



- Setup of FO network structures for PROFIBUS DP and Modbus RTU in hazardous areas
- “Ex op is” interface makes for easy installation and maintenance
- With error-signalling diagnostic function
- Simple parameterisation using a rotary switch
- Compatible with Series 9786 devices

A5

## MY R. STAHL 9786A

The Series 9786 media converters make it possible to transmit PROFIBUS DP and Modbus RTU signals over distances of up to 2.5 km without having to limit the baud rate. When used for Profibus DP, the devices enable redundant point-to-point, line and ring structures to be set up.

Standard plug connectors can be connected to the "Ex op is" inherently safe optical interfaces. The plug connectors can be pulled out and plugged in during operation. The rotary switch can be used to parameterise the media converter very quickly and easily. Variant 9786/12-11 can be used in Zone 1, while variant 9786/15-12 is suitable for Zone 2.

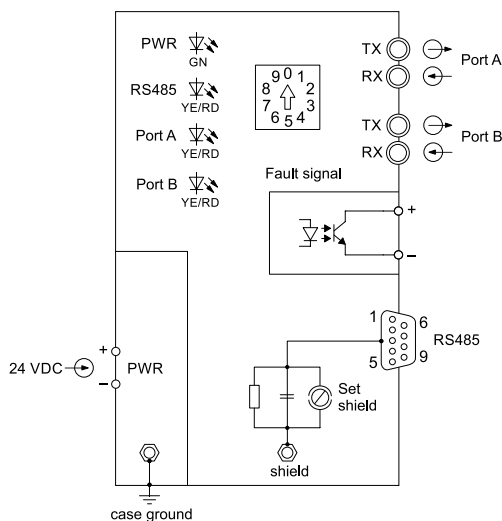
	IEEx / ATEX					
Zone	0	1	2	20	21	22
Ex interface	•	•	•	•	•	•
Installation in		•	•		•	•

Selection Table				
Product Description	Media converter			
Signal types	Error signal output	Product Type	Art. No.	Weight
Ex op is & RS-485 fibre optics	electronic alarm contact	9786/15-12	308563	814 g
FO Ex op is & RS-485 Ex i	NAMUR error output	9786/12-11	308562	825 g

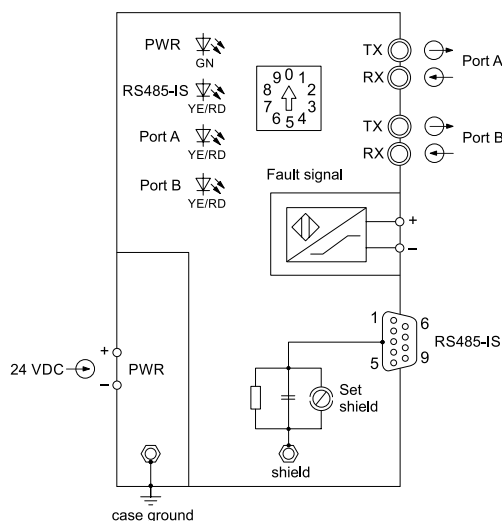
Technical Data		
Variant	9786/12-11	9786/15-12
Explosion Protection		
IECEx gas explosion protection	Ex eb mb ib [op is Ga] IIC T4 Gb	Ex ec mc ic [op is Ga] IIC T4 Gc
IECEx dust explosion protection	[Ex ib Db] [Ex op is Da] IIIC	[Ex op is Da] IIIC
ATEX gas explosion protection	⊕ II 2 (1) G Ex eb mb ib [op is Ga] IIC T4 Gb	⊕ II 3 (1) G Ex ec mc ic [op is Ga] IIC T4 Gc
ATEX dust explosion protection	⊕ II (2) (1) D [Ex ib Db] [Ex op is Da] IIIC	⊕ II (1) D [Ex op is Da] IIIC
Certificates	ATEX (EPS), Canada (FM), IECEx (EPS), USA (FM)	ATEX (EPS), Canada (FM), IECEx (EPS), USA (FM)
Declaration of Conformity	ATEX (EUK)	ATEX (EUK)
Installation	Zone 1	Zone 2 and safe areas
Safety Data		
Max. voltage U <sub>o</sub> (RS485-IS)	4.2 V	
Max. current I <sub>o</sub> (RS485-IS)	131 mA	
Max. power P <sub>o</sub> (RS485-IS)	124 mW	

**Technical Data**




Variant	9786/12-11	9786/15-12
<b>Safety Data</b>		
Max. voltage $U_{connection}$ (RS485-IS)	4,2 V	
Int. capacitance $C_i$ (RS485-IS)	35.7 $\mu$ F	
Int. inductance $L_i$ (RS485-IS)	negligible	
Max. voltage $U_{error}$ signal output	10 V	
Int. capacit. $C_i$ er. sig. out.	0.03 $\mu$ F	
Int. induct. $L_i$ err. sig. out.	negligible	
Safety-related max. voltage	40 V	40 V
<b>Electrical Data</b>		
Number of channels	2	2
Protocols	PROFIBUS DP Modbus RTU ServiceBus R.STAHL (IS1+)	PROFIBUS DP Modbus RTU ServiceBus R.STAHL (IS1+)
Interface data rate, field side	9.6 kbps ... 1.5 Mbps	9.6 kbps ... 1.5 Mbps
Electrical interface data rate	9.6 kbps - 1.5 Mbps	9.6 kbps - 1.5 Mbps
Electric interface version	RS 485-IS	RS 485
Electric interface connection	Sub-D socket, 9-pole	Sub-D socket, 9-pole
Optical interface transmission distance	1500 ... 2500 m	1500 ... 2500 m
<b>Auxiliary Power</b>		
Nominal voltage	24 V DC	24 V DC
Nominal current	100 mA	100 mA
Power consumption	2.4 W	2.4 W
Max. power dissipation	3.2 W	3.2 W
Polarity reversal protection	Yes	Yes
<b>Ambient Conditions</b>		
Ambient temperature	-40 °C ... +70 °C	-40 °C ... +70 °C
Storage temperature	-40 °C ... +70 °C	-40 °C ... +70 °C
<b>Mechanical Data</b>		
Degree of protection (IP)	IP20	IP20
Enclosure material	Anodised aluminium	Anodised aluminium

**Technical Drawings – Subject to Alterations**


Type 9786/15-12



Type 9786/12-11

Accessories			
Figure	Description	Art. No.	Weight
Sub-D plug, RS-485			
	9-pin for connecting fieldbus or ServiceBus to CPU & power module Type 9440/15, 9185 fieldbusisolatingrepeater 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	105715	60 g
Sub-D plug, RS-485 IS, angled			
	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	100 g
	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	50 g

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

