

Type F9.50/F9.51 Batch Controllers



The Type F9.50 Batch Controller is designed for accurate and reliable batching or blending of liquids. It accepts a pulse input from all FlowX3 Hall Effect flow sensors.

The instrument offers complex control capability. It is easy to calibrate and operate using self explanatory menus. A Simple and Advanced mode are available which allow the choice of quick calibration and basic outputs or a more customized and detailed control set-up. Four separate control outputs (two relays, an open collector and an analog output) allow the operator to set-up for accurate batch operation. State-of-the-art electronic design ensures performance and reliability.

Flow sensor supply voltage is provided by the controller. Modular design allows the same instrument to be mounted in three different ways: directly to the flow sensor or remotely either panel or wall mount.

New The Type F9.51 Batch Controller stores up to 10 batches.

■ Displays

Batch in Progress – 6 digits
Flow Rate – 5 digits
Resettable Total – 6 digits
Non-Resettable Total – 10 digits

Backlit display versions are available for F9.50 and F9.51 Monitors**

■ Output Signals

Item No.	4 – 20 mA* Wiring	Open Collector†	Relay (SPDT)††	No. of LEDs	
F9.50	1	3/4 Wire	1	2	3

† User selectable as START Batch, END Batch or Off.

†† **OUT1** – Batch: Batch in Progress indication
OUT2 – Option: User selectable Two-Stage Shutdown, End of Batch, Overrun Alarm or Missing Signal Alarm.

* User selectable as Valve Control or Degree of Batch Completion.

** Add "L" to the Item No. for backlit versions for F9.50, F9.51.

■ Connectable FlowX3 Sensors

Instrument Mounting	Sensor
Direct	F3.01.H
Panel or Wall	F3.00.H, F3.15.H, ULF.H, ULF3.15H F111.H



■ Features

- **Modular Design** – The same instrument may be mounted in three different ways using mounting kits. See page 25.



Direct



Panel



Wall

- Simple or Advanced Operating Modes
- External Start, Stop and Resume
- Two-Stage Shutdown Control
- Permanent and Resettable Totalizer
- Auto-calibration
- Auto Systematic Error Compensation (ASEC) – For increased linearity and accuracy
- Automatic or Manual Overrun Compensation
- Overrun Alarm
- Missing Signal Alarm
- Count-up or Count-down batch indication
- End of Batch pulse output
- Output Simulation for system testing
- Advanced Valve Control
- Password Protection
- Stores up to 10 batches (F9.51)

Type F9.50/F9.51 Batch Controller



■ Technical

Supply Voltage:

- 12 to 24 VDC ± 10% regulated
- 110/230 VAC with F9.KW2 Wall Mount Kit

Sensor Input (Frequency):

- Sensor Power: 3.8 to 5 VDC @ < 30 mA
- Range: 0.5 to 1,000 Hz
- Optically isolated from current loop
- Short circuit protected

Enclosure:

- NEMA 4, 4X (IP65) front
- 1/4 DIN Size
- Monolithic clear polycarbonate plastic with silicone rubber keypad

Operating Temperature:

- 10 to 70°C (14 to 158°F)

For dimensions and more technical specifications, see page 33.

■ Output Specifications

4 to 20 mA Output:

- Isolated, fully adjustable and reversible
- Maximum Loop Impedance: 150Ω @ 12 VDC, 330Ω @ 18 VDC, 600Ω @ 24 VDC
- User Selectable as Valve Control or Batch Completion

One Open Collector Output with LED display:

- User selectable as START Batch, END Batch or Off
- Optically isolated, 50 mA maximum sink, 24 VDC maximum pull-up voltage
- Maximum pulses per minute: 300
- Hysteresis: Adjustable

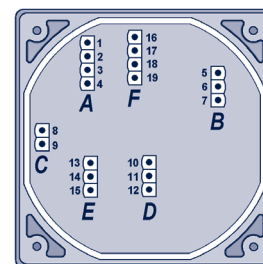
Two Relay Outputs with LED display:

- **OUT1** – Batch: Batch in progress indication
- **OUT2** – Option: User selectable Two-Stage Shutdown, End of Batch, Overrun Alarm or Missing Signal Alarm
- Mechanical SPDT contact
- Rated maximum: 3A @ 30 VDC or 3A @ 250 VAC resistive load
- Maximum pulses per minute: 300
- Hysteresis: Adjustable

■ Wiring

REAR TERMINAL VIEW

(See Instruction Manual for detailed wiring information)



Power Supply A	1	+ VDC
	2	+ LOOP
	3	- LOOP
	4	- VDC
Sensor B	SENSOR	
	5	GND
	6	IN
Open Collector Output C	7	V+
	8	O.C.+
Relay OUT 1 D	9	O.C.-
	RELAY 1	
	10	NC
Relay OUT 2 E	11	COM
	12	NO
	RELAY 2	
Remote Control F	13	NC
	14	COM
	15	NO
	16	GND
	17	RESUME
	18	START
	19	STOP