



Shown with optional backlight - loop powered

The **BA528E loop powered 4/20mA indicator** is a fourth generation instrument that is electrically and mechanically compatible with the earlier BA528C, but has a much larger full 5 digit display plus a 31 segment analogue bargraph providing maximum visibility from a 144 x 72mm instrument. The new model has guaranteed performance between -40°C & $+70^{\circ}\text{C}$ and an even shorter enclosure depth than its predecessor. The scale card can easily be marked to show the units of measurement and can be installed on-site without dismantling the indicator enclosure or removing the indicator from the panel. If the units of measurement are not specified when the indicator is ordered, a blank scale card will be fitted.

The **main application** of the BA528E 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 enables the indicator to display flow and tank level variables in linear engineering units. For weighing applications a tare function is included.

The **bold 29mm** high 5 digit display and 31 segment bargraph provide maximum contrast and have a very wide viewing angle, allowing the BA528E indicator to be read easily in most lighting conditions. An optional factory fitted backlight is available for applications 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.

IP66 front panel protection and a neoprene gasket to seal the joint between the indicator and the panel, making the

instrument suitable for use in areas that will be cleaned with a hose. To simplify installation and maintenance, the indicator has a removable terminal block allowing panel wiring to be completed before the BA528E indicator is installed.

A **Backlight** 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 field wiring is required. Powering from a separate supply produces a brighter backlight but requires additional field wiring.

Optional alarm outputs which can switch low power loads such as sounders, beacons and 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 each output.

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

Other models in this range include the BA508E which has a similar specification with four even larger 34mm high digits without a bargraph.

If flammable atmospheres are present the BA328E should be used. This has the same features as the BA528E but has been certified for use in hazardous areas.

BA528E

2-wire 4/20mA

5 digit indicator

General purpose

- ◆ Loop powered only
1.2V drop
- ◆ 5 digit 29mm high display & 31 segment bargraph.
- ◆ Optional backlight & alarms
- ◆ Easy on-site scale card installation
- ◆ IP66 front
- ◆ Root extractor and 16 segment lineariser
- ◆ 144 x 72mm DIN enclosure
- ◆ 3 year guarantee

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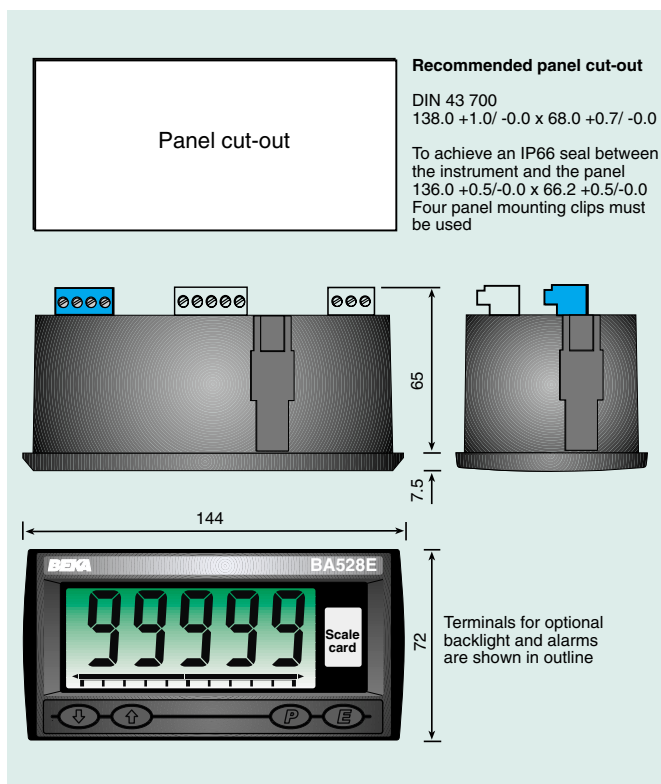
associates

BEKA associates Ltd. Old Charlton Rd.
Hitchin, Hertfordshire, SG5 2DA, U.K.
Tel. (01462) 438301 Fax (01462) 453971
e-mail sales@beka.co.uk www.beka.co.uk

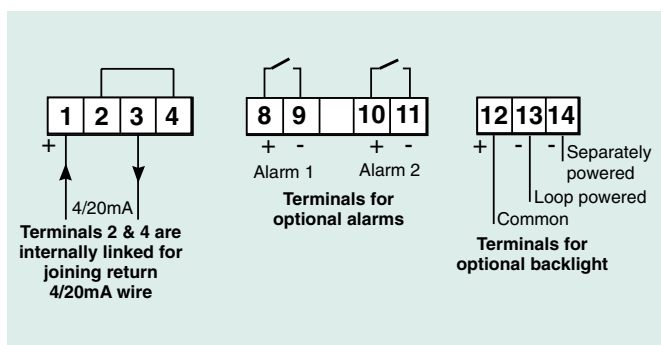
SPECIFICATION

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 indicator.
Display	
Type	Liquid crystal 5 digit 29mm high & 31 segment bargraph.
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.
Push buttons	
▼	(Function in display mode)
▲	Shows display with 4mA input
'P'	Shows display with 20mA input
	Displays input in mA or a % of span, has a modified function when alarms are fitted or Tare enabled.
'E'	Used for Tare function
Accuracy at 20°C	
Linear	±0.02% ±1 digit.
Root extracting	±16µA at input ±1 digit.
Temperature effect on:	
Zero	Less than 25ppm/°C
Span	Less than 50ppm/°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.
Vibration	Report available
Enclosure	Front IP66, rear IP20
EMC	Complies with 2004/108/EC
Mechanical	
Terminals	Screw clamp for 0.5 to 1.5mm ² cable, removable.
Weight	0.35kg
Accessories	
Backlight	Green, may be loop or separately powered.
Loop powered	Indicator input voltage 5V
Separately powered	
V supply	11V 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 solid state switch
Vmax	40V dc
I _{max}	200mA
R _{on}	5Ω + 0.7V max
R _{off}	1MΩ min
Printed scale card	Blank card fitted to each Indicator can be supplied printed with specified units of measurement.
Pack of printed scale cards	Contains 26 common units of measurement and four blanks.
Tag legend	Specified tag number or application thermally printed onto rear of the instrument.

DIMENSIONS (mm)



TERMINAL CONNECTIONS



HOW TO ORDER

Model number	BA528E
Display mode	Linear, root or lineariser*
Display at:	
4.000mA	XXXXX
20.000mA	XXXXX
	Include position of decimal point,* sign if negative & intermediate points if lineariser is required.
Accessories	
Display backlight	Backlight
Dual alarms	Alarms
Scale card	Legend required
Tag	Legend required

* Will be set to display 0.0 at 4mA and 1000.0 at 20mA with a linear display if calibration information is not supplied. Can easily be recalibrated on site.