

The **BA518E** is a third generation general purpose tachometer that has similar functions as the BA517E, with a larger display housed in a 144 x 72mm DIN enclosure. The tachometer is easy to use and can be configured on-site to operate with a magnetic pick-off, switch contact, proximity detector, open collector or voltage pulse sensor. A slide-in scale card can be supplied printed with units of measurement, or can easily be marked on-site without removing the tachometer from the panel or opening the instrument enclosure.

Main application of the BA518E is to measure and display rotational speed within a process area. To assist with routine maintenance the BA518E tachometer also includes a run-time clock that records the number of hours that the monitored machinery has been operating.

The display has high contrast and a wide viewing angle, allowing the tachometer to be read in most lighting conditions over a wide temperature range. Speed may be displayed in almost any units of measurement per second, minute or hour. Run-time is shown on the lower display in hours with a tenth of an hour resolution. If not required, the run-time display may be disabled.

IP66 front panel protection with a neoprene gasket to seal the joint between the tachometer and the instrument panel allow the BA518E to be installed in areas that will be washed down. To simplify installation and maintenance, the tachometer has removable terminal blocks enabling panel wiring to be completed before the instrument is installed.

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

The isolated open collector pulse output synchronously retransmits the tachometer input pulse to other instruments. The output pulse frequency may be divided and the pulse width may be defined.

A factory fitted optional 4/20mA current sink may be configured to produce an analogue output proportional to any part of the speed display.

Optional dual alarm outputs which can switch loads such as a sounder or solenoid valve are available as a factory fitted option. The two galvanically isolated, solid state voltage free outputs may be independently configured as speed or run-time alarms with normally open or closed outputs. Annunciators on the BA518E display show the status of both alarm outputs.

If panel space is limited the BA517E has similar functions but is housed in a smaller 96 x 48mm enclosure. Alternatively, for installation in marine or severe environments, or where the front of the instrument may be impacted, the BA517E-SS is housed in a rugged 316 stainless steel enclosure.

For applications in flammable atmospheres the BA318E, which is identical to the BA518E, has international intrinsic safety certification. For Zone 2 or 22 applications the rugged stainless steel BA317NE has Ex nA and Ex tc certification allowing installation without Zener barriers or galvanic isolators.

BA518E

One input tachometer

General purpose

- ◆ **Configurable input:** magnetic pick-off, switch contact, proximity detector, open collector or voltage pulse.
- ◆ **Separate speed and run-time displays.**
- ◆ **144 x 72mm DIN enclosure with IP66 front protection.**
- ◆ **Isolated pulse output**
- ◆ **Simple on-site scale card installation.**
- ◆ **Optional:**
Backlight
Dual alarms
4/20mA output
- ◆ **3 year guarantee**

www.beka.co.uk/ba518e

BEKA
associates

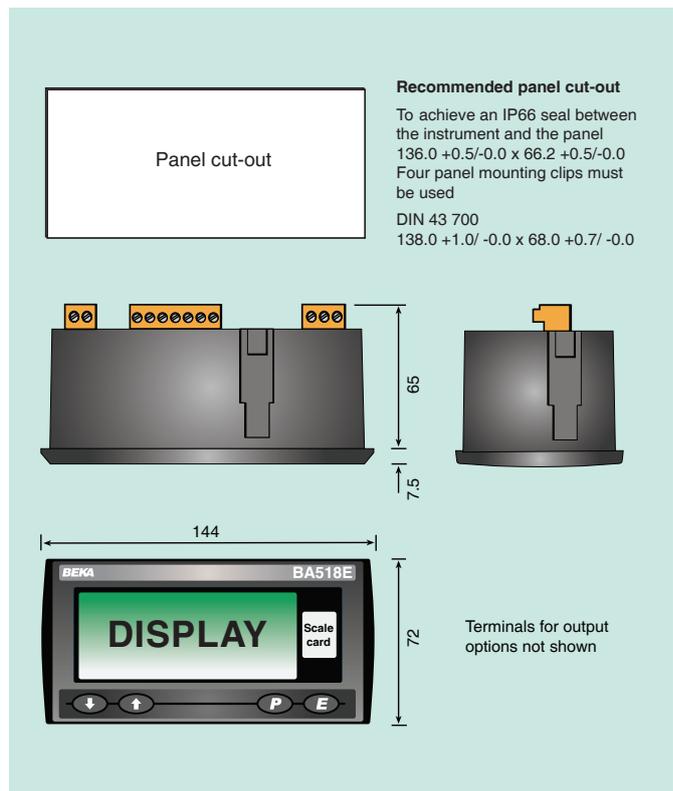
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SPECIFICATION

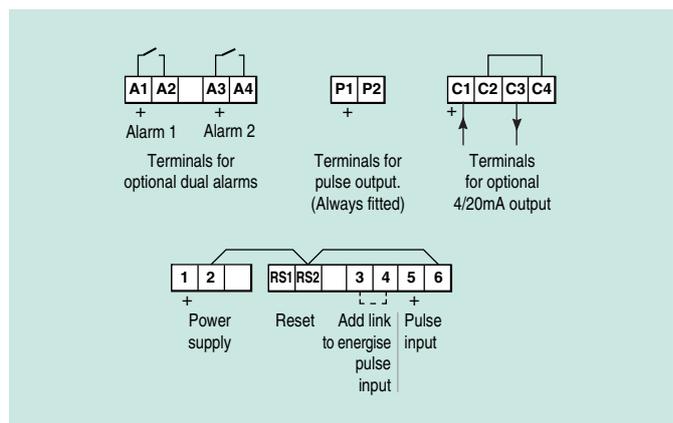
Power supply	
Voltage	10 to 30V dc
Current	16mA max plus 16mA for optional backlight
Input	
	Lower Upper switching thresholds
Switch contact	100Ω 1kΩ
Proximity detector (NAMUR)	1.2mA 2.1mA
Open collector	2kΩ 10kΩ
Magnetic pick-off	0 +40mV
Voltage pulse (low)	1V 3V 30V max
Voltage pulse (high)	3V 10V 30V max
Frequency	
Switch contact	150Hz typical
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
Speed	
Decimal point	8 digits 18mm high
Run-time	1 of 7 positions or absent
	6 digits 12mm high
	99999.9hours max
Grand total run-time	5 x 10 ⁶ hours max
Remote reset	Contact closure with resistance less than 10kΩ
Pulse output	
Source & output	Isolated open collector
	Synchronous pulse output, 5kHz max. 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	
Speed scale factor	Adjustable between 0.0001 and 99999 input pulses / revolution.
Speed timebase	Speed may be displayed per second, minute or hour.
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	
Material	Noryl SE1GFN3
Protection	Front IP66, rear IP20
EMC	Complies with EMC Directive 2014/30/EU
Mechanical	
Terminals	Screw clamp for 0.5 to 1.5mm ² cable, removable
Weight	0.35kg
Accessories	
Backlight	Green LED internally powered
Scale card	Blank card fitted to all instruments. Can be supplied printed with specified units of measurement for no additional charge at time of tachometer purchase. ~
Tag legend	Specified tag number or application printed onto rear of instrument. ~
4/20mA output	Isolated current sink.
Voltage drop	5 to 30V
Alarms	
	Two alarms each of which may be independently configured as a speed or run-time, 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
V max	30V dc
I max	200mA

~ See accessory datasheet for details

DIMENSIONS (mm)



TERMINAL CONNECTIONS



HOW TO ORDER

Model number	Please specify BA518E
Input Type *	
Speed scale factor	XXXXX *
Speed timebase	Seconds, minutes or hours*
Accessories	Please specify if required
Display backlight	Backlight
Scale card	Legend required
Tag	<i>No charge if ordered with tachometer</i> Legend required
4/20mA output	4/20mA output
Dual alarms	Alarms

* Tachometer can be supplied configured as required for no additional charge. If configuration information is not supplied, instrument will be configured for open collector input with speed scaling factor of 1.0 and a timebase of minutes. Can easily be reconfigured on-site.