

# TWO-STAGE BATCH CONTROLLER/RATEMETER

Optional RS232 or 422 Computer Interface Capability

## DP-F30 Series



DP-F31 shown  
smaller than actual size.

Ideal for use with all OMEGA® mass flowmeters, controllers, turbine and paddlewheel flow sensors, vortex meters, magmeters, and pitot tubes.

- ✓ Displays Rate, Batch Total, and Grand Total
- ✓ Separate K Factors for Rate and Total
- ✓ 12 to 24V Output
- ✓ Optional 16-Point Linearization
- ✓ NEMA 4X (IP65) Front-Panel Cover

The DP-F30 Series ratemeters/totalizers accept 3 to 30 Vdc pulses, dry-contact closure, voltage, or milliamp inputs, and provides 2-stage SPDT relay outputs for batch control. The display is fully scalable for engineering units and may be toggled between batch total, rate, and grand total. The linearization option allows the user to select up to 16 different K factors over the input range for accurate indication of non-linear signals.

Other features include 12 to 24 Vdc output for powering up flowmeters; pulsed (0.1 to 9.9 s) or maintained outputs; input filtering for dry-contact closure (such as reed relays); local/remote reset; excitation for open-collector or mechanical contacts; user-programmable auto-reset of batch total (repeat cycles, 10 Hz max); security lockout to prevent unauthorized changes; factored pulse output; and analog output for rate or total (analog output not available with square root -SQRT option).

The DP-F30 series indicates rate to 5½-digits and total to 8-digits, with program and count data stored for up to 10 years if power is lost.

### SPECIFICATIONS

**Input Power:** 110 Vac ±15% or 12 to 27 Vdc std.; 220 Vac ±15% optional

**Current:** Maximum 250 mA DC or 3.2 VA

**Output Power:** On AC-powered units only: +24 or +12 Vdc @ 100 mA; unregulated (±5% worst case)

#### Pulse Inputs:

**DP-F31:** 0 to 1 Vdc (low), 3 to 30 Vdc (high), 20 kHz maximum (minimum on/off 35 µs)

**DP-F32:** 4.7 kΩ pull up to +5 Vdc on input for pulsing with contact to ground or NPN collector transistor

**Factored Output:** Minimum on/off: 0.013 ms; open collector sinks 100 mA maximum from 1 to 30 Vdc maximum; maximum factored count speed is 20 kHz

#### Temperature:

**Operating:** 0 to 54°C (32 to 130°F)

**Storage:** -40 to 93°C (-40 to 200°F)

**Accuracy:** ±0.5% FS

**Relay Outputs:** 2 SPDT contacts rated for 10 A at 120/240 Vac or 28 Vdc  
**4 to 20 mA Output:** ±0.5% FS accuracy; requires 3 to 24 Vdc supply voltage, non-inductive

**Dimensions:** 63.5 H x 187 mm W (2.5 x 7.375") cutout

### To Order

Model No.	Input Type
DP-F31	High level pulse; 3 to 30 Vdc, 20 kHz maximum
DP-F32	High level pulse; 3 to 30 Vdc, 20 kHz maximum with 4.7 kΩ pull-up resistors to +5 Vdc for NPN
DP-F33	4 to 20 mA, 250 Ω impedance
DP-F33-SQRT	4 to 20 mA with square root extraction
DP-F34	0 to 5 Vdc; 15 kΩ impedance

### Options

Ordering Suffix	Description
-MA	4 to 20 mA analog output, not available with DP-F33-SQRT
-LIN	16 point linearization
-220VAC	220 Vac power
-RS232	RS232 communications
-RS422	RS422 communications

Comes complete with operator's manual, gasket, 4 mounting ears and screws.

**Ordering Examples:** DP-F33-RS422 ratemeter/totalizer with 4 to 20 mA input, and RS422 computer communications option. OCW-3 OMEGACARE<sup>SM</sup> extends standard 2-year warranty to a total of 5 years.

DP-F31-LIN, ratemeter/totalizer with 16-point linearization.