

The **BA504G** is a general purpose, loop powered 4/20mA field mounting indicator, with a large four digit display housed in a robust IP66 GRP or stainless steel enclosure.

Main application of the BA504G is to display a measured variable in meaningful engineering units within a process area. The zero and span of the display are independently adjustable allowing the indicator to be calibrated to display any linear variable represented by the 4/20mA signal. A root extractor and an adjustable sixteen segment lineariser enable the indicator to display flow and variables such as tank level in linear engineering units. For weighing applications a tare function is included.

The large 34mm high 4 digit display provides maximum contrast and has a very wide viewing angle, allowing the BA504G 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 four digits, with three decimal points and a negative sign, may be configured to display any variable between -9999 and 9999.

IP66 and impact protection are provided by a robust GRP or 316 stainless steel enclosure. Both have a thick armoured glass window and silicone gaskets. Impact and ingress protection have been assessed by UKAS accredited bodies. The BA504G and BA524G are surface mounting, but can be pipe or panel mounted using accessories.

Display backlighting which may be loop or separately powered is available as a factory fitted option. It provides green background illumination enabling the display to be read at night or in poorly illuminated areas. When powered from the 4/20mA loop, no additional wiring is required but the indicator's voltage drop is increased. Powering from a separate supply produces a slightly brighter backlight but requires additional field wiring.

Optional dual alarm outputs which can switch low power 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.

Reliability is ensured by protection from incorrect connection and radio frequency interference. The indicator has been subjected to extensive vibration and thermal testing and is supported by a three year guarantee.

Other field mounting models in this range include the BA524G which has a similar specification with a five digit 29mm high display plus a 31 segment bargraph.

If flammable atmospheres are present either the 4 digit BA304G or the 5 digit BA324G, should be used. Both have the same features as the BA504G, but are intrinsically safe and have international certification for use in hazardous, gas and dust areas worldwide.

BA504G BA504G-SS

2-wire 4/20mA 4 digit indicator

General purpose





- ◆ IP66 GRP or stainless steel enclosure.
- ◆ Loop powered only 1.2V drop.
- ◆ 4 digit 34mm high display.
- ◆ Optional backlight & alarms.
- ◆ Root extractor and 16 segment lineariser.
- ◆ Easy scale card installation on-site.
- ◆ 3 year guarantee

BEKA

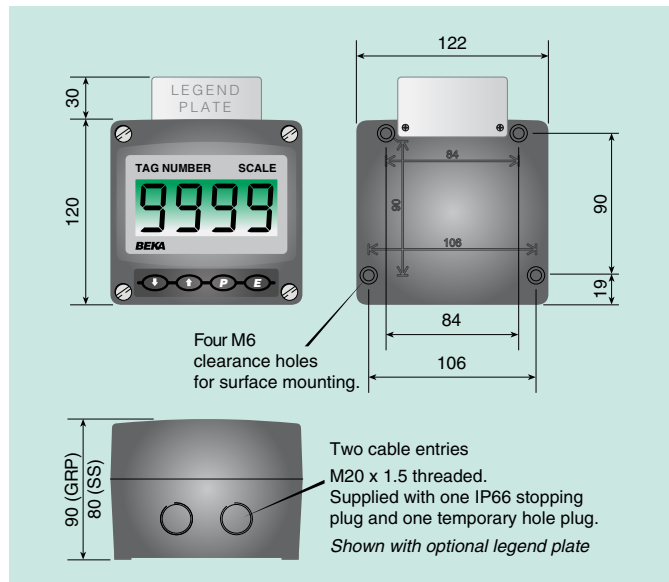
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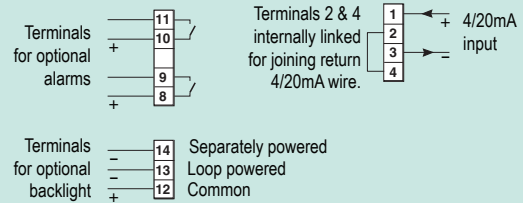
SPECIFICATION

| | |
|---|--|
| Input | |
| Current | 4 to 20mA |
| Voltage | Less than 1.2V at 20°C Less than 1.3V at -40°C Less than 5V with optional loop powered backlight. |
| Overrange | ±200mA or ±30V will not damage the indicator. |
| Display | |
| Type | Liquid crystal, non-multiplexed 4 digits 34mm high. |
| Span | Adjustable between 0 & ±9999 for a 4/20mA input. |
| Zero | Adjustable between 0 & ±9999 with 4mA input. |
| Decimal point | 1 of 3 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 |
| Overrange | 9999 or -9999 with all decimal points flashing. |
| Push buttons | |
|  | (Function in display mode) Shows display with 4mA input |
|  | Shows display with 20mA input |
|  | Displays input in mA or as a % of span, has a modified function when alarms are fitted. |
|  | Used for tare function |
| Accuracy at 20°C | |
| 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. |
| Environmental | |
| 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. |
| Mechanical | |
| Enclosure | |
| Material | GRP or 316 stainless steel |
| Ingress protection | IP66 |
| Impact protection | Enclosure 7J, Window 4J |
| Weight | |
| GRP | 1.1kg |
| Stainless steel | 2.6kg |
| Terminals | Orange with screw clamp for 0.5 to 1.5mm ² cable. |
| Scale card | Slide-in card showing units of measurement and tag information through display window. |
| Accessories | |
| Backlight | Green, may be loop or separately powered. |
| Loop powered | Indicator input voltage increases to 5V. |
| Separately powered | |
| V supply | 11 to 30V dc |
| I in | 35mA |
| Alarms | Two alarm outputs each of which may be independently configured as a high or low alarm contact with a NO or NC output. |
| Output | Isolated, voltage free solid state switch. |
| Vmax | 40V dc |
| Imax | 200mA |
| Ron | 5Ω + 0.7V max |
| Roff | 1MΩ min |

DIMENSIONS (mm)



TERMINAL CONNECTIONS



| | |
|--------------------------------|---|
| Legend plate | 316 stainless steel plate laser engraved with tag number or application information attached to rear of the instrument, visible from the front. # |
| Pipe mounting kit | BA393G 316 stainless steel # |
| Panel mounting kits | |
| For BA504G and BA504G-SS | |
| BA394G | Mounts indicator into an open panel aperture, does not seal aperture # |
| For BA504G | |
| BA494G | Mounts indicator into an open panel aperture and seals aperture # |
| For BA504G-SS | |
| BA494G-SS | Mounts indicator into an open panel aperture and seals aperture # |
| Back-box terminals for BA504G. | Including 4/20mA loop maintenance diode |

See accessory datasheet for details

HOW TO ORDER

| | |
|---------------------------|--|
| | Please specify |
| Model number | |
| GRP enclosure | BA504G |
| Stainless steel enclosure | BA504G-SS |
| Display mode | Linear, root or lineariser* |
| Display at: | |
| 4.000mA | XXXX |
| 20.000mA | XXXX |
| | Include position of decimal point & sign if negative.* |
| Scale card marking | |
| Units | Legend required |
| Tag | Legend required |
| Accessories | Please specify if required |
| Display backlight | Backlight |
| Dual alarms | Alarms |
| Stainless legend plate | Legend required |
| Pipe mounting kit | BA393G |
| Panel mounting kit | BA394G, BA494G or BA494G-SS |
| Back-box terminals | Back-box terminals |