

The BA558C is a loop-powered, panel mounting rate totaliser with separate rate and total displays. When connected in series with a 4/20mA flow transmitter, the BA558C will display the rate of flow in engineering units and total flow in the same or different units. The BA558C only introduces a 1.1V drop which allows it to be installed into almost any 4/20mA loop. If the 4/20mA loop is disconnected, the displayed total and all programme parameters are stored in permanent memory, and are automatically recovered when the 4/20mA current is restored.

Main application of the BA558C is to integrate the 4/20mA output from a flow transmitter and to display the total flow in engineering units. The flow rate is shown on a smaller display, although the function of the two displays may be reversed. A selectable root extracting function enables the output from a differential flow transmitter to be displayed in linear units. When fitted with optional alarms, the BA558C can detect high and low flow rates and can perform simple flow batching operations.

Control and programming is performed via the front panel tactile push-buttons which 'click' when operated. All the programme functions are contained in easy to understand menus which may be protected by a user definable security code. To simplify calibration the total scaling factor employs a floating decimal point.

The front panel is a robust, easy to clean Noryl moulding IP65 sealed with

a non-reflective, scratch resistant polyester membrane. A captive neoprene gasket provides an IP65 seal between the enclosure and the panel.

An internal calibrator simulates 4 and 20mA input currents so that the instrument may be quickly calibrated without the need for test equipment or disconnection from the 4/20mA loop. Although not providing independent verification, this provides an effective way to quickly check performance or to recalibrate.

Optional alarms provide two galvanically isolated solid state outputs which may be independently programmed for high or low operation on either the rate or total displays. Each output will switch a dc load such as a solenoid valve or a sounder, and the alarm status is shown by a display annunciator.

Backlighting is available as an option to improve readability when the BA558C is installed in a poorly illuminated area. High efficiency amber LEDs provide an even glow to enhance display contrast.

Reliability is ensured by an ISO9001 approved quality control system supported by a three year guarantee. The instrument is protected from reverse connection and overrange input current, and incorporates extensive radio frequency filtering.

If flammable atmospheres are present a BA358C should be used. This has the same features as the BA558C, but has been certified for use in hazardous areas.

BA558C

2-wire 4/20mA rate totaliser

General purpose for use with 4/20mA flowmeters

◆ **Loop powered only**
1.1V drop

◆ **Separate rate and total displays**

◆ **144 x 72mm DIN enclosure with IP65 front**

◆ **Root extractor**

◆ **Optional:**

Alarms

Backlight

◆ **3 year guarantee**

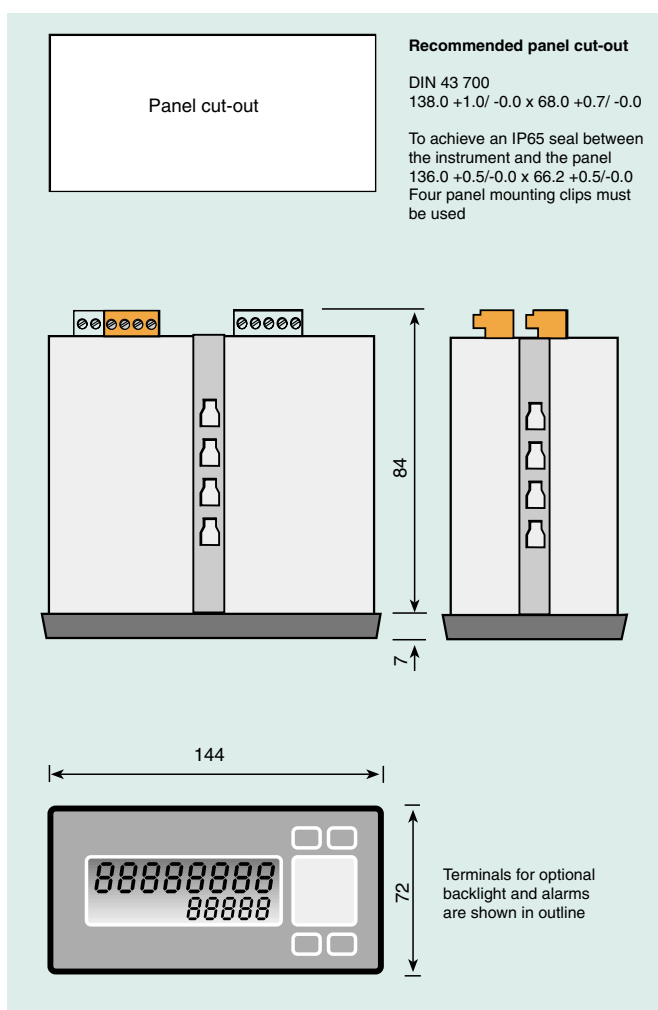
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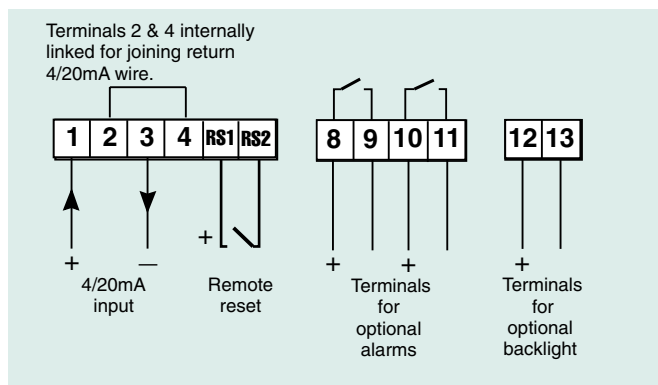
SPECIFICATION

| | |
|--|--|
| Input | |
| Current | 4 to 20mA |
| Voltage | Less than 1.1V at 20°C |
| Overrange | ±200mA will not cause damage. |
| Display | |
| Type | Liquid crystal |
| Rate~ | 5 digits 9.5mm high |
| Span | Adjustable between 0 & 20000 for a 4 to 20mA input. |
| Zero | Adjustable between 0 & 20000 with 4mA input. |
| Decimal point | 1 of 4 positions or absent |
| Timebase | Per second, minute or hour |
| Overrange | 4 least significant digits are blanked. |
| Total~ | 8 digits 14mm high |
| Scaling factor | Adjustable between 0.0001 & 65535 |
| Decimal point | 1 of 7 positions or absent |
| Grand total | Max count 10 ¹⁶ |
| ~Rate and total can be shown on either display | |
| Accuracy | |
| Rate display at 20°C | |
| Linear | ±0.02% of span ±1 digit |
| Root extracting | ±16µA at input ±1 digit |
| Temperature effect | |
| Zero | Less than 25ppm/°C |
| Span | Less than 50ppm/°C |
| Series mode | Less than 0.05% of span error for 1mA pk to pk 50Hz or 60Hz signal. |
| Total display | Updated every second |
| Remote total reset | |
| | Contact closure with resistance less than 1kΩ |
| Environmental | |
| Operating temperature | -20 to 60°C |
| Storage temp | -40° to 85°C |
| Enclosure | Front IP65 Rear IP20 |
| EMC | |
| Immunity | In accordance with EU Directive 89/336/EEC. |
| Emissions | Less than 1% of rate span error for 10V/m. Undetectable above background noise. Class B equipment |
| Mechanical | |
| Terminals | Screw clamp for 0.5 to 1.5mm ² cables. Terminal blocks removable. |
| Weight | 0.5kg |
| Accessories | |
| Separately powered backlight | LED backlight |
| Vin | 18 to 30V dc. May be dimmed by reducing voltage below 18V. |
| Iin | 40mA typical |
| Alarms | Two independent alarms each of which may be programmed for high or low operation on either the rate or total display with a NC or NO output. |
| Outputs | Isolated solid state switch |
| On | Less than 5Ω +0.6V |
| Off | Greater than 180kΩ |
| Rating | 30V dc; 250mA |
| Typeset scale card | Blank scale card fitted to each instrument, can be supplied typeset with units of measurement. * |
| Tag number | Thermally printed number or applicational information on rear of instrument. * |

DIMENSIONS (mm)



TERMINAL CONNECTIONS



HOW TO ORDER

| | |
|----------------------|---|
| Model number | BA558C |
| Rate display at 4mA | XXXXX |
| Rate display at 20mA | XXXXX |
| Rate timebase | Seconds, minutes or hours |
| Total scale factor | (Units of rate display)÷(Units of total display)# |
| Accessories | |
| Display backlight | Separately powered backlight |
| Alarms | Alarms |
| Scale card | Legend required |
| Tag number | Legend required |

please specify

please specify

* See accessory datasheet for details

If calibration information is not supplied, instrument will be set to display rate of 0.00 to 100.00 with a timebase of seconds and a total scale factor of 1