B Alert Datasheet

Your success counts

Basic Flow rate Monitor / Totalizer

with configurable alarm / pulse signal outputs

Application examples: *Common flow monitoring*

Battery powered flow indication

Your brand customization

The basic indicators of the B-Series have all the benefits you may expect from a Fluidwell product: It's durable, reliable and very easy to operate. For more advanced functionality we recommend our D-, E-, F- and N-Series.

Advantages

- Durable IP65 (Type4) field, wall or meter mount enclosure.
- Intuitive "Know one, know them all!" configuration menu, saving time, cost and aggravation.
- Compact design.
- Competitve pricing in bigger quantites.
- Design your own branded product with several enclosure customization options.

Features

- Displays instantaneous flow rate, total, accumulated total and alarm messages.
- Clear 12mm(0.5") numeric and 7mm(0.3") alphanumeric digits.
- All info at a glance with clear alphanumerical display.
- Bright LED backlight.
- The B-Alert accepts the basic sensor input signals: Reed-switch, Namur, NPN, PNP, Sine wave (coil).
- Two digital outputs that can be configured as a scaleable pulse output or as a a flow rate alarm output.
- Power requirements: Lithium AA battery, output loop powered and 10 - 30V DC.
- Sensor supply: 8.2V DC.
- Auto backup of settings and running totals.
- One 20mm and two 16mm knock-out hole cable entries.

Introduction

The B-Alert is a flow rate indicator and totalizer with continuous flow rate monitoring feature. It offers the facility to set one low flow rate and one high flow rate alarm value. The display shows flow rate, total, accumulated total and alarm messages. On-screen engineering units are easily configured from a comprehensive selection.

Display

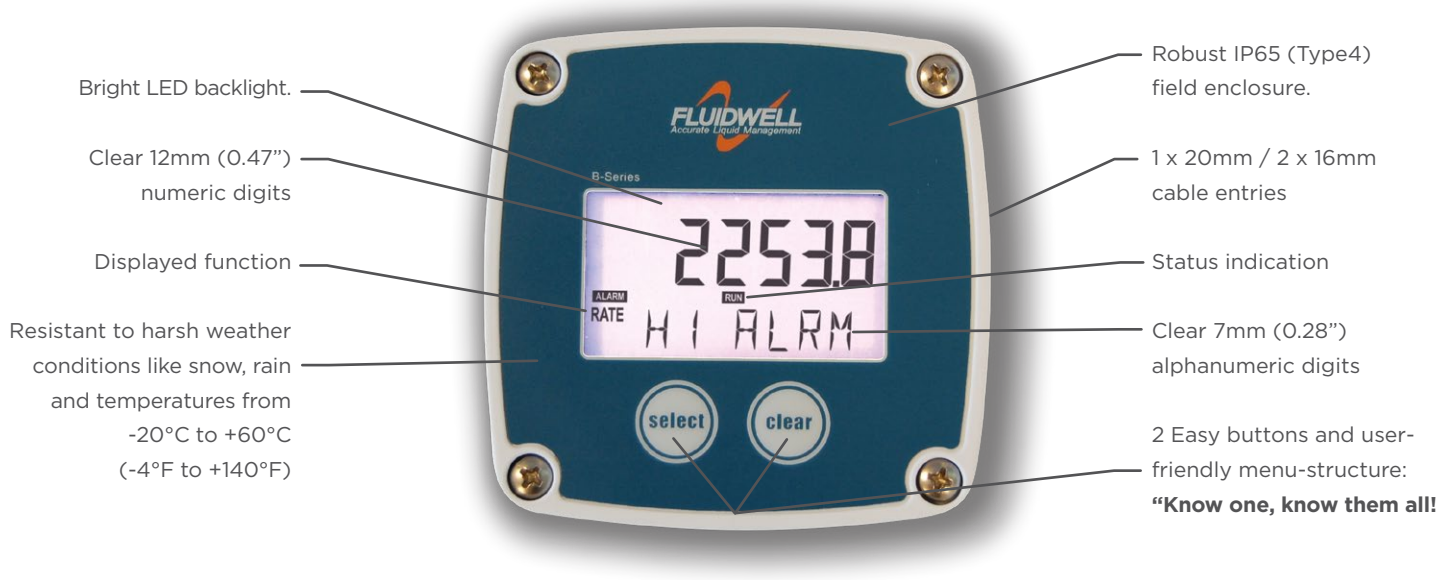
The main process information is displayed with 7 digits (12mm, 0.47”) to show flow rate, total or accumulated total. The 7 alpha-numeric digits (7mm, 0.28”) are used for the flow rate measurement units, the clear setup menu and the alarm messages. For good readings in full sunlight and darkness, the B-Alert is provided with a bright backlight.

Configuration

The B-Series uses the same highly appreciated configuration structure of our Fluidwell product series. Each setting is clearly indicated with an alphanumerical description, which avoids confusing abbreviations. Once familiar with one B-series product, you will be able to program all models in all series without a manual. In other words: know one, know them all.

Pulse / alarm outputs

Two digital outputs are available which can be configured as a scaleable pulse output or as a a flow rate alarm output. The pulse length can be set to 5msec or 100msec. The output is a passive NPN signal.



Power requirements

Two power inputs are available to supply the B-Series and sensor. The B-Alert can be powered with a single 3,6V lithium AA battery. The basic 10 - 30V DC power supply can supply the B-Alert including the backlight and offers an 8.2V DC sensor supply.

All info at a glance

Easy to install

Easy to program

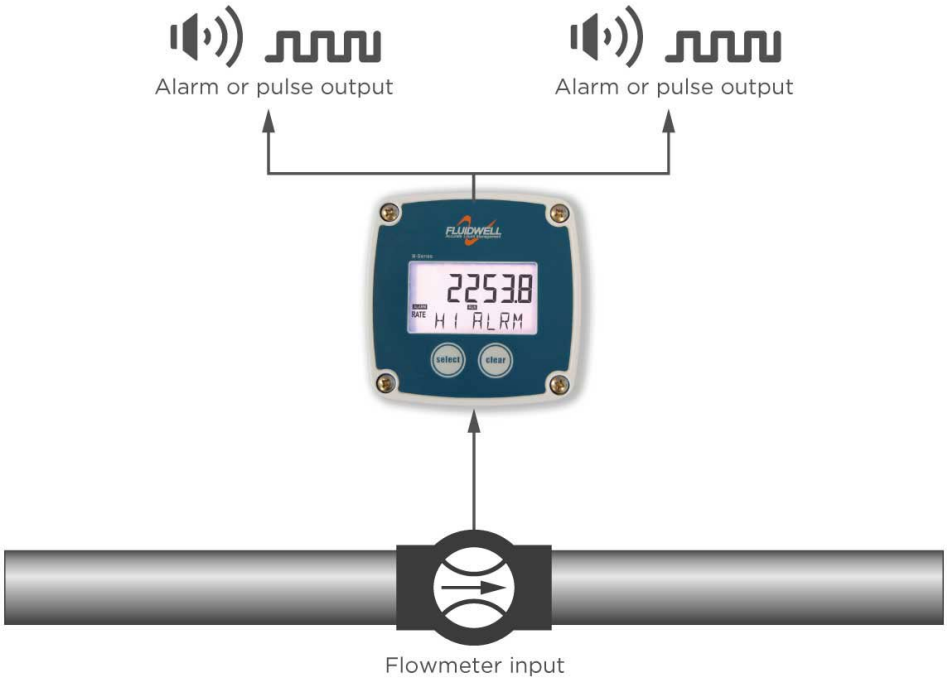
Know one know them all!

Reliable

User-friendly

Overview application B-Alert

Basic flow rate monitoring with a precise calculation over the full measurement range, where re-transmission of the totalizer and monitoring of the flow rate function is required. The B-series offers you an economical solution for common industrial applications. Nothing more, nothing less. For intrinsically safe applications we offer our rugged, field mount F-Series indicators. For explosion proof applications we offer our E-Series indicators. For panel mount applications we offer our D-Series indicators.



Signal input

The B-Alert accepts the basic flowmeter input signals: Namur, Reed-switch, NPN, PNP and Sine wave (coil). The input signal type can easily be selected in the configuration menu.

Type of signal	Resistance	Low Pass filter (LP)	Max. frequency	Max. frequency Low Pass filter (LP)	Min. amplitude P-P	Remark
NPN	100kΩ pull-up		6 kHz Threshold 1.2V			Open collector
REED		1MΩ pull-up		120Hz		
PNP	47KΩ pull-down		6kHz Threshold 1.2V			
NAMUR	820Ω pull-down		4kHz	-		External power required
COIL	-	-		-	$90mV_{pp}$	Default sensitivity

Enclosures

The smart design of the rugged IP65 (Type4) GRP enclosure ensures optimal advantages for various mounting possibilities.

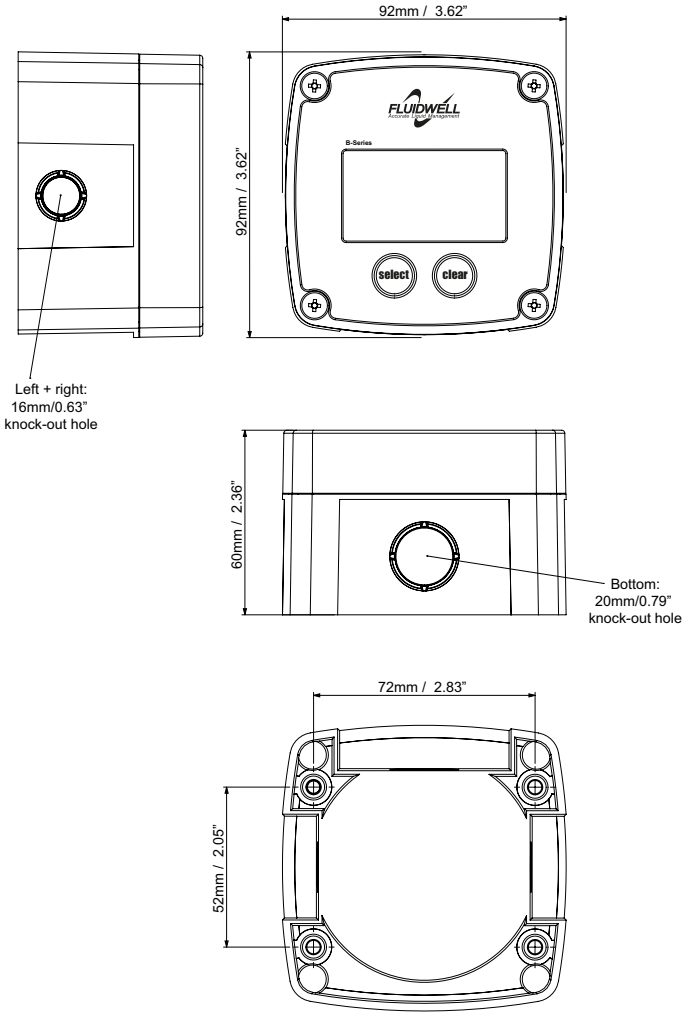
The B-Alert can be field or wall mounted or directly on the flowmeter.

The standard enclosure will be delivered as follows:

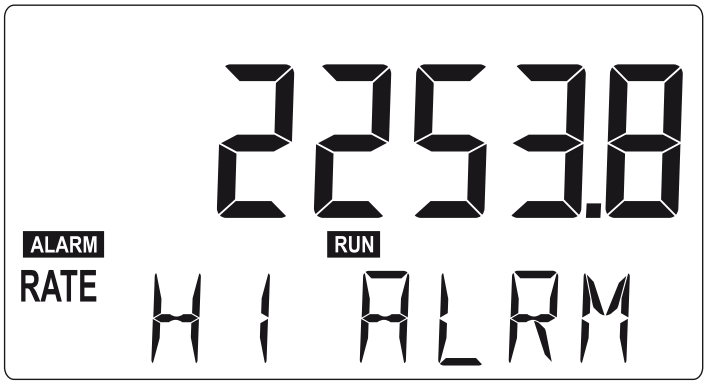
- Blue GRP back cover.
- White GRP front cover with blue polyester front foil and Fluidwell logo.

Dimensions enclosure

GRP field mount enclosure



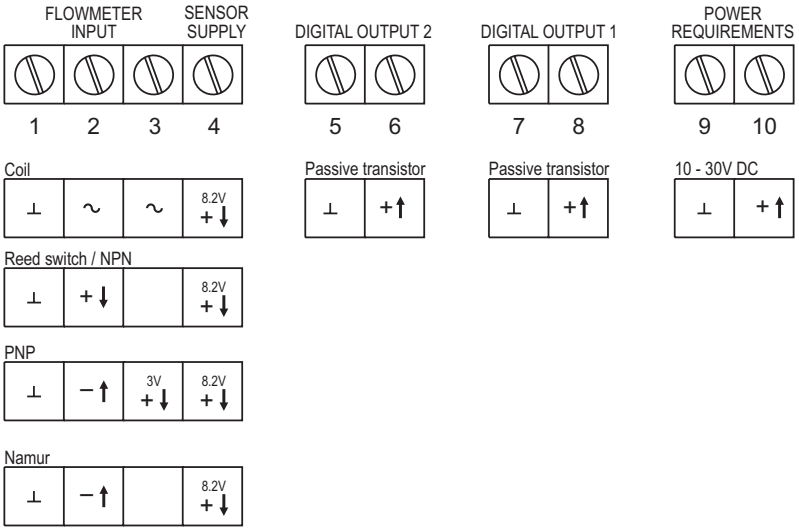
B-Alert display example



Customization options

- Fluidwell blue polyester front foil without logo.
- Custom front foil options. (2, 3, 4 or 5 colors).
- Custom front/back cover color.
- Customized manual cover.
- Customized technical label.
- Customized package label.

Terminal connections B-Alert



Display

Type	High intensity transflective numeric and alphanumeric LCD, with white LED backlight.
Dimensions	54 x 29mm (2.13" x 1.14").
Digits	Seven 12mm (0.47") and seven 7mm (0.28") digits Various symbols and measuring units.
Refresh rate	During operation 8 times/sec, it will automatically switch to 1 time/sec after 30 sec without operation.

Operating temperature

Ambient	-20°C to +60°C (-4°F to +140°F).

Power requirements

Basic supply	10 - 30V DC. Standard consumption: P_{max}. 60mW. With backlight: P_{max}. 435mW. With backlight + sensor supply: P_{max}. 735mW.
Note	The basic power supply will also supply the backlight or the 8.2V DC sensor supply.
Battery	1 x 3.6V AA Lithium battery - life-time depends upon settings and configuration - up to approx. 2 years.

Sensor excitation

Terminal 3	3V DC for pulse signals and 1.2V DC for coil pick-up, I_{out} max. 100µA.
Note	This is not a real sensor supply. Only suitable for sensors with a very low power consumption like coil (sine wave).
Terminal 4	8.2V DC, I_{out}t max. 10mA, requires 10-30V DC supply.

Data protection

Type	Non-volatile backup of all settings. Backup of running totals every minute. Data retention at least 10 years.
Password	Configuration settings can be password protected.

Directives & Standards

EMC	Directive 2014/30/EU, FCC 47 CFR part 15.
Low voltage	Directive 2014/35/EU
RoHS	Directive 2011/65/EU
IP & NEMA	EN 60529 & NEMA 250

Enclosure

Material	GRP, IP65 (Type4), UV-resistant and flame retardant.
Window	Polycarbonate window.
Sealing	EPDM gasket.
Control keys	Two industrial micro-switch keys.
Dimensions	92 x 92 x 60mm (3.62" x 3.62" x 2.36") - W x H x D.
Weight	200 gram / 0.44 lbs.

Signal outputs - Digital output

Function	• Pulse output: Transmitting accumulated total. • Alarm output: Low or high flow rate alarm.
Frequency	User definable: 100Hz (5msec) or 5Hz (100msec).
Output type	Two passive transistor outputs (NPN) - not isolated. 300mA, max. 30V.

Signal outputs - Analog output

Function	Transmitting flow rate.
Output type	Loop powered, analog output. 12 - 30V DC. 3 - 22mA according Namur NE45.
Accuracy	10 bit. Error 0.5% of full scale and temperature range. Analog output signal can be scaled to any desired range.
Liftoff voltage	12V.
Liftoff voltage	Typical 500Ohm @ 24V. Max. 800Ohm

Signal inputs - Flowmeter

Pulse inputs	Coil / sine wave (sensitivity: 80mVpp), NPN, PNP, reed-switch, Namur.
Frequency	Minimum 0Hz - maximum 6kHz for total and flow rate. Maximum frequency depends on signal type and internal low-pass filter. E.g. reed-switch with low-pass filter: max. frequency 120Hz.
K-Factor	0.000010 - 9,999,999 with variable decimal position.

Operator functions

Displayed info	• Flow rate. • Total. • Accumulated total. • Alarm values low and high flow rate. • Alarm values can be entered • Reset total by pressing the CLEAR-key twice.

Total

Digits	7 digits.
Units	L, m^3, US gal, igal, Oil bbl, kg, lb or none.
Decimals	0 - 1 - 2 or 3.
Note	Total can be reset to zero.

Accumulated total

Digits	7 digits.
Units / decimals	According to selection for total.
Note	Can not be reset to zero.

Flow rate

Digits	7 digits.
Units	mL, L, m^3, g, kg, ton, US ton, US gal, igal, Oil bbl, lb, cf or none.
Decimals	0 - 1 - 2 or 3.
Time units	/sec - /min - /hr - /day.

Alarm values

Digits	7 digits.
Units	According to selection for flow rate.
Decimals	According to selection for flow rate.
Time units	According to selection for flow rate.
Type of alarm	According to selection for flow rate.

Terminal connections

Type	Removable plug-in terminal strip. Wire max. 1.5mm^2

Fluidwell bv
T: +31 (0) 413 - 343 786
E: displays@fluidwell.com
www.fluidwell.com