Parts Export

Generated: 2026-06-10 11:42:37

Total Parts: 41

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
No Image	**EDS-00003-A**	Temperature sensor Device	ED - Electronic Device	Maxim Integrated, Dallas Semiconductor, Adafruit, SparkFun	DS18B20 digital temperature sensor device designed for accurate temperature measurement in embedded systems, IoT applications, and electronics projects. It uses a One-Wire communication protocol, allowing multiple sensors to operate on a single data line for simplified wiring.	Sensor Type: Digital Temperature Sensor Communication: One-Wire Interface Operating Voltage: 3.0V – 5.5V Temperature Range: -55°C to +125°C	Temperature Sensor • digital sensor • DS18B20 • one wire sensor • Arduino temperature sensor
No Image	**EDS-00004-A**	Temperature sensor Module	ED - Electronic Device	Texas Instruments, National Semiconductor, STMicroelectronics	LM35 temperature sensor module designed for accurate analog temperature measurement in electronic circuits, embedded systems, and IoT applications. It provides a linear voltage output proportional to temperature in Celsius, making it easy to interface with microcontrollers like Arduino. Commonly used in weather monitoring systems, robotics, industrial temperature control, and educational electronics projects.	Sensor Type: Analog Temperature Sensor Output: Linear Analog Voltage (10mV/°C) Operating Voltage: 4V – 30V Temperature Range: 0°C to 100°C (typical)	Arduino Sensor • Temperature Sensor • analog sensor • LM35 • thermal sensor • IoT sensor
No Image	**EDS-00005-A**	IR (INFRARED) RECEIVER SENSOR	ED - Electronic Device	Vishay, Everlight, Sharp, Panasonic	Infrared (IR) receiver sensor module designed to detect and decode IR signals from remote controls in electronic systems. It receives modulated infrared light signals (typically 38kHz) and converts them into digital output for microcontroller processing. Commonly used in Arduino projects, robotics, home automation systems, TV remote decoding, and embedded electronics applications.	Sensor Type: Infrared Receiver Module Operating Voltage: 3.3V – 5V Carrier Frequency: 38kHz (typical) Detection Range: 5m – 10m (approx.) Wavelength: ~940nm Infrared	IR Receiver • Infrared Sensor • IR Decoder • IR remote sensor • TSOP sensor • Arduino IR module
No Image	**EDT-00001-A**	Gas Sensor Device	ED - Electronic Device	N/A			
No Image	**EDT-00001-B**	Gas Sensor Device	ED - Electronic Device	Hanwei Electronics, Winsen	Gas sensor device designed for detecting alcohol vapors and ethanol concentration in the air. It is commonly used for breath alcohol detection systems, safety monitoring, and embedded IoT applications. The sensor provides analog output based on gas concentration, making it suitable for microcontroller-based systems like Arduino and Raspberry Pi.	Sensor Type: Alcohol / Ethanol Gas Sensor Target Gas: Ethanol (C?H?OH), Alcohol Vapors Operating Voltage: 5V DC Warm-up Time: 20–48 hours (initial), few minutes per use	alcohol sensor • Gas Detector • ethanol sensor • MQ-3 sensor • breath alcohol sensor
No Image	**EDT-00001-C**	Gas Sensor Device	ED - Electronic Device	Hanwei Electronics, Winsen, Figaro Engineering	Gas sensor device designed for detecting methane (CH?), CNG, and natural gas leaks in the environment. It is widely used in safety monitoring systems, industrial gas leak detection, smart home safety devices, and IoT-based gas monitoring applications. The sensor provides analog output proportional to gas concentration, making it suitable for microcontroller-based systems like Arduino and embedded controllers.	Sensor Type: Methane / CNG Gas Sensor Target Gas: CH? (Methane), CNG, Natural Gas Operating Voltage: 5V DC Warm-up Time: 20–60 seconds Detection Range: ~200–10000 ppm (typical)	methane sensor • CNG sensor • MQ-4 sensor • gas leak detector • natural gas sensor
No Image	**EDT-00001-D**	Gas Sensor Device	ED - Electronic Device	Hanwei Electronics, Winsen, Figaro Engineering	Gas sensor device designed for detecting LPG, propane, butane, smoke, and natural gas leaks in air safety and monitoring applications. It is widely used in gas leakage detection systems, smart home safety devices, industrial safety alarms, and IoT-based environmental monitoring systems.	Sensor Type: LPG / Natural Gas Sensor Target Gas: LPG (Propane, Butane), Natural Gas, Smoke Operating Voltage: 5V DC Warm-up Time: 20–60 seconds Detection Range: ~200–10000 ppm (typical)	MQ-2 Sensor • LPG Sensor • Propane Sensor • gas leak detector • natural gas sensor
No Image	**EDT-00001-E**	Gas Sensor Device	ED - Electronic Device	Hanwei Electronics, Winsen, Figaro Engineering	Gas sensor device designed for detecting LPG (liquefied petroleum gas), butane, and propane gas leaks in safety and monitoring applications. It is commonly used in gas leakage alarm systems, smart home safety devices, industrial safety monitoring, and IoT-based gas detection projects. The sensor provides analog output proportional to gas concentration, allowing easy interfacing with microcontrollers such as Arduino and embedded systems.	Sensor Type: LPG / Butane Gas Sensor Target Gas: LPG, Butane, Propane Operating Voltage: 5V DC Warm-up Time: 20–60 seconds Detection Range: ~200–10000 ppm (typical)	LPG Sensor • Propane Sensor • Butane Sensor • gas leak detector • MQ-6 sensor

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
No Image	**EDT-00001-F**	Gas Sensor Device	ED - Electronic Device	Hanwei Electronics, Winsen, Figaro Engineering	Gas sensor device designed for detecting carbon monoxide (CO), a highly toxic and odorless gas commonly produced by incomplete combustion. It is widely used in safety monitoring systems, industrial environments, smart home safety devices, and IoT-based air quality applications.	Sensor Type: Carbon Monoxide (CO) Gas Sensor Target Gas: CO (Carbon Monoxide) Operating Voltage: 5V DC Warm-up Time: 20–48 hours initial, few minutes per cycle Detection Range: ~20–2000 ppm (typical)	Carbon Monoxide Sensor • CO Sensor • Gas Detector • MQ-7 sensor • toxic gas sensor
No Image	**EDT-00001-G**	Gas Sensor Device	ED - Electronic Device	Winsen, Hanwei Electronics	Air quality device designed for detecting and monitoring harmful gases and air pollution levels in the environment. It measures gases such as CO, CO?, smoke, LPG, methane, and other volatile compounds depending on the sensor type used. Commonly used in environmental monitoring systems, smart home automation, industrial safety systems, IoT air monitoring stations, and educational electronics projects.	Sensor Type: Multi-Gas Air Quality Sensor Device Detected Gases: CO, CO?, Smoke, LPG, Methane, VOCs Operating Voltage: 5V DC Warm-up Time: 20–60 seconds	gas sensor • air quality device • pollution detector • MQ sensor • air monitoring system
No Image	**EDT-00006-A**	Force Sensor - ROUND	EM - Electronic-Electrical Modules	Interlink Electronics, SparkFun Electronics, DFRobot, Adafruit Industries, Ohmite, Tekscan	This is a force sensitive resistor with a round, 0.5? diameter, sensing area. This FSR will vary its resistance depending on how much pressure is being applied to the sensing area. The harder the force, the lower the resistance. When no pressure is being applied to the FSR its resistance will be larger than 1M?. This FSR can sense applied force anywhere in the range of 100g-10kg. Two pins extend from the bottom of the sensor with a 0.1? pitch making it bread friendly. There is a peel-and-stick rubber backing on the other side of the sensing area to mount the FSR. Just Connect a resistor to form a voltage divider and measure the voltage at the junction to find the force applied. This sensor can be easily interfaced with Microcontrollers, Arduino Boards, Raspberry Pi, etc. using an Analog to Digital Converter (ADC).	Diameter: 1.8 cm Max Pressure: 10 Kg Min Pressure: 100 gm Sensing area: 1.4 cm (Dia.) Shape: Circular Length: 6 cm	FSR Sensor • Force Sensor • Pressure Sensor • Round Force Sensor • Force Sensitive Resistor
No Image	**EDT-00006-B**	Force Sensor - SQUARE	EM - Electronic-Electrical Modules	Interlink Electronics, SparkFun Electronics, DFRobot, Adafruit Industries, Ohmite	This is a force sensitive resistor with a square, 1.75 x 1.5?, sensing area. This FSR will vary its resistance depending on how much pressure is being applied to the sensing area. The harder the force, the lower the resistance. When no pressure is being applied to the FSR its resistance will be larger than 1M?. This FSR can sense applied force anywhere in the range of 100g-10kg. Just Connect a resistor to form a voltage divider and measure the voltage at the junction to find the force applied. These sensors are simple to set up and great for sensing pressure, but they aren't incredibly accurate. This sensor can be easily interfaced with Microcontrollers, Arduino Boards, Raspberry Pi, etc. using an Analog to Digital Converter (ADC).	Actuation Force: 0.1 N Clock Speed: 16MHz	FSR Sensor • Pressure Sensor • Force Sensitive Resistor • Square Force Sensor • Touch Sensor
No Image	**EDT-00007-A**	Flex Sensor	ED - Electronic Device	Spectra Symbol, SparkFun, Adafruit, Interlink Electronics, Generic	A simple Flex Sensor 2.2? – Bend Sensor with a length of 2.2? which bends and flexes with a physical device. As the sensor is flex, the resistance across the sensor increases. A connector is 0.1? spaced and breadboard friendly. The flex sensor is a bend detecting sensor that has got numerous applications in Robotics, Gaming (Virtual Motion), Medical Devices, Computer Peripherals, Musical Instruments, Physical Therapy... The resistance of these sensors changes in accordance with the bend, which can be measured using any microcontroller.	Bend Resistance: minimum 20K Ohms ±30% (@ 180° pinch bend) Flat Resistance: 10K Ohms ±30% Flex length: 2.2 inch (5.6 cm) Power: 0.5 Watts continuous Length: 7 cm	Electronics • flex sensor • bend sensor • sensor • analog • resistance • wearable
No Image	**EMS-00001-A**	MQ-2 sensor	EM - Electronic-Electrical Modules	Hanwei Electronics Group Corporation, Zhengzhou Winsen Electronics Technology Co., Ltd.	The MQ-2 Gas Sensor Module detects combustible gases such as LPG, methane, hydrogen, alcohol vapor, and smoke. It uses a SnO? sensing element and provides both analog and digital outputs with adjustable sensitivity. Ideal for gas leakage detection, safety systems, and Arduino-based environmental monitoring projects.	Sensor Model: MQ-2 Detection Range: 300 – 10,000 ppm Detectable Gases: LPG, Butane, Propane, Methane (CH?), Hydrogen (H?), Alcohol, Smoke, CO Sensing Material: Tin Dioxide (SnO?) Operating Voltage: 5V DC Digital Output Voltage: 0V or 5V (TTL Logic) Analog Output: Yes Sensitivity Adjustment: Onboard Potentiometer Preheat Time: 20 seconds (minimum) Dimensions (mm): 36 × 20 × 21 Weight (g): 8 Shipping Weight: 0.012 kg Shipping Dimensions (cm): 4 × 4 × 4	Arduino Compatible • MQ-2 Sensor • LPG Gas Sensor • Smoke Detector • SnO2 Sensor • Combustible Gas Module • 5V Gas Sensor • Gas Leakage Detector
No Image	**EMS-00002-A**	DHT11 Temperature and Humidity Sensor	EM - Electronic-Electrical Modules	EM Series / Generic Compatible, KEYESTUDIO, SunFounder, DFRobot	Digital temperature and humidity sensor module with calibrated single-wire serial output. Features onboard pull-up resistor and LED status indicator for easy interfacing. Ideal for weather stations, environmental monitoring, and smart automation projects.	Item Type: Sensor Model: DHT11 Temperature and Humidity Sensor Measuring Temperature Range (°C): 0 – 50 Temperature Accuracy: ± 2 °C Humidity Range: 20 – 95 % RH Humidity Accuracy: ± 5 % RH Resolution: 16 bit Output Form: Digital Output (Single Wire Serial) Operating Voltage (VDC): 3 – 5 Operating Current (mA): ? 2.5 Dimensions (L × W × H mm): 31 × 14 × 7.5 Weight (g): 5 Shipping Weight: 0.01 kg Shipping Dimensions (L × W × H cm): 5 × 5 × 2	DHT11 • Temperature Sensor • Humidity Sensor • Digital Temp Sensor • Arduino Climate Sensor

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No Image	**EMS-00004-A**	Sound Level Sensor Module	EM - Electronic-Electrical Modules	Keyes, Keyes, DFRobot, SparkFun Electronics	Sound Detection Module Sensor for Intelligent Vehicle Compatible With Arduino is a Single channel signal output Sensor. The output is effective to the low-level sound signal with good fidelity, When there is sound, outputs low level and signal light.	IC Chip: LM393 Induction Distance: 500 cm Operating Voltage: 3.3 ~ 5 V Length: 4.3 cm Height: 0.8 cm Width: 1.7 cm	Sound Sensor • Microphone Module • Audio Sensor • Noise Sensor
No Image	**EMS-00005-A**	Ultrasonic Distance Sensor	EM - Electronic-Electrical Modules	MWduino / Generic, Elecfreaks, KEYESTUDIO, SunFounder	Ultrasonic distance sensor module using 40kHz sound waves for accurate measurement. Operates on 3.3–5.5V DC with 4-pin interface (VCC, Trig, Echo, GND). Ideal for robotics, obstacle detection, automation, and distance sensing projects.	Power Supply (V): +5V DC Working Current (mA): 15 mA Output Signal: Electrical frequency signal Ranging Distance: 2 cm – 400 cm Distance Resolution: 0.3 cm Measuring Angle: 30° Operating Voltage Range (V): 3.3V – 5.5V Interface Type: 4-pin (VCC, Trig, Echo, GND) Shipping Weight: 0.007 kg Shipping Dimensions (L × W × H): 9 × 6 × 2 cm	Ultrasonic Sensor • HC-SR04+ • Distance Sensor • Arduino Sensor • Obstacle Detection Module
No Image	**EMS-00006-A**	PIR Motion Sensor	EM - Electronic-Electrical Modules	HC, DFRobot, SparkFun, Keyestudio	The PIR Motion Sensor is a passive infrared (PIR) detection module used to detect human movement and body heat based on infrared radiation changes. The most common version is the HC-SR501 PIR sensor module, which uses a pyroelectric infrared sensor and Fresnel lens to detect motion within its sensing range. (components101.com)	Product Type: PIR Motion Sensor Model: HC-SR501 Sensor Type: Passive Infrared Operating Voltage: 5V – 20V DC Detection Distance: 3 – 7 meters	Motion Detection Sensor • PIR Motion Sensor • HC-SR501 PIR Sensor • Human Motion Sensor
No Image	**EMS-00007-A**	Temperature sensor Module - DS18B20	EM - Electronic-Electrical Modules	Maxim Integrated, DFRobot, SparkFun	The DS18B20 Temperature Sensor Module is a digital temperature sensing device designed for accurate temperature measurement using the 1-Wire communication protocol. Developed by Dallas Semiconductor (now Maxim Integrated), the DS18B20 provides calibrated digital temperature readings with high accuracy and supports multiple sensors on a single data line.	Product Type: Digital Temperature Sensor Model: DS18B20 Communication Protocol: 1-Wire Operating Voltage: 3V – 5.5V DC Temperature Range: -55°C to +125°C Accuracy: ±0.5°C	DS18B20 Temperature Sensor • Waterproof Temperature Sensor • Digital Temperature Sensor • One Wire Temperature Sensor
No Image	**EMS-00008-A**	Metal touch sensor	EM - Electronic-Electrical Modules	Keyes Electronics, Generic Electronics, Keyestudio	The KY-036 Metal Touch Sensor Module is a human body and metal touch detection sensor designed to detect changes in electrical conductivity when touched by a finger or conductive object. The module uses an LM393 comparator and transistor-based sensing circuit to generate analog and digital output signals.	Product Type: Metal Touch Sensor Module Model: KY-036 Main IC: LM393 Comparator Operating Voltage: 3.3V – 5V DC	KY-036 Metal Touch Sensor • Human Body Touch Sensor • Metal Touch Module • Touch Detection Sensor
No Image	**EMS-00009-A**	Heart Pulse Rate Sensor	EM - Electronic-Electrical Modules	Maxim Integrated, Generic Electronics, SparkFun, DFRobot	The Heart Pulse Rate Sensor is a biometric sensor module used to detect heartbeats and measure pulse rate (BPM - Beats Per Minute). It works using photoplethysmography (PPG), where an LED emits light into the skin and a photodetector measures changes in blood flow caused by heartbeats.	Product Type: Heart Pulse Rate Sensor Sensor Type: Photoplethysmography (PPG) Operating Voltage: 3.3V – 5V DC Output Type: Analog / I2C Measured Parameter: Pulse Rate (BPM)	Heart Pulse Sensor • Pulse Rate Sensor • Heartbeat Sensor Module • Pulse Detection Sensor • Arduino Pulse Sensor • BPM Sensor • Heart Rate Monitor Sensor • Pulse Sensor Amped
No Image	**EMS-00010-A**	MQ-2 Gas Sensor Module-Methane, Butane, LPG, SmoKe	EM - Electronic-Electrical Modules	Hanwei Electronics, Winsen Electronics, SparkFun Electronics, DFRobot	The MQ-2 Gas Sensor Module is a semiconductor-based gas detection sensor designed to detect combustible and flammable gases such as Methane, Butane, LPG, Propane, Hydrogen, Alcohol, and Smoke. It uses a tin dioxide (SnO?) sensing layer whose resistance changes when exposed to combustible gases.	Product Type: Gas & Smoke Sensor Model: MQ-2 Detectable Gases: LPG, Methane, Butane, Smoke Detection Range: 200 – 10000 ppm Operating Voltage: 5V DC	LPG Gas Sensor • methane sensor • Arduino Gas Sensor • MQ-2 Gas Sensor • Smoke Sensor Module • Butane Gas Detector • MQ2 Smoke Detector • Flammable Gas Sensor
No Image	**EMS-00010-B**	Alcohol Gas Sensor Module	EM - Electronic-Electrical Modules	Hanwei Electronics, Winsen Electronics, Waveshare	MQ-3 Alcohol Gas Sensor Module is used to detect alcohol concentration in the air and provides both analog and digital outputs. The module is based on the MQ-3 gas sensor which uses SnO? (Tin Dioxide) sensing material. The sensor operates from 2.5V to 5V and includes an onboard potentiometer to adjust the digital output threshold level.	Operating Voltage (V): 2.5 to 5 Additional Specs: Output Pin: Analog and digital, Gold pin connectors, 2.54 mm pitch, Boost Converter Chip: PT1301 Board Size (mm): 40 x 21 mm Mounting Hole Diameter (mm): 2 mm Interface: Digital Output, Analog output, VCC Positive power supply (2.5V-5.0V), Power ground	arduino • alcohol sensor • MQ-3 • gas sensor • ethanol detector

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
No Image	**EMS-00010-C**	Methane and Natural Gas sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Winsen Electronics, Waveshare	MQ-4 Gas Sensor Module is a high sensitivity gas detection module used for sensing Methane (CH4), CNG, and natural gas leakage in the environment. An onboard potentiometer allows adjustment of the gas detection threshold level for digital output triggering. MQ-4 sensor is widely used in gas leakage alarms, industrial safety systems, and smart monitoring projects.	Model: MQ-4 Detecting range: 200 to 10000 ppm. Operating Voltage: 3 ~ 5 V Length: 3.1 cm Height: 2.1 cm Width: 1.9 cm	Arduino Compatible • gas sensor • MQ-4 • methane sensor • CNG detector
No Image	**EMS-00010-D**	Natural Gas and LPG Analog Sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Winsen Electronics, Waveshare	The MQ-5 is used in gas leakage detecting equipment in consumer and industry applications, this sensor is suitable for detecting LPG, natural gas, coal gas. Avoid the noise of alcohol, cooking fumes, and cigarette smoke. The sensitivity can be adjusted by the potentiometer. The sensitive material of the MQ-5 gas sensor is SnO2, which with lower conductivity in clean air. When the target combustible gas exists, The sensor's conductivity is higher along with the gas concentration rising. Please use a simple electro circuit, Convert change of conductivity to the corresponding output signal of gas concentration. The sensor could be used to detect different combustible gas especially Methane, it is with low cost and suitable for different application	Model: MQ-5 Operating Temperature Range: -20 to 40 °C Operating Voltage: 5 V Length: 3.2 cm Height: 2.2 cm Width: 2 cm	Arduino Compatible • gas sensor • methane sensor • CNG detector • CH4 sensor

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
No Image	**EMS-00010-E**	Flammable Gas Sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Zhengzhou Winsen Electronics, DFRobot	This is a simple-to-use MQ-6 Liquefied Petroleum Isobutane Propane Gas Sensor module, suitable for sensing LPG (composed of mostly propane and butane) concentrations in the air. The MQ-6 can detect gas concentrations anywhere from 200 to 10000ppm. This sensor has high sensitivity and fast response time. The sensor's output is an analog resistance. The drive circuit is very simple; all you need to do is power the heater coil with 5V, add a load resistance, and connect the output to an ADC. The sensitive material of the MQ-6 gas sensor is SnO2, which with lower conductivity in clean air. When the target combustible gas exists, The sensor's conductivity is higher along with the gas concentration rising. Please use a simple electro circuit, Convert change of conductivity to the corresponding output signal of gas concentration.	Model: MQ-6 Operating Temperature Range: -20 to 40 °C Operating Voltage: 5 V Length: 3.2 cm Height: 2.2 cm Width: 2 cm	arduino • gas sensor • methane sensor • MQ6 • LPG Sensor • Propane Sensor • Butane Sensor
No Image	**EMS-00010-F**	MQ-7 sensor module	EM - Electronic-Electrical Modules	Hanwei Electronics, Zhengzhou Winsen Electronics, DFRobot	This MQ7 Carbon Monoxide Gas Sensor Module is a semiconductor gas sensor tuned to detect carbon monoxide. It is in the same family of devices as the smoke detector sensor, measuring the change in surface conductivity of tin dioxide in the presence of carbon monoxide. This sensor has high sensitivity and fast response time. The sensor can measure concentrations of 10 to 10,000 ppm. The sensor can operate at temperatures from -10 to 50°C and consumes less than 150 mA at 5 V. This module provides both digital and analog outputs. The threshold level for digital output can be easily adjusted using the preset on the board. The MQ-7 sensor module can be easily interfaced with Micro-controllers, Arduino and etc.	Model: MQ-7 Ambient temperature: -20 ~ + 50 °C Characteristic gas: 100 ppm CO Heating current: ? 180 mA Heating power: approx. 350 mW Heating resistance: ± 31 ? Heating voltage: 5.0V ± 2V / 1.5 ± 1V Humidity: ? 95% RH Operating Voltage: 5 V Oxygen content: 21%. Range: 10 ~ 1000 ppm Return time: ? 30 s Sensitivity: ? 3%. Length: 3.5 cm Height: 1.1 cm Width: 2 cm	arduino • MQ7 • Carbon Monoxide Sensor • CO Sensor • Gas Detector • Air Quality Sensor
No Image	**EMS-00010-G**	MQ135 gas sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Zhengzhou Winsen Electronics, Futurlec	The MQ 135 Air Quality Detector Sensor Module For Arduino has lower conductivity in clean air. When the target combustible gas exists, the conductivity of the sensor is higher along with the gas concentration rising. Convert change of conductivity to the corresponding output signal of gas concentration. The MQ135 gas sensor has a high sensitivity to Ammonia, Sulphide, and Benzene steam, also sensitive to smoke and other harmful gases. It is at low cost and suitable for different applications such as harmful gases/smoke detection.	Model: MQ-135 Detecting range: 100ppm to 1000ppm Operating current: 150 mA Operating Voltage: 5 V Length: 3.2 cm Height: 2.7 cm Width: 2 cm	Air Quality Sensor • MQ135 • Ammonia Sensor • NOx Sensor • CO2 Sensor • Smoke Sensor
No Image	**EMS-00010-H**	Hydrogen Gas Sensor - MQ-8 - SEN-10916	EM - Electronic-Electrical Modules	SparkFun Electronics, Hanwei Electronics, Winsen Electronics, SparkFun	The MQ-8 Hydrogen Gas Sensor is a semiconductor-based gas detection sensor designed to detect hydrogen (H?) gas concentration in air. It is highly sensitive to hydrogen and can detect gas concentrations ranging from 100 ppm to 10,000 ppm. The sensor uses a tin dioxide (SnO?) sensing layer whose resistance changes when exposed to hydrogen gas. The module provides both analog and digital outputs, making it easy to interface with Arduino, ESP32, Raspberry Pi, STM32, and other microcontrollers.	Product Type: Hydrogen Gas Sensor Model: MQ-8 SparkFun SKU: SEN-10916 Detectable Gas: Hydrogen (H?) Detection Range: 100 – 10,000 ppm Operating Voltage: 5V DC	MQ-8 Gas Sensor • Hydrogen Gas Sensor • H2 Gas Detector • MQ8 Sensor Module • Hydrogen Detection Sensor • Arduino Gas Sensor • ESP32 Hydrogen Sensor • Gas Leakage Sensor
No Image	**EMS-00012-A**	Color Sensor	EM - Electronic-Electrical Modules	ams-OSRAM, ams-OSRAM, ams-OSRAM, Generic Electronics	The TCS3200 Color Sensor Module is an RGB color detection sensor designed to identify and measure colors using red, green, and blue filtered photodiodes. The module uses the TCS3200/TCS230 light-to-frequency converter IC to convert light intensity into frequency signals readable by microcontrollers.	Product Type: RGB Color Sensor Model: TCS3200 / TCS230 Sensor Type: Light-to-Frequency Converter Operating Voltage: 2.7V – 5.5V DC	Arduino Color Sensor • Color Detection Module • TCS3200 Color Sensor • RGB Color Sensor • TCS230 Sensor • RGB Recognition Module • ESP32 Color Sensor • Light Frequency Sensor
No Image	**EMS-00012-B**	Color Sensor	EM - Electronic-Electrical Modules	ams-OSRAM, ams-OSRAM, ams-OSRAM, Generic Electronics	The TCS3200 Color Sensor Module is an RGB color recognition sensor used to detect and measure colors based on reflected light intensity. It uses the TCS3200/TCS230 light-to-frequency converter IC along with photodiodes and onboard white LEDs for accurate color detection.	Product Type: RGB Color Sensor Model: TCS3200 / TCS34725 Sensor Type: Light-to-Frequency Converter Operating Voltage: 2.7V – 5.5V DC	TCS3200 Sensor • RGB Sensor • Color Sensor • TCS230 Module • Arduino Color Sensor • ESP32 RGB Sensor • Color Detection Module

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No Image	**EMS-00013-A**	Infrared Obstacle Avoidance IR Sensor Module	EM - Electronic-Electrical Modules	Generic OEM Manufacturer, Keyestudio, HiLetgo, Elegoo, SunFounder	The Infrared Obstacle Avoidance Sensor Module detects nearby objects using reflected infrared light. It uses an IR transmitter–receiver pair with an LM393 comparator to provide a digital active LOW output when an obstacle is detected. Ideal for robotics, smart cars, automation systems, and Arduino-based proximity detection projects.	Sensor Type: Infrared Reflective Obstacle Sensor Operating Voltage: 3.6V - 5V DC Output Type: Digital (Active Low) Main IC: LM393 Comparator Average Current Consumption: 0.06 mA Detection Angle: 35° Detection Distance: 2 cm – 30 cm (adjustable) Interface Pins: VCC, GND, OUT Indicator LED: Yes (Obstacle Detection Indicator) Sensitivity Adjustment: Onboard Potentiometer Dimensions (mm): 48 × 14 × 8 Weight (g): 5 Shipping Weight: 0.01 kg Shipping Dimensions (cm): 5 × 4 × 1	IR Obstacle Sensor • Infrared Reflective Module • LM393 Comparator • Active Low Output • Proximity Sensor • Arduino Compatible • Robot Sensor
No Image	**EMS-00016-A**	Water Flow Sensor YF-G1	EM - Electronic-Electrical Modules	YF Electronics, DFRobot, FlyRobo, Robocraze	The YF-G1 Water Flow Sensor is a hall-effect liquid flow meter designed for measuring the flow rate of water and other non-corrosive liquids in pipelines. It contains an internal rotor with a magnet that spins when liquid flows through the sensor. The built-in hall-effect sensor detects the magnetic rotation and generates pulse signals proportional to the flow rate.	Product Type: Water Flow Sensor Model: YF-G1 Sensor Type: Hall Effect Flow Meter Operating Voltage: 5V – 18V DC Working Current: ? 15 mA Flow Range: 1 – 30 L/min	Water Flow Sensor • Hall Effect Flow Sensor • Liquid Flow Meter • Flow Rate Sensor • YF-G1 Sensor • Industrial Water Flow Sensor • Arduino Flow Sensor • Pipe Flow Detection Module
No Image	**EMS-00016-B**	Water Flow Sensor YF-S401	EM - Electronic-Electrical Modules	YF Electronics, DFRobot, FlyRobo, Robocraze	The YF-S401 Water Flow Sensor is a compact hall-effect liquid flow meter used to measure water flow rate in pipes and tubing systems. Inside the sensor, a rotor with magnets spins as water passes through it. The hall-effect sensor generates pulse signals proportional to the flow rate. It is widely used in water dispensers, smart irrigation systems, liquid monitoring systems, coffee machines, industrial automation, and Arduino/ESP32 projects.	Product Type: Water Flow Sensor Model: YF-S401 Sensor Type: Hall Effect Flow Meter Operating Voltage: 5V – 18V DC Working Current: ? 15 mA Flow Range: 0.3 – 6 L/min	YF-S401 Sensor • Water Flow Sensor • Hall Effect Flow Sensor • Liquid Flow Meter • Flow Rate Sensor • Arduino Water Flow Sensor • Flow Detection Module
No Image	**EMS-00018-A**	Water Level Sensor	EM - Electronic-Electrical Modules	Generic Electronics, Generic Electronics, DFRobot, SparkFun	The Water Level Sensor Module is used to detect and measure water levels in tanks, containers, reservoirs, automation systems, irrigation projects, and Arduino applications. It works using exposed parallel conductive traces that change resistance depending on the amount of water touching the sensor surface. Most modules provide both analog output (water level amount) and digital output (threshold detection using LM393 comparator). These sensors are widely used in smart irrigation systems, automatic water tank monitoring, rainwater harvesting, leak detection, and robotics projects.	Product Type: Water Level Sensor Module Sensor Type: Conductive Water Sensor Operating Voltage: 3.3V – 5V DC Comparator IC: LM393	Water Detection Sensor • Water Level Sensor • Liquid Level Sensor • Analog Water Sensor • Arduino Water Sensor • Level Detection Module • Tank Level Sensor
No Image	**EMS-00019-A**	Soil Moisture sensor	EM - Electronic-Electrical Modules	Sensor Probe Manufacturer, Comparator Module Manufacturer, IC Manufacturer	The Soil Moisture Sensor Module (YL-69 + FC-28) is a resistive soil humidity detection device used to measure water content in soil. It provides both analog (AO) and digital (DO) outputs with adjustable sensitivity using an onboard LM393 comparator. Ideal for smart irrigation systems, plant monitoring, Arduino, and IoT-based environmental projects.	Sensor Type: Resistive Soil Moisture Sensor Operating Voltage: 3.3V – 5V DC Output Type: Analog (AO) and Digital (DO) Digital Output: 0 or 1 (TTL Logic) Measurement Principle: Resistance-based conductivity measurement Sensitivity Adjustment: Onboard Potentiometer (for digital threshold) Probe Dimension: Approx. 6 cm × 3 cm Cable Length: 20 cm Interface Pins: VCC, GND, DO, AO Shipping Weight: 0.02 kg Shipping Dimensions (cm): 8 × 6 × 3	Arduino Compatible • Soil Moisture Sensor • YL-69 • FC-28 • LM393 • Resistive Soil Sensor • Irrigation Sensor
No Image	**EMS-00021-A**	SW-520D Tilt Sensor	EM - Electronic-Electrical Modules	Generic Electronics, DFRobot, SparkFun, Keyestudio	The SW-520D Tilt Sensor Module is a simple digital angle detection sensor used to detect tilt, orientation change, vibration, or motion. It works using a metal ball inside a cylindrical switch that moves when the angle changes. When tilted beyond a certain threshold (around ~10°–15° depending on mounting), the internal contacts connect/disconnect and the module outputs a digital HIGH/LOW signal. It is widely used in security alarms, anti-theft systems, robotics balance detection, and Arduino/ESP32 projects.	Product Type: Tilt / Angle Sensor Module Sensor Type: Ball Switch (SW-520D) Output Type: Digital (0 / 1) Operating Voltage: 3.3V – 5V DC Comparator IC: LM393	SW-520D Sensor • Tilt Sensor Module • Angle Sensor • Ball Switch Sensor • Orientation Sensor • Digital Tilt Switch • Arduino Tilt Sensor

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
No Image	**EMS-00023-A**	SW-420 Alarm Vibration Sensor Module	EM - Electronic-Electrical Modules	Generic Electronics, DFRobot, SparkFun, FlyRobo	SW-420 Alarm Vibration Sensor Module is a vibration and shock detection module used in security alarms, anti-theft systems, motion sensing, robotics, earthquake detection, and Arduino projects. It uses the SW-420 vibration switch along with an LM393 comparator to provide digital output when vibration or movement is detected. Sensitivity can be adjusted using the onboard potentiometer. (components101.com	Product Type: Vibration Sensor Module Sensor Model: SW-420 Comparator IC: LM393 Operating Voltage: 3.3V – 5V DC Output Type: Digital Output	LM393 Sensor • SW-420 Sensor • Vibration Sensor Module • Shock Sensor • Alarm Sensor • Motion Detection Sensor • Arduino Vibration Sensor
No Image	**EMS-00024-A**	Rain Sensor Module	EM - Electronic-Electrical Modules	Generic Electronics, DFRobot, SparkFun	Rain Sensor Modules are used to detect rain, water droplets, moisture, and rainfall intensity in weather monitoring systems, smart irrigation, automatic wiper systems, robotics, and Arduino projects. Most modules use a rain-sensitive conductive plate with an LM393 comparator module and provide both analog and digital outputs.	Product Type: Rain Detection Sensor Module Operating Voltage: 3.3V – 5V DC Comparator IC: LM393 Sensitivity Adjustment: Potentiometer Compatible Boards: Arduino, ESP32, Raspberry Pi	Rain Sensor Module • Rain Drop Sensor • FC-37 Sensor • YL-83 Rain Module • Water Detection Sensor • Arduino Rain Sensor • Weather Sensor
No Image	**EMS-00025-A**	Encoder Sensor Module	EM - Electronic-Electrical Modules	Broadcom, Generic Electronics, Omron, AMS	Encoder Sensor Modules are used to detect rotation, speed, direction, and position in robotics, automation, motor control, CNC machines, smart vehicles, and Arduino projects. Common encoder modules include rotary encoders (KY-040), optical encoder sensors (MOC7811), and magnetic encoder modules. These modules provide digital pulse outputs for precise motion tracking.	Product Type: Encoder Sensor Module Encoder Type: Rotary / Optical / Magnetic Operating Voltage: 3.3V – 5V DC Output Type: Digital Pulse	Encoder Sensor Module • Rotary Encoder Module • Optical Encoder Sensor • Speed Sensor • Position Sensor • KY-040 Encoder • Arduino Encoder
No Image	**EMS-00026-A**	HMC5883L Triple Axis Compass Magnetometer Sensor Module	EM - Electronic-Electrical Modules	Honeywell, ITEAD Studio, DFRobot, Adafruit, SparkFun	HMC5883L Triple Axis Compass Magnetometer Sensor Module is a 3-axis digital compass sensor used for navigation, heading detection, robotics, drones, GPS systems, and Arduino projects. The module communicates through the I2C interface and measures magnetic field strength across X, Y, and Z axes for accurate compass heading and orientation detection.	Product Type: Triple Axis Magnetometer Sensor Model: HMC5883L Number of Axes: 3 Axis Communication Interface: I2C Operating Voltage: 3.3V – 5V ADC Resolution: 12-bit	HMC5883L Sensor • Magnetometer Module • Compass Sensor • Triple Axis Compass • GY-271 Sensor • GY-273 Module • Arduino Compass Sensor