

Shown with optional loop powered backlight

The **BA627E** is a panel mounting set point station that enables the current flowing in a 4/20mA loop to be manually adjusted via the front panel push buttons from within the process area. It is a second generation instrument that is mechanically and electrically compatible with the earlier BA505C, but has more display digits plus additional functions.

**Main application** of the BA627E is the adjustment of a 4/20mA plant parameter from within a process area. For example, as the remote set point generator for a speed controller or for positioning an actuator or valve with a 4/20mA input. The BA627E incorporates a five digit display plus a bargraph that may be calibrated to show the engineering units represented by the 4/20mA current, allowing an operator to easily set the process variable to the required value.

**Five pre-set output** values may be rapidly selected using the instrument's front panel push buttons for applications where the same output values are repeatedly required. To minimise plant disturbance when the output is adjusted or switched between pre-sets, the maximum rate of output current change may be defined. The 4/20mA output range may also be restricted so that an operator can only adjust the plant variable within safe limits.

The **bold 11mm** high liquid crystal display provides maximum contrast and has a very wide viewing angle, allowing the BA627E set point station display to be read easily in most lighting conditions over a wide temperature range. The five digits, with four decimal points and a negative sign, may be configured to display any variable represent by the 4/20mA output current between -99999 and 99999.

**Engineering units** represented by the 4/20mA output current are shown on the scale card viewed through a window on the right hand side of the display. If the

units are specified when the BA627E is ordered a printed scale card will be fitted. If units are not specified, a blank card will be supplied which can easily be marked and installed on-site without dismantling the set point station enclosure or removing it from the panel.

**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 the minimum operating voltage of the BA627E is increased. Powering from a separate supply produces a brighter backlight but requires additional field wiring.

**IP66 front panel protection** and a neoprene gasket to seal the joint between the set point station and the panel make the instrument suitable for use in areas that will be cleaned with a hose. To simplify installation and maintenance, the set point station has a removable terminal block allowing panel wiring to be completed before the BA627E is installed.

A **BA490 panel mounting rotary encoder** may be directly connected to the BA627E set point station to provide analogue control of the output current. Although the BEKA BA490 has been designed for this application, almost any quadrature encoder with a contact output may be used.

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

**For applications in hazardous areas** the BA427E, which has similar features as the BA627E, has ATEX and IECEx certification allowing installation in most gas and dust hazardous area.

# BA627E

4/20mA manual  
set point station  
[set point generator]

*General purpose*

- ◆ Loop powered
- ◆ 5 digit 11mm high display & 31 segment bargraph.
- ◆ Optional backlight & BA490 external rotary encoder.
- ◆ IP66 front
- ◆ Easy on-site scale card installation.
- ◆ 96 x 48mm DIN enclosure.
- ◆ 3 year guarantee

[www.beka.co.uk/ba627e](http://www.beka.co.uk/ba627e)

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## SPECIFICATION

### Output

Current	3.0 to 22.0mA
Resistance	Greater than 1M $\Omega$

### Power supply

Voltage	6.1 to 30V 10 to 30V when optional backlight is loop powered.
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### Accuracy

Control resolution	1 least significant digit of the display, or 0.3 $\mu$ A whichever is greater.
Temperature effect	Less than 2 $\mu$ A/ $^{\circ}$ C

### Display

Type	Liquid crystal, non-multiplexed 5 digit 11mm high with 31 segment bargraph.
Zero	Adjustable between 0 & $\pm$ 99999 with 4mA output.
Span	Adjustable between 0 & $\pm$ 99999 with 20mA output.
Decimal point	1 of 4 positions or absent
Zero blanking	Blanked apart from 0 in front of decimal point.
Direction	Display may increase or decrease with increasing 4/20mA output.

### Push buttons

'E' and $\nabla$ or $\blacktriangle$	(Function in operating mode) Scrolls output current down or up. Pressing 'E' prevents output current being accidentally adjusted if $\nabla$ or $\blacktriangle$ buttons or optional rotary encoder are inadvertently operated. This function can be disabled in the configuration menu.
$\nabla$	Shows display calibration with 4mA output.
$\blacktriangle$	Shows display calibration with 20mA output.
'P'	Displays output current in mA, as a % of span or provides access to pre-set outputs.

### Environmental

Operating temp	-40 to 70 $^{\circ}$ C
Storage temp	-40 to 85 $^{\circ}$ C
Humidity	to 95% at 40 $^{\circ}$ C noncondensing
Vibration	Report available
Enclosure	Front IP66, rear IP20
EMC	Complies with EMC Directive 2014/30/EU

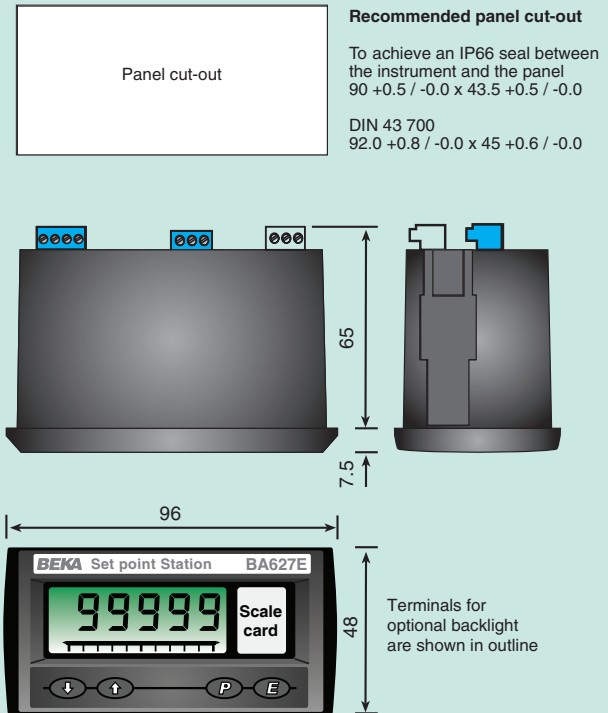
### Mechanical

Terminals	Screw clamp for 0.5 to 1.5mm <sup>2</sup> cable, removable.
Weight	0.2kg

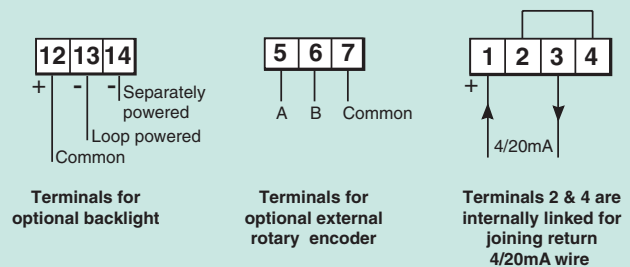
### Accessories

Backlight	Green, may be loop or separately powered.
Loop powered	Set point station + backlight supply 10 to 30V.
Separately powered.	9 to 30V at 22mA
Printed scale card	Blank card fitted to each Set Point Station can be supplied typeset with specified engineering units.
Tag legend	Specified tag number or application thermally printed onto rear of the instrument.

## DIMENSIONS (mm)



## TERMINAL CONNECTIONS



BA490 Rotary encoder	Panel mounting IP65 sealed rotary encoder which provides analogue control of the BA627E output current. See separate datasheet.
BA495 rear cover and sealing kit	Provides impact and IP66 protection for rear of instrument. #

# See accessory datasheet for details

## HOW TO ORDER

Model number	Please specify BA627E
Display at:	
4.000mA	XXXX } Include position of decimal XXXX } point & sign if negative *
20.000mA	
<b>Accessories</b>	<b>Please specify if required</b>
Display backlight	Backlight
Scale card	Legend required
Tag	Legend required
External rotary encoder	BA490
Rear cover and sealing kit	BA495

\* Will be set to display 0.00 at 4mA output and 100.00 at 20mA output if calibration information is not supplied. Calibration can easily be changed on-site.