

RS485 HUBs

H01 - H03 RS485 HUBs documentation

- [Data Sheet](#)
- [Contact Us](#)

Data Sheet

RS485 HUBs (H01 - H03)

H01 H02 H03



Features

- Isolated RS485 1:3 HUB
- ESD protection for the RS485 data line
- Power supply: +12 to +30 VDC or 24 VAC
- 2000 VDC isolation protection
- Transmission speed up to 115200 bps
- Tx, Rx and power LED indicators
- RS485 embedded termination 120 ohm
- Operating temperatures: -40°C to +75°C
- DIN-rail mounting
- Compact size - single module format (1M)
- Dimensions: 90x56.4x22.5 mm
- 3 years warranty
- Customization of OEM is welcomed

Introduction

The products from the H01-H03 family are reliable RS485 signal hubs made to work with variable transmission speeds. They allow flexible branching of the 1:3 interface while simultaneously protecting the attached devices thanks to internal 2 kV/DC galvanic isolation. Additionally, dedicated EMC protections will improve transmission quality and limit the impact of interference typical for an industrial environment.

Specifications

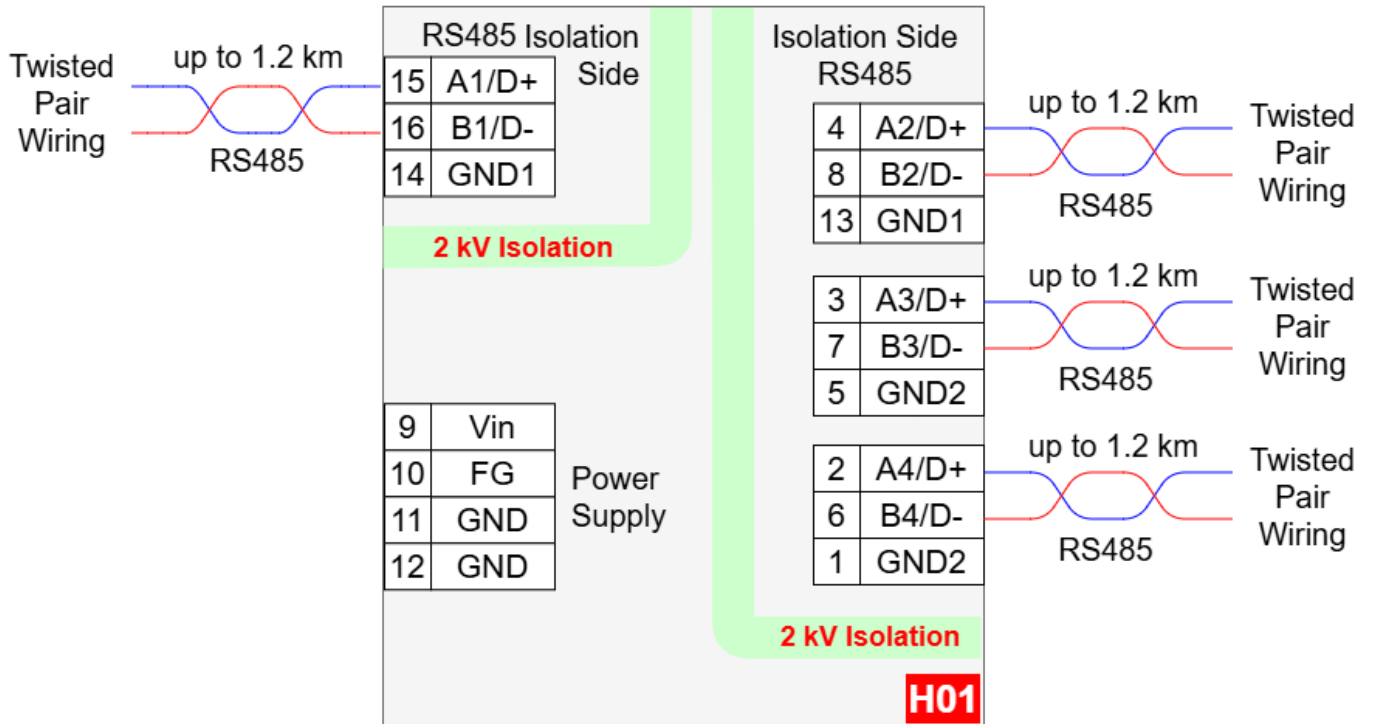
| Redisage PN | H01 | H02 | H03 | | | |
|-------------|----------------------------------|-----|-----|--|--|--|
| Input | 1 x RS485 channel; Data+, Data- | | | | | |
| Output | 3 x RS485 channels; Data+, Data- | | | | | |

| Redisage PN | | H01 | H02 | H03 | | | |
|-------------------------|---------|---|------------------|-----------|--|--|--|
| Power | Voltage | 12-30 VDC / 24 VAC | 12-30 VDC | | | | |
| | Power | < 1 W | | | | | |
| Frame ground protection | | yes | | | | | |
| 2000 VDC isolation | | 3-way | branched side | main side | | | |
| Baud rate | | up to 115200 bps | | | | | |
| LED indicators | | communication Tx, Rx and power | | | | | |
| RS485 termination | | 120 ohm manually enabled | | | | | |
| Connector | RS485 | 8-pin terminal block max. 2.5 mm ² wire | | | | | |
| | Power | 3-pin terminal block max. 2.5 mm ² wire | | | | | |
| Transmission distance | RS485 | max. 1,200 m at 9.6 kbps; max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change) | | | | | |
| Mounting and enclosure | | DIN rail, plastic PA - UL 94 V0, black/green | | | | | |
| Temperatures | | -40°C to +75°C operating and storage | | | | | |
| Humidity | | 10 - 90% RH, non-condensing | | | | | |
| ESD protection | | ±4 kV contact discharge / ±8 kV air discharge | | | | | |
| Certification | | CE, RoHS, EMC, LVD | | | | | |
| Norms | | 61000-6-2 - Immunity standard for industrial environments 61000-6-4 - Emission standard for industrial environments | | | | | |

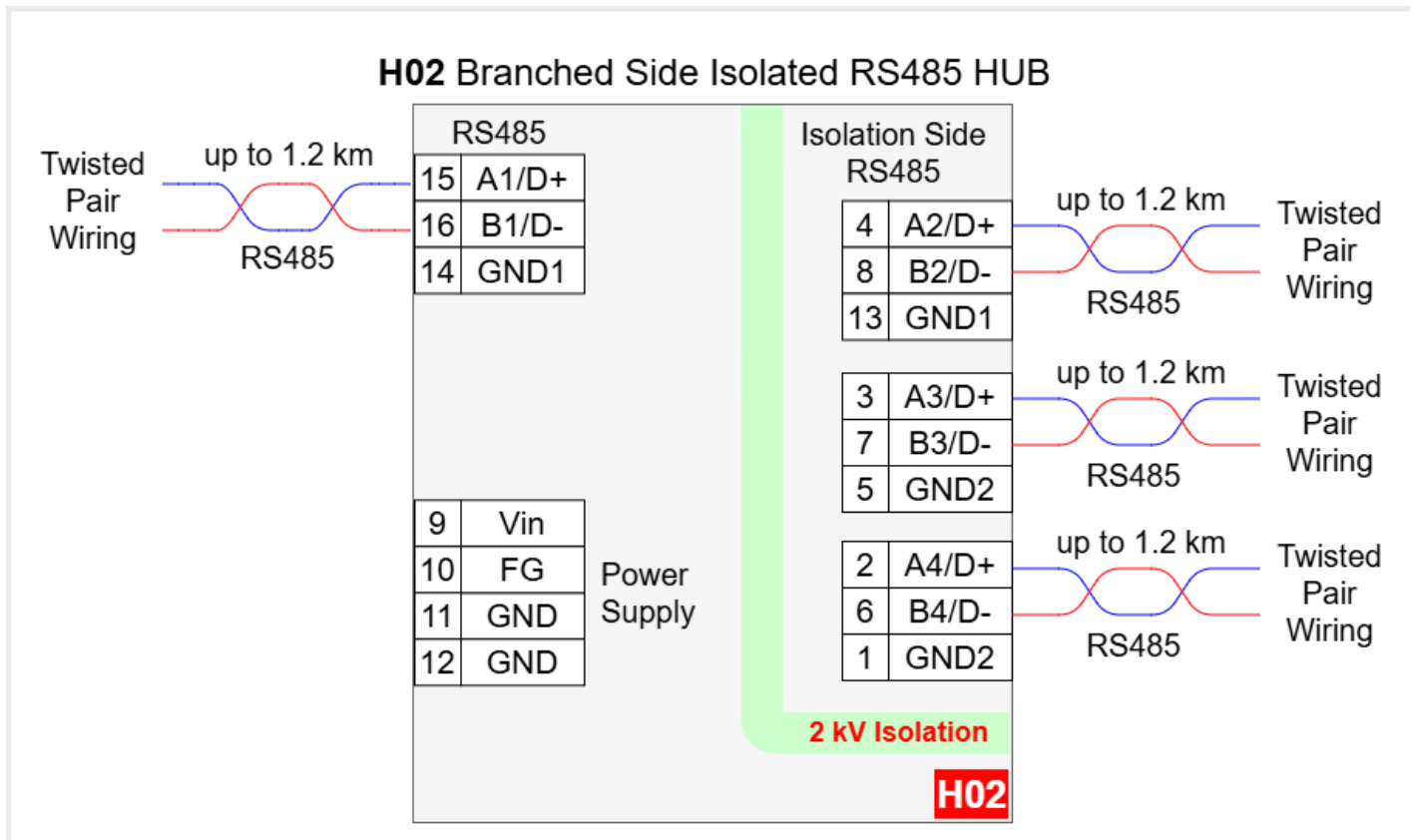
Variants

H01 - THREE-WAY Isolated RS485 HUB

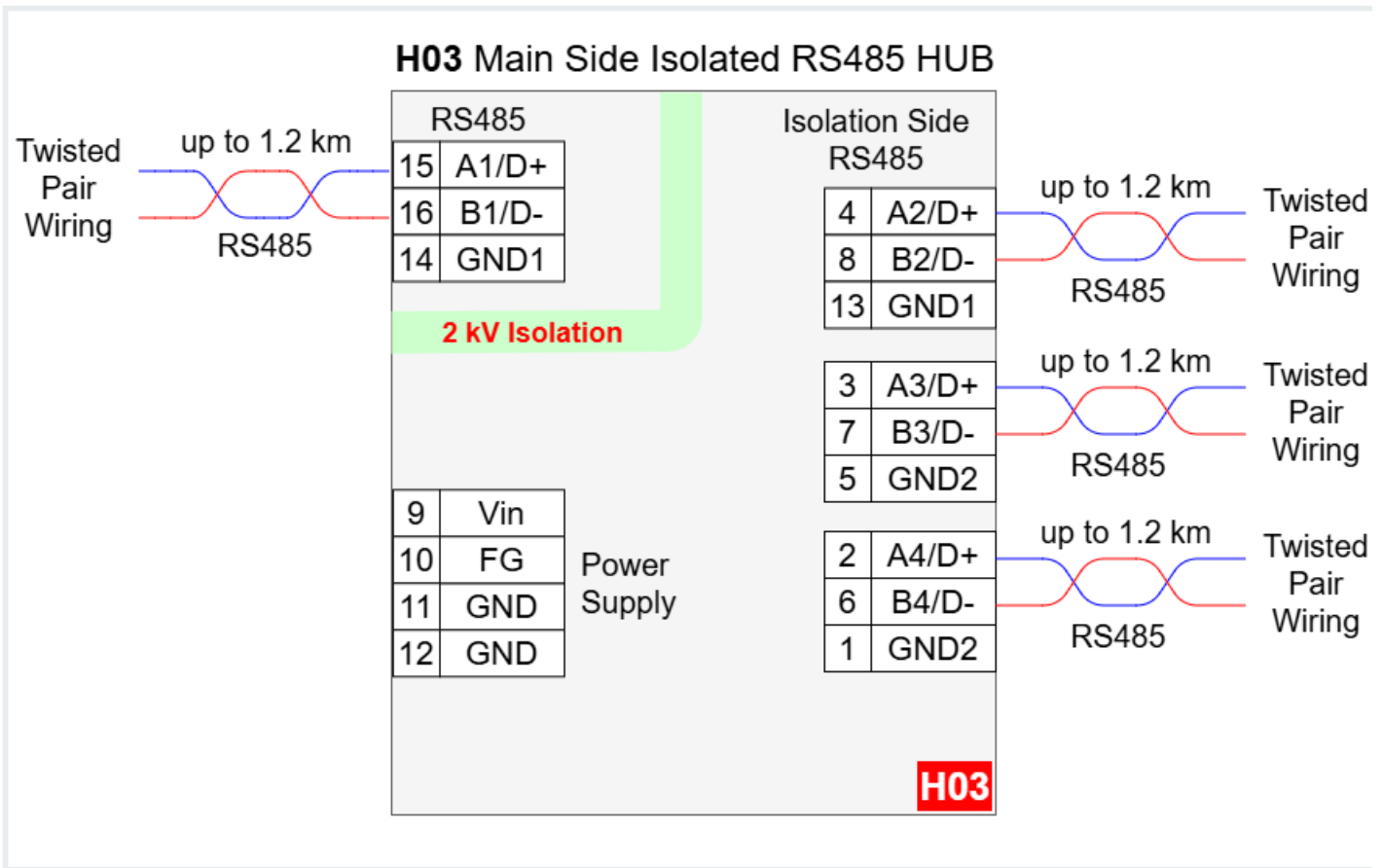
H01 THREE-WAY Isolated RS485 HUB



H02 - Branched Side Isolated RS485 HUB



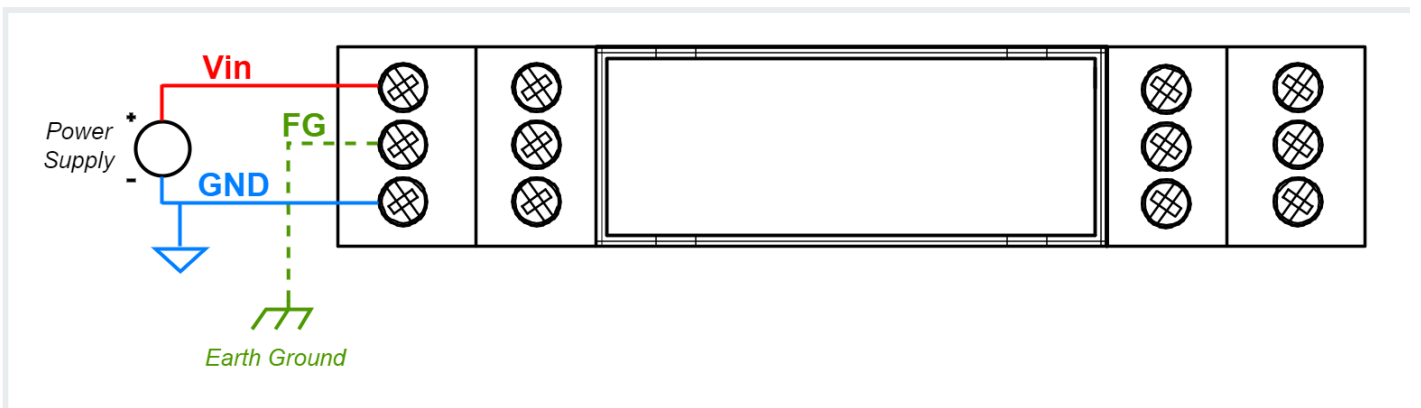
H03 - Main Side Isolated RS485 HUB



Frame ground FG

Electronic circuits are constantly prone to electrostatic discharge ESD. Redisaige Electronics modules feature a design for the frame ground terminal block FG. The frame ground provides a path for bypassing ESD, which provides enhanced static protection ESD abilities and ensures the module is more reliable. Connecting FG terminal block to the earth ground will bypass the ESD disturbances outside the device so will provide a better level of protection against ESD.

Frame Ground FG connection reference drawing is provided below.



If earth ground is not available FG can be left floating or it can be connected with the power supply GND.

Pin assignments

H01

H01 Three-Way Isolated RS485 HUB

123456789012345

Power: $\overline{\text{---}}$ 12-30V/DC <1W
 \sim 24V/AC
 Temperature: -40°C +75°C
 Interface: 3xRS485
 Baud: up to 115200 bps
 Isolation: 3-side 3kV/DC
 REV1 MADE IN EU

| | | | |
|--------|--------|--------|---------|
| 4 A2 | 8 B2 | 12 Gnd | 16 B1 |
| 3 A3 | 7 B3 | 11 Gnd | 15 A1 |
| 2 A4 | 6 B4 | 10 FG | 14 Gnd1 |
| 1 Gnd2 | 5 Gnd2 | 9 Vin | 13 Gnd1 |

B1 A1 B2 A2

ON

B3 A3 B4 A4

1 - Port 4 terminator
 2 - Port 3 terminator
 3 - Port 2 terminator
 4 - NC
 5 - NC
 6 - Port 1 terminator

H02

H02 Isolated RS485 HUB
 A(234) B(234) Isolated Side

123456789012345

Power: $\overline{\text{---}}$ 12-30V/DC <1W
 Temperature: -40°C +75°C
 Interface: 3xRS485
 Baud: up to 115200 bps
 Isolation: Output 3kV/DC
 REV1 MADE IN EU

| | | | |
|--------|--------|--------|--------|
| 4 A2 | 8 B2 | 12 Gnd | 16 B1 |
| 3 A3 | 7 B3 | 11 Gnd | 15 A1 |
| 2 A4 | 6 B4 | 10 FG | 14 Gnd |
| 1 Gnd1 | 5 Gnd1 | 9 Vin | 13 Gnd |

B1 A1 B2 A2

ON

B3 A3 B4 A4

1 - Port 4 terminator
 2 - Port 3 terminator
 3 - Port 2 terminator
 4 - NC
 5 - NC
 6 - Port 1 terminator

H03

H03 Isolated RS485 HUB
 A1 B1 Isolated Side

123456789012345

Power: $\overline{\text{---}}$ 12-30V/DC <1W
 Temperature: -40°C +75°C
 Interface: 3xRS485
 Baud: up to 115200 bps
 Isolation: Input 3kV/DC
 REV1 MADE IN EU

| | | | |
|-------|-------|--------|---------|
| 4 A2 | 8 B2 | 12 Gnd | 16 B1 |
| 3 A3 | 7 B3 | 11 Gnd | 15 A1 |
| 2 A4 | 6 B4 | 10 FG | 14 Gnd1 |
| 1 Gnd | 5 Gnd | 9 Vin | 13 Gnd1 |

B1 A1 B2 A2

ON

B3 A3 B4 A4

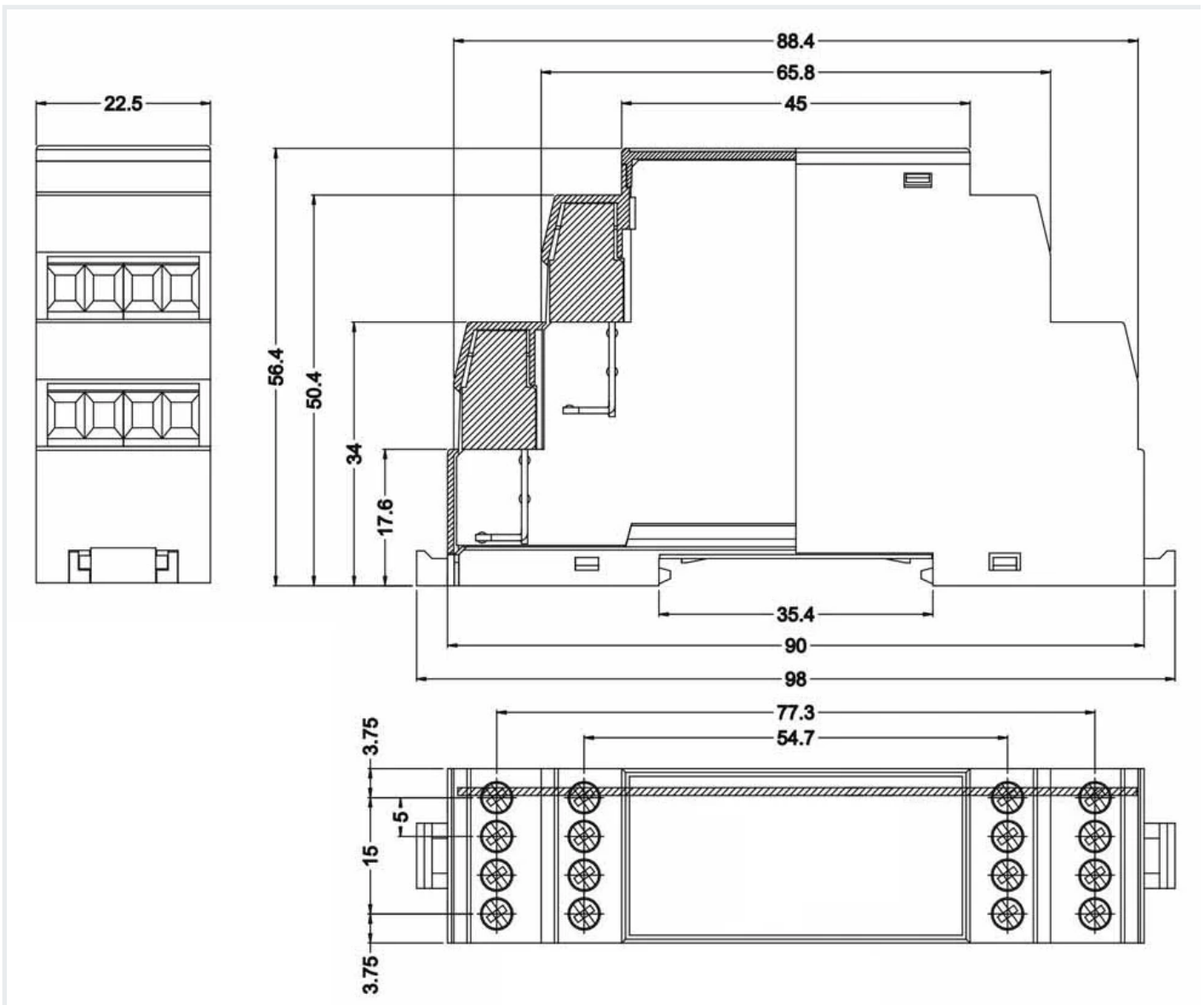
1 - Port 4 terminator
 2 - Port 3 terminator
 3 - Port 2 terminator
 4 - NC
 5 - NC
 6 - Port 1 terminator

Enclosure dimensions

2U Module Enclosure

98 x 22.5 x 56.4

Units: mm



Additional notes

Related information and links

[Ordering information](#)

[Accessories](#)

[Similar products](#)

Products family sample photo



<https://redisage.com>

DISCLAIMER NOTES

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Datasheet-ID:

SR-D

Contact Us

- [Main web page](#)
- [Facebook](#)
- E-mail:
online@redisage.com
- Phone number:
+48 71 70 00 140
- Address:
NSG 4L Sp. z o.o.
ul. Trzy Lipy 3B
80-172 Gdańsk
(POLSKA)
- [More information](#)