

HOBO 4-Channel Pulse Data Logger - UX120-017M



Measures:

AC Current, AC Voltage, Amp Hour (Ah), Amps (A), Event, Kilowatt Hours (kWh), Kilowatts (kW), Motor On/Off, Power Factor (PF), Pulse Input, Runtime, State Open/Closed, Volt-Amp Reactive (VAR), Volt-Amp Reactive Hour (VARh), Volt-Amps (VA), Volts (V), Watt Hours (Wh), Watts (W)

Qty	1-9	10-99	100+
\$US	\$325	\$302	\$276

Contact Onset at 1-800-564-4377

Features:

- 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 \leq 120 Hz
- Pulse input range \leq 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 which 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

Description:

The HOBO UX120 Pulse Logger is a highly versatile, 4-channel [energy](#) data logger that combines the functionality of four separate data loggers into one compact unit. It enables energy management professionals – from energy auditors to building commissioners – to easily track building energy consumption, equipment runtimes, and water and gas flow rates. The HOBO UX120 Pulse Logger is available in a [standard memory model \(UX120-017\)](#) capable of 500,000 measurements and an [expanded memory version \(UX120-017M\)](#) capable of over 4,000,000 measurements.

Detailed 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 \leq 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: \leq 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 $\text{K}\Omega$; Input High: $>$ 500 $\text{K}\Omega$
Internal Weak Pull-Up:	100 $\text{K}\Omega$
Input Impedance:	Solid state switch closure: 100 $\text{K}\Omega$ pull up; Driven signal: 4.5 $\text{K}\Omega$
Minimum Pulse Width:	Contact closure duration: 500 μS ; Driven logic signal: 100 μS
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: \pm 1 minute per month at 25 $^{\circ}$ C (77 $^{\circ}$ 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 $^{\circ}$ to 70 $^{\circ}$ C (-40 $^{\circ}$ to 158 $^{\circ}$ F); 0 to 95% RH (non-condensing)
Launch/Readout: 0 $^{\circ}$ to 50 $^{\circ}$ C (32 $^{\circ}$ to 122 $^{\circ}$ 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).