



CATALOGUE

SCIENCE LAB
EXPERIMENT SOLUTION



WAC RESEARCH CO.,LTD.
www.wacinfotech.com

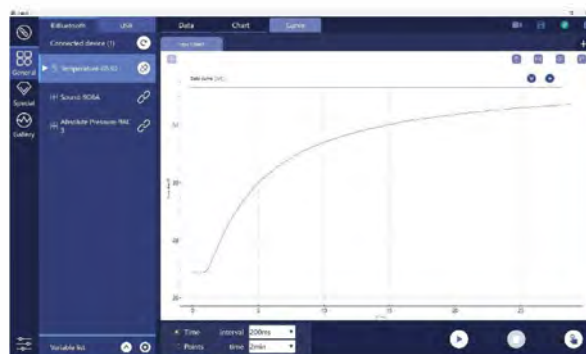
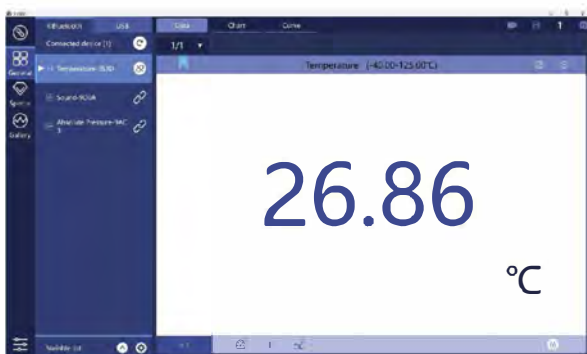
Software

Provide a wealth of default experiment template
Multiple loose-leaf folder display, can be preset display style
Complete statistics and data fitting function
Saving experimental settings to generate experimental template
Saving experiment result, and generating playback file
The unique operation interface, allowing you to operate more easily

iLab V12.0 SOFTWARE

Windows & Mac OSX & Android & iOS

01 Data Analysis Software for Windows & Mac OSX



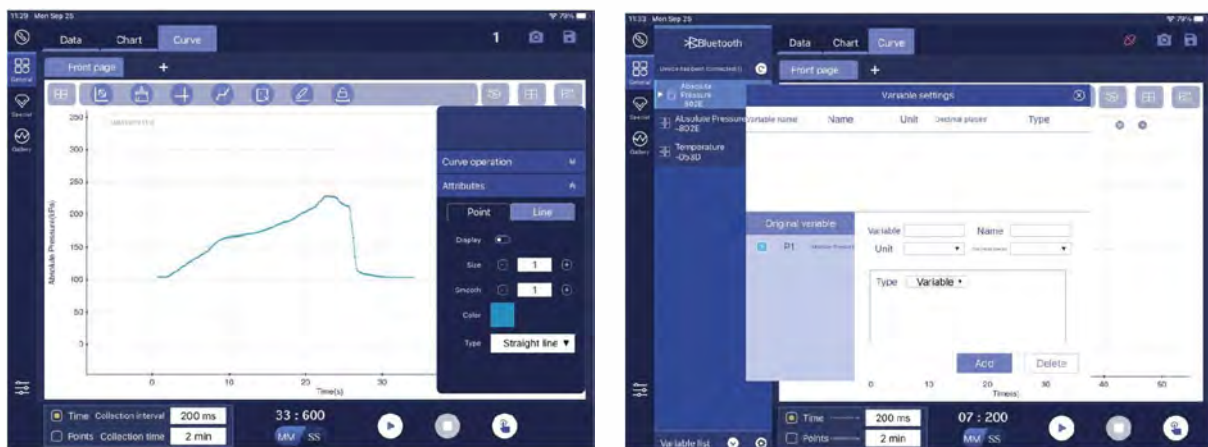
- Easy to user-define "My Experiment"
- Compatibility is enhanced
- New interface, new experience
- User-oriented graphical design platform
- Built-in an extensive worksheet
- CCD mode and sound mode
- Multiple languages

02 Data Analysis Software for Android



Data analysis software for Android is a kind of natural science experiment platform, which is developed on the basis of the Android operating system, mainly applied to the measurement on experimental data, analysis of experimental data and process of verification on experimental principle. Combined with sensors, can test nearly all physical, chemical and biological data, suitable for digital experimental teaching in primary school, middle and high school

03 Data Analysis Software for iOS



Data analysis software for iOS is a powerful experiment data processing software for teaching, which is developed on the basis of the iOS operating system, mainly applied to the measure the experimental data, analysis the experimental data and the process of verification on experimental principle. Combined with sensors, can test nearly all physical, chemical and biological data, suitable for natural science experimental teaching in primary school, middle school, university and other colleges.

SPECIAL SOFTWARE

Primary School Science & Junior High School & Senior High School

Synchronous matching primary school science, junior high and senior high school physics, biology, chemistry curriculum teaching

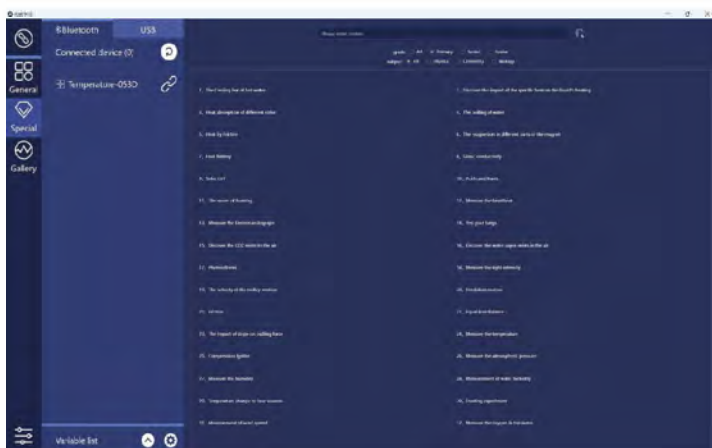
Experiment Software for Primary School Science



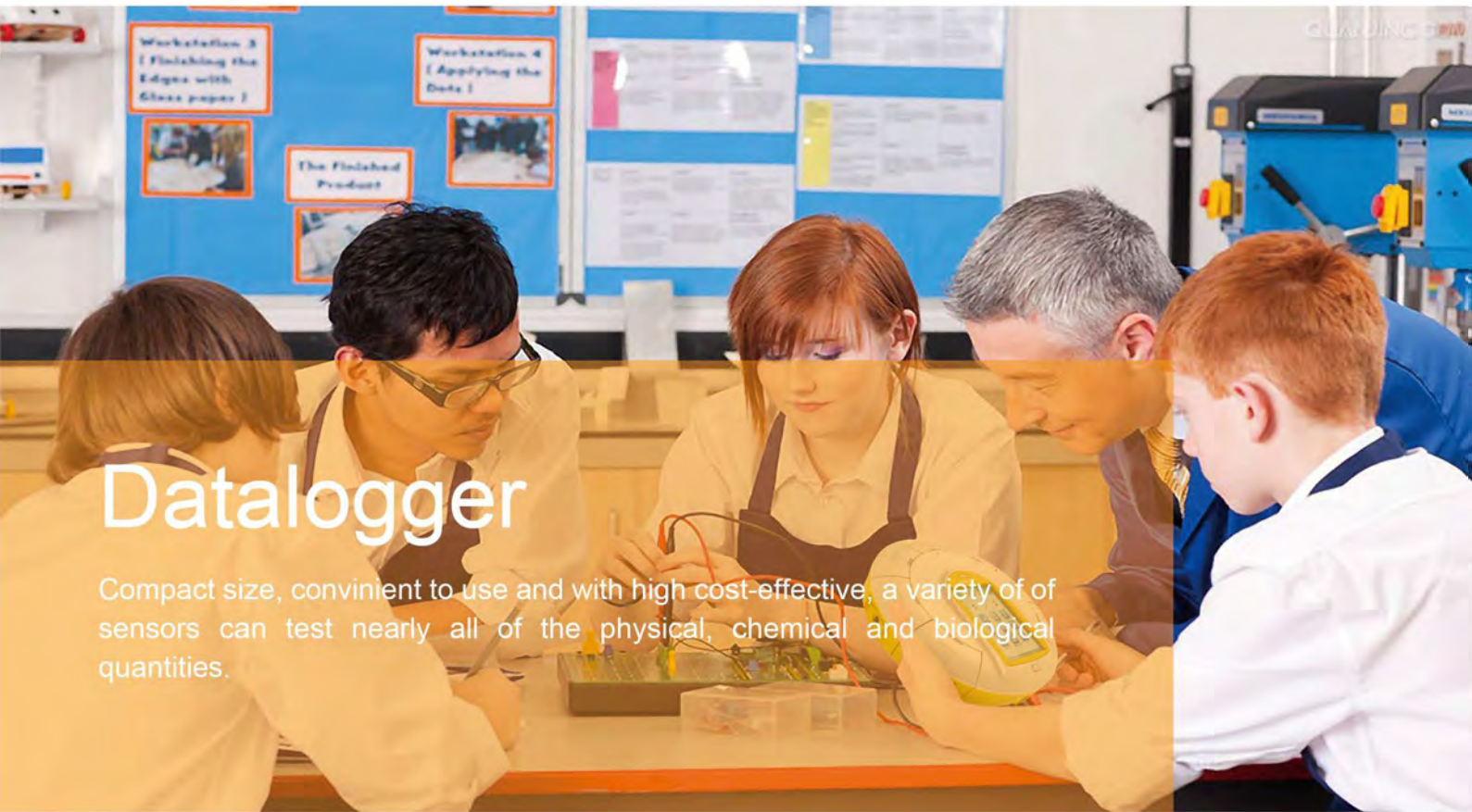
- Cartoon interface, simple operation, in line with the use of primary school students.
- Special experimental templates matching primary school textbooks are provided and can be indexed by grade level (topics in thermology, magnetism, electricity, chemistry, life sciences, optics, acoustics, mechanics and natural sciences).
- It can choose wired and wireless data access, Chinese and English interface languages.
- Automatic sensor identification, the sensor range can be set through software selection.
- Perfect data display and processing function, can set the frequency and time of data collection, can be manually collected.

- In the process of experiment, numerical value, table and curve can be displayed at the same time, and there is a real-time display data window.
- The experimental conditions in the experimental template can be set and saved, and the experimental results can be saved in the form of pictures and applied in teaching courseware.

Experiment Software for Junior High School & Senior High School



- It provides the special experiment template matching with the teaching material, which can be quickly indexed by grade or subject.
- Support wireless and wired access mode, automatic identification sensor.
- Multiple groups of values are recorded on the same page to form a record table, and coordinate axis curves are generated synchronously.
- The large text box displays the experimental value, the execution function button is concise and clear.
- Data collection frequency can be adjusted, can add any custom experimental conditions.
- One key to return home page, one key to save the experimental image, one key to view the experimental purpose and schematic diagram, one key to view the device connection.



Datalogger



Compact size, convenient to use and with high cost-effective, a variety of sensors can test nearly all of the physical, chemical and biological quantities.

Easy Datalogger

TS1001

Easy datalogger is featured in small volume, convenient use and quick collection (the highest collection frequency can reach 30kHz), it is also economical and practical. In an experiment, it can use at most four sensors to carry on measurement, with the four input channels as same as each other completely.



Accessories	
	
USB cable X1	Network cable X4



Indoor Data Logger Lighter than Mobile

1. USB interface is used to connect with the USB cable for transmitting the data collected by Easy Datalogger to the computer;
2. Input port 1,2,3,4 are used to connect to sensors. There is no special requirement for the position of channels when connecting sensor with this Easy datalogger. If connecting two or more identical sensors (e.g. two voltage sensors), the computer will make an automatic number in ascending sort order according to channel number;
3. Output port 5 can output the control signal to realize the control on external circuit, according to computer instruction.

NO.		Standard
1	A/D	12 bit resolution 30k sampling frequency
2	Interface	USB 2.0 interface RJ45 4 input port, can input digital and analog signals 1 return control port
3	Data transmission	USB
4	Dimension	110×65×24 mm

Smart Datalogger

TS1002



Portable datalogger with super elevation performance-to-price ratio



Item	Specification
1 Screen	LCD 128×64 Resolution 3 Inches
2 Power Supply	USB Power Supply 2000mAh Rechargeable lithium-ion battery ≥150-day Standby
3 A/D	12bit Resolution 30k sampling frequency
4 Port	USB 2.0 interface RJ45 4 digital/analog input channel 1 output channel
5 Storage	Ram 4MB
6 Data transmission	USB / Bluetooth
7 Built-in Sensor	Built-in Temperature Sensor
8 Button	Splash-proof anti-corrosion film button
9 Size	166×116×43 mm
10 Weight	378g

Smart datalogger is a fully self-contained portable datalogger, which can be used as:

1. A device connected to a computer
2. A stand-alone instrument

Under the stand-alone mode, Smart datalogger can:

1. Display the meter readings of the sensor attached
2. Support for data storage, and support for exporting the stored data to a computer

Timer

TS1004

Timer is used to capture the amount of change in an object during motion, such as time change, frequency change of motion, etc.

Functions:

1. With LCD display, it can directly display the measurement data.
2. Adopting high reliability and high precision quartz crystal oscillator, time precision 0.0001s, frequency precision 0.1Hz.
3. Measurement range: time 0 ~99999s, frequency: 0.0001kHz~100kHz.
4. Multiple modes of measurement: time interval, frequency, period, stopwatch, counting 5 measurement modes can be switched to carry out a variety of experiments, such as the measurement of the period of a single pendulum motion, free-fall motion and so on.
5. Support A, B and A-B channel mode, comes with two special photogate sensors, you can choose the sensor work.
6. Stores and can be placed back in the time interval mode captured by the photoelectric gate of the multiple blocking time.
7. Can be re-recorded by reset button.



timer specification	
Basic parameter	20 MHz crystal; 0.4ms time interval resolution; 0.0001s display resolution
Input voltage	9V DC / 500mA (inside is positive, outside is negative)
Power supply	9V DC or 9V battery
Interface for sensor	RJ-45 port
Interval mode	0.0001s resolution, max. Range is 99,999s
	Three independent storage modes of interval: Photogate A, Photogate B, Photogate A to Photogate B
Frequency mode	There are A, B, A to B and B to A four measurement modes of frequency; max. range is 100K Hz, accuracy is 0.1Hz
Period mode	A and B are two independent channels can be measured independently, the max. range can reach 19,999s
Stopwatch mode	Within 59.99s, accuracy is 0.01s; within 199min59s, the accuracy is 1s
Count mode	A and B are two independent channels can be measured independently, the max. range can reach 19,999s

SenseDisc

SD0020

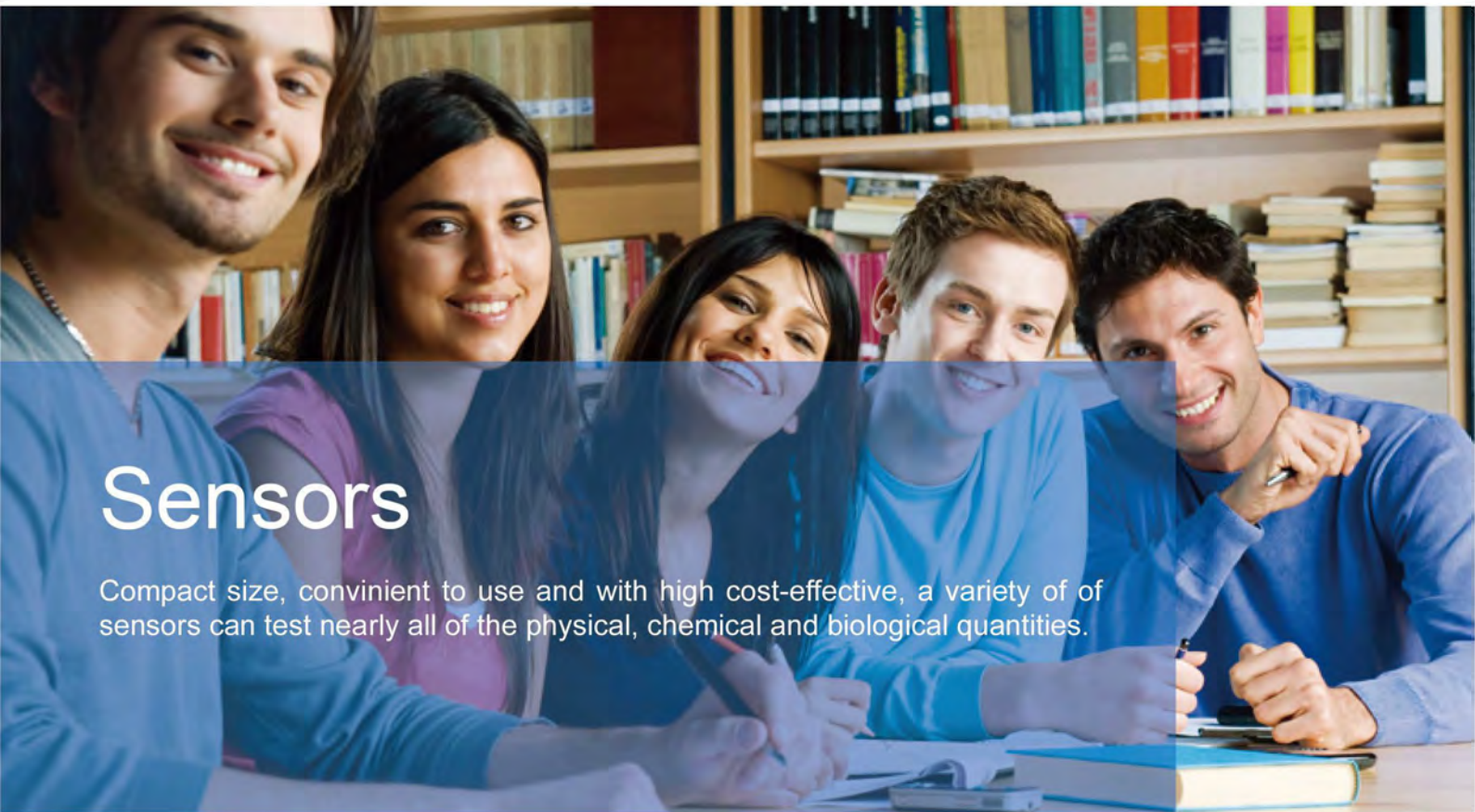


SenseDisc is a new concept of portable digital experimental system with powerful function, which is suitable for experiment teaching for primary and secondary school. It is equipped with wireless & exquisite sensor modules. It creates a simple and safe experimental environment for students.

The appearance of SenseDisc is elegant. Its round design allows seven channels collecting simultaneously. It has been designed with built-in triaxial accelerometer, GPS, ambient temperature sensor, barometer and relative high temperature sensor so that data measured are diversity and efficient.

SenseDisc is designed with 3.5 inch TFT touch screen, built-in 1800Ah lithium battery and more than 6 month await time. There are two working mode which are independent measurement and measure with external device. When it is connected to external device, it supports Windows, Android, Mac OS X and iOS. It supports both wire and wireless connection.

Item	Specification
Supported platform	Independent measurement, Windows, iOS, Android and Mac
Built-in sensors	Triaxial accelerometer, GPS, ambient temperature sensor, barometer and relative high temperature sensor
GPS	Supported
Independent measurement	Supported
Maximum acquisition interval	100,000 times/s
Resolution	12-bit
Internal storage	4M
Built-in battery	1800mAh lithium battery
Await time	More than 6 month
Screen	3.5'TFT 480*320 touch screen
Port	USB 2.0
Wireless connection	Supported
Size	Diameter=170mm, height=46mm
Temperature range	-20~70 °C
Power adapter	100~240V AC / 5V DC 1A
Software	SenseDisc iLab
Sensor ports	7











Sensors

Compact size, convenient to use and with high cost-effective, a variety of sensors can test nearly all of the physical, chemical and biological quantities.

TS Series Sensors

More than 60 kinds, and all the sensors have M6 screwed hole, it can be easy for sensors to be fixed with a variety of experimental devices. It needs to be used with Datalogger for data collection. Some sensors have been designed with multi-ranges, such as Light, Sound and Conductivity sensor.

<p>Voltage Sensor</p> <p>TS2101</p>  <p>Range: -25V~25V Resolution: 0.01V Accuracy: $\pm 1\%$ Input resistance: 2MΩ</p>	<p>Current Sensor</p> <p>TS2102</p>  <p>Range: -3A~3A Resolution: 0.002A Accuracy: $\pm 1\%$ Input resistance: 50mΩ</p>	<p>Micro-Current Sensor</p> <p>TS2103</p>  <p>Range: -10μA~10μA Resolution: 0.01μA Accuracy: $\pm 1\%$ Input resistance: 300Ω</p>	<p>Temperature Sensor</p> <p>TS2104</p>  <p>Range: -50 C~150 C Resolution: 0.1 C Accuracy: ± 0.6 C</p>
<p>Gas Pressure Sensor</p> <p>TS2105</p>  <p>Range: 0~700kPa Resolution: 0.02kPa Accuracy: $\pm 2\%$</p>	<p>Force Sensor</p> <p>TS2106</p>  <p>Range: -50N~50N Resolution: 0.03N Accuracy: $\pm 1\%$</p>	<p>Motion Sensor</p> <p>TS2107</p>  <p>Range: 20cm~200cm Resolution: 1mm Accuracy: $\pm 2\%$</p>	<p>Photogate</p> <p>TS2108</p>  <p>Range: 0~∞s Resolution: 1μs</p>

Acceleration Sensor

TS2109



Range: -6g~6g
Resolution: 0.003g
Accuracy: ±0.01g

Light Sensor

TS2110



Double Range
Range: 0~6000LUX / 0~50000LUX
Accuracy: ±5%F.S / ±5%F.S
Resolution: 1.5LUX / 12.5LUX

Magnetic Field Sensor

TS2111



Range: -64mT~64mT
Resolution: 0.03mT
Accuracy: ±1%F.S

Sound Sensor

TS2112



Double Range
Range: 30dB~90dB/80dB~120dB
Accuracy: ±2dB / ±2dB
Resolution: 0.1dB/ 0.1dB
Frequency: 20Hz-20kHz

G-M Sensor


TS2113



Range: 0~40000c/min
Resolution: 1c/min
Accuracy: ±2%F.S

Normal Open

TS2115



Range: 30V/1A

Normal Close

TS2116



Range: 30V/1A

Motion Sensor

TS2117



Range: 40cm~600cm
Resolution: 1mm

Current Sensor

TS2118



Range: -20mA~20mA
Resolution: 0.01mA
Accuracy: ±1%F.S
Input resistance: 0.22Ω

Charge Sensor

TS2119



Double Range
Range: -22nC~22nC/-220nC~220nC
Resolution: 0.01nC / 0.1nC
Accuracy: ±2%F.S / ±2%F.S

Quick-Temperature Sensor

TS2120



Range: -25 C~100 C
Resolution: 0.1 C
Accuracy: ±0.6 C

Voltage Sensor


TS2121



Range: -60mV~60mV
Resolution: 0.03mV
Accuracy: ±1%

Multi-Range Light Sensor


TS2122



Three Range
Range: 0~600LUX / 0~6000LUX / 0~15000LUX
Resolution: 0.15 LUX / 1.5LUX / 38LUX
Accuracy: ±5% / ±5% / ±5%

Thermal Radiation

TS2123



Range: -70 C~380 C
Resolution: 0.1 C
Accuracy:
±8 C (-70 C~0 C)
±5 C (0 C~60 C)
±8 C (60 C~120 C)
±10 C (120 C~180 C)
±10 C (120 C~180 C)
±12 C (180 C~240 C)
±14 C (240 C~380 C)

Relative Pressure Sensor

TS2124



Range: -20 ~20kPa
Resolution: 0.01kPa
Accuracy: ±5%

Surface Temperature Sensor

TS2125



Range: -30 C~150 C
Resolution: ±0.1 C
Accuracy: ±0.5 C

Electric Compass

TS2126























Range: 0~360°
Resolution: 0.1°
Accuracy: ±3°





Multirange Voltage Sensor

TS2128



Range:
-200mV~200mV/-2V~2V/-20V~20V
Resolution: 0.1mV / 0.001V / 0.01V
Accuracy: ±1% / ±1% / ±1%





<p>Multirange Current Sensor</p> <p>TS2129</p>  <p>Range: -2A~2A/-200mA~200mA/ -20mA~20mA Resolution: 0.001A/0.1mA/0.01mA Accuracy: ±1%F.S / ±1%F.S / ±1%F.S Input resistance: 50mΩ/500mΩ/5.1Ω</p>	<p>Frequency Sensor</p> <p>TS2140</p>  <p>Range: 1Hz~8MHz Resolution: 1Hz Accuracy: ±1% Input resistance: >1MΩ</p>	<p>High Temperature Sensor</p> <p>TS2201</p>  <p>Range: -200 C~1200 C Resolution: 0.3 C Accuracy: ±6 C (-200 C~0 C) ±3 C (0 C~200 C) ±6 C (200 C~1200 C)</p>	<p>pH Sensor</p> <p>TS2202</p>  <p>Range: 0~14pH Resolution: 0.01pH Accuracy: ±0.1F.S</p>
<p>Conductivity Sensor</p> <p>TS2203</p>  <p>Range: 0~20000μS/cm Resolution: 6μS/cm Accuracy: ±5%F.S</p>	<p>Oxygen Sensor</p> <p>TS2204</p>  <p>Range: 0 ~100% Resolution: 0.1% Accuracy: ±2%</p>	<p>Dissolved Oxygen Sensor</p> <p>TS2205</p>  <p>Range: 0~20mg/L Resolution: 0.01mg/L Accuracy: ±0.5mg/L</p>	<p>CO₂ Sensor</p> <p>TS2206</p>  <p>Range: 0~100000ppm Resolution: 2ppm Accuracy: 3% (0~5000ppm) 4%(5000~50000ppm) 6%(50000~100000ppm)</p>
<p>Humidity Sensor</p> <p>TS2207</p>  <p>Range: 0~100% Resolution: 0.1% Accuracy: ±4%</p>	<p>ECG Sensor</p> <p>TS2210</p>  <p>Range: -5mV~5mV Resolution: 0.01mV Accuracy: ±2%</p>	<p>Respiration sensor</p> <p>TS2211</p>  <p>Range: -10L/s~10L/s Resolution: 0.01L/s Accuracy: ±3%</p>	<p>ORP Sensor</p> <p>TS2214</p>  <p>Range: -2000mV~2000mV Resolution: 1mV Accuracy: ±2%</p>
<p>Sulphur Dioxide Sensor</p> <p>TS2215</p>  <p>Range: 0~20ppm Resolution: 0.01ppm Accuracy: ±1%F.S</p>	<p>Nitrite Ion Sensor</p> <p>TS2216</p>  <p>Range: 4.6ppm~4600ppm Resolution: 0.4ppm Accuracy: ±10%F.S</p>	<p>Alcohol Gas Sensor</p> <p>TS2217</p>  <p>Range: 0~6000ppm Resolution: 2ppm Accuracy: ±5%F.S</p>	<p>Dissolved CO₂ Sensor</p> <p>TS2218</p>  <p>Range: 0.2ppm~440ppm Resolution: 0.1 ppm</p>
<p>DO-O₂ Sensor</p> <p>TS2219</p>  <p>DO: Range: 0~20mg/L Resolution: 0.01mg/L Accuracy: ±0.5mg/L</p> <p>O₂: Range: 0~100% Resolution: 0.1% Accuracy: ±2%F.S</p>	<p>Chlorine Sensor</p> <p>TS2220</p>  <p>Range: 0~50ppm Resolution: 0.1ppm Accuracy: ±1%F.S</p>	<p>Ammonium Ion Sensor</p> <p>TS2221</p>  <p>Range: 0.9ppm~1800ppm Resolution: 1ppm Operating Range: Temperature 0~50 C, pH>11</p>	<p>Chloride Ion Sensor</p> <p>TS2222</p>  <p>Range: 1.8ppm~3550ppm Resolution: 0.3ppm Measure Temperature: 0~50 C pH Range: 4~11</p>

<p>Sodium Ion Sensor</p> <p>TS2223</p>  <p>Range: 0.2ppm~2300ppm Resolution: 0.2ppm Measure Temperature: 0~50 C pH Range >10</p>	<p>Heart Rate Sensor</p> <p>TS2224</p>  <p>Range: 0~200BPM Resolution: 1BPM</p>	<p>Methane Sensor</p> <p>TS2225</p>  <p>Range: 0~10000ppm Resolution: 13ppm Accuracy: $\pm 2\%$F.S</p>	<p>Carbon Monoxide Sensor</p> <p>TS2226</p>  <p>Range: 0~1000ppm Resolution: 1ppm Accuracy: $\pm 1\%$F.S</p>
<p>Salinity Sensor</p> <p>TS2227</p>  <p>Range: 0~55000ppm Resolution: 16ppm Accuracy: $\pm 5\%$F.S</p>	<p>Hydrogen Sensor</p> <p>TS2228</p>  <p>Range: 0~1000ppm Resolution: 1ppm Accuracy: $\pm 1\%$F.S</p>	<p>Nitrate Ion Sensor</p> <p>TS2229</p>  <p>Range: 0.6ppm~6200ppm Resolution: 1ppm</p>	<p>Hydrogen Sulfide Sensor</p> <p>TS2230</p>  <p>Range: 0~100ppm Resolution: 0.1ppm Accuracy: $\pm 1\%$F.S Response time: <5s Measure Temperature: -40C~50 C</p>
<p>Calcium Ion Sensor</p> <p>TS2232</p>  <p>Range: 0.4ppm~4000ppm Resolution: 0.7ppm Accuracy: $\pm 1.5\%$</p>	<p>Potassium Ion Sensor</p> <p>TS2235</p>  <p>Range: 0.4ppm~3900ppm Resolution: 3ppm Accuracy: $\pm 1\%$</p>	<p>Aluminum Case</p> 	



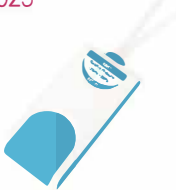

















Sensor





USB ZC series Sensors

USB ZC series, include a wide range of sensors, can measure force, heat, light intensity, electricity, intensity of magnetic field and other gas class, ion class quantities, fully can meet the needs of the middle school science experiment teaching. It can connect to a computer to collect data without Datalogger.

<p>Voltage Sensor</p> <p>ZC0001</p>  <p>Range: -25V~25V Resolution: 0.01V Accuracy: $\pm 1\%$F.S</p>	<p>Micro Voltage Sensor</p> <p>ZC0002</p>  <p>Range: -60mV~60mV Resolution: 0.03mV Accuracy: $\pm 1\%$F.S</p>	<p>Multirange Voltage Sensor</p> <p>ZC0003</p>  <p>Range: -25V~25V / -2.5V~2.5V Resolution: 0.01V / 0.001V Accuracy: $\pm 1\%$F.S</p>	<p>Multirange Current Sensor</p> <p>ZC0004</p>  <p>Range: -3A~3A / -300mA~300mA Resolution: 0.002A / 0.2mA Accuracy: $\pm 1\%$F.S</p>
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<p>Current Sensor</p> <p>ZC0005</p>  <p>Range: -3A~3A Resolution: 0.002A Accuracy: ±1%F.S</p>	<p>Micro Current Sensor</p> <p>ZC0006</p>  <p>Range: -10μA~10μA Resolution: 0.01μA Accuracy: ±1%F.S</p>	<p>Milli Current Sensor</p> <p>ZC0007</p>  <p>Range: -20mA~20mA Resolution: 0.01mA Accuracy: ±1%F.S</p>	<p>Electric Charge Sensor</p> <p>ZC0008</p>  <p>Range: -220nC~220nC Resolution: 0.1nC Accuracy: ±1%F.S</p>
<p>Temperature Sensor</p> <p>ZC0009</p>  <p>Range: -50 C~150 C Resolution: 0.1 C Accuracy: ±0.6 C</p>	<p>Thermal Radiation Sensor</p> <p>ZC0010</p>  <p>Range: -70 C~380 C Resolution: 0.1 C Accuracy: -70~0 C ±8 C 0~60 C ±5 C 60~120 C ±8 C 120~180 C ±10 C 180~240 C ±12 C 240~380 C ±14 C</p>		<p>Quick-temperature Sensor</p> <p>ZC0011</p>  <p>Range: -25 C~100 C Resolution: 0.1 C Accuracy: ±0.6 C</p>
<p>Surface Temperature Sensor</p> <p>ZC0012</p>  <p>Range: -30 C~150 C Resolution: 0.1 C Accuracy: ±0.6 C</p>	<p>High Temperature Sensor</p> <p>ZC0013</p>  <p>Range: -200 C~1200 C Resolution: 0.4 C Accuracy: -200~0 C ±6 C 0~200 C ±3 C 200~1200 C ±6 C</p>		<p>Force Sensor</p> <p>ZC0014</p>  <p>Range: -50N~50N Resolution: 0.03N Accuracy: ±1%F.S</p>
<p>Motion Sensor</p> <p>ZC0015</p>  <p>Range: 20cm~600cm Resolution: 0.1cm Accuracy: ±2%F.S</p>	<p>Photogate Sensor</p> <p>ZC0016</p>  <p>Range: 0~∞s Resolution: 1μs Accuracy: ±1μs</p>	<p>3-Axis Acceleration Sensor</p> <p>ZC0017</p>  <p>Range: -6g~6g Resolution: 0.003g Accuracy: ±1%</p>	<p>Magnetic Field Sensor</p> <p>ZC0020</p>  <p>Range: -100mT~100mT Resolution: 0.01mT Accuracy: ±3%</p>
<p>Light Sensor</p> <p>ZC0019</p>  <p>Range: 0~600LUX 0~6000LUX 0~150000LUX Resolution: 1.5LUX 12.5LUX 38LUX Accuracy: ±5%F.S</p>		<p>Sound Sensor</p> <p>ZC0021</p>  <p>Range: 30~90dB / 80~120dB Resolution: 0.1dB Accuracy: ±2dB</p>	<p>G-M Sensor</p> <p>ZC0022</p>  <p>Range: 0~40000c/m Resolution: 1c/m Accuracy: ±2%</p>

<p>Light Distribution Sensor</p> <p>ZC0023</p>  <p>Range: 125 Dot/mm Resolution: 8μm Accuracy: 8μm</p>	<p>Gas Pressure Sensor</p> <p>ZC0024</p>  <p>Range: 0~700kPa Resolution: 0.2kPa Accuracy: ±2%</p>	<p>Relative Pressure Sensor</p> <p>ZC0025</p>  <p>Range: -20kPa~20kPa Resolution: 0.01kPa Accuracy: ±5%F.S</p>	<p>Micro-force Sensor</p> <p>ZC0028</p>  <p>Range: -10N~10N / -2N~2N Resolution: 0.005N / 0.001N Accuracy: ±1%F.S</p>
<p>Micro Distance Sensor</p> <p>ZC0030</p>  <p>Range: 0~50mm Resolution: 0.01cm Accuracy: ±0.1mm</p>	<p>Wind Speed Sensor</p> <p>ZC0031</p>  <p>Range: 0.3m/s~45m/s Resolution: 0.1m/s Accuracy: ±3%F.S</p>	<p>Inclination Force</p> <p>ZC0033</p>  <p>Range: -20N~20N / -180°~180° Force: 0.01N Average: 0.03° Accuracy: ±1%F.S</p>	<p>pH Sensor</p> <p>ZC1002</p>  <p>Range: 0~14 Resolution: 0.01 Accuracy: ±0.2</p>
<p>Conductivity Sensor</p> <p>ZC1003</p>  <p>Range: 0~3000μS/cm / 0~30000μS/cm Resolution: 1μS/cm / 8μS/cm Accuracy: ±5%F.S</p>	<p>DO-O₂ Sensor</p> <p>ZC1005</p>  <p>Range: 0~20mg/L / 0~100% Resolution: 0.01mg/L / 0.1% Accuracy: ±0.5mg/L / ±2% F.S.</p>	<p>CO₂ Sensor</p> <p>ZC1007</p>  <p>Range: 0~100000ppm Resolution: 2ppm Accuracy: 3%(0~5000ppm) 4%(5000~50000ppm) 6%(50000~100000ppm)</p>	<p>Humidity Sensor</p> <p>ZC1008</p>  <p>Range: 0~100% Resolution: 0.1% Accuracy: ±6%</p>
<p>Colorimeter</p> <p>ZC1009</p>  <p>Range: 0~100% Resolution: 0.1% Accuracy: ±2%F.S</p>	<p>Turbidimeter</p> <p>ZC1010</p>  <p>Range: 0~400NTU Resolution: 0.1NTU Accuracy: ±5%NTU</p>	<p>Ecg Sensor</p> <p>ZC1011</p>  <p>Range: -5mV~5mV Resolution: 0.01mV Accuracy: ±2%F.S</p>	<p>Spirometer</p> <p>ZC1012</p>  <p>Range: -10L/S~10L/S Resolution: 0.01L/S Accuracy: ±3%F.S</p>
<p>ORP Sensor</p> <p>ZC1013</p>  <p>Range: -2000mV~2000mV Resolution: 1mV Accuracy: ±2%F.S</p>	<p>SO₂ Sensor</p> <p>ZC1014</p>  <p>Range: 0~20ppm Resolution: 0.1ppm Accuracy: ±1%F.S</p>	<p>Alcohol Gas Sensor</p> <p>ZC1016</p>  <p>Range: 0~6000ppm Resolution: 1.5ppm Accuracy: ±5%F.S</p>	<p>Nitrate Ion Sensor</p> <p>ZC1018</p>  <p>Range: 1~6200mg/L Resolution: 0.01mg/L</p>

Chloride Ion Sensor	Ammonium Ion Sensor	Blood Oxygen Sensor	Aluminum Case
ZC1019	ZC1020	ZC1034	
			
Range: 1.8ppm~3550ppm Resolution: 0.3ppm	Range: 1~1800mg/L Resolution: 0.01mg/L	Oxygen saturation: 35-100% Pulse rate: 25 to 250 beats/min Body temperature: 30-50 C	

SenseDisc series Sensors


SenseDisc is a new concept of portable digital experimental system with powerful function, which is suitable for experiment teaching for primary and secondary school. It is equipped with wireless & exquisite sensor modules. It creates a simple and safe experimental environment for students. The appearance of SenseDisc is elegant. Its round design allows seven channels collecting simultaneously. It has been designed with built-in triaxial accelerometer, GPS, ambient temperature sensor, barometer and 0.01mg/L relative high temperature sensor so that data measured are diversity and efficient.

SenseDisc is designed with 3.5 inch TFT touch screen, built-in 1800Ah lithium battery and more than 6 month await time. There are two working mode which are independent measurement and measure with external device. When it is connected to external device, it supports Windows, Android, Mac OS X and iOS. It supports both wire and wireless connection.

Voltage Sensor	Millivolts Voltage Sensor	Micro Voltage Sensor	Current Sensor
S0001	S0002	S0004	S0005
			
Range: -30V~30V Accuracy: ±1% Resolution: 0.02V	Range: -500mV~500mV Accuracy: ±1%F.S Resolution: 0.3mV	Range: -60mV~60mV Accuracy: ±1%F.S Resolution: 0.03mV	Range: -1A ~1A Accuracy: ±1% Resolution: 0.001A
Conductivity Sensor	Milli Current Sensor	Charge Sensor	Temperature Sensor
S0006	S0007	S0008	S0009
			
Range: -10μA~10μA Accuracy: ±1% Resolution: 0.01μA	Range: -20mA~20mA Accuracy: ±1%F.S Resolution: 0.01mA	Range: -220nC~220nC Resolution: 0.1nC	Range: -40 C~135 C Accuracy: ±0.6 C Resolution: 0.1 C

Infrared Thermometer

S0010



Range: -70 C~380 C
Resolution: 0.1 C
Accuracy: -70 C~0 C(±8 C),0 C~60 C (±5 C),60 C~120 C(±8 C),120 C~180 C(±10 C),180 C~240 C(±12 C), 240 C~380 C(±14 C)

Rapid Temperature Sensor

S0011



Range: -25 C~100 C
Accuracy: ±0.8 C
Resolution: 0.1 C

Surface Temperature Sensor


S0012



Range: -30 C~150 C
Accuracy: ±0.8 C(0-100 C)
Resolution: 0.1 C

Thermocouple

S0013



Range: -200 C ~1200 C
Accuracy: ±3 C
Resolution: 0.25 C

Force Sensor

S0014



Range: -50N~50N
Accuracy: ±1%
Resolution: 0.03N

Motion Sensor

S0015



Range: 20cm~600cm
Accuracy: ±2%
Resolution: 0.1cm

Photogate

S0016



Range: 0~∞s
Accuracy: ±1μs
Resolution: 1μs

Light Sensor

S0019



Range: 0~55000Lux
Accuracy: ±5%
Resolution: 15Lux

Magnetic Field Sensor

S0020



Range: -64mT~64mT
Accuracy: ±3%
Resolution: 0.04mT

Sound Level Sensor

S0021



Range: 40dB~92dB
Accuracy: ±4dB
Resolution: 0.1dB

Radiation Monitor (G-M)

S0022



Range: 0 ~ 40000c/min
Accuracy: ±2%F.S
Resolution: 1c/min

Absolute Pressure Sensor

S0024



Range: 0~400kPa
Accuracy: ±6kPa
Resolution: 0.1kPa

Relative Pressure Sensor

S0025



Range : -20kpa~20kpa
Accuracy: ±5%
Resolution: 0.01KPa

Microphone

S0034



Range: 100Hz~15kHz

Current Sensor

S0035



Range: -10A~10A
Accuracy: ±2%
Resolution: 0.01A

Blood Pressure Sensor

S0038



Range: 0-300mmHg
Accuracy: ±3mmHg
Resolution: 0.1mmHg

pH Sensor

S1002



Range: 0~14
Accuracy: ±0.2pH
Resolution: 0.01

Conductivity Sensor

S1003



Range: 0~20000μS/cm
Accuracy: ±3%
Resolution: 6μS/cm

DO/O₂ Sensor

S1005























DO:
Range: 0~20mg/L
Accuracy: ±0.5mg/L
Resolution: 0.01mg/L
O₂:
Range: 0~100%
Accuracy: ±2%F.S
Resolution: 0.1%









CO₂ Sensor

S1007



Range: 0~100000ppm
Accuracy: 3% (0~5000ppm)
4% (5000~50000ppm)
6% (50000~100000ppm)
Resolution: 2ppm

<p>Humidity Sensor</p> <p>S1008</p>  <p>Range : 0~100% Accuracy : ±4% (10%~90%RH) Resolution: 0.1%</p>	<p>EKG Sensor</p> <p>S1011</p>  <p>Range: -1mV~5mV Resolution: 2.5µV</p>	<p>Spirometer</p> <p>S1012</p>  <p>Range: -10L/s~10L/s Accuracy: ±3% Resolution: 0.01L/S</p>	<p>ORP Sensor</p> <p>S1013</p>  <p>Range: -2000mV~2000mV Accuracy: ±1%F.S Resolution: 1mV</p>
<p>SO₂ Sensor</p> <p>S1014</p>  <p>Range: 0~20ppm Accuracy: ±1%F.S Resolution: 0.1ppm</p>	<p>Nitrite Ion Sensor</p> <p>S1015</p>  <p>Range: 4.6ppm~4600ppm Resolution: 0.5 ppm</p>	<p>Alcohol Gas Sensor</p> <p>S1016</p>  <p>Range: 0~6000ppm Accuracy: ±3% F.S Resolution: 1.5 ppm</p>	<p>Chlorine Gas Sensor</p> <p>S1017</p>  <p>Range: 0~10ppm Accuracy: ±1%F.S Resolution: 0.1ppm</p>
<p>Nitrate Ion Sensor</p> <p>S1018</p>  <p>Range: 0.6ppm~ 6200ppm Resolution: 0.4ppm</p>	<p>Chloride Ion Sensor</p> <p>S1019</p>  <p>Range: 1.8ppm~3550ppm Resolution: 0.3 ppm</p>	<p>Ammonium Ion Sensor</p> <p>S1020</p>  <p>Range: 0.9ppm~1800ppm Resolution: 0.1ppm</p>	<p>Sodium Ion Sensor</p> <p>S1021</p>  <p>Range: 0.2ppm~2300ppm Resolution: 0.2ppm</p>
<p>Potassium Ion Sensor</p> <p>S1022</p>  <p>Range: 0.4ppm~3900ppm Resolution: 0.3ppm</p>	<p>Calcium Ion Sensor</p> <p>S1023</p>  <p>Range: 0.4ppm~4000ppm Resolution: 0.7ppm</p>	<p>Heart Rate Sensor</p> <p>S1024</p>  <p>Range: 0~200bpm Accuracy: ±2bpm Resolution: 1bpm</p>	<p>Salinity Sensor</p> <p>S1026</p>  <p>Range: 0~55000ppm Accuracy: ±2.5%F.S Resolution: 16ppm</p>
<p>CO Sensor</p> <p>S1027</p>  <p>Range: 0~1000ppm Accuracy: ±1%F.S Resolution: 1ppm</p>	<p>H₂ Sensor</p> <p>S1028</p>  <p>Range: 0~1000ppm Accuracy: ±1%F.S Resolution: 1ppm</p>	<p>NH₃ Sensor</p> <p>S1029</p>  <p>Range: 0~50ppm Accuracy: ±1%F.S Resolution: 0.1ppm</p>	<p>O₃ Sensor</p> <p>S1030</p>  <p>Range: 0~20ppm Accuracy: ±1%F.S Resolution: 0.02ppm</p>

<p>H₂S Sensor</p> <p>S1031</p>  <p>Range: 0~100ppm Accuracy: ±1%F.S Resolution: 0.1ppm</p>	<p>NO₂ Sensor</p> <p>S1033</p>  <p>Range: 0~20ppm Accuracy: ±1%F.S Resolution: 0.1ppm</p>	<p>Methane Sensor</p> <p>S1034</p>  <p>Range: 0~10000ppm Accuracy: ±3%F.S Resolution: 3ppm</p>	<p>NO Sensor</p> <p>S1035</p>  <p>Range: 0~250ppm Accuracy: ±1%F.S Resolution: 0.1ppm</p>
<p>Dissolved CO₂ Sensor</p> <p>S1036</p>  <p>Range: 0.2ppm~440ppm Resolution: 0.1ppm</p>	<p>Soil Moisture & Temperature Sensor</p> <p>S1038</p>  <p>Range: 0~100% / -40 C~80 C Resolution: 0.1% / 0.1 C Accuracy: ±2% (0-50%) ±3% (50%-100%)</p>	<p>UV Sensor</p> <p>S1040</p>  <p>Range: 0~400W/m2 Accuracy: ±5% Resolution: 0.1W/m2</p>	
<p>Current Sensor</p> <p>S0036</p>  <p>Range: -30A~30A Accuracy: ±2% Resolution: 0.02A</p>	<p>Voltage Sensor</p> <p>S0037</p>  <p>Range: -500V~500V Accuracy: ±2% Resolution: 0.3V</p>	<p>Distance Sensor</p> <p>S0041</p>  <p>Range: 5cm~400cm Accuracy: 1cm or 2% of the measuring value Resolution: 0.1cm Sample rate: 10 times/second</p>	<p>Universal Input</p> <p>S3000</p> 

More Colorful Choices...



ADVANCE



BASIC



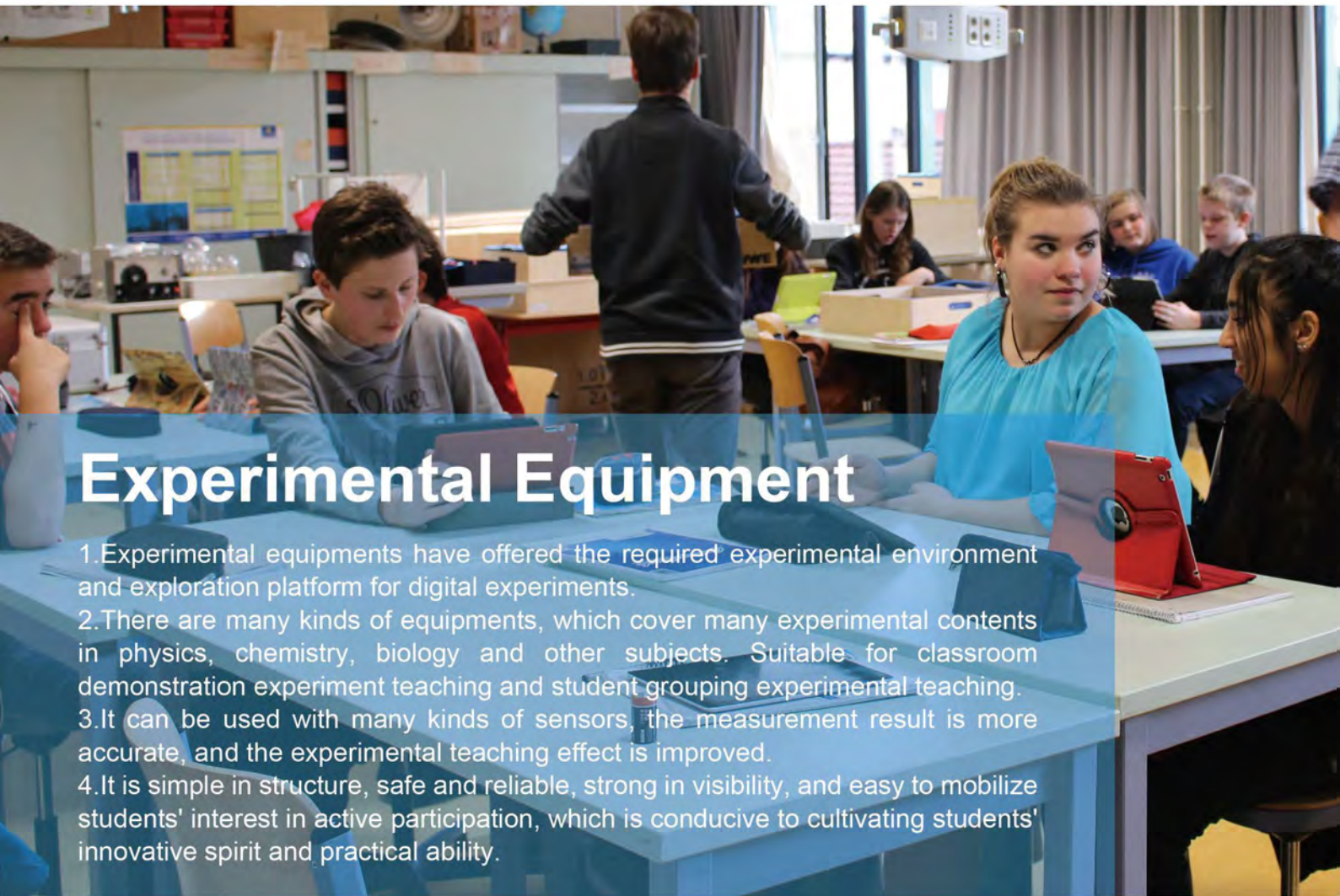
PHYSICS



BIOCHEMISTRY



ENVIRONMENT



Experimental Equipment

1. Experimental equipments have offered the required experimental environment and exploration platform for digital experiments.
2. There are many kinds of equipments, which cover many experimental contents in physics, chemistry, biology and other subjects. Suitable for classroom demonstration experiment teaching and student grouping experimental teaching.
3. It can be used with many kinds of sensors, the measurement result is more accurate, and the experimental teaching effect is improved.
4. It is simple in structure, safe and reliable, strong in visibility, and easy to mobilize students' interest in active participation, which is conducive to cultivating students' innovative spirit and practical ability.

Experimental Equipment

TP2013



Far infrared heater consists of a heating furnace and wooden baseplate. There is a switch installed on the wooden baseplate, the external of heating furnace is made of steel shell, internal is a furnace core and a steel baseboard. The design of cylindrical far-infrared radiation heating furnace core, is convenient for heating the body uniformly. Combined with related equipments, can complete the Charles' law experiment, the crystal melting and solidification experiment, specific heat capacity and other high-precision thermal quantitative experiments. 220V AC power supply, 80W

Apparatus for Interference Diffraction of Light

TP6052



Used for the study of light in senior high school physics. Investigate the phenomenon of diffraction and interference when light passes through single and double slits. The wavelength of light in the interference experiment can be measured by the light sensor. It consists of light screen, laser body, optical components.

Digital Friction Experimental Equipment

TP4006



This equipment is used for friction force equipment for primary school and junior high school. It can explore factors affect friction from frictional surface, mass of object, velocity and touching area.

Requirement

1. Track should be longer than 500mm so that enough data can be collected while the car is moving.
2. Uniform velocity motor is powered by 12V. It can rotate on both forward and reverse direction and is able to stop.
3. The car has two different touching area which are upper and lower surface, and can add mass components, which is easy to study the affection to friction force from touching area and mass.
4. Built-in double module Bluetooth and 100mAh lithium battery. Both wire and wireless connection are accepted.
5. Auto stop operation of car when it reaches end of track. Product consists of triple-level speed motor, three track with different touching surface and small car with built-in sensor."

Conductor and Insulator Experimental Equipment

TP4009



"The equipment is used for ""Conductors and Insulators" experiment for primary school science. It is used to explore the conductivity of different materials and to recognize conductors and insulators.

Requirement

1. Judging conductors and insulators (metal, non-metal, liquid) through small bulbs.
2. Able to judge the conductive properties of material. The experimental device is composed of PCB boards embedded in dry cells, light bulbs, digital ammeters and other electrical components."

Heat Absorption(Dissipation) Studying Experimental Equipment

TP4008



The equipment is used for "Heat Absorption and Dissipation" experiment for primary school. It is used to explore the heat performance for same material with different color.

Requirement

1. The experimental rods are homogenous in quantity, uniformly heated, distributed around the light source in an equal-distance fan shape, and are convenient for pupils to build, and the light source is safe and low in consumption;
2. Three experimental rods with different surface colors and the same material. The experimental equipment consists of a heat-absorbing (dissipating) research integrated experimenter, three experimental rods with different surface colors, the same material, and a 50W power supply."

Apparatus for Work Done by Compressing Gas

TP2007



This product consists of a holder, a 100 ml syringe, a rubber hose and a quick temperature probe. It is used to study that temperature rises gradually when certain volume of air being compressed constantly.

Typical experiment

- Work Done by Compressing Gas

Law of Boiling (Cooling of Hot Water) Demonstrator

TP4012



"Used for ""Cold and Hot"" experiment of primary school science to explore the cooling law of hot water and the boiling phenomenon of water.

The apparatus consists of safety and explosion proof alcohol lamp, sensor bracket, iron stand, asbestos net, beaker, etc."

Heat Absorption and Dissipation Demonstrator (Liquid)

TP4010



This product consists of infrared heater, test tube holder, temperature sensor supporting part, temperature sensor fixing ring and test tubes. It is used to explore the heat absorption and dissipation performance of liquid.

Labor Saving on the Slope Experimental Equipment

TP4014

This product consists of control parts, trolley, power adapter and USB cable. It is used to carry out 'slope enlightenment' in primary school experiment. To explore the impact of slope on pulling force.



Requirement

1. The angle of slope could be adjusted within 0-90 degree continuously. Track should be longer than 500mm so that enough data can be collected while car is moving.
2. Uniform velocity motor is powered by 12V. It can rotate on both forward and reverse direction and is able to stop.
3. Built-in double module Bluetooth and 100mAh lithium battery. Both wire and wireless connection are accepted.
4. Auto stop operation of car when it reaches end of track. Product consists of triple-level speed motor, three track with different touching surface and small car with built-in sensor.

Velocity of Trolley Motion

TP4017



This product consists of track shaft, testing trolley, track, weights and weights bucket, which used for "Trolley Motion" experiment for primary school science, and "comparing the speed of the object movement" experiment in junior middle school physics, to explore the relationship between the speed of the movement of trolley and the factors such as tension, friction surface, trolley mass, the number of small wheels of trolley.

Requirement

1. The length of the track is not less than 800mm, which is convenient for experimental operation.
2. It is free to increase the weights and change the mass and pulling force of the trolley.
3. A light barrier is installed on the multi-functional trolley to measure the movement time of the trolley.
4. The number of small wheels can be changed without changing the mass of trolley. The experimental device consists of a multi-functional trolley, two kinds of frictional surface motion tracks, weights, and a ruler card slot.

Apparatus for Work Done by Friction

TP2011



This product consists of copper pipe and table clamp, cotton cord and rubber stopper. It is mainly used to verify that work done by friction can change the internal energy of an object. The product structure is simple. Assembly is not required. It has clear experimental result.

Typical experiment

- Heat by friction

Solar Cell

TP2037



This solar cell consists of baseplate, holder, fixing board, panel and solar panel. It is mainly used to study the working principle of solar power generation and the factors affect it.

Typical experiment

- Solar cell

Dust Explosion Demonstrator

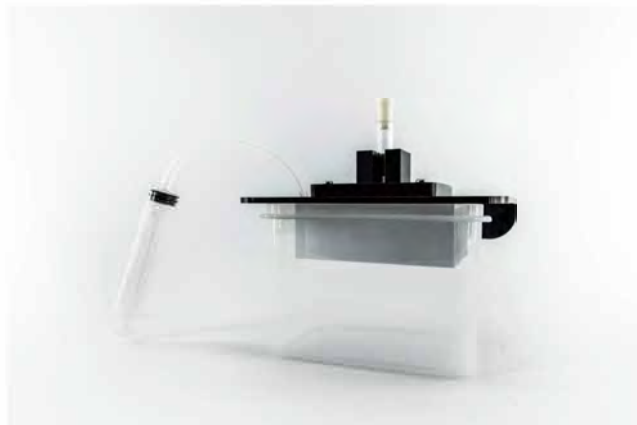
TP6029



It is used to explore the experimental principle of dust explosion. The whole process of starch burning and explosion can be clearly observed, deepen students' understanding of combustion conditions, and further understand the principle of fire extinguishing. It consists of a clamshell crisper, an elbow through the plate, a rubber tube, a dust blowing ball, a candle, a starch, a lighter and a fireproof frame.

Water Solidifying & Ice Melting Demonstrator

TP2030



The product consists of ice maker, water tank and 12V 8A adapter. It is used to observe the water solidifying and ice melting phenomena and analyzing its regulation.

Typical experiment

- Water Solidifying & Ice Melting

Apparatus for Temperature Change Rule of Solid Melting

TP2092



The product consists of beaker, long test tube, binder clip and other parts. Used for the "melting characteristics of solid" in junior middle school, to explore the temperature change characteristics of solid before and after melting and during melting. The product is easy to build and operate. It has clear experiment result.

Intelligent Power Supply

TP2094



This product consists of internal power supply, main board and control panel, with single cycle, multi-cycle (2-3 cycles) and continuous waveform output. Single-cycle and multi-cycle output waveform is triggered by the trigger button. Output form: DC voltage (0.5-20v) can be continuously adjusted. Sine wave/triangle wave/trapezoidal wave/square wave amplitude (0.5-20v peak value) continuously adjustable; Sinusoidal/square wave frequency is continuously adjustable from 1Hz to 1KHz. The triangular/trapezoidal waves are continuously adjustable in front and behind independently. Maximum output current 1A, with overload protection. It can be used with various electrical experimental equipment to complete electromagnetic physics experiments, such as electromagnetic induction phenomenon, magnetic effect of current, the relationship between uniformly changing electric field and generating magnetic field, electric resonance phenomenon and so on.

Apparatus for Fluid Pressure

TP2095



This product consists of three PPR pipes with different pipe diameters, two special-shaped connections, 220V electric air pump, air pump fixing seat, and pipe fixing seat. Used to explore the inverse relationship between liquid pressure and flow rate. It is integrated and does not require assembly. It is easy to operate and has clear experiment result.

Law of Resistance Experimental Equipment II

TP6003



The equipment is used in "resistance" for junior high school physics, used in "resistance law" experiment for high school physics, used to explore the resistance's material, length, cross-sectional area to the conductor resistance size influence. The device consists of a Law of Resistance Experimental Equipment II and a clip-type jack hook. The equipment material is nickel-chrome wire, manganese copper wire, iron-chromium wire, it can study the influence of the three factors of type, length, and cross-sectional area on the resistance.

Heat Effect of Infrared Ray Experimental Equipment

TP6008



It is used in "invisible light to the human eye" for junior high school physics, to explore that there is a significant thermal effect outside the infrared ray. The experimental device consists of a parallel light source, a prism, a light screen, and a temperature measurement component. It is required that the experiment can not only see the obvious dispersion phenomenon, but also can measure the thermal effect of various colors of light with an equal distance fan-shaped movement. The equipment is convenient for students to build and the light source is a parallel light source.

Pocket Biochemical Seal Experimental Equipment

TP6018



Acrylic material, height * diameter: 153.5*60, with silicone cover and silicone plug. It can be connected with oxygen sensor, carbon dioxide sensor, etc., for photosynthesis, respiration, decomposition of hydrogen peroxide and other experiments in biochemical experiments.

Dynamical System

TM1001

Dynamical system is a multifunctional and open experimental platform that allows students or researchers to assemble experimental equipment based on their own experimental ideas to complete experiments. Therefore, the assembly of Car rail experimental device has great flexibility, and the assembly method and required equipment will also change as the experiment changes. So the assembly of device is an open and self-service assembly form guided by experiments and based on existing auxiliary materials, which can maximize human creativity and imagination.



Experimental cases

1. X-t images of uniform linear motion;
2. X-t and v-t images of uniformly variable linear motion;
3. Measure the acceleration of uniformly variable speed linear motion using two photogates;
4. Explore the relationship between acceleration, tension, and mass;
5. The kinetic energy theorem for doing work with constant force;
6. The kinetic energy theorem for variable force work;
7. Change the initial kinetic energy and measure the relationship between velocity changes;
8. The theorem of momentum under constant force;
9. The theorem of momentum under the action of variable forces;
10. The momentum theorem of collision forms;
11. The law of conservation of momentum;
12. Free falling motion;
13. Simple harmonic vibration in the vertical direction.

Gas-liquid Seal Experimental Equipment

TP6022

This product consists of plastic sealing bottle, with sensor probe jack and rubber plug, 780ml capacity. It can be connected with temperature sensor, oxygen sensor, carbon dioxide sensor and humidity sensor, which can be used for photosynthesis and respiration of yeast in biochemical experiments.



Apparatus for Boiling Point and Pressure

TP6033



Used for vaporization and liquefaction of junior middle school physics to explore the relationship between boiling point and pressure. This product consists of iron stand, syringe kit, conical flask 250ml, beaker holder, asbestosed wire gauze, flask clamp, flask clamp holder, tube holder and alcohol lamp. It is used to explore the boiling point changes under two different pressures of standard atmospheric pressure, we can measure the changes of temperature and pressure at the same time, and explosion-proof alcohol lamp is safe and high temperature resistant.

Apparatus for Joule's Law

TP6039



It is used to explore the thermal effect of current in the physics "electrical work and current" in junior high school. The apparatus can explore the relationship between current thermal effect and current, resistance. By setting up experiments, students can get the experimental data and grasp the knowledge points of "current heat effect". It consists of panel components, base components, cup body components and sensor fixed components. It is equipped with two pieces 3Ω and one piece 1.5Ω resistance wires to generate heat, equipped with one piece 3Ω metal film resistor used in parallel to research the relationship between calorific value and the current.

Digital Flame Measurement Demonstrator

TP6038



It is used for junior high school chemistry "The temperature of the flame", to explore the stratification of the flame and the relationship between the temperature of each layer. It consists of acrylic lampshade, K-type removable high-temperature sensor components and stainless steel alcohol lamp. The experimental device can guarantee the relative stability of the flame combustion and the digital temperature display, so that students can have a more intuitive understanding.

Geomagnetic Field Generator

TP6041



It is used to recognize the electromagnetism phenomenon in junior high school physics and to study the electromotive force knowledge in senior high school physics. The relationship between the rotational speed and direction of the coil and the magnitude and direction of the current can be explored. The device is composed of a support plate, a coil rotating part and a base part.

Hand-cranked Magnetic Field Generator

TP6043



It is used in the physics "electromagnetic induction" in junior high school, which can be used to explore the electric current generated when the wirecuts the magnetic field. It consists of silicone cable, hand-operated part, terminal part and H-shaped spool.

Physical Optics Experimental Package for Junior High School

TP6044



It is used in the experiments of rectilinear propagation of light, reflection of light, refraction of light, the rule of convex lens imaging and pinhole imaging of junior high school physics.

- 1) Explore the experimental rectilinear propagation of light in uniform medium.
- 2) Explore the relationship between reflected light, incident light and normal line when light is reflected.
- 3) Explore the relationship between refracted light, incident light and normal line when light is refracted.
- 4) Explore the relationship between the imaging properties of objects through convex lens and object distance.

The experimental device is composed of three-line parallel laser, water tank, floating humidifier, pinhole imaging device, and reflection demonstrator. 1) Three parallel lasers can emit three sets of parallel light through the main body of the water tank and internal lens to observe the linear propagation, refraction and convex lens imaging of light. 2) Equipped with a floating humidifier to generate water mist, but the light passing through is clearly visible for easy observation. 3) Equipped with holes of square, circle and triangle, and with f-type light source to explore the characteristics of pinhole imaging. 4) Equipped with a reflection demonstrator, it can observe the reflected incident and exit Angle of the background plate, and explore the light reflection experiment.

Apparatus for Carbon Dioxide Property

TP6051

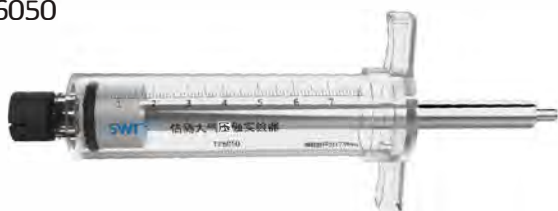


"Used to explore the property of carbon dioxide in junior high school chemistry. Four experiments can be completed at the same time, including the dumping of carbon dioxide, solubility of carbon dioxide, the reaction of carbon dioxide with the clear lime water, and the reaction of carbon dioxide with water.

The apparatus consists of a main body, a combustion bench and a small beaker. The combustion bench is equipped with a fixed alcohol cotton device, which replaces the traditional candle and is easy to light and can be reused. Dry and wet purple litmus paper can be placed on the combustion bench at the same time, which is convenient for comparison experiment and observation. The combustion bench has fixed holes, which are fastened on the protrusion of the main body of the apparatus to ensure the stability of the combustion bench, and it is also easy to remove and ignite."

Apparatus for Estimating Atmospheric Pressure

TP6050



It is used for junior high school physics "estimation of atmospheric pressure experiment", the atmospheric pressure is calculated by using atmospheric pressure and cross-sectional area of the syringe, $P=F/S$. It is composed of syringe, plug, piston and pull rod, used to estimate atmospheric pressure.

Apparatus for Mass Conservation

TP6054



Range is 0~500g, resolution is 0.01g. For junior high school chemical mass conservation law. It can detect the small change of mass in the process of chemical reaction and verify the law of conservation of mass. The apparatus consists of a fixed frame, a built-in high-precision micro-force sensor and a tray.

Apparatus for Determining Oxygen Content in Air

TP6056

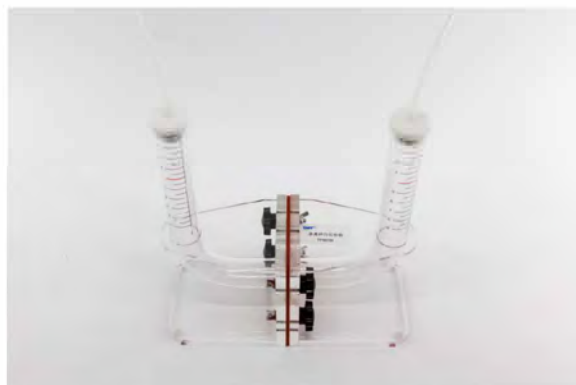


"Used for measuring oxygen content in air in junior high school chemistry. It can not only observe the burning of red phosphorus, but also monitor the change of oxygen content and pressure in the bottle during the burning of red phosphorus.

The apparatus consists of combustion sealing table, gas collecting bottle, beaker and high voltage power supply. The combustion sealing table is equipped with rubber plug matching the aperture of the sensor probe, high voltage power supply is made of high-quality ABS shell, high voltage resistant silicone wire, high voltage resistant safety socket, and the fuse can be changed. The red phosphorus in the spoon is ignited by high voltage to avoid the harm caused by ignition outside the bottle, which is safe and environmentally friendly."

Permeation Research Experimental Equipment

TP6059



"Used for ""research permeation"" experiment of biology in junior high school and senior high school.

Combined with the pressure sensor, it can explore the pressure changes on both sides of the semi-permeable membrane in the permeation process. The combination of ion sensor (such as chloride ion sensor) and conductivity sensor can explore the change of ion concentration on both sides of the membrane in the permeation process. The apparatus consists of the main body, air guide accessories and semi-permeable membrane, equipped with sealing fin to maintain good air tightness of the device, with equi-high red scale line and a volume of about 60mL at the scale line."

Ion Drop Counter

ZC1036



"It is used in various kinds of titration experiments in chemistry, such as acid-base neutralization titration experiment, and partial ion content determination. It consists of USB ion-titration counter, titration component, long tail clip, adapter, aluminum rod, iron stand, pH probe and other components. Among them, USB ion-titration counter range: $0\sim\infty\text{c}/0\sim\infty\text{mL}$, resolution: $1\text{c}/0.01\text{mL}$, accuracy: $\pm 1\text{c}/\pm 0.1\text{mL}$, including a lightning interface, Q9 interface, temperature probe interface, supporting connection into different probes, expand into the following sensors:

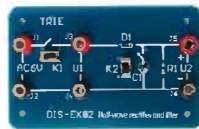
1. pH sensor, range: $0\sim 14$, resolution: 0.01 , accuracy: $\pm 0.2\text{pH}$.
2. Temperature sensor, range: $-40\sim 135\text{ }^\circ\text{C}$; resolution: $0.1\text{ }^\circ\text{C}$; accuracy: $\pm 0.6\text{ }^\circ\text{C}$.
3. Dissolved carbon dioxide, range: $0.2\sim 440\text{ppm}$, resolution: 0.1ppm .
4. Nitrite ion sensor, range: $0.5\sim 4600\text{ppm}$, resolution: 0.4ppm .
5. Nitrate ion sensor, range: $0.6\sim 6200\text{ppm}$, resolution: 0.4ppm .
6. Chlorine ion sensor, range: $1.8\sim 3550\text{ppm}$, resolution: 0.3ppm .
7. Ammonium ion sensor, range: $0.9\sim 1800\text{ppm}$, resolution: 0.1ppm .
8. Sodium ion sensor, measuring range: $0.2\sim 2300\text{ppm}$, resolution: 0.2ppm .
9. Potassium ion sensor, range: $0.2\sim 39000\text{ppm}$, resolution: 3ppm .
10. Calcium ion sensor, range: $0.4\sim 4000\text{ppm}$, resolution: 0.7ppm ."

Electrics experimental Plates (17 pieces)

TM3001



EX01
RC-RL phase shift



EX02
Half-wave rectifier and filter



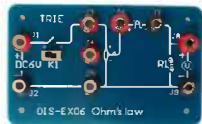
EX03
Full-wave rectifier and filter



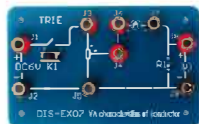
EX04
Charging & discharging and series-parallel circuit of capacitor



EX05
LC oscillation circuit



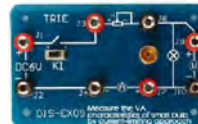
EX06- Ohm's law



EX07
VA characteristics of conductor



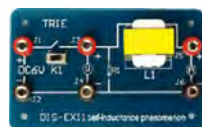
EX08
Measure the electrodynamic potential of the battery by compensation method



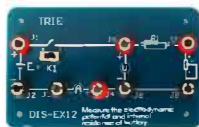
EX09
Measure the VA characteristics of small bulb by current-limiting approach



EX10
Measure the VA characteristic curve of small bulb by voltage-tapping approach



EX11
Self-inductance phenomenon



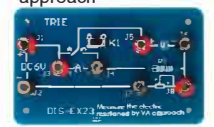
EX12
Measure the electrodynamic potential and internal resistance of battery



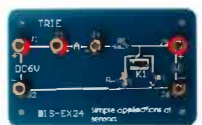
EX21
Serial-parallel circuit of resistance



EX22
Relation between power output and load



EX23
Measure the electric resistance by VA approach



EX24
Simple applications of sensors



EX25
Electromagnetic induction phenomena

Chemical Reaction Rate Experimental Equipment

TP6063

It is used to explore the effect of catalyst on hydrogen peroxide decomposition, metal and acid reaction and the high efficiency of enzyme catalysis in biology. The apparatus is mainly composed of sealed reaction bottle, pressure relief component and screw injector. The device is equipped with syringe switch and pressure relief valve, which fully guarantees the safety of the experiment. Screw injector and sealed reaction bottle with cover ensure the sealing of the apparatus, greatly reduce the experimental error caused by gas escape, and make it more scientific and rigorous.



Apparatus for Internal Pressure of Liquids

TP6032

This product consists of apparatus for internal pressure of liquids (including rubber band), water tank and sensor connector. It is used to explore internal pressure of liquid and factors affect it. It realizes the combination of traditional experiment and digital experiment and measures the experimental results at the same time.



Bone Decalcification Demonstrator

TP6072



"Used in junior high school biology ""human reproduction and development"". It is used to verify the main components of bone and to explain the relationship between the functional characteristics of human body structure and the components of structure. The carbon dioxide sensor is connected to the apparatus, and through the acidification treatment (decalcification) and calcining (removal of organic matter) of the fish bones, it is found that the decalcified bone do not contain inorganic salt. The apparatus is composed of experimental chamber, upper cover, silica gel plug and other parts, equipped with beaker and tweezers."

Toroidal Coil

TM3201



It is used to explore the relationship between the direction of current passing through the toroidal coil and the direction of magnetic field generated by the toroidal coil. Meanwhile, it can also be used to explore the relationship between the current passing through the toroidal coil and the intensity of magnetic field generated by the toroidal coil. It is made of multi-turn copper wire, and the binding post is installed on the product support plate to facilitate the test.

Apparatus for Acid-base Reaction Heat



"It is composed of adiabatic barrel, beaker, etc. It can achieve accurate measurement of chemical reaction heat."

Apparatus for Water Boiling

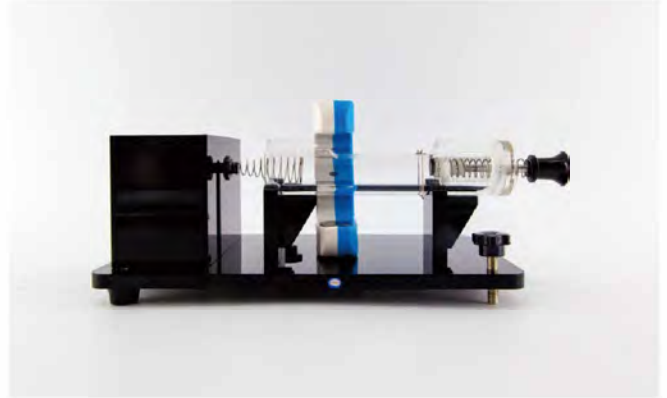
TP6027

The product consists of iron stand, stainless steel alcohol lamp, 250ml beaker holder, asbestos wire gauze, 250ml beaker, rotary union, temperature sensor holder hand screw and cardboard cover. It is used to explore temperature and bubble rising change before and after water boiling. And in the vaporization experiment of junior middle school physics, to explore the phenomenon of water boiling and the condition of continuous boiling of hot water. The product is practical and easy to operate.



Apparatus for Momentum Theorem

TP2080



It consists of ejection device, launching track, two experimental balls with different materials, horizontal adjustment mechanism, built-in Photogate sensor and built-in micro force sensor. Among them, Photogate sensor range: $0 \sim \infty$ s, resolution: 1 μ s. Measuring range of micro force sensor: ± 2 N, resolution: 0.001N, accuracy: $\pm 1\%$. The apparatus by measuring the balls are in the process of collision impulse is equal to its momentum variation, verify the momentum theorem: $Ft = \Delta vm = m \cdot v_2 - m \cdot v_1$.

Simulated Ecosystem

TP6069

It consists of 3 photosynthesis experiment chambers, bottom tray and a series of rubber plugs, which can simulate various environmental states and mutual influences. Equipped with various silica plugs and absorbent cotton silver, it can connect temperature, humidity, carbon dioxide, O₂-DO and other sensors, which can be used for photosynthesis, respiration and ecosystem simulation in biochemical experiments.



Solenoid

TM3202



Used to measure the uniform magnetic field inside a energized solenoid. When the solenoid has a certain length-diameter ratio, a uniform magnetic field will be generated inside the solenoid after electrification. By changing the current through the solenoid or changing the number of turns of the coil connected to the circuit, the relationship between the current and the number of turns of the coil and the magnetic field intensity inside the solenoid can be explored. It is made of multi-turn copper wire and covered with white plastic ring, which is used to protect the coil. The binding post is installed on the product support board to facilitate experimental construction.

Car Track

TP2033



Car track is experiment apparatus that can easily perform most kinetic experiments for junior & senior high school. The apparatus setup varies with experiments so that setup methods and apparatus required are changing. It can stimulate students' imagination and innovation. This apparatus has multi-function and full set of supporting materials. It is solid, light, easy to assemble, variable and disassemble for storage.

Configuration: guide rail (length 1.2m)×1, car ×1, L-type bracket ×2, wide L-type bracket, pulley ×1, weight ×3, weight hook ×1, thin rope ×1, light baffle ×1, collision spring ×2, buffer baffle ×1, pulley frame ×1, a set of fasteners, a set of miniature L-type bracket, a set of miniature L-type pulley frame, etc.

Typical experiment

- Motion diagram for uniform variable rectilinear motion
- Velocity diagram of uniform variable rectilinear motion
- Explore how acceleration is influenced by pulling force and mass.

Free Fall Motion Demonstrator

TP6057



Used in "free fall motion" experiment in senior high school physics, it can verify that free fall motion is uniformly accelerated motion, and the change of mass does not affect gravity acceleration, and the value of gravity acceleration can be calculated. Through the electromagnet adsorption and release of the barrier, the falling speed and the acceleration of the free fall body are calculated through the photogate. In the experiment, there are three different types of barriers and two kinds of hook codes. The accuracy of the six data measured by collocation is within 1‰. The device consists of free fall apparatus, fence board, hook code, USB data cable, charger and Bluetooth adapter. There are three types of barriers: 2cm, 1.6cm, 1.4cm. Electromagnet parameters: DC5V, battery is 14500 lithium battery.

Hall Effect Demonstrator

TP2103



It is used to explore Hall effect experiment (the effect of electromotive force generated by the interaction of current and magnetic field in conductive materials). The apparatus is composed of hall effect demonstrator, bar magnet, USB data cable, charger and Bluetooth adapter.

Wireless Centripetal Force Demonstrator

TP6012



Used in the study of "centripetal force" in high school physics, to explore the relationship between centripetal force and angular velocity, radius, quality and time. Force sensor range: $-10N-10N$, resolution: $0.01N$, precision: $1\% F.S$; angular velocity sensor range: $0-35rad/s$, resolution: $0.1rad/s$, precision: $1\%F.S$; Experimental device comprises of a base, a supporting rod, the centripetal force of wireless body, fasteners, bob, Bluetooth adapter. Built in angular speed sensor and force sensor, built-in lithium battery and Bluetooth module, wireless connection supported. Bob mass and rotation radius are changeable, also rotating arm in the range of $0\sim 90$ degrees is adjustable.

Electromagnetic Wave Demonstrator

TP4001



Transmitting Module

Carrier frequency: $200Hz$.
Modulation wave frequency: $2\sim 20Hz$.
Modulation wave line: sin wave, triangular wave, square wave is optional.
Adjustable output amplitude.
Transmitting distance: $\leq 5m$ (external antenna, open and unobstructed).

Receiving Module

used in conjunction with the transmitting module, it can accept the electromagnetic wave signals generated by the transmitting module.

Apparatus for Joule's Law

TP4005



It is composed of circuit board, rubber plug and base, which can be used for Joule's law experiment. Used with temperature sensor, it can measure the relationship between current thermal effect and current.

Electrostatics Kit

TP2089



Contains Faraday ice bucket, shielding net, metal grounding plate component, silk, acrylic rod component, fur, rubber rod component, electrical appliances, charge separator component, alligator clip line, towel. Able to complete such as charge conservation and other electrostatic experiments.

High Voltage Electrostatics Kit

TP2091



Including high voltage electrostatic generator, conductor ball and alligator clip line, combined with the electrostatic kit can complete the corresponding electrostatic experiments.

Force Measuring Plate

TP2090



Include USB/Bluetooth mainboard, stainless steel shield, mat and force sensor with high range. It can be used to measure weight of human, over weight, weight loss, action and reaction force.

Digital Photoelectric Effect Demonstrator

TP2602



"Used for senior high school physics ""particle property of light"" experiment to explore photoelectric effect phenomenon.

Requirement

1. Demonstrate the phenomenon that the photocurrent increases with the increase of voltage and reaches the saturation current.
2. Demonstrate the phenomenon of the larger the light intensity and the larger the saturation current.
3. Explore the relationship between photocurrent and voltage under different light sources with different frequencies and light intensities.
4. The device can be used independently, but also combined with the computer to complete the experiment.

The integrated design of the apparatus includes photoelectric effect tube, 1.5W light source, 4 kinds of color shading plates, built-in micro-current sensor and voltage sensor, micro-current and voltage digital display module, -12V~12V continuous adjustable power supply."

Digital Faraday's Law of Electromagnetic Induction Demonstrator (Induced)

ZC6019



It consists of primary coil, secondary coil, base and built-in magnetic field sensor, micro voltage sensor, etc. It is mainly used to explore Faraday's law of electromagnetic induction. Through the change of the primary coil current, the change of magnetic flux of the secondary coil can be detected, and the change rate of magnetic flux and the proportional relationship with the generated electromotive force can be accurately analyzed.

Apparatus for Charles Law

TP6037



It is used for high school physics "Isometric change of gas", the device is used to explore a certain mass of gas at constant volume, its pressure P is proportional to the thermodynamic temperature T . It consists of Charles law tester apparatus, tube bracket, 150ml measuring cup.

Apparatus for Study of the Distribution of Pillworm

TP6061



Used in the biological experiment of "abiotic factors affecting the distribution of pillworm". To explore the influence of abiotic factors such as temperature, light and humidity on the distribution of pillworm. The apparatus consists of a main body and a power adapter. The main body consists of two environment rooms and a transition room. The accessories are sponge, a transition room cover and an environment room cover. Use plexiglass material, with good heat resistance. Visualization of the cover, no need to open it to observe the distribution of pillworm, simple and convenient. The influence of light on the distribution of pillworm is studied by comparing tawney and transparent colors. Sponge is selected to absorb water and dry sponge to explore the influence of humidity on pillworm. The influence of temperature on the distribution of pillworm can be studied by using carbon film heating resistance. Low power electronic components, high safety, no harm to animals. Power adapter: input: AC220V, output: DC9v 1A. Carbon film resistance: 2005W heating power 4W.

Digital Faraday's Law of Electromagnetic Induction Demonstrator (Motional)

TP6013



It is composed of pressure plate, support plate, bottom plate, support column, slide rod and 60ml large syringe. Combined with the pressure sensor, it can well complete the verification experiment of Boyle's law.

Boyle's Law Demonstrator

TP2025



It is composed of pressure plate, support plate, bottom plate, support column, slide rod and 60ml large syringe. Combined with the pressure sensor, it can well complete the verification experiment of Boyle's law.

Digital Conservation of Mechanical Energy Demonstrator

TP6017



It is used in high school physics "mechanical energy", to explore the conservation of mechanical energy. The experimental device consists of a panel, a light barrier, a photogate part, a bracket, etc., and has a built-in Bluetooth and lithium battery that can be wirelessly connected to a computer. It has 12 light-adjusting height adjustment positions and can simultaneously obtain kinetic energy, potential energy, and mechanical energy data of 6 groups of objects at different heights.

Apparatus for Uniform Magnetic Field

TP6040



It is used for "research on uniform magnetic field" in high school physics. On the premise of studying the characteristics of uniform magnetic field, the apparatus can expand and explore the relationship between the magnetic field intensity inside the electrified solenoid and the size of the electrified current and the number of turns of the coil per unit length. Made of copper wire twin-turn solenoid, bracket, track, sensor sliding bracket, ruler. Sliding bracket for fixing magnetic induction intensity probe. The binding post is installed on the product bracket for easy use. In addition, the front of the apparatus is equipped with a ruler for reading the position of magnetic induction intensity probe.

Two-dimensional Plane Motion Kit with Electromagnetic Positioning System

TP6100

The kit is suitable for completing experiments in the field of two-dimensional plane motion in middle and high school physics subjects. It uses the principle of electromagnetic positioning to measure the position of the signal source at any time. Through high-frequency collection, it can fully depict the trajectory of objects in two-dimensional plane motion kit. And through software calculation, the velocity and acceleration of the object at any time can be obtained. This kit can be measured while displaying movement phenomena. the advantage is accurate data, clear display of physical laws, and minimal impact from environmental factors.

Part 1

Electromagnetic positioning system sensor (TPA024)



Part 2

Two- dimensional plane motion of pendulum (TP6084)



Part 3

Two -dimensional plane motion of horizontal projectile and oblique projectile motion (TP6085)



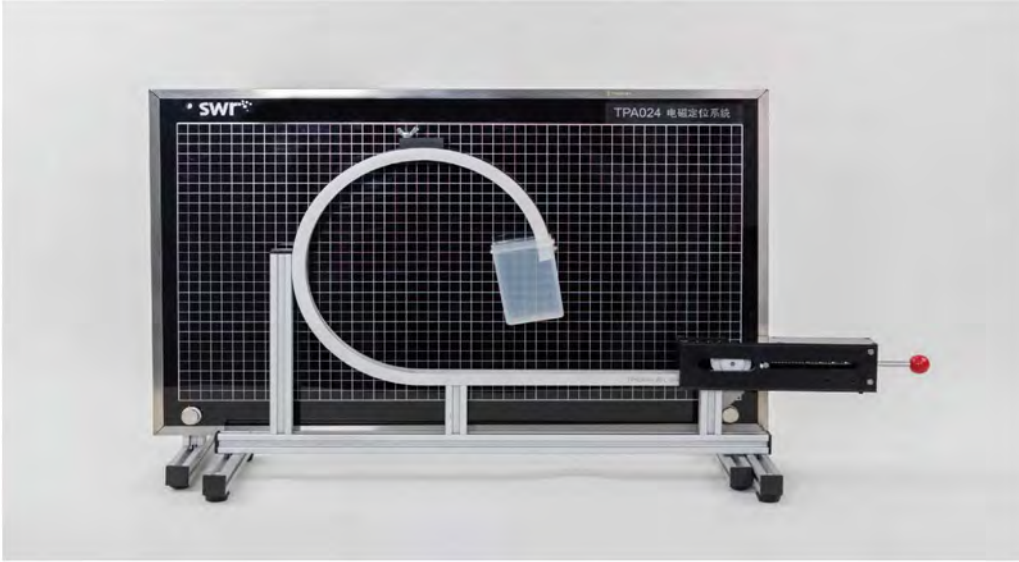
Part 4

Two -dimensional plan motion of free fall (TP6088)



Part 5

Two-dimensional plane motion of centrifugal motion (TP6096)



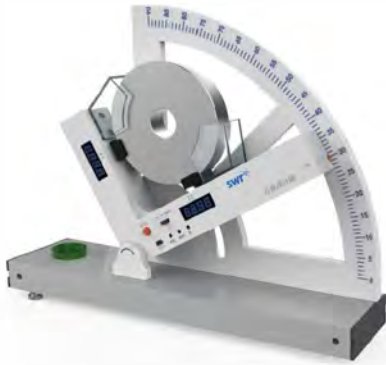
Part 6

Two-dimensional plane motion of centrifugal motion (TP6096)



Apparatus for the Synthesis and Decomposition of Force on Inclined Plane

TP6055



It is used in the experiment of "force synthesis" and "force decomposition".

- 1) explore the parallelogram rule of force synthesis.
- 2) explore the triangle rule of force decomposition.

The apparatus consists of L-shaped shell component, angle scale, profile base and ring-shaped weight.

Built-in force sensor, angle sensor.

- 1) built-in force inclination sensor, Bluetooth, support wired and wireless transmission.
- 2) built-in lithium battery, easy to use.
- 3) equipped with zero calibration button, which can calibrate force sensor with one button.
- 4) the built-in display screen of force sensor can directly observe the change of force data when the angle changes.
- 5) small data error, within 5% error accuracy.

Vector Force Plate

TP6066



It consists of adapter, bearing rod, rubberized bearing, weights and weight hooks component, hook component, dial, iron stand, sensor support arm component, and main shaft, with two force tilt sensors and supporting software can perfectly achieve vector force Synthesis and decomposition experiments.

High Voltage Power Supply

TPA001



Input: DC 5V-500mA, output: 750V, 1500V, 3000V, 6000V, which is adjustable. Four-hole output, one ground terminal, used for experiments that generate high voltage, such as high-voltage electrostatic kit, with security indicator light and fuse, which can rest assured to use.



Solution

SWR Solution with SenseDisc

The SenseDisc Digital Lab Solution is specially designed for primary, junior high and senior high schools. It helps both teachers and students to carry our experiments in Physics, Chemistry and Biology. This solution covers : SenseDisc sensors and dataloggers, experimental sets and SenseDisc iLab software.

Digital Experiment Solution for Primary School Science

Solution

Experimental Equipment

*Intelligent
Integrated design*



Datalogger

*Built-in display
Experiment indoors and outdoors*



Digital Experimental System Products

*Compact and portable
Free replacement*



Sensor

*Cartoon interface
Diversification of display forms*



Experiment Software

Datalogger and Sensor

SenseDisc

Surround design, the sensor is flexibly embedded in the channel port around the Datalogger, creating a simple cable-free environment for students to explore the scientific world.

The Datalogger has built-in temperature, pressure and acceleration sensors, and equipped with temperature, voltage, light, humidity, oxygen, pressure and heart rate sensors.

Built-in 3.5-inch TFT true color touch screen has the function of offline collection, which can be brought into the classroom or out of the outdoors to complete scientific inquiry.



Software & Apps

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Built-in 3.5-inch TFT true color touch screen has the function of offline collection, which can be brought into the classroom or out of the outdoors to complete scientific inquiry.



Experimental Equipment

The integrated design helps to get rid of redundant and tedious equipment operation, and the experimental process is safe and stable, creating possibilities for students to explore and research independently.

It has strong applicability, and supports many kinds of experiments, such as "motion law of pendulum, the heat-absorption and heat-dissipation performance of objects with different colors, friction force, the cooling rule of hot water, the labor saving on the slope, and velocity of trolley motion".



Velocity of Trolley Motion



Friction Force



Motion Law of Pendulum



Labor Saving on the Slope



Heat Absorption(Dissipation) Studying Demonstrator



Heat Absorption and Dissipation Demonstrator(Liquid)



Burning Secret

Digital Experiment Solution for Middle School Physics, Chemistry and Biology

Experimental Equipment

Intelligent Integrated design



Datalogger

Built-in display
Experiment indoors and outdoors



Digital Experimental System Products

Compact and portable
Free replacement



Sensor

Cartoon interface
Diversification of display forms



Experiment Software

Datalogger and Sensor

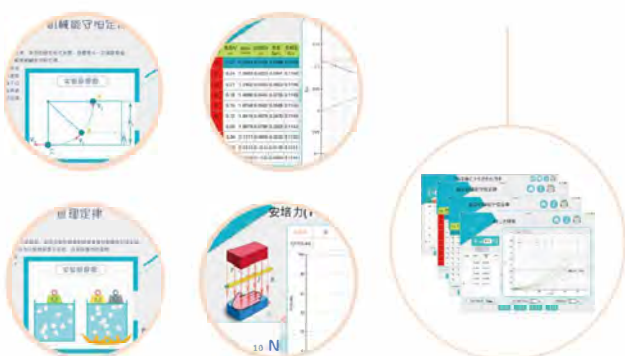
SenseDisc

The sensor is flexibly embedded in the channel port around the Datalogger to create a simple and cable-free experimental environment. With the function of offline collection, it can read, record and store experimental data through the 3.5-inch TFT true-color touch screen in real time, which can be brought into the classroom and out of the outdoors to complete scientific inquiry with great ability.

Built-in ambient temperature, barometer, altimeter, GPS and three-axis acceleration sensor, and equipped with current, temperature, light, sound, heart rate and other sensors, convenient for high school science related experiments.



Software & Apps



Support Windows, android, iOS and Mac OS, equipped with special experimental software, easy to operate, convenient and practical.

Dynamic effect: there is a progress bar in the software value display area. It changes with the experimental value, and the dynamic progress bar can attract students' interest.

User interface visual design:

The software user interface visual design, teachers and students can easily preset experimental conditions and collect data. Some specific experiments can use a preset panel as well as a custom panel.

Experimental Equipment



Buoyancy Law Experiment

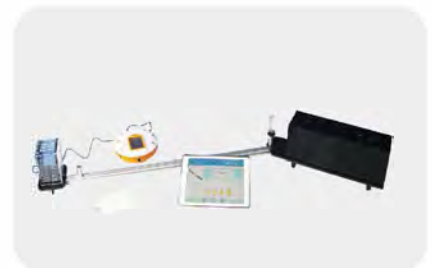
It is used in junior high school physics "buoyancy", to explore the amount of buoyancy of an object immersed in a liquid is equal to the gravity of the liquid being displaced by the object.

Taking the textbook as the prototype, the lifting platform of the experimental equipment adopts the gear lifting structure to move the heavy weight from top to bottom. The buoyancy and gravity of boiling water can be measured simultaneously.

Heat Effect of Infrared Ray Experiment

It is used in "invisible light to the human eye" for junior high school physics, to explore that there is a significant thermal effect outside the infrared ray.

The experimental equipment is convenient for students to set up, and the light source is parallel light source, which can explore the heat effect of various colors of light, and solve the problem of not being able to experiment without sunlight.



Wireless Centripetal Force Experiment

Used in the study of "centripetal force" in high school physics, to explore the relationship between centripetal force and angular velocity, radius, quality and time.

The built-in force sensor and Photogate sensor make the experimental data collection more sensitive.

Digital Conservation of Mechanical Energy Experiment

It is used in high school physics "mechanical energy", the law of conservation of mechanical energy is verified by comparing the mechanical energy of a pendulum ball at different heights during its swing with a device similar to a single pendulum.

The velocity and kinetic energy of the pendulum ball can be obtained by the Photogate sensor



Digital Faraday's Law of Electromagnetic Induction Experiment (Motional)

It is used in "Faraday electromagnetic induction" experiment in high school physics, to explore the influence of coil length, cutting line velocity, magnetic field intensity and other factors on induced electromotive force.

The experimental equipment uses the speed generated by the coil falling from different heights to cut the magnetic induction line and generate the induced electromotive force.

Configuration of Primary Science

Item	Experimental Name	Experiment Equipment	
		Sensor Module	Accessories
1	Secret of burning	S1005 DO-O ₂ sensor S1007 CO ₂ sensor	TP2018 Photosynthesis Experimental Chamber
2	Photosynthesis	S1005 DO-O ₂ sensor S1007 CO ₂ sensor	TP2018 Photosynthesis Experimental Chamber
3	Law of pendulum motion	S0016 Photogate sensor	TP4007 Motion law of pendulum Demonstrator
4	Simple circuit	S0005 Current sensor	Electrical Magic Module
5	Converging effect of Convex lens	S0009 Temperature sensor	TP2039 Convex Lens Focusing Device
6	Leverage	S0014 Force sensor	TP4018 Leverage
7	influence of force on the shape of object	S0014 Force sensor	P2060 Miniature Material Tester
8	Conductors and Insulators	/	TP4009 Conductors and Insulators
9	The vsble Sound	S0021 Sound sensor	TP2038 Experimental kit for three elements of sound
10	Volume and tone of sound	S0021 Sound sensor	TP2038 Experimental kit for three elements of sound
11	Conductivity of glass	S0006 Micro current sensor	TP2010 Glass Electric Conductor
12	Friction force	S0014 Force sensor	TP4006 Friction Experimental Device
13	Solar cell	S0007 Milli curent sensor	TP2037 Solar Cell Experimental Apparatus
14	What's the temperature	S0009 Temperature sensor	/
15	Measure the oxygen content in the water	S1005 DO-O ₂ sensor	/
16	Test your heartbeat	S1024 Heart rate sensor	/
17	Turbidity of water	ZC1010 Turbidimeter	/
18	Have an Electrocardiograph test	S1011 EKG sensor	/
19	Measure the envronmental humidity	S1008 Humidity sensor	/
20	Measure the light intensity	S0019 Light sensor	/
21	Explore the power of compressed air	S0024 Absolute pressure sensor	/
22	Measure the atmospheric pressure	S0024 Absolute pressure sensor	/
23	pH of different substances	S1002 pH sensor	/
24	Fruit battery	S0007 Milli current sensor	/
25	Measure the wind speed	ZC0031 Wind speed sensor	/

We have more...

Solution

Configuration of Junior High Science

Item	Experimental Name	Experiment Equipment	
		Sensor Module	Accessories
1	Velocity of Objects	Phologate Sensor	Apparatus for Cart in Motion
2	Charatensis of Spring Elongaton	Force Sensor, Split Motion Sensor	Apparatus for Hooke's Law
3	Mass and Gravity	Force Sensor	/
4	Action and Reaction	Force Sensor	Apparatus for Newlon's Third Law
5	Friction	/	Apparatus for Frictional Force
6	Factors Afeccting Buoyancy	Force sensor	/
7	Buoyancy Law	Force sensor	Apparatus for Buoyancy Law
8	Characteristics of Solid Melting	Temperature Sensor	Apparatus for Temperature Change Rule of Solid Meltnng
9	Water Solidificaton and ice Melting	Temperature Sensor	Apparalus for Waler Solidification and Ice Melting
10	Water Boiling	Temperature Sensor	Apparatus for Water Boiling
11	Boiling Point and Pressure	Temperature Sensor Absolute Pressure Sensor	Apparatus for Boiling Point and Pressure
12	Thermal Effect of Infrared Ray	Temperature Sensor	Apparatus for Thermal Effect of Infrared Ray
13	Heat Absorption of Substances	Temperature Sensor	Apparatus for Heat Absorption (Dissipation) of Liquids
14	Heat by Fricion	Temperature Sensor	Apparatus for Work Done by Friction
15	Work Done by Compressing Gas	Quick Temperature Sensor	Apparatus for Work Done by Compressing Gas
16	Internal Pressure of Liquids	Relative Pressure Sensor	Apparatus for Interl Pressure of Liquids
17	Fluid Pressure and Flow Velocity	Relative Pressure Sensor	Apparatus for Fluid Pressure
18	Phologate Sensor	Current Sensor	/
19	Measure the envronmental humidity	Current Sensor	/
20	Measure the light intensity	Voltage Sensor	/
21	Explore the power of compressed air	Current Sensor	Apparatus for the law of Resistance II
22	Measure the atmospheric pressure	Voltage Sensor, Current Sensor	/
23	pH of different substances	Voltage Sensor, Current Sensor	/
24	Fruit battery	Voltage Sensor, Current Sensor	/
25	Measure the wind speed	Temperature Sensor	Apparatus for Joule's Law

We have more...

Configuration of Senior High Science

Item	Experimental Name	Experiment Equipment	
		Sensor Module	Accessories
1	Measuring velocity using sensors	Motion Sensor	Car Track
2	Velocity Changing Regulation	Motion Sensor	Car Track
3	Free Fall	/	2D Free-Fall Apparatus
4	Hooke's Law	Force Sensor, Split Motion Sensor	Hooke's Law Demonstrator
5	Composition & Resolution of Force	Dipmeter(wireless)	Vector Force Panel
6	Force, Mass & Acceleration	Photogate	Car Track
7	Newton's Third Law	Force Sensor	Newton's Third Law Demonstrator
8	Momentum	Force Sensor	Car Track
9	Ohm's Law	Voltage, Current Sensor	Ohm's Law
10	VA characteristics of conductor	Voltage, Current Sensor	VA characteristics of conductor
11	Joule's Law	Temperature Sensor	Joule's Law Demonstrator
12	Factors Affect Resistance	Voltage, Current Sensor	Ohm's Law Demonstrator II
13	Ampere Force	High-Accuracy MF Sensor	Ampere Force Demonstrator
14	Car Collision	/	Digital Photoelectric Track
15	Momentum	/	Momentum Demonstrator
16	Hall Effect	/	Hall Effect Demonstrator
17	Boyle's Law	Pressure Sensor	Boyle's Law Demonstrator
18	VA Characteristics of Small Bulb	Voltage, Current Sensor	Self Setup
19	Charging & Discharging for Capacitor	Voltage, MC Sensor	Charging & Discharging for Capacitor
20	Uniform Magnetic Field	Magnetic Induction Intensity Sensor	Solenoid
21	Induced Current	Voltage Sensor	GM Generator
22	GM Generating	Voltage Sensor	GM Generator
23	Photoelectric Effect	/	Photoelectric Effect Demonstrator
24	Crystal Diode AND Gate	Voltage Sensor	Logic Gates
25	Crystal Diode OR Gate	Voltage Sensor	Logic Gates

We have more...