



HOBO[®] UX120-017M Data Logger

4-Channel Pulse

A highly versatile, 4-channel energy data logger that combines the functionality of four separate data loggers into one compact unit. Enables energy management professionals, from energy auditors to building commissioners, to easily track building energy consumption, equipment runtimes, and water and gas flow rates. This logger has an expanded memory capable of over 4,000,000 measurements, and is also available in a standard memory model (UX120-017) capable of 500,000 measurements.



Key Advantages:

- Simultaneously measures and records pulse signals, events, state changes, and runtimes
- Stores up to over 4 million measurements, enabling longer deployments with fewer site visits
- Maximum pulse rate – 120 Hz
- Pulse input range – 0 to 24VDC
- Streamlines deployment via a range of start/stop options, logger status LEDs, and high-speed USB 2.0 data offload
- Works with Onset's Energy & Power Meter to measure Power Factor (PF), Reactive Power (VAR), Watt Hours (Wh) and more. [Learn how.](#)

The T-VER-E50B2 Energy and Power Meter outputs (3) sets of pulses that are logged by the UX120-017. These pulses represent Watt-hours, Amp-hours, and VAR-hours. HOBOWare software uses these pulse values to calculate AC Current, AC Voltage, kW, Power Factor, VARs, and VA. The formulas used in these calculations can be found here: [14993-A-Derived-Channels.zip](#)

- Compatible with HOBOWare and HOBOWare Pro software for logger setup, graphing, and analysis

HOBO UX120-017M Data Logger Specifications

Inputs

External Contact Input:	Electronic solid state switch closure or logic driven digital signals to 24 V
Maximum Pulse Frequency:	120 Hz
Maximum State, Event, Runtime Frequency:	1 Hz
Bits:	4–32 bits depending on pulse rate and logging interval
Maximum Pulses Per Interval:	7,863,960 (using maximum logging rate)
Driven Logic Signal:	Input Low: ≤ 0.4 V; Input High: 3 to 24 V
Absolute Maximum Rating:	Maximum Voltage: 25 V DC Minimum Voltage: -0.3 V DC
Solid State Switch Closure:	Input Low: < 10 K ; Input High: > 500 K
Internal Weak Pull-Up:	100 K
Input Impedance:	Solid state switch closure: 100 K pull up; Driven signal: 4.5 K
Minimum Pulse Width:	Contact closure duration: 500 μ S; Driven logic signal: 100 μ S
Lockout Time:	0 to 1 second in 100 ms steps
Edge Detection:	Falling edge, Schmitt Trigger buffer
Preferred Switch State:	Normally open or Logic "1" state

Logging

Resolution:	Pulse: 1 pulse, Runtime: 1 second, State and Event: 1 State or Event
Logging Rate:	1 second to 18 hours, 12 minutes, 15 seconds
Time Accuracy:	± 1 minute per month at 25°C (77°F) (see Plot A in manual)
Battery Type:	Two AA alkaline or lithium batteries
Battery Life:	1 year, typical with logging intervals greater than 1 minute and normally open contacts

Memory

Memory:	UX120-017: 520,192 measurements (assumes 8-bit) UX120-017M: 4,124,672 measurements (assumes 8-bit)
Download Type:	USB 2.0 interface
Download Time:	30 seconds for UX120-017, 1.5 minutes for UX120-017M

Physical

Operating Range:	Logging: -40° to 70°C (-40° to 158°F); 0 to 95% RH (non-condensing) Launch/Readout: 0° to 50°C (32° to 122°F) per USB specification
Weight:	149 g (5.26 oz)
Size:	11.4 x 6.3 x 3.3 cm (4.5 x 2.5 x 1.3 inches)
Environmental Rating:	IP50



The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).

Contact Us

Sales (8am to 5pm ET, Monday through Friday)

- ▶ Email sales@onsetcomp.com
- ▶ Call 1-508-759-9500
- ▶ In U.S. toll free 1-800-564-4377
- ▶ Fax 1-508-759-9100

Technical Support (8am to 6pm ET, Monday through Friday)

- ▶ Contact Product Support www.onsetcomp.com/support/contact
- ▶ Call 1-508-759-9500
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