Proximity detector, magnetic pick-off, voltage pulse, switch contact or open collector sensors

Isolated pulse output

Power 24V dc

Shown with optional backlight

BA568E

Two input counter

General purpose

◆ **Configurable inputs: magnetic pick-off, switch contact, proximity detector, open collector or voltage pulse.**

◆ **Separate rate and total displays.**

◆ **Can display position from quadrature sensor output.**

◆ **144 x 72mm DIN enclosure with IP66 front protection.**

◆ **Simple on-site scale card installation.**

◆ **Isolated pulse output**

◆ **Optional:**
Backlight
Dual alarms
4/20mA output

◆ **3 year guarantee**

www.beka.co.uk/ba568e

The BA568E is a two input general purpose counter which can display the sum or difference between the two pulse inputs, or the count direction of Input A may be controlled by input b. The output from a quadrature sensor can also be decoded to calculate and display position. The counter is easy to use and each input can be independently configured on-site to operate with a magnetic pick-off, switch contact, proximity detector, open collector or a sensor with a voltage pulse output. A slide-in scale card can be supplied printed with units of measurement, or can easily be marked on-site.

Any application requiring the sum or difference of pulse outputs from two sensors, such as counting the number of strokes performed by two reciprocating pumps and displaying total volume pumped in engineering units, can be performed by the BA568E. The counter's quadrature input also enables the position of a shaft or cable to be displayed together with its speed and direction of movement.

The large display has high contrast and a very wide viewing angle enabling the counter to be read in most lighting conditions over a wide temperature range. The total display may be shown in almost any engineering units and may be reset using the front panel push buttons or an external contact closure. Rate may be displayed in the same or different units of measurement per second, minute or hour.

IP66 front panel protection with a neoprene gasket to seal the joint between the counter and the instrument panel allow the BA568E to be installed in areas that will be washed down. To simplify installation and maintenance, the counter has removable terminal blocks allowing panel wiring to be completed before the instrument is installed.

The isolated open collector pulse output can be configured to synchronously retransmit either pulse input, or a pulse each time the least significant digit of the total display is incremented.

Display backlighting, which is internally powered from the counter, is available as a factory fitted option. It provides green background illumination enhancing daylight viewing and allowing the display to be easily read at night or when the counter is installed in a poorly illuminated area.

An optional isolated 4/20mA current sink output may be configured to produce an analogue output proportional to any part of the rate or total display.

Optional dual alarms can switch loads such as a sounder or solenoid valve. The two galvanically isolated, solid state voltage free outputs may be independently configured as total or rate alarms with normally open or closed outputs. Annunciators on the BA568E display show the status of both alarm outputs.

If panel space is limited the BA567E is a one input counter housed in a 96 x 48mm enclosure which has similar single input features as the BA568E. Alternatively for applications in severe environments, or where the front of the instrument may be impacted, the BA567E-SS is housed in a rugged 316 stainless steel enclosure.

For applications in flammable atmospheres the BA368E, which is identical to the BA568E, has international intrinsic safety certification. For Zone 2 or 22 applications the rugged stainless steel BA367NE has Ex nA and Ex tc certification allowing installation without Zener barriers or galvanic isolator.

BEKA associates
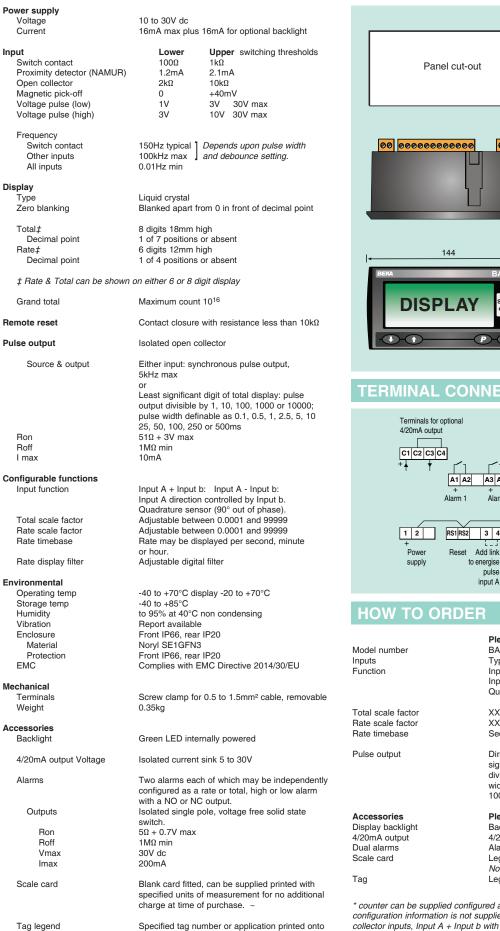
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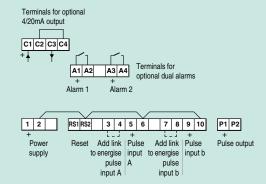
SPECIFICATION

Power supply
Voltage	10 to 30V dc
Current	16mA max plus 16mA for optional backlight

Input
	Lower	Upper switching thresholds
Switch contact	100Ω	1kΩ
Proximity detector (NAMUR)	1.2mA	2.1mA
Open collector	2kΩ	10kΩ
Magnetic pick-off	0	+40mV
Voltage pulse (low)	1V	3V 30V max
Voltage pulse (high)	3V	10V 30V max

Frequency	
Switch contact	150Hz typical] *Depends upon pulse width*
Other inputs	100kHz max] *and debounce setting.*
All inputs	0.01Hz min

Display
Type	Liquid crystal
Zero blanking	Blanked apart from 0 in front of decimal point
Total‡	8 digits 18mm high
Decimal point	1 of 7 positions or absent
Rate‡	6 digits 12mm high
Decimal point	1 of 4 positions or absent

‡ *Rate & Total can be shown on either 6 or 8 digit display*

Grand total	Maximum count 10^{16}

Remote reset
Contact closure with resistance less than 10kΩ

Pulse output
Isolated open collector

Source & output	Either input: synchronous pulse output, 5kHz max
	or
	Least significant digit of total display: pulse output divisible by 1, 10, 100, 1000 or 10000; pulse width definable as 0.1, 0.5, 1, 2.5, 5, 10 25, 50, 100, 250 or 500ms
Ron	51Ω + 3V max
Roff	1MΩ min
I max	10mA

Configurable functions
Input function	Input A + Input b: Input A - Input b: Input A direction controlled by Input b. Quadrature sensor (90° out of phase).
Total scale factor	Adjustable between 0.0001 and 99999
Rate scale factor	Adjustable between 0.0001 and 99999
Rate timebase	Rate may be displayed per second, minute or hour.
Rate display filter	Adjustable digital filter

Environmental
Operating temp	-40 to +70°C display -20 to +70°C
Storage temp	-40 to +85°C
Humidity	to 95% at 40°C non condensing
Vibration	Report available
Enclosure	Front IP66, rear IP20
Material	Noryl SE1GFN3
Protection	Front IP66, rear IP20
EMC	Complies with EMC Directive 2014/30/EU

Mechanical
Terminals	Screw clamp for 0.5 to 1.5mm² cable, removable
Weight	0.35kg

Accessories
Backlight	Green LED internally powered
4/20mA output Voltage	Isolated current sink 5 to 30V
Alarms	Two alarms each of which may be independently configured as a rate or total, high or low alarm with a NO or NC output.
Outputs	Isolated single pole, voltage free solid state switch.
Ron	5Ω + 0.7V max
Roff	1MΩ min
Vmax	30V dc
Imax	200mA
Scale card	Blank card fitted, can be supplied printed with specified units of measurement for no additional charge at time of purchase. ~
Tag legend	Specified tag number or application printed onto rear of instrument. ~

~ *See accessory datasheet for details*

DIMENSIONS (mm)

Panel cut-out

Recommended panel cut-out
To achieve an IP66 seal between the instrument and the panel
136.0 +0.5/-0.0 x 66.2 +0.5/-0.0
Four panel mounting clips must be used

DIN 43 700
138.0 +1.0/ -0.0 x 68.0 +0.7/ -0.0

Terminals for output options not shown

TERMINAL CONNECTIONS

Terminals for optional 4/20mA output

Terminals for optional dual alarms

HOW TO ORDER

	Please specify
Model number	BA568E
Inputs	Type *
Function	Input A + Input b: Input A - Input b: Input A direction controlled by Input b. Quadrature sensor (90° out of phase).*
Total scale factor	XXXXX *
Rate scale factor	XXXXX *
Rate timebase	Seconds, minutes or hours*
Pulse output	Direct retransmission or derived from least significant digit of total display: pulse output divided by 1, 10, 100, 1000 or 10000; pulse width defined as 0.1, 0.5, 1, 2.5, 5, 10, 25, 50 100, 250 or 500ms.*

Accessories	**Please specify if required**
Display backlight	Backlight
4/20mA output	4/20mA output
Dual alarms	Alarms
Scale card	Legend required *No charge if ordered with counter*
Tag	Legend required

* *counter can be supplied configured as required for no additional charge. If configuration information is not supplied, instrument will be configured for open collector inputs, Input A + Input b with total and rate scaling factors of 1.0 and a timebase of seconds with direct pulse retransmission. Can easily be reconfigured on-site.*