

## 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.
- Competitive 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 alphanumeric 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 alphanumeric 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.



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<br>Threshold 1.2V |                                     |                    | Open collector          |
| REED           |                | 1MΩ pull-up          |                         | 120Hz                               |                    |                         |
| PNP            | 47KΩ pull-down |                      | 6kHz<br>Threshold 1.2V  |                                     |                    |                         |
| NAMUR          | 715Ω pull-down |                      | 4kHz                    | -                                   |                    | External power required |
| COIL           | -              | -                    |                         | -                                   | 30mV <sub>pp</sub> |                         |

## Enclosures

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

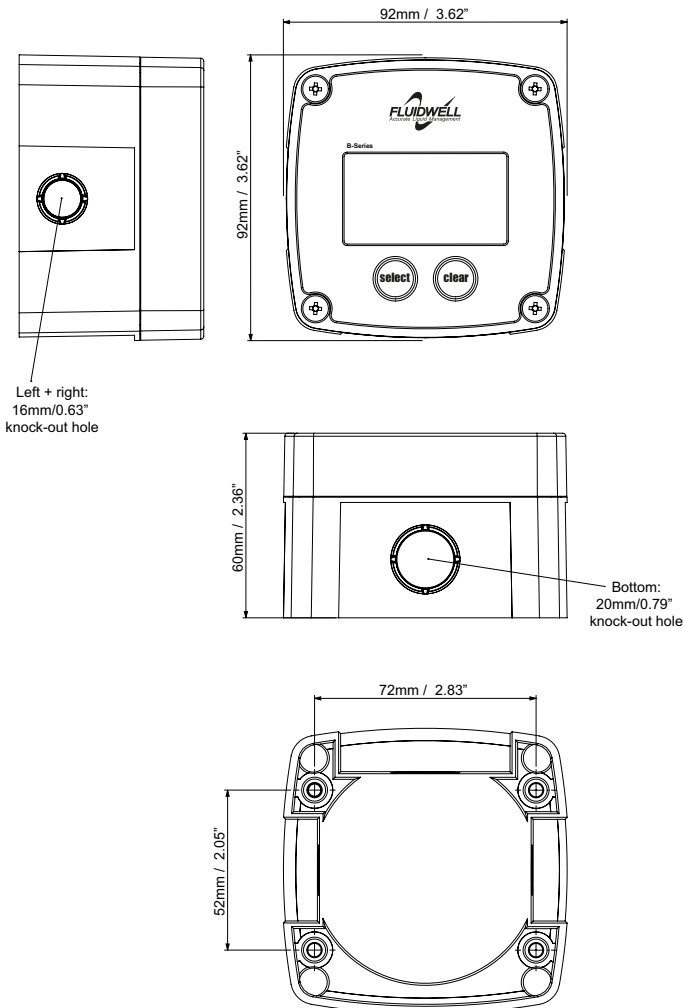
The B-In-Control can be field or wall mounted or directly on the flowmeter. The back cover can be turned in steps of 90°, enabling cable entry from any side.

The standard enclosure will be delivered as follows:

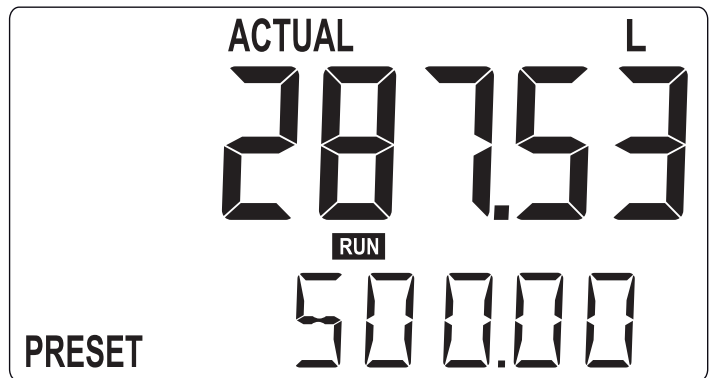
- Blue GRP back cover.
- White GRP front cover with blue polyester front foil and Fluidwell logo.

## Dimensions enclosure

GRP field mount enclosure



## B-In-Control display example

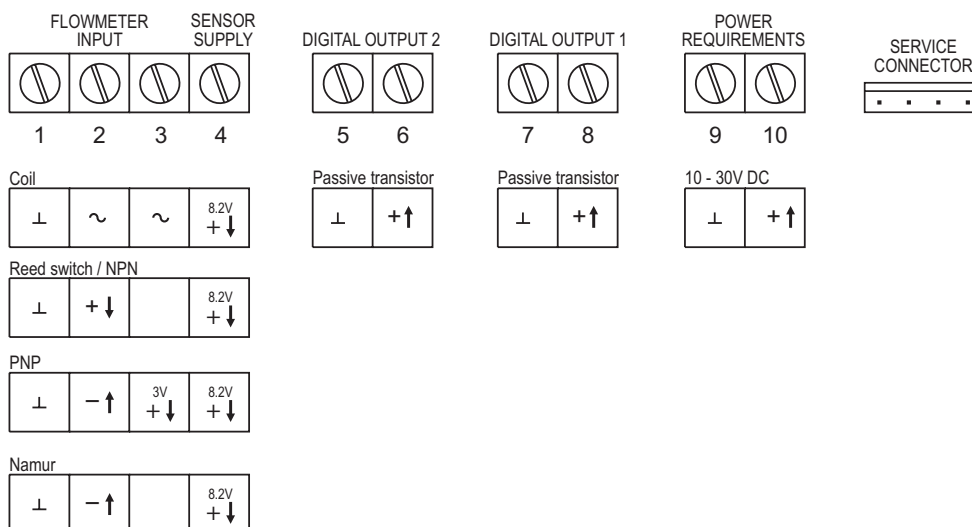


## Customization options

- 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

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

## Operating temperature

|                |                                  |
|----------------|----------------------------------|
| <b>Ambient</b> | -20°C to +60°C (-4°F to +140°F). |
|----------------|----------------------------------|

## Power requirements

|                     |  |
|---------------------|--|
| <b>Basic supply</b> | 10 - 30V DC. Max. 25mA.  |
| <b>Note</b>         | The basic power supply will also supply the backlight and the 8.2V DC sensor supply. |
| <b>Battery</b>      | 1 x 3.6V AA Lithium battery - life-time up to approx. 2 years.                       |

## Sensor excitation

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

## Data protection

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

## Directives & Standards

|                      |   |
|----------------------|---|
| <b>EMC</b>           | Directive 2014/30/EU, FCC 47 CFR part 15. |
| <b>Low voltage</b>   | Directive 2014/35/EU                      |
| <b>RoHS</b>          | Directive 2011/65/EU                      |
| <b>IP &amp; NEMA</b> | EN 60529 & NEMA 250                       |

## Enclosure

|                      |   |
|----------------------|---|
| <b>Material</b>      | GRP, IP65 (Type 4X), UV-resistant & flame retardant.                  |
| <b>Window</b>        | Polyester foil window.  |
| <b>Sealing</b>       | EPDM gasket.  |
| <b>Control keys</b>  | Two industrial micro-switch keys.                                     |
| <b>Dimensions</b>    | 92 x 92 x 60mm (3.62" x 3.62" x 2.36") - W x H x D.                   |
| <b>Weight</b>        | 200 gram / 0.44 lbs.  |
| <b>Cable entries</b> | Knock out holes<br>Side: 2 x 16mm / 0.63"<br>Bottom: 1 x 20mm / 0.73" |

## Terminal connections

|             |                                     |
|-------------|-------------------------------------|
| <b>Type</b> | Fixed. Wire max. 1.5mm <sup>2</sup> |
|-------------|-------------------------------------|

## Signal inputs - Flowmeter

|                     |  |
|---------------------|--|
| <b>Pulse inputs</b> | Coil / sine wave (sensitivity: 30mVpp), NPN, PNP, reed-switch, Namur.  |
| <b>Frequency</b>    | Minimum 0Hz - maximum 6kHz for total and flow rate. Maximum frequency depends on signal type and internal low-pass filter. |
| <b>K-Factor</b>     | 0.000010 - 9,999,999 with variable decimal position.   |

## Signal outputs - Digital output

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

## Operator functions

|                       |  |
|-----------------------|--|
| <b>Displayed info</b> | <ul style="list-style-type: none"> <li>Actual value (batched quantity) and preset value simultaneously.</li> <li>Total.</li> <li>Accumulated total.</li> <li>Reset total by pressing the CLEAR-key twice.</li> </ul> |
|-----------------------|--|

## Preset

|                 |   |
|-----------------|---|
| <b>Digits</b>   | 7 digits.   |
| <b>Units</b>    | L, m <sup>3</sup> , US gal, gal, bbl, kg, lb or none. |
| <b>Decimals</b> | 0 - 1 - 2 or 3.                                       |

## Total

|                         |                                    |
|-------------------------|------------------------------------|
| <b>Digits</b>           | 7 digits.                          |
| <b>Units / decimals</b> | According to selection for preset. |
| <b>Note</b>             | Total can be reset to zero.        |

## Accumulated total

|                         |                                    |
|-------------------------|------------------------------------|
| <b>Digits</b>           | 7 digits.                          |
| <b>Units / decimals</b> | According to selection for preset. |
| <b>Note</b>             | Can not be reset to zero.          |