FLOMEC®

N410 DELUXE BATCH CONTROLLER

The N410 batch controller distinguishes itself by its user-friendly features:

- Numerical keypad
- Clear programming menu structure
- Easy-to-read and simple mounting enclosure
- The numerical keypad allows simple and fast changing of the preset batch quality

APPLICATIONS

- Accurate batching or filling of liquids where the batch size changes frequently.
- The N410 offers the perfect solution for batch control applications where a user-friendly instrument is required.

PRODUCT CONFIGURATION

PRODUCT IDENTIFIER 1

N410 = Deluxe Batch Controller

FLOWMETER INPUT SIGNAL 2

P = Pulse Input: NPN, Open Collector, Reed Switch, Active Pulse Signals

COMMUNICATION 3

CX = No Communication

PANEL MOUNT FRONT CLOSURE 4

HB = Aluminum Front Panel - IP67 (NEMA 4X)

OUTPUTS 5

OR = 2 Field Replaceable, Mechanical Relays (NO-NC) and 1 Passive Transistor Output

POWER REQUIREMENTS 6

PG = 24 VDC and 110 - 230 VAC, both with sensor supply

HAZARDOUS AREA 7

XX = Safe Areas Only

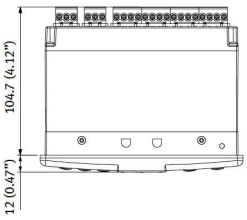
OTHER OPTIONS 8

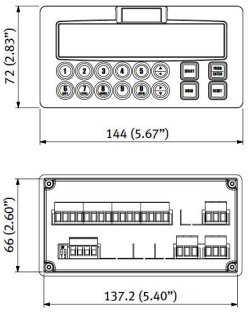
ZX = No Options

1 2 3 4 5 6 7 8

--->>>> N410 - P - CX - HB - OR - PG - XX - ZX - FL = SAMPLE

DIMENSIONS





BENEFITS

- Save time and cost with the easy to operate numerical keypad.
- Key information at a glance as the display simultaneously shows actual value, preset value, batch process indication, relay status and measuring units.
- Easy installation with the rugged aluminum DIN-size panel mount enclosure.

APPROVALS

CE

FEATURES

- Five control inputs for remote START, HOLD, RESUME, keypad lock and external alarm.
- 7 large digits for actual value, flow rate, total and 10 smaller digits for preset value, accumulated total and batch count.
- Selectable on-screen engineering units; volumetric or mass.
- Power requirements: 24V DC / 110 - 230V AC
- Sensor supply: 8.2 / 12 / 24V DC
- No-flow monitoring
- Automatic overrun correct

SPECIFICATIONS

Display	
Type	High intensity transflective numeric and alphanumeric LCD, UV-resistant. White LED backlight.
Digits	Seven 14mm (0.56") and ten 8mm (0.3") digits. Various symbols and measuring units.
Refresh rate	8 times/sec.
Enclosure	
General	Die-cast aluminum front panel, GRP back enclosure. Polycarbonate window, silicone gasket; UV stabilized and flame retardant material.
Keypad	Sixteen industrial micro-switch keys; UV-resistant silicone keypad; replaceable front
Painting	UV-resistant 2-component industrial painting
Dimension	144 x 72 x 110mm (5.67" x 2.83" x 4.33") – W x H x D
Classification	IP67 (NEMA4X) at the front side IP20 at the back side
Panel cut-out	138 x 67mm (5.43" x 2.64") W x H
Weight	650 gram / 1.7 lbs
Operating Temperature / Humidity	
Temperature	-4° F to +140° F (-20° C to +60° C)
Storage	-40° F to +176° F (-40° C to +80° C)
Humidity	85% non-condensing, relative
Power Requirements	
Type PG	110 - 230V AC. Power consumption max. 10 Watt 24V DC + 10%. Power consumption max. 10 Watt
Sensor Excitation	
Type PG	Terminal 5: 12V DC. Iout max. 30mA Terminal 29: 8.2 / 12 or 24V DC 8.2V DC, Iout max. 20mA 12V DC, Iout max. 30mA 24V DC, Iout max. 75mA
Terminal Connections	
Type	Removable plug-in terminal strip. Wire max. 2.5mm^2
Data Protection	
Type	EEPROM backup of all settings. Backup of running totals every minute. Data retention at least 10 years
Pass-code	Configuration settings can be pass-code protected
Lock function	Complete keyboard can be locked with external input (e.g. key lock or PLC)
Signal Input (Flowmeter Sensor)	
Type P	NPN, open collector, reed-switch, PNP or active 8 / 12 / 24V DC pulse signals
Frequency	Minimum 0Hz - maximum 5kHz for total and flow rate. Maximum frequency depends on signal type and internal low-pass filter. E.g. reed switch with low-pass filter: max. frequency 120Hz

Signal Input (Flowmeter Sensor)	
K-Factor	0.000010 - 9,999,999 with variable decimal position
Low-pass Filter	Available for all pulse signals
Low Level	0V DC min. to 3V DC max
High Level	8V DC min. to 24V DC max
Load Impedance	4.7kOhm pull-up to +12V DC
Current	2.5mA steady state
External Inputs	
Function	Five remote inputs: START, HOLD, RESET, Keypad Lock and External Alarm
Type	Current sinking
Logic	Level sensitive
Response	100ms make and break time
Signal Output (Control, Alarm or Pulse Output)	
Type OR	• One batch output (always a mechanical relay). • Two configurable outputs (one mechanical relay and one transistor): batch / two-stage control / any alarm / scaled pulse output
Pulse Frequency	Max. 500Hz. Pulse length user definable between frequency 1msec up to 10 seconds
Relays	2 isolated, field replaceable, electro-mechanical relays (NO-NC). Max. switching capacity (resistive load): 8A @ 250V AC / 30V DC Max. switching power (resistive load): 2000VA 240W
Transistor	One passive transistor output - not isolated. Load max. 50V DC - 300mA.
Preset / Total	
Digits	7 digits
Units	L, m3, USGAL, IGAL, ft3, bbl, kg, Ton, US Ton, lb
Decimals	0 - 1 - 2 or 3
Note	Total can be reset to zero
Accumulated Total	
Digits	10 digits
Units /Decimals	According to selection for preset
Note	Cannot be reset to zero
Batch Counter	
Digits	10 digits
Note	Counter can be reset to zero
Flow Rate	
Digits	7 digits
Units	L, m3, USGAL, IGAL, ft3, bbl, kg, Ton, US Ton, lb
Decimals	0 - 1 - 2 or 3
Time Units	/sec - /min - /hr - /day

Service & Warranty: For technical assistance, warranty replacement or repair contact your **FLOMEC®** or **GPI®** distributor: In North or South America: **888-996-3837 / GPI.net**
Outside North or South America: **+61 2 9540 4433 / flomec.com.au**

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