

## FEATURE HIGHLIGHTS



- Maximum Communication Speed: 500Kbps
- Industrial Grade Temperature: -40~85°C
- ESD Protection (IEC 61000-4-2: ESD level 3 protection)
- External power not required (When RTS/DTR signal line is enabled)
- Compact size
- Hardware-based Auto Toggling
- RS422/RS485 mode selectable by external switch
- Built-in 120Ω termination resistors, selected by external switch
- 3kV isolation
- LED port power indicator

## PRODUCT DESCRIPTION

The SS100/SS100SiS media converters provide complete signal conversion between RS-232 and RS-422/485, without requiring an external power source. It is a fast and efficient solution to overcome distance limitations of RS232 or for connecting to industrial devices with an RS422/RS485 interface. The converters support both half-duplex 2-wire RS-485 and full-duplex 4-wire RS-422/485, and you could select mode via DIP switch without extra software required. Automatic data direction control is provided for RS-485. In this case, the RS-485 driver is enabled automatically when the circuitry senses the TxD output from the RS-232 signal. This means that no programming effort is required to control the transmission direction of the RS-485 signal.

### Port Power over RS232

The RS-232 port of the SS100/SS100SiS is a DB9 female socket that can connect directly to the host PC, using the RTS/DTR lines to receive the power needed to run. Regardless of whether the signal is high, the can obtain enough power from the data line. SS100-SiS, the version with isolation, still requires an external power supply. When there are many devices connected to RS422 or RS485 signal lines, we recommend that external power supply is necessary.

### LED Port Power Indicator

It is easy to let the SS100 test the device for you. Simply connect the SS100 to the device's RS-232 port and set the RS485 Echo mode. If the power port LED indicator of PWR/Tx/RX lights up, then SS100 is receiving enough power and data communication is working properly.

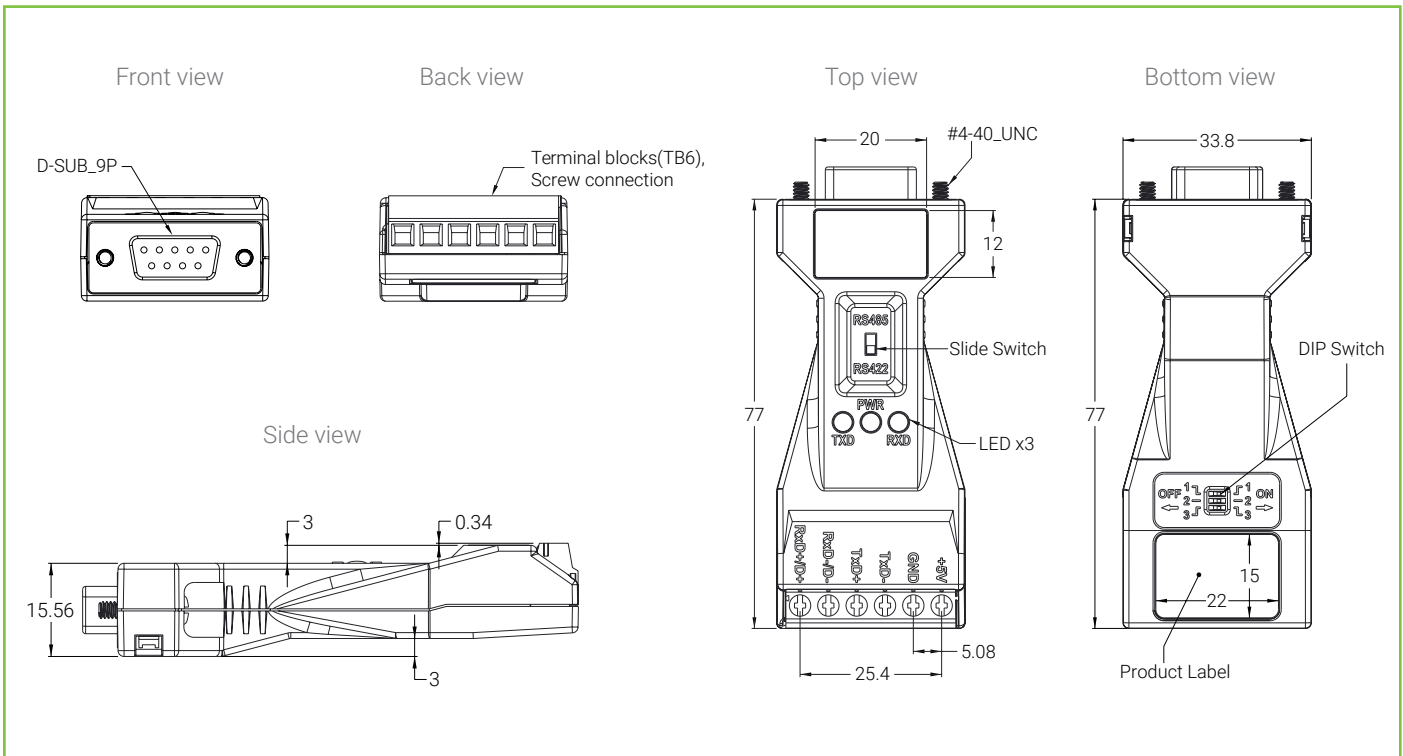
## SPECIFICATIONS

| Serial interface          |   |
|---------------------------|---|
| Mode                      | RS422 : Point to point Mode, Multi-Drop Mode<br>RS485: Echo Mode, Non-Echo Mode |
| Speed                     | 1200bps ~ 500Kbps   |
| Maximum Distance          | 1.2Km. @115.2Kbps, 24AWG twisted pair cable                                     |
| Connector                 | RS232: DB9 female<br>RS422/485: Terminal block 6P (DC-Jack would be 4P)         |
| Data bits                 | 5, 6, 7, 8  |
| Stop bits                 | 1, 2  |
| Parity                    | None, even, odd, space, mark  |
| Data control              | Auto toggling   |
| Termination Resistor      | 120Ω, selectable via dip switch   |
| Interface                 |   |
| LEDs                      | Power, Tx, Rx   |
| Power Requirements        |   |
| Power                     | Power supply via RS232 port (RTS, DTR), by TB or DC Jack                        |
| Power input               | 5 VDC   |
| Power consumption         | Non-ISO 115mW Max, ISO 220mW Max  |
| Physical Characteristics  |   |
| Housing                   | Plastic   |
| Dimension                 | 33.8 x 76.4 x 17.5 mm   |
| Weight                    | 21 g  |
| Environmental Limits      |   |
| Operating Temperature     | -40°C ~ 85°C (-40°F ~ 185°F)  |
| Storage Temperature       | -40°C ~ 85°C (-40°F ~ 185°F)  |
| Ambient Relative Humidity | 5 to 95%, non-condensing  |

## REGULATORY APPROVALS

| Approvals      |  |                   |                                |       |           |
|----------------|--|-------------------|--------------------------------|-------|-----------|
| EMC            | EN55032/24, EN61000-6-4, EN61000-6-2, EN61000-3-2, EN61000-3-3 |                   |                                |       |           |
| EMI            | FCC Part 15B Class A   |                   |                                |       |           |
| Test           | Item   |                   | Value                          | Level | Criterion |
| IEC 61000-4-2  | ESD  | Contact Discharge | ±6KV                           | 3     | B         |
|                |  | Air Discharge     | ±8KV                           | 3     | B         |
| IEC 61000-4-3  | RS   | 80-1000MHz        | 10(V/m)                        | 3     | A         |
| IEC 61000-4-4  | EFT  | AC Power Port     | ±2.0KV                         | 3     | B         |
| IEC 61000-4-5  | Surge  | AC Power Port     | Line-to-Line±1.0KV             | 3     | B         |
| IEC 61000-4-6  | CS   | 0.15-80MHz        | 10 Vrms                        | 3     | A         |
| IEC 61000-4-8  | PFMF   | Enclosure         | 30A/m (r.m.s)                  | 4     | A         |
| IEC 61000-4-11 | DIP  | AC Power Port     | 1. >95% reduction, 1 period    | -     | A         |
|                |  |                   | 2. 60% reduction, 10 period    |       | A         |
|                |  |                   | 3. 30% reduction, 25 periods   |       | A         |
|                |  |                   | 4. >95% reduction, 250 periods |       | C         |
| RoHS           | Yes  |                   |                                |       |           |
| MTBF           | 25.29 years  |                   |                                |       |           |
| Warranty       | 5 years  |                   |                                |       |           |

## DIMENSIONS & LAYOUT



## ORDERING INFORMATION

### Ordering Information

| Product     | Part number     | RS232 | RS422/485 | Isolation Voltage | Power Connector |
|-------------|-----------------|-------|-----------|-------------------|-----------------|
| SS100       | 1P1SS100000001G | DB9   | TB-6      | N/A               | TB-2            |
| SS100-SiS-R | 1P1SS100000002G | DB9   | TB-6      | 3000 VDC at RS232 | TB-2            |
| SS100-J     | 1P1SS100000004G | DB9   | TB-4      | N/A               | DC-Jack         |

### Optional Accessories

| Model Name          | Part Number     | Description  |
|---------------------|-----------------|--|
| UV305-0510(US-DC)   | 50500051500003G | DC jack (3.5/1.35/7.5 mm) power adapter, 100~240VAC input, 1.0A @ 5 VDC output, US plug, LV6 |
| UVE305-0510 (EU-DC) | 50500051500013G | DC jack (3.5/1.35/7.5 mm) power adapter, 100~240VAC input, 1.0A @ 5 VDC output, EU plug, LV6 |
| UVE305-0510(UK-DC)  | 50500051500023G | DC jack (3.5/1.35/7.5 mm) power adapter, 100~240VAC input, 1.0A @ 5 VDC output, UK plug, LV6 |