BA484DF-P

PROFIBUS PA
Fieldbus display
8 variables

Intrinsically safe for use in gas and dust hazardous areas

Standard display formats: 1, 2, 3, 4 or 8 variables some with bargraphs
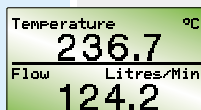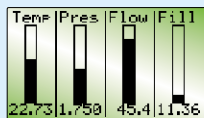
Safe area

◆ **PROFIBUS PA protocol**

◆ **Compatible with most system hosts**

◆ **High contrast display with backlight**

◆ **Intrinsically safe**
   ATEX gas
   or **ATEX gas & dust**
   or **FM & ATEX gas**
   All models have IECEx certification
   FISCO compliant

◆ **Four operator push buttons & six optional local alarm outputs**

◆ **IP66 field mounting GRP enclosure**

◆ **3 year guarantee**
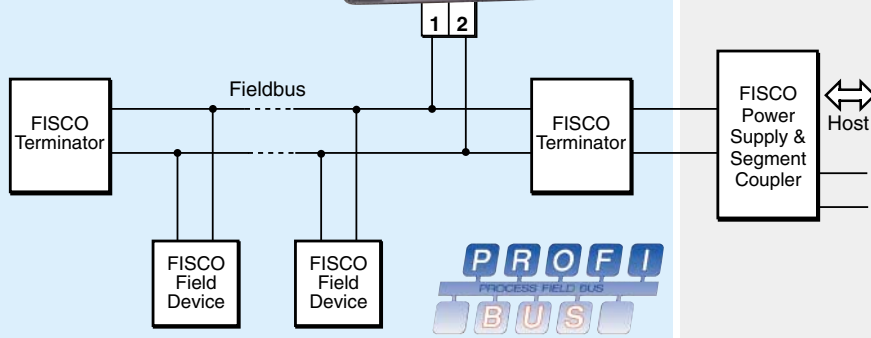
The BA484DF-P Fieldbus Display is an intrinsically safe instrument that can display up to eight fieldbus process variables. Eleven selectable standard screen formats contain one, two, three, four or eight variables, with units of measurement, tag descriptions and bargraphs on some screens.

Powered by the fieldbus the BA484DF-P 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 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 BA484DF-P configuration files onto the system host and selecting the fieldbus variables to be displayed, no programming is required. Configuration of the BA484DF-P Fieldbus Display is performed via the fieldbus and the instrument front panel push buttons.

ATEX, FM and IECEx intrinsic safety certification allows the BABA484DF-P to be installed in gas and dust hazardous areas. The two fieldbus terminals comply with the Fieldbus Intrinsic Safety Concept (FISCO) simplifying system design and documentation, although connection to non-FISCO intrinsically safe systems is possible using the entity concept.
This allows a BA484DF-P display to be directly connected to almost any hazardous fieldbus segment, provided that the segment can supply the 25mA consumed by the display.

Six optional local 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 allowing them to switch any certified intrinsically safe load such as a sounder, lamp or solenoid valve. Alarm configuration and the alarm set point adjustment is performed via the BA484DF-P front panel push buttons, as the local alarms are not accessible from the fieldbus system host.

The four push buttons on the front of the instrument may be used for returning operator acknowledgments or controls to the fieldbus host. If larger industrial switches are required for these operator controls, up to six external push buttons may be connected to the BA484DF-P. 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 a PROFIBUS Interface Guide.

For panel mounting applications see the BA488CF-P datasheet. This instrument has a similar electrical specification but is housed in a 144 x 72 panel mounting enclosure.

For FOUNDATION™ fieldbus systems, please see the datasheet for the equivalent BA484DF-F fieldbus display.

SPECIFICATION

Display
Type	120 x 64 pixel liquid crystal
Size	86.5mm x 45mm
Backlight	Powered from fieldbus
Screens	
Standard format	1, 2, 3, 4 or 8 variables plus bargraph can include: units of measurement tag information

Controls
Front panel	Four push buttons scroll the indicator display between screens when the BA484DF-P is configured to display more variables than fit onto a single screen. Also used to configure optional local alarms and may be used to return operator inputs to the system host.
External switches	Control may be transferred to six external switches; front panel buttons may be inhibited or operated in parallel.
Switch cable	Length 5m max

Fieldbus communication
Voltage	9 to 32V (Limited by intrinsic safety parameters)
Current	25mA
Compliant with	IEC61158–2 Clauses 11 and 22
Protocol	PROFIBUS PA
Function blocks	
PROFIBUS PA	8 x AO (Analogue Output) 6 x DI (Digital Input)

Intrinsic safety
Europe ATEX
Code	Group II Category 1G Ex ia IIC T5 Ga (Tamb = -40ºC to +60ºC)
or	Group II Category 1D Ex ia IIIC T80ºC Da (Tamb = -40ºC to +60ºC) IP66

Dust option, see How to order

Cert. No.	ITS04ATEX22778
Intrinsic safety parameters	U_i = 17.5V I_i = 380mA FISCO compliant P_i = 5.32W
Location	Gas Zone 0, 1 or 2: Dust Zone 20, 21 or 22

USA FM *Option, see How to order*
Standard	3610 Entity
Code	CL I, II, III: Div 1: GP A, B, C, D, E, F & G T4 @ 60˚C
File	3022546
Standard	3611 Nonincendive
Code	CL I: Div 2: GP A, B, C & D, T4 @ 60˚C CL II, III: Div 2: GP F & G, T4 @ 60˚C
File	3022546

International IECEx
Code	Group II Category 1G Ex ia IIC T5 Ga (Tamb = -40ºC to +60ºC)
or	Group II Category 1D Ex ia IIIC T80ºC Da (Tamb = -40ºC to +60ºC) IP66

Dust option, see How to order

Cert. No	IECEx ITS 05.0006

Environmental
Operating temp	-20 to 60°C (ATEX gas certification -40 to 60˚C)
Storage temp	-40 to 85˚C
Humidity	To 95% @ 40˚C
Enclosure	IP66
EMC	In accordance with EU Directive 2004/108/EC
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	CISPR16-1/2 Class A

Mechanical
Terminals	Screw clamp for 0.5 to 1.5mm² cable.
Weight	1.6kg

Accessories
|	
Alarms	Six galvanically isolated outputs which may be linked to displayed variables. Each alarm is configurable from instrument push buttons as: combined high and low alarm high or low alarm

***Note:*** *Alarms are not accessible from the fieldbus system host*

DIMENSIONS (mm)

141

212

91

117

72

This instrument can display one of eleven standard screens

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Two M6 clearance holes for surface mounting

Three cable entries ATEX version: M20 x 1.5 tapped FM version: 22.25 Ø plain hole

TERMINAL CONNECTIONS

| S7 | S6 | S5 | S4 | S3 | S2 | S1 | 2 | 1 | A6 | A5 | A4 | A3 | A2 | A1 |

External switches   Fieldbus   − + − + − +

Optional alarm outputs

Case

| A12 | A11 | A10 | A9 | A8 | A7 |

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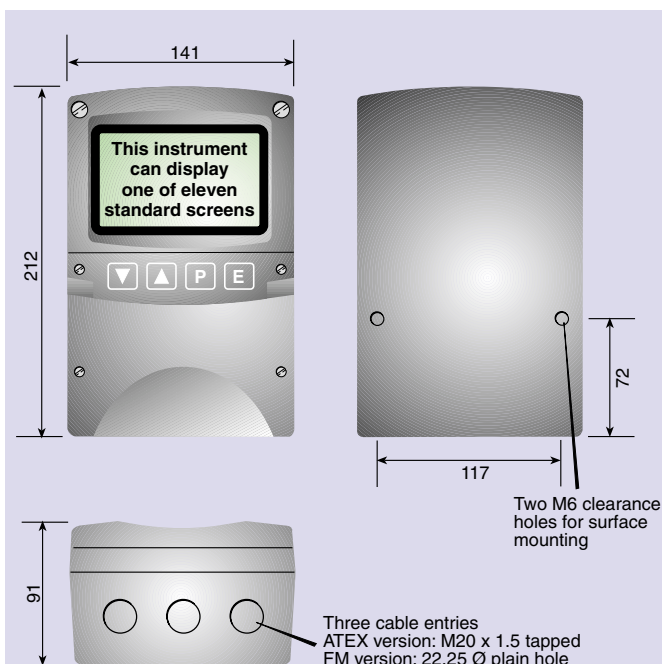
Optional alarm outputs
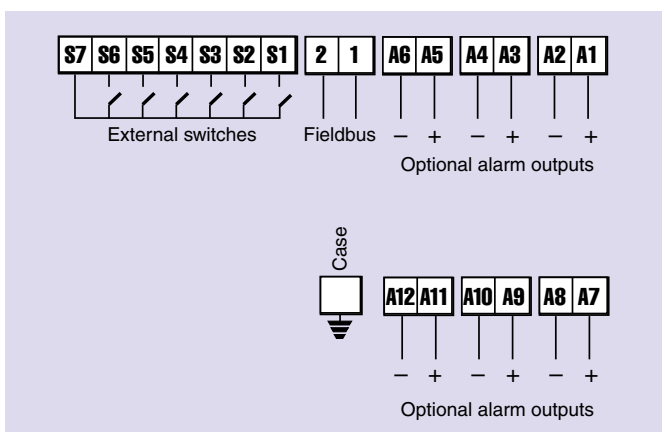
Contacts	Isolated single pole solid state switch certified as simple apparatus. Ron less than 5Ω + 0.7V Roff greater than 1MΩ
Intrinsic safety parameters	U_i = 28Vdc I_i = 200mA P_i = 0.84W
Tag strip	Printed legend behind the display window
Tag plate	Engraved stainless steel plate attached to the side of the instrument.
Pipe mounting kit	BA392D or BA393
PROFIBUS PA interface guide	May be downloaded from *www.beka.co.uk*

HOW TO ORDER

		Please specify	
Model number		BA484DF-P	
Certification		ATEX gas	*All models have IECEx certification.*
	or	ATEX gas & dust	
	or	FM & ATEX gas	*Note: Cable entries differ for FM & ATEX models*

Accessories	**Please specify if required**
Six alarms	Alarms
Tag strip	Tag strip legend
Tag plate	Tag plate legend
Pipe mounting kit	BA392D or BA393

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