

HOB0[®] Energy Logger Pro[™]

onset

- Onset's most flexible logger records up to 15 channels
- Provides 12v excitation for third-party sensors
- Pre-configured smart sensors get you started fast
- Signal conditioning modules retain configurations until you change them, providing plug-and-play convenience for commonly used sensors
- Flexible power options include battery operation or AC power adapter



Accepts up to 3 two-channel modules and 6 plug-and-play smart sensors (some measure more than one parameter.) HOB0ware[®] Pro Software provides easy logger launch, data readout, and plotting.

Temperature

Relative Humidity (RH)

AC Current (True RMS)

AC Voltage (True RMS)

kW

kWh

Gauge Pressure

Differential Air Pressure

CO₂

Pulse inputs for electric, gas or flow meters

Other third-party sensors via 4-20 mA/0-20 VDC

Size (with modules):
15.4 x 9.4 x 5.1 cm
(6.06 x 3.69 x 2.00 in)
Weight (without modules):
418.7 g (14.77oz)

Memory: up to 512,000 measurements, number varies based on sensor selection
Sample rate: 1 second to 18 hours
Battery life: 1-year typical, with up to 75mA sensor excitation, 1 second-warmup time, and 10-minute logging interval—user-replaceable, AC adapter (optional)



Ideal for
Building Commissioning
Compressed Air Studies
Energy Management
HVAC/R Diagnostics
IAQ Management
M&V Projects
Performance Verification



**FlexSmart[™]
TRMS Module**
#S-FS-TRMSA

- 2 input channels of AC Current and/or Voltage
- Measures True RMS for accurate readings of sinusoidal and non-sinusoidal waveforms

AC Current
#T-MAG-SCT-XXX



Ranges: 0-20, 0-50, 0-100, 0-200, 0-600 Amps
Accuracy: ±1% (from 10% to 130% of rated current)

AC Voltage
#T-MAG-SPT-XXX



Ranges: 0-150, 0-300, 0-600 volts
Accuracy: ±1% (from 10% to 130% of rated voltage)



**FlexSmart[™]
Analog Module**
#S-FS-CVIA

- 2 input channels of 0-20mA and/or 0-20 VDC
- Provides 12V sensor excitation and user-configurable warm-up

Kilowatt Power
#T-VER-8044-100



Range: 3 phase, 50/60 Hz, 480 VAC, 0 to 100 Amps
Accuracy: ±1% per ANSI C12.1 (from 10% to 100% of CT rating)

Gauge Pressure
#T-ASH-G2-XXX



Ranges: 0-100, 0-200, 0-500 psig
Accuracy: ±1% of span from -20° to 85°C (-4° to 185°F)

Differential Pressure
#T-SET-265-XXX



Range: 0-0.25 in, 0-1 in, 0-2.5 in, 0-5 in, 0-10 in WC
Accuracy: ±1% FS

Carbon Dioxide/Temp
#TEL-7001



Ranges: 0 to 4000 ppm CO₂, 0° to 40°C (32° to 104°F)
Accuracy: ±50 ppm or ±5% of reading; ±1°C (±2°F)
Requires CABLE-2070 for use with Analog Module

Duct-Mount Humidity/Temp
#T-VAI-HMD-40Y

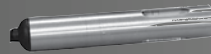


Ranges: 10 to 90% RH,
Temp: -10° to 60°C (14° to 140°F)
Accuracy: better than ±3% RH @ 25°C (77°F);
±0.3° temp @ 25°C (±0.54° @ 77°F)



• Plug-and-play smart sensors are automatically recognized by the logger

Temp/RH #S-THA-M0XX



Ranges: -40° to 70°C (-40° to 167°F); 0 to 100% RH
Accuracy: ±0.7°@ 25°C (±1.3°@ 77°F); ±3% RH

8-bit Temp #S-TMA-M0XX



Range: -40° to 100°C (-40° to 212°F)
Accuracy: ±0.7°@ 25°C (1.3°@ 77°F)

12-bit Temp #S-TMB-M0XX



Range: -40° to 100°C (-40° to 212°F)
Accuracy: ±0.2°@ 25°C (0.36°@ 77°F)

Pulse Input #S-UCA-M006



Maximum input frequency: 120 Hz

Compatible with electronic switch closures, such as FET or open collector outputs, or CMOS-level logic signals. Accepts both kWh transducers below, as well as flow meters, power meters, and gas meters with pulse outputs

kWh Transducer #T-WNA-3X-XXX



Ranges: 208/240 VAC and 480 VAC ±15% Delta and Wye systems
Accuracy: ±0.45% of reading ±0.05% FS through 25th harmonic

Works with CTs (T-MAG-SCT-XXX) to provide True RMS kilowatt hours of energy used, even for loads with non-sinusoidal waveforms

Requires Pulse Input Adapter (S-UCA-M006)

kWh Transducer #T-VER-805X-XXX



Ranges: 208 to 480 VAC, 300 Amps, 1-phase
208 to 480 VAC, 800 Amps, 3-phase

Self-contained unit includes split-core AC current transformers and voltage leads to provide kilowatt hours of energy used. **Requires Pulse Input Adapter (S-UCA-M006)**

AC Power Adapter #P-AC-1



Switched supply powers HOB0 Energy Logger Pro from AC power sources (100 to 240 VAC, 50 or 60 Hz.)

HOBO® Energy Logger Pro™ Ordering Information

Description	Part No.
HOBO Energy Logger Pro	H22-001
FlexSmart™ TRMS Module	S-FS-TRMSA
FlexSmart™ Analog Module	S-FS-CVIA

Sensors

*Smart Sensors (plug-and-play, no module required)
See pg 28 for additional weather-related smart sensor options*

Temperature/RH	
2-m cable	S-THA-M002
6-m cable	S-THA-M006
17-m cable	S-THA-M017
8-bit Temperature	
2-m cable	S-TMA-M002
6-m cable	S-TMA-M006
17-m cable	S-TMA-M017
12-bit Temperature	
2-m cable	S-TMB-M002
6-m cable	S-TMB-M006
17-m cable	S-TMB-M017
Pulse Input adapter	S-UCA-M006

WattNode kWh

Pulse Input Adapter required (Part # S-UCA-M006)

Wye config 208/240	T-WNA-3Y-208
Wye config 480	T-WNA-3Y-480
Delta config 208/240	T-WNA-3D-240
Delta config 480	T-WNA-3D-480

Veris kWh

Pulse Input Adapter required

Veris kWh	
1-phase, 300 Amp	T-VER-8051-300
3-phase, 800 Amp	T-VER-8053-800

True RMS Current and Voltage

FlexSmart™ TRMS Module required (Part #S-FS-TRMSA)

Magnetlab Split-Core AC Current (also used with WattNode)	
0-20 Amp	T-MAG-SCT-020
0-50 Amp	T-MAG-SCT-050
0-100 Amp	T-MAG-SCT-100
0-200 Amp	T-MAG-SCT-200
0-600 Amp	T-MAG-SCT-600
Magnetlab AC Voltage (Potential)	
0-150 Volt	T-MAG-SPT-150
0-300 Volt	T-MAG-SPT-300
0-600 Volt	T-MAG-SPT-600

Description

Analog Input Sensors

the following sensors require a FlexSmart™ Analog Module (Part #S-FS-CVIA)

Description	Part No.
Veris kW	T-VER-8044-100
Ashcroft Gauge Pressure	
100 psig	T-ASH-G2-100
200 psig	T-ASH-G2-200
500 psig	T-ASH-G2-500
Setra Differential Air Pressure	
0.25 in WC	T-SET-265-R25
1in WC	T-SET-265-001
2.5 in WC	T-SET-265-2R5
5 in WC	T-SET-265-005
10 in WC	T-SET-265-010
Vaisala Duct-Mount RH/Temp	T-VAI-HMD-40Y
Telaire CO ₂ /Temp	TEL-7001
Cable CO ₂ /Temp to Module	CABLE-2070

Accessories

Mounting Feet Kit	A-H22-MOUNT-1
DIN Mount Kit	A-H22-DINMOUNT-1
AC power adapter	P-AC-1

Smart Sensor Extension Cables

(total cable length of all sensor cables is 100 m (300 ft))

5-m length	S-EXT-M005
10-m length	S-EXT-M010
25-m length	S-EXT-M025
1-to-2 Sensor Adapter*	S-ADAPT

** when used with Smart Sensor Extension Cables, this allows a single smart sensor input to branch to two smart sensors*

Lithium Batteries -4 pack

(2 packs required)

H22 Spares kit	HWSB-LI
	A-H22-SPARES-1
<i>(includes screwdriver, rubber bumper mounts, module connector covers)</i>	
TRMS Module spares kit	A-FS-TRMSA-4P-1
	<i>(includes 4-pin screw terminals (4) and screwdriver)</i>
Analog Module spares kit	A-FS-CVIA-7P-1
	<i>(includes 7-pin screw terminals (4) and screwdriver)</i>

Software and Communications

HOBOWare includes USB interface cable

HOBOWare® Pro Software (Windows)	BHW-PC
HOBOWare Pro Software (Mac)	BHW-MAC
Serial Interface Cable	CABLE-PC-3.5
USB Serial Adapter	CABLE-USB232

Optional Communications

HOBO U-Shuttle	U-DT-1
Serial to Ethernet Server	SERVER-DS202