



101 West 31st. Street, 7th Floor, New York, NY 10001
www.cunybpl.org

BUILDING *performance* LAB

CUNY BPL Field Equipment Lending Library

CUNY Building Performance Lab is excited to present our expanded Field Equipment Lending Library, funded with generous support from NYC DCAS Energy Management. In line with our mission to help advance high-performance building operations and practices, this resource is available to NYC municipal facility personnel, industry professionals, and current students and alumni of our energy management courses.

The lending library is stocked with a full range of field equipment that can be used to test, measure and diagnose building system operations, and to facilitate ongoing commissioning, building re-tuning and retrofit projects.

Equipment available for loan includes HOBO data loggers, CO2 meters, thermal image cameras, ultrasonic non-intrusive flow meters, balometers, light meters, power quality analyzers and more. Courier service is available to qualified NYC municipal facility personnel for the delivery of tools. In addition, we have a variety of simulation and diagnostic software that can be used onsite at our Manhattan location.

CUNY Building Performance Lab personnel are available to assist with the selection of equipment and to provide necessary training.

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HOBO Data Loggers



ZW-RCVR



ZW-Router



ZW-001



ZW-003



ZW-005



ZW-006



ZW-007



ZW-008



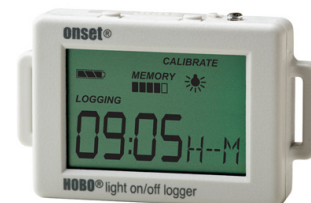
UA-002-64



UTB1-001



UX90-001M



UX90-002



UX90-004



UX90-006M



UX100-001



UX100-011

HOBO Data Loggers



UX120-006M



UX120-014M



UX120-017



U9-001



U9-002



U9-004



U10-001



U10-003



U12-006



U12-011



U12-012



U23-002



MX1102



U30-GSM/Wifi



U-DT-1



UX120-018

HOBO Data Loggers

HOBO Data Receiver – ZW-RCVR



Definition: The ZW-RCVR Data Receiver is the central hub of the wireless data logger network. It collects and stores data, and operates as a bridge between the network and the computer software.

Power Source: (3) AAA battery backup life of 19 hours, AC Power adapter (recommended).

Equipment Compatibility & Software: ZW-001, ZW-003, ZW-005, ZW-006, ZW-007, ZW-008, HOBOWare Pro.

HOBO Data Router – ZW-Router



Definition: The ZW-Router wireless router node provides connectivity with other wireless network nodes by expanding the reach of the wireless network and transmitting data from the data nodes to the data receiver.

Power Source: (3) AAA battery backup life of 19 hours, AC Power adapter (recommended).

Equipment Compatibility & Software: ZW-001, ZW-003, ZW-005, ZW-006, ZW-007, ZW-008, HOBOWare Pro.

HOBO Temperature Data Node – ZW-001



Definition: The ZW-001 Temperature Data Node is a single-channel wireless temperature data node that features a temperature sensor; wirelessly transmits the data in real time.

Power Source: (3) AAA battery backup life of 19 hours, AC Power adapter.

Equipment Compatibility & Software: ZW-003, ZW-005, ZW-006, ZW-007, ZW-008, HOBOWare Pro.

HOBO Temperature/RH Data Node – ZW-003



Definition: The ZW-003 Temperature/RH Data Node is a two-channel wireless data node with temperature and relative humidity sensor; wirelessly transmits data in real time.

Power Source: (3) AAA battery backup life of 19 hours, AC Power adapter.

Equipment Compatibility & Software: ZW-001, ZW-005, ZW-006, ZW-007, ZW-008, HOBOWare Pro.

HOBO Data Loggers

HOBO Four-Channel Data Logger – ZW-005



Definition: The ZW-005 Four Channel Data Logger is a wireless network data node that records data that is then collected by the data receiver. This particular node measures temperature and relative humidity, and has two analog channels for external sensor inputs.

Power Source: (3) AAA battery backup life of 19 hours, AC Power adapter.

Equipment Compatibility & Software: CTV-(A-E), T-MAG-SCT-600, TEL-7001, T-VER-PXU-L, T-WNB-3Y-208, TMC20-HE, ZW-RCVR, ZW-ROUTER, HOBOWare Pro

HOBO Four Analog Port Data Node – ZW-006



Definition: The ZW-006 Four Analog Port Data Node is a four-channel wireless data node with four analog ports that wirelessly transmits data in real time. Analog ports allow it to accept a wide range of external energy sensors.

Power Source: (3) AAA battery backup life of 19 hours, AC Power adapter.

Equipment Compatibility & Software: CTV-(A-E), T-MAG-SCT-600, TEL-7001, T-VER-PXU-L, T-WNB-3Y-208, TMC20-HE, ZW-RCVR, ZW-ROUTER, HOBOWare Pro

HOBO Two External Channel Data Node – ZW-007



Definition: The ZW-007 Two External Channel Data Node is a two-channel wireless data node that includes an external 2m temperature/RH sensor probe and two additional analog ports for external sensors.

Power Source: (3) AAA battery backup life of 19 hours, AC Power adapter.

Equipment Compatibility & Software: CTV-(A-E), T-MAG-SCT-600, TEL-7001, T-VER-PXU-L, T-WNB-3Y-208, TMC20-HE, ZW-RCVR, ZW-ROUTER, HOBOWare Pro

HOBO Four External Channel Data Node – ZW-008



Definition: The ZW-008 Four External Channel Data Node is a four-channel wireless data node with two analog ports and two pulse input ports. Analog ports allows it to accept a wide range of external energy sensors.

Power Source: (3) AAA battery backup life of 19 hours, AC Power adapter.

Equipment Compatibility & Software: CTV-(A-E), T-MAG-SCT-600, TEL-7001, T-VER-PXU-L, T-WNB-3Y-208, TMC20-HE, ZW-RCVR, ZW-ROUTER, HOBOWare Pro

HOBO Data Loggers

HOBO Pendant Temperature/Light Data Logger 64K – UA-002-64



Definition: The UA-002-64 Pendant Temperature/Light Data Logger is a miniature data logger that can record outdoor or indoor temperature and relative light levels. Waterproof casing allows it to be used outdoors.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: BASE U-4 station, HOBOWare Pro.

HOBO Water Temperature Data Logger – UTBI-001



Definition: The UTBI-001 Water Temperature Data Logger is a tiny data logger that measures temperature over a wide range. Designed for outdoor and underwater environments, it is waterproof to 1,000 feet.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: BASE U-4 station, HOBOWare Pro.

HOBO State Data Logger – UX90-001M



Definition: The UX90-001M State Data Logger monitors state changes using an internal magnetic reed switch for monitoring contact closures, current flow of remote devices or the presence of positive DC voltages up to 15V. Ideal for monitoring mechanical equipment operation. Capable of over 346,795 measurements.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: T-WNB-3D-480, U-DT-1 HOBOWare Pro.

HOBO Light on/off Data Logger – UX90-002



Definition: The UX90-002 Light On/Off Data Logger monitors indoor light changes with an internal sensor, and records light on and off conditions. Ideal for building energy audits and lighting studies. Capable of 84,650 measurements.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: UX90-Light Pipe, U-DT-1 HOBOWare Pro.

HOBO Data Loggers

HOBO Motor on/off Data Logger – UX90-004



Definition: The UX90-004 Motor On/Off Data Logger monitors motor on and off states and records runtime. Ideal for tracking the usage & runtimes of motors, pumps, compressors, and other equipment. Capable of 84,650 measurements.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: CABLE-2.5 Stereo, U-DT-1, HOBOWare Pro.

HOBO Occupancy/Light Data Logger – UX90-006M



Definition: The UX90-006M Occupancy/Light Data Logger monitors room occupancy and indoor light changes. Ideal for identifying occupancy patterns and determine energy usage for potential savings. Measures room occupancy up to 12 meters away. Capable of over 346,795 measurements.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: U-DT-1, UX90-Light Pipe, HOBOWare Pro.

HOBO Temperature Data Logger – UX100-001



Definition: The UX100-001 Temperature Data Logger records temperature in indoor environments with an internal sensor. Ideal for monitoring occupant comfort within an office building, tracking food storage conditions in a warehouse or logging temperature trends in a server room.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: U-DT-1, HOBOWare Pro.

HOBO Temperature/Relative Humidity 2.5% Data Logger – UX100-011



Definition: The UX100-011 Temperature/Relative Humidity Data Logger records temperature and relative humidity (within 2.5% accuracy) in indoor environments. Ideal for monitoring occupant comfort in office buildings, tracking food storage conditions in warehouses, logging temperature trends in server rooms or measuring humidity levels in museums.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: U-DT-1, HOBOWare Pro.

HOBO Data Loggers

HOBO Four-Channel Analog Data Logger – UX120-006M



Definition: The UX120-006M Four-Channel Data Logger provides twice the accuracy of previous models, a deployment-friendly LCD screen and up to four external sensor jacks for measuring temperature, current, CO₂, voltage and more. Ideal for energy audits, building commissioning studies and equipment scheduling.

Power Source: (2) AAA 1.5v Alkaline batteries

Equipment Compatibility & Software: Cable 4-20mA, CTV-(A-E), T-CON-ACT-300, TEL-7001, T-VER-PXU-L, TMC6-HE, T-ASH-G2-500, T-VER-8044-100, TMC-20HD, HOBOWare Pro.

HOBO Four-Channel Thermocouple Data Logger – UX120-014M



Definition: The UX120-014M Thermocouple Data Logger is a four-channel LCD data logger for measuring and recording temperature in a variety of monitoring applications. Records temperatures over a broad range (-260 to 1,820 degrees Celsius) and can accept up to four types of temperature probes.

Power Source: (2) AAA 1.5v Alkaline batteries

Equipment Compatibility & Software: TC6-J, TC6-K, TC6-T, TCP6-K12, U-DT-1, HOBOWare Pro.

HOBO Four-Channel Pulse Data Logger – UX120-017



Definition: The UX120-017 Pulse Data Logger is a highly versatile 4-channel energy data logger that combines the functionality of four separate loggers into one compact unit. It enables the user to track building energy consumption, equipment run-times and water and gas flow rates. Capable of 500,000 measurements.

Power Source: (2) AAA 1.5v Alkaline batteries

Equipment Compatibility & Software: T-VER-E50B2, T-WNB-3Y208, T-ACT-0750-250, T-MAG-SCT-600, HOBOWare Pro

HOBO State Data Logger – U9-001



Definition: The U9-001 State Data Logger monitors state changes using an internal magnetic reed switch. Ideal for monitoring contact closures, current flow of remote devices or presence of positive DC voltages up to 15V. Capable of 43,000 state changes.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: CABLE-2.5 STEREO, HOBOWare Pro.

HOBO Data Loggers

HOBO Light On/Off Data Logger – U9-002



Definition: The U9-002 Light On/Off Data Logger records light on and off status, with a light threshold that is adjustable from 10 to 100 lumens/m². The large memory records up to 43,000 on/off changes, making this logger a great tool for monitoring light usage for energy audits.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: U-DT-1, HOBOWare Pro.

HOBO Motor On/Off Data Logger – U9-004



Definition: The U9-004 Motor On/Off Data Logger records motor on and off status, making it ideal for energy audits and equipment monitoring. Monitors the AC field generated by a motor; easily mounted on a motor housing. Capable of recording 43,000 state changes.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: U-DT-1, HOBOWare Pro.

HOBO Temperature Data Logger – U10-001



Definition: The U10-001 Temperature Data Logger is used for indoor temperature monitoring. Small size and large memory capacity make it a great multi-purpose logger.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: U-DT-1, HOBOWare Pro.

HOBO Temperature/RH Data Logger – U10-003



Definition: The U10-003 Temperature/Relative Humidity Data Logger is used for monitoring indoor temperature and relative humidity. Small size and large memory capacity make it a great multi-purpose logger.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: U-DT-1, HOBOWare Pro.

HOBO Data Loggers

HOBO Four-Channel External Data Logger – U12-006



Definition: The U12-006 Four-Channel External Data Logger measures data using sensors that are externally attached to the device; sensors can be placed in different locations as long as they remain connected to the data logger. The U12-006 has four channels to collect data from four sensors at the same time.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: 4-20mA, CTV-A, CTV-B, CTV-E, T-CON-ACT-300, TEL-7001, T-VER-PXU-L, TMC6-HE, HOBOWare Pro

HOBO Temperature/RH Data Logger – U12-011



Definition: The U12-011 Temperature/Relative Humidity Data Logger is a 2-channel data logger for high-accuracy monitoring of temperature and humidity.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: U-DT-1, HOBOWare Pro

HOBO Temperature/RH/Light/External Data Logger – U12-012



Definition: The U12-012 Temperature/Relative Humidity/Light/External Data Logger accepts a wide range of energy and environmental sensors. It provides 12-bit resolution measurements for detecting greater variability in recorded data, and stores 43,000 measurements.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: 4-20mA, CTV-A, CTV-B, CTV-E, T-CON-ACT-300, TEL-7001, T-VER-PXU-L, TMC6-HE, HOBOWare Pro

HOBO External Temperature/Relative Humidity Data Logger – U23-002



Definition: The U23-002 External Temperature/Relative Humidity Data Logger is a weatherproof logger with an external temperature and relative humidity sensor; attached to a 6-foot cable for fast sensor responses and deployment in tight spaces.

Power Source: 1/2 AA, 3.6 V lithium battery

Equipment Compatibility & Software: BASE U-4, U-DTW-1, RS3, HOBOWare Pro

HOBO Data Loggers

HOBO U30 Cellular Data Logger – U30-GSM/Wifi



Definition: The U30-GSM Cellular Data Logger is a 15-channel data logging system for a broad range of energy and weather monitoring applications. It can be easily configured with a wide range of plug and play smart sensors.

Power Source: 4-volt sealed lead battery, AC adapter

Equipment Compatibility & Software: TEL-7001, T-VER-PXU-L, T-MAG-SCT-600, T-WNB-3Y-208, S-LIB-M003, S-WDA-M003, S-WSA-M003, T-ACT-0750-250, S-FS-CVIA, T-VER-E50B2, S-UCC-M006, T-DCI-F900-S-P, T-DCI-F900-L-P, T-ASH-G2-500, T-VER-8053-800, STHB-M008, HOBOWare Pro

HOBO Energy Logger – H22-001



Definition: The H22-001 Energy Logger is a 15-channel data logger which allows energy and facility managers to quickly and easily detect and address a variety of issues relating to HVAC, machinery and other systems.

Power Source: (8) AA Alkaline batteries, optional AC wall adapter connector

Equipment Compatibility & Software: T-ACT-0750-250, S-FS-CVIA, T-MAG-SCT-600, T-VER-E50B2, S-UCC-M006, T-DCI-F900-S-P, T-DCI-F900-L-P, TEL-7001, T-ASH-G2-500, T-WNB-3Y-208, S-LIB-M003, T-VER-8053-800, STHB-M008, HOBOWare Pro

HOBO Temperature/Relative Humidity Data Logger - MX1101



Definition: The MX1101 is a data logger which measures temperature and relative humidity with a internal sensor, the MX1101 provides a new way to transmit your data by using bluetooth technology you can transmit your data wirelessly to your mobile device using the app HOBOMobile.

Power Source: (2) AAA 1.5 V Alkaline Batteries

Equipment Compatibility & Software: HOBOMobile App Device with iOS 9.2 or higher, Android 4.4 or higher and Bluetooth 4.0

HOBO Plug Load Data Logger - UX120-018



Definition: The UX120-018 is a plug load logger that measures and records the power and energy consumption of 120V plug loads from office equipment, vending machines, and other devices.

Power Source: (2) AAA 1.5V Alkaline batteries or Line-Powered

Equipment Compatibility & Software: HOBOWare Pro

HOBO Data Loggers

HOBO Pendant G Data Logger - UA-004-64



Definition: The UA-004-64 G Data logger is a data logger which has the ability to measure 3-dimensional motion, such as sports activity or medical therapy compliance. With this logger you can measure acceleration and angular displacement in 1, 2 or 3 axes.

Power Source: (1) 3V CR2032 battery

Equipment Compatibility & Software: BASE U-4 station, HOBOWare Pro.

HOBO Carbon Dioxide/Temp/RH - MX1102



Definition: The MX1102 CO2 Logger makes it more convenient than ever to measure and record CO2 in buildings and other non-condensing environments. It measures CO2 from 0-5,000 parts per million (ppm) and through HOBObot mobile app you can access that data right from your mobile phone or table.

Power Source: (4) AA 1.5V Alkaline battery

Equipment Compatibility & Software: HOBObot mobile App Device with iOS 9.2 or higher, Android 4.4 or higher and Bluetooth 4.0

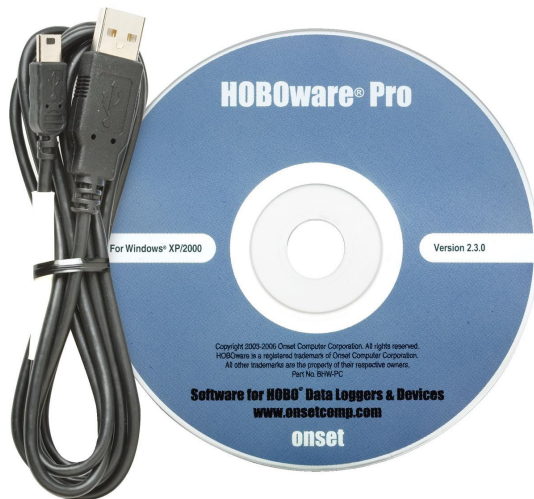
HOBO U-Shuttle - U-DT-1



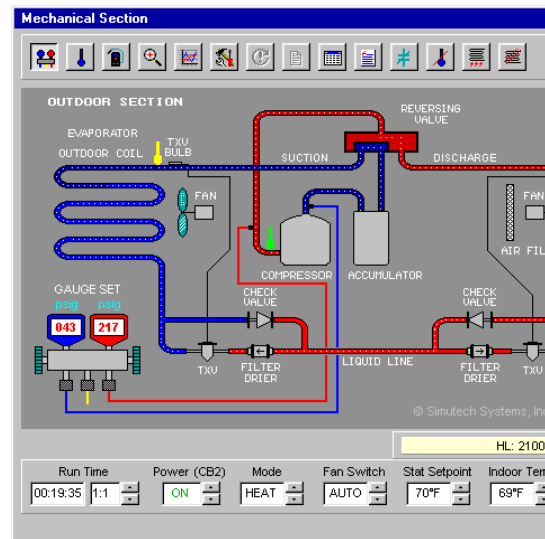
Definition: The U-Shuttle allows users to easily relaunch or conveniently offload data in the field, while viewing readings and status in hand. The U-Shuttle works with all U-Series loggers, Weather Stations, Micro Stations and Energy Loggers.

Power Source: (2) AA 1.5V Alkaline battery

Equipment Compatibility & Software: All U-Series loggers, all UX-Series loggers, Hobo Weather Stations, and Micro Stations (H21), and Hobo Energy Logger (H22).



HOBOWare Pro - Data
Logging Software



Simutech Simulation Software-
SIMUAIR, SIMUPUMP, SIMUMKT

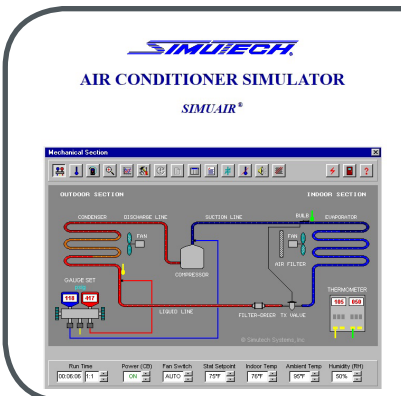
HOBOWare Pro - Data Logging Software



Definition: The HOBOWare Pro Software is used for all HOBO data loggers and wireless data nodes. It Facilitates download and subsequent analysis of data collected from data loggers.

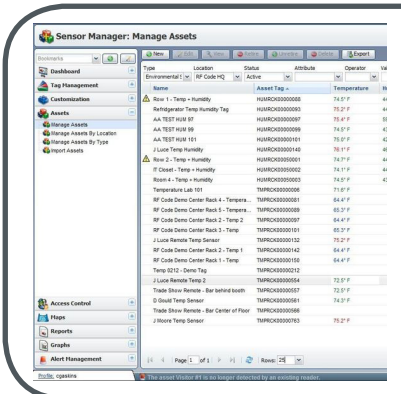
Equipment Compatibility & Software: ZW-Series, U12-Series, U20-Series, UA-Series, U22-Series, UTBI-Series, U23-Series, U24-Series, U14-Series, U26-Series, UX120-Series, U30-GSM, UX90-Series

Simutech Simulation Software - SIMUAIR / SIMUPUMP / SIMUMKT



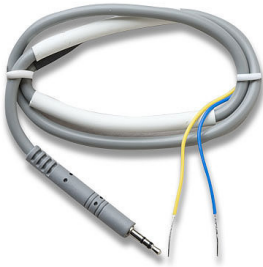
Definition: Simutech's simulation software emulates various systems through animated electric and mechanic schematic designs. SIMUAIR simulates air conditioning systems; SIMUPUMP simulates a heat pump system, with heating, cooling and emergency heat modes; and SIMUMKT simulates a commercial refrigeration system.

Sensor Manager Software - RF Code V2.6.1



Definition: The RF Code Sensor Manager provides real-time monitoring and alerting about the environmental conditions surrounding assets in dense spaces such as data centers. This wire-free solution provides the deployment flexibility you need to monitor environmental conditions dynamically.

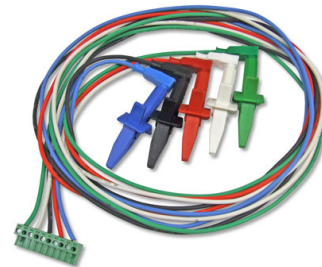
CABLES



Cable 420mA



Cable CO₂



Voltage Input Lead Set



Optic USB Base station



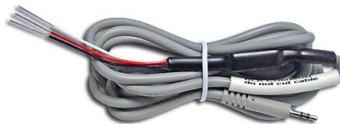
AC Power Adapter



E50B2 Wiring Kit



Smart Sensor Ext cable



Ext Input Cable for DC Voltage



Ext Cable for Video Borescope



Weatherproof Ext. Housing



UX90 - Light pipe



Data logger USB cable



4-20mA input
Adapter Sensor



CO₂ and Temp Output Cable

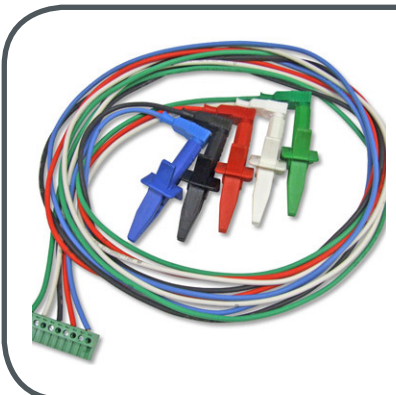
Power & Energy Meter Wiring Kit – A-E50B2-LEADSET



Definition: The A-E50B2-LEADSET Power & Energy Meter Wiring Kit contains the appropriate wires to connect the HOBO UX120-017 pulse data logger and the E50B2 Power and Energy Meter to an electrical panel.

Equipment Compatibility & Software: UX120-017M, T-VER-E50B2, HOBOWare Pro

Wattnode Voltage Input Lead Set – A-WNB-LEADSET



Definition: The A-WNB-LEADSET Voltage Input Lead Set is comprised of the electric cables that are attached to the WattNode and act as a connection to the terminals. One of the wires is attached to the ground, so that the terminal is grounded, which increases the accuracy of the device. One terminal is neutral, and the other three are connected to electric mains.

Equipment Compatibility & Software: ZW-Series, U30-GSM, UX90-Series, T-WNB-3Y-208, UX120-017M, T-VER-E50B2, HOBOWare Pro

Optic USB Base Station – BASE-U-4



Definition: The BASE-U-4 Universal Optic USB Base Station, and couplers, are used to offload data from any HOBO data logger with an optic USB interface. It creates the required connection to your computer via USB.

Equipment Compatibility & Software: UA-002-64, U22-001, UTBI-001, U23-002, U23-003, U23-004, U-DT-1, HOBOWare Pro

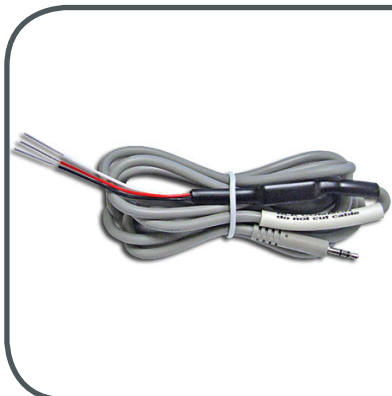
Extech BR250 Video Borescope Extension Cable & USB Video Receiver



Definition: The BR250 Video Borescope Extension Cable is a 38" long cable with a 19mm diameter connector that allows a maximum extension of about 3 meters of length for the Borescope inspection tool. The USB Video Receiver connects to a computer via USB port to transmit video capture over the Internet or to save a file for future viewing.

Equipment Compatibility & Software: BR250 Video Borescope

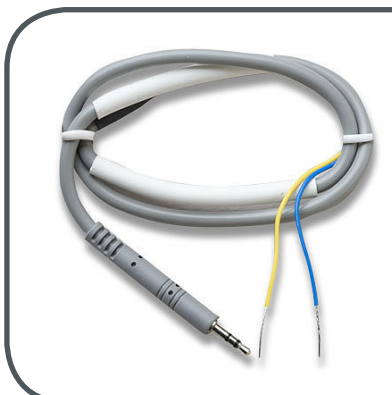
External Input Cable to Measure DC Voltage - CABLE-ADAP5



Definition: The CABLE-ADAP5 is an external input cable that provides analog sensor input of 0-5 VDC max. For HOBO ZW Series, UX120, and U12 data loggers with one or more analog inputs.

Equipment Compatibility & Software: U12-012, U12-013, U12-006, UX120-006m, ZW-005, ZW-007, ZW-006, ZW-008, T-ASH-G2-500, HOBOWare Pro

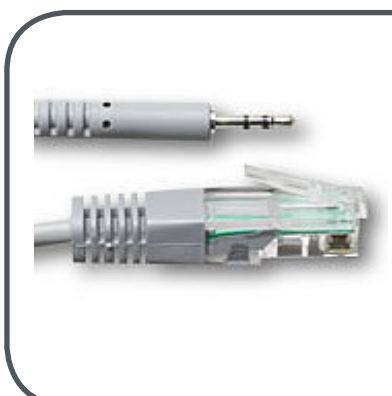
Cable 4-20mA Input Cable



Definition: The Cable 420mA Input Cable is used to connect sensors with 4-20mA output to HOBO U-Series and ZW Series external-channel data loggers.

Equipment Compatibility & Software: ZW-Series, U12-Series, UX90-Series, T-CON-ACT-300

Cable CO2



Definition: The Cable CO2 connects the Telaire CO2 Sensor with HOBO data loggers and nodes such as the U12's and ZW's. The data loggers can only register up to 2500 ppm, and thus limit the CO2 sensor accordingly when connected. The U30 requires the VIA option and a CABLE-2070.

Equipment Compatibility & Software: ZW-Series, U12-Series, TEL-7001, U30-GSM, HOBOWare Pro

Data Logger USB Cable - CABLE-USB



Definition: The CABLE-USBMB is a mini USB cable which connects to PC for communication is six feet long and its mainly used for launching and reading out data from the HOBO data Loggers. It works with all data loggers that have a mini USB connection.

Equipment Compatibility & Software: All Loggers with mini USB connection.

CABLES

Smart Sensor Extension Cable 25m length - S-EXT-MO25

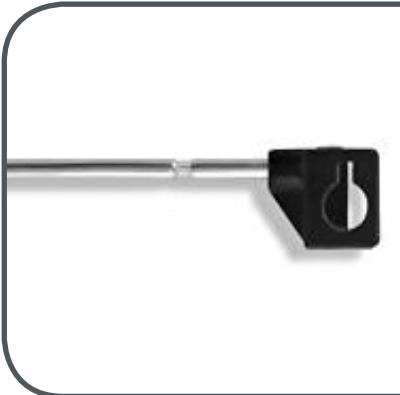


Definition: The S-EXT-MO25 is a 25 meter smart sensor male to male extension cable, plus a female to female adapter to allow further reach from the HOBO U30 GSM and a smart sensor.

Note: For outdoor use please use the S-EXT-CASE2 a weatherproof extension housing.

Equipment Compatibility & Software: H22-001, U30-GSM, Smart Sensors

HOBO Light Pipe - UX90-Light-Pipe-1



Definition: The UX90 Light pipe is a 1-foot fiber optic attachment for the HOBO UX90 Light data loggers which helps eliminate the effects of ambient sunlight when monitoring room light usage.

Equipment Compatibility & Software: UX90-002M, UX90-005M, UX90-006M, HOBOWare Pro

Weatherproof Extension Housing - S-EXT-CASE2



Definition: The S-EXT-CASE2 is a 6.5 inch long, weatherproof housing that protects the connection between sensors and sensor extension cables. Used with the S-EXT-MO25, when extension of smart sensor to U30-GSM is required.

Equipment Compatibility & Software: H22-001, U30-GSM, S-EXT-MO25

AC Power Adapter for 3rd party sensors up to 400mA at 12vdc - AC-SENS-1



Definition: The AC-SENS-1 is a AC power adapter which provides DC power to sensors that require it. This expands the range of 3rd party sensors that can be used with HOBO U12, U30 and ZW series.

Equipment Compatibility & Software: U12-012, U12-013, U12-006, U12-008, U30GSM, ZW-005, ZW-007, ZW-006, ZW-008, HOBOWare Pro



Dynasonics DXNP



Dynasonics TFX Ultra

Ultrasonic Flow Meter

Ultrasonic, Non-Intrusive Flow Meter - Dynasonics DXNP-ABS-NN



Definition: The DXNP-ABS-NN Ultrasonic, non-intrusive flow meter is a device that measures the velocity of a gas or liquid using ultra-sound. Can be used to check the flow of water through a system (e.g, a Chiller Plant) externally, with non-intrusive clamp on sensors that go over the pipes.

Power Source: AC power connection with internal battery fully charged estimated 6.5 Hours battery runtime.

Ultrasonic, Non-Intrusive Flow Meter - Dynasonics DTFXE-FC-AKEC-NA



Definition: The TFX Ultrasonic flow and energy meter is a clamp on meter which clamps onto the outside of pipes and do not contact the internal liquid. No need to shut down the process for installation or maintenance. Is an ideal meter for water & waste water industry, chemical industry, oil industry even food and beverage industry.

Power Source: Direct line power connections.

METERS



Kill A Watt P4400



Extech CO250



Extech HD755



pSense AZ-0001



Extech 461995



Fluke 985



Fluke 810



Extech MO290



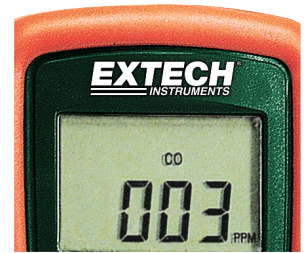
Fluke 805



RLD2-500



Bacharach PCA 3



Extech CO10



Extech EZ40



True Spot Smoke Test Kit

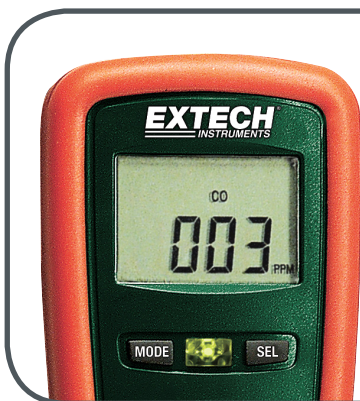


Extech BR250



Amprobe MAN30

Carbon Monoxide Meter - Extech CO10



Definition: The CO10 Carbon monoxide meter provides safety checks in all environments up to 1000 ppm. It has an audible alarm feature, which starts when measurements reach 35 ppm and continuous beeping begins when levels are above 200ppm.

Sensor Life (Typical): 3 Years

Power Source: (1) 9V battery approx. 50 hours of continuous use.

Combustible Gas Detector - Extech EZ40



Definition: The EZ40 Combustible gas detector quickly identifies and Pinpoints gas leaks. It features one-hand operation with a thumb controlled sensitivity adjustment to eliminate background gas levels.

Gases that can be detected are: natural gas, methane, ethane, propane, butane, acetone, alcohol, ammonia, steam, carbon monoxide, gasoline, jet fuel, hydrogen sulfide, smoke, industrial solvents, lacquer thinner, naphtha.

Power Source: (3) "C" 1.5V Alkaline batteries approx. 8 hours of continuous use.

Portable CO2 Meter - Extech CO250



Definition: The CO250 is a Portable CO₂ Meter which measures carbon dioxide (CO₂), temperature, humidity, dew point and wet bulb. Is an ideal instrument for indoor air quality diagnostic.

Power Source: (4) AA 1.5V batteries, battery life 24 hours of continuous use/ AC adaptor, approx. 24 hours of continuous use.

Hand-held CO2 Meter (with data logger) - pSense AZ 0001



Definition: The AZ-0001 is a hand-held CO₂ Meter device which assesses air quality. It measures CO₂, temperature, and humidity. When used with a data logger the air quality readings can be monitored and recorded over an extended period of time. It works perfectly as a personal safety alarm unit in hazardous environments, or wherever carbon dioxide is produced, stored, generated and used.

Power Source: (4) AA 1.5V batteries, battery life 24 hours of continuous use/DC adaptor.

METERS

Kill A Watt Electricity Usage Monitor - P4400



Definition: The P4400 Kill A Watt Meter helps reduce your electricity bill. With the P3 International Kill A Watt you can now cut down on costs and find out what machines are actually worth keeping plugged in. Simply connect these appliances to the Kill A Watt, and it will assess how efficient they really are.

Functions: RMS Voltage, RMS Current, Active Power, Apparent Power, Line Frequency, Power Factor, Power Quantity, Time Quantity, Power Consumption

Power Source: 120V Wall outlet

Differential Pressure Manometer - Extech HD755



Definition: The HD755 Differential Pressure Manometer measures gauge and differential pressure in the range of +or- 0.500 psi. The unit uses convenient quick-disconnect fittings. Ideal for diagnosing pressure issues with HVAC systems and gas furnaces.

Unit of measures: Pounds per square inch, inches of mercury, milli-bar, millimeters of mercury, kilo-pascals, kilograms per centimeters squared, inches of water, feet of water, centimeters of water, bars, ounces per square inch.

Power Source: (1) 9V alkaline battery, Battery life 125 hours

Differential Pressure Manometer - Amprobe MAN30



Definition: The Amprobe MAN30 is a differential pressure manometer designed for HVAC/R technicians or other pneumatic control environment, with a measuring range of up to 30 PSI is a perfect tool for applications such as valves, control sensors in a pneumatic control environment, and medical pressure systems.

Power Source: (1) 9V Battery

Leak Detector Flashlight - Fluke RLD2



Definition: The RLD2 Leak detector flashlight is a compact flashlight that uses standard leak detection dyes to uncover refrigerant leaks instantly. The leak detection is combined with a bright flashlight to illuminate dark areas and a laser pointer to pinpoint a leak.

Power Source: (3) AAA 1.5V Batteries

Wireless Inspection Tool Video Borescope - Extech BR250



Definition: The BR250 Video Borescope is a wireless inspection camera capable of capturing JPEG images or AVI video through a 1 meter flexible goose-neck extension cable which features a 17mm diameter camera head which makes it adequate for most applications and limited access.

Applications such as: Home inspections inspecting inside walls for mold, insect infestation, electrical wire or pipe location, HVAC inside ducts, behind motors, around engines and more.

Power Source: (4) AA Batteries, apprx. 2 hours continuous use.

Portable Combustion Analyzer kit - Bacharach PCA 3



Definition: The PCA 3 Portable combustion analyzer is a combustion and emissions analyzer that enables fast and accurate measurement for on-demand or semi-continuous sampling of light industrial, institutional, commercial and residential furnaces, boilers and appliances.

Directly Measures: Oxygen, Stack Temperature, Ambient air temperature, Carbon Monoxide, Pressure/Draft, CO High range, Nitric Oxide, Nitrogen Dioxide, sulfur Dioxide.

Fuels: Natural Gas, Oil #2, Oil#4, Oil#6, Propane, Coal, Wood, Kerosene, Bagasse, Digester Gas

Particle Counter - Fluke 985



Definition: The Fluke 985 Particle Counter is an essential tool in the facility maintenance of HVAC and IAQ. From filter testing to indoor air quality investigations, the particle counter equips the user with valuable data concerning the concentration and source of particulates in the tested environment.

Power Source: Li-ion 7.4V, 2600 mAh battery life of about 5 hours continuous sampling, 10 hours with typical use model.

Vibration Meter - Fluke 805



Definition: The Fluke 805 Vibration Meter is very reliable and accurate to check bearings and overall vibration. It's machine category applications are Chiller (refrigeration), Fans, Cooling tower drives, centrifugal pumps, positive displacement pumps, air compressors, blowers, generic gearboxes, machine tools.

Power Source: (2) AA Alkaline batteries, battery life of about 8 hours continuous use.

Vibration Tester - Fluke 810



Definition: The Fluke 810 Vibration Tester is a troubleshooting tool for mechanical maintenance. It's unique diagnostic technology helps you quickly identify and prioritize mechanical problems such as bearings, misalignment, unbalance, looseness.

Power Source: Lithium-ion, 14.8V, 2.55 Ah , battery life 8 hours under normal conditions.

True Spot Smoke Test Kit



Definition: The True spot smoke test kit determines efficient combustion and is recognized as the standard method for evaluating smoke density in the flue gases from distillate fuels. Too much smoke is one of the most common causes of excessive fuel usage and expensive service requirements.

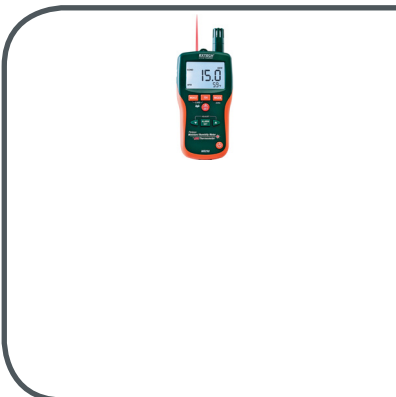
Contact/Laser Photo Tachometer - Extech 461995



Definition: The 461995 Laser Photo/Contact Tachometer is a laser guided model for greater distance non-contact measurements. Ideally used for measuring a motors RPM (velocity).

Power Source: (4) 1.5V AA Batteries

Moisture Meter 8-in-1 - Extech MO290



Definition: The MO290 Moisture meter monitors moisture in wood and other building materials with vitally no surface damage with the pinless moisture sensor. It can also measure humidity and air temperature with its built in probe plus non-contact infrared temperature.

Power Source: (1) 9V battery, battery life 6-8 weeks (4hrs/day use)

LIGHT METERS



Amprobe LM-100



Amprobe LM-631A



Extech LT-300



Fluke 1000FLT



Extech EN300



Konica-Minolta CL200A



Konica-Minolta MM4e

LIGHT METERS

Digital Light Meter - Amprobe LM-100



Definition: The Amprobe LM-100 light meter measures the visible light from fluorescent, metal halide, high-pressure sodium or incandescent sources. Helps reduce energy usage and increase lighting efficiency.

Power Source: (1) 9V battery, battery life 200 hours

Digital Light Meter - Amprobe LM-631A



Definition: The Amprobe LM631A digital light meter measures the visible light from fluorescent, metal halide, high-pressure sodium or incandescent sources. Helps reduce energy usage and increase lighting efficiency.

Power Source: (4) AAA batteries, battery life 200 hours

Digital Light Level Meter - Extech LT-300



Definition: The Extech LT-300 hand-held light level meter measures illumination in footcandles (lm/ft²) or lux. This is the standard unit used in the lighting industry. Different facility types, such as retail stores, office spaces, schools, hospitals, homes, and the specific areas within those buildings, such as rooms, hallways, and stairs, vary in their recommended lighting levels.

Power Source: (1) 9V battery, low battery indication will appear on the LCD

Chromacity Meter - Konica Minolta CL-200A



Definition: The CL-200A chroma meter, is the successor to the CL-200, it measures the illuminance, color temperature, chromaticity, dominant wavelength, and excitation purity of various light sources, specifically LED, Organic LED (OLED), and other forms of organic electro-luminescence.

Power Source: (2) AA batteries, battery life of 72 hrs. Of continuous measurements (at room temperature) / AC adapter (optional)

LIGHT METERS

Light Box - Konica Minolta MM4e



Definition: The MM4e light box is used to simulate typical lighting conditions that replicate different environments. The light box contains a luminaire, a type of lighting unit which produces different types of light. For example, it produces a cool white fluorescent to simulate store lighting, an incandescent illumination for home light, and D65 for daylight. Has an open or translucent front wall so that objects can be placed inside and viewed as if they were in the simulated environment.

Power Source: AC Power connection

Environmental Meter 5-in-1 - Extech EN300



Definition: The EN300 is an Environmental Meter which allows the user to do 5 measurements in 1, with Environmental Meter you can measure Temperature, Humidity, Air Velocity, Light and Sound. The ideal instrument for providing maintenance within your facility.

Power Source: (6) AAA batteries

Fluorescent Light Tester - Fluke 1000FLT



Definition: The Fluke 1000FLT is a lamp tester which allows you to perform 5 fluorescent lamp tests with 1 compact tool, tests feature lamp tests, ballast test, non-contact voltage, pin continuity test, and ballast type test. If one of your daily tasks is to provide maintenance on fluorescent light bulbs this is the right tool for the job.

Power Source: (4) AA Batteries, 40 hours of life

TEMPERATURE METERS



Fluke 566



Prof'l Equipment T7352



Flir i7



Fluke TiS



Pocket RH/Temp Pen



Fluke 411D/62

TEMPERATURE METERS

Humidity/Temperature Pocket Pen - 44550



Definition: The 44550 Humidity/Temperature pen is a small portable pen which has a built-in sensor that simultaneously provides relative humidity and temperature readings.

Power Source: (1) LR44 button battery

Contact and infrared Thermometer - Fluke 566



Definition: The Fluke 566 contact and infrared thermometer measures the temperature of objects and surfaces both from a distance and through contact. The Fluke 566 infrared/contact thermometer allows measurement of smaller objects from further away, with a distance-to-spot ratio of 30:1

Power Source: (2) AA batteries battery life 100 hours with laser and back-light off only 12 hours with both on / USB-powered

Infrared Thermometer - PEquipment T7352



Definition: The T7352 infrared thermometer features a gun-like shape and targeting laser that enables you to easily take temperature measurements in a wide range of applications, including food safety, HVAC/R systems, automotive, electrical and industrial, construction, and much more. The laser system improves accuracy, and users select Fahrenheit or Celsius temperature measurement with a single switch.

Power Source: (1) 9V battery

Laser Distance Meter & Infrared Thermometer - Fluke 411D/62



Definition: The Fluke 411D/62 is the ideal kit for temperature and distance measurements.

Power Source: (2) AAA Batteries, and (1) 9V Batteries

TEMPERATURE METERS

Thermal imaging Camera - Fluke TiS



Definition: The Fluke TiS Thermal Imaging Camera is an entry level thermal imager for quick, easy, accurate problem identification and troubleshooting designed specifically for the building inspection professional. Whether you are a building inspector, home inspector, electrician, energy auditor, HVAC, insulator, or windows installer, the Fluke thermal imaging camera is the perfect tool to help you identify hidden building construction issues.

Power Source: AC adapter / charger internal rechargeable battery pack

Thermal imaging Camera - Flir E60



Definition: The Flir E60 is a thermal image camera which features an MSX enhancement which allows you to see numbers, labels and other key visual details that not normally you will see in a regular thermal image, also the picture-in-picture feature allows users to overlay thermal images with digital pictures for documentation.

Power Source: Li-ion / >4 hours battery life

Thermal imaging Camera - Fluke Ti400



Definition: The Fluke Ti400 is a thermal image camera which is able to take high temperature measurements up to 650 degrees celcius, it holds a touch screen with a resoulution of 640 x 480, provides annotation options for documentation, ideal instrument for electrical panel inspections.

Power Source: (2) Lithium-ion battery packs / 4 hours of continous use for each battery pack.

Thermal imaging Camera - Flir i7



Definition: The Flir i7 is the smallest and lightest thermal imaging camera, It is easy to use such as point-shoot-detect to obtain high quality thermal images that will immediately give you the thermal information needed.

Power Source: AC adapter, Li-Ion rechargeable batteries

AIRFLOW METERS



Extech AN100



Alnor AVM430



Alnor EBT721



Extech AN25



CTRL UL101



T-CDI-5400-20S



Extech SDL310



TSI-9545

AIRFLOW METERS

Thermo Anemometer - Extech AN100



Definition: The AN100 Thermo Anemometer measures air velocity, air flow (volume) and temperature, and simultaneously displays all factors on its large LCD screen. Ideal for HVAC installations, repairs, diagnostics and optimizations.

Power Source: (1) 9V battery, battery life 80 hours (if back-light is continuously in use) / DC adapter

Thermal Anemometer - Alnor AVM430



Definition: The AVM430 Hot Wire Anemometer is a hand-held device that measures air velocity and temperature. Is an ideal application for HVAC system performance, commissioning, plant maintenance, critical environment certification and duct traverses.

Power Source: (4) AA batteries

Air Velocity Meter - TSI-9545



Definition: The TSI-9545 Air Velocity Meter is a meter that simultaneously measures and logs data for several ventilation parameters using a single probe with multiple sensors. It measures velocity, temperature, and relative humidity; and calculates flow, wet bulb and dew point temperature.

Power Source: (4) AA batteries or AC adapter

Thermo Anemometer - Extech SDL310



Definition: The Extech SDL310 is a Vane Thermo-Anemometer which measures air flow, air velocity and ambient temperature its features include data logging capabilities allowing the user to record data date/time stamps and store it on an SD card in Excel format.

Power Source: (6) 1.5VDC batteries

AIRFLOW METERS

Ultrasound Detector - CTRL UL101



Definition: The UL101 is a Ultrasound detector designed with the right technology and software to be used for condition monitoring and predictive maintenance. The UL101 is capable of accurately interpreting sounds created by under lubrication, over lubrication, and early signs of wear. This fast and effective means of determining such conditions in moving, mechanical components such as bearings, gearboxes, motors, compressors, steam traps, etc.

Power Source: (1) 9 volt battery, 45 hours of continuous use

Compressed Air Flow Meter - T-CDI-5400-20S



Definition: The T-CDI-5400-20S is a flow meter which includes two probes, one warmer than the other. This arrangement calculates mass velocity based on heat requirements. Additionally, pipe area data is used to determine flow amounts. This product fits a two-inch steel pipe.

Balometer - Alnor EBT721



Definition: The EBT721 Balometer is a multi-purpose electronic air balancing instrument primarily used for efficiently taking direct air volume readings at diffusers and grilles. It features a detachable micro-manometer which can be used with optional probes for increased flexibility in multiple measurement applications.

Power Source: (4) AA rechargeable batteries, Internal Charger

Heat Index Anemometer - Extech AN25



Definition: The Extech AN25 is a pocket size heat index anemometer that only measures air velocity but also monitors heat index, measuring WGBT, humidity, ambient temperature, dew point, wet bulb, windchill.

Power Source: (1) CR2032 battery

SENSORS



TMC6-HE



S-LIB-M003



Telaire TEL-7001



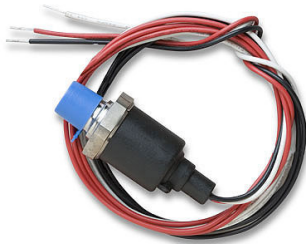
Onset S-WDA-M003
Onset S-WSA-M003



T-DCI-F900-L-P
T-DCI-F900-S-P



TMC20-HD



T-ASH-G2-500



S-FS-CVIA



S-UCC-M006



S-TMB-MO17



T-VER-PXU-L



S-THB-M002

SENSORS

Temperature Sensor - Onset TMC6-HE



Definition: The TMC6-HE is a fast response temperature sensor, complete with a plated copper sensor probe that can be connected to the U12, and ZW-005,6,7, and 8 data loggers, it can also be mounted to a pipe or flat surface for temperature measurements.

Equipment Compatibility & Software: HOBO ZW-Series, U12-Series

Solar Radiation Sensor - Onset S-LIB-M003



Definition: The S-LIB-M003 Solar Radiation Smart Sensor is a light sensor (silicon pyranometer) with a measurement range of 0 to 1280 W/m² over a spectral range of 300 to 1100 nm. This sensor reports the average light intensity over a user-set logging interval from a minimum of one second. Although the azimuth error is only $\pm 2\%$ error at 45° from vertical, a light sensor bracket and light sensor level are recommended.

Equipment Compatibility & Software: H22-001, HOBO U30-GSM, RX3000, HOBOWare Pro

Temperature Smart Sensor 17m - Onset S-TMB-M017



Definition: The S-TMB-M017 Temperature smart sensor measures ambient temperature it connects to the HOBO U30 allowing for a full measurement range of -40 degrees F to 212 degrees F. It's stainless steel allows it for immersion in water up to 50 degrees Celsius.

Equipment Compatibility & Software: H22-001, U30-GSM, RX3000, HOBOWare Pro

Electronic Switch Pulse input Adapter Sensor 6m - Onset S-UCC-M006



Definition: The S-UCC-M006 Electronic Switch smart sensor is compatible with electronic switch closures such as FET or open-collector outputs, or CMOS-level logic signals with a maximum input frequency of 120Hz, for pulse input measurements.

Equipment Compatibility & Software: H22-001, U30-GSM, RX3000, T-VER-8053-800, T-WNB-3y-208, T-ACT-0750-250, T-MAG-SCT-600, HOBOWare Pro

SENSORS

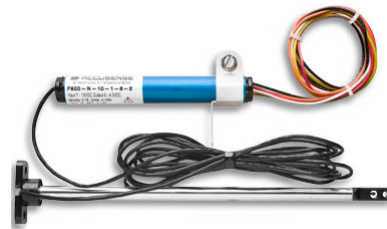
Air Velocity Sensor - Onset T-DCI-F900-S-P



Definition: The T-DCI-F900-S-P air velocity sensor is designed to measure the velocity of airflows in applications such as HVAC, industrial processes, automotive, air filtration systems, electronics enclosures and critical containment areas.

Equipment Compatibility & Software: U12-012, U12-013, U12-006, UX120-006m, H22-001, U30-GSM, ZW-005, ZW-007, ZW-006, ZW-008, HOBOWare Pro

Air Velocity Sensor - Onset T-DCI-F900-L-P



Definition: The T-DCI-F900-L-P air velocity sensor is designed to measure the velocity of airflows in applications such as HVAC, industrial processes, automotive, air filtration systems, electronics enclosures and critical containment areas.

Equipment Compatibility & Software: U12-012, U12-013, U12-006, UX120-006m, H22-001, U30-GSM, ZW-005, ZW-007, ZW-006, ZW-008, HOBOWare Pro

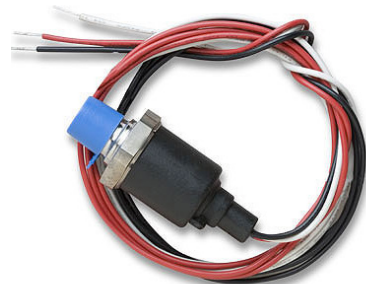
FlexSmart Analog Module (2 channels) - Onset S-FS-CVIA



Definition: The S-FS-CVIA 12 bit FlexSmart analog input module for use with the H22-001 Energy logger handles two single-ended input channels with user-configurable ranges of 0 to 20mA DC or 0 to 20 VDC which is suitable for 2.5-, 5-, and 10-volt sensors. Field wiring is 2 or 3 wire via screw terminals.

Equipment Compatibility & Software: H22-001, T-DCI-F900-S-P, T-DCI-F900-L-P, Tel-7001, T-VER-PXU-L, T-ASH-G2-500, HOBOWare Pro

Ashcroft Gauge Pressure Sensor - Onset T-ASH-G2-500



Definition: The T-ASH-G2-500 Gauge Pressure Sensor provides precision pressure measurements in compressed air systems, water, or other compatible gases and fluids with an accuracy from -4 degrees to 185 degrees Fahrenheit.

Equipment Compatibility & Software: U12-012, U12-013, U12-006, U12-008, H22-001, U30GSM, UX120-006M, ZW-005, ZW-007, ZW-006, ZW-008, S-FS-CVIA, HOBOWare Pro

SENSORS

Wind Direction Smart Sensor - Onset S-WDA-M003



Definition: The S-WDA-M003 Wind Direction Smart Sensor is a research-grade plug-and-play sensor for measuring and logging wind data. The sensor calculates a unit vector average of the wind direction, providing data directly in degrees.

Equipment Compatibility & Software: H22-001, HOBO U30-GSM, RX3000, HOBOWare Pro

Wind Speed Smart Sensor - Onset S-WSA-M003



Definition: The S-WSA-M003 Wind Speed Smart Sensor is a smart sensor that provides data reporting average wind speed and highest 3 second gust for each logging interval. The starting threshold is 1 m/s (2.2 mph); sensor survives through 120 mph. This model comes with a 3m cable.

Equipment Compatibility & Software: H22-001, HOBO U30-GSM, RX3000, HOBOWare Pro

Telaire 7001 CO2 Sensor - TEL-7001



Definition: The Telaire 7001 CO₂ sensor features patented absorption infrared technology that accurately displays CO₂ and temperature. When combined with the HOBO U12 or ZW Series, it can record Temperature & CO₂ over time.

Power Source: (4) AA batteries, battery life of 70 hours / AC power adapter (included)

Equipment Compatibility & Software: HOBO ZW-Series, U12-Series, H22-001, HOBO U30 GSM, HOBOWare Pro

Differential Air Pressure Transducer Sensor - Veris T-VER-PXU-L



Definition: The T-VER-PXU-L Differential pressure transducers utilizes a highly accurate microprocessor profiled sensors. Designed to monitor duct and room pressure in commercial buildings, the PX Series offers exceptional job-site flexibility.

Equipment Compatibility & Software: HOBO ZW-Series, U12-Series, U30-GSM, HOBOWare Pro

AC CURRENT SENSORS



Onset CTV-A



Onset CTV-B



Onset CTV-C



Onset CTV-E



T-MAG-SCT-600



T-ACT-0750-250



T-VER-8053-800

AC CURRENT SENSORS

0-20 Amp Split-Core AC Current Sensor - Onset CTV-A



Definition: The CTV-A 0-20 Amp split-core AC current sensor is responsive over the range of 0 to 20 amps AC for use with U12 data loggers with external input channels. With an input current of AC current, sine wave, single phase 50 Hz or 60 Hz, load power factor 0.5 to 1.0 lead or lag.

Power Source: Sensor powered from line

Equipment Compatibility & Software: U12-012, U12-013, U12-006, U12-008, UX120-006M, ZW-005, ZW-007, ZW-006, ZW-008, HOBOWare Pro

0-50 Amp Split-Core AC Current Sensor - Onset CTV-B



Definition: The CTV-B 0-50 Amp split-core AC current sensor is responsive over the range of 0 to 50 amps AC for use with U12 data loggers with external input channels. With an input current of AC current, sine wave, single phase 50 Hz or 60 Hz, load power factor 0.5 to 1.0 lead or lag.

Power Source: Sensor powered from line

Equipment Compatibility & Software: U12-012, U12-013, U12-006, U12-008, UX120-006M, ZW-005, ZW-007, ZW-006, ZW-008, HOBOWare Pro

10-100 Amp Split-Core AC Current Sensor - Onset CTV-C



Definition: The CTV-C 10-100 Amp split-core AC current sensor is responsive over the range of 10 to 100 amps AC for use with the U12, UX120 and ZW data logger series with its external input channels. It has an input current of AC current, sine wave, single phase 50Hz or 60 Hz, load power factor of 0.5 to 1.0 lead or lag. Ideal for measuring AC current and Amps.

Power Source: Sensor powered from line

Equipment Compatibility & Software: U12-012, U12-013, U12-006, U12-008, UX120-006M, ZW-005, ZW-007, ZW-006, ZW-008, HOBOWare Pro

0-600 Amp Split-Core AC Current Sensor - Onset CTV-E



Definition: The CTV-E 0-600 Amp split-core AC current sensor is responsive over the range of 0 to 600 amps AC for use with the U12, UX120 and ZW data logger series with its external input channels. It has an input current of AC current, sine wave, single phase 50Hz or 60 Hz, load power factor of 0.5 to 1.0 lead or lag. Ideal for measuring AC current and Amps.

Power Source: Sensor powered from line

Equipment Compatibility & Software: U12-012, U12-013, U12-006, U12-008, UX120-006M, ZW-005, ZW-007, ZW-006, ZW-008, HOBOWare Pro

AC CURRENT SENSORS

Kilowatt Hour Transducer 3-Phase (800 Amp sensor) - Veris T-VER-8053-800



Definition: The T-VER-8053-800 AC Kilowatt Transducer incorporates three split-core AC current sensors and three voltage leads and outputs a signal proportional to kilowatts of power (demand). Accepting an input primary voltage of 480 volts AC RMS, this transducer requires a pulse input adapter. Because these sensors tie directly into the line, they should be used only by qualified personnel. **Note:** Not recommended for use with variable frequency drives.

Equipment Compatibility & Software: UX120-017M, H22-001, U30-GSM, ZW-005, ZW-008, S-UCC-M006, HOBOWare Pro

250 Amp Split-Core Current Transformer - Onset T-ACT-0750-250



Definition: The T-ACT-0750-250 Split-core transformer has a window opening of 0.75inch making it a small transformer with a lot of Amperage power for 250 Amps. Essential for accurate power and energy measurements, glove friendly easy to open and install with one hand using safety gloves.

Equipment Compatibility & Software: U30-GSM, H22-001, UX90-001M, ZW-005, ZW-008

0-600 Split-Core AC Current Transformer - Magnelab T-MAG-SCT-600

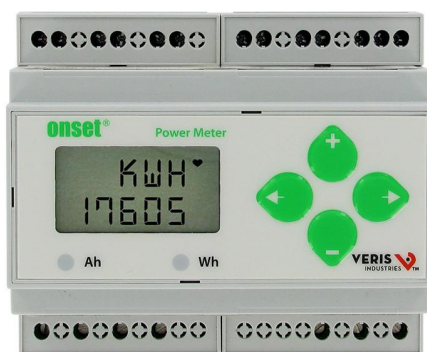


Definition: The T-MAG-SCT-600 Split Core AC Current Transformers converts electrical energy from one source to another. This can be used as an external sensor for compatible data loggers and nodes to read current flow. It is compatible with the U12 series data loggers (like the U12-006) and any ZW series data node (like ZW-005).

Equipment Compatibility & Software: HOBOWare ZW-Series, U12-Series, HOBOWare Pro



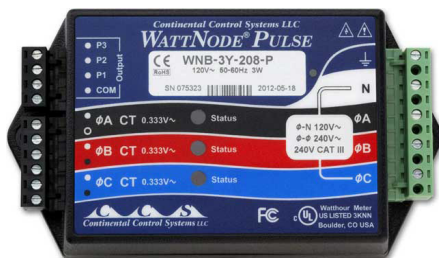
ConLab T-CON-ACT-300



E50B2



Extech CB10



WattNode T-WNB-3Y-208



Fluke 435 II



Fluke 381



Fluke 87-E2-Kit



Fluke 1730



Dranetz EP1



Fluke 435



Dranetz HDPQ Xplorer



Dent Elite pro XC

0-300 Volt AC Transmitter - ConLab T-CON-ACT-300



Definition: The T-CON-ACT-300 is a 0-300 volt self-powered transformer for monitoring sine wave, single-phase AC voltage. Requires Input Cable (CABLE 4-20 mA) for use with U12 loggers.

Equipment Compatibility & Software: HOBO ZW-Series, U12-Series, CABLE 4-20 mA, HOBOWare Pro

Industrial Electrician Combo Kit - Fluke 87V/E2



Definition: The Fluke 87V/E2 combo kit includes a multimeter which has trouble-shooting features for problems on motor drives, in-plant automation, power distribution and electro-mechanical equipment.

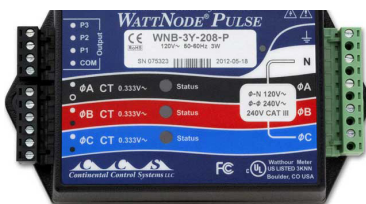
Power Source: (1) 9V battery

Electrical Troubleshooting Kit - Extech CB10-KIT



Definition: The CB10-KIT is a handy electrical troubleshooting kit with 5 functions. Circuit breaker finder with outlet/GFCI tester, continuity checker/wire tracer, and AC voltage detector with flashlight in one convenient kit.

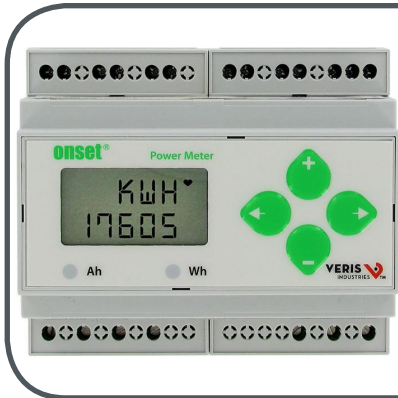
Advanced Pulse WattNode kWh Transducer - T-WNB-3Y-208



Definition: The T-WNB-3Y-208 Advanced Pulse WattNode kWh Transducer measures energy and power, and is placed in an electric service panel. This WattNode Wye-connection kWh Transducer works with Magnelab AC Current Transformers and a Pulse Input Adapter to provide True RMS kilowatt hours of energy used, even for loads with non-sinusoidal waveforms.

Equipment Compatibility & Software: HOBO ZW-Series, U12-Series, T-MAG-SCT-600, T-ACT-0750-250, A-WNB-LEADSET, HOBOWare Pro

Power & Energy Meter - Onset T-VER-E50B2



Definition: The E50B2 Power & Energy meter is simple to deploy and can either be installed on standard DIN rail or be surface mounted. It integrates with the HOBO UX120, U30, ZW, H22 and H21 data loggers to measure power factor, reactive power, watt hours, and more.

Equipment Compatibility & Software: UX120-017M, H22-001, U30-GSM, ZW-005, ZW-008

Power Source: Line Powered

Power Quality and Energy Analyzer - Fluke 435 Series II



Definition: The Fluke 430 Series II is a power quality meter. It measures voltage, current, frequency, power, power consumption (energy), unbalance and flicker, harmonics and inter-harmonics. The new Fluke-435-II model helps locate, predict, prevent, and troubleshoot power quality problems in three-phase and single-phase power distribution systems.

Power Source: AC current, 7 hours on full charge

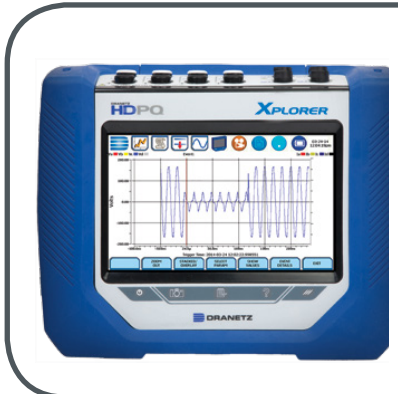
Energy Platform EP1 Energy Logger/Analyzer - Dranetz DBEPFLEX6K-4



Definition: The Energy Platform EP1 is an essential tool for any electrical energy monitoring application. It provides a color touch display, automatic setups, easy to read reports and energy platform report writer software simple to use.

Power Source: (6) Sealed, rechargeable NiMH (Nickel Metal Hydride) cells, 3 hours on full charge

Power Quality Analyzer - Dranetz HDPQ Xplorer



Definition: The HDPQ Xplorer is a Power Quality Analyzer which simultaneously captures thousands of parameters such as low-medium-high frequency transients through peak, waveshape, rms duration and adaptive high-speed sampling, as well as power measurements such as harmonics, non-sinusoidal, and unbalanced systems. Ethernet, bluetooth and usb capabilities.

Power Source: Rechargeable lithium battery, 8 hours on full charge

True RMS AC/DC Clamp Meter - Fluke 381



Definition: The Fluke 381 True RMS AC/DC clamp meter does everything you would expect from a clamp meter including letting you remove the display for even more flexibility. Allows you to measure awkward sized conductors and improved wire access.

Power Source: (5) AAA batteries

Power Quality Clamp Meter - Fluke 345



Definition: The Fluke 345 is a power meter which combines the functions of a clamp meter, oscilloscope, data logger and digital power meter into one device. It's ideal for working with variable frequency motor drives, high efficiency lighting and other loads using switching electronics.

Power Source: (2) AA battery, battery life of 10 hours.

Three Phase Electrical Energy Logger - Fluke 1730



Definition: The Fluke 1730 is a three Phase electrical Energy Logger which measures voltage, current, power, power factor and associated values enabling energy saving strategies to be implemented. It performs convenient in the field analysis and data checks on the go. Its optimized user interface provides a quick, guided, graphical setup that also provides verification functions to make sure connections have been made.

Power Source: Rechargeable lithium battery, 5 hours on full charge

Energy Logger - Dent Elite Pro XC



Definition: The Elitepro XC is a logger which allows the user to pinpoint electric usage and record building performance metrics. It is cable of analyzing electrical consumption data which is derived from the voltage and current inputs. With direct connections to each phase of the voltage and various flexible interchangeable split-core current transformers.

Power Source: Line Powered

RF Code



RF Code R150-5B10



RF Code R155-5B10



RF Code R160-0010



RF Code R135-0B50



RF Code M250

Fluid Detector Tag - RF Code R135-0B50



Definition: The R135 Fluid Detector Tag is a real-time liquid detection sensor that totally eliminates the need to wire or cable a data center for liquid leak detection capabilities. Combining thin-film technology with RF Code's real-time, wire-free environmental monitoring technology, the new sensor provides the freedom and ease to deploy liquid detection wherever vulnerabilities to conductive liquids threaten expensive IT assets.

Power Source: Lithium CR2032 replaceable coin cell, battery life 3 years (typical)

M250 Reader Kit - RF Code M250



Definition: The M250 reader kit is a dual-channel radio receiver tuned to 433.92 MHz. The reader is programmed, calibrated and dedicated to interpreting and reporting the radio frequency messages emitted by RF Code tags. Tag transmissions are processed in real-time to quickly locate and identify tagged assets or personnel in defined areas. M250 readers are compatible with wired and wireless networks for rapid integration into an organization's IT infrastructure.

Power Source: 100-240 V with IEC connector

Temperature & Humidity Tags - RF Code R150 & R155-5B10



Definition: The R150 Temperature Tag and R1555 Humidity Tag is a battery-powered RF transmitter that monitors temperature- and relative humidity in sensitive items, such as assets in IT racks. Periodically reporting its own unique ID along with the ambient temperature observed by the tag, the R150 is designed for use in a variety of environmental monitoring applications.

Power Source: Lithium CR2032 replaceable coin cell, battery life 3 years (typical)

Differential Air Pressure Sensor - RF Code R160-0010



Definition: The R160 Differential Air Pressure Sensor monitors and reports the differential air pressure reading between two points (e.g., above vs. below a raised floor or room vs. plenum). While the pressure ranges found in the data center can exceed 0-0.5" H₂O/0-125 Pa, the pressure differentials found in the plenum are often only 0.01" H₂O/2.5 Pa, requiring a sensor to be both accurate and precise in order to assure proper monitoring.

Power Source: Lithium CR2032 replaceable coin cell, battery life 5 years (typical)



BUILDING *performance* LAB

How to Borrow from the Field Equipment Lending Library

Step 1: Head over to the BPL website: <http://cunybppl.org>

Step 2: On the “Resources” tab at the top of the website, locate the
“Field Equipment Lending Library” link

Step 3: Confirm that the equipment you would like to borrow is within our inventory list

Step 4: Email Us: CUNYlends@cunybppl.org to set-up a reservation for the equipment



Robert E. Paaswell, Executive Director, CIUS
Michael Bobker, Director, Building Performance Lab

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