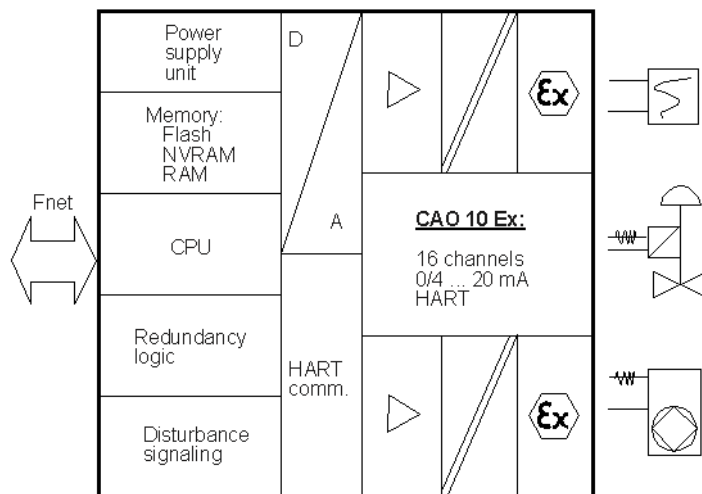


CAO 10 Ex - Analog output module

Features / application



- 16 analog outputs, output signal 0/4 ... 20 mA, channel-by-channel configuration
- Process circuits to EN 50020 with protection type EEx ib IIC
- Load: max. 600 Ohm
- Monitoring of loads
- Channel-by-channel isolation of the outputs
- Module is capable of redundant operation
- Digital communication with field devices according to HART protocol (Version 5.0 / 5.1)
- Monitoring of modules

The CAO 10 Ex analog output module is used to activate the following intrinsically safe devices:

- Intelligent and conventional actuators
- Pneumatic actuators
- Recorders
- Display instruments

Technical data

Output signal "dead zero" (channel-by-channel configuration) - Nominal range (dead zero): - max. signal size (dead zero):	I = 0 ... 20 mA I = 0 ... 21.5 mA
Output signal "live zero" (channel-by-channel configuration) - Nominal range (live zero): - Max. signal size (live zero):	I = 4 ... 20 mA I = 3.6 ... 21.5 mA
Load impedance:	R ≤ 600 Ohm (incl. supply lines)
Load voltage:	U = 0 ... 12.9 V
Change of output signal with change of load ± 300 Ohm (based on 300 Ohm load and U = 6.3 V):	≤ ± 0.3 %
Break / load monitoring Threshold:	I _{act} < I _{nom} ; with I > 1 mA
HART communication:	With I ≥ 3 mA
Update rate of output signal:	< 40 ms, typ. 10 ms
Change of output signal:	Limited by PT1 element (where T1 = 10 ms)
D/A conversion - Type: - Zero deviation: - Range deviation: - Residual ripple:	12-bit converter (without preceding sign) ≤ ± 30 μA ≤ ± 0.2 % with 300 Ohm < 50 mV _{pp} with I _{max}
Effect of temperature on - Zero point: - Gain:	≤ 20 μA / 10 K ≤ 0.08 % / 10 K
Isolation:	Channel by channel
Rated voltage:	250 V _{eff} (to EN 50020)
Voltage test:	750 V _{eff} (for channels) 1500 V _{eff} (to system)
Ambient temperature:	0 ... 50 °C (temperature for venting of module in rack)
Type of explosion protection:	EEx ib IIC
Connective capacity:	P _a = 570 mW
No-load voltage:	U ₀ ≤ 20 V
Electronic current limiting:	I _k ≤ 28.5 mA
Electrical data connection lines:	L _a + L _i = 1.3 mH C _a + C _i = 96.5 nF L _a = 1.3 mH C _a = 95 nF
Voltage supply: - Supply voltage: - Fuse:	U _{v1} /U _{v2} = 20 ... 33 V DC Glass fuse link 5 * 20 3.15 A slow-blowing T 3.15 H
Permitted overvoltages for voltage supply:	35 V (for t = 1 s) 45 V (for t = 10 ms)
Current drain (reference current):	150 mA where U _v = 24 V (power outputs disabled)
Power loss:	Max. 13 W

Ordering Information

Catalog No.								Description	
72124-4-	0	7	8	8	7	2	4	CAO 10 Ex - Analog output 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, Current-Limitation Redundant 8 TE	
72199-4-	0	7	8	9	4	4	1	Cable Clamps	



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