

## B-CONNECTED

Flowrate indicator / totalizer / transmitter with Modbus communication

### Quick Reference Guide



B-Series - Basic with a capital B  
More info: [www.fluidwell.com](http://www.fluidwell.com)

## 1. INTRODUCTION

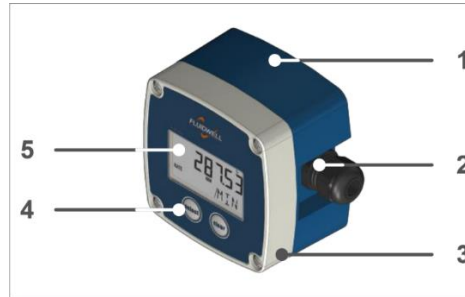
The B-Series are intended for use in safe areas (ordinary locations) and designed and constructed for measurement purposes in industrial processes. A hazardous situation may occur if the B-Series is not used for the purpose it was designed for or is used incorrectly.

## 2. DESCRIPTION

The B-Smart is used as a flowrate indicator/totalizer and has one flowmeter input, one isolated scaled pulse output, one isolated analog output and one RS485 port.

B-Series components:

- the front cover (3) with the display (5) and the control keys (4);
- the body (1) with knockouts for the cable glands (2).



## 4. NAVIGATION IN SETUP MENU

The setup menu has menus (e.g. 1, 2 and 3) and sub-menus (e.g. 2.1, 2.2 etc.) to configure the B-Series.

**Enter / leave setup:** press and hold SELECT for 7 seconds

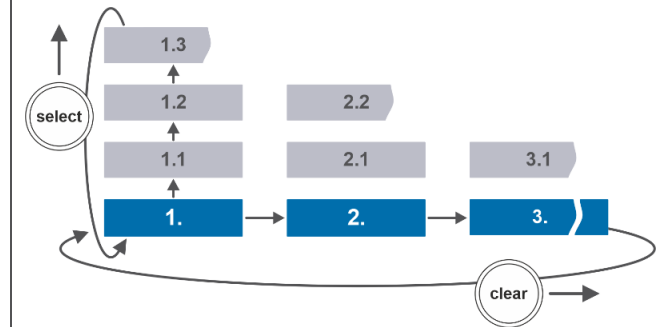
**Select a menu:** press CLEAR

**Select a sub-menu:** press SELECT

**Change selection:**

- simultaneously, press SELECT + CLEAR.
- press SELECT to increase value or RESET to select the digit or change the selection.

**Confirm change:** simultaneously, press SELECT + CLEAR



## MORE INFORMATION

Downloads:

- Detailed user-manual
- Declaration of Conformity (DoC),

by scanning the QR-code:



or visit our website:

[www.fluidwell.com/bseries](http://www.fluidwell.com/bseries).

Fluidwell bv  
Voltaweg 23  
5466 AZ Veghel - The  
Netherlands  
[www.fluidwell.com](http://www.fluidwell.com)

Doc: B-Connected\_QRG\_06\_EN.docx

This publication is subject to change without prior notice.

## 3. OPERATION



**SELECT-key**

To scroll to view Flowrate, Total or Accumulated total.



**CLEAR-key**

To reset (clear) Total, when shown on screen,.

You can reset (clear) the Total:

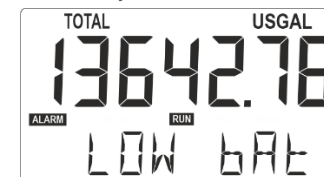
1. Press the SELECT key to view the Total screen.
2. Press the CLEAR key two times.

Examples display information:

Flowrate



Low battery alarm



## 5.A SETUP MENU STRUCTURE

<b>1. TOTAL</b>	<b>5. DIGITAL OUT</b>
1.1 Unit	5.1 Mode
1.2 Decimals	5.2 Amount decimals
1.3 K-Factor	5.3 Amount
1.4 K-Factor decimals	<b>6. COMM</b>
<b>2. RATE</b>	6.1 Mode
2.1 Unit	6.2 Speed (baudrate)
2.2 Time unit	6.3 Databits
2.3 Decimals	6.4 Parity
2.4 K-Factor	6.5 Address
2.5 K-Factor decimals	6.6 Transmission delay
<b>3. METER</b>	<b>7. OTHER</b>
3.1 Signal	7.1 Model
<b>4. ANALOG OUT</b>	7.2 Software version
4.1 Output	7.3 Serial number
4.2 Rate min	7.4 Pin code
4.3 Rate max	7.5 Backlight
4.4 Tune min	
4.5 Tune max	

**5.B Modbus registers** (see manual for description and full list)

PDU	H.REG	VARIABLE	# REGS	TYPE
6146	46147	Total	4	UINT64
6150	46151	Acc. Total	4	UINT64
6154	46155	Flowrate	2	UINT32
4640	44641	Clear total (write: 258)	1	UINT16

## GENERAL SAFETY INFORMATION

This safety information is meant for guidance. Consult the full user-manual for all detailed safety instructions, safety rules and precautionary measures. The employer's and the plant owner's safety instructions shall always prevail.

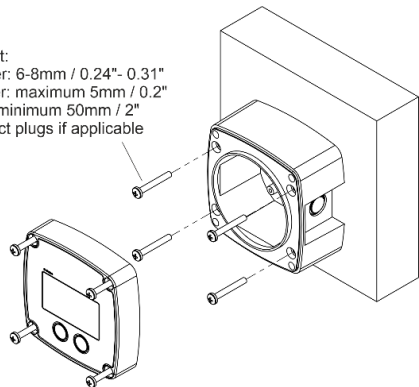
- It is the responsibility of the installer to install the B-Series in accordance with the (inter)national Rules and Regulations. The manufacturer accepts no responsibility whatsoever if the instructions as described in this publication are not followed.
- Only qualified and well-trained persons are allowed to install, operate, maintain and service the B-Series.
- Read this publication and take note of the technical specifications of the B-Series and related peripheral devices.
- Do not touch the electronics. Electro Static Discharge (ESD) can cause serious damage to the electronics! Take the ESD-precautionary measures before you open the B-Series.
- It is not allowed to modify or change the B-Series without a written authorization from the manufacturer.
- The B-Series must be installed in accordance with the (inter)national Rules and Regulations. Make sure, the connections and settings are made correctly.

**Before doing any work: make sure all leads are de-energized.**

## 6. INSTALLATION

1. Install the body with the screws to the wall.
2. Make sure, the O-ring is installed correctly.
3. Install the wiring as applicable.
4. Connect the wiring according the terminal layout.
5. If applicable, install the battery.
6. Mind the O-ring! Install the cover with the bolts.

4x screw / bolt:  
Head diameter: 6-8mm / 0.24" - 0.31"  
Shaft diameter: maximum 5mm / 0.2"  
Shaft length: minimum 50mm / 2"  
Use the correct plugs if applicable



The rear-enclosure part can be rotated in steps of 90°, enabling cable entry from any side.

## 7. GENERAL TECHNICAL SPECIFICATIONS

**Sensor:** Coil (30mVpp); Reed; NPN; PNP; NAMUR

**Rating:** IP65

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

*Note: Protect against severe weather and direct sunlight!*

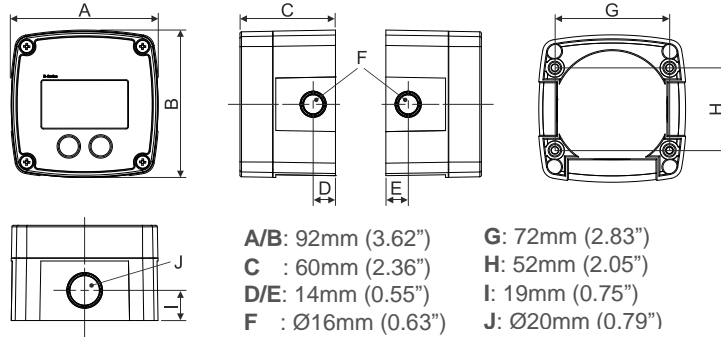
**Humidity:** 90%, no condensation allowed

**Wire gauge:** stranded 0.25-1 mm<sup>2</sup>, solid 0.14-1.5 mm<sup>2</sup>, AWG 26-16

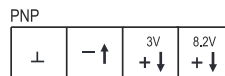
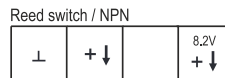
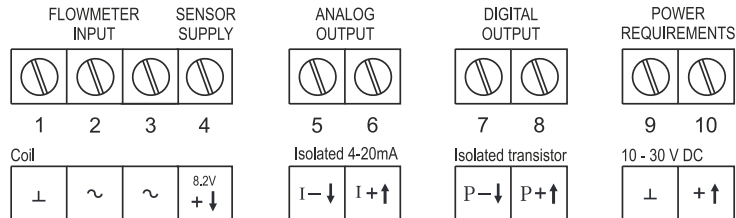
**Terminal, Torque:** M2, 0.22 - 0.25 Nm

**Material:** GRP enclosure, Polyester window

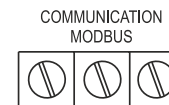
**Weight:** 200g



## 8. TERMINAL CONNECTIONS



*Note: Input, RS485 & power supply use a common ground. Analog and digital outputs are isolated.*



- |          |   |
|----------|---|
| 1, 2     | Pulse signal from flowmeter                                 |
| 3        | Reference voltage, low power only! I <sub>max</sub> : 100µA |
| 4        | 8.2V DC sensor supply; I <sub>max</sub> : 10mA              |
| 5, 6     | Isolated 4-20mA current loop; 6-30V DC                      |
| 7, 8     | Isolated passive transistor output; max. 30V, 50mA          |
| 9, 10    | External power supply; 10-30V DC, max. 32mA                 |
| C1,C2,C3 | RS485 connection, do not use termination resistors!         |

## BATTERY SAFETY INSTRUCTION



**WARNING!**

**Handle the battery with care. A mistreated battery can become unsafe. Unsafe batteries can cause (serious) injury to persons.**

The batteries are used to store electrical energy. The battery is a high power battery which must be treated carefully. When the battery is mistreated or damaged, there is a risk of a fire, an explosion and serious burns.

- Only use a battery which is applicable for the intended use.
- Mind that you cannot switch off a battery.
- Make sure, it is safe to work on the battery system.
- Handle the battery with the utmost care to prevent a short circuit and damage.
- Do not recharge, crush, disassemble, incinerate, heat above its rated temperature or expose to water.
- Dispose of the battery in accordance with the (inter)national and the plant owner's standards and regulations.

## BATTERY SPECIFICATION

Primary, non-rechargeable, Lithium metal Thionyl Chloride (Li/SOCl<sub>2</sub>), 1x3.6V/2.4Ah, AA size (IEC-R6, ANSI size15).

## 9. CHANGE THE BATTERY

- Obey the battery safety instruction.
- Open the B-Series, remove and keep the bolts (1).
- Hold the cover (2) and carefully remove the battery (3) from the battery holder (4). The holder can either be made of plastic (as indicated) or metal brackets.
- Mind the polarity! Install a new battery (3) in the holder (4).
- Make sure, the display comes on.
- Install the cover (2) with the bolts (1).

