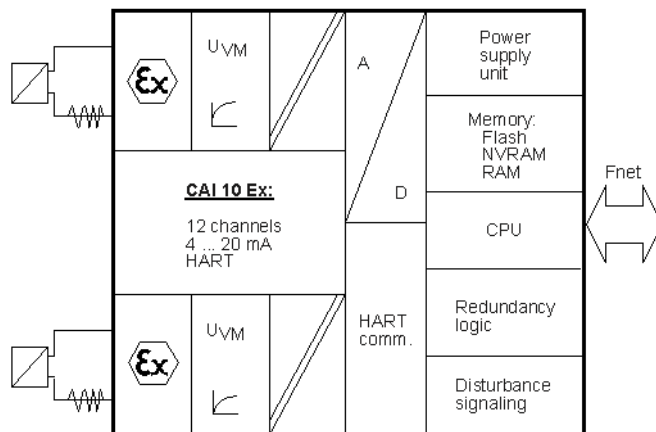


CAI 10 Ex - Analog input module

Features / Application



- 12 analog inputs for 2-wire transmitters (4 ... 20 mA) incl. transmitter supply (overload- and short circuit-proof)
- Process circuits to EN 50020 with type of protection EEx ib IIC
- Common installation with "non-hazardous modules" in one rack is possible
- Channel-wise configuration of inputs
- Digital communication with transmitters to HART protocol (version 5.0 / 5.1)
- Channel-wise electrical isolation to SYMPHONY
- Module is capable of redundant operation
- Module monitoring
- Monitoring of connected transmitters (wire break, short-circuit)

Technical Data

Analog input: - Nominal range: - Signal scope:	$I = 4 \dots 20 \text{ mA}$ $I = 3 \dots 23.0 \text{ mA}$
Supply to transmitters - Voltage: - Rated current:	$U = 14 \dots 18 \text{ V}$ (CAI 10 Ex non-redundant) $U = 13.2 \dots 18 \text{ V}$ (CAI 10 Ex redundant) (for Utransmitter and Uwire) $I_{rat} = 23 \text{ mA}$
Short-circuit current of transmitter supply:	$I_k = 23.6 \dots 28.5 \text{ mA}$ short-circuit-proof
A/D conversion - Type: - Linearity error: - Error limit:	12 bits (without preceding sign) $\leq 0.1 \%$ $\leq 0.2 \%$
Measuring resistor:	Imaginary measuring resistor $R_M = 250 \text{ Ohm}$ by transformer
Influence of temperature on - Zero: - Amplification:	$\leq 20 \mu\text{A} / 10 \text{ K}$ $\leq 0.08 \% / 10 \text{ K}$
HART communication - Version: - Operating range:	5.0 / 5.1 $I \geq 3 \text{ mA}$
Damping of input signal:	Low-pass; $T = 100 \text{ ms}$ ($D = -30 \text{ dB}$ at $f = 50 \text{ Hz}$)
Measurement updating:	$< 40 \text{ ms}$, typical
Electrical isolation:	Channel-wise
Rating voltage:	250 V_{eff} (to EN 50020)
Voltage test:	750 V_{eff} (between channels) 1500 V_{eff} (to the system)
Ambient temperature:	$0 \dots 50^\circ \text{ C}$ (temperature for cooling of module in rack)
Type of Ex protection:	EEx ib IIC
Connected load:	$P_a = 600 \text{ mW}$
No-load voltage:	$U_o \leq 21 \text{ V}$
Electronic current limiting:	$I_k \leq 28.5 \text{ mA}$
Electrical data of connecting wires:	$L_a + L_i = 1.5 \text{ mH}$ $C_a + C_i = 80.0 \text{ nF}$ $L_a = 1,3 \text{ mH}$ $C_a = 79 \text{ nF}$
Voltage supply: - Supply voltage: - Fusing:	$U_{v1}/U_{v2} = 20 \dots 33 \text{ V DC}$ Glass fuse link 5 * 20 3.15 A time-lag T 3.15 H
Permissible supply overvoltages:	35 V (for $t = 1 \text{ s}$) 45 V (for $t = 10 \text{ ms}$)
Current consumption:	$0 \leq 200 \text{ mA}$ (no load) $I_{rat} = 580 \text{ mA}$ at $U_v = 24 \text{ V}$ and simultaneity factor $\text{Eta} = 0.75$
Power loss:	Max. 10.0 W at $U_v = 24 \text{ V}$ (for 12 2-wire transmitters)

Ordering Information

Catalog No.								Description	
72121-4-	0	7	8	8	7	2	1	CAI 10 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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