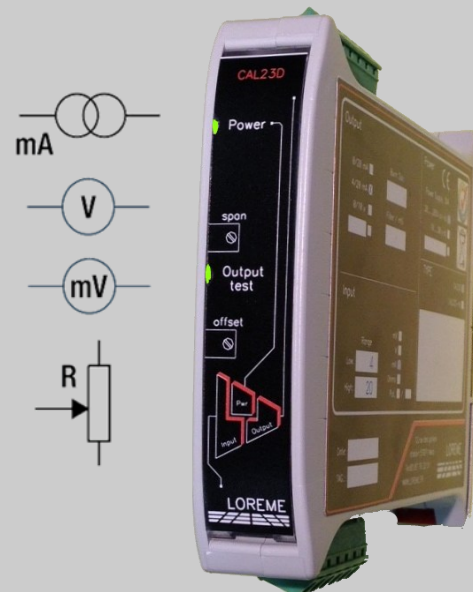


ISOLATED ANALOG SIGNAL CONDITIONER GALVANIC ISOLATION

type: CAL23D

LOREME

- **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).

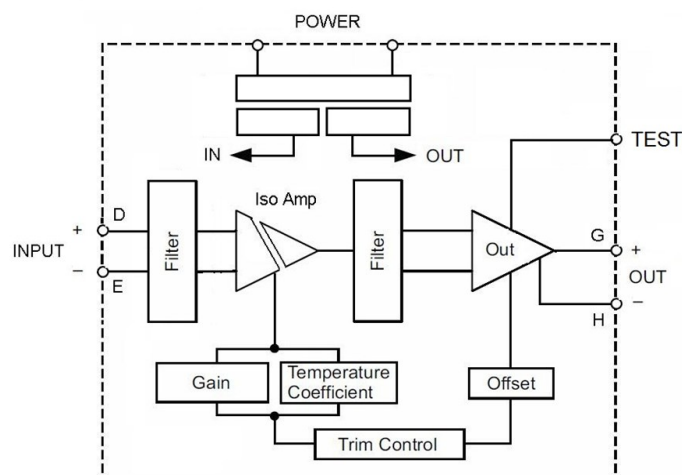
- Outputs:

- 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 mm² 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:

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

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 μ A 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	01500 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	



WIRING AND OUTLINE DIMENSIONS:

