

# BA484DF-P

## PROFIBUS PA

### Fieldbus display

#### 8 variables

*Intrinsically safe for use in gas and dust hazardous areas*

- ◆ 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 or INMETRO
- ◆ All models have IECEx certification. FISCO compliant.
- ◆ Four operator push buttons & six optional local alarm outputs.
- ◆ IP66 field mounting GRP enclosure.
- ◆ 3 year guarantee

[www.beka.co.uk/ba484df-p](http://www.beka.co.uk/ba484df-p)



# BEKA

## associates

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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 re-quired. 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.

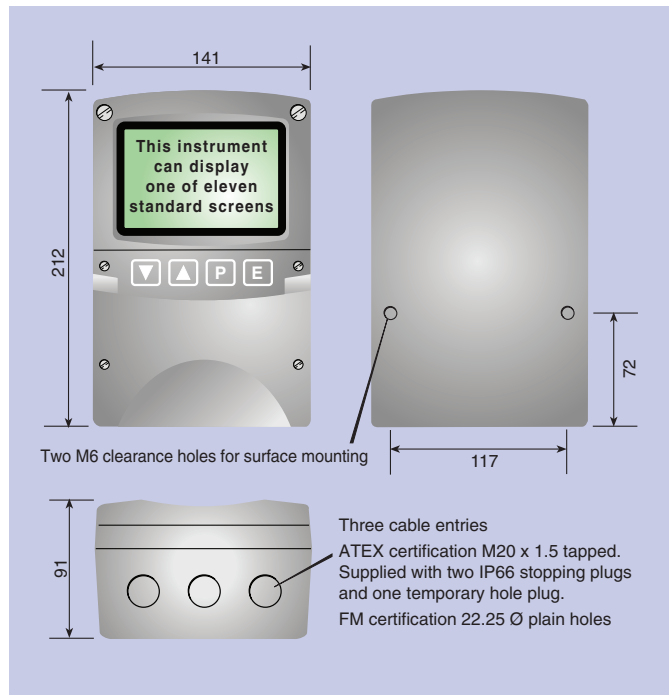
**For panel mounting applications** see the BA488CF-P datasheet. This instrument has a similar electrical specification but is housed in a 144 x 72 panel mounting enclosure.

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

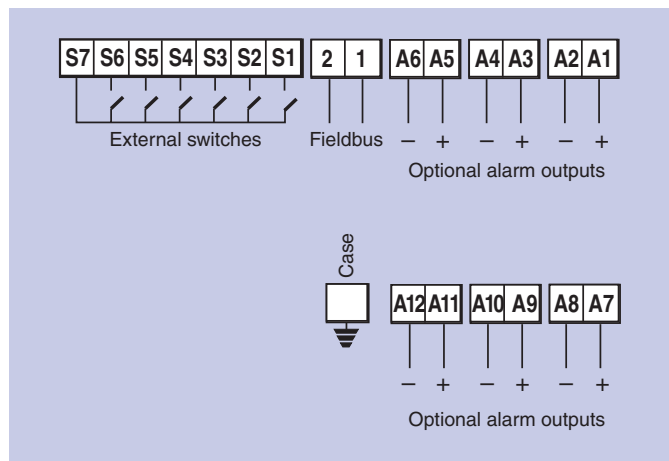
## SPECIFICATION

<b>Display</b>					
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				
<b>Controls</b>					
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				
<b>Fieldbus communication</b>					
Voltage	9 to 32V (Limited by intrinsic safety parameters)				
Current	25mA				
Compliant with Protocol	IEC61158-2 31.25kbits/s Voltage Mode PROFIBUS PA				
Function blocks	8 x AO (Analogue Output) 6 x DI (Digital Input)				
<b>Intrinsic safety</b>					
<b>Europe ATEX</b>					
Code	Group II Category 1G Ex ia IIC T5 Ga (Tamb = -40 to 60°C)				
or	Group II Category 1D Ex ia IIIC T80°C Da (Tamb = -40 to 60°C) IP66 <i>Dust option, see How to order</i>				
Cert. No.	ITS04ATEX22778				
Intrinsic safety parameters	<table border="0"> <tr> <td>U<sub>i</sub> = 17.5V</td> <td rowspan="3">] FISCO compliant</td> </tr> <tr> <td>I<sub>i</sub> = 380mA</td> </tr> <tr> <td>P<sub>i</sub> = 5.32W</td> </tr> </table>	U <sub>i</sub> = 17.5V	] FISCO compliant	I <sub>i</sub> = 380mA	P <sub>i</sub> = 5.32W
U <sub>i</sub> = 17.5V	] FISCO compliant				
I <sub>i</sub> = 380mA					
P <sub>i</sub> = 5.32W					
Location	Gas Zone 0, 1 or 2: Dust Zone 20, 21 or 22				
<b>USA FM</b>					
Standard Code	<i>Option, see How to order</i> 3610 Entity CL I, II, III: Div 1: GP A, B, C, D, E, F & G T4 @ 60°C				
File	3022546				
Standard Code	3611 Nonincendive 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				
<b>International IECEx</b>					
Code	Group II Category 1G Ex ia IIC T5 Ga (Tamb = -40 to 60°C)				
or	Group II Category 1D Ex ia IIIC T80°C Da (Tamb = -40 to 60°C) IP66 <i>Dust option, see How to order</i>				
Cert. No.	IECEx ITS 05.0006				
<b>Brazil INMETRO</b>					
	NCC 12.0845				
<b>Environmental</b>					
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 BS EN 61326:1998				
Immunity	Operates normally with conducted 3Vrms interference between 0.15kHz and 80MHz, or radiated 10V/m interference between 80MHz and 1GHz. CISPR16-1/2 Class A				
Emissions					
<b>Mechanical</b>					
Terminals	Screw clamp for 0.5 to 1.5mm <sup>2</sup> cable.				
Weight	1.6kg				
<b>Accessories</b>					
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				
	<b>Note:</b> Alarms are not accessible from the fieldbus system host				

## 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	U <sub>i</sub> = 28Vdc I <sub>i</sub> = 200mA P <sub>i</sub> = 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 <a href="http://www.beka.co.uk">www.beka.co.uk</a>

## HOW TO ORDER

Model number	<b>Please specify</b> BA484DF-P	<i>All models have IECEx certification. Note: Cable entries differ for FM &amp; ATEX models</i>
Certification	ATEX gas ATEX gas & dust FM & ATEX gas INMETRO gas INMETRO gas & dust	
or		
or		
or		
<b>Accessories</b>	<b>Please specify if required</b>	
Six alarms	Alarms	
Tag strip	Tag strip legend	
Tag plate	Tag plate legend	
Pipe mounting kit	BA392D or BA393	