

The BA684DF Fieldbus Display is a general purpose instrument that can display up to eight fieldbus process variables together with their units of measurement and tag information. Four selectable standard display formats enable one, two or four variables, or a single variable plus a bargraph to be displayed on one screen. Operating a front panel push button changes the display to the next screen or, if only one screen is required, the buttons may be disabled.

Fieldbus Foundation and Profibus PA versions of the BA684DF Fieldbus Display are available and have been registered by both organisations. Configuration files may be downloaded from the appropriate Fieldbus Foundation or Profibus web sites, or from the BEKA associates web site at www.beka.co.uk.

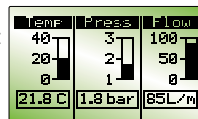
Powered by the fieldbus the BA684DF only requires a 2-wire connection, no additional power supply is required. The high contrast 86 x 45mm liquid crystal display incorporates a green backlight enabling the display to be read in all lighting conditions from full sunlight to total darkness.

Simple commissioning results from the use of standard display formats. Apart from loading the BA684DF configuration files onto the system host and selecting the fieldbus variables to be displayed, no programming is required. Configuration of the BA684DF Fieldbus Display is performed via the fieldbus or the instrument front panel push buttons; simple menus enable the required standard display format to be selected and the units of measurement and tag information for each variable to be entered.

Six optional alarm outputs may be linked to any of the displayed variables. Each isolated single pole solid state output, which will switch a low voltage dc load, may be conditioned as a combined high and low alarm, or as just a high or low alarm.

BA684DF applications vary from a simple single variable display using a standard format, to providing an operator interface with a custom display and control inputs via external buttons.

Custom display screens dedicated to a specific application can be created by writing to the transducer block parameters. Custom displays can contain text in five different font sizes plus lines, boxes, bargraphs, simple graphics and fieldbus process variables. *Typical custom display* Custom displays may be developed using the BEKA text display simulator, which will run on a personal computer and is available free of charge from the BEKA website.



The four 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 acknowledgments, up to six external push buttons may be connected to the BA684DF. When the external switches are activated, the front panel push buttons may be disabled or operated in parallel with the external switches.

A comprehensive programming guide explaining how to design custom screens may be downloaded from the BEKA website. However, for most applications where standard screens are adequate, it is not necessary to refer to this guide.

For panel mounting applications see the BA688CF datasheet. This instrument has a similar electrical specification but is housed in a 144 x 72 panel mounting enclosure.

If flammable atmospheres are present the intrinsically safe BA484DF fieldbus display should be used.

BA684DF

Fieldbus display

General purpose

- **Fieldbus Foundation & Profibus PA models**
- **High contrast display with backlight**
- **Displays up to 8 fieldbus variables**
- **Four operator push buttons & six optional alarm outputs**
- **IP66 field mounting GRP enclosure**
- **3 year guarantee**



BEKA associates

ABLE
Instruments & Controls

SPECIFICATION

Display

Type	120 x 64 pixel liquid crystal
Size	86.5mm x 45mm
Backlight	Powered from fieldbus
Screens	
Standard format	1, 2 or 4 fieldbus variables or 1 variable plus bargraph can include: units of measurement tag information variable status
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	Four 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	Length 5m max

Fieldbus communication

Voltage	9 to 32V
Current	25mA
Compliant with Protocol	IEC61158—2 Clauses 11 and 22 Fieldbus Foundation or Profibus PA
Function blocks	
Fieldbus Foundation	1 x MAO
Profibus PA	8 x AO

Environmental

Operating temp	-20 to +60°C
Humidity	To 95% @ 40°C
Enclosure	IP66
EMC	In accordance with EU Directive 89/336/EEC BS EN 61326:1998 Operates normally with conducted 3Vrms interference between 0.15kHz and 80MHz, or radiated 10V/m interference between 80MHz and 1GHz.
Immunity	CISPR16-1/2 Class A
Emissions	

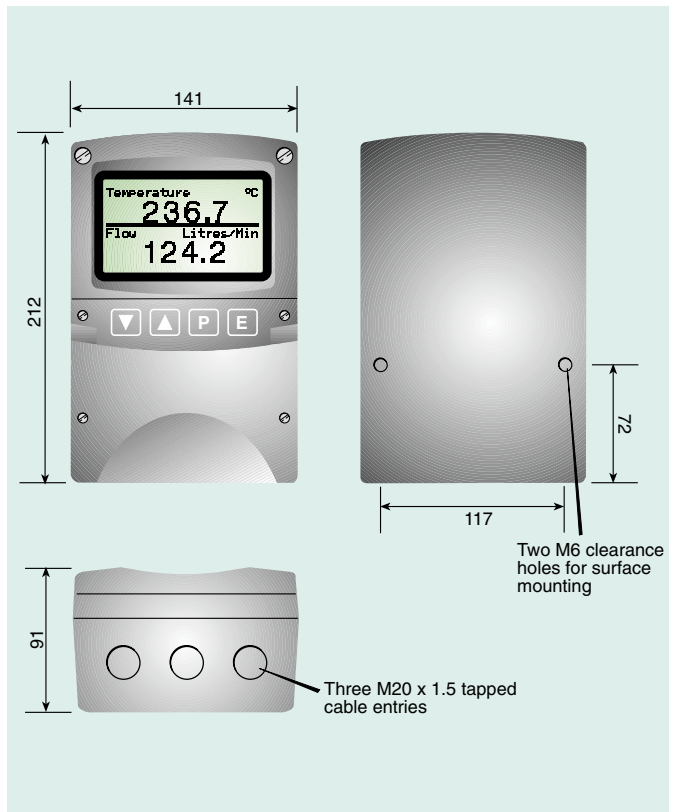
Mechanical

Terminals	Screw clamp for 0.5 to 1.5mm ² cable.
Weight	1.6kg

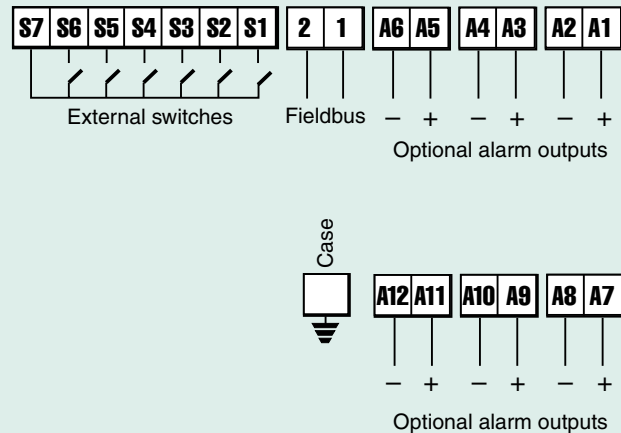
Accessories

Alarms	Six galvanically isolated outputs which may be linked to displayed variables. Configurable as: combined high and low alarm high or low alarm
Contacts	Isolated single pole solid state Ron less than 5Ω + 0.7V Roff greater than 1MΩ Vmax = 30V dc Imax = 200mA
Engraved tag plate	Stainless steel plate attached to the side of the instrument.
Pipe mounting kit	BA392D or BA393
Programming guide	May be downloaded from www.beka.co.uk
Fieldbus interface guide	May be downloaded from www.beka.co.uk

DIMENSIONS (mm)



TERMINAL CONNECTIONS



HOW TO ORDER

Model number
Type of fieldbus

Accessories
Six alarms
Tag plate
Pipe mounting kit

Please specify

BA684DF
Fieldbus Foundation
or Profibus PA

Please specify if required

Alarms
Legend
BA392D or BA393