Product Summary

Display instrumentation
for use in **hazardous**
and **safe areas**

Loop Powered Indicators

Process Panel Meters

Set Point Stations [Generators]

Rate Totalisers

Counters

Tachometers

Timers or Clocks

Modbus, Serial Data & Message Displays

Fieldbus Indicators & Displays

Flow Batch Controllers

Indicating Temperature Transmitters

Sounders & Beacons

LED Panel Lamps

visit our website **www.beka.co.uk**

BEKA associates

Field Mounting
4/20mA Loop Powered Digital Indicators

Ex i Intrinsically Safe

Ex eb Increased Safety

Ex nA Non Sparking

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 nA non sparking, Ex eb increased safety and
> Ex t dust ignition protection certification.

> **Robust impact resistant GRP and 316 stainless steel IP66 enclosures**
> Compact 'G' models with GRP or stainless steel enclosure
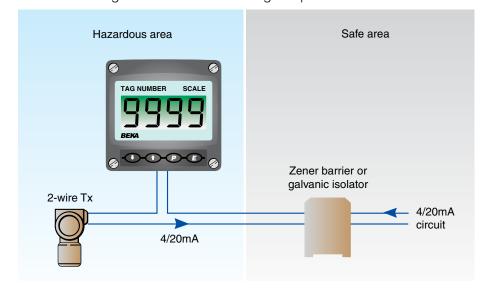> 'E' models with separate terminal compartment

> **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.
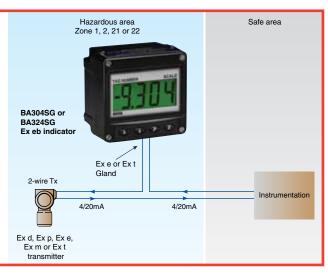
Models available

Model No.	Enclosure	Display				Certification					
		Digits		Bargraph		Europe ATEX		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 20, 21 & 22											
BA304E	GRP - separate tml. compartment	4	34mm	–	–	✔	✔	✔	✔	✔	✔
BA324E	GRP - separate tml. compartment	5	29mm	31	83mm	✔	✔	✔	✔	✔	✔
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 **NEW!**											
BA304SG	GRP Compact	4	34mm	–	–	✔	✔	✔	✔	–	–
BA324SG	GRP Compact	5	29mm	31	83	✔	✔	✔	✔	–	–
Ex nA & Ex tc - for use in Zones 2 and 22 without Zener barriers or galvanic isolators											
BA304NE	GRP - separate tml. compartment	4	34mm	–	–	✔	✔	✔	✔	–	–
BA324NE	GRP - separate tml. compartment	5	29mm	31	83mm	✔	✔	✔	✔	–	–
BA304NG	GRP Compact	4	34mm	–	–	✔	✔	✔	✔	✔	✔
BA324NG	GRP Compact	5	29mm	31	83mm	✔	✔	✔	✔	✔	✔
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											
BA504E	GRP - separate tml. compartment	4	34mm	–	–						
BA524E	GRP - separate tml. compartment	5	29mm	31	83mm						
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						

NEW! 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*

Hazardous area Zone 1, 2, 21 or 22

Safe area

BA304SG or BA324SG Ex eb indicator

Ex e or Ex t Gland

2-wire Tx

4/20mA   4/20mA

Instrumentation

Ex d, Ex p, Ex e, Ex m or Ex t transmitter

Panel Mounting
4/20mA Loop Powered Digital Indicators

Intrinsically safe
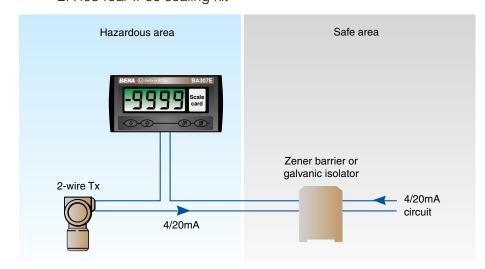
Ex nA

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 nA 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

Hazardous area | Safe area

2-wire Tx

4/20mA

Zener barrier or galvanic isolator

4/20mA circuit

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

Models available

Model No.	Enclosure	Display				Certification					
		Digits		Bargraph		Europe ATEX		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 20, 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	11mm	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	11mm	31	44mm	✔	✔	✔	✔	✔	–

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

Ex nA & Ex tc - for use in Zones 2 and 22 without Zener barriers or galvanic isolators											
BA307NE	Rugged 105 x 60	4	15mm	–	–	✔	✔	✔	✔	–	–
BA327NE	Rugged 105 x 60	5	11mm	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	11mm	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	11mm	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 ATEX		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						

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.
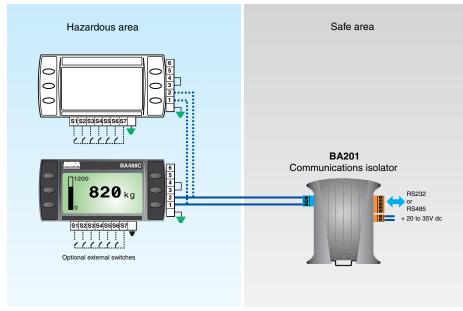
Message display
view operator instructions

> 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.

FREE simulation and **ScreenWriter software**

Models available

Model No.	Mounting	Operator buttons	Communication	Certification					
				Europe ATEX		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

INDICATORS
One variable displayed at a time

FISCO & FNICO compliant

DISPLAYS
Up to eight variables may be displayed at a time
FISCO compliant

Models available

Model No.	Mounting	Variables	Protocol	Certification					
				Europe ATEX		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	Field	1	FF ITK 6 compliant	✔	✔	✔	✔	✔	✔
BA444DF Node or Listener	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	Panel	8		✔	–	✔	–	✔	–
Ex nL & Ex tD - for use in Zones 2 and 22 without Zener barriers or galvanic isolators. Only for legacy applications									
INDICATORS									
BA414NDF	Field	1	FF ITK 6 compliant	✔	✔	✔	✔	–	–
BA444NDF Node or Listener	Field	8	FF or Profibus PA	✔	✔	✔	✔	–	–
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							

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
> Ex nA non sparking
> 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 ATEX		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											
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	✔	–	✔	–	✔	✔
Ex nA & Ex tc - for use in Zones 2 and 22 without Zener barriers or galvanic isolators											
BA334NG	GRP Compact	Pulse	External	8 x 18mm	6 x 12mm	✔	✔	✔	✔	✔	✔
BA384NG	GRP Compact	2 x Pulse	External	8 x 18mm	6 x 12mm	✔	✔	✔	✔	✔	✔
BA354NE	GRP- separate tml. compartment	4/20mA	Loop	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						

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 and Ex nA non sparking 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**
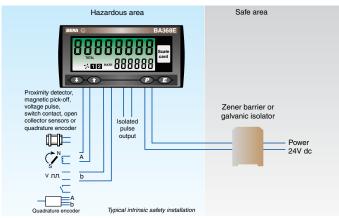
> **-40 to +70˚C operating temperature range**

> **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 ATEX**		**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											
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											
Ex nA & Ex tc - for use in Zones 2 and 22 without Zener barriers or galvanic isolators											
BA337NE	Rugged 105 x 60	Pulse	External	8 x 9mm	6 x 6mm	✔	✔	✔	✔	✔	✔
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						

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
> Ex nA non sparking
> 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.
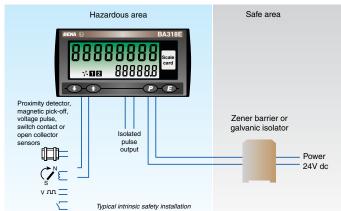> Rear IP66 sealing kit

> **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

Typical intrinsic safety installation

Models available

Model No.	Mounting	Input	Display digits		Certification					
			TOTAL No. x height	**RATE** No. x height	**Europe ATEX**		**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										
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										
Ex nA & Ex tc - for use in Zones 2 and 22 without Zener barriers or galvanic isolators										
BA364NG	Field compact	2 x Pulse	8 x 18mm	6 x 12mm	✔	✔	✔	✔	✔	✔
BA367NE	Panel Rugged 105 x 60	Pulse	8 x 9mm	6 x 6mm	✔	✔	✔	✔	✔	✔
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*

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
> Ex nA non sparking
> 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

Typical intrinsic safety installation

Models available

Model No.	Mounting	Input	Display digits		Certification					
			SPEED No. x height	RUN-TIME No. x height	Europe ATEX		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										
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**										
Ex nA & Ex tc - for use in Zones 2 and 22 without Zener barriers or galvanic isolators										
BA314NG	Field compact	Pulse	8 x 18mm	6 x 12mm	✔	✔	✔	✔	✔	✔
BA317NE	Panel Rugged 105 x 60	Pulse	8 x 9mm	6 x 6mm	✔	✔	✔	✔	✔	✔
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						

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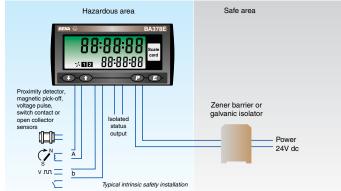
> **Accessories**
> Dual isolated control outputs
> Backlight
> Scale cards - *can be supplied printed with units of measurement and tag information for no additional charge.*
> Laser engraved stainless steel legend plates

Typical intrinsic safety installation

Models available

Model No.	Mounting	Input	Display digits		Certification					
			PRIMARY No. x height	**SECONDARY** No. x height	**Europe ATEX**		**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										
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										
Ex nA & Ex tc - for use in Zones 2 and 22 without Zener barriers or galvanic isolators										
BA374NG	Field compact	2 x Sensors	8 x 18mm	6 x 12mm	✔	✔	✔	✔	✔	✔
BA377NE	Panel Rugged 105 x 60	Sensor	8 x 9mm	6 x 6mm	✔	✔	✔	✔	✔	✔
General Purpose - for use in safe areas										
BA574G	Field compact	2 x Scnsors	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*

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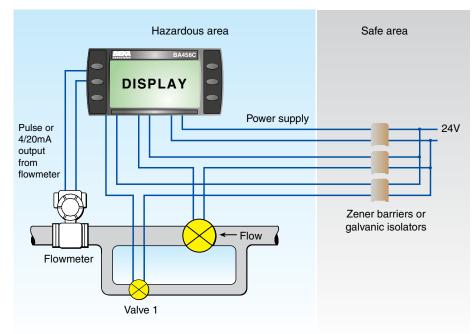
> **Single or two-stage control with overrun compensation**

> **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.

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

Models available

Model No.	Mounting	Certification					
		Europe ATEX		**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						

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***

Hazardous area

Safe area

Zener barrier or galvanic isolator

4/20mA

4/20mA

Speed controller

Adjusting speed controller set point from within a hazardous area

Shown with optional backlight

BA490
Quadrature Rotary Encoder - optional

Models available
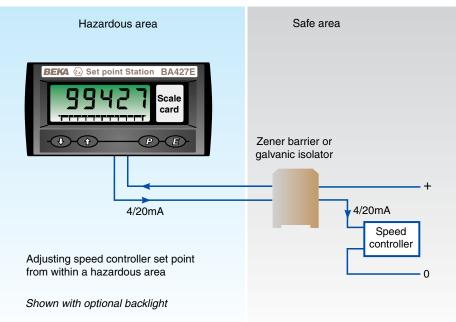
Model No.	Mounting	Display digits	Certification					
			Europe ATEX		International IECEx		USA & Canada	
		No. x height	Gas	Dust	Gas	Dust	Gas	Dust
Ex ia intrinsically safe - for use in Zones 0, 1 & 2 and 20, 21 & 22 where certified								
BA427E	Panel 96 x 48	5 x 11mm bargraph	✔	✔	✔	✔	✔	–
BA427E-SS	Panel 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   **Ɛx**   IEC IECEx   FM APPROVED

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. Similarly, when installed in Zone 2 the BA474ND may be connected to a primary element in Zone 0, 1 or 2, again without a Zener barrier or galvanic isolator.

> **Large high contrast temperature display**

> **General purpose and certified hazardous area models**
> International Ex ia intrinsic safety and Ex nA non sparking 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**
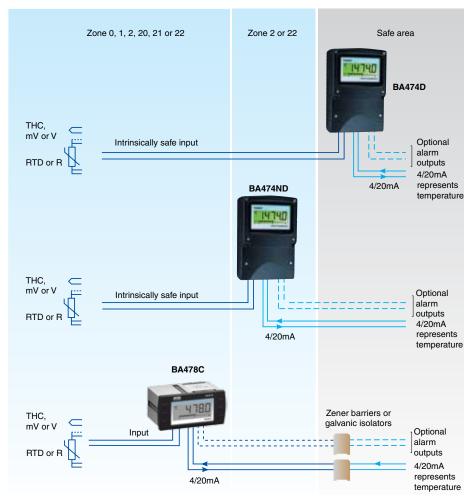
> **Accessories**
> Dual isolated alarms
> Backlight loop powered
> Scale card - *can be supplied printed with units of measurement and tag information for no additional charge*
> Laser engraved stainless steel legend plates
> Pipe mounting kits

Models available

Model No.	Mounting	Certification					
		Europe ATEX		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							
BA474D	Field	✔	✔	✔	✔	✔	✔
BA478C	Panel 144 x 72	✔	–	✔	–	✔	–
Ex nA - intrinsically safe input							
BA474ND	Field	✔	✔	✔	✔	–	–
General Purpose - for use in safe areas							
BA674D	Field						
BA678C	Panel 144 x 72						

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

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.

NEW!

> **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.*

Courtesy of Saffron Scientific Equipment.

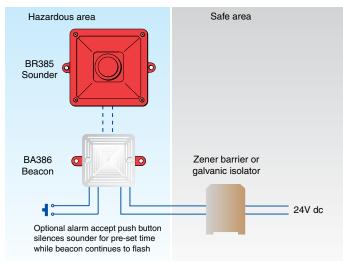| General Purpose - for use in safe areas	
Model No.	*Separate versions for 10-36V dc or 90 to 264V ac supplies*
A90	Universal process meter
A90-SS	Rugged universal process meter in stainless steel enclosure

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 ATEX		International IECEx		USA	
	Gas	Dust	Gas	Dust	Gas	Dust
Ex ia intrinsically safe - for use in Zones 0, 1 & 2						
BR385 Sounder	✔	–	✔	–	✔	–
BA386 Beacon	✔	–	✔	–	✔	–

Hazardous area / Safe area

BR385 Sounder

BA386 Beacon

Zener barrier or galvanic isolator

24V dc

Optional alarm accept push button silences sounder for pre-set time while beacon continues to flash

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Ex d Sounders & Beacons

A vast range of Ex d flameproof Sounders, Beacons and combined devices. ATEX 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

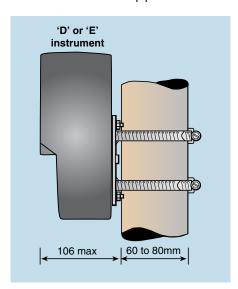# Accessories
for FIELD mounting instruments

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   IP66 GRP enclosure with separate terminal compartment
Model numbers with a 'G' suffix   IP66 compact GRP enclosure
Model numbers with a 'G-SS' suffix   IP66 compact 316 stainless steel enclosure
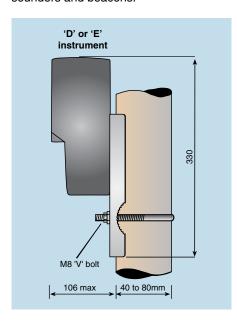
'D' and 'E' Instruments

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.

'D' or 'E' instrument

106 max   60 to 80mm
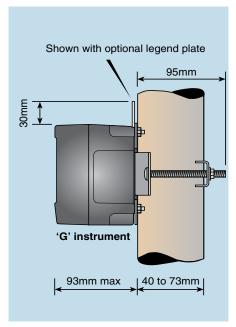
BA393 Heavy duty 316 stainless steel pipe mounting bracket using a single 'V' bolt which attaches instrument to any vertical or horizontal pipe with an outside diameter between 40 and 80mm. Will also support BEx series flameproof sounders and beacons.

'D' or 'E' instrument

330

M8 'V' bolt

106 max   40 to 80mm
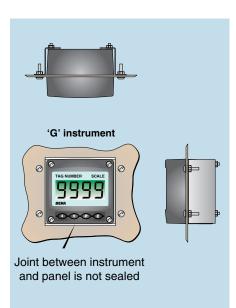
'G' and 'G-SS' Instruments

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.
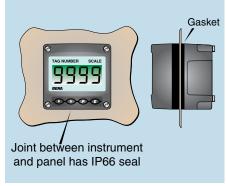
Shown with optional legend plate

95mm

30mm

'G' instrument

93mm max   40 to 73mm

PANEL MOUNTING KITS

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.
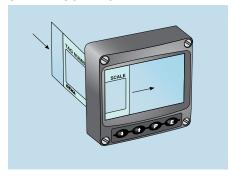
'G' instrument

Joint between instrument and panel is not sealed

BA494G sealing panel mounting kits

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

Gasket

TAG NUMBER   SCALE
9999

Joint between instrument and panel has IP66 seal

BA494G   for a GRP enclosure

BA494G-SS for a stainless steel enclosure.

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.

LEGEND PLATE

Accessories
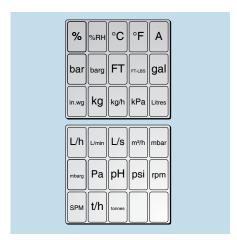## for PANEL mounting instruments

'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.
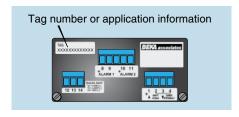

Scale card for 'E' suffix instruments is inserted from the rear of the instrument.

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.
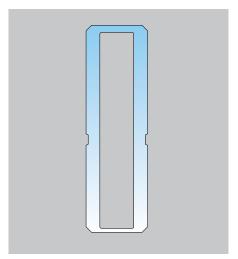

Tag number or application printed on rear panel of instrument.

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.

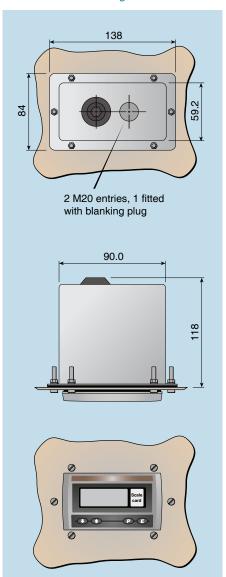*Scale card can be printed with customer specified information.*

For 96 x 48mm, Rugged 'E' suffix, and A90 meters

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.*

BA495 rear IP66 sealing kit

2 M20 entries, 1 fitted with blanking plug

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*

Europe

Asia Pacific

Africa & The Middle East

South America

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