



- Reliable, bidirectional conversion from USB to RS485
- Versions with Ex i USB and/or Ex i RS485 interface
- Power supply via USB port
- LED status indicators
- Very resistant to interference
- Extended temperature range -40 to +75 °C
- Installation in Zones 1 and 2

MY R. STAHL 9787A



The USB RS485 converters are used to convert a USB interface to an RS485 interface. Depending on the version, the USB interface and/or the RS-485 can be operated in an intrinsically safe configuration (USB-IS or RS485-IS, according to PI standard).

Ideal for converting the IS1+ USB ServiceBus of the 9442 CPU into an RS485 fieldbus.

Technical Data

Explosion Protection	
Application range (zones)	2, 22
Ex interface zone	2
IECEX gas certificate	IECEX TUR 18.0038X
IECEX gas explosion protection	Ex ec IIC T4 Gc
ATEX gas certificate	TÜV 18 ATEX 8212 X
ATEX gas explosion protection	II 3 G Ex ec IIC T4 Gc
Certificates	ATEX (TUR), China (NEPSI), IECEX (TUR), Korea (KTL)
Ship approval	ABS, BVIS, EU RO MR (DNV), KR, LR
Declaration of conformity	ATEX (EUK), China (CCC)
Installation	Zone 2
Electrical Data	
USB version	Standard
USB connection	Type B socket X2, 5-pole
Number of USB ports	1
USB specification	USB 2.0
Max. USB conductor length	3 m
Strain relief USB	Protection from unintentional separation
Version RS485	standard
RS485 connection	D-SUB DE-9 socket X1, 9-pole
Number of RS485 ports	1
RS485 specification	RS485 (TIA/EIA-485-A)
RS485 data rate	Max. 1.5 Mbit/s
EOL resistor RS485	Externally in the D-SUB plug connector (200 Ω)
Max. RS485 conductor length	400 m at 500 kbit/s 200 m at 1.5 Mbit/s 1200 m at 9.6 to 93.75 kbit/s 1000 m at 187.5 kbit/s

Auxiliary Power

Power supply connection	Via USB port
Auxiliary power nominal voltage	5 V DC (4.5 to 5.5 V)
Current consumption	50 mA
Max. power consumption	250 mW
Max. power dissipation outputs	150 mW
Polarity reversal protection	Yes, mechanical
Surge voltage category	I in accordance with DIN EN 60664 to USB, III in accordance with DIN EN 60664 to RS485
Bypassing in the event of a voltage failure	None, in accordance with EN 61000-4-11

Galvanic Isolation

Test voltage for galvanic separation	Acc. to standard EN 60950-1
Auxiliary power/system components	≥ 1500 V AC

Device Specific Data

RS485 tightening torque	0.5 – 0.6 N · m
Drivers computer software	Can be obtained at http://www.fdtichip.com/FTDrivers – Virtual COM Port (VCP)
Power RS485 LED	"RS485" LED, green
Power USB LED	"USB" LED, green
LED Receive RS485 to USB	"RX" LED, yellow
LED Transmit RS485 to USB	"TX" LED, yellow

Ambient Conditions

Ambient temperature	-40°C ... +75°C
Ambient temperature	-40°F ... +167°F
Storage temperature	-40°C ... +80°C
Max. operating altitude	< 2000 m
Max. relative humidity	95% (without condensation)

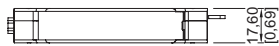
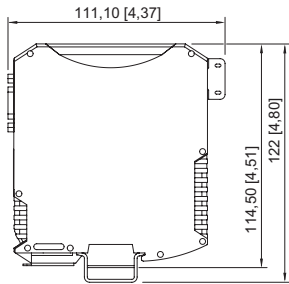
Mechanical Data

Degree of protection (IP) (IEC 60529)	IP30
Module enclosure	PA 6.6
Fire resistance (UL 94)	V0
Pollutant class	Corresponds to G3
Width	17.6 mm
Depth	114.5 mm
Length	111.1 mm
Weight	170 g
Weight	0.37 lb

Mounting / Installation

Mounting type	on NS 35/7.5 DIN rail Not perforated (IEC/EN 60715)
Mounting orientation	Vertical Horizontal

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



Accessories

Sub-D plug, RS-485 IS, angled

Art. No.



9-pin for connecting fieldbus or ServiceBus to CPU & power module Series 9440/22, 9185 fieldbus isolating repeater and 9786/12-11 media converter.
The end-of-line resistor is installed and switchable.
For RS 485 IS (according to Profibus standard).
Ambient temperature: -40 °C to +70 °C

162693



9-pin for connecting 9185 fieldbus isolating repeater and 9786/12-11 media converter.
The end-of-line resistor is installed. For RS-485 IS (according to Profibus standard).
Ambient temperature: -25 °C to +70 °C

201805

USB cable Type A to Type B for 9787/13-11-12 and 9787/15-11-11

Art. No.



Cable type: USB 2 5-pole with shielding
Colour (sheath): black
Connector plug USB A to USB B; Length: 3000 mm

266833

Sub-D plug, RS-485

Art. No.



9-pin for connecting fieldbus or ServiceBus to CPU & power module Type 9440/15, 9185 fieldbus isolating repeater and 9786/15-12 media converter.
The end-of-line resistor is installed and switchable. For non-intrinsically safe RS-485.
Ambient temperature: -40 °C to +75 °C

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