



Badger Meter

Batch Controller

Model CB-30

DESCRIPTION

The Model CB-30 batch controller is especially designed for use in concrete plants to batch water into the concrete mix. Unlike ordinary batch controllers, the CB-30 controller allows the operator to quickly set and run an exact batch, which includes a preset wash amount and valve overrun compensation. It also allows for manual operation to override normal presets.

OPERATION

The controller is designed to work mainly with the Badger Meter® Turbo/Butterfly Valve system. The pulse signal coming from the meter's pulse transmitter is scaled to US gallons or other units of measure. Once the *Batch* and *Wash* cycles are set by the operator, a **START** command energizes the valve solenoid, opening the valve. The controller counts down from the batch valve to a number equal to the total desired batch less the wash amount, and then closes the valve. The operator presses **START** again and the wash amount runs, completing the batch. The controller is also suitable for other single-point batching operations.

FEATURES

Safety

- Presettable batch limit prevents overbatching by not allowing a batch greater than the specified value to be preset.
- Preprogrammed 3-second pulse time fail-safe closes the valve in case of flow signal interruption.
- Permanent display of preset batch alerts operator of gallons remaining and also of batch value.
- English annunciators (Batch Ready, Batch, Wash Ready, Wash, and Hold) inform the operator of the batch condition.

Accuracy

- Front panel scaling for fast recalibration of meter and/or for counting in any unit of measure.
- Compensation programming feature provides automatic batch adjustment for valve shutdown overrun.
- Manual override allows operator to manually dispense water or add to the preset batch.

Ease of Operation

- Three-step programming for fast batch change.
- Wash cycle needs to be preset only once. On manual operation, the counter reverses and counts up.



Flexibility

- Two counter displays; one for permanent preset batch display and the other for the batch count.
- Accepts inputs from Hall-effect pickups, open collector transistors or dry switch contacts.
- Additional open collector output for use with external relays.
- EEPROM memory preserves all programmed information during power failure.
- Rugged aluminum front panel with industrial keypad.
- Standard: panel mount Optional: meter, desk or wall mount.

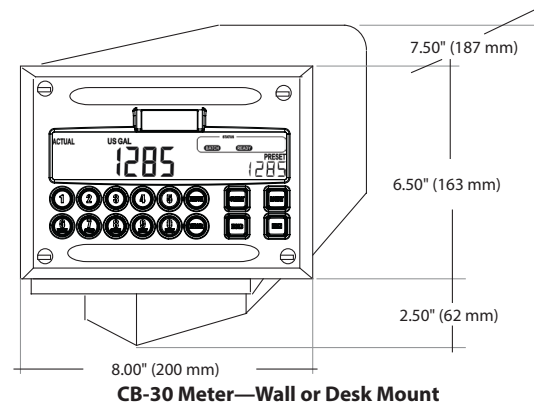
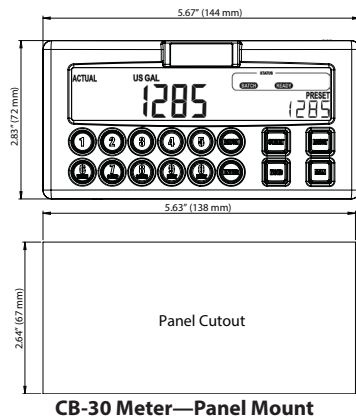
SERVICE

- Front panel or optional enclosure provides NEMA 4X , IP-65 (watertight and corrosion proof) protection.
- Field replaceable output Triac.
- In house stock for prompt replacement.

COMPLIANCE

The Model CB-30 batch controller is CE approved and RoHS compliant.

DIMENSIONS



SPECIFICATIONS

Power

AC Input	85...265V AC
DC Input	24V DC \pm 10%
Consumption	10 Watt
Sensor Excitation	12V DC, max. 50 mA

Environment

Operating	- 4...140° F (-20...60° C)
Storage	- 40...176° F (- 40...80° C)
Humidity	85% non-condensing, relative

Physical

Dimensions	See dimensional drawings
Panel Cutout	
Weight	1.1 lbs (0.5 kg)
Materials	Aluminum, polycarbonate, silicone
Housing	Glass fiber reinforced
Front Panel	Polycarbonate
Memory	EEPROM; backup of all settings
Displays	Seven 0.56" numerical digits, ten 0.8" alphanumerical digits; symbols; measuring units
Keypad	16 industrial microswitch keys; UV-resistant silicone; replaceable front

Counters/ Presets/Controls

Batch	Four digit programmable
Wash	Three digit programmable
Batch Limit	Four digit programmable
Scale Factor	Four digit: 0.0001...0.9999
Compensation	Three digit programmable
Failsafe Timer	Three seconds
Unit of Measure	US gallons – liter selectable

Inputs

Count Inputs	(pulse transmitter)
Frequency	DC to 5 kHz (high speed) DC to 150 Hz (low speed)
Low Level	0V DC min. to 2V DC max.
High Level	8V DC min. to 20V DC max.
Impedance	4.7 K Ω pullup to +12V DC
VDC Current	2.5 mA steady state
Response	100 μ s min pulse (high speed) 3.5 ms min pulse (low speed)
Control Inputs	Remote start, reset, hold, manual, keyboard lockout
Frequency	DC to 20 Hz typical
Type	Current sinking
Logic	Level sensitive
Low Level	0V DC min. to 2V DC max.
High Level	8V DC min. to 20V DC max.
Impedance	4.7 K Ω pullup to +12V DC
Current	2.5 mA steady state
Response	32 ms make and break time

Signal Outputs

Triac*	One Triac output SHARP S202T02F Load voltage: 80...240V AC Load current: 2 A Function: batch control output to valve
Transistors	One open collector NPN Load voltage: 12V DC max. Load current: 50 mA sink max. (1V DC typical Vce at 50 mA)
Terminal Connectors	Removable plug-in terminal strips

Control. Manage. Optimize.

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www.badgermeter.com

The Americas | Badger Meter | 4545 West Brown Deer Rd | PO Box 245036 | Milwaukee, WI 53224-9536 | 800-876-3837 | 414-355-0400
 México | Badger Meter de las Americas, S.A. de C.V. | Pedro Luis Ogazón N°32 | Esq. Angelina N°24 | Colonia Guadalupe Inn | CP 01050 | México, DF | México | +52-55-5662-0882
 Europe, Eastern Europe Branch Office (for Poland, Latvia, Lithuania, Estonia, Ukraine, Belarus) | Badger Meter Europe | ul. Korfantego 6 | 44-193 Knurów | Poland | +48-32-236-8787
 Europe, Middle East and Africa | Badger Meter Europa GmbH | Nurtinger Str 76 | 72639 Neuffen | Germany | +49-7025-9208-0
 Europe, Middle East Branch Office | Badger Meter Europe | PO Box 341442 | Dubai Silicon Oasis, Head Quarter Building, Wing C, Office #C209 | Dubai / UAE | +971-4-371 2503
 Slovakia | Badger Meter Slovakia s.r.o. | Racianska 109/B | 831 02 Bratislava, Slovakia | +421-2-44 63 83 01
 Asia Pacific | Badger Meter | 80 Marine Parade Rd | 21-06 Parkway Parade | Singapore 449269 | +65-63464836
 China | Badger Meter | 7-1202 | 99 Hangzhong Road | Minhang District | Shanghai | China 201101 | +86-21-5763 5412
 Switzerland | Badger Meter Swiss AG | Mittelholzerstrasse 8 | 3006 Bern | Switzerland | +41-31-932 01 11