

## RS-232 to RS-485/422 serial converter for SATELLINE -1870 radio modems

*SATEL RS-LINK 100 is a cost-effective serial converter that can be configured to operate in compliance with RS-485 or RS-422. In addition to the standard converter features the device includes a lot of user friendly functions that are needed for radio modem operation.*

The galvanically isolated and surge suppression protected converter lines allow information exchange in full-duplex RS-422 or half-duplex RS-485 mode. The RS-485 or RS-422 settings are easily selected by the DIP-switches. It is also possible to terminate the lines.

With a help of the six LED indicators monitoring of the system data transfer is easily visualized at-a-glance view. For service purposes the radio modem can be set to the programming mode or it can be turned OFF if needed. As the RS-LINK 100 has been designed for SATELLINE-1870 radio modem there is no need for any cables or extra connectors. RS-232 signals can be connected directly to screw connectors of the unit.



### SATEL RS-LINK 100 General specifications

Feature	Typical Values
Supply Voltage	+9...30 VDC
Interfaces	RS-232 RS-485 half-duplex RS-485 full-duplex (RS-422)
Isolation	Galvanic Isolation
Surge suppression	EMI-protected
Indicators	PWR ON/OFF, Converter ON/OFF, RD, TD, CTS, RS-485/422.
DIP-Switches	Termination ON/OFF RS-485/422 Programming Mode Modem ON/OFF Converter ON/OFF
Connectors	Screw connectors
Temperature range	-25...+55°C
Mounting	Wall mounting or DIN-rail
Casing	Brushed steel
Size	L 123 x W 85 x H 30 mm
Weight	100 g

SATEL OY is a Finnish electronics and telecommunications company that specialises in wireless data communications. It designs, manufactures and markets radio modems for data and alarm transfer systems. The main user groups include industrial companies, public organisations and private persons. Today SATEL is one of Europe's leading manufacturers of narrow-band radio modems.

## Operational description for SATEL RS-LINK 100

SATEL RS-LINK 100 is compatible to the SATELLINE-1870 radio modem. It can be used as direct screw connector for the radio modem's RS-232 serial line or as an RS-485/422 serial converter.

### Screw connector:

- |                                |                        |
|--------------------------------|------------------------|
| 1, 2. Supply Voltage minus.    | 8. SGND, Signal Ground |
| 3. Supply Voltage + 9...30 VDC | 9. RS-422 TX-          |
| 4. RD                          | 10. RS-422 TX+         |
| 5. RTS                         | 11. RS-485 T/R -       |
| 6. TD                          | 12. RS-485 T/R +       |
| 7. CTS                         |                        |

**Note !** The names and directions are described from the DTE's (Data Terminal Equipment) point of view. (Example: Text "RD" of the converter means RD input of the DTE).

### DIP-switch/ Upper row

1. Converter ON/OFF
2. Programming ON/OFF
3. Modem ON/OFF
4. RS-485/422 ON/OFF

### DIP-switch/ Lower row: TERMINATION ON/OFF

## OPERATION

Connect the RS-LINK to the radio modem. The RS-LINK gets the regulated supply voltage from the radio modem. Connect the supply voltage to the - and + connectors of the RS-LINK 100.

### RS-232 operation. Screws 4, 5, 6, 7.

Setting of the upper DIP-switch=1000

When this operation is used the other conversions are disabled.

### RS-485 operation, Half-Duplex. Screws 11, 12.

Setting of the upper DIP-switch=0000

### RS-422 operation, Full-Duplex. Screw 9, 10.

Setting of the upper DIP-switch=0001

### Line termination

Setting of the lower DIP-switch=1111

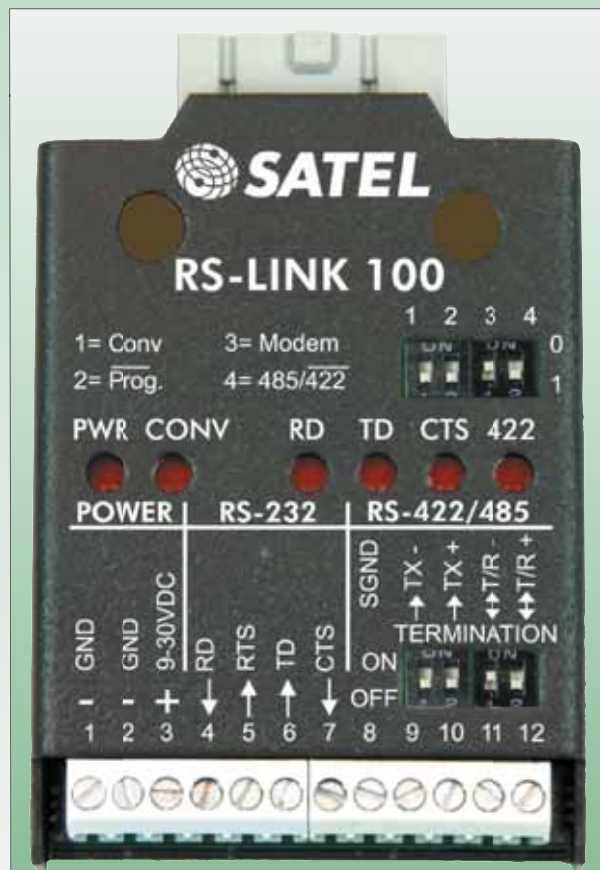
The serial line is terminated by setting all DIP-switches of the lower row to ON-position.

### Other functions

When the DIP-switch No.2 is set to 1-position, upper DIP-switch = 0100, the radio modem is in programming mode and the settings are configurable by using a suitable terminal program.

### Indicators and their functions:

- PWR = Supply Power is connected
- CONV = Converter is ON
- RD = Receive Data (by the DTU)
- TD = Transmit Data (by the DTU)
- CTS = CTS from the DTU
- 422 = OFF => RS-485.  
ON => RS-422.



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