

The BA489 instrument displays up to eight process variables with engineering units and tag identifications on a 7 inch backlit display which is visible in all lighting conditions. The BA489 is easily configured via the front panel touch buttons using a simple intuitive menu, which will be familiar to anyone who has used a BEKA product. If a Configuration Table is completed when the BA489 is ordered, the display can be supplied configured for installation, for no additional charge.

Nine different display formats allow one, two, four or eight variables to be shown together on a screen. Each variable can be individually scaled and displayed with its units of measurement and tag identification.

International intrinsic safety certification allows the BA489 display to be installed in Zones 0, 1, 2, 20, 21 or 22 throughout the world.

The communication port requires an intrinsically safe power isolator. The BA489 display complies with the Profibus RS485-IS User and Installation Guideline document. BEKA can advise on which third party isolators can be used.

Both BA489 models are powered from a BEKA Power Isolator located in a safe area, or in Zone 2 with IP54 protection. The BA212 Power Isolator should be used for applications in IIB or IIA gases, or in dust atmospheres. It is also suitable for IIC gas applications when the BA489 display and the isolator are close together. Where greater separation in a IIC gas application is required, the BA243 Power Isolator and BA3901 Power Combiner should be used.

For applications in an Ex e or Ex t enclosure the BA489-PC front panel has certified Ex e and Ex t compliant impact and ingress protection. When correctly installed in an Ex e or Ex t apparatus certified enclosure, the BA489-PC does not invalidate the enclosure's certification.

The stainless steel front panel is completely flat and easy to clean. The front of both models have certified IP66 protection for the display and the joint between the display and the panel in which it is mounted. Both models are suitable for installation in areas that are regularly washed or hosed down. The BA489-GL features a toughened glass display window, and the BA489-PC has an impact resistant polycarbonate window with a hard, scratch resistant outer surface.

BA489-GL BA489-PC

Modbus RTU Display

*Intrinsically safe for use in
Zone 0, 1, 2, 20, 21 or 22*

- ◆ Simple configuration
- ◆ Modbus RTU slave
- ◆ Ex ia international intrinsic safety certification.
- ◆ 1 to 8 process variables per screen including bargraphs, units of measurement & tags.
- ◆ 8 controlled tricolour LEDs
- ◆ 8 operator touch buttons
- ◆ 7 inch backlit screen visible in all lighting conditions.
- ◆ IP66 stainless steel front panel:
 - BA489-GL Toughened glass window.
 - BA489-PC Impact resistant window for installation in an Ex e or Ex t enclosure.
- ◆ 3 year guarantee

www.beka.co.uk/ba489



BEKA

associates

BEKA associates Ltd. Old Charlton Rd.
Hitchin, Hertfordshire, SG5 2DA, U.K.
Tel. (0) 1462 438301 e-mail sales@beka.co.uk
website: www.beka.co.uk

SPECIFICATION

Power supply

BA489

Voltage	7.5V min via a BA212 or BA243 Power Isolator.
Current	280mA at 7.5V

Display

Type	FSTN Liquid crystal
Size diagonal	178mm (7 inch)
Resolution	320 x 240 pixels
Backlight	White backlight, turned on or off via a Modbus Coil
Screens	Nine different screen layouts showing 1, 2, 4 or 8 process variables plus bargraph and can include units of measurement and tag information. If further screen customisation is required please contact BEKA.

Controls

Front Panel	Eight projected capacitance touch buttons which can be read as Modbus Inputs. Eight controllable tricolour LEDs can be used as Modbus annunciators.
-------------	--

Communication

Port	Isolated RS485-IS
Protocol	Modbus RTU Slave
Speed	9600, 19200, 38400, 57600 or 115200 bps.
Format	1 or 2 stop bits; odd, even or no parity bit; 8 data bits.
Modbus Address	1-247

Safety certification

International IECEx

Code	Ex ia IIC T4 Ga Ex ia IIIC T135°C Da -40°C ≤ Ta ≤ 65°C
------	--

Safety parameters for Power Port TB1

Ui	12.4V
Ii	2.68A
Pi	5.44W
Ci	0
Li	0

Safety parameters for Communication Port SK100

Complies with requirements specified by Profibus RS485-IS User and Installation Guide 1.1

Ui	4.2V
Uo	3.8V
Io	132mA
Po	126mW
Li	0
Ci	0

Cert. Nos.	IECEX CML 20.0150X IECEX CML 20.0152X
------------	--

Europe ATEX and UK UKCA

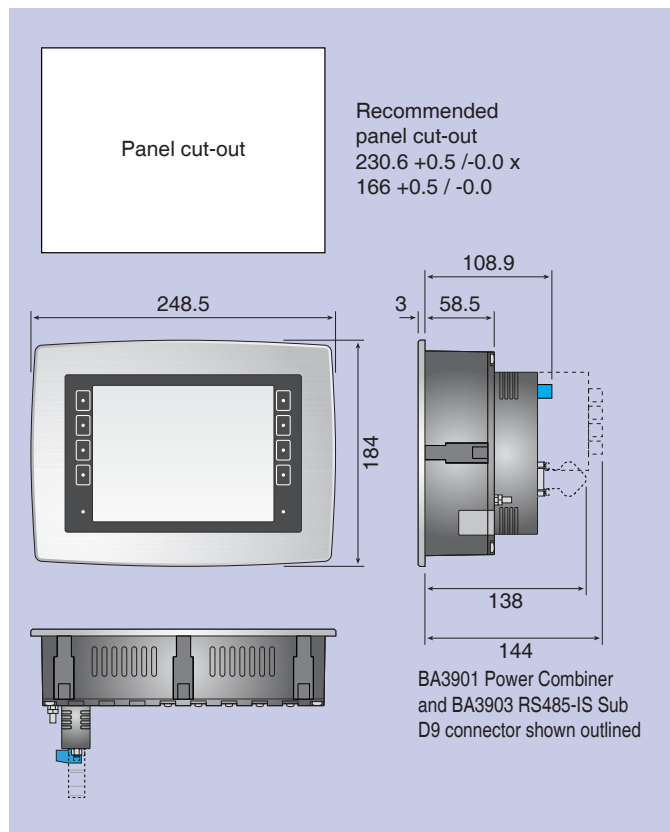
Code	II 1G Ex ia IIC T4 Ga II 1D Ex ia IIIC T135°C Da -40°C ≤ Ta ≤ 65°C
------	--

Safety parameters for each port as IECEx	
Cert. Nos.	CML 20ATEX2252X CML 20ATEX2254X CML 21UKEX2003X CML 21UKEX2005X

Environmental

Operating temp	-40 to +65°C display -20 to +65°C
Storage temp	-40 to +85°C
Humidity	To 95% at 40°C non-condensing
EMC	Complies with UK & European EMC Directive.

DIMENSIONS (mm)



Mechanical

Enclosure	
Front bezel	316 stainless steel
BA489-GL window	Toughened glass
BA489-PC window	Polycarbonate with scratch resistant coating. Certified for installation in Ex e and Ex t enclosures
Sides & rear	Noryl flame class rating UL94V-1
Ingress protection	
Front	IP66
Rear	IP20
Weight	2.0kg

HOW TO ORDER

For intrinsic safety applications.

Please specify

BA489-GL display
Plus BA212 Power Isolator for IIB, IIA gas or dust applications.
or BA243 Power Isolator & BA3901 Power Combiner for IIC gas applications.

For intrinsic safety applications in an Ex e or Ex t enclosure.

BA489-PC display
Plus BA212 Power Isolator for IIB, IIA gas or dust applications.
or BA243 Power Isolator & BA3901 Power Combiner for IIC gas applications.

Configuration

Both models can be supplied configured for no additional charge. If configuration is required please request a Configuration Table from our sales team or download it from our website and submit this document with the purchase order. If configuration information is not specified the BA489 will be supplied with default configuration, but can be configured on-site via the front panel touch buttons or via the Modbus interface.