SELF-POWERED 4..20mA CURRENT LOOP ISOLATORS
CAL25IG

- ***CAL25IG:*** *1 or 2 independent channels*
  Hart transparent option with 1 channel version
- ***CAL25IG/3:*** *1 to 3 independent channels*
- ***CAL25IG/V:*** *electric rigidity of 2500 Veff*
- ***CAL25IGA:*** *1 channel, insulation of transmitter in loop powered*
- ***High accuracy:*** *+/- 0.15 %*
- ***Excellent linearity:*** *0.1%*
- ***Low response time:*** *<2 mS*
- ***Small insertion loss:*** *< 65 Ohms*

CAL25IG/3

CAL25IG

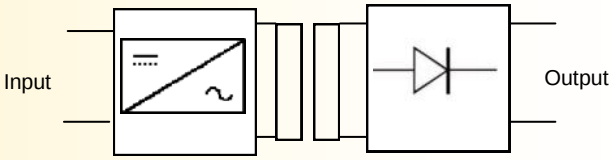
The galvanic separators CAL25IG are design to isolate current loops 0...4...20mA.
No auxiliary power supply is required, there are easily integrated in existing current loops. It's a way to eliminate the ground loop or common mode problems.

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 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 principle (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.

OPERATING :
Two operating mode are available :
1) Isolate a current signal 4..20mA active
(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)

GENERAL CHARACTERISTICS:
- DIN rail mounting,
- wiring with screw terminals (up to 2.5mm²),
- isolated with transformer,
- reverse polarity protection,
- tropicalization varnish,
- protection class IP20.

Synoptic:



Version and order code:

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

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

OPTION : **/Z:** a 10V zener in parallel with the output prevents 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**

90 days accuracy (20 °C +/- 2 °C)

TECHNICAL SPECIFICATIONS

INPUT

Input	0 ... 4 ... 20 (50) mA
Max. input voltage	30 V
Output	0 ... 4 ... 20 (50) mA
Transformation ratio	1:1
Threshold current	< 2 µA
Residual ripple (noise)	< 3.57 mV pp. / mA
Insertion loss	< 1.3 V to 20 mA (65 Ohms)
Max. load	1300 Ohms
Load influence	< 0.1 % / 100 Ohms
Input capacity	2 µF
Output capacity	1 µF
Response time	< 2 ms load of 600 Ohms
CAL25IGA	
Input	36 to 50 V
Output	23 V

OPERATING CONDITIONS

Temperature	
Operating	-10 °C to 60 °C
Storage	-20 °C to +85 °C
Influence	0.01 % / °C
Relative humidity	85 % not condensed
Weight:	CAL25IG: 44 g
	CAL25IGA: 50 g
	CAL25IG/V: 54 g
	CAL25IG/3: 120 g
Protection	IP20
Dielectric strength	CAL25IG: 1000 Vrms continuous
	CAL25IGA: 1000 Vrms continuous
	CAL25IG/V: 2500 Vrms for 1h.
	CAL25IG/3: 1500 Vrms continuous
	(inputs / outputs and between channels)

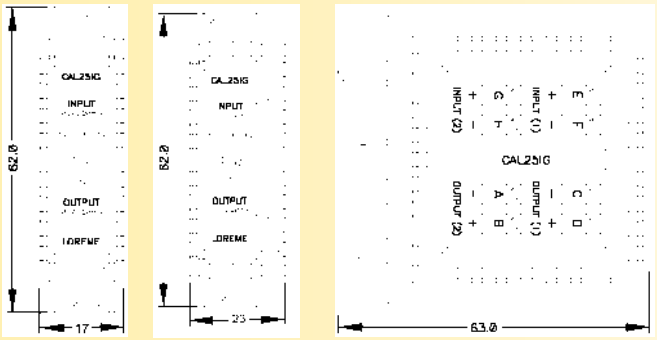
Electromagnetic compatibility

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

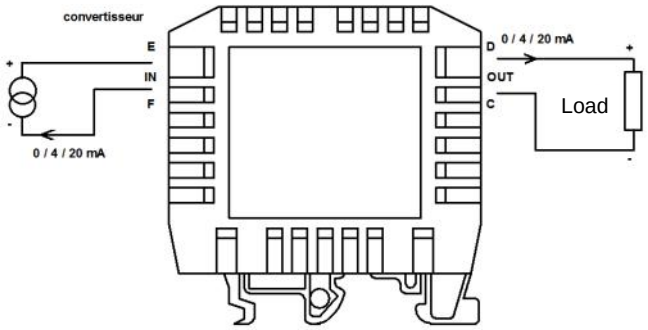
EN55011	meet	groupe 1 / classe A			
EN61000-4-2	no influence	B	**EN61000-4-3**	< +/- 5 %	A
EN61000-4-4	< +/- 5 %	B	**EN61000-4-6**	< +/- 10 %	A
EN61000-4-5	< +/- 5 %	B			
EN61000-4-8	no influence	A			
EN61000-4-11	< +/- 5 %	B	**DBT**	**2006/95/CE**	

WIRING AND OUTLINE DIMENSIONS:

CAL 25 IG CAL 25 IG/V

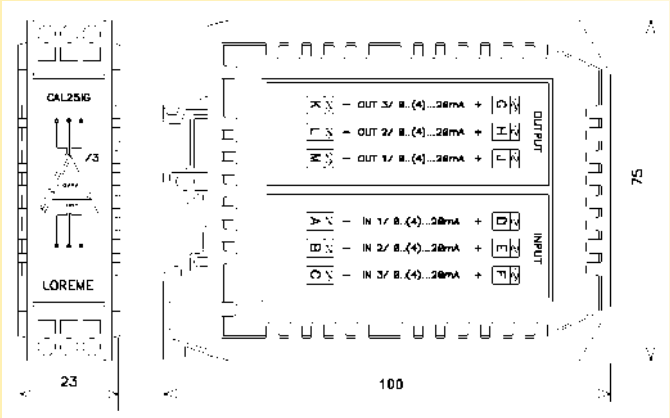


Wiring for isolation of load CAL25IG, IG3, IGV

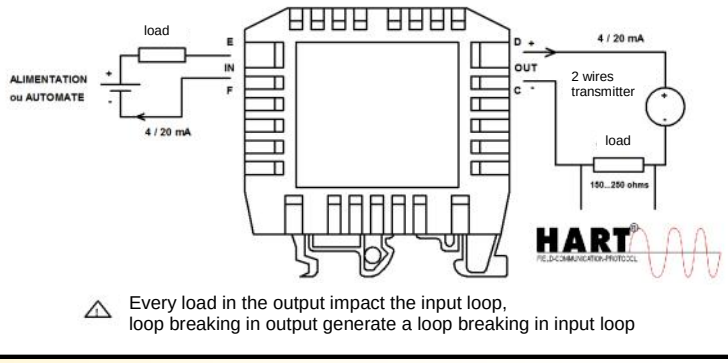


⚠ Every load in the output impact the input loop,
loop breaking in output generate a loop breaking in input loop

CAL 25 IG/3



Utilisation pour l'isolation d'un transmetteur en technique 2 fils CAL25IGA



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