





Humidity.

Temperature.

Voltage. Current.

Radiation. Pulse.

Light. Pressure.

DATA LOGGING. SIMPLY.

# yoyo DATA LOGGERS

Wind, water, solar radiation, rain, heat - these are just some of the environmental conditions data loggers have to brave in operation. To ensure durability and accuracy in readings, despite these conditions, the yoyo data loggers are robust and durable.

### Contents

| Benefits       |   | page 3    |
|----------------|---|-----------|
| Data loggers f | or:   |           |
|                | Temperature, humidity and condensation loggers        | pages 4-5 |
|                | Thermocouple loggers                                  | page 6    |
|                | Temperature, humidity and barometric pressure loggers | page 8    |
|                | Micro voltage logger                                  | page 10   |
|                | Electrical signal loggers                             | page 12   |
|                | Pulse loggers   | page 14   |
|                | Light data loggers                                    | page 16   |
|                | Multiloggers (RH, T°, C, V, Pulse)                    | page 18   |
|                | (current/voltage/humidity/temp. etc.)                 |           |
| Accessories    |   | page 20   |
| Software       |   | page 22   |
|                |   |           |



### BENEFITS

- » High accuracy
- » Shock proof, IP65 housing (dust and water jet proof)
- » 20 bit A/D converter
- » Up to 32Hz sampling rate
- » Up to 4 years battery life
- » Up to 4 million readings (internal memory size)

### Robust

Yoyo data loggers are robust and used for measuring and recording a wide variety of variables: temperature, humidity, condensation, extra-low voltage, strain gauge, voltage, current, pulse, barometric pressure, as well as light and radiation.

The loggers are made of high quality, shock-proof POM-composed synthetic material. The devices are protected from water ingress according to IP65.

### Versatile, flexible & easy to operate

In order to meet the specific demands of various applications the loggers come in different designs and with different enclosures:

- » with integrated sensor (e.g. for monitoring shipments)
- » with connectable probes for differentiated analyses with different parameters
- » with sensor integrated in a 100mm stainless steel tube (e.g. for measurements in air ducts, or for pharmaceutical or biological research)

Probes can be easily connected to the logger through screw on connectors, allowing flexible use and quick exchange.

### High-quality and fast

The logger provides memory capacity for 100,000 readings (optional 4 million), which can be read out via USB within seconds via a transfer rate of 500 kbps.

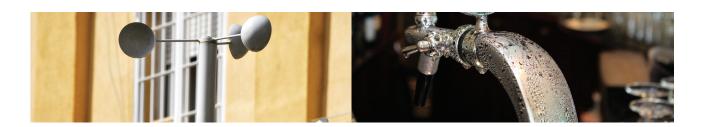
### Long durability

The large memory capacity and the low current consumption allow logging for years without the need to monitor the device. The "continuous" mode makes it possible to overwrite old data with new readings. Should the battery be completely discharged during operation the integrated none-volatile flash memory will keep the readings safe.

### Status visualisation by LED

The yoyo data loggers are equipped with an integrated status LED which can be used for different functions:

- » displaying when a threshold has been exceeded
- » indicating low battery
- » displaying the data logging status (making it easy to identify the device's condition)



# TEMPERATURE, HUMIDITY & CONDENSATION LOGGERS

### Overview

TempLog and HumiLog are robust data loggers for measuring temperature and humidity. There are several models of loggers available: loggers with integrated sensors or loggers with up to 2 externally connectable probes. The standard probes include low cost sensors for humidity/temperature, surface humidity, surface temperature and condensation. HumiLog delivers accurate readings for humidity and temperature. Relative humidity can be measured with an accuracy of  $\pm 2\%$ . The accuracy for temperature measurements is  $\pm 0.3$ °C. External temperature probes provide an accuracy of up to  $\pm 0.1$ °C.

### **Applications**

Commonly used in the following industries: agriculture, lab & healthcare, building monitoring and environment.

### YL-T10 yoyo TempLog

Comes with integrated temperature sensor. Best suited for applications in refrigerators, carrier boxes, or for "field work" under rough conditions.



### YL-T10E yoyo TempLog

It's temperature sensor is integrated in a 100mm steel tube. It can be attached



to the radiation protector YY-351-OM, installed in ventilation ducts, or it can be used to record product and medium temperature.

### YL-T11 yoyo TempLog

Data logger with connector for an external temperature probe (PT100/PT1000) See p. 20 for probes.



Connectors for two external temperature probes (PT100/PT1000). See p. 20 for probes

### YL-RH20 yoyo HumiLog

Data logger with integrated sensor for humidity and temperature. Sensors covered by filter cap to protect from the elements.



#### YL-RH20E yoyo HumiLog

The sensors for humidity and temperature are integrated in a 100mm steel tube. It can be attached



to the radiation protector YY-351-OM in order to operate even during rainfall and solar radiation and still deliver accurate readings.

#### YL-RH25 yoyo HumiLog

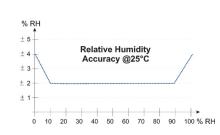
This data logger features an integrated sensor for humidity and temperature and provides additional connectors for two external probes. (PT100/PT1000). See p. 20 for probes.

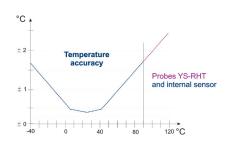


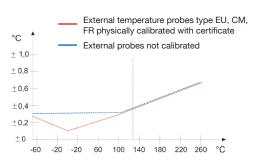
|  | YL-T10<br>TempLog   | YL-T10E<br>TempLog                           | YL-T11<br>TempLog   | YL-T12<br>TempLog                  | YL-RH20<br>HumiLog                          | YL-RH20E<br>HumiLog                                 | YL-RH25<br>HumiLog  |  |
|--|---|--|---|------------------------------------|---|---|---|--|
| Sensor type  | 1 x integrated<br>temperature<br>sensor   | 1 x external<br>temperature<br>steel tube ** | 1 x external<br>Pt100 or<br>Pt1000                        | 2 x external<br>Pt100 or<br>Pt1000 | integrated 1<br>x Rh and 1 x<br>temperature | 1 x external<br>temperature<br>and RH steel<br>tube | integrated<br>temperature<br>and RH, 2 x ex-<br>ternal Pt1000 |  |
| Temperature operating range with standard battery (CR2477N)          |   |  |   | -30 to +70 °C                      |   |   |   |  |
| Temperature operating range with high temperature battery (CR2450HT) |   |  |   | -40 to +90 °C*                     |   |   |   |  |
| Internal temperature sensor measuring range & resolution             |   | -40 to +90 °C / 0.01 K                       |   |                                    |   |   |   |  |
| Humidity sensor (internal & external)                                | 0 to 100% RH / 0.01% RH   |  |   |                                    |   |   |   |  |
| Condensation sensor  | bedewed / dry   |  |   |                                    |   |   |   |  |
| Dimensions d x h (mm)  |   |  |   | Ø 50 / 30                          |   |   |   |  |
| Memory capacity / optional upgrade                                   | 100,000 readings / 4 million readings   |  |   |                                    |   |   |   |  |
| Interval   | 1 sec to 24h  | 1 sec to 24h                                 | 1 sec to 24h or<br>Fastmode 32Hz<br>with Pt1000<br>sensor |                                    | 1 sec to 24h                                | 1 sec to 24h  | 1 sec to 24h  |  |
| Enclosure  | Robust, shock-proof POM, protection class IP65 (dust and spray proof)                   |  |   |                                    |   |   |   |  |
| Standard lithium battery life  | 4 years @ 1 min. / 230 days @ 10 sec. / 25 days @ 1 sec.                                |  |   |                                    |   |   |   |  |
| Included in delivery   | Data logger, 1 battery, Software YoyoView, USB cable, manual, declaration of conformity |  |   |                                    |   |   |   |  |
| Optional   | YoyoView Plus Software, calibration certificate, wall holder,<br>lead seal kit          |  |   |                                    |   |   |   |  |

<sup>\*</sup> Using the logger within the extended operating range requires the use of the CR2450HT battery.

The given limitations of use for the external probes may change due to the cable used for connection. PVC cable type V can be used from -20 to  $+80^{\circ}$ C, Teflon cable type G can be used from -70 to  $+250^{\circ}$ C. The humidiry probeYS-RHT120 may be employed only between -40 to  $+120^{\circ}$ C.







The steel tube of the YL-RH20E may be used from -40 to +100°C only, while the steel tube of the YL-T10E can be used with temperatures of up to +130°C.

### THERMOCOUPLE LOGGERS

### Overview

The thermocouple data logger is suited for measuring temperature with the following thermocouple types: K, T, J, B, E, N, R, and S. There are two models available: YL-T15 with one thermocouple input and YL-T16 with two thermocouple inputs.

The thermocouple logger has an integrated reference junction for temperature and delivers proper readings within a large temperature range. The resolution in the range of -100 to +1300°C is 0.05 K with an accuracy of ± 0.3K. To get the overall accuracy simply add the figures for the thermocouple.

### YL-T15 yoyo Temp Log

The YL-T15 logger with one thermocouple input for measuring surface temperature, air temperature or product temperature.



### YL-T16 yoyo Temp Log

The YL-T16 has two thermocouple inputs for measuring surface temperature, air temperature or product temperature.



|  | YL-T15  | YL-T16   |  |  |
|--|---|--|--|--|
| Sensor type  | 1 x thermocouple input<br>Type K, T, N, S, R, J, B, E                                   | 2 x thermocouple inputs<br>Type K, T, N, S, R, J, B, E |  |  |
| Temperature operating range with standard battery (CR2477N)          | -30 to  | +70 °C   |  |  |
| Temperature operating range with high temperature battery (CR2450HT) | -40 to  | +90 °C*  |  |  |
| Temperature probe range / resolution / accuracy                      | -100 to +1300 °C / 0.05K / Class 1&2  |  |  |  |
| Suitable thermocouples   | Type K, T, J, B, E, N, R, S   |  |  |  |
| Dimensions d x h (mm)  | 50  | / 45   |  |  |
| Memory capacity / optional upgrade                                   | 100,000 readings / 4 million readings   |  |  |  |
| Interval   | 1 sec to 24h / Fastmode 4, 2Hz  |  |  |  |
| Enclosure  | Robust, shock-proof POM, protection class IP65  |  |  |  |
| Standard lithium battery life  | 4 years @ 1 min / 230 days  | @ 10 sec / 25 days @ 1 sec                             |  |  |
| Included in delivery   | Data logger, 1 battery, YoyoView Software, USB cable, manual, declaration of conformity |  |  |  |
| Optional   | · · · · · · · · · · · · · · · · · · ·   | oration certificate, wall holder,<br>seal kit          |  |  |

<sup>\*</sup> Using the logger within the extended operating range requires the use of the CR2450HT battery.

# TEMPERATURE, HUMIDITY & PRESSURE LOGGERS

### Overview

The RH & hPA logger is a robust device capable of logging humidity, temperature, and barometric pressure readings. With the aid of the software the device can be set to record either all variables or just individual variables.

### **Applications**

The pressure logger is suited for a variety of applications: environmental or climate studies, meteorological research, and also in clean rooms and laboratories.

### YL-RH23 yoyo RH/hPa Log

The YL-RH23 has built-in sensors for humidity, temperature, and barometric pressure.



### YL-RH23E yoyo RH/hPa Log

The humidity/temperatue sensor is integrated in a 100mm steel tube.



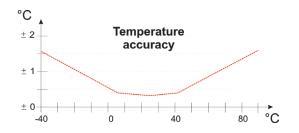
#### YY-351-OM Radiation Protector

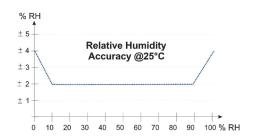
The YL-RH23E can be attached to the radiation protector YY-351-OM, allowing it to provide reliable readings even during rainfall and radiation in outdoor operation.



|   |   | YL-RH23   | YL-RH23E   |  |  |
|---|---|---|--|--|--|
| Sensor type   |   | Built-in sensors<br>1 x temperature, 1 x RH, 1 x pressure                   | Built in temperature and RH sensor 2 x external sensors Pt1000 |  |  |
| Temperature operating range v battery (CR2477N)   | with standard                             | -30 to -  | +70 °C   |  |  |
| Temperature operating range v<br>perature battery (CR2450HT)                                      | with high tem-                            | -40 to +  | -90 °C*  |  |  |
| Temperature range   | e/resolution                              | -40 to +90  | °C / 0.01 K  |  |  |
| Humidity range  | e/resolution                              | 0 to 100% rf  | F / 0.01% rF   |  |  |
| Barometric Pressure range   | e/resolution                              | Pa / 0.1 hPa  |  |  |  |
|   | w @25 °C<br>lute Accuracy<br>ive Accuracy | =   | ± 1.5 hPa<br>± 0.5 hPa   |  |  |
| Dimensions d x h  | (mm)                                      | 50 /  | 33   |  |  |
| Memory capacity / optional  |   | 100,000 readings / 4 million readings                                       |  |  |  |
| Interval  |   | 1 sec to 24h / Fastmode 2Hz   |  |  |  |
| Enclosure   |   | Robust, shock-proof PO  | M, protection class IP65                                       |  |  |
| Standard lithium battery life   |   | 4 years @ 1 min. / 230 days @ 10 sec. / 25 days @ 1 sec.                    |  |  |  |
| Included in delivery  Data logger, 1 battery, YoyoView software, USB cable, manual, de conformity |   |   |  |  |  |
| Optional  |   | YoyoView Plus software, calibration certificate, wall holder, lead seal kit |  |  |  |

<sup>\*</sup> Using the logger within the extended operating range requires the use of the CR2450HT battery.





### MICRO VOLTAGE LOGGER

#### Overview

The voltage and current data logger YL-M32 is a two-channel logger for recording extra-low voltage in the mV region and common reference voltage measurements, e.g. standard analog outputs (0..1V/0...5V/0..10V). The loggers can be used for recording small measurement signals such as from a Wheatstone bridge, force or range sensor, strain gauge, or extra-low voltages due to chemical balancing processes. The YL-M32 provides constant current for strain gauge sensors to supply the bridge. The devices are programmable so that you can log on either just a single channel or on both channels.

The logger features a 20 bit analog to digital converter giving a resolution of up to 150nV. The measuring range of the YL-M32 can be freely selected, enabling you to work with special measuring ranges such as from 10mV to 20mV at the same resolution.

### YL-M32 yoyo Micro V Log

The YL-M32 has sensors for humidity, temperature, and barometric pressure built-in in its enclosure



| Strain gauges measurements as bridge circuits (for full bridges 607000hm) |      |      |      |      |      |       |
|---|------|------|------|------|------|-------|
| Range   | mV   | ± 5  | ± 10 | ± 20 | ± 50 | ± 100 |
| Resolution  | μV*  | 0.15 | 0.3  | 0.6  | 0.8  | 1.5   |
| Input impendance  | Mohm | 2.5  | 2.5  | 2.5  | 2.5  | 2.5   |

<sup>\*</sup> Strain gauge measurements allow a sample rate of up to 32 Hz in fast mode. The maximum resolution is ten times of the above value.

| High impendance mode |      |      |      |      |      |       |        |
|----------------------|------|------|------|------|------|-------|--------|
| Range                | mV   | ± 5  | ± 10 | ± 20 | ± 50 | ± 100 | ± 1000 |
| Resolution           | μV*  | 0.15 | 0.3  | 0.6  | 0.8  | 1.5   | 15     |
| Input impendance     | GOhm | 1    | 1    | 1    | 1    | 1     | 1      |

<sup>\*</sup> High impedance mode allows for a maximum sample rate of 1 Hz.

| Input Ranges     |      |         |         |         |          |         |           |         |          |
|------------------|------|---------|---------|---------|----------|---------|-----------|---------|----------|
| Range            | mV   | 0 to 10 | 0 to 20 | 0 to 50 | 0 to 100 | 0 to 1V | 0 to 2.5V | 0 to 5V | 0 to 10V |
| Resolution       | μV*  | 0.58    | 0.58    | 0.76    | 1.54     | 15.4    | 38.9      | 76.9    | 154      |
| Input impendance | MOhm | 2.5     | 2.5     | 2.5     | 2.5      | 2.5     | 0.1       | 0.1     | 0.1      |

 $<sup>^{\</sup>star}$  input ranges can be measured at 32 Hz. At 32 Hz the maximum resolution is ten times of the above value.

|                               | Current / Voltage logger YL-M32  |
|-------------------------------|--|
| Cable                         | DKC-S for ranges 0 to 1V<br>DKC-U for ranges > 1V  |
| Accuracy                      | 0.1% of range  |
| Dimensions d x h (mm)         | 50 /30   |
| Memory capacity / optional    | 100,000 readings / 4 million readings  |
| Interval                      | 1 sec to 24h   |
| Enclosure                     | Robust, shock-proof POM, protection class IP65   |
| Standard lithium battery life | 4 years @ 1 min / 230 days @ 10 sec / 25 days @ 1 sec                                      |
| Included in delivery          | Data logger, 1 battery, YoyoView Software, USB cable, manual, 2 connection cables          |
| Optional                      | YoyoView Plus Software, calibration certificate, wall holder, carrying case, lead seal kit |

### ELECTRICAL SIGNAL LOGGERS

### Voltage and current data loggers

#### Overview

The YL-M33 and YL-M34 loggers are one or two channel data loggers for recording the variables of current and voltage. The devices are fully programmable and settable to 0 to 1V, 0 to 5V, 0 to 10V or 0 to 24mA. Corresponding cables are available for each measuring range. The logger can be used to record singals of almost every transmitter or probe as long as they provide adequate analog outputs.

The data logger has got a 20 bit analogue to digital converter which can provide a resolution of up to  $15\mu V$  or  $0.36\mu A$  (according to set range).

#### YL-M33 yoyo V & C Log

YL-M33 voltage and current logger features one channel with a programmable input for voltage or current



### YL-M34 yoyo V & C Log

YL-M34 with two channels for voltage and current



| Input Ranges     |      |         |           |         |          |             |
|------------------|------|---------|-----------|---------|----------|-------------|
| Range            |      | 0 to 1V | 0 to 2.5V | 0 to 5V | 0 to 10V | 0 to 24mA   |
| Resolution       | μV   | 15.4    | 38.9      | 76.9    | 154      | 0.36μΑ      |
| Input impendance | MOhm | 0.1     | 0.1       | 0.1     | 0.1      | 10 Ohmshunt |

<sup>\*</sup> input ranges can be measured at 32 Hz. At 32 Hz the maximum resolution is ten times of the above value.

Note: A YY - CU cable with integrated potential divider is required in order to connect voltage signals. Current signals require the YY-CI cable.

|                            | YL-M33   | YL-M34  |  |
|----------------------------|--|---|--|
| Number of inputs           | 1 x volt and current   | 2 x volt and current                            |  |
| Accuracy                   | 0.1% c   | of range  |  |
| Dimensions d x h (mm)      | 50 / 30  |   |  |
| Memory capacity / optional | 100,000 readings / 4 million readings  |   |  |
| Interval                   | 1 sec to 24h / Fastmode 32, 16, 8, 4, 2Hz  |   |  |
| Enclosure                  | Robust, shock-proof POM, protection class IP65   |   |  |
| Included in delivery       |  | View Software, USB cable,<br>tion of conformity |  |
| Optional                   | YoyoView Plus Software, calibration certificate, wall holder, carrying case, lead seal kit |   |  |

### PULSE LOGGERS

### Overview

There are two models available: YL-M41 with one input channel and the YL-M42 with two input channels. Both are designed to measure potential-free pulses such as TTL signals or voltage signals of up to 3V. With the YY-CP connection cable the logger can be used for measuring signals up to 24V.

The devices are fully programmable allowing you to set the logger to record on one or two channels. The incoming signal (potential-free/voltage) can be set using the software. The logger is best suited for operation with counters, photoelectric sensors, revolution-counters, make contact elements, switches and sensors with pulse output.

### **Applications**

Typically used in rainfall measurement and industrial sectors measuring flow rate (pulse) with flowmeter or pulse energy in building monitoring.

### YL-M41 yoyo Pulse Log

The YL-M41 has one input channel. The logger can also be integrated into the aerodynamic rain gauge YY-RG.



### YL-M42 yoyo Pulse Log

The YL-M42 has two input channels with an option to record on one or two channels. The logger can also be integrated into the aerodynamic rain gauge YY-RG.



|  | YL- M41   | YL- M42 |  |  |
|--|---|---------|--|--|
| Number of channels                                     | 1   | 2       |  |  |
| Measuring pulses (potential-free) / range / resolution | 0 to 65 000 pulses, interval of 0 to 100 pulses / sec.  1Hz / 1 pulse   |         |  |  |
| Voltage pulses / range / resolution                    | 0 to 65 000 pulses, interval 0 to 1300Hz<br>1Hz / 1 pulse   |         |  |  |
| Signal input   | Potential-free signals or low level pulses < 0,5 VDC and high level between 2 and 3 VDC can be processed. *             |         |  |  |
| Dimensions d x h (mm)                                  | 50 /  | / 30    |  |  |
| Memory capacity / optional                             | 100,000 readings / 4 million readings   |         |  |  |
| Enclosure  | Robust, shock-proof POM, protection class IP65  |         |  |  |
| Included in delivery                                   | Data logger, 1 battery, YoyoView Software, USB cable, connection cable YY-CS(max.5V), manual, declaration of conformity |         |  |  |
| Optional   | YY-CP connection cable (2 m for pulses with voltages from 5 to 24V YoyoView Plus Software, calibration certificate      |         |  |  |

 $<sup>^{\</sup>star}$  Higher levels up to 24 V require the YY-CP cable.

### LIGHT DATA LOGGERS

### Overview

The YL-M61 records illuminance with a spectral sensitivity adjusted to the spectrum of the human eye, whilst the YL-M62 version is also equipped with an additional humidity and temperature sensor. A range of sensors with different spectral ranges are available, suitable for use in scientific research.

### **Applications**

These robust data loggers are equally suited for operation indoors, outdoors or under water. Commonly used in workplace studies, weather stations, museums, street lighting or showcase lighting.

### YL-M61 yoyo Lux Log

The YL-M61 records luminocity with a spectral sensitivity adjusted to spectrum of the human eye.

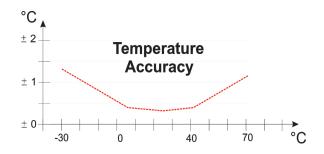


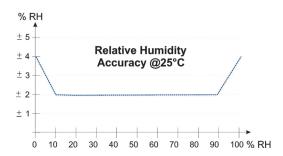
### YL-M62 yoyo Lux / RH / T° Log

The YL-M62 records luminocit with a spectral sensitivity adjusted to spectrum of the human eye. In addition the logger is equipped with additional sensors for humidity and temperature



|  | YL- M61   | YL- M62   |  |  |
|--|---|---|--|--|
| Sensor type  | Single channel for luminance  | Single channel for luminocity, integrated 1 x temperature, 1 x humidity sensors |  |  |
| Measuring range<br>Light / Relative humidity / Temperature | 0 to 40 000 Lux / 0 to 100%RH / -30 to +70°C  |   |  |  |
| Dimensions d x h (mm)                                      | 50 / 33   |   |  |  |
| Memory capacity / optional                                 | 100,000 readings / 4 million readings   |   |  |  |
| Interval   | 1 sec   | to 24h  |  |  |
| Enclosure  | Robust, shock-proof PC  | DM, protection class IP65   |  |  |
| Included in delivery                                       | Data logger, 1 battery, YoyoView Softare, USB cable, connection cable YY-CS (max.3V), manual, declaration of conformity |   |  |  |
| Optional   | YY-CP connection cable (2 m for pulses with voltages up to 24V<br>YoyoView Software, calibration certificate            |   |  |  |





## MULTILOGGERS

### Overview

The YL-M90 is a rugged and powerful miniature fully configurable data logger capable of recording up to 6 parameters. It has an integrated humidity/temperature sensor and two additional inputs which can be configured with YoyoView software.

A selection of probes and transducers are available for each parameter. Please see page 20 for further details. The following inputs can be configured for the YL-M90:

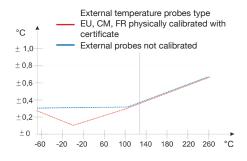
- » Humidity and temperature integrated
- » Temperature (PT1000, PT100)
- » Humidity/temperature (for combined humidity/ temperature probes, e.g. YS-RHT, YS-RHT-XXS etc.)
- » Current/voltage (µV range, 0-1V/0-5V/0-10V,0-20mA), radiation, CO2, air velocity and many more
- » Moisture, pulse or frequency: e.g. For revolution counters, rain gauges, photoelectric sensors, etc.

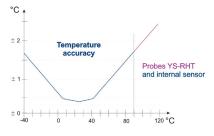
### YL- M90 yoyo Multi Log

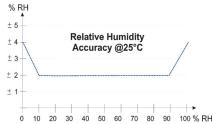
The YL-M90 is capable of logging up to 6 parameters. Commonly used in industries such as building monitoring, agriculture, environment, industry, lab and healthcare, environment.











|  |                | VI - \$400 \$5 101 I  |  |  |  |  |
|--|----------------|---|--|--|--|--|
|  |                | YL- M90 Multi logger  |  |  |  |  |
| Internal temperature range   | e / resolution | -40 to +90 °C / 0.01K   |  |  |  |  |
| External temperature range   | e / resolution | -70 to +250 °C / 0.01K  |  |  |  |  |
| External temperature proble  |                | Pt1000 or Pt100   |  |  |  |  |
| nternal/external humidity sensor range / resolution                  |                | 0 to 100RH / 0.01%RH  |  |  |  |  |
| Potential-free pulses range  | e / resolution | 0 to 65,000 pulses, interval 0 to 100 pulses per sec / 1Hz,1 pulse                      |  |  |  |  |
| Voltage pulses range   | e / resolution | 0 to 65,000 pulses, interval 0 to 1300 Hz /1Hz, 1 pulse                                 |  |  |  |  |
| Signal input   |                | Potential-free signals or low level pulses < 0.5 VDC and high level between 2 and 3 VDC |  |  |  |  |
| Signal Input   |                | can be processed with the standard cable YY-CS (included in delivery) *                 |  |  |  |  |
| Temperature operating range with standard battery (CR2477N)          |                | -30 to +70 °C * *   |  |  |  |  |
| Temperature operating range with high temperature battery (CR2450HT) |                | -40 to +90 °C   |  |  |  |  |
| Dimensions d x l   | n (mm)         | 50 /30  |  |  |  |  |
| Memory capacity / optional   |                | 100,000 readings / 4 million readings   |  |  |  |  |
| Interval   |                | 1 sec to 24h / Fastmode 2Hz   |  |  |  |  |
| Enclosure  |                | Robust, shock-proof POM, protection class IP65  |  |  |  |  |
| Included in delivery   |                | Data logger, 1 battery, YoyoView, USB cable, manul, declaration of conformity           |  |  |  |  |
| Optional   |                | YoyoView Plus, calibration certificate, lead seal kit, wall holder                      |  |  |  |  |

Higher levels require up to 24 V DKC-P cable.

PVC cable type V can be used from -20 to +80°C, Teflon cable type G can be used from -70 to +250°C.

The humidity probe YS-RHT120 may be used only between -40 to +120°C.

| Voltage and Current |  |                    |         |         |          |         |         |          |  |  |
|---------------------|--|--------------------|---------|---------|----------|---------|---------|----------|--|--|
| Range               | mV   | 0 to 10            | 0 to 20 | 0 to 50 | 0 to 100 | 0 to 1V | 0 to 5V | 0 to 10V |  |  |
| Resolution          | μV*  | 0.58               | 0.58    | 0.76    | 1.54     | 15.4    | 76.9    | 154      |  |  |
| Input impendance    | MOhm   | 2.5                | 2.5     | 2.5     | 2.5      | 2.5     | 0.1     | 0.1      |  |  |
| Voltage             | range/resolution   | 0 to 24mA / 0.36μA |         |         |          |         |         |          |  |  |
| Accuracy            |  | 0.1% of range      |         |         |          |         |         |          |  |  |
| Signal input        | Lower signals (max 1V) can be processed with the standard cable YY-CP. Higher voltage levels require the connection cable YY-CP. |                    |         |         |          |         |         |          |  |  |

### **ACCESSORIES**

For YL-T11, YL-T12, YL-RH25, YL-M90

Temperature sensors for YL-T11 TempLog and YL-RH25 HumiLog

### **YS-CML Standard** temperature probe

d=4mm, I=100mm

### **YS-CMS Standard** temperature probe

d=4mm, I=50 mm

### YS-EU Surface temp, sensor

I=20mm, w=10mm



#### **YS-EUM Surface temp. sensor**

with magnet (e.g. for masonry) I=25mm, w=14mm



#### YS-FR Air temperature sensor

d=4mm, l=17mm, extra fast response time



#### **YS-MT Sheathed thermocouple**

d=3mm, I=200mm, for high temperatures up to 1200°C



### Sensors for YL-RH25 HumiLog

### **YS-RHT - Measures humidity and** temperature

Operating range: -20 to +80°C or -40 to +120°C with special cable type G. Dimensions: 8 x 35mm



### YS-RHTO - Probe for measuring humidity and temperature

Suitable for measuring temperature and humidity in wall and boundary levels. Range: -20 to +80°C. D=30mm x h=10mm



### YS-SHS - Detects incipient moisture

Operating from 0 to 50°C. Dimensions: 43 x 10mm



### YS-RHTW - Special probe for measuring humidity/temperature

Suitable for use in confined spaces or wall surfaces. Dimensions: l=45mm, w=20mm



### YS-RHT-XXS Extra small probe

Dimensions d=4mm and I=20mm. Sensor cable: 2m

Operating temperature from -40 to +120°C



### Other accessories

#### Wall Holder for Temp or Humi log

Enables you to install the logger on walls, also allows the installation of a lead seal.





### Lead seal kit for Temp and Humi Logs

Contains 50 pieces of wire and 50 numbered lead seals for non-recurring use, which have to be manually pressed together.



### Rain Gauge YY-RG and YY-B1



#### **Radiation Protector for YY-31-0M**



### Cables

The standard probes are equipped with a PVC cable type V and can used within the range fo -20 to +80°C. If desired, cables made of Teflon (type G) can be used to enlarge the operating range to -75 to +250°C. The YS-RHT120 can operate within the range of -40..+120°C with the Teflon cable.

Example for the product identifier: YS-CMS80-2 for standard temperature probe with 2m PVC cable or YS-CML120-2 with 2m Teflon cable

## YoyoView SOFTWARE

### YoyoView (part number YY-100)

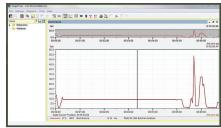
The basic software, included with the logger, is suitable for configuring the logger, downloading basic data and exporting data. The yoyo logger can be connected to laptop or PC via a USB port.

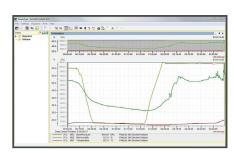
### YoyoView Plus software (part number YY-200)

In addition to the functionalities of the basic software, the optional upgrade offers more complex analyses of data, charts and statistics.

- » Three scaleable Y-axes
- » Zoom function
- » Cursor readings
- » Display in spreadsheet format
- » Combination of a series of measurements in one chart
- » Definition of thresholds
- » Y/T-charts (values over time)
- » Statistics (min, max, and average values)
- » Online metering (display actual values)







# **Grant**



World wide availability and support for Grant data loggers

Please visit www.grantinstruments.com for information about our full product range or www.yoyologger.com for further information about our yoyo range.

#### Grant Data Acquisition products

- » bear the CE mark and meet relevant European directives (EN 61326-1:2006 and EMC Directive 2004/108/EC)
- » comply with USA FCC part 15

#### Quality statement

Grant Instruments operates a Quality Management System complying with ISO9001:2008. It is Grant's policy to supply customers with products which are fit for their intended purpose, safe in use, perform reliably to published specification and are backed by a fast and efficient customer service. All yoyo loggers are warranted against faulty amterials and workmanship for 2 years.

All specifications are subject to continuous development and Grant Instruments (Cambridge) Ltd reserves the right to alter them without prior notice.

All trademarks acknowledged.

#### United Kingdom head office

29 Station Road Shepreth Cambridgeshire SG8 6GB

Tel: +44 (0) 1763 260 811 Fax: +44 (0) 1763 262 410

Email:

acquisitionsales@grantinstruments.com

#### China regional office

Office No. 1204
Regus Silver Centre
No. 1388 North Shan Xi Road
Shanghai 200060
Tel: + 86 21 6149 8337

Fax: + 86 21 6149 8001

Email:

enquiries.china@grantinstruments.com

#### India regional office

Office 922, level 9 26-27 Raheja Towers Mahatma Gandhi Road Bangalore – 560 001

Tel: +91 80 6570 3680 Fax: +44 (0) 1763 262 410

Email:

enquiries.india@grantinstruments.com

www.yoyologger.com

Part number: 30380 v1