

The BA588E is a two input general purpose rate totaliser that can simultaneously display the total flow and the rate of flow of either flowmeter, or the sum or difference of the two inputs. Rate and total displays may have the same or different engineering units. The BA588E is easy to use and each input can be independently configured on-site to operate with a flowmeter having various pulse outputs. A slide-in scale card simplifies identification.

Main application of the BA588E is to process the pulse output from two process area flowmeters and calculate and display the sum or difference of the two. Rate and total flow can be simultaneously displayed in the same or different engineering units and the output from each flowmeter can also be shown. The BA588E will compensate for nonlinearity of each flowmeter using up to sixteen flowmeter K-factors which can be entered for each meter on-site.

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

Display backlighting, which is internally powered from the totaliser, 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 totaliser is installed in a poorly illuminated area.

An 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.

IP66 front panel protection with a neoprene gasket to seal the joint between the totaliser and the instrument panel allow the BA588E to be installed in areas that will be washed down. To simplify installation and maintenance, the totaliser has removable terminal blocks allowing panel wiring to be completed before the instrument is installed.

An optional isolated 4/20mA current sink output may be configured to produce an analogue output proportional to any part of the sum or difference of the two flowmeter rate or total displays. The output is galvanically isolated allowing direct connection to other instruments.

Dual alarms with galvanically isolated solid state outputs which can switch loads such as sounders or solenoid valves, are available as a factory fitted option. Both may be independently configured as rate or total alarms operating on either flowmeter input, or on the sum or difference of the two inputs. Annunciators on the BA588E display show the status of both alarm outputs.

If only one input is required the BA538E has the same functions and display but only one input. When panel space is limited the BA537E is a single input rate totaliser in a 96 x 48mm enclosure.

For applications in flammable atmospheres the BA388E is identical to the BA588E but has international intrinsic safety certification. For one input applications the intrinsically safe BA338E and the smaller BA337E are also available.

BA588E

Two input rate totaliser

General purpose

- ◆ Each input independently configurable: magnetic pick-off, switch contact, proximity detector, open collector or voltage pulse.
- ◆ Separate rate and total displays.
- ◆ 144 x 72mm DIN enclosure with IP66 front protection.
- ◆ Separate lineariser for each input.
- ◆ Simple on-site scale card installation.
- ◆ Isolated pulse output
- ◆ Optional:
Backlight
Dual alarms
4/20mA output
- ◆ 3 year guarantee

BEKA
associates

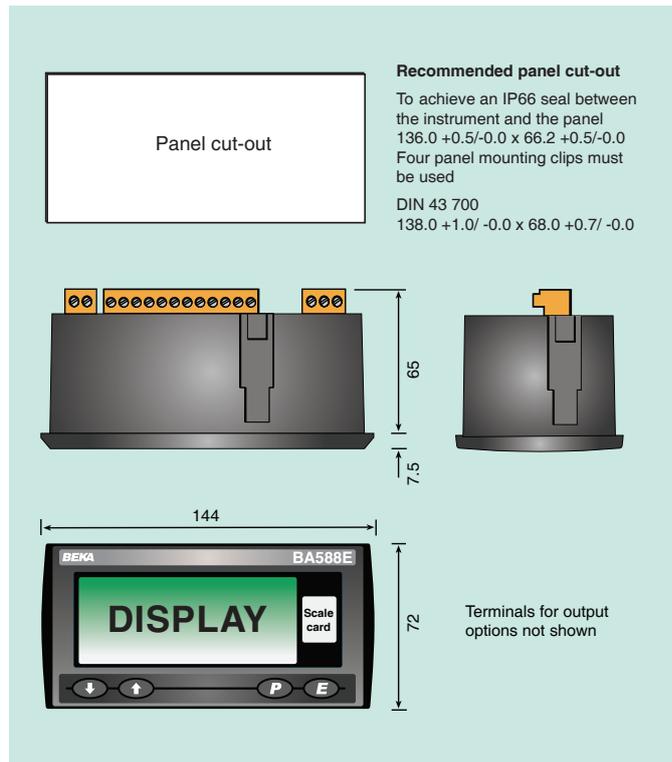
Sales & Support Distributor:-
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SPECIFICATION

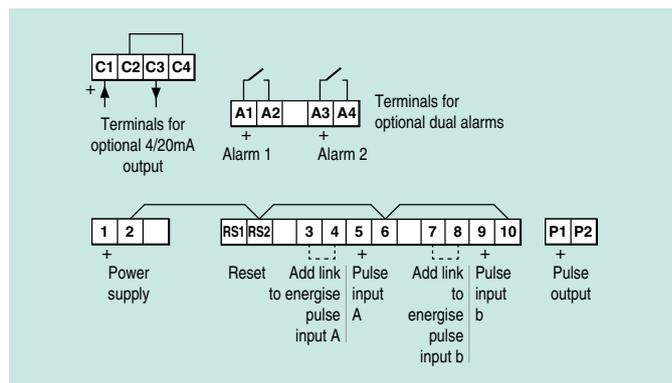
Power supply	
Voltage	10 to 30V dc
Current	22mA max plus 16mA for optional backlight
Input	
	Lower Upper switching thresholds
Switch contact	100Ω 1kΩ
Proximity detector (NAMUR)	1.2mA 2.1mA
Open collector	2kΩ 10kΩ
Magnetic pick-off	0mV +40mV
Voltage pulse (low)	1V 3V 30V max
Voltage pulse (high)	3V 10V 30V max
Frequency	
Switch contact	150Hz typical
Other inputs	100kHz max
All inputs	0.01Hz min
} <i>Depends upon pulse width and debounce setting.</i>	
Display	
Type	Liquid crystal
Zero blanking	Blanked apart from 0 in front of decimal point
Rate‡	
Decimal point	6 digits 12mm high
Total‡	1 of 4 positions or absent
Decimal point	8 digits 18mm high
	1 of 7 positions or absent
‡ Rate or Total of either input can be shown on 6 or 8 digit display.	
Grand total	Maximum count 10 ¹⁶
Remote reset	Contact closure with resistance less than 10kΩ
Pulse output	
Source & output	Isolated open collector
	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	
Each input individually configurable	
Rate scale factor (K-factor)	Adjustable between 0.0001 and 99999 pulses/unit volume. Up to 16 K-factors may be entered
Lineariser	Rate may be displayed per second, minute or hour
Rate timebase	Adjustable digital filter
Rate display filter	Adjustable between 0.0001 and 99999
Total scale factor	
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	Noryl SE1GFN3. Front IP66, rear IP20
EMC	Complies with EMC Directive 2014/30/EU
Mechanical	
Terminals	Screw clamp for 0.5 to 1.5mm ² cable, removable
Weight	0.35kg
Accessories	
Backlight	Green LED internally powered
4/20mA output	Isolated current sink representing any part of the sum or difference of the two inputs.
Voltage drop	5 to 30V dc
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 operating on either input. Isolated solid state switch
Outputs	
Ron	5Ω + 0.7V max
Roff	1MΩ min
V max	30V dc
I max	200mA
Scale card	Blank card fitted to all instruments. Can be supplied typeset 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)



TERMINAL CONNECTIONS



HOW TO ORDER

Model number	Please specify configuration for both inputs
Input	BA588E
	Type *
Rate scale factor	XXXXX *
	<i>If linearisation is required, up to 16 rate scale factors may be entered each at a specified flow rate for each input.</i>
Rate timebase	Seconds, minutes or hours*
Total scale factor	XXXXX *
Pulse output	Direct retransmission of either input 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
	<i>No charge if ordered with totaliser</i>
Tag	Legend required

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