

Intrinsically Safe and General Purpose **Display Instrumentation**



Product Summary

NEW PAGEANT

IS Operator Panel

Loop Powered Indicators

Modbus & Serial Data
Displays

Universal Process Panel
Meters

Set Point Stations
[Generators]

Rate Totalisers

Counters

Tachometers

Timers or Clocks

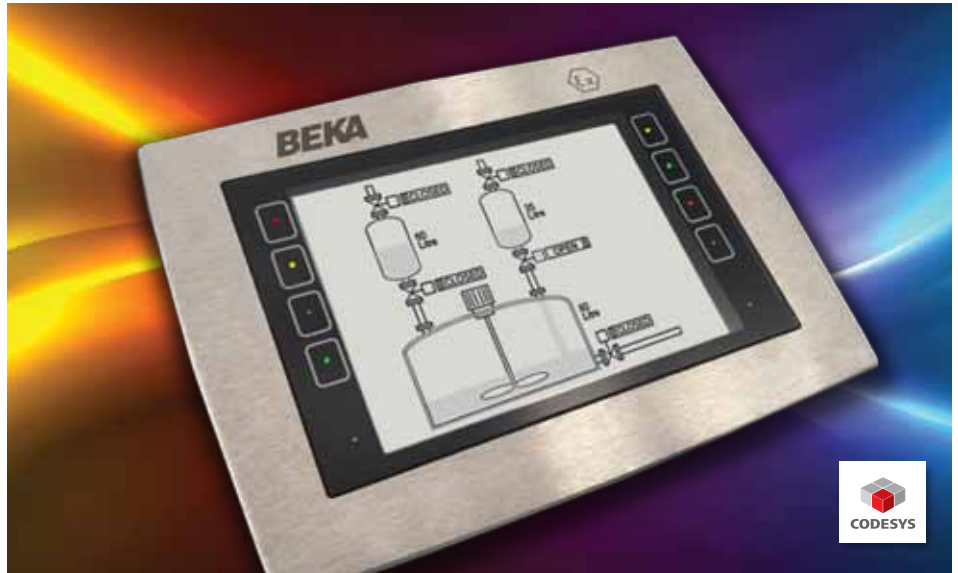
Fieldbus Indicators
& Displays

Flow Batch Controllers

Indicating Temperature
Transmitters

Sounders & Beacons

LED Cluster Lamps



www.beka.co.uk



MEMBER

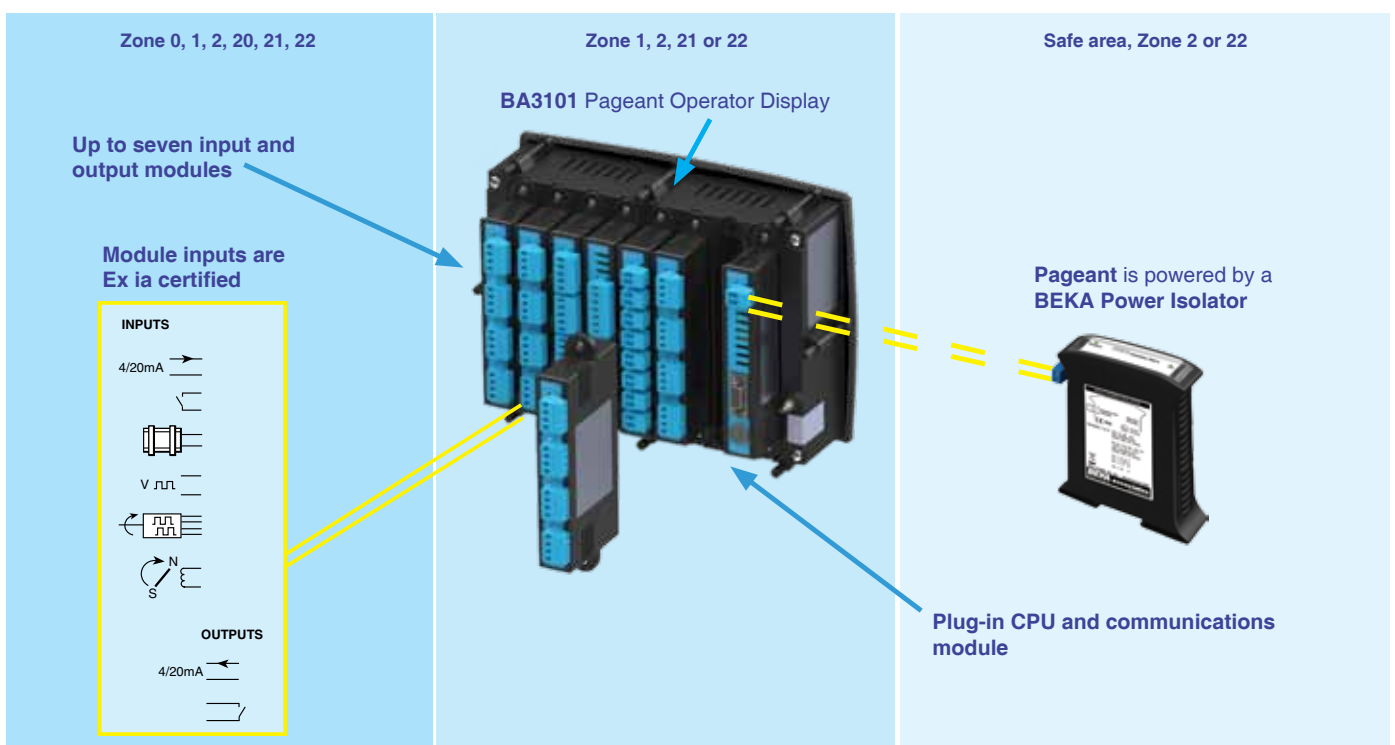




Ex ia Intrinsically Safe



- > Low cost combined operator panel, PLC & I/O modules
- > Intrinsic safety Ex ia certification allows installation in Zones 1, 2, 21 or 22
- > 7 Inch backlit operator screen
- > IEC 61131 compliant PLC
- > Up to 7 plug-in input or output modules
- > 8 touch buttons with tricolour annunciators
- > IP66 toughened window and stainless steel front panel
- > 3 year guarantee





BA3101
Intrinsically Safe Operator Display
 FSTN Liquid Crystal
 178mm (7 inch) diagonal, 320 x 240 pixels
 White Backlight, brilliance adjustable
 8 Touch buttons & 2 Tri-colour annunciators



BA3201
CPU without external communication
 Operating system, memory and power distribution
 CODESYS PLC IEC 61131 compliant



BA3202
CPU with Modbus RTU communication
 Operating system, memory and power distribution
 CODESYS PLC IEC 61131 compliant
 Modbus Master or Slave
 Isolated RS485-IS



BA212
Power Isolator IIA or IIB applications
 4.4W Typical output
 Safe area or zone 2 mounting
 DIN rail mounting, 22.5mm Wide



BA243
Power Isolator IIC applications
 4-Channel, combined output 4.4W
 Safe area or zone 2 mounting
 DIN rail mounting, 97mm Wide



BA3901
Power Combiner
 Required for BA243
 Extends cable length for IIC applications
 Mounts onto CPU Module



BA3301
Analogue input module
 4 x 4/20mA inputs
 Individually isolated unpowered inputs
 Consumes 4% of power available for modules



BA3401
Digital input module
 8 x Contact or open collector
 Quadrature decoder using 2 inputs
 Consumes 4% of power available for modules



BA3402
Digital input module
 8 x NAMUR 2 wire proximity detector inputs
 Quadrature decoder using 2 inputs
 Consumes 40% of power available for modules



BA3501
Analogue output module
 4 x 4/20mA outputs
 Individually isolated unpowered outputs
 Consumes 4% of power available for modules



BA3601
Digital output module
 4 solid state contact outputs
 Individually isolated
 Consumes 4% of power available for modules



BA3701
Totaliser/counter module
 2 Non-isolated 2-wire NAMUR inputs
 2 Isolated synchronous pulse outputs
 Consumes 24% of power available for modules

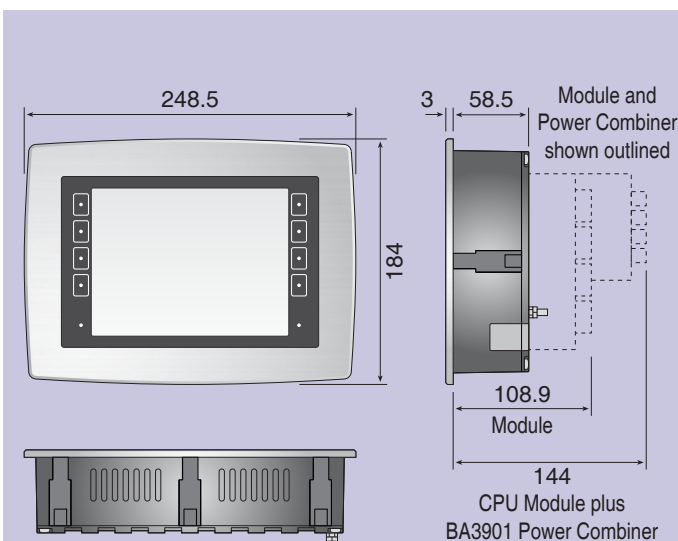


BA3902
USB Programming Cable
 Dedicated to Pageant
 Required to protect IS circuits



BA3903
RS485-IS Connector
 Sub D9 connector
 Required for connecting CPU to RS485-IS comms

DIMENSIONS for BA3101 Operator Display



SPECIFICATION

Power supply

Voltage 20 to 30Vdc via Power Isolator
 Current Depends on modules fitted 320mA typ.

Certification (typical, see specific data sheet)

IECEx Ex ia IIC T4 Ga
 Ex ia IIIC T135°C Da
 ATEX & UKEX II 1G Ex ia IIC T4 Ga
 II 1D Ex ia IIIC T135°C Da
 * Dust certification requires IP54 enclosure

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 EMC directive 2014/30/EU

Materials

Display front 316 Stainless steel
 4mm Toughened window
 Flat, easy to clean & bevelled outside edges
 Display rear Flame retardant Noryl
 Power Isolator Flame retardant ABS & Polycarbonate
 Modules Flame retardant Noryl

Ingress Protection

Display IP66 (front) IP20 (rear)
 Modules IP20

Field Mounting

4/20mA Loop Powered Digital Indicators



Ex i Intrinsically Safe

Ex eb Increased Safety

Ex d Flameproof

General Purpose

An extensive range of 4/20mA loop powered field mounting indicators in GRP and 316 stainless steel enclosures.

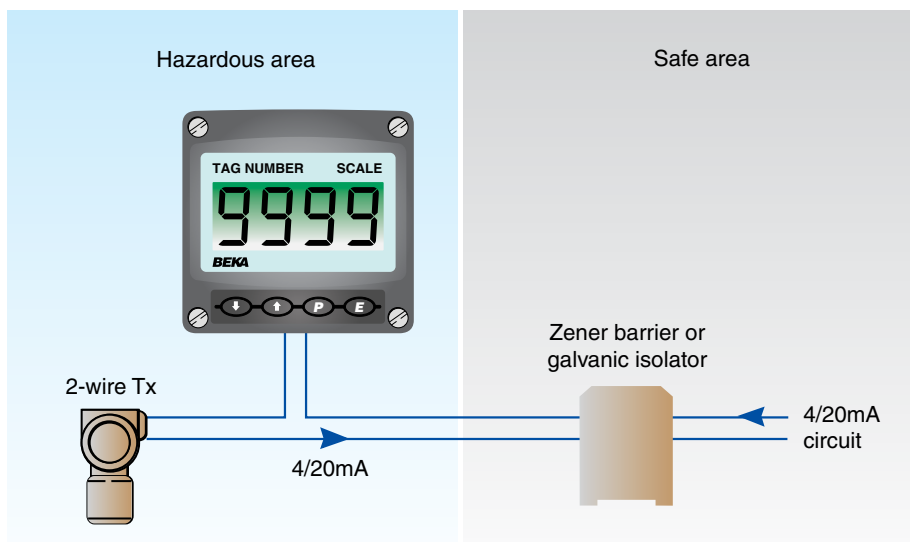
- > **Large high contrast displays with a wide viewing angle**
- > **General purpose and certified hazardous area models**
International Ex ia gas and dust intrinsic safety,
Ex eb increased safety and
Ex t dust ignition protection certification.
- > **Robust impact resistant GRP and 316 stainless steel IP66 enclosures**
- > **Internal calibrator, root extractor, lineariser & tare function**
- > **-40 to +70°C operating temperature range**
- > **Accessories**
 - Dual isolated alarms
 - Display backlight may be loop or separately powered
 - Pipe & panel mounting kits
 - Scale cards - *can be supplied printed with units of measurement and tag information for no additional charge.*
 - Laser engraved stainless steel legend plates



Slide-in scale card can be supplied printed with customer specified information for no extra charge.



'G' instrument panel mounted using BA494G panel mounting kit.



'G' instrument attached to pipe using BA393G panel mounted kit.

An **indicator** for every **application** -
delivered ready for **installation**



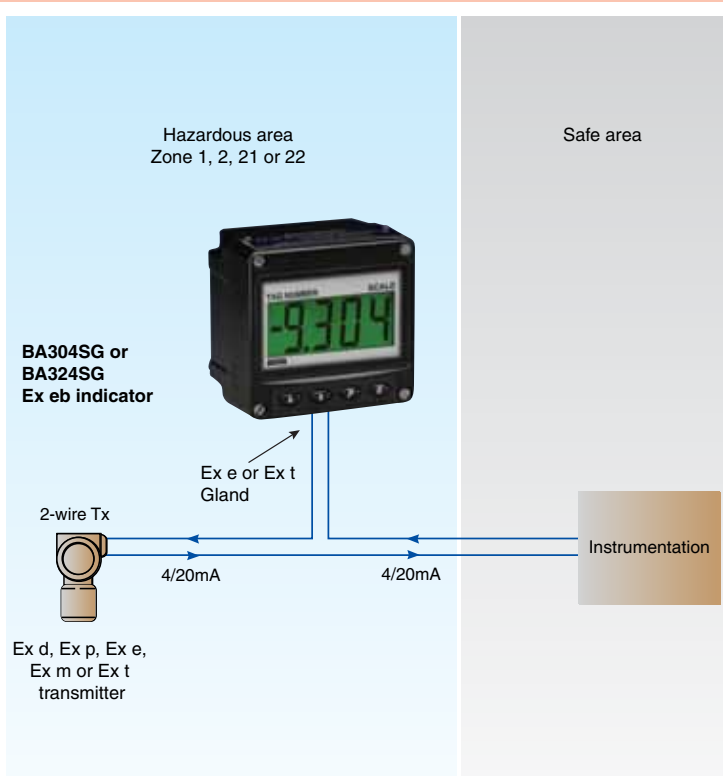
Models available

Model No.	Enclosure	Display				Certification					
		Digits		Bargraph		Europe/UK ATEX/UKEX		International IECEx		USA & Canada	
		Number	Height	Segments	Length	Gas	Dust	Gas	Dust	Gas	Dust
Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 21 & 22											
BA304G ▲	GRP Compact	4	34mm	—	—	✓	✓	✓	✓	✓	✓
BA304G-SS ▲	Stainless Steel	4	34mm	—	—	✓	✓	✓	✓	✓	✓
BA324G ▲	GRP Compact	5	29mm	31	83mm	✓	✓	✓	✓	✓	✓
BA324G-SS ▲	Stainless Steel	5	29mm	31	83mm	✓	✓	✓	✓	✓	✓
Ex eb ib mb & Ex ib mb tb for use in Zones 1 and 2, 21 and 22 without Zener barriers or galvanic isolators											
BA304SG	GRP Compact	4	34mm	—	—	✓	✓	✓	✓	—	—
BA324SG	GRP Compact	5	29mm	31	83	✓	✓	✓	✓	—	—
Ex d & Ex td Flameproof for use in Zones 1, 2, 21 and 22											
BR323AL	Aluminium	5	10mm	—	—	✓	✓	—	—	—	—
BR323SS	Stainless Steel	5	10mm	—	—	✓	✓	—	—	—	—
General Purpose - for use in safe areas											
BA504G	GRP Compact	4	34mm	—	—						
BA504G-SS	Stainless Steel	4	34mm	—	—						
BA524G	GRP Compact	5	29mm	31	83mm						
BA524G-SS	Stainless Steel	5	29mm	31	83mm						

CCC Ex certified

Ex eb alternative to flameproof Ex d indicators

- > *Less expensive*
- > *Large easier to read displays*
- > *Zener barriers or galvanic isolators not required.*
- > *Gas and dust certification*



Panel Mounting

4/20mA Loop Powered Digital Indicators



Intrinsically safe

Ex ec

General purpose

An extensive range of panel mounting 4/20mA loop powered indicators in Noryl or rugged 316 stainless steel enclosures.

- > **Large high contrast displays with a wide viewing angle**
- > **General purpose and certified hazardous area models**
International Ex ia intrinsic safety and Ex ec non sparking certification.
- > **Rugged stainless steel Ex ia models**
May be installed in certified Ex e, Ex p or Ex t panel enclosure without invalidating the enclosure's certification.
- > **Combined analogue and digital display indicators**
- > **IP66 front panels**
- > **Internal calibrator, root extractor, lineariser & tare function**
- > **-40 to +70°C operating temperature range**
- > **Accessories**
Dual isolated alarms
Display backlight may be loop or separately powered
Scale card - *can be supplied printed with units of measurement and tag information for no additional charge.*
BA495 rear IP66 sealing kit



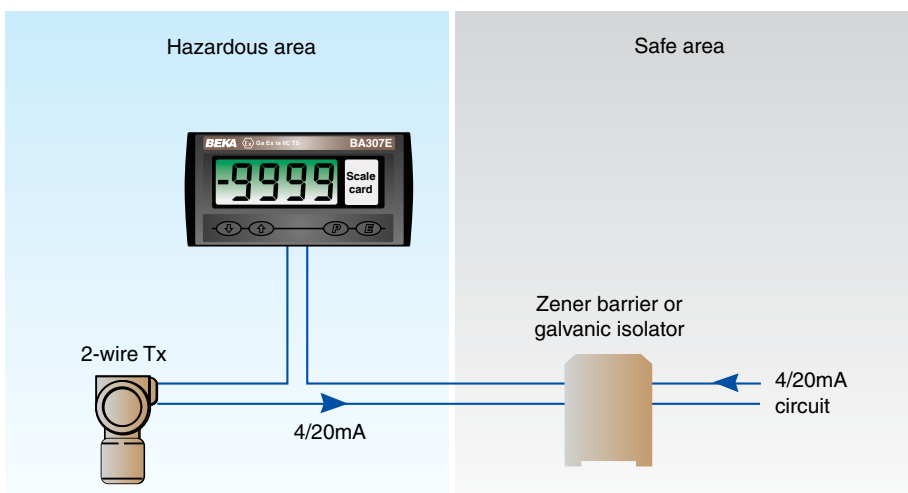
Rugged indicator maintains panel enclosure's impact and ingress protection and does not invalidate its certification.



Gasket provides IP66 seal to panel



Sturdy panel clamps supplied with unit



Easy scale card installation without the need to remove indicator from the panel.

An **indicator** for every **application** -
delivered ready for **installation**



Models available

Model No.	Enclosure	Display				Certification					
		Digits		Bargraph		Europe/UK ATEX/UKEX		International IECEx		USA & Canada	
		Number	Height	Segments	Length	Gas	Dust	Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 21 & 22

BA304G-SS-PM* ▲	Rugged 120 x 122	4	34mm	—	—	✓	✓	✓	✓	—	—
BA324G-SS-PM* ▲	Rugged 120 x 122	5	29mm	31	83mm	✓	✓	✓	✓	—	—
BA307E ▲	96 x 48	4	15mm	—	—	✓	✓	✓	✓	✓	—
BA308E ▲	144 x 72	4	34mm	—	—	✓	✓	✓	✓	✓	—
BA327E ▲	96 x 48	5	12.7mm	31	44mm	✓	✓	✓	✓	✓	—
BA328E ▲	144 x 72	5	29mm	31	83mm	✓	✓	✓	✓	✓	—
BA326C	144 x 48 Combined	4½	5.5mm	100	95mm	✓	—	✓	—	—	—
BA307E-SS*	Rugged 105 x 60	4	15mm	—	—	✓	✓	✓	✓	✓	—
BA327E-SS*	Rugged 105 x 60	5	12.7mm	31	44mm	✓	✓	✓	✓	✓	—

* Certification allows installation in an Ex e, or Ex p or Ex t panel enclosure without invalidating enclosure certification

Ex ec & Ex tc - for use in Zones 2 and 22 without Zener barriers or galvanic isolators

BA307SE	Rugged 105 x 60	4	15mm	—	—	✓	✓	✓	✓	—	—
BA327SE	Rugged 105 x 60	5	12.7mm	31	44mm	✓	✓	✓	✓	—	—

General Purpose - for use in safe areas

BA504G-SS-PM	Rugged 120 x 122	4	34mm	—	—						
BA524G-SS-PM	Rugged 120 x 122	5	29mm	31	83mm						
BA507E	96 x 48	4	15mm	—	—						
BA508E	144 x 72	4	34mm	—	—						
BA527E	96 x 48	5	12.7mm	31	44mm						
BA528E	144 x 72	5	29mm	31	83mm						
BA526C	144 x 48 Combined	4½	5.5mm	100	95mm						
BA507E-SS	Rugged 105 x 60	4	15mm	—	—						
BA527E-SS	Rugged 105 x 60	5	12.7mm	31	44mm						

Ex ia Panel Lamps



Bright, low cost panel mounting lamps with IP66 front of panel protection which have a ten year life expectancy.

- > Red, Amber, Green, Blue & White models
- > BA390 lamps have 20mA constant current consumption
- > BA390S lamps have specified performance at 4mA
- > BA599 rear sealing kit includes cable gland

Now **IECEX & ATEX** dust certified



Models available

Model No.	Certification					
	Europe/UK ATEX/ UKEX		International IECEx		USA	
	Gas	Dust	Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 and 20, 21 & 22

BA390 20mA constant current	✓	✓	✓	✓	✓	—
BA390S Low current specified performance at 4mA	✓	✓	✓	✓	✓	—

General Purpose - for use in safe areas

BA590 20mA constant current

Field Mounting Rate Totalisers



This extensive range includes one and two pulse input instruments and loop powered 4/20mA rate totalisers. All models can display rate of flow and total flow on separate displays in the same or different engineering units. The pulse input instruments will operate with most types of sensor and all models include square root extraction and an adjustable lineariser enabling flow to be displayed in linear engineering units.

- > **Large high contrast separate rate and total displays with wide viewing angle**
- > **General purpose and certified hazardous area models**
International Ex ia intrinsic safety
Dust certification
- > **Robust impact resistant IP66 GRP enclosures**
Compact 'G' models
'E' models with separate terminal compartment
- > **Isolated pulse output**
- > **-40 to +70°C operating temperature range**
- > **Accessories**
Dual isolated alarms
Isolated 4/20mA output
Backlight
Pipe & panel mounting kits
Scale cards - *can be supplied printed with units of measurement and tag information for no additional charge.*
Laser engraved stainless steel legend plates



A **Rate Totaliser**
for every **application** . . .

Models available

Model No.	Enclosure	Input	Powered	Display digits		Certification					
				TOTAL No. x height	RATE No. x height	Europe/UK ATEX/UKEX		International IECEX		USA & Canada	
						Gas	Dust	Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 21 & 22 where certified

BA334G ▲	GRP Compact	Pulse	External	8 x 18mm	6 x 12mm	✓	✓	✓	✓	✓	✓
BA334E ▲	GRP- separate tml. compartment	Pulse	External	8 x 18mm	6 x 12mm	✓	–	✓	–	✓	✓
BA354E ▲	GRP- separate tml. compartment	4/20mA	Loop	8 x 18mm	5 x 12mm	✓	✓	✓	✓	✓	✓
BA384G ▲	GRP Compact	2 x Pulse	External	8 x 18mm	6 x 12mm	✓	✓	✓	✓	✓	✓
BA384E ▲	GRP - separate tml. compartment	2 x Pulse	External	8 x 18mm	6 x 12mm	✓	–	✓	–	✓	✓

General Purpose - for use in safe areas

BA534G	GRP Compact	Pulse	External	8 x 18mm	6 x 12mm						
BA554E	GRP- separate tml. compartment	4/20mA	Loop	8 x 18mm	5 x 12mm						
BA584G	GRP Compact	2 x Pulse	External	8 x 18mm	6 x 12mm						

CCC Ex certified

Panel Mounting Rate Totalisers



Includes one and two pulse input instruments and loop powered 4/20mA rate totalisers which can display rate and total flow separately. The pulse input instruments will operate with most types of sensor and all models include square root extraction and an adjustable lineariser. The rugged stainless steel totalisers can be safely mounted in a certified Ex e, Ex p or Ex t panel enclosure without invalidating the panel enclosure's certification.



- > **Large high contrast displays with wide viewing angle**
- > **General purpose and certified hazardous area models**
International Ex ia intrinsic safety certification.
- > **Rugged stainless steel Ex ia models**
May be installed in a certified Ex e, Ex p or Ex t panel enclosure without invalidating the enclosure's certification.
- > **Isolated pulse output**
- > **IP66 front panels**
- > **-40 to +70°C operating temperature range**
- > **Accessories**
Dual isolated alarms
Isolated 4/20mA output
Backlight
Scale cards - can be supplied printed with units of measurement and tag information for no additional charge.
IP66 rear sealing kit.

...delivered ready for **installation**

Models available

Model No.	Enclosure	Input	Powered	Display digits		Certification					
				TOTAL No. x height	RATE No. x height	Europe/UK ATEX/UKEX		International IECEX		USA & Canada	
						Gas	Dust	Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 21 & 22 where certified

BA337E ▲	96 x 48	Pulse	External	8 x 9mm	6 x 6mm	✓	—	✓	—	✓	✓
BA337E-SS* ▲	Rugged 105 x 60	Pulse	External	8 x 9mm	6 x 6mm	✓	✓	✓	✓	✓	✓
BA338E ▲	144 x 72	Pulse	External	8 x 18mm	6 x 12mm	✓	—	✓	—	✓	✓
BA358E ▲	144 x 72	4/20mA	Loop	8 x 18mm	5 x 12mm	✓	✓	✓	✓	✓	—
BA388E ▲	144 x 72	2 x Pulse	External	8 x 18mm	6 x 12mm	✓	—	✓	—	✓	✓

* Certification allows installation in an Ex e, or Ex p or Ex t panel enclosure without invalidating enclosure certification

General Purpose - for use in safe areas

BA537E	96 x 48	Pulse	External	8 x 9mm	6 x 6mm
BA537E-SS	Rugged 105 x 60	Pulse	External	8 x 9mm	6 x 6mm
BA538E	144 x 72	Pulse	External	8 x 18mm	6 x 12mm
BA558E	144 x 72	4/20mA	Loop	8 x 18mm	5 x 12mm
BA588E	144 x 72	2 x Pulse	External	8 x 18mm	6 x 12mm

CCC Ex certified

Counters



An extensive range of one and two input pulse counters which can display total and rate on separate displays in the same or different engineering units. The two input models can display the sum or differences of the inputs and can also decode a quadrature detector and display position.

> **Large high contrast displays with wide viewing angle**

> **General purpose and certified hazardous area models**

International Ex ia intrinsic safety
Dust certification

> **Field mounting models have IP66 GRP enclosure**

Compact 'G' models
'E' models with separate terminal compartment
Pipe and panel mounting accessories

> **Panel mounting models**

Choice of sizes all with IP66 front panels.
Rugged stainless steel Ex ia model may be installed in certified Ex e, Ex p or Ex t panel enclosure without invalidating the enclosure's certification.
Rear IP66 sealing kit

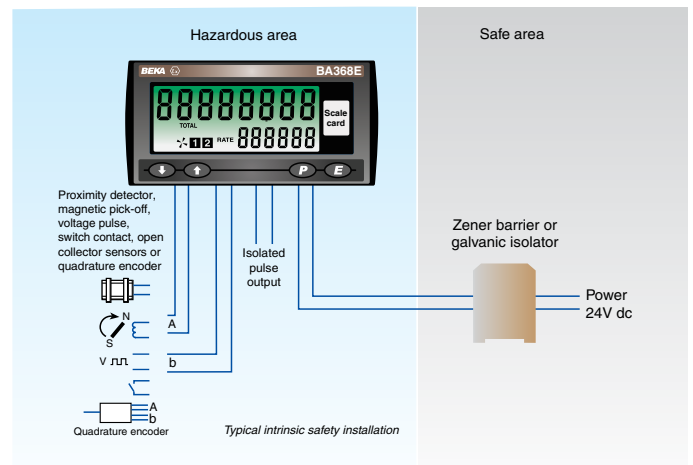
> **Isolated pulse output**

Synchronous with input for retransmission

> **-40 to +70°C operating temperature range**

> **Accessories**

Dual isolated alarms
Isolated 4/20mA output
Backlight
Scale cards - *can be supplied printed with units of measurement and tag information for no additional charge.*
Laser engraved stainless steel legend plates



Models available

Model No.	Mounting	Input	Display digits		Certification					
			TOTAL No. x height	RATE No. x height	Europe/UK ATEX/UKEX		International IECEX		USA & Canada	
					Gas	Dust	Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 21 & 22 where certified

BA364G ▲	Field compact	2 x Pulse	8 x 18mm	6 x 12mm	✓	✓	✓	✓	✓	✓
BA364E ▲	Field - separate tml. compartment	2 x Pulse	8 x 18mm	6 x 12mm	✓	—	✓	—	✓	✓
BA367E ▲	Panel 96 x 48	Pulse	8 x 9mm	6 x 6mm	✓	—	✓	—	✓	✓
BA367E-SS* ▲	Panel Rugged 105 x 60	Pulse	8 x 9mm	6 x 6mm	✓	✓	✓	✓	✓	✓
BA368E ▲	Panel 144 x 72	2 x Pulse	8 x 18mm	6 x 12mm	✓	—	✓	—	✓	✓

* Certification allows installation in an Ex e, Ex p or Ex t panel enclosure without invalidating enclosure certification

General Purpose - for use in safe areas

BA564G	Field compact	2 x Pulse	8 x 18mm	6 x 12mm						
BA567E	Panel 96 x 48	Pulse	8 x 9mm	6 x 6mm						
BA567E-SS	Panel Rugged 105 x 60	Pulse	8 x 9mm	6 x 6mm						
BA568E	Panel 144 x 72	2 x Pulse	8 x 18mm	6 x 12mm						

A Counter for every application - delivered ready for installation

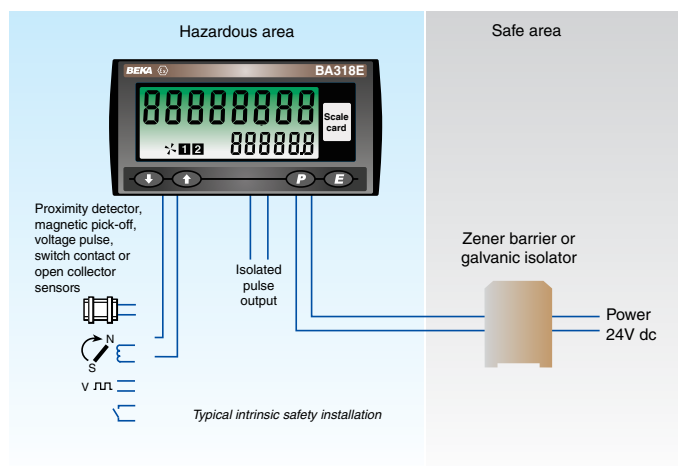
CCC Ex certified

Tachometers



A tachometer for every application which can display speed and run-time on separate displays. Operates with most transducers.

- > **Large high contrast displays with wide viewing angle**
- > **General purpose and certified hazardous area models**
International Ex ia intrinsic safety
Dust certification.
- > **Field mounting models have IP66 GRP enclosure**
Compact 'G' models
'E' models with separate terminal compartment
Pipe and panel mounting accessories
- > **Panel mounting models**
Choice of sizes all with IP66 front panels
Rugged stainless steel Ex ia model may be installed in certified Ex e, Ex p or Ex t panel enclosure without invalidating the enclosure's certification.
Rear IP66 sealing kit
- > **Isolated pulse output**
Synchronous with input for retransmission
- > **-40 to +70°C operating temperature range**
- > **Accessories**
Dual isolated alarms
Isolated 4/20mA output
Backlight
Scale cards - *can be supplied printed with units of measurement and tag information for no additional charge.*
Laser engraved stainless steel legend plates



Models available

Model No.	Mounting	Input	Display digits		Certification					
			SPEED No. x height	RUN-TIME No. x height	Europe/UK ATEX/UKEX		International IECEX		USA & Canada	
					Gas	Dust	Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 21 & 22 where certified

BA314G ▲	Field compact	Pulse	8 x 18mm	6 x 12mm	✓	✓	✓	✓	✓	✓
BA314E ▲	Field - separate tml. compartment	Pulse	8 x 18mm	6 x 12mm	✓	—	✓	—	✓	✓
BA317E ▲	Panel 96 x 48	Pulse	8 x 9mm	6 x 6mm	✓	—	✓	—	✓	✓
BA317E-SS* ▲	Panel Rugged 105 x 60	Pulse	8 x 9mm	6 x 6mm	✓	✓	✓	✓	✓	✓
BA318E ▲	Panel 144 x 72	Pulse	8 x 18mm	6 x 12mm	✓	—	✓	—	✓	✓

* Certification allows installation in an Ex e, Ex p or Ex t panel enclosure without invalidating enclosure certification

General Purpose - for use in safe areas

BA514G	Field compact	Pulse	8 x 18mm	6 x 12mm
BA517E	Panel 96 x 48	Pulse	8 x 9mm	6 x 6mm
BA517E-SS	Panel Rugged 105 x 60	Pulse	8 x 9mm	6 x 6mm
BA518E	Panel 144 x 72	Pulse	8 x 18mm	6 x 12mm

CCC Ex certified

Speed measurement for every application - delivered ready for installation

Timers or Clocks



One and two input instruments that can be configured as a Timer or as a Clock. As a Timer they can measure and display elapsed time between events, or control events via optional control outputs. As a Clock local time is displayed and optional control outputs can be configured to turn on and off twice in each 24 hour period.

> **Large high contrast displays with wide viewing angle**

> **General purpose and certified hazardous area models**

International Ex ia intrinsic safety
Dust certification

> **Field mounting models have IP66 GRP enclosure**

Compact 'G' models
'E' models with separate terminal compartment
Pipe and panel mounting accessories

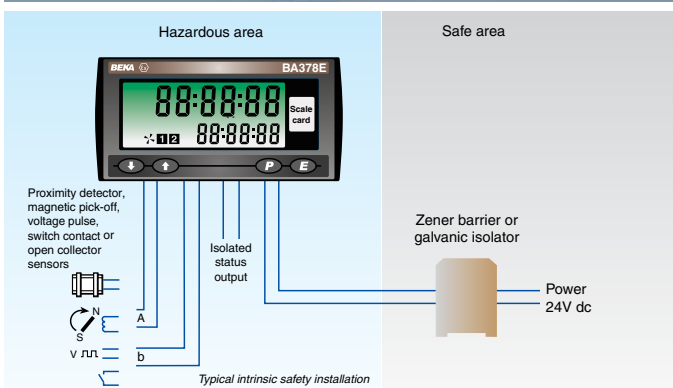
> **Panel mounting models**

Choice of sizes all with IP66 front panels
Rugged stainless steel Ex ia model may be installed in certified Ex e, Ex p or Ex t panel enclosure without invalidating the enclosure's certification.
Rear IP66 sealing kit

> **-40 to +70°C operating temperature range**

> **Accessories**

Dual isolated control outputs
Backlight
Scale cards - can be supplied printed with units of measurement and tag information for no additional charge.
Laser engraved stainless steel legend plates



Models available

Model No.	Mounting	Input	Display digits		Certification					
			PRIMARY No. x height	SECONDARY No. x height	Europe/UK ATEX/UKEX		International IECEX		USA & Canada	
					Gas	Dust	Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 21 & 22 where certified

BA374G ▲	Field compact	2 x Sensors	8 x 18mm	6 x 12mm	✓	✓	✓	✓	✓	✓
BA374E ▲	Field - separate tml. compartment	2 x Sensors	8 x 18mm	6 x 12mm	✓	—	✓	—	✓	✓
BA377E ▲	Panel 96 x 48	Sensor	8 x 9mm	6 x 6mm	✓	—	✓	—	✓	✓
BA377E-SS* ▲	Panel Rugged 105 x 60	Sensor	8 x 9mm	6 x 6mm	✓	✓	✓	✓	✓	✓
BA378E ▲	Panel 144 x 72	2 x Sensors	8 x 18mm	6 x 12mm	✓	—	✓	—	✓	✓

* Certification allows installation in an Ex e, Ex p or Ex t panel enclosure without invalidating enclosure certification

General Purpose - for use in safe areas

BA574G	Field compact	2 x Sensors	8 x 18mm	6 x 12mm
BA577E	Panel 96 x 48	Sensor	8 x 9mm	6 x 6mm
BA577E-SS	Panel Rugged 105 x 60	Sensor	8 x 9mm	6 x 6mm
BA578E	Panel 144 x 72	2 x Sensors	8 x 18mm	6 x 12mm

A Timer/clock for every application - delivered ready for installation

CCC Ex certified

Modbus, Serial Data & Message Displays



Low cost operator interfaces with graphical display, push buttons and switch outputs, for simple display and machine control in hazardous and safe areas.

> Applications:

Modbus slave display

view up to 8 variables

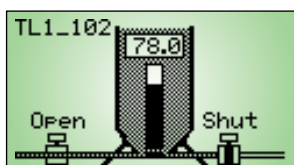
ASCII data display

view output from weighing system, RFID reader or any similar device.

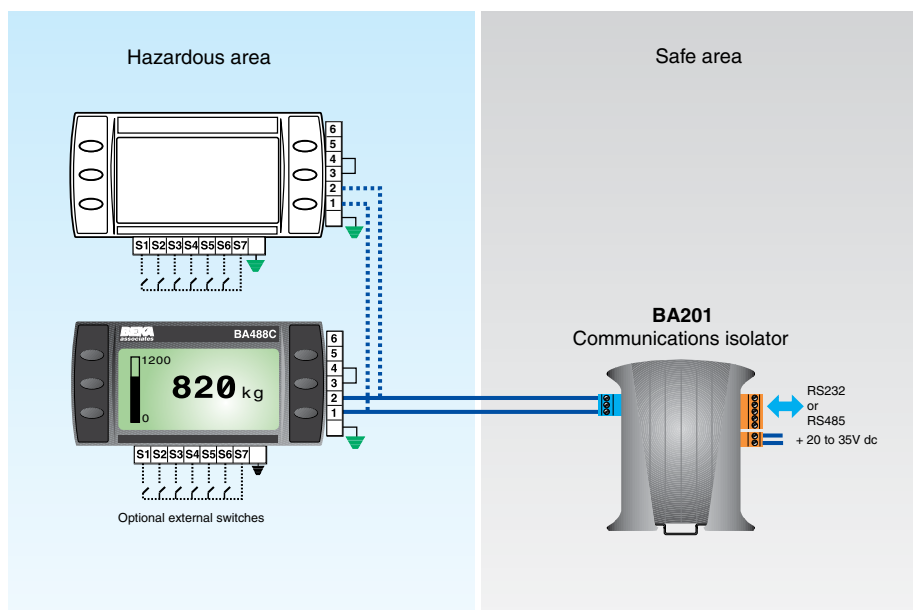
Message display

view operator instructions

- > Up to 8 variables shown on 11 standard or custom screens.



- > Push buttons status returned to system host.
- > 2 isolated software controlled outputs.
- > Intrinsically safe models are powered and communicate via BA201 isolator which has RS232 and RS485 ports.
- > General purpose models have RS232 or RS485 port.
- > Panel & field mounting models
- > Free ScreenWriter software and simulator enable control programmes and custom screens to be developed on a Windows PC.



Models available

Model No.	Mounting	Operator buttons	Communication	Certification					
				Europe/UK ATEX/UKEX		International IECEx		USA & Canada	
				Gas	Dust	Gas	Dust	Gas	Dust
Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 20, 21 & 22 where certified									
BA484D	Field	4	Via BEKA BA201 galvanic isolator	✓	✓	✓	✓	✓	✓
BA488C	Panel 144 x 72	6		✓	—	✓	—	✓	—
General Purpose - for use in safe areas									
BA684D	Field	4	RS232 or RS485						
BA688C	Panel 144 x 72	6							
Galvanic Isolator [Ex ia] IIC intrinsically safe associated apparatus									
BA201	35mm DIN rail	—	RS232 or RS485	✓		✓		✓	

Fieldbus Indicators & Displays



An extensive range of bus powered, single and eight variable Displays, Indicators and Listeners for use with FOUNDATION fieldbus and Profibus PA systems in hazardous or safe areas.

FIELDBUS INDICATORS

5 digit 20mm high LCD digits with a 31 segment bargraph

- > Single variable FOUNDATION fieldbus models
- > 8 variable FOUNDATION fieldbus models which can be nodes or listeners.
- > 8 variable Profibus PA models which can be nodes or listeners.
- > Ex ia and Ex ic certification permits use with higher voltages in Zone 2.

FIELDBUS DISPLAYS

Graphical display which can show up to 8 variables

- > Models for FOUNDATION fieldbus or Profibus PA applications.
- > Choice of 11 standard display screen formats, some with bargraphs.
- > Backlight
- > Push buttons for operator acknowledgements
- > 6 optional outputs



Models available

Model No.	Mounting	Variables	Protocol	Certification					
				Europe/UK ATEX/UKEX		International IECEx		USA	
				Gas	Dust	Gas	Dust	Gas	Dust

Ex ia & Ex ic intrinsically safe - for use in Zones 0, 1 & 2 and 20, 21 & 22 where certified

INDICATORS

BA414DF ▲ CCC Ex certified	Field	1	FF ITK 6 compliant	✓	✓	✓	✓	✓	✓
BA444DF Node or Listener ▲ CCC Ex certified	Field	8	FF or Profibus PA	✓	✓	✓	✓	✓	✓
BA418CF	Panel	1	FF ITK 6 compliant	✓	—	✓	—	✓	—
BA448CF Node or Listener	Panel	8	FF or Profibus PA	✓	—	✓	—	✓	—

Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 20, 21 & 22 where certified

DISPLAYS

BA484DF	Field	8	} FF ITK 6 compliant or Profibus PA	✓	✓	✓	✓	✓	✓
BA488CF ▲ CCC Ex certified	Panel	8		✓	—	✓	—	✓	—

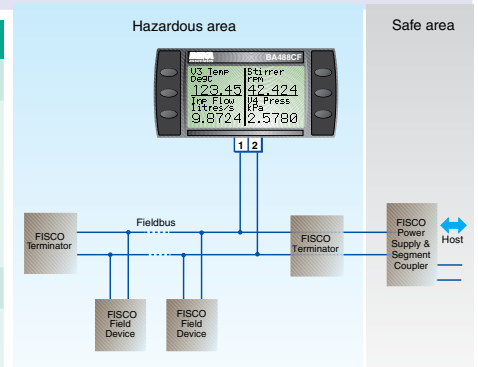
General Purpose - for use in safe areas

INDICATORS

BA614DF	Field	1	FF ITK 6 compliant
BA644DF Node or Listener	Field	8	FF or Profibus PA
BA618CF	Panel	1	FF ITK 6 compliant
BA648CF Node or Listener	Panel	8	FF or Profibus PA

DISPLAYS

BA684DF	Field	8	} FF ITK 6 compliant or Profibus PA
BA688CF	Panel	8	



Flow Batch Controllers



Very easy to use, stand alone batch controllers for dispensing and sampling. Graphical display that can be configured to suit applications including up to 9 named batch setpoints.

- > **Graphical display with backlight**
- > **General purpose and certified hazardous area models**
ATEX and North American Ex ia intrinsic safety gas and dust certification.
- > **Field mounting models have IP66 impact resistant GRP enclosure**
Separate terminal compartment
Pipe mounting accessories.



- > **Panel mounting models**
IP66 front panel

- > **Input**
Pulse or 4/20mA

- > **Three isolated outputs**

Output 1:

control output

Outputs 2 & 3 configurable:

control outputs
flow alarm
reset alarm
reset status
batch state
scaled pulse output

- > **Single or two-stage control with overrun compensation**

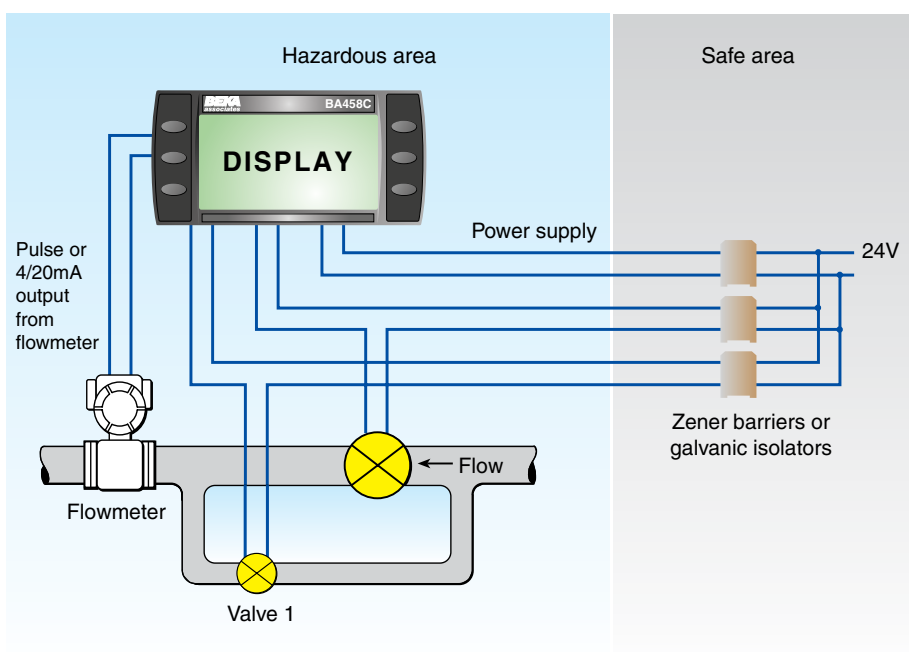
- > **Provision for external push buttons**

Push button control may be transferred to external switches.

- > **-20 to +60°C operating temperature range**

- > **Accessories**

Three additional configurable isolated outputs.
Laser engraved stainless steel legend plates.



Models available

Model No.	Mounting	Certification					
		Europe/UK ATEX/UKEX		International IECEx		USA & Canada	
		Gas	Dust	Gas	Dust	Gas	Dust
Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 20, 21 & 22							
BA454D	Field	✓	✓	—	—	✓	✓
BA458C	Panel	✓	—	—	—	✓	—
General Purpose - for use in safe areas							
BA654D	Field						
BA658C	Panel						

A **Flow Batch Controller**
for every **application**.....
delivered ready for **installation**

Set Point Station [Generator]



For manually adjusting a 4/20mA process variable or controller set point from within a hazardous or safe area using the instrument's push buttons. These loop powered instruments incorporate a display to show the operator the 4/20mA current in engineering units.

> General purpose and certified hazardous area models

International Ex ia intrinsic safety certification.

> Rugged stainless steel Ex ia models

May be installed in certified Ex e, Ex p or Ex t panel enclosure without invalidating the enclosure's certification.

> IP66 front panels

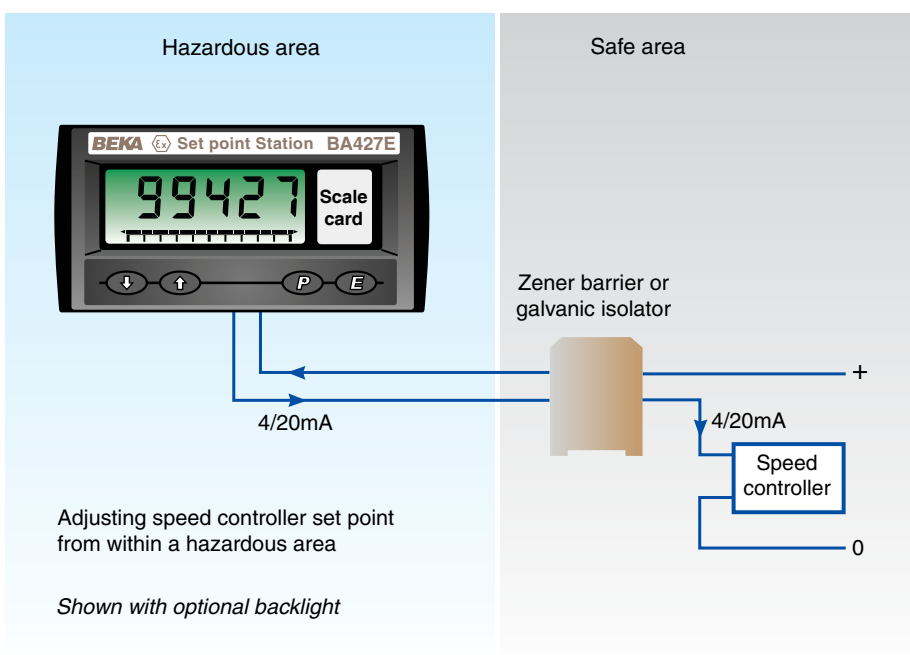
> BA490 Quadrature rotary encoder

Alternative to using the set point station's push buttons, current can be controlled by an external rotary encoder such as the BA490.

> -40 to +70°C operating temperature range

> Accessories

Display backlight may be loop or separately powered
Scale card - can be supplied printed with units of measurement and tag information for no additional charge
Rear IP66 sealing kit



A Set Point Station

for every **application**.....
delivered ready for
installation



Models available

Model No.	Mounting	Display digits No. x height	Certification			
			Europe/UK ATEX/UKEX		International IECEX	
			Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 20, 21 & 22 where certified

BA427E	Panel 96 x 48	5 x 11mm bargraph	✓	✓	✓	✓
BA427E-SS	Panel Rugged 105 x 60	5 x 11mm bargraph	✓	✓	✓	✓

General Purpose - for use in safe areas

BA627E	Panel 96 x 48	5 x 11mm bargraph				
BA627E-SS	Panel Rugged 105 x 60	5 x 11mm bargraph				

Indicating Temperature Transmitters

HART
COMMUNICATION PROTOCOL

IECEX

Ex

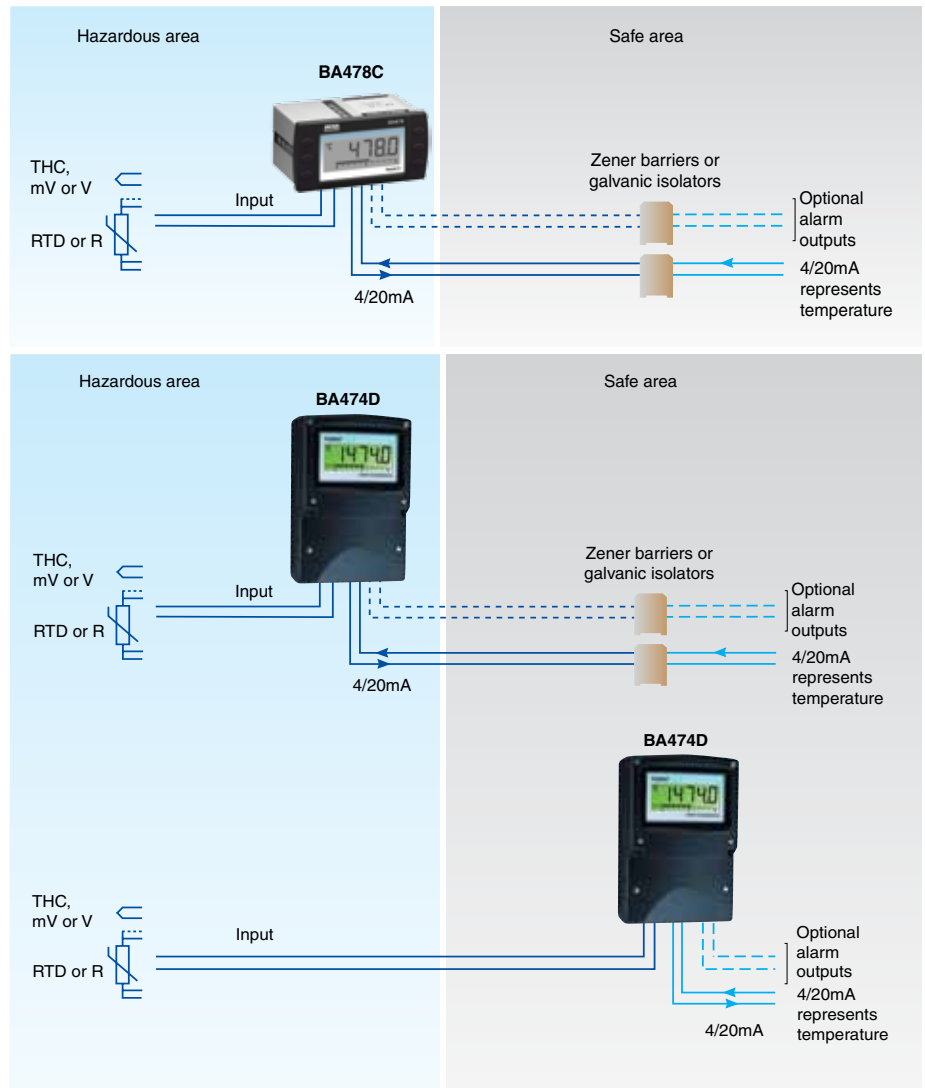
CE

**UK
CA**

Field and panel mounting loop powered HART enabled temperature transmitters which incorporate a large easy to read temperature display. In addition to conventional Ex ia intrinsic safety certification, the field mounting BA474D also has associated apparatus certification. When installed in a safe area this permits it to be connected to a primary element in the hazardous area without the need for a Zener barrier or galvanic isolator.



- > **Large high contrast temperature display**
- > **General purpose and certified hazardous area models**
International Ex ia intrinsic safety certification
- > **Field mounting models**
Separate terminal compartment. Innovative certification eliminates need for barrier or isolator
- > **Panel mounting models**
IP66 front panels
- > **HART communication**
Sensor diagnostics
- > **-20 to +60°C operating temperature range**
- > **Accessories**
Dual isolated alarms
Backlight loop powered
Scale card - can be supplied printed with units of measurement and tag information for no additional charge
Laser engraved stainless steel legend plates
Pipe mounting kits



An **Indicating Temperature Transmitter**
for every **application**. . . delivered ready for **installation**

Models available

Model No.	Mounting	Certification			
		Europe/UK ATEX/UKEX		International IECEX	
		Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 20, 21 & 22 where certified

BA474D	Field	✓	✓	✓	✓
BA478C	Panel 144 x 72	✓	—	✓	—

General Purpose - for use in safe areas

BA674D	Field				
BA678C	Panel 144 x 72				

Universal process panel meters with **MULTICOLOUR** displays

New, high quality universal process panel meters featuring multicoloured, negative liquid crystal five digit and bargraph displays which are visible in all lighting conditions from bright sunlight to total darkness. The display colour is fully adjustable and can be linked to the meter's optional alarms, providing operators with a very conspicuous status warning. Display colours and brightness can easily be adjusted on-site to match other instrumentation on the panel.

The meters have process current, voltage and resistance thermometer inputs, with separate versions for powering from a low voltage dc or from an ac mains supply.

All models have IP66 front of panel protection and a scratch resistant glass window. For marine or harsh environments where the front of the instrument may be impacted, the rugged A90-SS has a stainless steel enclosure with a 10mm thick toughened glass window.

Panel meters can be supplied configured to customer's requirements and fitted with a printed slide-in scale card showing specified units of measurement and tag information for no additional charge.

Courtesy of Saffron Scientific Equipment.



- > **High quality**
UK designed and manufactured
- > **Large high contrast multicolour 5 digit display with bargraph**
Fully adjustable display colour
Visible in all lighting conditions
Negative liquid crystal technology
- > **Input - may be configured on-site**
4-20mA or 0-50mA
0-100mV, 0-1V or 0-10V
Pt100 2-wire or 3-wire RTD
- > **Power supply - separate versions for:**
10 to 36V dc
90 to 264V ac 47-63Hz
- > **IP66 front of panel protection with toughened glass window**
- > **A90-SS has stainless steel enclosure and 10mm thick toughened glass window**
For harsh and marine environments
- > **-40 to +55°C operating temperature range**
- > **Accessories**
Isolated Modbus RTU
Dual isolated alarms with changeover contacts, alarms can be linked to display colour.
Isolated 4/20mA output
Isolated 24V transmitter power supply
IP66 rear sealing kit
Scale cards - can be supplied printed with units of measurement and tag information for no additional charge.

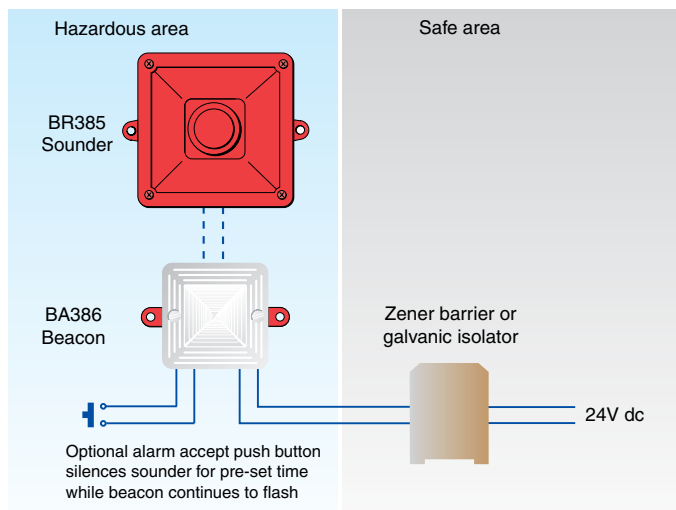
General Purpose - for use in safe areas

Model No.	Separate versions for 10-36V dc or 90 to 264V ac supplies
A90	Universal process meter
A90-SS	Rugged universal process meter in stainless steel enclosure

Ex ia Sounders & Beacons



High performance Ex ia intrinsically safe sounder and flashing beacon in IP66 enclosures, may be used separately or as a pair powered from a single intrinsically safe circuit. Both are IECEx, ATEX and US certified for use in gas hazardous areas.



BR385 SOUNDER

- > 49 different sounds
- > 3 stage alarm
- > Up to 105dBA output
- > IP66 enclosure

BA386 BEACON

- > Red, Amber, Green, Blue & White models
- > 2 double flashes per second
- > Alarm accept function silences sounder for pre-set time.
- > Steady state BA386S version also available

Models available

Model No.	Certification					
	Europe/UK ATEX/UKEX		International IECEx		USA	
	Gas	Dust	Gas	Dust	Gas	Dust

Ex ia intrinsically safe - for use in Zones 0, 1 & 2

BR385 Sounder	✓	—	✓	—	✓	—
BA386 Beacon	✓	—	✓	—	✓	—

Ex d Sounders & Beacons



A vast range of Ex d flameproof Sounders, Beacons and combined devices. ATEX, UKEX and IECEx certified for use in gas and dust hazardous areas. Models for use with 24V dc, 115V ac or 230V ac supplies.

SOUNDER

- > 32 different sounds
- > 3 stage alarm
- > Up to 123dBA output
- > IP67 enclosure

BEACON

- > Red, Amber, Yellow, Green, Blue & White models
- > Up to 21 joule output
- > IP67 enclosure
- > Xenon flash or LED light source



Accessories for FIELD mounting instruments

BEKA field mounting instruments are housed in one of three enclosures, each with a range of mounting and marking accessories.

Model numbers with a 'D' or 'E' suffix

Model numbers with a 'G' suffix

Model numbers with a 'G-SS' suffix

IP66 GRP enclosure with separate terminal compartment

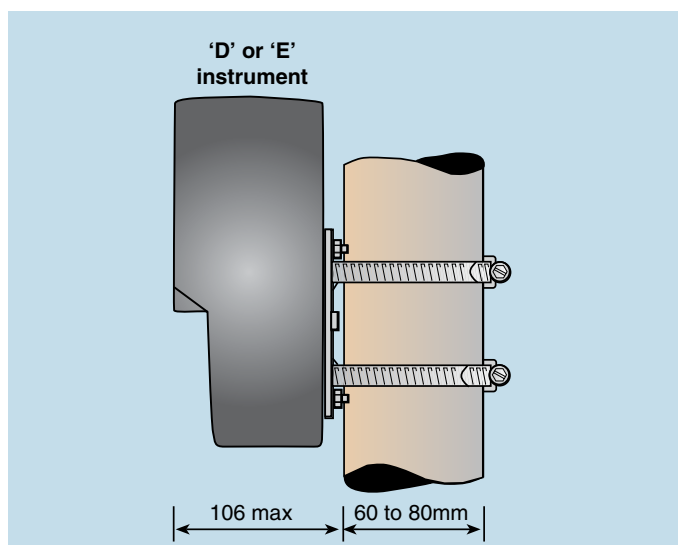
IP66 compact GRP enclosure

IP66 compact 316 stainless steel enclosure

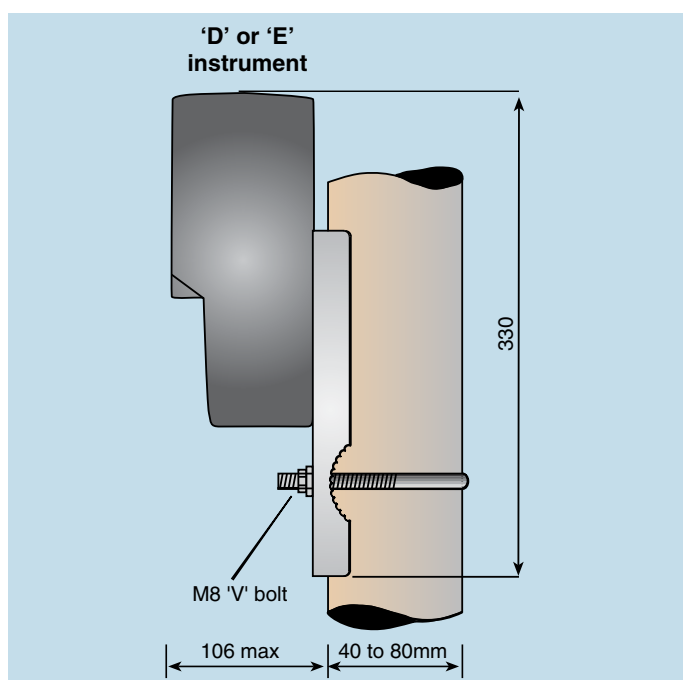
'D' and 'E' Instruments

PIPE MOUNTING KITS

BA392D Standard duty 316 stainless steel bracket secured by two stainless steel worm drive hose clips which attach instrument to any 60 to 80mm outside diameter vertical or horizontal pipe. Usually suitable for clamping to a 2 inch internal diameter metal pipe.



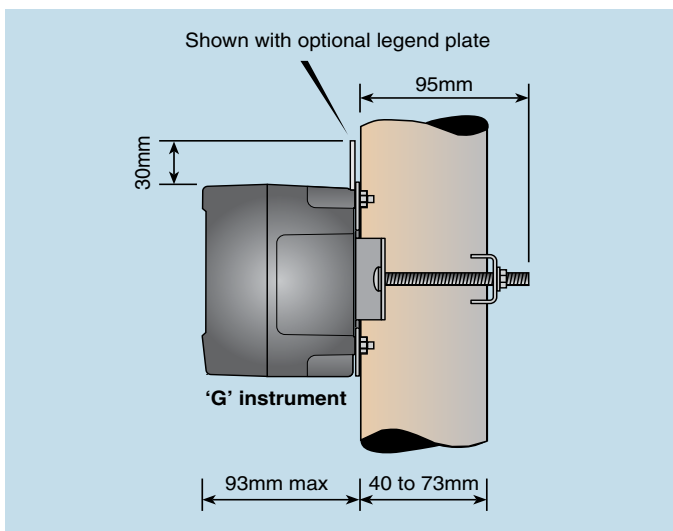
BA393 Heavy duty 316 stainless steel pipe mounting bracket using a single 'V' bolt which attaches instrument to any vertical or horizontal pipe with an outside diameter between 40 and 80mm. Will also support BEx series flameproof sounders and beacons.



'G' and 'G-SS' Instruments

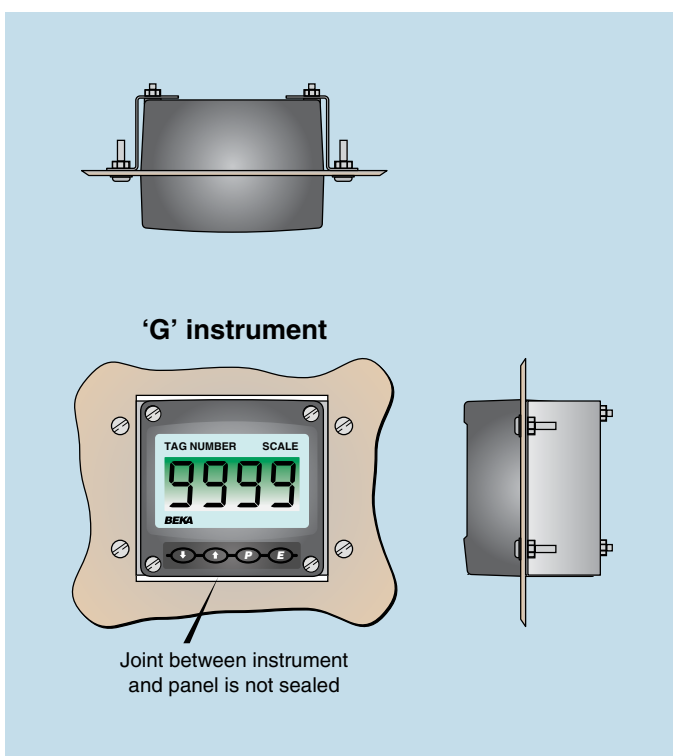
PIPE MOUNTING KIT

BA393G 316 stainless steel pipe mounting bracket attaches 'G' instruments to any vertical or horizontal pipe with an outside diameter between 40 and 73mm.

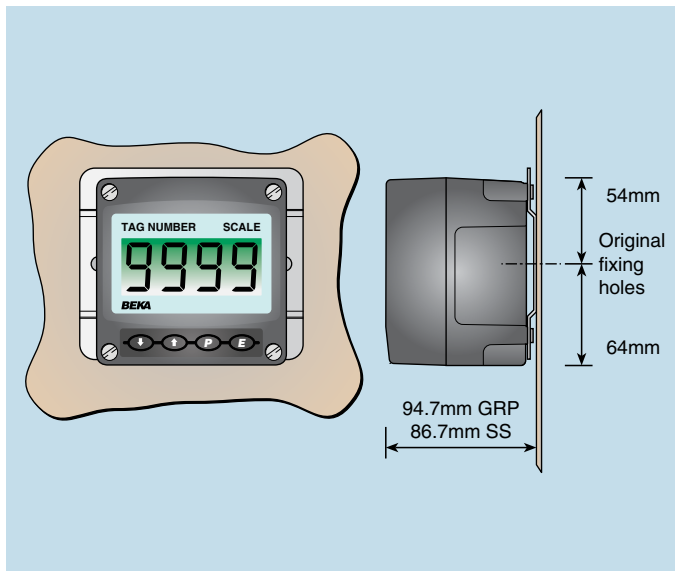


PANEL MOUNTING KIT

BA394G 316 stainless steel panel mounting kit secures a GRP or stainless steel 'G' instrument in a panel aperture but does not seal the assembly.



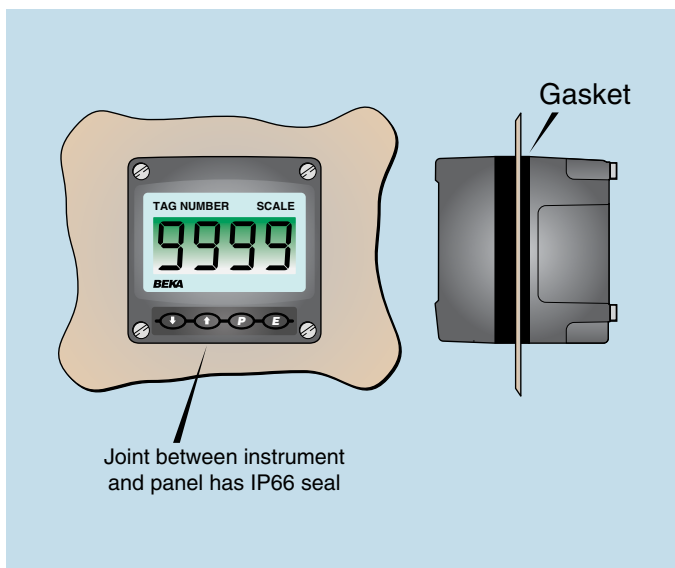
BA496G SURFACE MOUNTING KIT



The **BA496G surface mounting kit** enables a BEKA 'G' GRP or Stainless Steel field instrument to replace a surface mounting BEKA 'E' or 'D' field mounting instrument using the existing surface mounting holes.

BA494G sealing panel mounting kits

Secures 'G' instrument in a panel aperture and seals the panel.



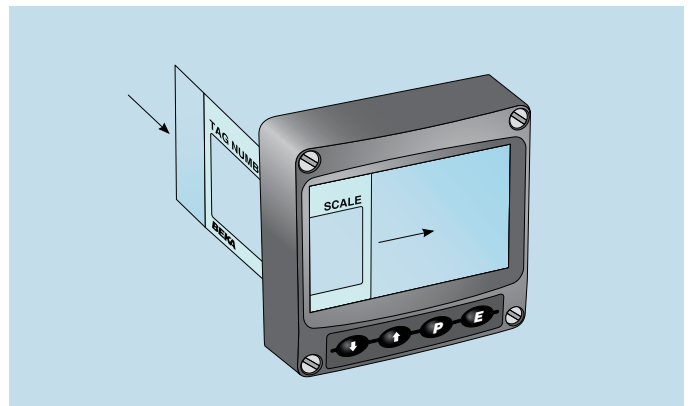
BA494G for a GRP enclosure

BA494G-SS for a stainless steel enclosure.



'G' instrument panel mounted using BA494G panel mounting kit

SLIDE IN SCALE CARD



All 'G' suffix field and panel mounting instruments have a slide-in scale card which can accommodate scale and tag marking. If requested the instrument can be supplied with the scale card printed to show customer specified units of measurement, tag and application information.

EXTERNAL STAINLESS STEEL LEGEND PLATE

For customers requiring traditional labelling, 'G' instruments can be supplied with a laser etched stainless steel legend plate showing customer specified information.



Accessories for PANEL mounting instruments

'E' suffix, Rugged and A90 meters

SLIDE IN SCALE CARD

A slide-in scale card can be fitted without removing the instrument from the panel or opening the instrument enclosure. A customer specified scale card is a no cost accessory when an 'E' or Advisor instrument is ordered. A pack of 30 scale cards pre-printed with common legends is available for on-site configuration.



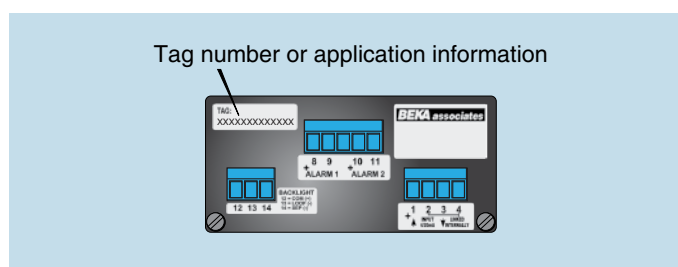
Scale card for 'E' suffix instruments is inserted from the rear of the instrument.

%	%RH	°C	°F	A
bar	barg	FT	FT-LBS	gal
in.wg	kg	kg/h	kPa	Litres
L/h	L/min	L/s	m³/h	mbar
mbarg	Pa	pH	psi	rpm
SPM	t/h	tonnes		

Pre-printed scale cards

TAG NUMBER

Customer specified tag number or application information can be thermally printed or laser etched onto the instrument rear panel adjacent to the terminals.



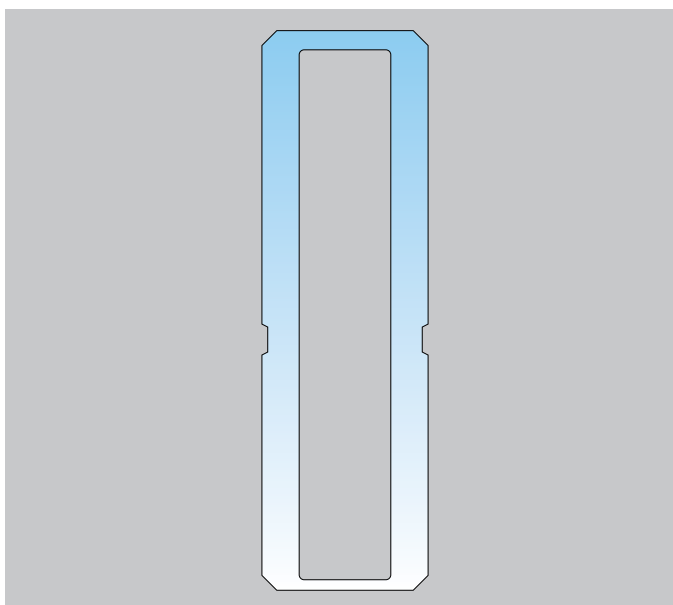
Tag number or application printed on rear panel of instrument.

All instruments can typically accommodate up to 2 rows of 18 characters

BA326C and BA526C Combined Indicators

SCALE CARD

The factory fitted internal scale card can be printed with a customer specified scale for the analogue bargraph and with the units of measurement for the digital display.

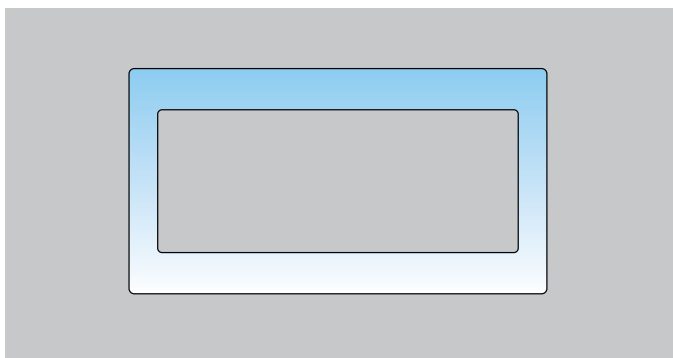


Scale card can be printed with customer specified bargraph scale and units of measurement.

Fieldbus Indicators & Indicating Temperature Transmitters

SCALE CARD

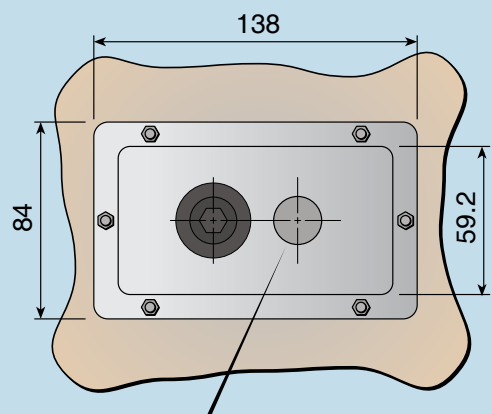
Panel mounting Indicating Temperature Transmitters and Fieldbus indicators have an internal scale card around the display which can be supplied printed with customer specified application information.



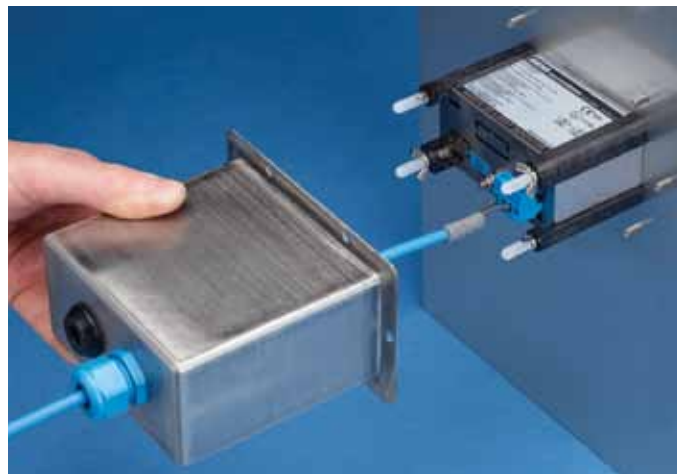
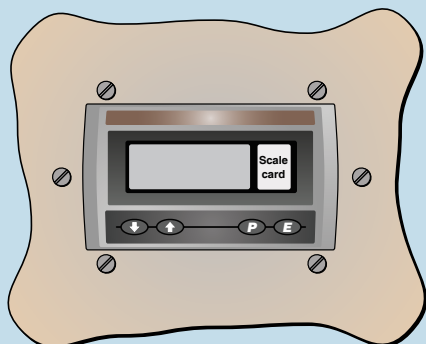
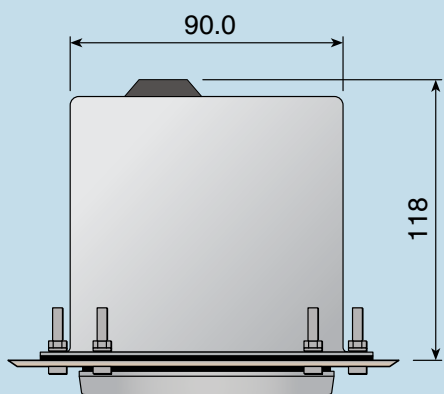
Scale card can be printed with customer specified information.

REAR COVER AND SEALING KIT

The BA495 rear cover and sealing kit provides impact and IP66 ingress protection for a single 96 x 48mm or a 105 x 60mm rugged instrument. The 316 stainless steel rear cover has two M20 cable entries, one fitted with a blanking plug. *Note: cannot be used with stainless steel support plate.*



2 M20 entries, 1 fitted with blanking plug



BA495 rear IP66 sealing kit

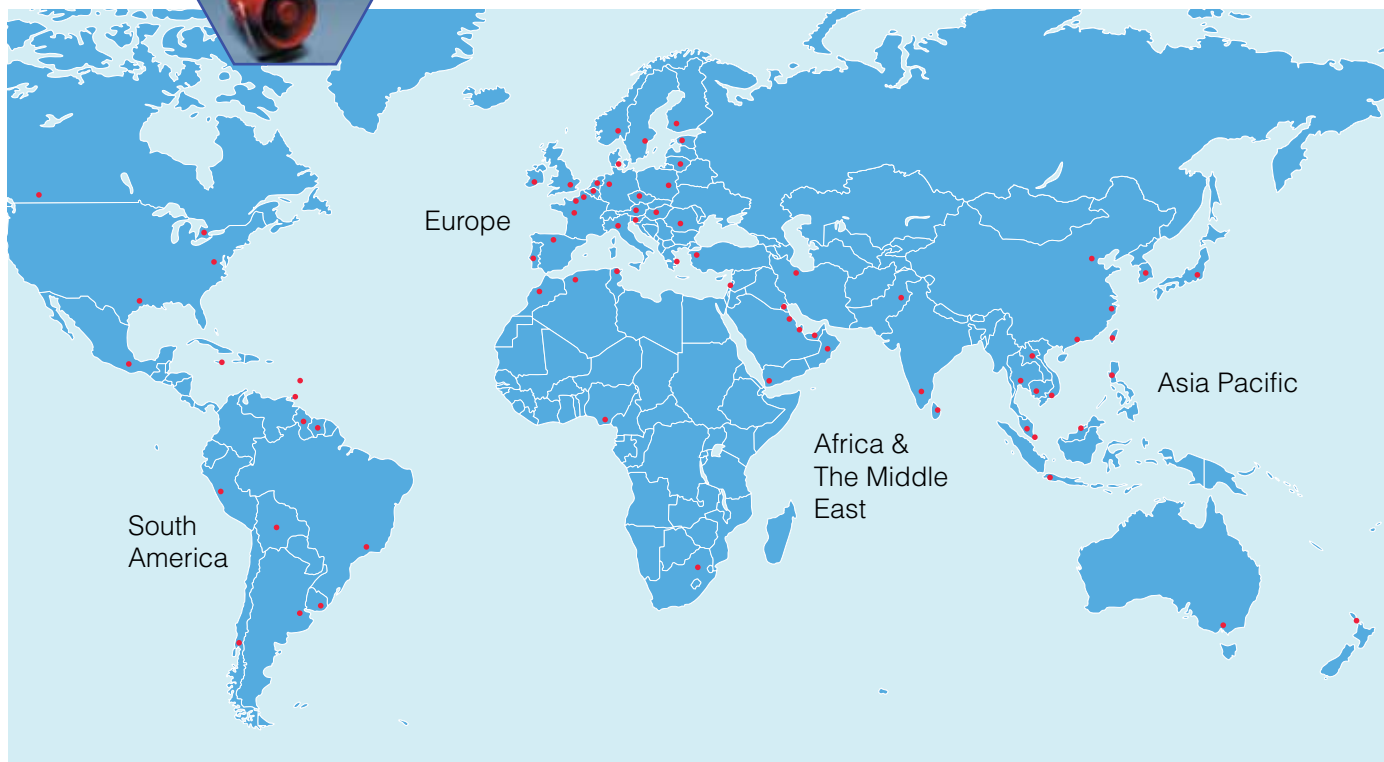


Gasket provides IP66 seal to panel

Why Buy **BEKA** ?



- > *Three-Year warranty on all products*
- > *Fast manufacturing times, typically 3-5 working days*
- > *Widest range available of hazardous area indicators and displays*
- > *International certifications for global applications*
- > *High reliability products for hazardous areas and general purpose applications*
- > *Privately owned by engineers designing products for engineers since 1984*
- > *Direct telephone or email contact to sales team and knowledgeable engineers*
- > *Excellent customer support pre and post sales*
- > *World-wide support network of agents and distributors*
- > *Set-up and scale printing on most models for no additional charge*
- > *Comprehensive website and easy access to all documentation*



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