Batch Controller

The F130 is a straight forward two-stage Batch controller 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 (or remaining) quantity and the units of measurement. The automatic self-learning overrun correction ensures an accurate result after each batch.

A wide selection of options further enhances the capabilities of this model, which includes Intrinsic Safety and full Modbus communication.

Features

- Displays preset and running batch value simultaneously
- Self-learning overrun correction
- Easy to enter a batch value and to control the process
- Count-up and count-down function available
- No-flow monitoring
- Selectable on-screen engineering units; volumetric or mass
- Ability to process all types of signals: Sine wave (coil), NAMUR, NPN/PNP pulse, Reed switch, Active pulse signals, (0)4-20mA
- Remote control input: Start/Pause/Stop.
- Two configurable control outputs: for two stage control or one-stage control with scaled pulse output according to acc. total.
- Full Modbus communication RS232/485/TTL.
- Power requirements: loop or battery powered, 8-30V DC, 8-24V AC/DC or 115-230V AC.
- Sensor supply 3/8.2/12/24V DC.

Advantages

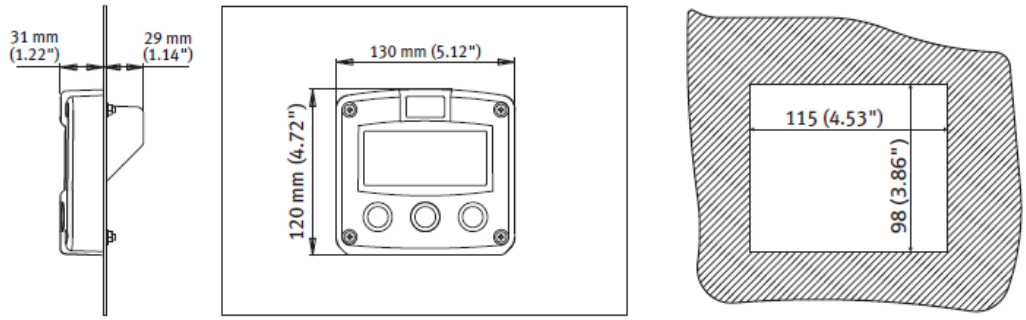
- Robust IP67 (NEMA Type4X) field enclosure. It is so rugged you can even stand on it!
- Intrinsically safe available – ATEX and IECEx approval for gas and dust applications.
- Programming can be done by your own crew, with the sensible menu-driven structure, saving cost and irritation. Know one, know them all!
- Very diverse mounting possibilities: walls, pipes, panels or directly onto outdoor sensors.

Specifications

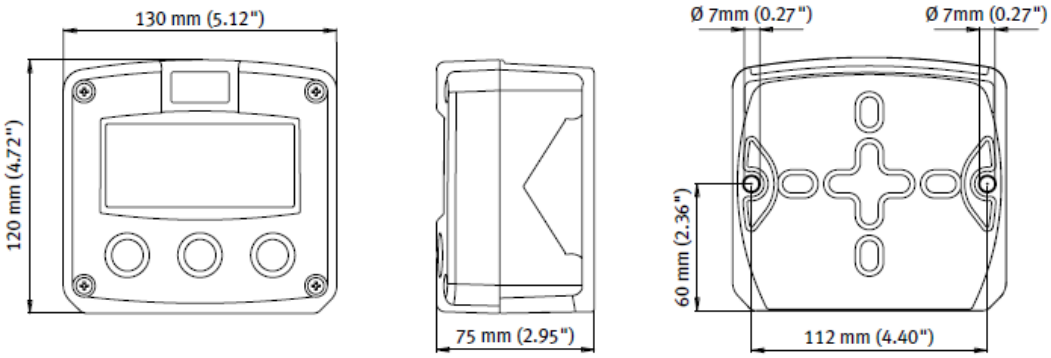
Display	
Type	High intensity reflective numeric and alpha-numeric LCD, UV resistant
Dimensions	3.5” x 1.6” (90mm x 40mm)
Digits	Seven 0.67” (17mm) and eleven 0.31” (8mm) digits
Option ZB	Translective LCD with green LED backlight. Good for readings in full sunlight and darkness
Operating temperature	-40°F to +176°F (-40°C to +80°C)
Power Requirements	8-24V (ac/dc) +/- 10%. Power consumption maximum 10 Watt. 16-30V (dc). Power consumption maximum 1 Watt.
Signal Input	Coil/sin wave (minimum 20mVpp or 80mVpp – sensitivity selectable), NPN/PNP, open collector, reed switch, Namur, active pulse signals 8 – 12 and 24V (dc)
Frequency	0Hz – 7kHz for total and flow rate internal low-pass filter. E.g. reed switch with low-pass filter: maximum 120Hz
K-Factor	0.00001-9,999,999 with variable decimal position
Signal Output (Analog)	
Function	Transmitting differential / sum flow rate
Accuracy	10 bit, error < 0.05%. Analog output signal can be scaled to any desired range
Update Time	Ten times per second
Type AP	Passive 4 – 20mA output – not isolated. Unit will be loop powered
Type AH	Galvanically isolated, loop powered 4-20mA output
Signal Output (Pulse)	
Function	Pulse output according to differential or sum accumulated total and indication negative pulse output
Frequency	Maximum 64Hz. Pulse length user definable between 7.8ms up to 2 seconds
Type OT	Two passive transistor outputs (NPN) – not isolated. Maximum 50V (dc) – 300mA per output
Accumulated Total	
Units (7 digits)	L, m^3 , GAL, USGAL, kg, lb, bbl, no unit
Flow rate units (7 digits)	mL, m^3 , gallons, kg, Ton, lb, bl, cf, RND, ft^3 , scf, Nm^3 , NI, igal – no units

Dimensions

Panel Mount Enclosure



Wall Mount Enclosure



Product Codes

F130	Batch Controller	
Input	A	(0)4 – 20mA input
	P	**Pulse input, eg. Coil, NPN, PNP**
Communication	CB	Communication RS 232 – Modbus ASCII / RTU – requires XX
	CH	Communication RS 485 – 2wire – Modbus ASCII /RTU – requires XX
	CI	Communication RS 485 – 4wire – Modbus ASCII / RTU – requires XX
	CT	Intrinsically Safe TTL – Modbus ASCII /RTU –requires XI
	CX	**No Communication**
Enclosures	HB	Aluminium panel mount enclosure
	HC	**GRP panel mount enclosure**
	HD	GRP field mount –Cable entry: no holes
	HE	GRP field mount –Cable entry: 2 x 16mm & 1 x 20mm
	HF	GRP field mount –Cable entry: 1 x 22 mm (7/8")
	HG	GRP field mount –Cable entry: 2 x 20 mm
	HH	GRP field mount –Cable entry: 6 x 12mm
	HJ	GRP field mount –Cable entry: 3 x 22mm (7/8")

	HK	GRP field mount, flat bottom – Cable entry: no holes
	HA	Aluminium field mount – Cable entry: 2 x PG9 & 1 x M20
	HL	Aluminium field mount – Cable entry: 2 x 1/2“ NPT
	HM	Aluminium field mount – Cable entry: 2 x M16 & 1 x M20
	HN	Aluminium field mount – Cable entry: 1 x M20
	HO	Aluminium field mount – Cable entry:2 x M20
	HP	Aluminium field mount – Cable entry: 6 x M12
	HT	Aluminium field mount – Cable entry:1 x ½”NPT
	HU	Aluminium field mount – Cable entry: 3 x ½”NPT
	HV	Aluminium field mount – Cable entry: 4 x M20
	HZ	Aluminium field mount – Cable entry: no holes
Additional	**IR**	**Remote control input to start, pause, or stop**
Digital output	OA	Two active transistor outputs – requires XX and PD, PF, PM or PX
	OR	Two mechanical relay outputs – requires XX and PF or PM
	OT	**One passive transistor output**
Power	PD	8 – 24V DC & sensor supply – with XI: 16 – 30 DC
	PF	24V AC/DC & sensor supply – requires XX
	PL	Input loop powered from sensor signal type “A” – requires OT and XX
	PM	115 – 230V AC & sensor supply – requires XX
	PX	**Basic power supply 8 – 30V DC**
Battery	PB	Additional lithium battery powered (opt.) – requires XX and PD or PX
	PC	Additional lithium battery powered (opt.) – Intrins. Safe – requires XI, and PD or PX
Hazardous	XI	Intrinsically safe, according ATEX, IECEx
	XF	Ex d enclosure – 3 keys according ATEX
	XX	**Safe area only**
Options	ZB	Backlight
	ZF	Coil input 10mVpp
	ZX	**No options**

The **bold** marked text contains the standard configuration: F130-P-CX-HC-IR-OT-PX-XX-ZX

Filton Process Control Engineering
Unit 2, The Old Grain Store,
Ditchling Common Industrial Estate,
Ditchling, East Sussex
BN6 8SG
United Kingdom
Tel: 01444 248777
Fax: 01444 243750
Email: sales@filton.com