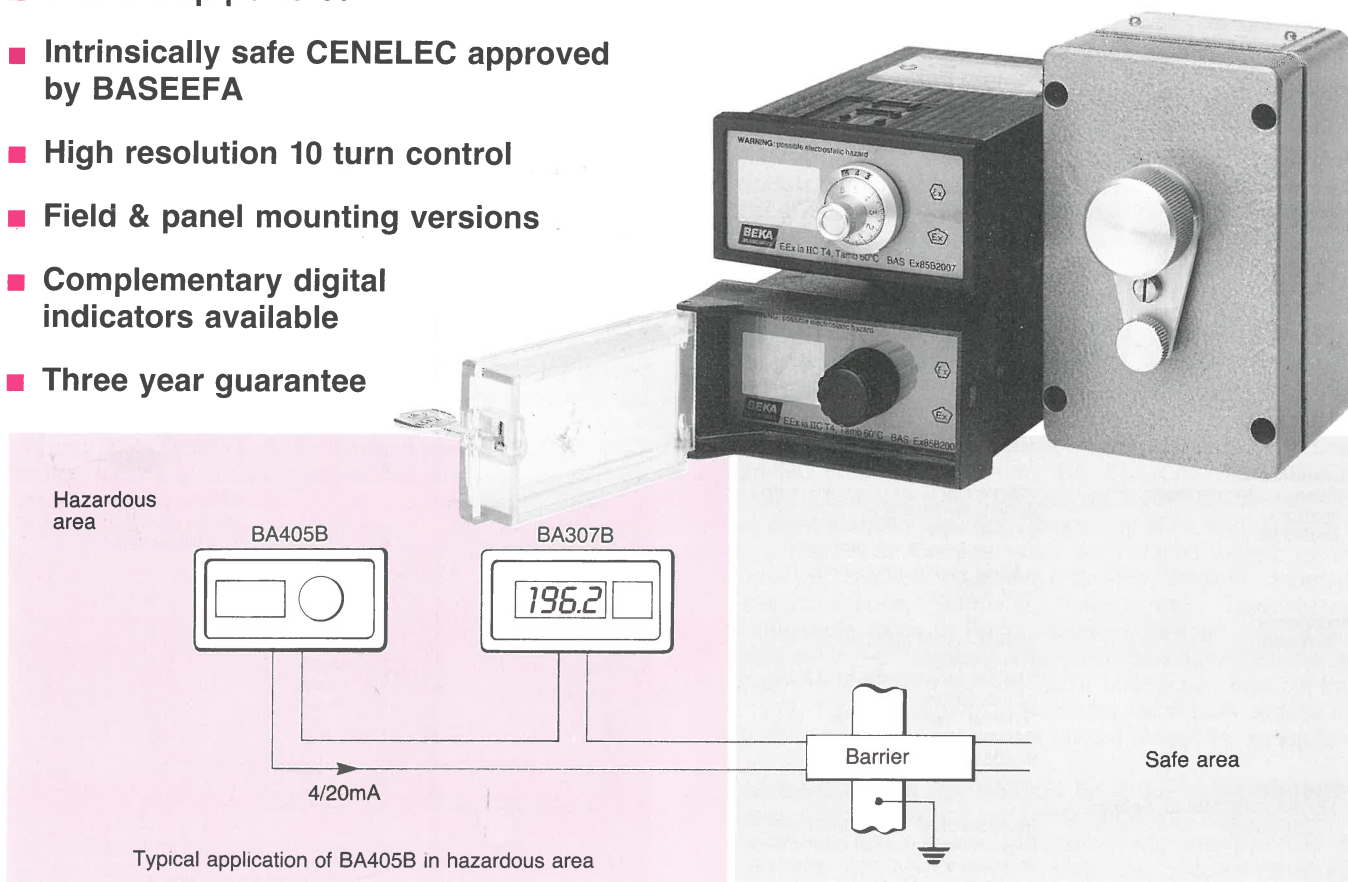


- 2-wire loop powered
- Intrinsically safe CENELEC approved by BASEEFA
- High resolution 10 turn control
- Field & panel mounting versions
- Complementary digital indicators available
- Three year guarantee



The **BA404B and BA405B** manual set point stations enable the current flowing in a 4/20mA loop to be manually adjusted from the process area. The field and panel mounting versions, which are electrically identical, are loop powered and require no additional power supply or batteries. Both versions have been certified intrinsically safe by BASEEFA to the CENELEC standard.

Main application of the manual set point station is the adjustment of plant parameters from the process area. The BA404B and BA405B enable controller set points, actuator positions or alarm levels to be accurately adjusted from within a hazardous area. Local indication in engineering units of the set point station output can be obtained by connecting any certified BEKA digital indicator into the loop.

The intrinsic safety of the BA404B and BA405B allows them to be installed within a hazardous area without the need for purged, pressurised or flameproof enclosures. Both versions have been certified by BASEEFA to the CENELEC standard, and may be used with most of the common 4/20mA single and dual-channel Zener barriers. Application Guide AG404 lists the types of Zener barrier which may be used, and gives additional application information.

The field mounting BA404B is housed in a robust epoxy painted aluminium diecast enclosure sealed with a neoprene gasket to form an IP65 hoseproof assembly. The enclosure may be surface mounted, or clamped to a pipe-stand using the optional pipe mounting kit. The large metal control knob is ungraduated and fitted with a heavy duty locking mechanism and end stops; both the control and locking knobs are deeply knurled allowing easy adjustment by an operator wearing gloves.

To simplify installation and maintenance the BA404B can be removed from the enclosure without disconnecting the field wiring.

An optional engraved stainless steel plate can be fitted above the control knob to show the units of adjustment.

The panel mounting BA405B is housed in a DIN standard glass filled Noryl enclosure which flush mounts onto a process panel. The BA405B is available with an ungraduated 10 turn control knob, or a 10 turn mechanical counter calibrated 0 to 100%.

The BA405B is suitable for control room mounting without additional protection. For applications where the front of the instrument must be weatherproof, or unauthorised adjustments prevented, an optional locking transparent door is available.

A blank scale card is fitted on the left hand side of the control knob, this can be typeset during manufacture or marked on site to show the units of adjustment. To simplify installation and maintenance, the BA405B has a removable rear terminal block which allows the panel wiring to be completed before the setpoint station is installed.

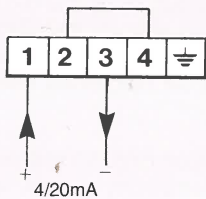
Reliability is ensured by BEKA Associates BS5750 approved quality control system, and a high temperature soak test before final calibration. The BA404B and BA405B incorporates radio frequency filtering to reduce interference from portable transceivers operating to within a few feet of the indicator. All set point stations are guaranteed for three years.

Intrinsically safe digital indicators for use with the set point stations are available. Please refer to BEKA Associates catalogue or datasheets for the full range.

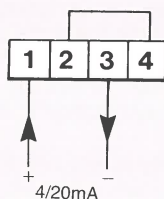
SPECIFICATION

Output	
Current	3.5 to 21mA 4.0 to 20.0mA (BA405BT with turns counting dial) Greater than 1 M ohm
Resistance	
Power supply	
Voltage	10 to 30V dc
Ripple	1V pk to pk 50Hz ripple
Accuracy	
Control resolution	0.05% of maximum output
Temperature effect on output current	Less than 0.01% of maximum output/°C
Intrinsic safety	
BASEEFA	
Standard	BS5501:Part 7:1977:EN50 020
Code	EEx ia IIC T4
Certificate numbers:	
Apparatus	BAS Ex85B2007
System	BAS Ex852008
Residual reactance	Leq: 2µH Ceq: 0.01µF
IS supply	
Umax: in	30V
Wmax: in	1W
Location	Zone 0, 1 or 2
Installation	The BA404B/BA405B may be connected to any certified intrinsically safe interface whose parameters do not exceed the IS supply values shown above. See certificates and AG404 for full details
Environmental	
Operating temperature	-20 to +60°C
Humidity	To 95% RH at 40°C
Enclosure	BA404B IP65 BA405B Front IP52, IP55 with optional weather-proof door Rear IP20
Mechanical	
Terminals	BA404B screw clamp for 0.5 to 2.5mm cables BA405B screw clamp for 0.5 to 1.5mm cables Terminal block removable
Weight	BA404B 1kg BA405B 0.4kg
Accessories	
For BA404B field mounting	
Scale plate	Stainless steel scale plate engraved with units of adjustment
Tag plate	Stainless steel tag plate engraved with tagging information
Pipe mounting kit	Mounts BA404B onto any vertical or horizontal pipe with diameter between 60 & 80mm. For larger or smaller pipes special kits are available
For BA405B panel mounting	
Turns-counting dial	Mechanical counter calibrated 0 to 100% in 0.25% divisions for 4 to 20mA output
Weather-proof transparent front door	BA395 provides IP55 protection for the front of the instrument. Supplied with key to lock door and gasket to seal joint between instrument and panel
Scale card	Blank card fitted to each unit, can be supplied typeset with units of adjustment
Tag plate	Thermally printed tag plate screwed to rear of instrument

Terminal Connections

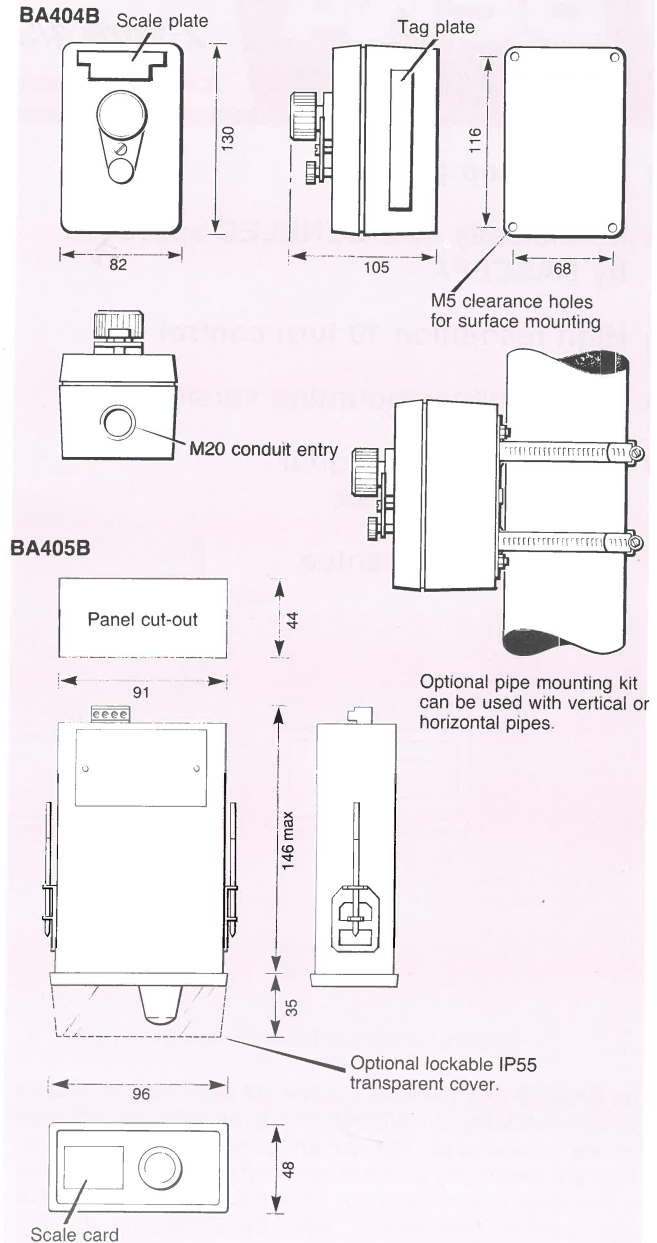


BA404B
Terminals 2 & 4 internally linked for joining return 4/20mA wire. Right hand terminal connected to case.



BA405B
Terminals 2 & 4 internally linked for joining return 4/20mA wire.

DIMENSIONS (mm)



HOW TO ORDER: please specify

Model number	
BA404B	Field mounting
BA405B	Field mounting with 10 turn blind knob
Accessory items:	
BA404B	
Scale plate	Specify legend required (Up to 6 alphanumeric characters)
Tag plate	Specify legend required (See Accessory datasheet for maximum size of legend)
Pipe mounting kit	Specify pipe diameter
BA405B	
Scale card	Specify legend required
Tag plate	Specify legend required
10 turn counting dial	Specify BA405BT
IP55 transparent front cover with lockable hinged front door	Specify fitted with BA395
Example	
Model number	BA405BT (T specifies turns counting dial)
Scale card	°C
Tag plate	Inlet set point
Front cover	Fitted with BA395