

ANALOG CONVERTER FOR PROCESS INPUTS

type: CAL23



• **Process inputs**
(volt, mA, sensor power supply, potentiometer)

• **CAL23:** Standard width 35 mm

• **CAL23L:** Small size version 23 mm
(SMPS power supply)

• **SVL23:** Maximum value selector version
(between 2 similar inputs)

• **Triple galvanic insulation**

• **Up to 10 kHz bandwidth**



CAL23L



CAL23

The converter CAL23 allows for adaptation and insulation of a wide variety of electrical process signals. The triple galvanic insulation (Input/Output/Power supply) ensures optimum safety regardless of the use of the converter.

- Inputs:

- Symmetrical voltage, direct mV, V.
- Symmetrical current, direct mA, A.
- 3-wire potentiometer (5 V potentiometer reference).
- Sensor power supply, 4/20 mA transmitter in loop powered, do not short-circuit the sensor power supply otherwise you will damage the converter.

- Special inputs:

- Sum of 2 non-insulated inputs (mA, V).
- Difference of 2 non-insulated inputs (mA, V).
- Mean of 2 non-insulated inputs (mA, V).
- Max value selector: 2 non-insulated inputs (mA, V).

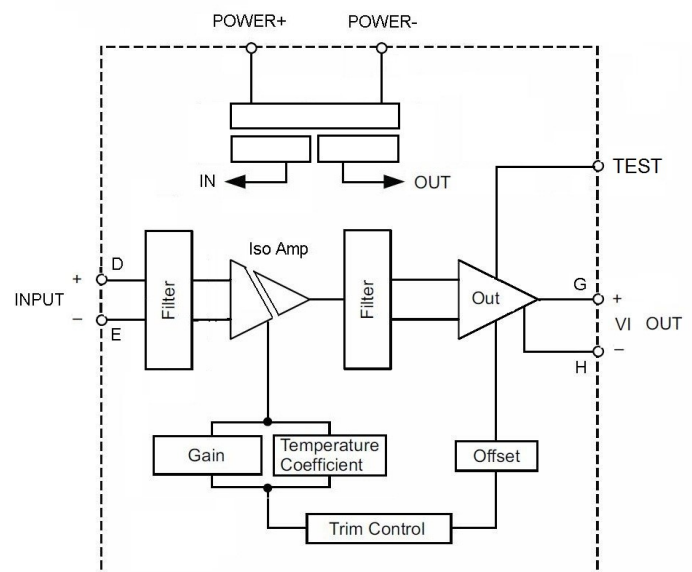
- Outputs:

- Voltage output: 0...1...5...10V.
- Current output: 0...4...20mA.
- Up to 10 kHz bandwidth (option).

- General characteristics:

- DIN rail mounting plastic enclosure, IP20 protection.
- Extended electromagnetic compatibility,
- Control of power supply voltage presence by green LED,
- Adjustments of start and end of scale with potentiometers,
- Protected against reverse polarity,
- Symmetrical and asymmetrical DIN rail mounting,
- Connection with screw-terminals (section of the wires up to 4 mm²).
- Conformal coating.

Bloc diagram:



Version and order code :

CAL23D	All signal low noise version Linear power supply 35 mm width
CAL23L	All signal standard version Wide range switching power supply 23 mm width
SVL23	Max value selector
option:	/DP (dual power) two redundant power supply inputs.

TYPE	INPUT RANGE
Voltage mV, V dc Impedance	+/- 100 mV to +/- 1000 V > 200 kOhms (0...1 V) > 1 MOhms (1... 1000 V)
Current mA, A dc Input impedance	+/- 500 µA / +/- 5 A 6.5 Ohms (mA) 0.25 Ohms (1 A) 0.05 Ohms (5 A)
Potentiometer	10 kOhms maximum
Accuracy	+/- 0.25 %
Response time	< 200 ms
optional pass-band	100 Hz (-3 dB)
AUXILIARY	
Sensor power supply for power supply voltage rating	19 V (smoothed)
Potentiometer reference	5 V (regulated)
OUTPUT	
TYPE	RANGE
Current Load (for rating power supply voltage)	0 ... 4 ... 20 mA 0 - 700 Ohms
Voltage Impedance (Other output ranges on request)	0 ... 10 V 500 Ohms

POWER SUPPLY (to be specified at the order)	
CAL23: 230 Vac 50-60 Hz +/- 10 %, 2 VA 115 Vac 50-60 Hz +/- 10 %, 2 VA	
CAL23L: 20 to 70 Vac / Vdc, 2 VA 80 to 265 Vac / Vdc, 2 VA 9 to 30 Vdc, 2 W	
RECOMMENDED OPERATING CONDITIONS	
Temperature	
Operating	-10 °C to 60 °C
Storage	-20 °C to +85 °C
Influence	~ 0.015 % / °C
Relative humidity	85 % non condensed
Weight	~ 110 g
Protection	IP 20
Dielectric strength	1500 Vac continuous (Inputs/Pwr.supply/Outputs)

Electromagnetic compatibility			
Generic standards: NFEN50081-2 / NFEN50082-2			
EN55011	meet	group 1 / class A	
EN61000-4-2	no influence	B	ENV50140 < +/- 5 % A
EN61000-4-4	< +/- 5 %	B	ENV50141 < +/- 10 % A
EN61000-4-5	< +/- 5 %	B	ENV50204 no influence A
EN61000-4-8	no influence	A	
EN61000-4-11	< +/- 5 %	B	DBT 73/23/CEE



WIRING AND OUTLINE DIMENSIONS:

