



- Simple, front-end parameterization
- Bit refresh function improves signal quality
- Adjustable transmission speeds of 1.2 kbit/s and 1.5 Mbit/s - automatic with PROFIBUS DP
- Intrinsically Safe field interface for RS-485

WebCode **9185A**



9185/11 series fieldbus isolating repeaters are the interface between intrinsically safe and non-intrinsically safe PROFIBUS DP segments, Modbus RTU segments and other similar fieldbus segments. These devices galvanically separate intrinsically safe bus interfaces (RS-422/RS-485) from non-intrinsically safe interfaces (RS-232, RS-422 or RS-485).

Technical Data

Explosion Protection

Application range (Zones)	2
Ex interface zone	1 2 21 22
IECEX certificate Gas	IECEX BVS 06.0004 X
IECEX gas explosion protection	Ex nA [ib Gb] IIC T4 Gc
IECEX dust certificate	IECEX BVS 06.0004 X
IECEX dust explosion protection	[Ex ib Db] IIIC
ATEX gas certificate	DMT 02 ATEX E 246 X
ATEX gas explosion protection	⊕ II 3 (2) G Ex nA [ib Gb] IIC T4 Gc
ATEX dust certificate	DMT 02 ATEX E 246 X
ATEX dust explosion protection	⊕ II (2) D [Ex ib Db] IIIC
Certificate FMus	FM16US0122X
Certificate cFM	FM16CA0067X
Marking cFMus	Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, AEx/Ex nA Group IIC AIS Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 1, [AEx ib]/[Ex ib] IIC T4 at Ta = 70°C See Doc. 91 856 01 31 1
EAC certificate	EAEU RU S-DE.HA91.B.00100/20
EAC certificate valid until	2025-01-26
EAC gas explosion protection	⊕ 2 Ex nA [ib Gb] IIC T4 Gc X
EAC dust explosion protection	⊕ [Ex ib Db] IIIC X
Certificates	ATEX (BVS), Canada (FM), EAC (ENDCE), IECEX (BVS), India (PESO), USA (FM)
Ship approval	CCS, EU RO MR
Notes	CCC certificate available from 2021 onward

Safety Data

Max. voltage U_o/V_{oc}	3.73 V
Max. current I_o/I_{sc}	149 mA
Max. power P_o	139 mW
Max. voltage U_i connection RS-485 IS	$\pm 4,2$ V
Internal capacitance C_i	Negligible
Internal inductance L_i	Negligible
Safety-related maximum voltage	253 V

Electrical Data

Signal types	RS-485 Ex i
Protocols	ServiceBus R.STAHL (IS1) HART Modbus PROFIBUS DP
Interface field area level	setting: RS-485 IS (PNO specification) and RS-485 IS (R. STAHL specification)
Connections	Sub-D socket X3, 9-pole (Interface field area)
Interface data rate field side	1,2 kbit/s - 1,5 Mbit/s
Interface settings	Fixed transmission speed or automatic detection > 9.6 kbit/s (only with Profibus DP)
Line length interface field area	depends on transmission rate and cable
Data transmission indication	LED green "Rx/D2"
Electrical interface data rate	1.2 kbit/s - 1.5 Mbit/s
Connection electrical interfaces	Sub-D socket X1, 9-pole
Terminating resistor interface field area	to be set in external plug
Field side of interfaces	RS-485 IS (PNO)

Auxiliary Power

Auxiliary power	24 V AC / DC
Nominal voltage V_{nom}	24 V UC
Auxiliary power voltage range	24 V AC $\pm 15\%$, 18 ... 31.2 V DC
Voltage range residual ripple	$\leq 3,6 V_{ss}$
Nominal current	66 mA
Power consumption	1.6 W
Polarity reversal protection	Yes

Ambient Conditions

Ambient temperature °C	-20 °C ... +70 °C (Single device) -20 °C ... + 60 °C (Group assembly)
Ambient temperature °F	-4°F ... +158°F (Single device) -4°F ... +140°F (Group assembly)
Storage temperature °C	-40 °C ... +80 °C
Storage temperature °F	-40°F ... +176°F
Max. relative humidity	95%
Use at the height of	< 2000 m
Electromagnetic compatibility	Tested to the following standards and regulations: EN 61326-1 Use in industrial environment

Mechanical Data

Degree of protection (IP)	IP30
Terminal degree of protection (IP)	IP20
Fire resistance (UL 94)	V0

Mechanical Data

Connection cross-section	0.2-2.5 mm ² flexible 0.2-2.5 mm ² rigid 0.25-2.5 mm ² flexible core end sleeve
Enclosure material	Polyamide
Clamping range AWG	16 – 12
Connection cross-section AWG	16 ... 12
Grid dimension	35.2 mm
Width inches	1.39 in
Length inches	4.25 in
Mounting depth inches	4.51 in
Weight	0.35 kg
Weight	0.77 lb

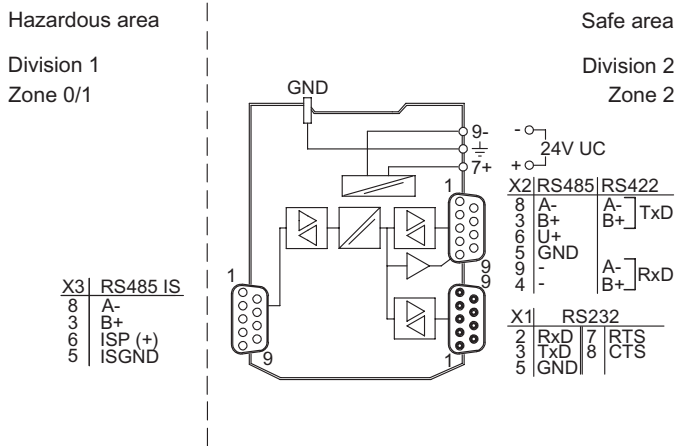
Mounting / Installation

Mounting orientation	horizontal or vertical
Mounting position	Vertical Horizontal
Connection type	Screw terminal

Components

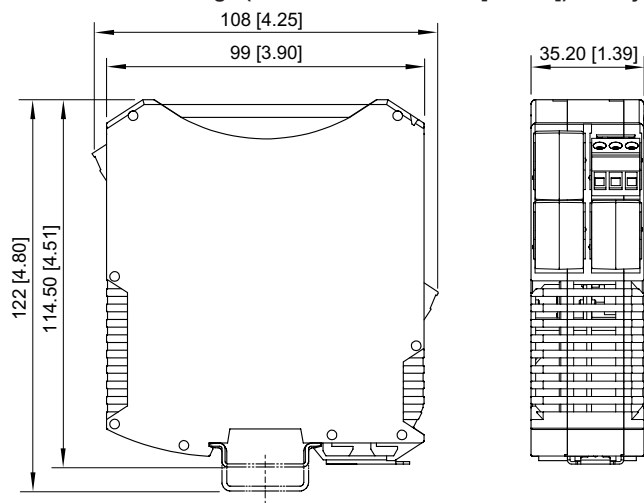
Safe interface area	RS 232, RS 422, RS 485
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Technical Drawings – Subject to Alterations



Connection diagram 9185/11

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



ISpac Series 9185, 9192 with screw terminal

Accessories

SUB-D socket



9-pin for connection of the fieldbus or ServiceBus to the CPU & power module Series 9440/22 and fieldbus-isolating repeater 9185. Integrated terminator can be switched on or off. For RS 485 IS to PNO standard.

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162693

Sub-D plug, angled



9-pin, for connection of fieldbus or ServiceBus to CPU & Power Module Type 9440/12 and fieldbus isolating repeater Type 9185. The termination resistance is built-in. Suitable for RS-485 IS (PNO standard).

Art. No.

201805

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