

The BA405C is an intrinsically safe panel mounting manual set point station that enables the current flowing in a 4/20mA loop to be manually adjusted from within a hazardous 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.

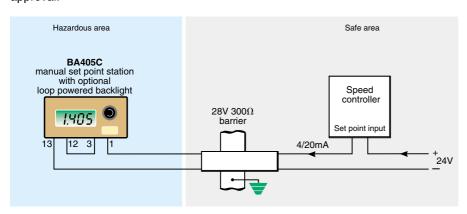
Main application of the BA405C is the adjustment of plant parameters from within a hazardous process area. Speed controller set points such as a vessel mixer, actuator positions or any parameter represented by a 4/20mA signal can be adjusted from within the hazardous area. The BA405C incorporates a ten 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 31/2 digit display which may be calibrated in engineering units. An operator can therefore accurately set the process parameter to the required

ATEX intrinsic safety certification confirms compliance with the requirements for Group II Category 1G equipment Ex ia IIC T5, allowing the BA405C to be installed in almost all gas hazardous areas throughout Europe. For use in the USA the BA405C has FM intrinsic safety and nonincendive approval.

Two display backlight options are available. The loop powered backlight produces green background illumination enabling the display to be read at night and in poor lighting conditions. No additional power supply, IS interface or field wiring are required, but the minimum operating voltage is increased. Alternatively, the separately powered backlight has a bright orange output which enhances daylight viewing, but an additional IS interface and field wiring are required.

The front panel is a robust Noryl moulding sealed with a scratch resistant polyester membrane. A neoprene gasket provides an IP65 seal between the enclosure and the panel. To simplify installation and maintenance, the BA405C has a removable blue 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.



BA405C

2-wire 4/20mA manual set point station

Intrinsically safe for use in all gas hazardous areas

- Loop powered
- Intrinsically safe ATEX and FM certification
- 3¹/2 digit display
- Optional
 Loop powered
 backlight
 Separately powered
 backlight
- IP65 front
- 96 x 48 DIN enclosure
- ♦ 3 year guarantee



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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

Accuracy

Control resolution 0.05% of maximum output

Temperature effect Less than 2µA/°C

Display

31/2 digit LCD Type

Zero Adjustable between -1000 & 1000 Adjustable between 000 & 1999 Span

Polarity Automatic minus sign

Decimal point 1 of 3 positions or absent selected

by internal plug-in link.

Intrinsic safety **Europe ATEX**

Cert No

Code Group II, Category 1G

Ex ia IIC T5 ITS03ATEX21103

Location Zone 0, 1 or 2

Installation

4/20mA output May be connected to any EEx ia

certified barrier or isolator with output parameters equal to, or less

than: Uo =

30V 200mA lo = Ро 0.85W

USA FM

File No

Standard 3610 Entity

CL I: Div 1; GP. A, B, C, D Code

T4 at 60°C 3026081

3611 Nonincendive Standard CL I: Div 2; GP. A, B, C, D Code

T4 at 60°C

File No 3026081

Environmental

Operating temperature -20 to +60°C -40 to +85°C Storage temp

Humidity To 95% at 40°C non-condensing

Enclosure **IP65** Front Rear IP20

EMC In accordance with EU Directive

2004/108/EC, full report available. Less than 1% of span error for

10V/m field strength between

27MHz & 1 GHz.

Emissions Electromagnetically benign

Mechanical

Immunity

Screw clamp for 0.5 to 1.5mm² **Terminals**

cables in blue removable terminal

block.

Weight 0.4kg

Accessories

Loop powered backlight

Orange, powered from 28V 300Ω Separately powered backlight

Zener barrier or galvanic isolator Green; powered from 4/20mA

current.

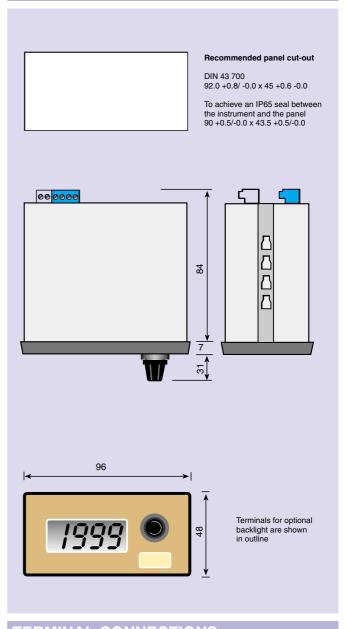
Typeset scale card Blank scale card fitted to each

instrument can be supplied typeset with units of measurement.

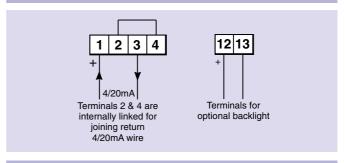
Thermally printed tag number on Tag number

rear of the instrument.

DIMENSIONS (mm)



TERMINAL CONNECTIONS



HOW TO ORDER

Model number

Please specify BA405C

Display at 4mA XXXX Include position of Display at 4MA XXXX
Display at 20mA XXXX
decimal point and sign if negative

Accessories

Display backlight

Scale card Tag strip

Please specify if required

Loop powered backlight or Separately powered backlight

Legend Legend