Model Information

Main Features

- Converts RS232 <=> RS422/485
- ARTc(Automatic Receive/Transmit Control) for RS485
- Auto Baudrate sensing
- Built-in 120Ω termination, no biasing needed
- LEDs for Power, RS232 & RS485
- Full software configuration, no jumpers
- Quick DIP configuration for standard modes
- Wide power supply range 9-30V @ 100mA
- 16kV ESD surge protection
- 2.5kV electrical isolation (ISO version only)
- DIN-Rail/Wall mountable option
- Ultra small metal case

Contact Online...

SER-485 Mini
SER-485 Mini ISO
(SER-485 PRO, SER-485 Lite, SER-485 PRO-SI)

Quick Link: | Main Features | More Pictures | Overview | Port RS232 | Port RS422 / 485 | Software Configuration | Power Requirements | Housing and Mounting | Environmental Data | Standards | MTBF (Mean Time Between Failures) | Warranty | Ordering Information | Options | Packaging |

More Pictures



Click on the thumbnails for the large picture ...

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Overview

The SER-485 Mini is a small size, smart bidirectional RS232 to RS422/RS485 converter that is fully configurable by software and suitable for industrial environments. The device supports the ARTc (Automatic Receive/Transmit Control) for RS485 and auto baud rate sensing. Whilst automatic line termination exists there is no need for biasing differential lines easing its deployment. Both the RS232 and the RS422/RS485 interfaces are ESD surge protected. RS485/RS422 interface is build as a 5 Pin terminal block. The device is a table, Din-Rail or wall mountable system.

ARTc (Automatic Receive Transmit control)

In the RS485 mode, the data direction is managed by the bitrate adaptive function of the ARTc to allow faster transmitter switch-off times. Auto baud rate sensing analyses the data in real-time and adapts to the speed of the RS232 port; this way the change from transmit to receive is done quickly and automatically.

Software Configuration

All options and parameters of the SER-485 operation are configured by a software and controlled by an easy-to-use menu structure. This menu is accessed from standard terminal programs. The SER-485 has NO jumpers.

Quick & Easy DIP control

Operation modes that are frequently used by the RS485/RS422 are selected by bottom DIP switches. The full versatility is controlled by the built-in software configuration menu.

The internal termination resistors help to adjust the RS485 signals to connect to customers networks. These internal resistors are controlled by the configuration modes.

ESD protection and Isolation

For usage in hazardous industrial environments, the RS232 & RS422/RS422 interfaces and DCin are +/-16KV air and +/-8KV contact ESD surge protected. Long distance RS485/RS422 connections with unbalanced ground loops could seriously damage the equipment; As such, an ISO version offers 2.5kV galvanic isolation.

Port RS232

No. of Ports/Type	1 × RS232
Connector	DB-9 female
Protection	16kV ESD surge protection
Signals	TxD,RxD, RTS, GND
Baudrate	200 bps to 460.8/500 kbps
LEDs	Bi-colour for TxD/RxD

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Port RS422 / 485

No. of Ports/Type	1 × RS422/485 selected by DIP-switch or software
Connector	5-pin Terminal Block
Protection	• 16kV ESD surge protection • 2.5kV electric isolation (ISO version only)
Operating Modes	• RS422 full duplex (120Ω on/off) • RS485 4 wire, full duplex (120Ω on/off) • RS485 2 wire, half duplex (120Ω on/off)
Configuration	One DIP switch sets operating mode and RS422/485 termination Also software can configure this No High/Low biasing resistors needed
Signals	• RS422: Tx+/-, Rx+/-, GND • RS485 4 wire: Tx+/-, Rx+/-, GND • RS485 2 wire: Data+/-, GND
RS485 Data Direction Control	• ARTc (Automatic Receive Transmit control) • RTS Signal on RS232 port
Baudrate	• RS422: 200 bps to 500 kbps • RS485+ARTc: 200 bps to 250 kbps • RS485+RTS: 200 bps to 500 kbps
LEDs	Bi-colour for TxD/RxD, bi-colour for ARTc/PWR

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Software Configuration

Configuration Menu	Software Utility with easy-to-use menu interface is accessed via standard terminal programs (Hyperterminal, PuTTY, miniterm, ...)
ARTc Options	• ARTc: Transmit/Receive change as quick, average, standard • By RTS signal

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Power Requirements

Input Voltage	9-30V DC
Power Consumption	50mA @ 12V, 600mW
Connector	2-pin Terminal Block

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Housing and Mounting

Case	0.8mm sheet metal
Weight	w/o box 130g; w/h box 200g
Dimensions	50×74×22 mm³ (W×L×H)
Packaged	85×122×55 mm³

Mounting	• DIN-Rail (optional) • Wall mount

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Environmental Data

Operating Temp	−20°C - 65°C
Storage Temp	−20°C – 85°C
Ambient Humidity	5-95% non condensing

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Standards

Declarations	CE, FCC
EMI	• EN 55022 Class B • EN 61000-3-2: Limits of harmonic current emissions • EN 61000-3-3: Limitation of voltage changes • 47 CFR FCC Part 15 Subpart B
EMS (EN 55024)	• EN 61000-4-3: Radiated RFI • EN 61000-4-4: Electrical Fast Transient • EN 61000-4-5: Surge • EN 61000-4-6: Induced RFI • EN 61000-4-8: Power Frequency Magnetic Field • EN 61000-4-11: Power supply dips
ESD	EN 61000-4-2 4kV contact 8kV air for • Serial Ports • DC Power connector

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MTBF (Mean Time Between Failures)

MTBF	available soon
Standard	Telcordia (Bellcore) Standard; RelCalc. 5.0 BELL-7

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Warranty

Warranty Period	2 years

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Ordering Information

416	SER-485 Mini
417	SER-485 Mini ISO

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Options

6033	Power adapter 110-230V AC to 9V @ 300mA, DC, EU plug
6034	Power adapter 110-230V AC to 12V @1A, DC, US plug
662	DK 35A Plastic DIN-Rail mounting kit

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Packaging

Packing list	• Converter SER-485 Mini • Terminal block for Power Supply • Terminal block for Serial Signals

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SER-485 Mini ISO
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Output Signals

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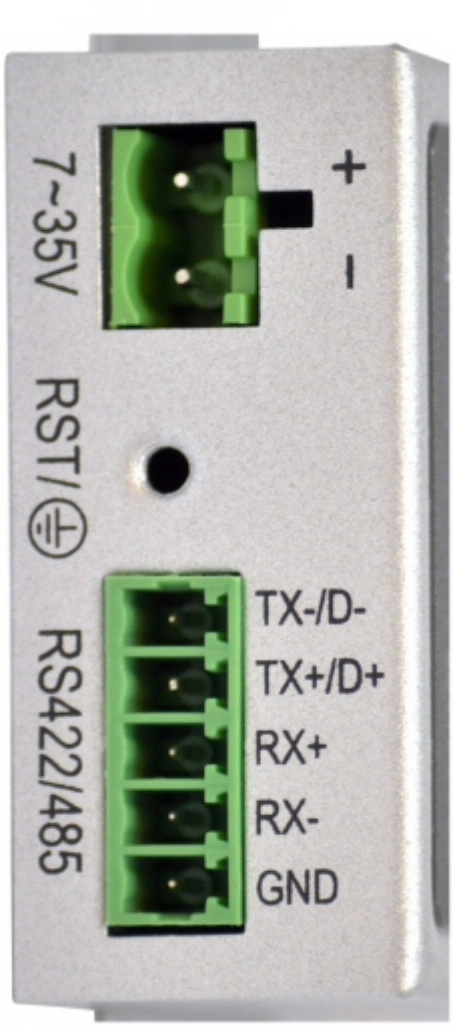

Configuration Menu

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 VScom RS422/485 Converter SER-485 Plus ISO v1.3.0      www.vscom.de
 SN: 00000000  HW Ver: 1.0  Prd Date: 2016-05-31 www.visionsystems.de

 Operation Modes
  1:   RS-422
  2:   RS-485 controlled by RTS
  3: * RS-485 controlled by ART
  a: *  Tx switch off Delay (long,  11 bit)
  b:    Tx switch off Delay (medium, 6 bit)
  c:    Tx switch off Delay (short,  2 bit)

 Cabling Schemes
  d: * Full Duplex (4-wire)
  e:   Half Duplex (2-wire)
  h: * Terminate Data-lines

  W: + Write to memory         R:   Read from memory

Enter new choice :
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(2019 Feb 01)