

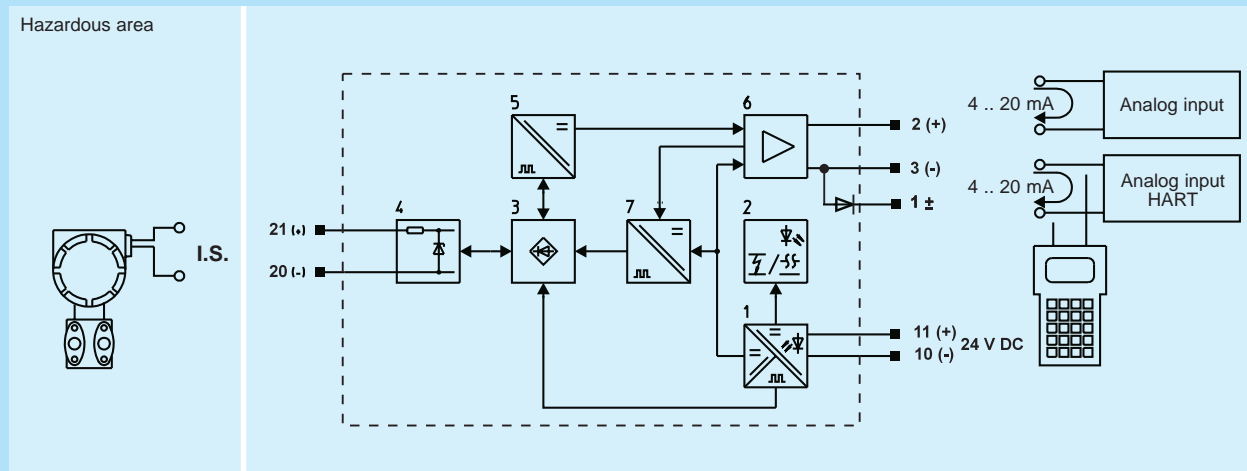
I.S. Isolators (Modules) Transmitter Supply Unit Type 9103/1

- Intrinsically safe input [EEx ia] IIC
- Output 4 .. 20 mA
- Galvanic isolation between input, output and power supply
- Power supply 18 .. 35 V DC
- Open-circuit and short-circuit monitoring
- Suitable for HART transmitters
- EMC tested, CE marking



Basic function: analog input, 4 .. 20 mA, 1 channel.

The transmitter supply units are used for intrinsically safe operation of 2-wire transmitters. They supply power to the transmitter and transmit the signal to the output. Also suitable for HART transmitters.



Selection table	
Version	Ordering code
for analog transmitters	9103 / 11 - 22 - 11
for HART transmitters	9103 / 13 - 22 - 11

Safety data for input	
Certifications	BVS (Europe, CENELEC), CSA (Canada), SEV (Switzerland), FTZU (Czech Republic), EVPU (Slovakia), FM (USA)
Marking	[EEx ia] IIC/IIB according to CENELEC
Classification	associated electrical apparatus
Safe maximum values (CENELEC)	
Max. voltage U_m	28 V
Max. current I_m	91 mA
Max. power P_m	637 mW
Max. capacitance C_a for [EEx ia] IIC / IIB	70 nF / 500 nF
Max. inductance L_a for [EEx ia] IIC / IIB	4.9 mH / 18 mH
Further information and combinations of values, see certifications	

Technical data		
Types	9103/11	9103/13
Power supply		
Rated voltage U_N	24 V DC	24 V DC
Voltage range	18 .. 35 V	18 .. 35 V
Rated current (for U_N , $I_E = 20$ mA)	$I_N \leq$ 65 mA	65 mA
Max. power consumption (for $U_N = 30$ V, $I_E = 22$ mA)	1.7 W	1.7 W
Polarity reversal protection	yes	yes
Signal transmission		
Current range (specified accuracy)	$I_A = I_E$ 4 .. 20 mA	4 .. 20 mA
Response time (10 .. 90%)	\leq 0.2 ms	0.2 ms
Type 9103/13 The transmission of the digital communication signal from and to HART transmitters is bidirectional.		
Input		
Transmitter supply voltage ($I_E = 20$ mA, $R_L = 250 \Omega$)	\geq 16.5 V	17.0 V
Output		
Range for load resistance R_L with Hand Held Terminal	0..750 Ω –	0..650 Ω 200..650 Ω
Open-circuit / Short-circuit		
Output behavior on open-circuit or short-circuit in the field circuit	$I_A \sim$ I_E	I_E
Open-circuit or short-circuit indication	LED red	LED red
Error limits		
Tolerance band setting, in % of the measuring range		
Linearity error for U_N , 23 °C	\leq 0.1%	0.1%
Temperature effect	\leq ± 0.1 % / 10K	± 0.1 % / 10K

