Hazardous area

Safe area

BA448CF-P
PROFIBUS PA
Fieldbus Indicator
8 variables

Intrinsically safe for use in all gas hazardous areas

◆ **Large 5 digit display with bargraph.**

◆ **PROFIBUS PA protocol**

◆ **Displays up to 8 fieldbus variables.**

◆ **Selectable Node or Listener modes.**

◆ **Intrinsically safe ATEX, FM, cFM, INMETRO & IECEx.**

◆ **Entity Ex ia & ic parameters & FISCO compliant.**

◆ **144 x 72mm DIN enclosure.**

◆ **IP66 front**

◆ **3 year guarantee**

The BA448CF-P PROFIBUS Indicator is an intrinsically safe instrument that can display up to eight fieldbus process variables within a hazardous area. A numeric annunciator on the left hand side of the screen shows which variable is being displayed. This version of the indicator supports PROFIBUS PA protocol; for FOUNDATION™ fieldbus systems an alternative version is available - please see BA448CF-F FOUNDATION™ fieldbus datasheet.

Configuration as a fieldbus Node or Listener using the indicator's front panel push buttons allows the instrument to be tailored to suit local requirements. When configured as a Listener the BA448CF-P is not visible to the fieldbus host; may not be subject to a Node Licence Fee and is configured and controlled via the instrument's front panel push buttons.
As a fieldbus Node, the indicator is configured by the fieldbus host and the displayed variable is selected from the eight pre-configured variables using the indicator's front panel up and down buttons.

Powered by the fieldbus the BA448CF-P only requires a 2-wire connection to the fieldbus segment, no additional power supply is required. Compatibility with most PROFIBUS hosts is assured by the use of eight Analogue Output and six Digital Input function blocks.

The liquid crystal display has large 20mm high digits providing maximum contrast and a wide viewing angle, allowing the BA448CF-P PROFIBUS indicator to be read easily in most lighting conditions. The five digits, with four decimal points and a negative sign, may be configured to display any variable between -99999 and 99999. The 31 segment bargraph, which provides a bold analogue indication of the fieldbus variable, may be conditioned to any starting or finishing values within the fieldbus variable's range.

The instrument front panel provides IP66 protection and a neoprene gasket seals the

joint between the fieldbus indicator and the panel, making it suitable for use in areas that will be cleaned with a hose. To simplify installation and maintenance, the indicator has a removable terminal block that allows panel wiring to be completed before the BA448CF-P indicator is installed.

ATEX intrinsic safety certification allows the BA448CF-P to be installed in all gas hazardous areas. The two fieldbus terminals comply with the Fieldbus Intrinsic Safety Concept (FISCO) simplifying system design and documentation. Separate Ex ia and Ex ic entity input safety parameters also allow connection to most non-FISCO intrinsically safe systems. A BA448CF-P indicator may therefore be connected to almost any intrinsically safe fieldbus segment, provided the segment can supply 13mA to power the instrument.

FM, cFM and IECEx approvals allow installation in the USA, Canada plus the growing number of countries accepting IECEx certificates. All approvals incorporate FISCO certification.

Operator acknowledgements may be returned to the fieldbus host when the BA448CF-P is configured as a fieldbus Node. Six Digital Input function blocks in the indicator which are supported by most Profibus hosts enable the status of the front panel push buttons to be read.

A Comprehensive PROFIBUS interface guide contains commissioning information for the BA448CF-P. Copies may be requested from the BEKA sales office or downloaded from www.beka.co.uk

Units of measurement can be marked onto the display escutcheon prior to despatch and the tag number or application thermally printed onto the rear panel adjacent to the terminals.

For field mounting applications see the BA444DF-P PROFIBUS datasheet. This instrument has a similar electrical specification but is housed in an IP66 field mounting enclosure.

BEKA
associates

SPECIFICATION

Display
Type	Liquid crystal 5 digit 20mm high (-99999 to 99999) 31 segment bargraph
Variables	8

Fieldbus communication
Voltage	9 to 32V (Limited by intrinsic safety parameters)
Current	13mA
Compliant with	IEC61158-2 31.25kbits/s Voltage Mode Clauses 11 and 22
Protocol	PROFIBUS PA
Profibus User Organisation.	Approval certificate Z01505
Function	Fieldbus Node or Listener selected via front panel push buttons.

Function blocks
Profibus PA node	8 x AO; 6 x DI
Listener	Captures date in DS-33 format

Intrinsic safety
Europe ATEX

Code	Group II Category 1G Ex ia IIC T4 Ga FISCO field device Ex ia IIC T4 Ga Group II Category 3G Ex ic IIC T4 Gc Ta = -40°C to 70°C

Input parameters	FISCO	Ex ia entity	Ex ic entity
U_i	17.5V	22.0V	32V
I_i	380mA	250mA	125mA
P_i	5.32W	1.2W	1W

Location	Zone 0, 1 or 2
Cert. No.	ITS06ATEX25314X

USA FM
Standard	3610 Entity
Code	CL I: Div 1 GP A, B, C & D T4 @ 70°C
Standard	3611 Nonincendive
Code	CL I: Div 2 GP A, B, C & D T4 @ 70°C
File	3027031

Canada cFM
File	3027031C

International IECEx
Code	As ATEX code shown above
Cert. No	IECEx ITS 06 0013X

Brazil INMETRO NCC 12.0873X

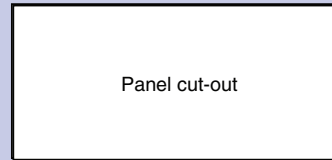### Environmental
Operating temp	-20 to 70°C (ATEX, FM & IECEx certification -40°C to 70°C)
Storage temp	-40 to 85°C
Humidity	To 95% @ 40°C
Enclosure	Front IP66, rear IP20
EMC	In accordance with EU Complies with EMC Directive 2014/30/EU

Mechanical
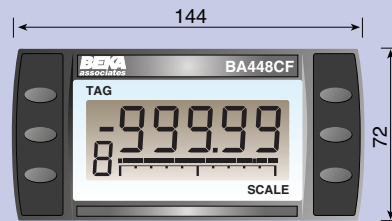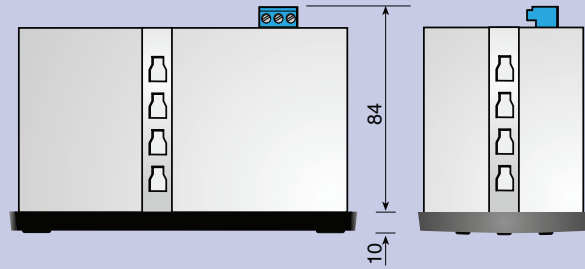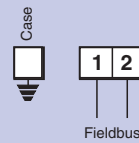|	
Terminals	Removable with screw clamp for 0.5 to 1.5mm^2 cable.
Weight	0.7kg

DIMENSIONS (mm)

Recommended panel cut-out

To achieve an IP65 seal between the instrument and the panel 136.0 +0.5/-0.0 x 66.2 +0.5/-0.0 Four panel mounting clips must be used

DIN 43 700
138.0 +1.0/ -0.0 x 68.0 +0.7/ -0.0

TERMINAL CONNECTIONS

Non polarised

Accessories
Scale legend	Units of measurement marked onto display escutcheon.
Tag legend	Tag number or application marked onto display escutcheon.
PROFIBUS interface guide.	May be downloaded from www.beka.co.uk

HOW TO ORDER

Please specify

Model number	BA448CF-P PROFIBUS

Accessories	**Please specify if required**
Certification	INMETRO
Escutcheon markings	
Scale	Legend
Tag	Legend
Tag strip	Legend