



SmartGen SG485-3 Interface Expansion Module User Manual

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SG485-3 INTERFACE EXPANSION MODULE USER MANUAL

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SG485-3 Interface Expansion Module



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Table 1 Software Version

| Date | Version | Note |
|------------|---------|--------------------------------|
| 2021-06-08 | 1.0 | Original release. |
| 2021-07-19 | 1.1 | Update pictures in the manual. |
| 2021-11-06 | 1.2 | Update pictures in the manual. |
| | | |

OVERVIEW

SG485-3 is the expansion module of the RS485 interface, which has 3 interfaces, namely the RS485 host interface, RS485 slave 1 interface, and RS485 slave 2 interfaces. It can convert 1# RS485 interface to 2# RS485 interface, providing convenience for customers to monitor and collect data via Modbus-RTU protocol.

PERFORMANCE AND CHARACTERISTICS

Its main characteristics are as follows:

- With 32-bit ARM SCM, high hardware integration, and improved reliability;
- DC(8~35)V continuous power supply;
- 35mm guide rail installation method;
- Modular design and pluggable connection terminals; compact structure with easy mounting.

SPECIFICATION

Table 2 Performance Parameters

| Items | Contents |
|---------------------|---|
| Working Voltage | DC(8~35)V |
| RS485 Interface | Baud rate: 9600bps, max. communication distance can reach 1,000m when a 120Ω shielded twisted pair line is applied. Stop bit: 1-bit' Parity bit: None |
| Case Dimension | 71.6mmx92.7mmx60.7mm (LxWxH) |
| Working Temperature | (-40~+70)°C |
| Working Humidity | (20~93)%RH |
| Storage Temperature | (-40~+80)°C |
| Protection Level | IP20 |
| Weight | 0.14kg |

WIRING

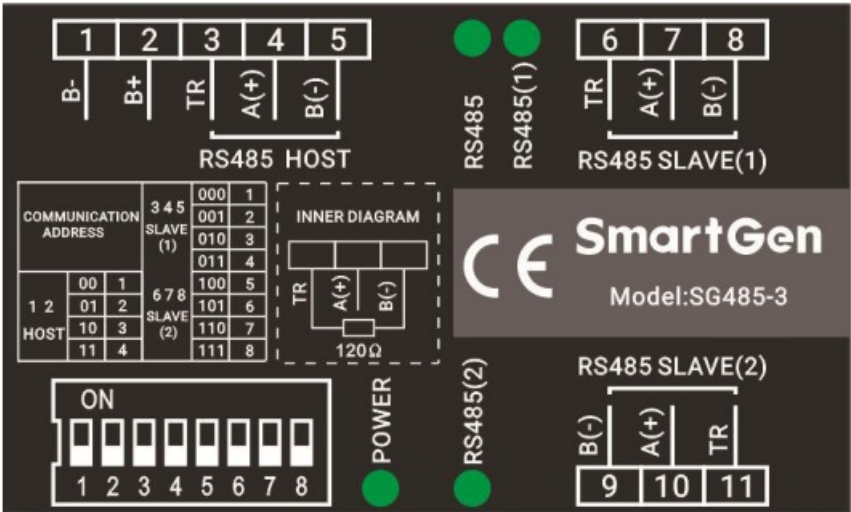


Fig.1 Mask Diagram

Table 3 Indicators Description

| No. | Indicator | Description |
|-----|-----------|---|
| 1. | POWER | Power indicator, always on when powered on. |
| 2. | RS485 | RS485 HOST communication indicator flashes 100ms when sending or receiving data. |
| 3. | RS485(1) | RS485 SLAVE(1) communication indicator, flashes 100ms when sending or receiving data. |
| 4. | RS485(2) | RS485 SLAVE(2) communication indicator, flashes 100ms when sending or receiving data. |

Table 4 Wiring Terminals Description

| No. | Function | | Cable Size | Remark |
|-----|----------------|------|--------------------|---|
| 1. | B- | | 1.0mm ² | DC power negative. |
| 2. | B+ | | 1.0mm ² | DC power is positive. |
| 3. | RS485 HOST | TR | 0.5mm ² | RS485 host interface communicates with controller, TR can be shortly connected with A(+), which is equivalent to connecting 120Ω matching the resistor between A(+) and B(-). |
| 4. | | A(+) | | |
| 5. | | B(-) | | |
| 6. | RS485 SLAVE(1) | TR | 0.5mm ² | RS485 slave interface communicates with PC monitoring interface, TR can be shortly connected with A(+), which is equivalent to connecting 120Ω the matching resistor between A(+) and B(-). |
| 7. | | A(+) | | |
| 8. | | B(-) | | |
| 9. | RS485 SLAVE(2) | B(-) | 0.5mm ² | RS485 slave interface communicates with PC monitoring interface, TR can be shortly connected with A(+), which is equivalent to connecting 120Ω the matching resistor between A(+) and B(-). |
| 10. | | A(+) | | |
| 11. | | TR | | |

Table 5 Communication Address Setting

| Communication Address Setting | | | | | | | | |
|--|--------------|---|-----------------|---|---|-----------------|---|---|
| Address | Host Address | | Slave 1 Address | | | Slave 2 Address | | |
| Dial Switch No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| The corresponding relation between dial switch combination and communication address | 00:1 | | 000:1 | | | 000:1 | | |
| | 01:2 | | 001:2 | | | 001:2 | | |
| | 10:3 | | 010:3 | | | 010:3 | | |
| | 11:4 | | 011:4 | | | 011:4 | | |
| | / | | 100:5 | | | 100:5 | | |
| | / | | 101:6 | | | 101:6 | | |
| | / | | 110:7 | | | 110:7 | | |
| | / | | 111:8 | | | 111:8 | | |

ELECTRICAL CONNECTION DIAGRAM

This module is applied for the expansion of the RS485 interface, which can convert 1# RS485 interface to 2# RS485 interface. Common connection examples are as follows:

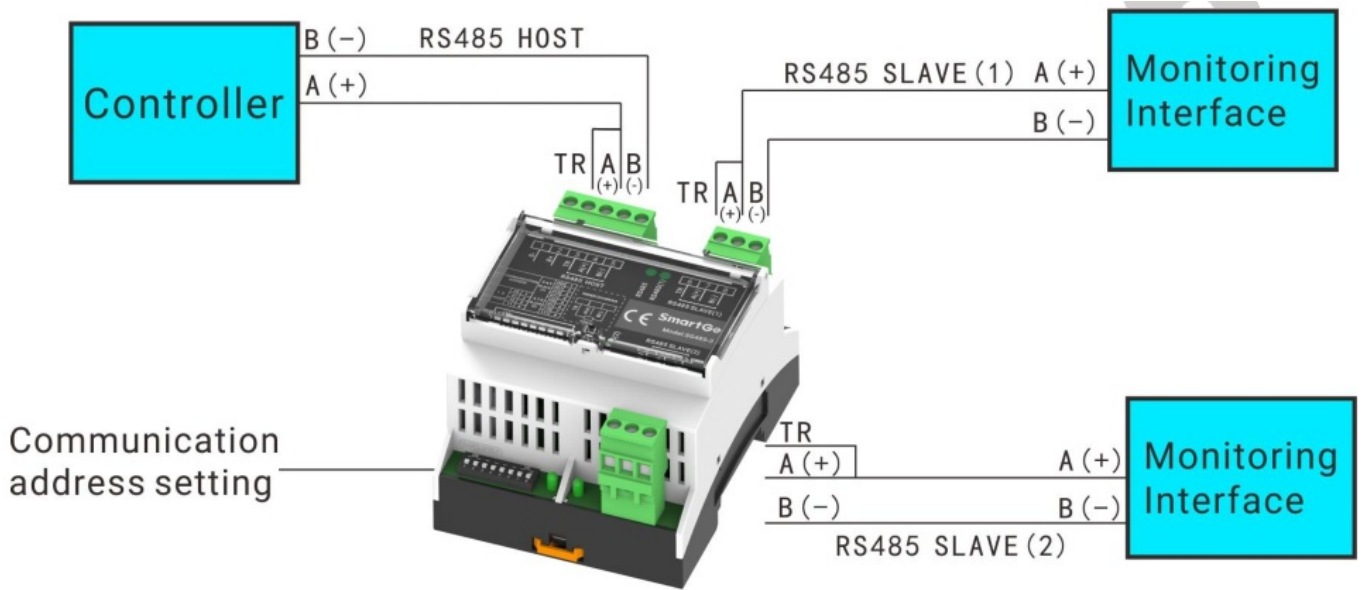


Fig.2 Electrical Connection Diagram

OVERALL DIMENSION AND INSTALLATION

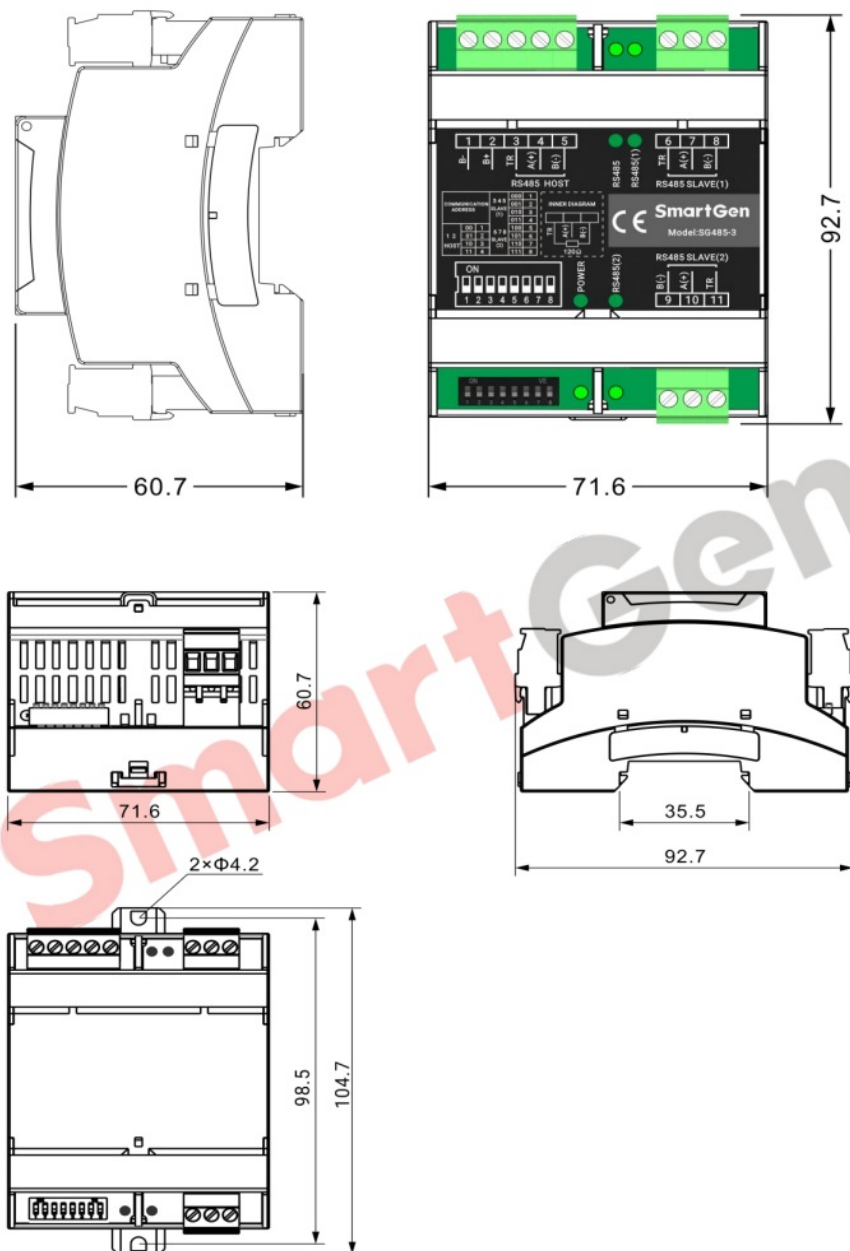


Fig.3 Overall Dimension and Installation (Unit: mm)



Chinese trademark

SmartGen English trademark

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Documents / Resources

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|  | <p>SmartGen SG485-3 Interface Expansion Module [pdf] User Manual SG485-3, Interface Expansion Module, SG485-3 Interface Expansion Module, Expansion Module, Module</p> |
|  | <p>SmartGen SG485-3 Interface Expansion Module [pdf] User Manual SG485-3, Interface Expansion Module, SG485-3 Interface Expansion Module, Expansion Module, Module</p> |

References

- [众智](#)
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