For more information and to download the manuals, scan the QR-code or visit our website: www.fluidwell.com/bseries.

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doc: B-Series_QRC_001_EN

Declaration of Conformity

Fluidwell B-series indicators Veghel, July 2016

We, Fluidwell BV, declare under our sole responsibility that the B-series indicators are designed and will operate conform the following applicable European Directives and Harmonised Standards, when installed and operated according to the related manual:

EMC Directive	EN61000-6-2:2005; EN61000-6-3:2007; EN61326-1:2013
RoHS Directive	EN 50581:2012

Last two digits of the year in which the CE marking was affixed: 14.
The object of the declaration above is in conformity with the relevant Union harmonisation legislation

	until April 19th, 2016	from April 20th, 2016
EMC Directive	2004/108/EC	2014/30/EU
RoHS Directive	2011/65/EU	2011/65/EU

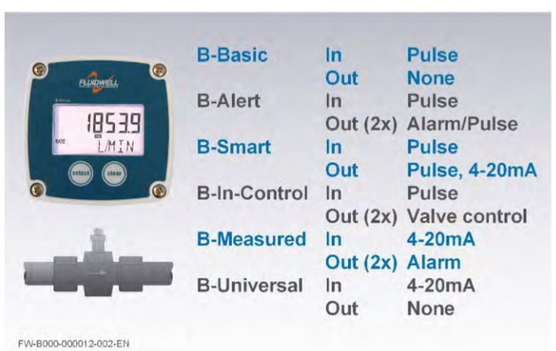
Fluidwell BV

I. Meij, Manager Technology

Fluidwell BV are ISO9001 certified by DEKRA Certification BV, Meander 1051, 6825 MJ, Arnhem, The Netherlands.

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

B-Basic, B-Smart, B-Alert
These models are used as a flow rate indicator/totalizer.

B-In-Control
This model is used as a batch controller.

B-Measured
This model is used for temperature or pressure indication.

B-Universal
This model is used as a general purpose, loop-powered indicator.

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

3. OPERATION

B-Basic, B-Smart (SELECT key)
to view the Flow rate, Total or Accumulated total.

B-Alert (SELECT key)
to view the Flow rate, Total, Accumulated total, Alarm-Low or Alarm-Hi.

B-Measured, B-Universal (SELECT key)
to view the sensor data, (B-Measured: Alarm-Low / Hi).

B-Basic, B-Smart, B-Alert, B-Universal (CLEAR key)
When in the Total screen, to reset (clear) the Total.

B-In-Control (START key)
to view the (accumulated)Total, start/restart a batch.
When in the Total screen, to reset (clear) the Total.

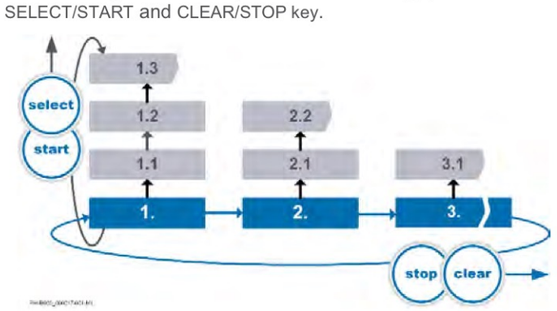
B-In-Control (STOP key)
To pause and stop a batch.

Flow rate	Preset	Accumulated Total
28.753 L/MIN	ACTUAL 29734 L, PRESET 6350.0	ACC.TOTAL 372389 m³

4. NAVIGATION IN SETUP MENU

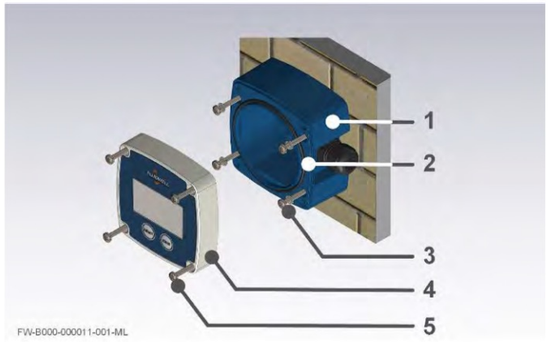
The setup menu has different menus and pages to configure the B-Series. For navigation, the menus and pages are identified with menu numbers (e.g. 1) and page numbers (e.g. 1.2).

Enter / leave setup: Press and hold the SELECT/START key
Enter menu: Press the CLEAR/STOP key, as required.
Enter page: Press the SELECT/START key, as required.
Change selection: Momentarily and simultaneously, press SELECT/START and CLEAR/STOP key.
Confirm change. Momentarily and simultaneously, press SELECT/START and CLEAR/STOP key.



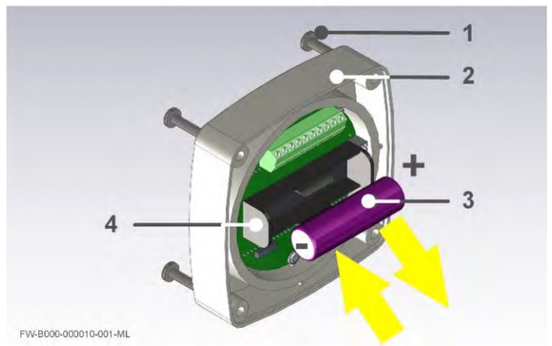
5. INSTALLATION

1. Install the body (1) with the screws (3).
2. Make sure, the O-ring (2) 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 (2)! Install the cover (4) with the screws (5).



6. CHANGE THE BATTERY

1. Obey the battery safety instruction.
2. Open the B-Series, remove and keep the screws (1).
3. Hold the cover (2) and carefully remove the battery (3).
4. Inspect the battery holder (4) for signs of deterioration.
5. Mind the polarity! Install a new battery (3) in the holder (4).
6. Make sure, the display comes on.
7. Install the cover (2) with the screws (1).



7. GENERAL TECHNICAL SPECIFICATIONS

Sensor: Coil (80mVpp); Reed; NPN; PNP; NAMUR; 4-20mA

Rating: IP65, NEMA Type 4

Ambient: -20°C to +60°C (-4°F to +140°F)
Protect against severe weather and direct sunlight

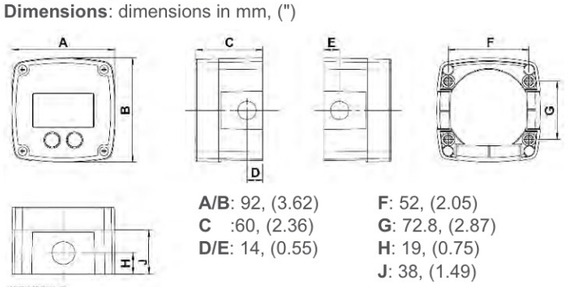
Humidity: 90%, no condensation allowed

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

Dimensions: dimensions in mm, (")



A/B: 92, (3.62)
C :60, (2.36)
D/E: 14, (0.55)
F: 52, (2.05)
G: 72.8, (2.87)
H: 19, (0.75)
J: 38, (1.49)

GENERAL SAFETY INFORMATION

This safety information is meant for guidance. 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.
- Lock-out/Tag-out the B-Series before you do any work. Make sure, all leads are de-energized.

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.

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

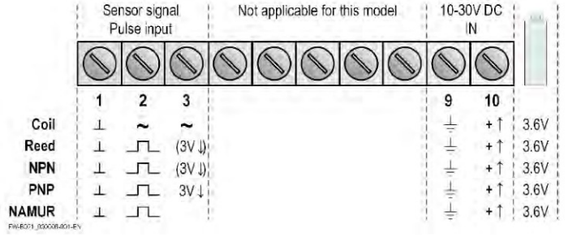
B-Series
Basic Field mount indicators

Quick Reference Guide

B-Series - Basic with a capital B
More info: www.fluidwell.com/bseries

B-Series_QRC_10001850_001_EN

B-BASIC - Flow rate indicator / totalizer



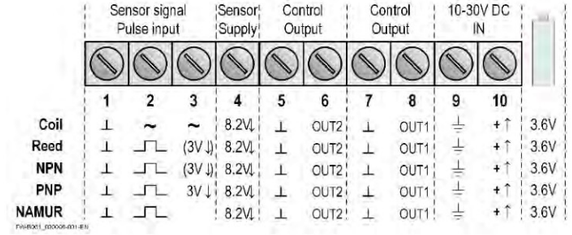
1, 2	Pulse signal from flowmeter
3	No real sensor supply, low power only! I_{max}: Reed, NPN = 30µA; PNP = 63µA; Namur=NA
4	Not applicable for this model
5, 6	Not applicable for this model
7, 8	Not applicable for this model
9, 10	External power supply, max. consumption 625mW

Setup menu structure

- **1. TOTAL**
  - 1.1 Unit
  - 1.2 Decimals
  - 1.3 K-Factor
  - 1.4 K-Factor decimals
- **2. FLOW RATE**
  - 2.1 Unit
  - 2.2 Time unit
  - 2.3 Decimals
  - 2.4 K-Factor
  - 2.5 K-Factor decimals
  - 2.6 Measurement
- **3. FLOWMETER**
  - 3.1 Signal
- **4. OTHER**
  - 4.1 Model
  - 4.2 Software version
  - 4.3 Serial number
  - 4.4 Pin code
  - 4.5 Backlight

You can only reset (clear) the Total.
1. Press the SELECT key to view the Total screen.
2. Press the CLEAR key two times.

B-IN-CONTROL - Batch controller



1, 2	Pulse signal from flowmeter
3	No real sensor supply, low power only! I_{max}: Reed, NPN = 30µA; PNP = 63µA; Namur=NA
4	8.2V DC/3mA sensor supply from 10-30V DC in
5, 6	Passive transistor output for valve control
7, 8	Passive transistor output for valve control
9, 10	External power supply, max. consumption 625mW

Setup menu structure

- **1. PRESET**
  - 1.1 Unit
  - 1.2 Decimals
  - 1.3 K-Factor
  - 1.4 K-Factor decimals
- **2. OVERRUN**
  - 2.1 Time unit
- **3. FLOWMETER**
  - 3.1 Signal
- **4. OTHER**
  - 4.1 Model
  - 4.2 Software version
  - 4.3 Serial number
  - 4.4 Pin code
  - 4.5 Backlight

How to enter a batch quantity

1. Press the STOP key to select the Total Actual display.
2. Press the START and STOP key simultaneously.
3. Use the START and STOP key to enter the batch value.
4. Press the START and STOP key simultaneously.

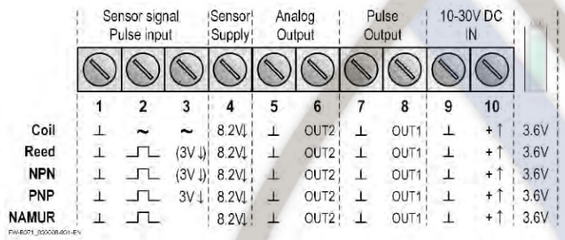
How to start / restart a batch

1. Press the START key momentarily.

How to pause / stop a batch

1. Press the STOP key once, to pause the batch process.
2. Press the STOP key again, to stop the batch process.

B-SMART - Flow rate indicator / totalizer



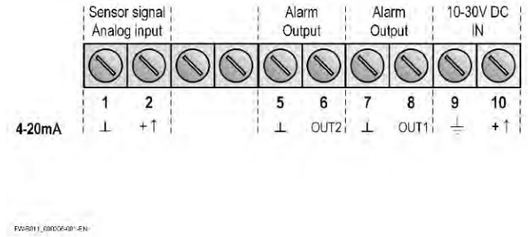
1, 2	Pulse signal from flowmeter
3	No real sensor supply, low power only! I_{max}: Reed, NPN = 30µA; PNP = 63µA; Namur=NA
4	8.2V DC/3mA sensor supply from 10-30V DC in
5, 6	4-20mA, loop-powered output
7, 8	Passive transistor output
9, 10	External power supply, max. consumption 625mW

Setup menu structure

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

You can only reset (clear) the Total.
1. Press the SELECT key to view the Total screen.
2. Press the CLEAR key two times.

B-MEASURED - Temperature / pressure monitor

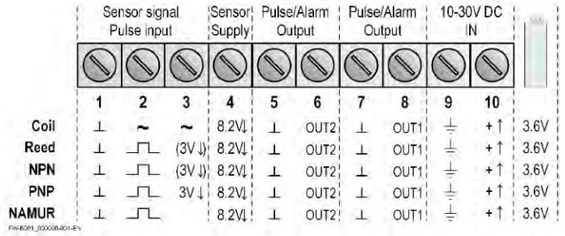


1, 2	Input Loop-powered from sensor, U_{drop} ≤3V DC
3	Not applicable for this model
4	Not applicable for this model
5, 6	Passive transistor output
7, 8	Passive transistor output
9, 10	External power supply, max. consumption 625mW

Setup menu structure

- **1. DISPLAY**
  - 1.1 Unit
  - 1.2 Decimals
  - 1.3 Offset
  - 1.4 Span
- **2. ALARM**
  - 2.1 Low alarm
  - 2.2 High alarm
- **3. SENSOR**
  - 3.1 Filter
  - 3.2 Calibrate low
  - 3.3 Calibrate high
- **4. OTHER**
  - 4.1 Model
  - 4.2 Software version
  - 4.3 Serial number
  - 4.4 Pin code
  - 4.5 Backlight

B-ALERT - Flow rate monitor / totalizer



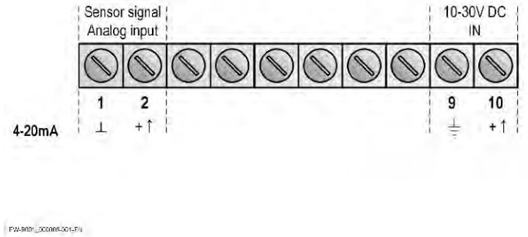
1, 2	Pulse signal from flowmeter
3	No real sensor supply, low power only! I_{max}: Reed, NPN = 30µA; PNP = 63µA; Namur=NA
4	8.2V DC/3mA sensor supply from 10-30V DC in
5, 6	Passive transistor output
7, 8	Passive transistor output
9, 10	External power supply, max. consumption 625mW

Setup menu structure

- **1. TOTAL**
  - 1.1 Unit
  - 1.2 Decimals
  - 1.3 K-Factor
  - 1.4 K-Factor decimals
- **2. FLOW RATE**
  - 2.1 Unit
  - 2.2 Time unit
  - 2.3 Decimals
  - 2.4 K-Factor
  - 2.5 K-Factor decimals
  - 2.6 Measurement
- **3. ALARM**
  - 3.1 Zero flow
  - 3.2 Low flow alarm
  - 3.3 Hi flow alarm
- **4. FLOWMETER**
  - 4.1 Signal
- **5. DIGITAL OUT**
  - 5.1 Out1
  - 5.2 Out2
  - 5.3 Mode
  - 5.4 Amount decimals
  - 5.5 Amount
- **6. OTHER**
  - 6.1 Model
  - 6.2 Software version
  - 6.3 Serial number
  - 6.4 Pin code
  - 6.5 Backlight

You can only reset (clear) the Total.
1. Press the SELECT key to view the Total screen.
2. Press the CLEAR key two times.

B-UNIVERSAL - General purpose indicator



1, 2	Input Loop-powered from sensor, U_{drop} ≤3V DC
3	Not applicable for this model
4	Not applicable for this model
5, 6	Not applicable for this model
7, 8	Not applicable for this model
9, 10	External power supply, max. consumption 625mW

Setup menu structure

- **1. DISPLAY**
  - 1.1 Unit
  - 1.2 Time
  - 1.3 Decimals
  - 1.4 Offset
  - 1.5 Span
- **2. SENSOR**
  - 2.1 Formula
  - 2.2 Direction
  - 2.3 Filter
  - 2.4 Calibrate low
  - 2.5 Calibrate high
- **3. OTHER**
  - 3.1 Model
  - 3.2 Software version
  - 3.3 Serial number
  - 3.4 Pin code
  - 3.5 Backlight