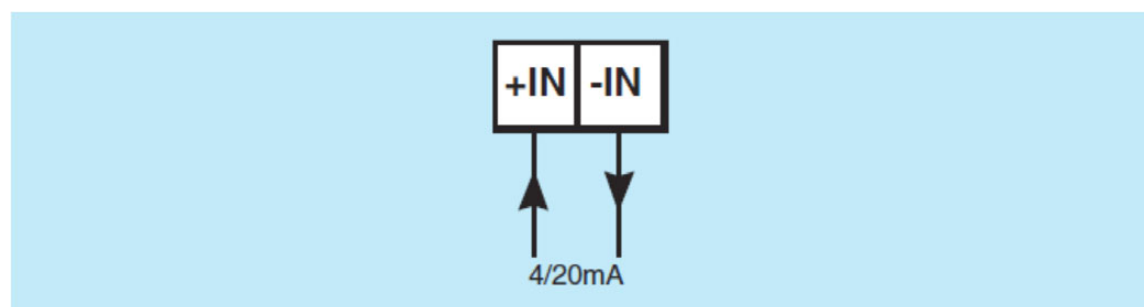
Tag strip	Thermally printed label
Tag plate	Etched tie-on stainless steel label
Pipe mounting kit	304 stainless steel 'U' bolt to fit up to 50mm outside diameter pipe
RS232 cable	Connects BR323 indicator to serial communications port or to USB serial converter
USB to serial converter	Chipi-X10 cable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

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Dimensions



Terminal Connections



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Ordering Information

	Please specify
Model Number	
Aluminium enclosure	BR323AL
Stainless Steel enclosure	BR323SS
Entry threads	M20x1.5 (model suffix 'M') Or ½ inch NPT (model suffix 'N')
Calibration	
Display at:	
4.000mA	<i>Include position of decimal point & sign if negative. 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.</i>
20.000mA	
Units of measurement	

Accessories

	Please specify if required
Tag strip	Legend
Tag plate	Legend
Pipe mounting kit	BR391 Pipe mounting kit
RS232 cable	RS232 cable
USB to serial converter	Chipi-X10 cable (RS232 cable also required)