

The **BA324G-SS-PM** loop powered 4/20mA indicator is an intrinsically safe panel mounting instrument with a large 5 digit display. It has a rugged, impact resistant IP66 stainless steel front allowing it to be safely mounted in an Ex e, Ex p or Ex t panel enclosure.

**IECEX and ATEX** intrinsic safety gas and dust certification permit world wide installation. The 4/20mA input terminals comply with the requirements for *simple apparatus* which, together with the low voltage drop, allow the indicator to be connected in series with most intrinsically safe 4/20mA loops.

**Main application** of the BA324G-SS-PM is to display a measured variable in engineering units when mounted in an Ex e, Ex p or Ex t panel enclosure or cubicle. The front of the indicator has IECEX and ATEX impact and ingress certification allowing it to be installed in a certified panel enclosure without invalidating the enclosure's certification. The rugged front and IP66 protection also make the indicator ideal for intrinsically safe applications in marine environments or where the front of the instrument is likely to be impacted.

**A large 29mm high 5 digit display** and 31 segment bargraph provide maximum contrast and have a very wide viewing angle, allowing the BA324G-SS-PM indicator to be easily read in most lighting conditions over a wide temperature range. An optional factory fitted backlight is available for installations in poorly illuminated areas. The five digits, with four decimal points and a negative sign, may be configured to display any variable between -99999 and 99999.

**Display backlighting** 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 intrinsically safe interface or wiring is required and the indicator input remains compliant with the requirements for *simple apparatus*. Powering from a separate supply produces a slightly brighter backlight but requires an additional intrinsically safe interface.

**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 outputs may be independently conditioned as high or low alarms with normally open or closed outputs. Annunciators on the display show the status of both alarms.

**The scale card** which shows units of measurement and tag information slides into an internal slot and can easily be changed on-site. New instruments can be supplied with the scale card printed to show customer specified information for no additional charge, if this is not requested a blank card is fitted which can easily be marked on-site.

**A Zener barrier or galvanic isolator** is not required when the indicator is installed in an Ex pxb, Ex pzc or Ex t panel enclosure. See Application Guide AG300 for details.

## BA324G-SS-PM 2-wire 4/20mA 5 digit indicator

*Intrinsically safe for use in Ex e, Ex p or Ex t panel enclosures and in harsh environments.*

- ◆ IP66 stainless steel indicator front maintains Ex e, Ex p or Ex t panel enclosure certification.
- ◆ Intrinsically safe ATEX and IECEX certification.
- ◆ Loop powered only 1.2V drop.
- ◆ 5 digit 29mm high display & 31 segment bargraph.
- ◆ Optional backlight & alarms.
- ◆ Root extractor, lineariser and tare function.
- ◆ Easy scale card installation on-site.
- ◆ 3 year guarantee

[beka.co.uk/ba324g-ss-pm](http://beka.co.uk/ba324g-ss-pm)



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## SPECIFICATION

|              |   |
|--------------|---|
| <b>Input</b> |   |
| Current      | 4 to 20mA HART® transparent   |
| Voltage      | Less than 1.2V at 20°C<br>Less than 1.3V at -40°C<br>Less than 5V with optional loop powered backlight. |
| Overrange    | ±200mA or ±30V will not damage the indicator  |

|                |  |
|----------------|--|
| <b>Display</b> |  |
| Type           | Liquid crystal, non-multiplexed 5 digits 29mm high             |
| 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 decimal point                 |
| Direction      | Display may increase or decrease with increasing 4/20mA input. |
| Reading rate   | 2 per second   |
| Bargraph       | 31 segments 80mm long  |
| Overrange      | 99999 or -99999 with all decimal points flashing               |

|                     |   |
|---------------------|---|
| <b>Push buttons</b> | <i>(Function in display mode)</i>   |
| ▼                   | 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. |

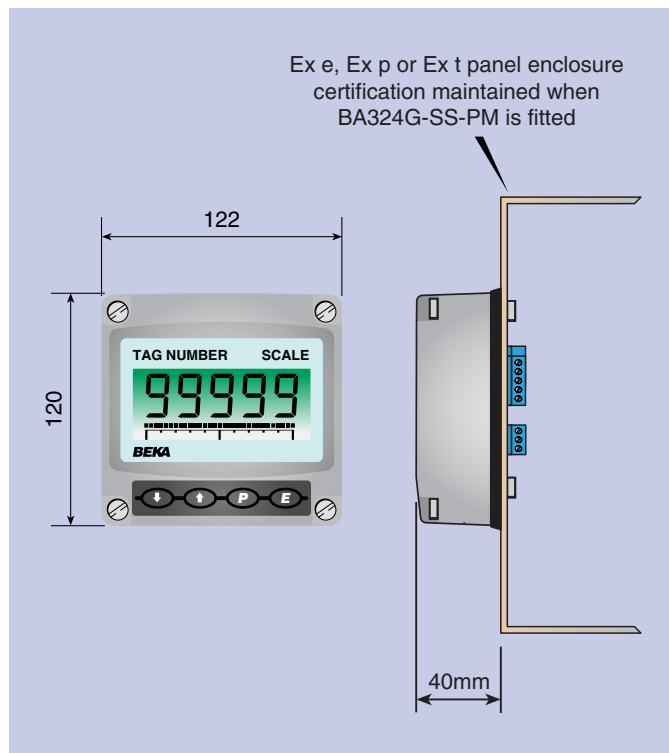
|                         |   |
|-------------------------|---|
| <b>Intrinsic safety</b> |   |
| <b>Europe ATEX</b>      |   |
| Code                    | Group II Category 1GD<br>Ex ia IIC T5 Ga<br>Ex ia IIIC T80°C Da IP66<br>-40°C ≤ Ta ≤ 70°C |
| Input parameters        |   |
| Ui                      | 30V dc  |
| Ii                      | 200mA   |
| Pi                      | 0.84W   |
| Output parameters       | Comply with requirements for <i>simple apparatus</i> .                                    |
| Cert. No.               | ITS11ATEX27253X<br>(Special conditions only apply for Zone 0)                             |

|                            |  |
|----------------------------|--|
| <b>International IECEx</b> |  |
| Code                       | Ex ia IIC T5 Ga<br>Ex ia IIIC T80°C Da IP66<br>-40°C ≤ Ta ≤ 70°C |
| Parameters                 | As ATEX  |
| Cert. No.                  | IECEX ITS 11.0014X<br>(Special conditions only apply for Zone 0) |

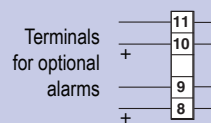
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|----------------------|--|
| <b>Environmental</b> |  |
| Operating temp       | -40 to +70°C                           |
| Storage temp         | -40 to +85°C                           |
| Humidity             | to 95% at 40°C noncondensing           |
| EMC                  | Complies with EMC Directive 2014/30/EU |

|                    |  |
|--------------------|--|
| <b>Mechanical</b>  |  |
| Enclosure          |  |
| Material           | 316 stainless steel  |
| Ingress protection | IP66   |
| Impact protection  | Enclosure 7J, Window 4J  |
| Weight             | 1.2kg  |
| Scale card         | Slide-in card showing units of measurement and tag information through display window. |

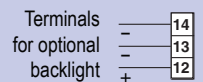
## DIMENSIONS (mm)



## TERMINAL CONNECTIONS



Terminals 2 & 4 internally linked for joining return 4/20mA wire.



Separately powered  
Loop powered  
Common

## Accessories

|                    |  |
|--------------------|--|
| <b>Backlight</b>   | Green, may be loop or separately powered   |
| Loop powered       | Indicator input voltage 5V   |
| Separately powered | 11V at 35mA from IS interface  |
| <b>Alarms</b>      | Two alarm outputs each of which may be independently configured as a high or low alarm contact with a NO or NC output. |
| <b>Output</b>      | Isolated, voltage free solid state switch complying with requirements for <i>simple apparatus</i> .                    |
| Ron                | 5Ω + 0.7V max  |
| Roff               | 1MΩ min  |

## HOW TO ORDER

|                     |                                    |
|---------------------|------------------------------------|
| <b>Model number</b> | BA324G-SS-PM                       |
| <b>Display mode</b> | Linear, root or lineariser*        |
| <b>Display at:</b>  |                                    |
| 4.000mA             | XXXX ] Include position of decimal |
| 20.000mA            | XXXX ] point & sign if negative.*  |
| <b>Accessories</b>  | <b>Please specify if required</b>  |
| Display backlight   | Backlight                          |
| Dual alarms         | Alarms                             |
| Scale card marking  |                                    |
| Units               | Legend required                    |
| Tag                 | Legend required                    |

\* 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.