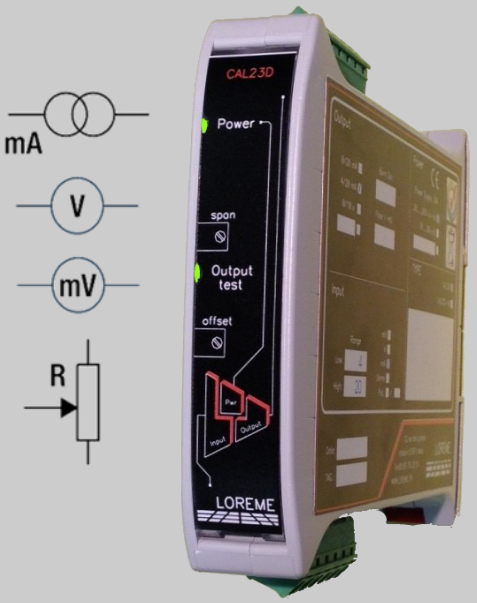
ISOLATED ANALOG SIGNAL CONDITIONER
GALVANIC ISOLATION *type: CAL23D*

- ***Process inputs:*** *mV, V, mA, A, Ohms, potentiometer*
  direct input up to 1000Vdc and 10Adc
- ***3-way galvanic isolation:*** *2500Vac continuous*
- ***Active or passive current mode***
  For input and output,
  2 or 3 wires sensor power supply: 22V, 200mA
- ***Typical 10ms response time*** *1kHz bandwidth in option*
- ***High output load resistance*** *> 1500 ohms*
- ***Universal power supply*** *20 to 265Vac-dc or 10 to 30Vdc*
- ***Application :*** *current loop isolator*
  DC voltage or current measurement.



The signal conditioner CAL23D is designed for adaptation and isolation of a wide range of analog signals in an industrial process. The 3-way galvanic isolation (input / output / power supply) ensures an optimum safety operation.

Description:

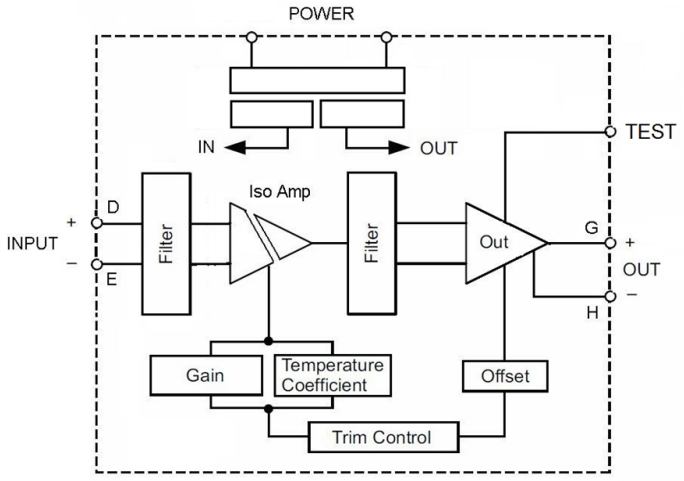
- Input (all measure range are available) :
- Voltage: asymmetrical / symmetrical (mV, Vdc),
  min : 50mV, max: 1000 V.
- Current: asymmetrical/symmetrical (mA, Adc).
  Max: 10 Adc.
- 3 wires potentiometer (voltage reference: 5V).
- 2 wires resistance up to 50Kohms
- Sensor power supply for 2 or 3 wires 4-20mA loop powered transmitters (HART compatible), (22V up to 200 mA)

- Special inputs :
- Sum of 2 non-isolated inputs (mA, V),
- Difference of 2 non-isolated inputs (mA, V),
- Average of 2 non-isolated inputs (mA, V).

- Outputs:
- Voltage output, all scales up to 30 V maximum (mV output available).
- Current output (active or passive) for all scales.

- Features:
- plastic box (PC/ABS), symmetrical DIN rail mounting.
- Protection rating IP20.
- Pluggable screw terminals blocks (2.5mm²).
  10 mm^2 for current input > 10 Adc (not pluggable blocks).
- Green LED for power supply voltage presence.
- Green LED to control output signal.
  (turn off when test terminals are used).
- Internal 250 ohm resistor for HART communication.
- Start and end scale adjusting by potentiometers. (+/-10% max)
- Test terminals to control output current (under the front face).
- Universal power supply, Ac-Dc, not polarized
- Conformal coating.

Synoptic:



Version and order code:

Request a quote

CAL23D Standard version, all signals,
Isolation test voltage : 2500Vac
Sensor power supply : 22V / 200 mA

Special versions :

CAL23D-B isolator ratio 1:1 (same output and input type)
bipolar output up to +/-20V, bandwidth : 10kHz
(low noise version with 230Vac linear power supply. 35mm case width)

CAL23D-S2B isolator ratio 1:1 (same output and input type)
2 bipolar outputs up to +/-10V, bandwidth : 10kHz

90 days accuracy (20 °C +/- 2 °C) *DATA SHEET CAN BE DOWNLOADED ON* WWW.LOREME.FR

TECHNICAL SPECIFICATIONS

INPUT

TYPE	RANGE
Voltage mVdc, Vdc	from +/-50 mV to +/-1000 V
Input impedance	> 200 kOhms (0...1 V) > 1 MOhms (1 V...1000 V)
Accuracy	+/- 0.25 % of range
Current mAdc, Adc	+/- 500 µA to +/- 10 A
Input impedance	6.5 Ohms (mA) 0.25 Ohms (1 A) 0.05 Ohms (5 A) 0.01 Ohms (10 A)
Accuracy	+/- 0.25 % of range
2 wires resistance	0....50 kOhms
Accuracy	+/- 0.5 % of range
standard response time	< 10 ms
Optional bandwidth	1000 Hz (-3 dB)

AUXILIARY

Sensor power supply	22V (Regulated +/-8%)
Potentiometer reference:	5V (Regulated +/- 0.15%)

OUTPUT

TYPE	RANGE
Current	0 ... 4 ... 20 mA
Load	0 .....1500 Ohms
Passive mode output using:	loop voltage of 40 V max
Voltage	0 ... 10.....30 V
Impedance	500 Ohms for 10V

(Other outputs range on request)

POWER SUPPLY

Universal (2 ranges, define at order)

standard version :	20 to 265 Vac / Vdc, 2 VA max
low voltage version :	10 to 30 Vdc, 2 VA max
linear version:	230Vac

ENVIRONMENT

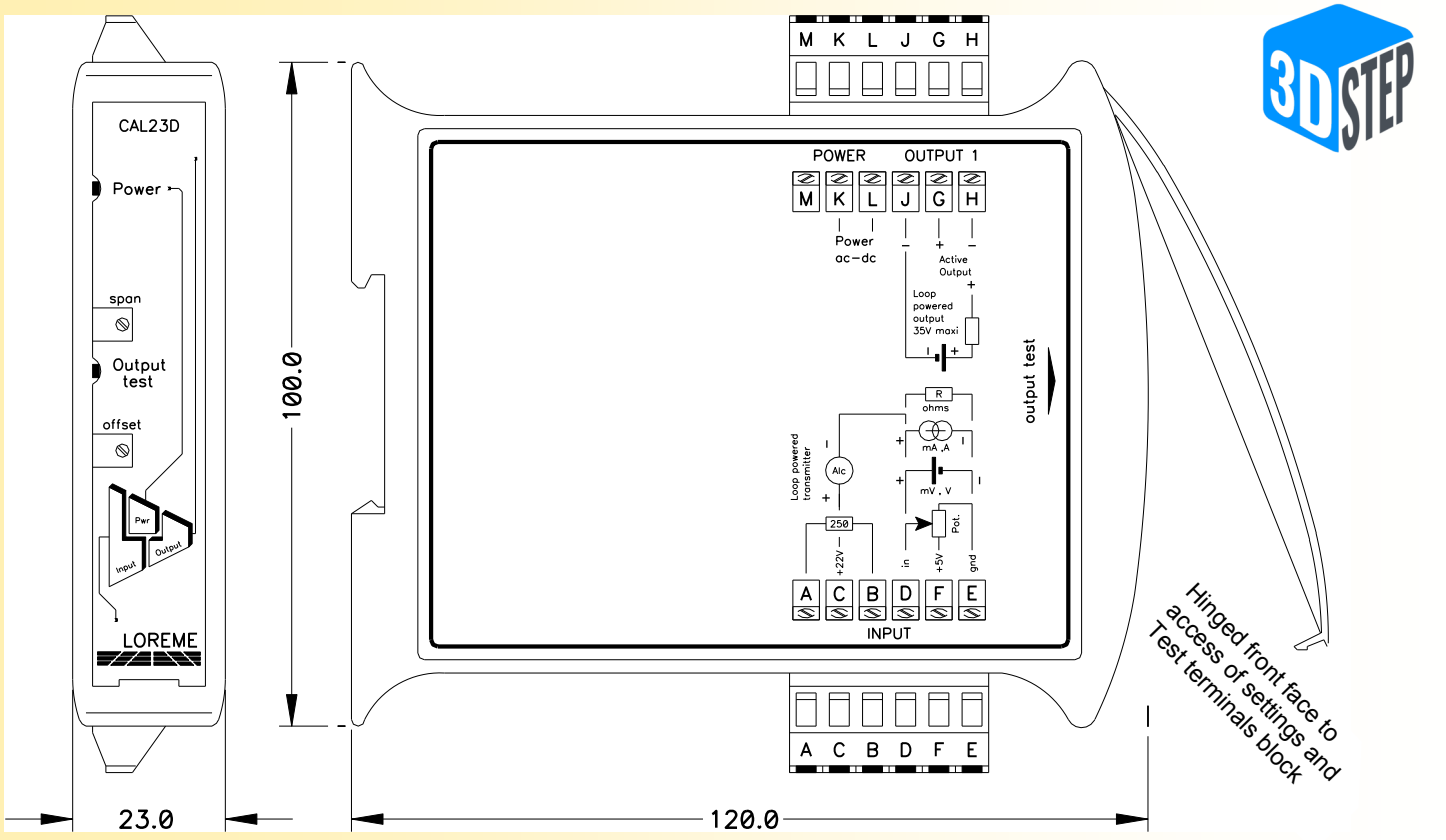
Operating temperature:	-20 °C to 60 °C
Storage temperature:	-25 °C to +85 °C
Temperature coefficient	~ 0.015 % / °C
Humidity	85 % not condensed
Weight	~ 110 gr.
Protection	IP 20
Dielectric strength (Inputs/Pwr supply/Outputs)	2500 Vac continuous (3500 Vrms / 1 min)
MTBF (MIL HDBK 217F)	> 4 000 000 Hrs @ 25°C
Life time	> 200 000 Hrs @ 30°C

Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	*EN 61000-4-8 AC MF*	*EN 55011* *group 1* *class A*
EN 61000-4-3 RF	*EN 61000-4-9 pulse MF*	
EN 61000-4-4 EFT	*EN 61000-4-11 AC dips*	
EN 61000-4-5 CWG	*EN 61000-4-12 ring wave*	
EN 61000-4-6 RF	*EN 61000-4-29 DC dips*	

CE

WIRING AND OUTLINE DIMENSIONS:



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