



USB Powered Portable Sensor Checker  
SA1P



# Portable Sensor Checker

Easily connects 24V DC devices at any location

IDEC CORPORATION

# Compact & lightweight (95g). Ideal for on-site use

Push-in terminal eliminates the need for tools

Output 200mA

Connects to 2 types of devices simultaneously

NPN/PNP output

Scale markings enable easy measurement of detection distances

POWER OFF ON 24V 0V NPN PNP S1 S2  
24V 0V NPN PNP  
CE  
MADE IN JAPAN  
SA1P-UC24V  
BUZZER

Back

## Issue

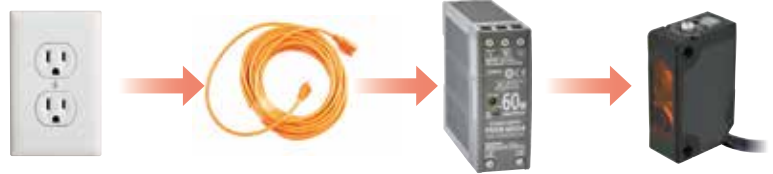
How can I test 24VDC devices on my machine?

The old way of using cell batteries or power supplies connected to outlets using extension cords are required.

Without AC power supply



With AC power supply



Have you ever had this experience?

When testing operation of sensors and indicator lights on-site, as there are no power outlets nearby, it takes a lot of time and effort to route the cords from the control panel.



## Solution

## USB Powered Portable Sensor Checker

SA1P

## The SA1P uses an external USB battery for power

Because cell batteries are not required, cost can be reduced and used for a long period of time. The mobile battery can be fastened using a belt for making it convenient to carry around.

Connects to PCs using a USB connector (\*2)

\*1) Connect to a mobile battery of 5V DC, 2A output min.

\*2) When connecting a USB connector from a PC, load conditions differ depending on ratings. See the instruction manual for details.



## Tests and continuity checks can be performed in any location

Easy device testing and continuity check for 24V DC devices without power outlets near by.



## Push-in terminal allows easy wiring. Connect up to 2 devices simultaneously.

## Sensor operation check



## Operation check of pressure-sensitive switches such as edge switches



\*1) Available August 2021

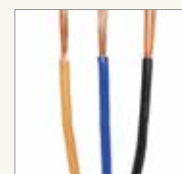
## Operation check of illuminated buzzers



## Example: Connecting 3-wire sensors

1. Insert each wire by pressing part A (white terminal).
2. Turn on the POWER switch.
3. When the output signal is received from the sensor, the signal input indicator (red) turns on. To make the buzzer sound at the same time, turn on the BUZZER.  
(Two terminal parts are available so that two sensors can be connected)

24V DC Brown 0V Blue NPN or PNP Black A (S1 terminal)



## General Specifications

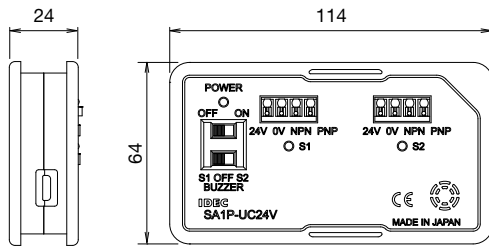
Electrical specifications	Power supply	Connectors	USB Type-C connector (USB2.0 Type-A conversion cable on main unit) *1	
	Power supply	USB power rating	5V DC, 2A maximum	
		Input current	Max. load current: 1.8A (buzzer ON), 1.5A (buzzer OFF) No Load: 0.2A	
		Connectors	Terminal S1, S2 (push-in terminal)	
	Sensor connection	External output (for sensor power)	24V DC±10% 200mA max. (Total of S1 and S2)	
		Points	Points	2 points
			Connection*2	NPN: Connect to 24V NPN open collector output. PNP: Connect to 24V PNP open collector output.
		Signal input (connected to sensor output)	Input current	NPN: Buzzer output ON: 25mA (peak current 50mA)/point Buzzer output OFF: 2mA/point PNP: Buzzer output ON: 2mA/point Buzzer output OFF: 2mA/point
			Min. input time	0.5s
	Buzzer output	1 point (S1/S2/OFF selectable)		
	Slide switches	POWER Switch (ON-OFF)		
		Buzzer Switch (S1-OFF-S2)		
Indicator	POWER indicator (Green) Signal input indicator S1 side (Red) Signal input indicator S2 side (Red)			
Environmental specifications	Operating temperature	-10 to +50°C (no freezing)		
	Relative humidity	30 to 85%RH (no condensation)		
	Storage temperature	-25 to +70°C (no freezing)		
	EMC Resistance	IEC/EN61000-6-2, IEC/EN61000-6-4		

\*1) We recommend you to use the USB cable supplied with the product. If a commercially available USB cable is used, be sure to keep the cable length short in consideration of the voltage drop caused by the current flowing through the USB cable. Note that operation of commercially available USB cables are not guaranteed.

\*2) Although a proximity switch, a switch or other devices with contacts can be connected, a DC 2-wire type sensor with built-in power supply cannot be connected.

## Dimensions

Dimensions in mm



## Part No.

### Main part

Package quantity:1

Name	Part No. (Ordering No.)
SA1P	SA1P-UC24V

### Attachments (included with Part No.)

Package quantity:1

Name / Shape	Descriptions
Fastening belt	Belt to fasten the USB cable or mobile battery. Black, length: 0.3m, width: 20mm, thickness: 1mm
USB cable	Cable used to connect the SA1P and the power supply. Connector (main unit side): USB Type C Connector (power supply side): USB Type A Length: 0.25m
Strap	Prevents the SA1P from dropping.

## Instructions

Be sure to read the instruction sheet before installation, wiring, operation, and maintenance of the product.

For details on installation, wiring, and maintenance, see the Instruction Sheet and User's Manual from the URL below.

SA1P <https://product.idec.com/?product=SA1P>



## Product Information

### Miniature Photoelectric Switches

#### SA2E



Achieves stable detection even at a fast response time of 0.5ms. Equipped with light ON/dark ON features, on-site switching of light ON/dark ON is possible, enabling stock reduction. Three detection distances (1000, 500, 100m) available for diffuse-reflective sensors allowing a flexible installation location.

### Photoelectric Switches

#### SA1U



Universal voltage types operate on 24-240V AC and 12-240V DC. DC power types operate on 12-24V DC. Four sensing methods (through-beam, polarized retroref active, diffuse-ref active, and background suppression).

### Magnetic Proximity Switches

#### DPRI



The DPRI magnetic proximity switch incorporates a sealed reed switch and four magnets inside a compact housing. This self-contained proximity switch requires no external power supply and can detect the presence of magnetic objects without contact.

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