



4/20mA

Supply for  
optional separately  
powered backlight

4/20mA  
output

*Shown with optional separately powered backlight*

The **BA505C** is a panel mounting manual set point station that enables the current flowing in a 4/20mA loop to be manually adjusted from within a process area. The instrument is loop powered and contains a 3½ digit display which may be calibrated to show the 4/20mA current in engineering units.

**Main application** of the BA505C is the adjustment of plant parameters from within a process area. Speed controller set points such as a vessel mixer, actuator position or any parameter represented by a 4/20mA signal can be adjusted by the set point station. The BA505C incorporates a ten turn high resolution potentiometer fitted with a friction damper to minimise the risk of accidental adjustment. The magnitude of the variable being adjusted is shown on a 3½ digit display which may be calibrated in engineering units. An operator can therefore accurately set the process parameter to the required value without the need for any other instruments.

The **front panel** is a robust Noryl moulding sealed with a scratch resistant polyester membrane, and a captive neoprene gasket provides an IP65 seal between the enclosure and the panel. To simplify installation and maintenance, the BA505C has a removable rear terminal block which allows panel wiring to be completed before the set point station is installed. A blank scale card is fitted to all instruments, this can be typeset during manufacture, or marked on site to show the units of adjustment.

**Reliability is ensured** by an ISO9001 approved quality control system supported by a three year guarantee. Set point stations are protected from reverse connection and overrange input current, and incorporate radio frequency filtering to comply with the European EMC Directive.

**For applications in flammable atmospheres** the BA405C has been certified intrinsically safe and may be installed in most hazardous areas.

**BA505C**  
manual set point station



4/20mA

Speed  
controller

Set point input

+ 24V  
-

# BA505C

## 2-wire 4/20mA manual set point station

### General purpose

- ◆ **Loop powered**
- ◆ **Optional:**  
Loop powered  
backlight  
Separately powered  
backlight
- ◆ **IP65 front**
- ◆ **96 x 48mm DIN  
enclosure**
- ◆ **3 Year guarantee**

**BEKA**  
**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

### Output

Current	Typ 3.5 to 21mA
Resistance	Greater than 1M

### Power Supply

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

Control resolution	0.05% of maximum output
Temperature effect	Less than $2\mu A/^{\circ}C$

### Display

Type	3 <sup>1</sup> / <sub>2</sub> digit
Zero	Adjustable between -1000 & 1000
Span	Adjustable between 000 & 1999
Polarity	Automatic minus sign
Decimal point	1 of 3 positions or absent selected by internal plug-in link.

### Environmental

Operating temp	-20 to +60°C
Storage temp	-40 to +85°C
Humidity	To 95% at 40°C non-condensing
Enclosure	
Front	IP65
Rear	IP20

### EMC

Immunity	In accordance with EU Directive 89/336/EEC, full report available. Less than 1% of span error for 10V/m field strength between 27MHz & 1 GHz.
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### Emissions

Electromagnetically benign

### Mechanical

Terminals	Screw clamp for 0.5 to 1.5mm <sup>2</sup> cables in removable terminal block.
Weight	0.4kg

### Accessories

Separately powered backlight	LED backlight
Vin	14 to 30V dc, may be dimmed by reducing voltage below 14V. 40mA typical
Iin	
Loop powered backlight	Green, powered from 4/20mA current.
Typeset scale card	Blank scale card fitted to each instrument can be supplied typeset with units of measurement.
Tag number	Thermally printed tag number on the rear of the instrument.

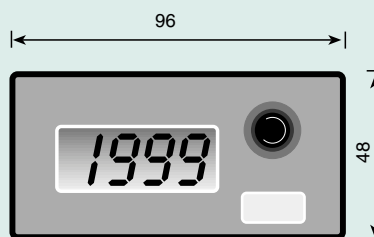
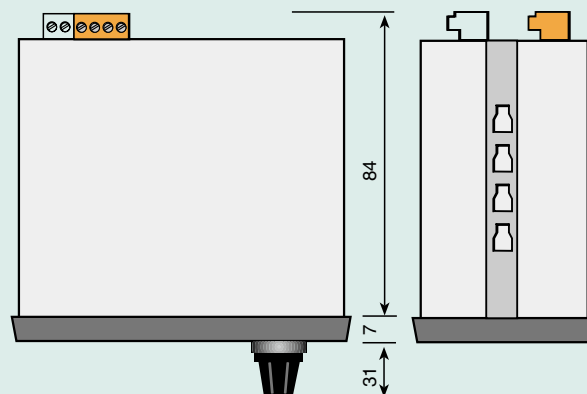
## DIMENSIONS (mm)



### Recommended panel cut-out

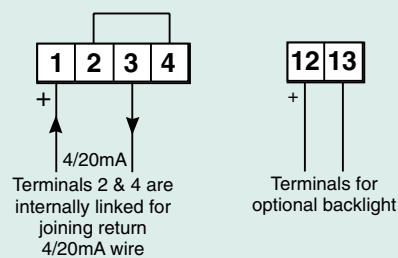
DIN 43 700  
92.0 +0.8/-0.0 x 45 +0.6 -0.0

To achieve an IP65 seal between the instrument and the panel  
90 +0.5/-0.0 x 43.5 +0.5/-0.0



Terminals for optional backlight are shown in outline

## TERMINAL CONNECTIONS



## HOW TO ORDER

Model number

### Please specify

BA505C

Display at 4mA XXXX

Display at 20mA XXXX

Include position of decimal point and sign if negative

### Accessories

Display backlight

Scale card

Tag strip

### Please specify if required

Separately powered backlight or

Loop powered backlight

Legend

Legend