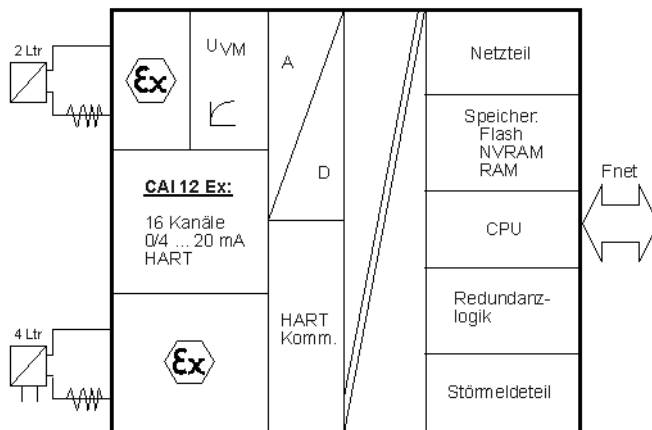


CAI 12 Ex - Analog input module

Features / Application



- Configuration:
 - Up to 16 analog inputs for two-wire transmitter (4 ... 20 mA) including MU supply (capable of withstanding overloads and short-circuits) *or*
 - Up to 16 analog inputs for externally powered four-wire transmitters without release (0/4 ... 20 mA)
 - The channels can be configured independently from one another for 2-wire or 4-wire transmitters
- Process circuits in conformity with EN 50020 with EEx ib IIC type of protection
- Joint installation with "non-intrinsically safe modules" in one rack is possible
- Central electrical isolation of the inputs and outputs to the system
- Channel-by-channel configuration of inputs
- Digital communication with transmitters in conformity with the HART protocol (version 5.0 / 5.1; point-to-point)
- The module is capable of redundancy (two-wire transmitters only)
- Monitoring of the module
- Monitoring of connected transmitters (wire break, short-circuit)

Technical data

	2-wire transmitter:	4-wire transmitter:
Analog input: - Nominal range: - Signal scope:	I = 4 ... 20 mA I = 3 ... 23.0 mA	I = 0/4 ... 20 mA I = 0/3.6 ... 23.0 mA
Powering of transmitters - Voltage: - Nominal current:	U = 15 ... 18 V (CAI 12 Ex not redundant) U = 13.2 ... 18 V (CAI 12 Ex redundant) (for Utransmitter and Uline) I _{rated} = 23 mA	- / -
Short-circuit current of the transmitter power supply:	I _k = 28.5 mA; short-circuit-proof	Short-circuit current limiting must be part of the field device!
A/D conversion:	12-bit (without sign)	
Measuring resistance:	R _M = 250 Ohm	
Measurement tolerance:	<= 6 µA	
Linearity tolerance:	<= 12 µA	
Gain:	<= 0.1 %	
Temperature influence on - Zero point: - Gain	<= 4 µA / 10 K <= 0.08 % / 10 K	
HART communication - Version: - Operating range:	5.0 / 5.1 I >= 3 mA	
Input signal attenuation:	Low pass filter; T = 100 ms (D = -30 dB in the case of f = 50 Hz)	
Updating of measurement:	< 40 ms, typical	
Electrical isolation:	Central electrical isolation of the inputs and outputs to the system	
Rated voltage:	253 V _{rms} (to EN 50020)	
Voltage testing:	2500 V _{rms} (to the system)	
Ambient temperature:	0 ... 50° C (temperature for ventilation of the module in the rack)	
Ex type of protection:	EEx ib IIC	
Rated power:	P _a = 600 mW	
Idle voltage:	U _o <= 21 V	
Electronic current limiting:	I _k <= 28.5 mA	
Electrical data of the connecting wires:	L _a + L _i = 1.5 mH C _a + C _i = 80.0 nF L _a = 1.3 mH C _a = 79 nF	
Power supply: - Supply voltage: - Fuse:	U _{v1} /U _{v2} = 20 ... 33 V DC G-type fuse link 5 * 20 3.15 A slow-blow T 3.15 H	
Permissible overvoltages of the power supply:	35 V (für t = 1 s) 45 V (for t = 10 ms)	
Current consumption:	I _o <= 170 mA (no load) I _{rated} = 470 mA at U _v = 24 V and simultaneity factor Eta = 0.75	
Power dissipation:	Max. 10.0 W at U _v = 24 V (for sixteen 2-wire transmitters)	

Ordering Information

Catalog No.								Description	
72141-4-	0	7	8	8	7	4	1	CAI 12 Ex - Analog input module	
Additional Order Information									
								Former System Packet (Indicate Version)	BA-No. 601
Necessary Accessories:									
72199-4-	0	7	4	5	2	1	2	CI 120 Connection Unit, blue , EExi-Version, Basic 8 TE	
	0	7	4	5	2	0	4	CI 122 Connection Unit, blue , EExi-Version, Cur- rent-Limitation Redundant 8 TE	
72199-4-	0	7	8	9	4	4	1	Cable Clamps	



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