DUAL CURRENT LOOP ISOLATOR AND REPEATER
CAL23DmA for safety application SIL2 / SIL3

- ***Current Input :*** *(0...4….20mA)*
  With or without sensor power supply
- ***Simulation Link :*** *(Automatic input switching)*
  Allowing full loops control without disconnection
- ***Fully galvanic isolation*** *(1000 V)*

- ***2 Active or Passive Current Output***
  Isolated
  Max Load : 750 ohms
- ***Plug Connectors***

- ***Universal power supply :*** 20 to 265 Vac/Vdc or 24Vdc

- ***HART transparency***

- ***SIL safety : SIL2 / SIL3*** *according IEC61508*

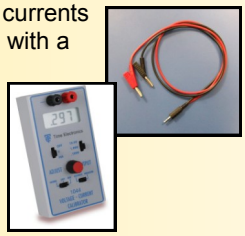
The CAL23DmA-S2 analog isolator is designed for current loop isolation and duplication with high reliability level. Fully galvanic isolation (Input / Output 1 / Output 2 / Power) allows complete independence of each current loop

Functionality:

Application :
• Power supply and current loop isolator with low response time, and bidirectional HART® protocol transparency.

- Inputs :
Current : 0….4….20….22 mA (active or passive)
Power supply output (21 volts) for loop powered transmitter (HART compatible)

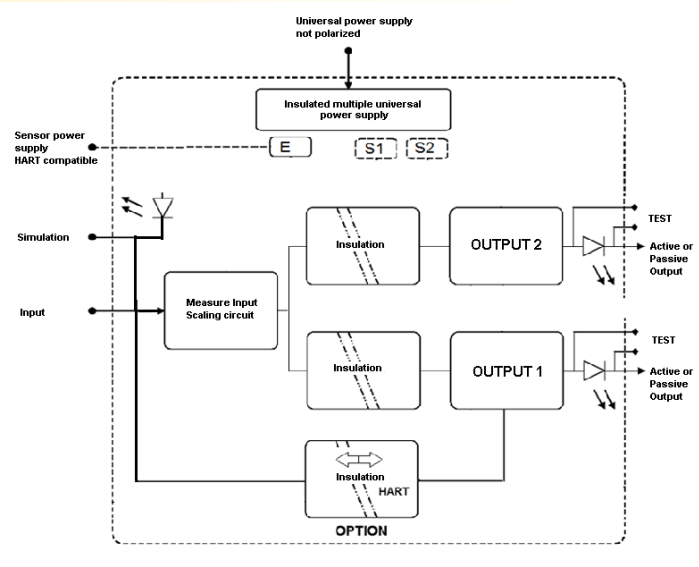
- Simulation :
3.5 mm Jack allow connection of standard currents simulator, Automatic "test" mode switching with a red LED lighting.
The current simulation is applied directly on the input circuit and takes in account the complete device.
simulation link and simulator are provided separately



- Outputs:
Output current 0...4..20 mA (active or passive)
HART® transparency option (output1 and input)

- General characteristics:
Symmetrical DIN rail mounting plastic enclosure.
Protection degree IP20
protective varnish.
pluggable connector (max. 2.5 mm²)
Power supply voltage controlled by green LED.
each output signal is controlled by green LED
(led is off when test terminals are used).
Test terminals (behind the front cap)
Allow output control without current loops influence.
AC and DC universal power supply, not polarized.

Synoptic:



Version et order code:

CAL23DmA-S1 1 output + Hart transparency
CAL23DmA-S2 2 outputs + Hart transparency
(without SIL3 approval)

CAL23DmA-S1/SIL3 1 output + Hart transparency + SIL3
CAL23DmA-S2/SIL3 2 outputs + Hart transparency + SIL3
(SIL3 approval according IEC61508)

Connectors : removable screw connections
spring plug connectors on request

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

TECHNICAL SPECIFICATIONS

INPUT

TYPE	RANGE
Current mA dc	0….4……20 mA
Input Impedance	250 Ohms
Accuracy	+/- 0.25 % of full range
Response time	< 30 ms

AUXILIARY

Sensor power supply	21 V (Regulated +/-5%)
Limitation	50 mA

Note: the voltage remaining at the sensor is approximately:
21V - (input impedance x input current), the cable losses are neglected
21V - (250 ohms x 0.02mA) is around 16 Volts

OUTPUT

TYPE	RANGE
Current	0 ... 4 ... 20 mA
Load	0 .....750 Ohms
Passive output (external loop voltage) :	35 V maxi

POWER SUPPLY

Universal , not polarized (on 3 range to specify)

standard version :	20 to 265 Vac / Vdc, 2 VA maxi
Low voltage version :	10 to 30 Vdc, 2 VA maxi
"long life" version:	24V +/-10% 3VA maxi

OPERATING CONDITIONS - SPECIFICATIONS

Operating Temperature :	-10 °C to 60 °C
Storage Temperature :	-20 °C to +85 °C
Temperature Drift :	~ 0.015 % / °C
Relative humidity	85 % not condensed
Weight	~ 110 gr.
Protection degree	IP 20
Dielectric strength	(Inputs/Pwr supply/Outputs) 1000 Vac continuous
MTBF	> 3 000 000 Hrs @ 45°C
lifetime (20...265Vac-dc)	> 200 000 Hrs @ 30°C
lifetime (24Vdc +/-10%)	> 400 000 Hrs @ 30°C

Electromagnetic compatibility

Generic standards: **NFEN50081-2 / NFEN50082-2**

CE

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: