

B-SMART

Flowrate indicator / totalizer / transmitter

Quick Reference Guide



B-Series - Basic with a capital B
More info: 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 scaled pulse output and one analog output.

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

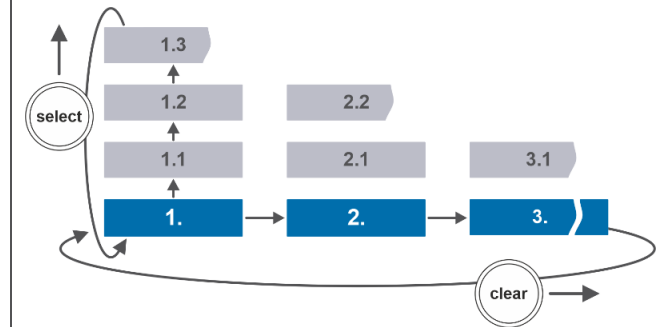
Select a menu: press CLEAR

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
- EU Declaration of Conformity (DoC),

by scanning the QR-code:



or visit our website:

www.fluidwell.com/bseries.

Fluidwell bv
Voltaweg 23
5466 AZ Veghel - The
Netherlands
www.fluidwell.com

Doc: B-Smart_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:

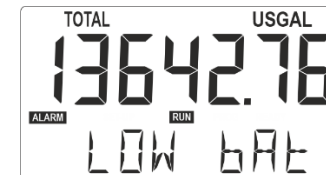
1. Press the SELECT key to view the Total screen.
2. Press the CLEAR key two times.

Examples display information:

Flowrate



Low battery alarm



5. SETUP MENU STRUCTURE

1. TOTAL	4. ANALOG OUT
1.1 Unit	4.1 Output
1.2 Decimals	4.2 Rate min
1.3 K-Factor	4.3 Rate max
1.4 K-Factor decimals	4.4 Tune min
2. RATE	4.5 Tune max
2.1 Unit	5. DIGITAL OUT
2.2 Time unit	5.1 Mode
2.3 Decimals	5.2 Amount decimals
2.4 K-Factor	5.3 Amount
2.5 K-Factor decimals	6. OTHER
3. METER	6.1 Model
3.1 Signal	6.2 Software version
	6.3 Serial number
	6.4 Pin code
	6.5 Backlight

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.

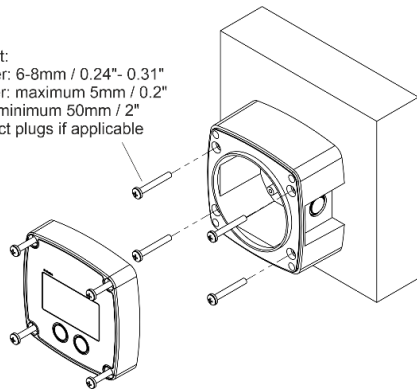
- It is the responsibility of the installer to install the B-Series in accordance with the (inter)national Rules and Regulations. The manufacturer accepts no responsibility whatsoever if the instructions as described in this publication are not followed.
- Only qualified and well-trained persons are 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!

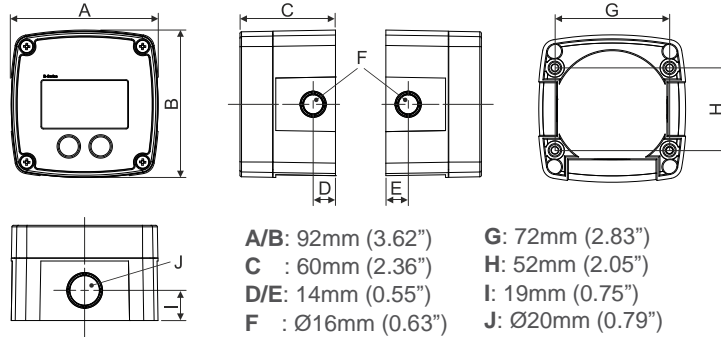
Humidity: 90%, no condensation allowed

Wire gauge: stranded 0.25-1 mm², solid 0.14-1.5 mm², AWG 26-16

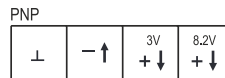
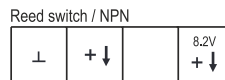
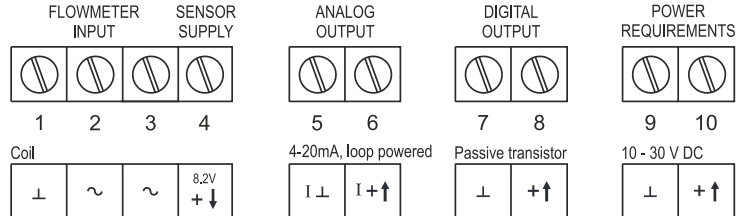
Terminal, Torque: M2, 0.22 - 0.25 Nm

Material: GRP enclosure, Polyester window

Weight: 200g



8. TERMINAL CONNECTIONS



Note: Input, outputs & power supply use a common ground.



- 1, 2 Pulse signal from flowmeter
- 3 Reference voltage, low power only! I_{max}: 100µA
- 4 8.2V DC sensor supply; I_{max}: 10mA.
- 5, 6 4-20mA, loop-powered output; 12-30V DC
- 7, 8 Passive transistor output; max. 300mA - 30V
- 9, 10 External power supply; 10-30V DC, max. 25mA
- SERVICE Service connector for remote configuration

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/SOCl₂), 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).

