Product Number: 04

Product Name: IoT Basic Sensor Circuits Trainer

Brand: ZerOne
Model:ZT-IOTSN-7071
Origin: China (Assembly by BD)

(Sample Picture)

Technical Specifications:

Module One:

Chapter 1 Photo Sensor Circuits

Experiment 1: CdS Sensor Circuit ; Operating Wave length: 500 nm - 580 nm

Experiment 2: Photo Diode circuit ; Operating Wave length: 76nm - 1000 nm

Experiment 3: Photo transistor Circuit ; Operating Wave length: 430nm - 670 nm

Experiment 4: Photo Interrupter Circuit ; Operating Wave length: 940 nm

Module Two:

Chapter 2 Switch Sensor circuit

Experiment 1: Tilt Switch Circuit ; Conduction Angel: 55-125 deg. ; SW Normal State: ON ; Operating State: LED Indicator

Experiment 2: Micro Switch Circuit ; SW Normal State: OFF ; Operating State: LED

Indicator ; Experiment 3: Touch Switch Circuit ; SW Normal State: OFF ; Operating State:

LED Indicator ; Experiment 4: Reed Switch Circuit ; SW Normal State: OFF ; Operating State: LED Indicator

Experiment 5: Vibration Switch Circuit ; SW Normal State: ON ; Operating State: LED

Indicator Module Three:

Chapter 3 Temperature Sensor circuit

Module Six: Chapter 6 Gas Sensor Circuits

Experiment 1: Smoke Sensor Circuit ; Sensing Body Resistance: 1 kΩ - 10 kΩ (1000 ppm lsobutane) ; Operating Humidity: <95% RH ; Operating Oxygen Concentration (min.): >2%

Experiment 2: Nature Gas Sensor Circuit Sensing Body Resistance: 2 kΩ - 20 kΩ (5000 ppm Methane) ; Operating Humidity: <95% RH ; Operating Oxygen Concentration (min.): > 2%

Experiment 3: Alcohol Sensor Circuit Sensing Body Resistance: 100.kΩ - 500 kΩ (100 ppm Alcohol) ; Operating Humidity: <95%

RH ; Operating Oxygen Concentration (min.): > 2%

Experiment 4: Carbon Monoxide Sensor Circuit Sensing Body Resistance: 2 kΩ - 20 kΩ (100 ppm Carbon Monoxide) ; Operating Humidity: <95% RH ; Operating Oxygen Concentration (min.): > 2%

Module Seven:

Chapter 7 Ultrasonic Sensor Circuits

Experiment 1: Sound Generator ; Frequency: 850±100 Hz and 1700±150 Hz

Experiment 2: Ultrasonic Transmitter ; Operating Frequency: 40 kHz ; Operating Temperature: -20°C ~ +70°C ; Operating Humidity: <90% RH@40°C ;

Experiment 3: Ultrasonic Receiver ; Operating Frequency: 40 KHz ; Operating Temperature: -20°C ~ +70°C ; Operating Humidity: <90% RH@40°C

Module Eight:

Chapter 8 Color Sensor Circuits

[N.B: Product specifications are not fixed, product specifications may be changed as per brand models and others things.]

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Experiment 1: MCP9701 Temperature Sensor Circuit ; Measurement Range: - 40˚C to +125˚C ; Accuracy (max.): ± 4˚C @ (0˚C to +70˚C) Experiment 2: LM335 Temperature Sensor Circuit ; Measurement Range: - 40˚C to +100˚C ; Accuracy (max.): ± 2˚C @ 25˚C Experiment 3: TC620 Temperature Sensor Circuit Experiment4: TC74 Temperature Sensor Circuit ; Measurement Range: - 40˚C to +125˚C ; Accuracy (max.): ± 3˚C @ (0˚C to +125˚C) Module Four: Chapter 4 Humidity Sensor Circuits Experiment 1: H25K5A Humidity Sensor Circuit ; Measurement Range: 20% - 90% RH ; Accuracy (max.): ±5% RH@25°C Experiment 2: Sl7007 Humidity Sensor Circuit ; Measurement Range: 0 - 100% RH ; Accuracy (max.): ±5% RH@ (0 - 80% RH) Experiment 3: RH818 Humidity Sensor Circuit ; Measurement Range: 0 - 100% RH ; Accuracy (max.): ±1% RH@ (10% - 90% RH) Experiment 4: DHT11 Humidity Sensor Circuit ; Measurement Range: 20% - 90% RH ; Accuracy (max.): ±5% RH@ 25°C. Module Five: Chapter 5 Infrared Sensor Circuits Experiment 1: RE200B Passive Infrared Sensor Circuit ; Frequency Response: 0.3 Hz - 3 Hz/±10 dB ; Field of View: 21 ° - 159° (X axis), 27.5° - 152.5° (Y axis) ; Experiment 2: OTP-628 Thermopile Infrared Sensor Circuit ; Thermopile Voltage: 2.6±0.8 mV ; Field of View: 45 ° - 135 ° (X axis), 45° - 135° (Y axis) ; Experiment 3: TS-S2NMB Thermopile Infrared Sensor Circuit ; Thermopile Voltage: 2.43±0.6 mV ; Field of View: 45 ° - 135° (X axis), 45° - 135° (Y axis).	Experiment 1: Red Sensor Circuit ; Operating Wave length: 590 nm ~ 720 nm (λp: 660 nm) ; Experiment 2: Green Sensor Circuit ; Operating Wave length: 480 nm ~ 660 nm (λp: 540 nm) Experiment 3: Blue Sensor Circuit ; Operating Wave length: 400 nm ~ 540 nm (λp: 460 nm) Function Generator and DC Power Supply Waveforms: Sine, Triangle, Square, TTL Pulse ; Amplitude: >10 Vpp ; Impedance: 50Ω ±10% ; Duty Control: 30% ~ 60% ; Display: 6-Digit LED Display Warranty: 1 (One) year with services