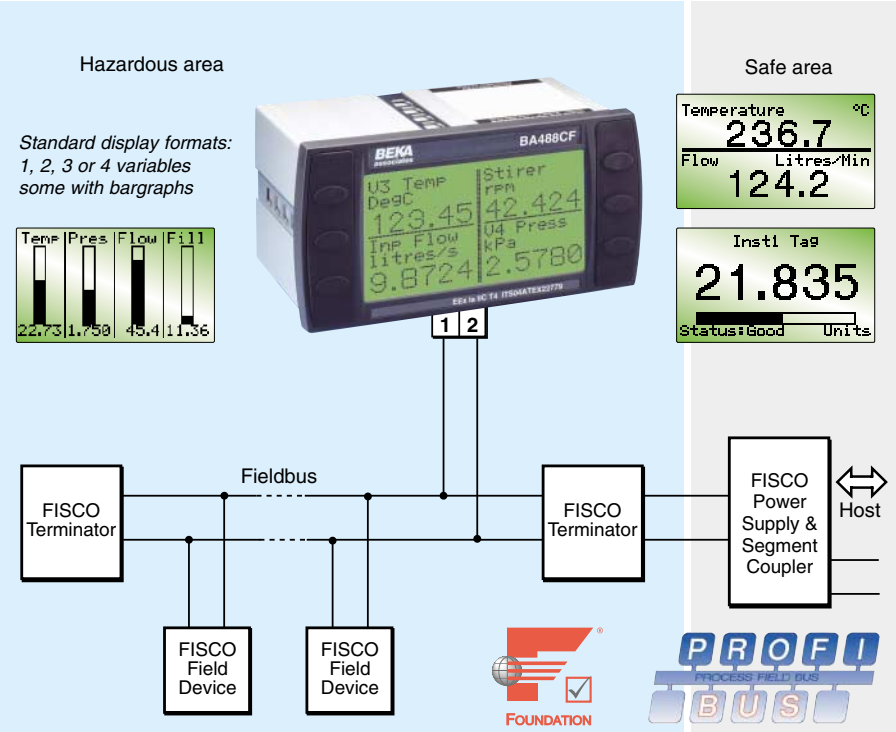


The BA488CF Fieldbus Display is an intrinsically safe instrument that can display up to eight fieldbus process variables. Nine selectable standard screen formats contain one, two, three or four variables, with units of measurement, tag descriptions and bargraphs on some screens. The use of standard screens simplifies commissioning, but if required dedicated screens tailored to an individual application can be constructed.

Fieldbus Foundation and Profibus PA versions of the BA488CF are available and have been registered by both organisations. The Fieldbus Foundation version now has selectable function blocks allowing use with most popular system hosts. Configuration files may be downloaded from the appropriate Fieldbus Foundation or Profibus sites, or from www.beka.co.uk.

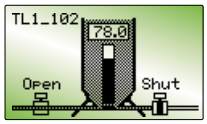
Powered by the fieldbus the BA488CF only requires a 2-wire connection, no additional power supply Zener barriers or galvanic isolators are required. The high contrast 86 x 45mm liquid crystal display incorporates a green backlight that is also powered from the fieldbus enabling the display to be read in all lighting conditions from full sunlight to total darkness.

Simple commissioning results from the use of standard display formats. Apart from loading the BA488CF configuration files onto the system host and selecting the fieldbus variables to be displayed, no programming is required. Configuration of the BA488CF Fieldbus Display is performed via the fieldbus and the instrument front panel push buttons.

ATEX, FM & IECEx intrinsic safety certification allows the BA488CF to be installed in gas hazardous areas worldwide. The two fieldbus terminals comply with the Fieldbus Intrinsic Safety Concept (FISCO) simplifying system design and documentation, although connection to non-FISCO intrinsically safe segments is possible using the entity concept. This allows a BA488CF to be directly connected to almost any hazardous fieldbus providing the segment can supply the 25mA consumed by the display.

Six optional alarm outputs may be linked to any of the displayed variables. Each isolated single pole solid state output may be conditioned as a combined high and low alarm, or as just a high or low alarm. All the outputs comply with the requirements for *simple apparatus,* which permits them to switch any certified intrinsically safe load such as an intrinsically safe sounder, lamp or solenoid valve.

Custom display screens dedicated to a specific application may be created by writing to the transducer block parameters. Custom designed displays can contain text in five different font sizes plus lines, boxes, bargraphs, simple graphics and fieldbus process variables. Free programming utilities to assist with screen development are available via the BEKA web site.



Typical custom display

The six push buttons on the front of the instrument may be used for returning operator acknowledgments or controls by reading a transducer block parameter. If larger industrial switches are required for these acknowledgements, up to six external push buttons may be connected to the BA488CF. When the external switches are activated, the front panel push buttons may be disabled or operated in parallel with the external switches.

Comprehensive documentation includes Fieldbus Foundation and Profibus Interface Guides and a Programming Guide that explains how to create custom display screens.

For field mounting applications see the BA484DF datasheet. This instrument has a similar electrical specification but is housed in a robust IP66 GRP enclosure suitable for external mounting.

BA488CF

Fieldbus display

Intrinsically safe for use in all gas hazardous areas

- ***Fieldbus Foundation & Profibus PA models***
- ***Compatible with most system hosts***
- ***High contrast display with backlight***
- ***Displays up to 8 fieldbus variables***
- ***Intrinsically safe ATEX, FM & IECEx certification FISCO compliant***
- ***Six operator push buttons & six optional alarm outputs***
- ***IP66 front panel***
- ***3 year guarantee***

FM APPROVED

IEC IECEx

BEKA associates

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Tel. (01462) 438301 Fax (01462) 453971
e-mail sales@beka.co.uk www.beka.co.uk

SPECIFICATION

Display

Type	120 x 64 pixel liquid crystal
Size	86.5mm x 45mm
Backlight	Powered from fieldbus
Screens	
Standard format	1, 2, 3 or 4 variables plus bargraph can include: units of measurement tag information
Custom format	See Programming Guide
Characters	ASCII character set, 5 font sizes each with 4 computer definable soft characters.
Hidden screen	May be written to at any time and displayed when required.

Controls

Front panel	Six push buttons which select the displayed screen. May be used for returning operator acknowledgements by reading transducer block parameters.
External switches	Control may be transferred to six external switches; front panel buttons may be inhibited or operated in parallel.
Switch cable	5m max length.

Fieldbus communication

Voltage	9 to 17.5V (limited by intrinsic safety parameters)
Current	25mA
Compliant with	IEC61158—2 Clauses 11 and 22
Protocol	Fieldbus Foundation or Profibus PA
Function blocks	
Fieldbus Foundation	1 x MAO (Multiple Analogue Output) **or** 2 x IS (Input Selector) — Selectable on-site
Profibus PA	8 x AO (Analogue Output)

Intrinsic safety

Europe ATEX

Standard	EN50020:2002
Code	Group II Category 1G EEx ia IIC T4
Cert. No.	ITS04ATEX22779
Intrinsic safety parameters	Ui = 17.5V Ii = 380mA Pi = 5.32W FISCO compliant
Location	Zone 0, 1 or 2

USA FM

Standard	3610 Entity
Code	CL I; Div 1; GP A, B, C & D T4 @ 60˚C
File No	3022546
Standard	3611 Nonincendive
Code	CL I; Div 2; GP A, B, C & D T4 @ 60˚C
File No	3022546

International IECEx

Standard	IEC60079-11:1999
Code	Ex ia IIC T4 Ta = -40 to 60˚C
Cert. No.	IECEx ITS 05.0007

Environmental

Operating temp	-20 to +60˚C (certified for use at -40˚C)
Humidity	To 95% @ 40˚C
Enclosure	Front IP66, rear IP20
EMC	In accordance with EU Directive 89/336/EEC
Immunity	BS EN 61326:1998 Operates normally with conducted 3Vrms interference between 0.15kHz and 80MHz, or radiated 10V/m interference between 80MHz and 1GHz.
Emissions	CISPR 16-1/2 Class A

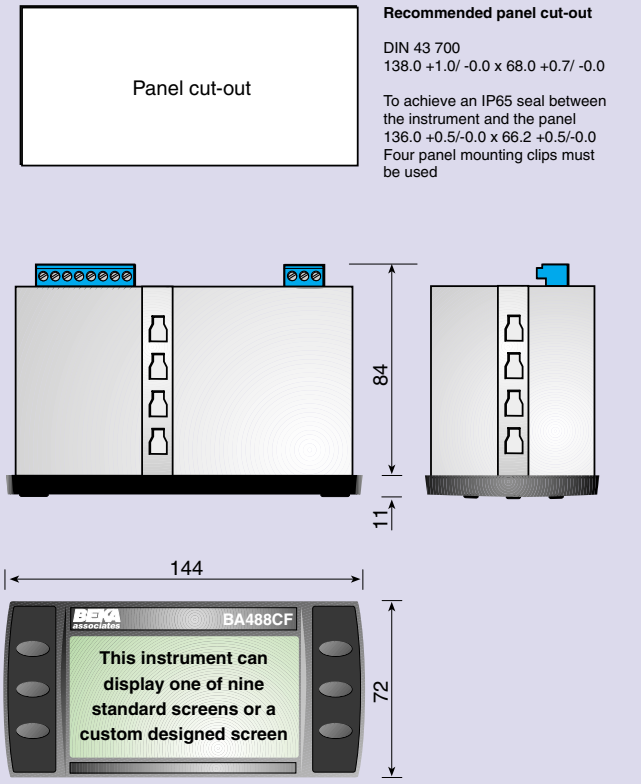
Mechanical

Terminals	Removable with screw clamp for 0.5 to 1.5mm² cable.
Weight	0.7kg

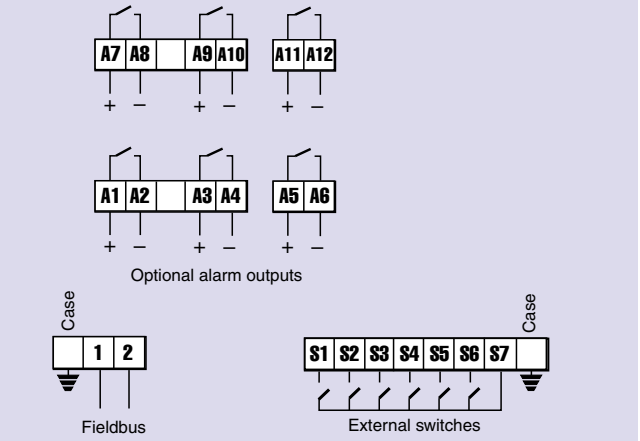
Accessories

Alarms	Six galvanically isolated outputs which may be linked to displayed variables. Configurable as: combined high and low alarm high or low alarm

DIMENSIONS (mm)



TERMINAL CONNECTIONS



Contacts	Isolated single pole solid state switch certified as simple apparatus. Ron less than 5Ω + 0.7V Roff greater than 1MΩ
Intrinsic safety parameters	Ui = 28Vdc Ii = 200mA Pi = 0.84W
Tag number	Thermally printed strip on rear of instrument.
Programming guide	May be downloaded from *www.beka.co.uk*
Fieldbus interface guides	May be downloaded from *www.beka.co.uk*

HOW TO ORDER

	Please specify
Model number	BA488CF
Type of fieldbus	Fieldbus Foundation or Profibus PA
Accessories	**Please specify if required**
Six alarms	Alarms
Tag strip	Legend