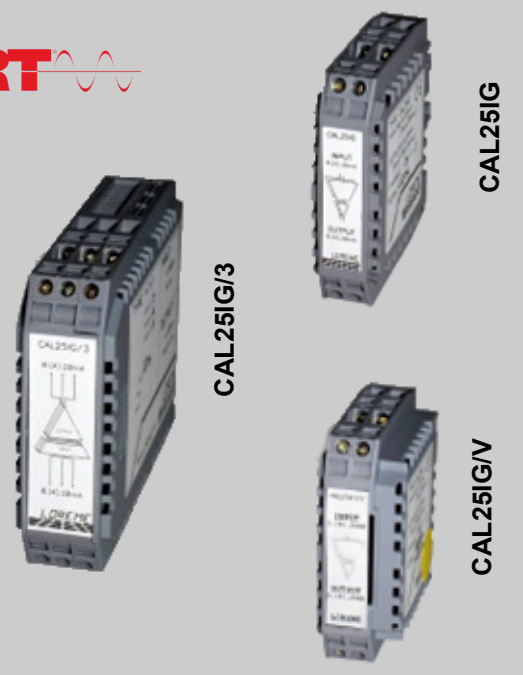


Galvanic isolator current loop powered 0-10mA, 0-20mA, 4-20mA, 10-50mA, ...

- **CAL25IG:** 1 or 2 independent channels
 - **CAL25IG/H:** Hart transparent option
 - **CAL25IG/3:** 3 independent channels
 - **CAL25IG/V:** dielectric strength of 2500 Vrms
 - **CAL25IGA:** 1 channel, isolation of loop powered transmitter
- **Without auxiliary power supply**
Powered by current loop
- **Excellent linearity:** 0.1%
 - **Low response time:** < 2 msec
 - **Small insertion loss:** < 65 Ohms
 - **Wide range, 1:1 ratio:** 0..4..10..20..50mA
- **SIL2 and SIL3 option:** in accordance to IEC61508

HART



The galvanic isolators CAL25IG are designed to isolation of current loops 0...4...20mA. No auxiliary power supply needed, there are easily integrated in existing current loops. It's a way to eliminate the ground loop or common mode problems.

DESCRIPTION:

- This galvanic isolators allows the copy of current loops 0 ... 4 ... 20 ... (50) mA, without auxiliary power supply.
- Inside the device, the loop current is transform in alternative signal and isolated via a transformer and rectified to recover its initial value.
- This isolation mode bring a small insertion loss. (equivalent load of 65 ohms, voltage drop: 20mA :1.3V)
- Due to its operating mode (loop powered), a load insert on the output current loop have an impact in the input current loop.
- High accuracy: +/- 0.15 %,
- Low thermal drift < 0.01 % / °C
- With its long time stability, it is not necessary to recalibrate the device.
- NAMUR NE43 compliant

OPERATING :

Two operating mode are available :

- 1) Isolate an active current signal 4..20mA
(the output copy the input constrained current)
- 2) isolate a loop powered transmitter
(the transmitter constrained the consumed current on the output, the isolator consumes this same current on its input)

FEATURES:

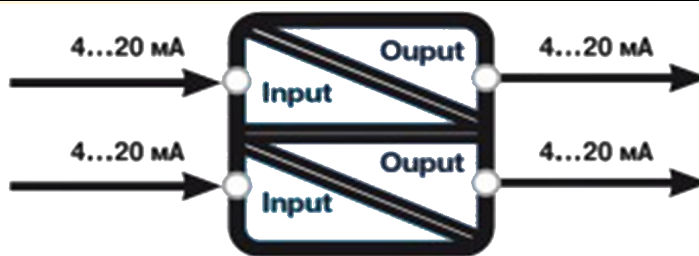
- DIN rail mounting (symmetrical or asymmetrical),
- wiring with screw terminals block(up to 2.5mm²),
- reverse polarity protection,
- conformal coating,
- protection rating IP20.

Functional security data:

type A component, HFT = 0
 λf : 265 fit (1/MTBF)
 DC : 88.8 % (diagnostic coverage)
 PFH : 1.8 fit (probability of dangerous failure per hour)
 SFF : 99.4 % (safe failure fraction)



Synoptic: 2 channels version



Version and order code:

[Request a quote](#)


- **CAL25IG** 1 channel, housing 63 x 62 x 17, 1000 Vac isolation.
- **CAL25IG2** 2 channels, housing 63 x 62 x 17, 1000 Vac isolation.
- **CAL25IG/3** 3 channels, housing 100 x 75 x 23, 1000 Vac isolation.
- **CAL25IG/V** 1 channel, housing 63 x 62 x 23, 2500 Vrms isolation.
- **CAL25IGA** 1 channel, 2 wires transmitter isolation with adjustment of transmitter supply. 63 x 62 x 17mm, 1000 Vac isolation.

Remark: In standard version, a loop breaking on output generates a loop breaking on input loop.

- OPTION : /Z:** 10V zener diode in parallel with the output to prevent the input loop opening when there is a breaking loop on output.
(the zener voltage may be adapt)
- OPTION : /H:** HART transparent (available only on CAL25IG)

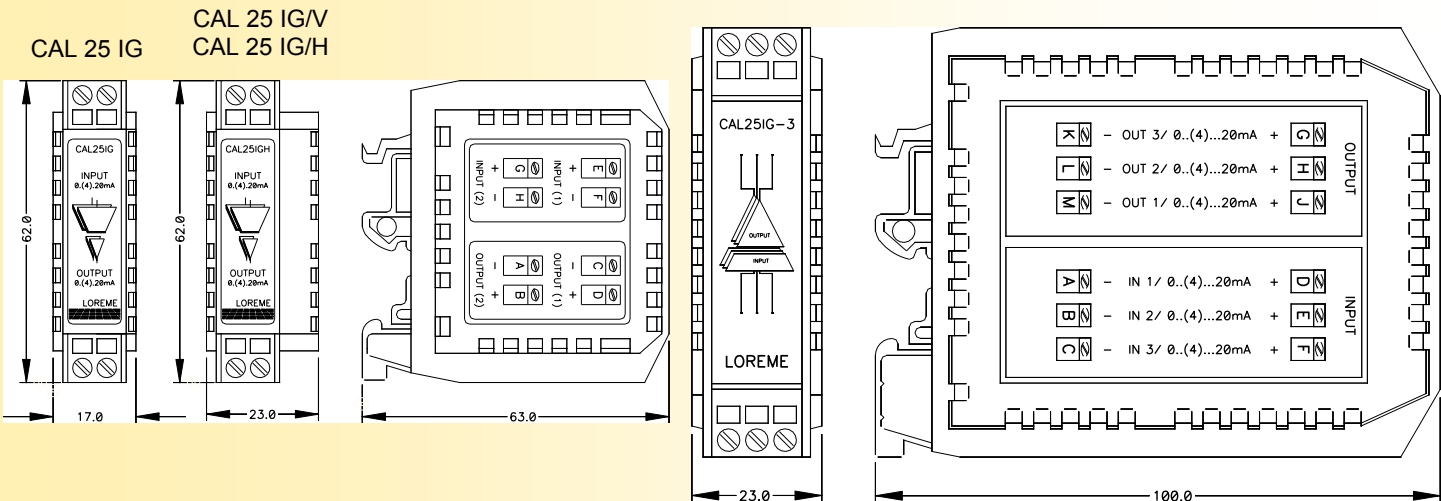
Specials versions : input : 4...20mA output : 0...20mA
 input : 0...20mA output : 0...10V
 input : 4...20mA output : 0...10V

Option: SIL2 / SIL3 compliance (according to IEC61508)

INPUT / OUTPUT		ENVIRONMENT															
Input	0 ... 4 ... 20 (50) mA	Operating temperature	-25 °C to 70 °C														
Max. input voltage	30 V	Storage temperature	-40 °C to +85 °C														
Output	0 ... 4 ... 20 (50) mA	Thermal Drift	0.01 % / °C														
Transformation ratio	1:1	Humidity	85 % not condensed														
Accuracy	0.15%	Weight:	CAL25IG: 44 g CAL25IGA: 50 g CAL25IG/V: 54 g CAL25IG/3: 120 g														
Threshold current	< 2 µA	Protection rating	IP20														
Residual ripple (noise)	< 3.57 mV pp. / mA	Dielectric strength (inputs / outputs and between channels)	CAL25IG: 1000 Vac CAL25IGA: 1000 Vac CAL25IG/V: 2500 Vac. CAL25IG/3: 1500 Vac														
Insertion loss	< 1.3 V to 20 mA (65 Ohms)	MTBF lifetime	> 4 000 000 Hrs @ 45°C > 400 000 Hrs @ 30°C														
Max. load	1300 Ohms	Shock IEC 60068-2-27 (operating)	15 G / 11 ms														
Load influence	< 0.1 % / 100 Ohms	Bump IEC 60068-2-29 (transportation)	40 G / 6 ms														
Input capacity	2 µF	Vibrations IEC 60068-2-6 (operating)	1 G / 10 - 150 Hz														
Output capacity	1 µF	Vibrations CEI 60068-2-6 (transportation)	2 G / 10 - 150 Hz														
Response time	< 2 ms load of 600 Ohms	Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE															
CAL25IGA		<table border="1"> <thead> <tr> <th colspan="2">Immunity standard for industrial environments EN 61000-6-2</th> <th>Emission standard for industrial environments EN 61000-6-4</th> </tr> </thead> <tbody> <tr> <td>EN 61000-4-2 ESD</td> <td>EN 61000-4-8 AC MF</td> <td rowspan="6">EN 55011 group 1 class A</td> </tr> <tr> <td>EN 61000-4-3 RF</td> <td>EN 61000-4-9 pulse MF</td> </tr> <tr> <td>EN 61000-4-4 EFT</td> <td>EN 61000-4-11 AC dips</td> </tr> <tr> <td>EN 61000-4-5 CWG</td> <td>EN 61000-4-12 ring wave</td> </tr> <tr> <td>EN 61000-4-6 RF</td> <td>EN 61000-4-29 DC dips</td> </tr> </tbody> </table>		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
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Supply of input loop	36 to 50 V																
Supply of output loop	23 V																

WIRING AND OUTLINE DIMENSIONS:

CAL 25 IG-3



Use of CAL25IG, IG3, IG/V to isolate a load.

Use of CAL25IGA to isolate a 2 wires transmitter.

