Higeco

HRC Higeco Repeater Converter

DS-007-HRC-EN-R04



1 Warnings

- This manual is an integral part of the product and must be kept nearby.
- The device must not be used for purposes other than those intended.
- Check that the power supply voltage is correct before connecting the device.
- In case of malfunction, contact the reseller or Higeco S.r.l. with a detailed description of the fault.
- Keep power cables and RS485 line cables separate.
- Install the device in compliance with applicable safety regulations.
- Do not open the device.

2 General Description

HRC is a repeater/isolator for RS485 lines. It introduces galvanic isolation on the data bus and regenerate the signal at the nominal level. The device allows to double the transmission distances of the bus, eliminating the restrictions imposed by the resistance and capacity of the cables. In addition to this function, HRC allows to convert an RS485 into a basic RS232, without the flow control (only RX/TX signals are available).

3 System LEDs

The device has 3 status LEDs:

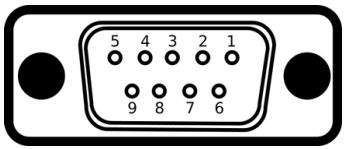
LED	Color	Description
PWR	Green	On
	Off	Not powered
TX	Blinking yellow	Data transmission
	Off	No data transmission
RX	Blinking yellow	Data reception
	Off	No data reception

4 Power Supply

The device can be powered with a voltage of 12–15 V ac ± 10% or 12–24 V dc ± 10% through terminals 4–5 located on the bottom side of the device.
The power supply must be provided by a source compliant with ES1 (Energy Source Class 1) requirements and classified as PS1 (Power Source Class 1), equipped with short-circuit and overload protection.
The device integrates reverse polarity protection and is internally protected by a safety fuse that is not removable or user-replaceable.

5 RS232

The RS232 port requires a DB9 cable, sold separately. If HRC is used as an RS232 converter, it cannot simultaneously function as an RS485 repeater. The cable should be as short as possible, with a maximum length of 1 meter.



Standard RS232 DB9 connector

1	2	3	4	5	6	7	8	9
NC	**RX**	**TX**	NC	**GND**	NC	NC	NC	NC

⚠ **WARNING:** the RS232 serial port does NOT have flow control.

6 Protections

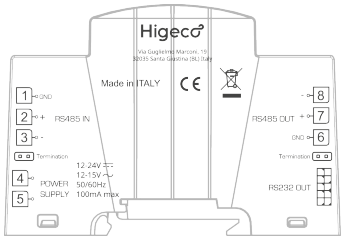
HRC features protections to enhance line robustness:

- TVS: Transient Voltage Suppression
- TBU: Transient Blocking Unit
- GDT: Gas Discharge Tube

7 Termination Resistor

To activate the termination resistor, insert the supplied jumper into the "Termination" connector, as shown in the diagram below.

8 Wiring Diagram



Lower terminal block:

- **1-2-3**: RS485 IN
- **TERMINATION**: RS485 IN Termination
- **4-5**: Power Supply

Upper terminal block:

- **6-7-8**: RS485 OUT
- **TERMINATION**: RS485 OUT termination
- **RS232 OUT**: RS232 Connector

9 Technical Data

- Housing: ABS
- Type: 1 DIN module
- Mounting: DIN rail
- Protection: IP20
- Power supply: 12–15 V ac ±10% - 12–24 V dc ±10%
- Connections: detachable screw terminal block for wire 16 AWG max
- Current consumption: 80 mA max
- Terminations: 150 Ω
- Dimensions: 88 x 62 x 17 mm
- Operating temperature: -20°C ÷ +55°C

10 Device options

Order Code	Device Marking	Description
PHHW0007	HRC PHHW0007	HRC 1KV optoisolated RS485/RS485 repeater, RS232/RS485 converter

11 Disposal

The equipment is subject to mandatory separate collection in compliance with current regulations.



12 Certifications

CE

13 Contacts

Higeco S.r.l.

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