B In-Control Datasheet

Your success counts

FLUIDWELL

Basic Batch Controller

with two-stage control outputs

Application examples: *For basic batching*

Battery powered batch control

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 (Type 4X) field, wall or meter mount enclosure.
- Intuitive "Know one, know them all!" configuration menu, saving time, cost and aggravation.
- Compact design.
- Competitve pricing.
- Design your own branded product with several enclosure customization options.

Features

- Displays preset value and running batch value simultaneously, total and accumulated total.
- 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-In-Control accepts the basic sensor input signals: Reed-switch, Namur, NPN, PNP, Sine wave (coil)
- Two control outputs, with one- or two-stage for accurate valve control.
- Power requirements: Lithium AA battery or 10-30VDC supply.
- Sensor supply: 8.2V DC.
- Auto backup of settings and running totals.
- One 20mm (0.79") and two 16mm (0.63") knock-out hole cable entries.
- Easy configurable via PC with free downloadable remote configuration tool.

Introduction

The B-In-Control is a basic batch controller with two valve control outputs, offering exactly what is required for many applications. The operator can enter a batch quantity easily or execute repeating batches. During the batch, the preset value is displayed as well as the batched (actual) quantity and the units of measurement. The automatic self-learning overrun correction ensures an accurate result after every batch.

Display

The main process information is displayed with 7 digits (12mm, 0.47") to show the actual batched value, total or accumulated total. The 7 alpha-numeric digits (7mm, 0.28") are used for the preset value and the clear setup menu messages. For good readings in full sunlight and darkness, the B-In-Control is provided with a bright backlight.

Power requirements

Two power inputs are available to supply the B-Series and sensor. The B-In-Control can be powered with a single 3.6V lithium AA battery. The basic 10 - 30V DC power supply can supply the B-In-Control including the backlight and offers an 8.2V DC sensor supply.

Configuration

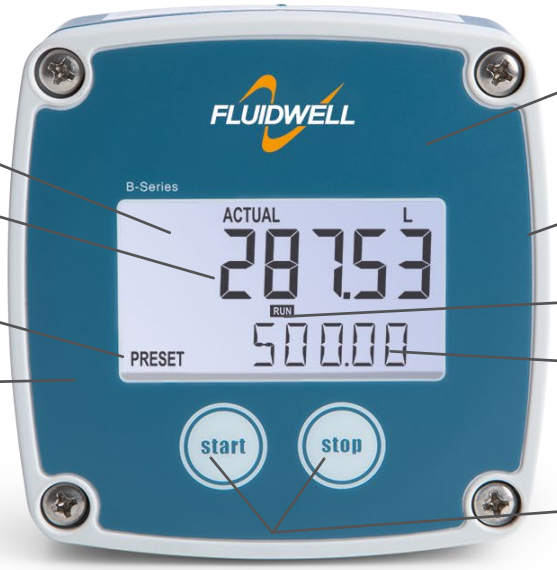
The B-Series uses the same highly appreciated configuration structure of our Fluidwell product series. Each setting is clearly indicated with an alphanumerical description, which avoids confusing abbreviations. Once familiar with one B-series product, you will be able to program all models in all series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

Remote configuration

Even more user-friendly is the remote configuration via a PC using the free downloadable Configuration Software. Connect the B-Series service connector with the special Configuration Cable (ACE02) to the USB port of your PC.

Control outputs

Two digital outputs are available with one- or two-stage for accurate valve control. The output is a passive NPN signal.



Bright LED backlight

Clear 12mm (0.47") numeric digits

Displayed function

Resistant to harsh weather conditions like snow, rain and temperatures from -20°C to +60°C (-4°F to +140°F)

Robust IP65 (Type4) field enclosure

1 x 20mm (0.79")/ 2 x 16mm (0.63") cable entries

Status indication

Clear 7mm (0.28") alphanumeric digits

2 Easy buttons and user-friendly menu-structure: **"Know one, know them all!"**

All info at a glance

Easy to install

Easy to program

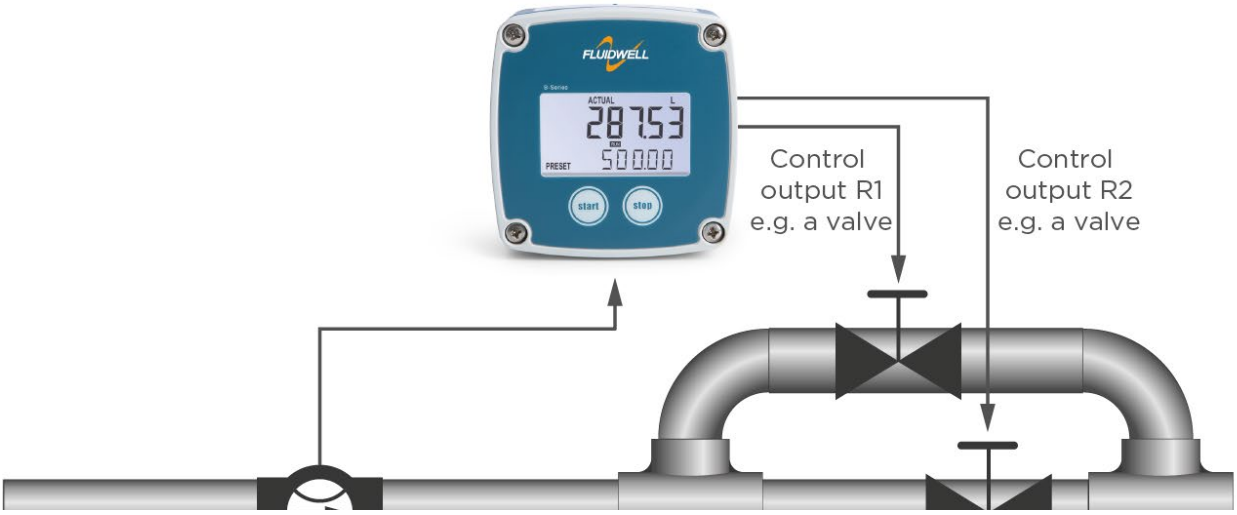
Know one know them all!

Reliable

User-friendly

Overview application B-In-Control

For basic batching, from small up to very large quantities. Just a simple single batch or repeating similar batches. 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 batch controllers and for panel mount applications we offer our D-Series batch controllers and for advanced batch controllers with numeric keypad we offer our N-Series batch controllers..



Signal input

The B-In-Control 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	715Ω pull-down		4kHz	-		External power required
COIL	-	-		-	$30mV_{pp}$	

Enclosures

The smart design of the rugged IP65 (Type 4X) GRP enclosure ensures optimal advantages for various mounting possibilities.

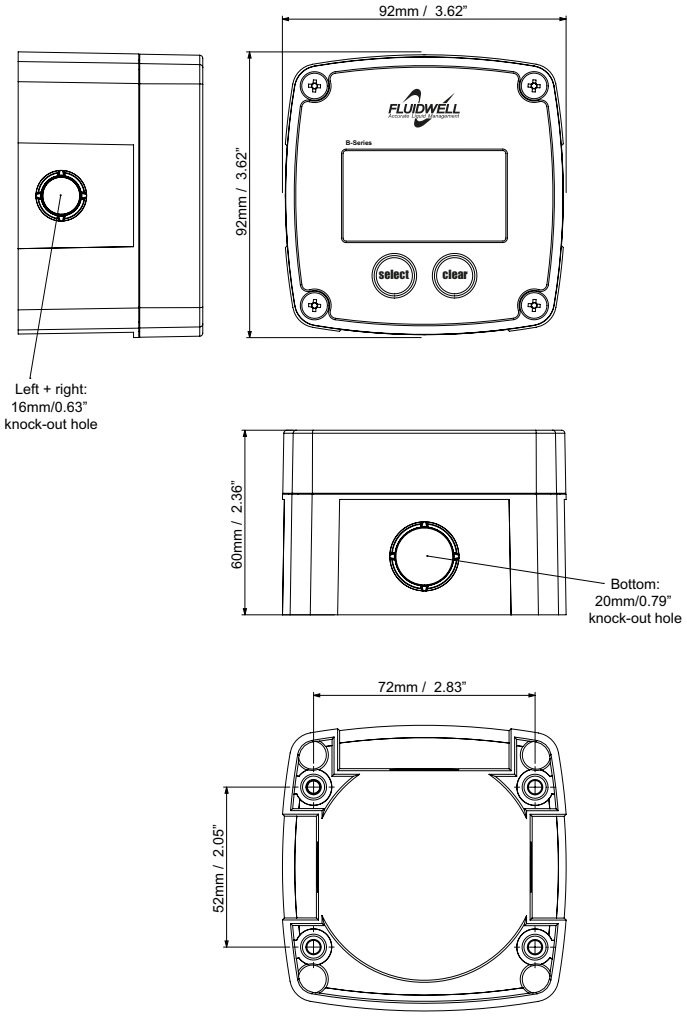
The B-In-Control can be field or wall mounted or directly on the flowmeter. The back cover can be turned in steps of 90°, enabling cable entry from any side.

The standard enclosure will be delivered as follows:

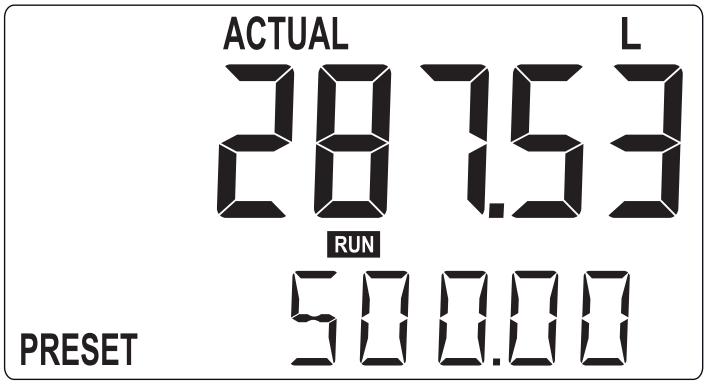
- Blue GRP back cover.
- White GRP front cover with blue polyester front foil and Fluidwell logo.

Dimensions enclosure

GRP field mount enclosure



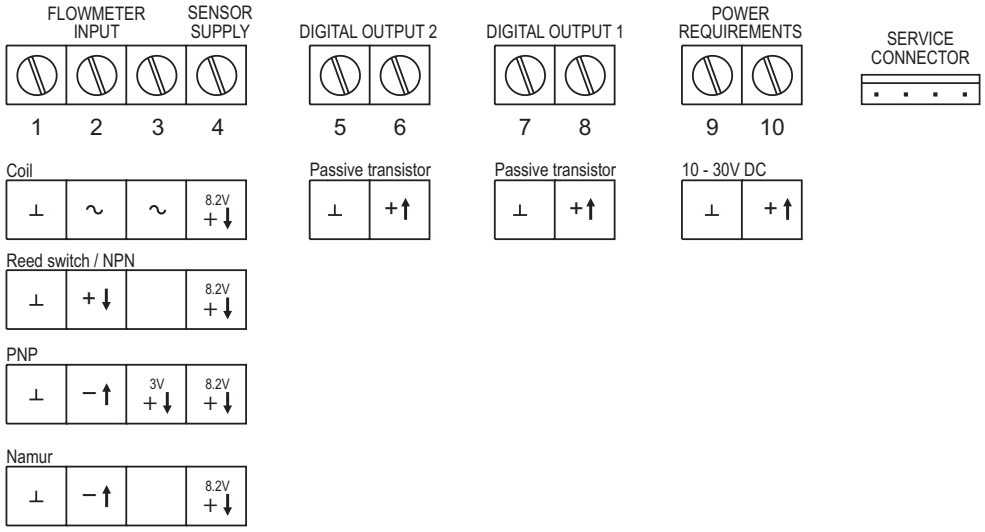
B-In-Control display example



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-In-Control



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. Max. 25mA.
Note	The basic power supply will also supply the backlight and the 8.2V DC sensor supply.
Battery	1 x 3.6V AA Lithium battery - life-time 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 coils (sine wave).
Terminal 4	8.2V DC, I_{out} 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 (Type 4X), UV-resistant & flame retardant.
Window	Polyester foil 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.
Cable entries	Knock out holes
	Side: 2 x 16mm / 0.63"
	Bottom: 1 x 20mm / 0.73"

Terminal connections

Type	Fixed. Wire max. 1.5mm^2

Signal inputs - Flowmeter

Pulse inputs	Coil / sine wave (sensitivity: 30mVpp), 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.
K-Factor	0.000010 - 9,999,999 with variable decimal position.

Signal outputs - Digital output

Function	2 control outputs with one- or two-stage batch control.
Output type	Two passive transistor outputs (NPN) - not isolated. 300mA, max. 30V per output.

Operator functions

Displayed info	• Actual value (batched quantity) and preset value simultaneously. • Total. • Accumulated total. • Reset total by pressing the CLEAR-key twice.

Preset

Digits	7 digits.
Units	L, m^3, US gal, gal, bbl, kg, lb or none.
Decimals	0 - 1 - 2 or 3.

Total

Digits	7 digits.
Units / decimals	According to selection for preset.
Note	Total can be reset to zero.

Accumulated total

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

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