4-20mA signal isolator, splitter with 2, 3, 4 outputs
SIL2 / SIL3 CAL4/100ig CAL4/100igM

LOREME

- ***CAL4/100ig*** *(current loop splitter)*
  - ***CAL4/100ig2:*** *1 input to 2 outputs*
  - ***CAL4/100ig3:*** *1 or 2 inputs to 3 outputs*
  - ***CAL4/100ig4:*** *1 or 2 inputs to 4 outputs*
- ***CAL4/100igM*** *(multi current loop isolator)*
  - ***CAL4/100igM2:*** *2 inputs, 2 outputs*
  - ***CAL4/100igM3:*** *3 inputs, 3 outputs*
  - ***CAL4/100igM4:*** *4 inputs, 4 outputs*
- ***Input:*** *active or passive*
- ***Output:*** *with test terminals and control led*
- ***AC-DC universal supply:*** *20…..265V*
- ***option SIL2 and SIL3 according to IEC 61508***

Series of galvanic isolators composed of independent cells designed for the 0..4..20mA current loop processing. Each input may be wired in active or passive mode, so it is able to measure a current provided by an active transmitter or to supply a 2-wire transmitter and measure the loop current.

Due to the modular design of this isolators, it is possible to isolate up to 4 independent loops or split a loop current in 4 isolated outputs (when the inputs are connected in series).
Similarly, connect in series or in parallel the outputs allows to have higher loads or higher output current.

DESCRIPTION:
Isolator for passive or active inputs:
The 4-20mA input current maybe provided by an active transmitter, or the isolator input can supply a 2 wire transmitter and measure current of the loop. (Do not short-circuited the inputs in active mode operating)

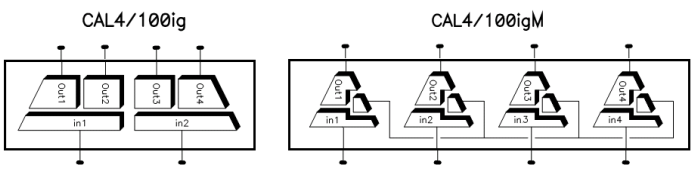
By its design and its transformation ratio fixed to 1/1, the product ensures good accuracy (+ / - 0.15%) , an great thermal stability (<0.01% / °C). the long term stability (greater than 0.1% / year) requires no recalibration in the most applications.

The circuit separation ensures high operational reliability and a complete measure independence, while protecting the acquisition system.
(There is no impact of outputs on inputs or between outputs themselves, no load influence, or when output is opening ....)

FEATURE:

- Symmetrical DIN rail mounting, IP20 enclosure
- connection on pluggable screw terminal blocks
  (section: 2.5 mm² max.)
- "Test" terminals to control output currents value with an ammeter without opening the loop. (accessible under the front panel)
- The LEDs in series on output allow a visual diagnosis on loop integrity.
- main voltage presence indicated by green LED
- Wide range Ac - Dc switching power supply
- isolation by high frequency transformer

INTERNAL DIAGRAM: (the power supply is not drawn)

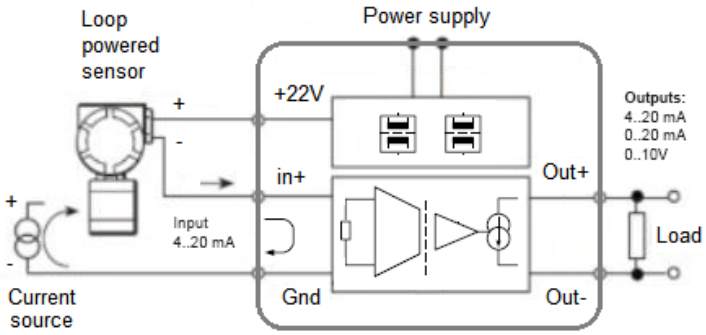


Operational safety data:
type A components, HFT = 0

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)

SIL2 SIL3

Synoptic (1 internal cell)



Version and order code

Request a quote

- **CAL4/100ig** (current loop splitter)
  - CAL4/100ig2: 1 input to 2 outputs
  - CAL4/100ig3: 1 or 2 inputs to 3 outputs
  - CAL4/100ig4: 1 or 2 inputs to 4 outputs
- **CAL4/100igM** (multiple current loop isolator)
  - CAL4/100igM2: 2 inputs, 2 outputs
  - CAL4/100igM3: 3 inputs, 3 outputs
  - CAL4/100igM4: 4 inputs, 4 outputs

Option : SIL2 / SIL3 (according to IEC 61508)

TECHNICAL SPECIFICATIONS

INPUT

Current	0 ... 4 ... 20 mA
Impedance	50 Ohms

OUTPUT

Current: 1 to 4 outputs	0 ... 4 ... 20 mA
Admissive load	0 ... 600 Ohms
Voltage	0 ... 10 V
on internal shunt	500 Ohms
Transformation ratio	1:1
Load influence	<0.03 % / 100 Ohms
Residual ripple (Noise)	40 mV pp max.
Response time	< 20 ms
on load 500 Ohms	

AUXILIARY

Power supply for transmitter (for each input)	21 V regulated +/- 10 %

POWER SUPPLY

20...265Vac /Vdc 5VA (10..30Vdc in option)

ENVIRONMENT

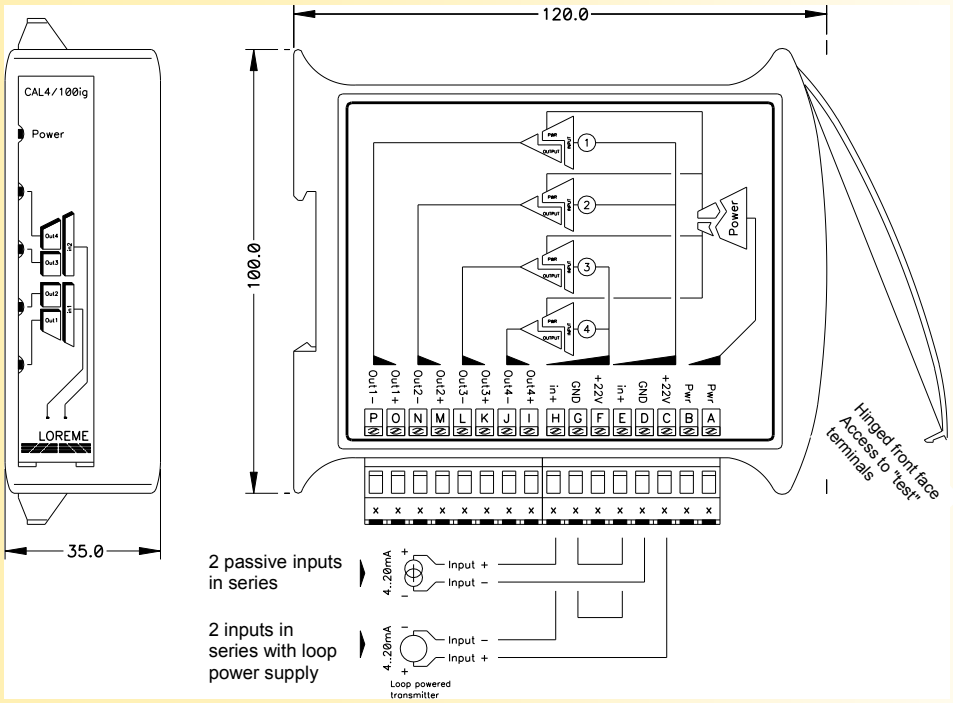
Operating temperature	-20°C to 60°C
Storage temperature	-25°C to +85°C
Thermal drift	0.01 % / °C
Humidity	85 % not condensed
Weight	300 g
protection rating:	IP20
Dielectric strength	1000 Vrms continuous (input/output) 2500 Vrms continuous (power supply)
MTBF (MIL HDBK 217F)	> 3 000 000 Hrs @ 25°C
Lifetime	> 170 000 Hrs @ 30°C

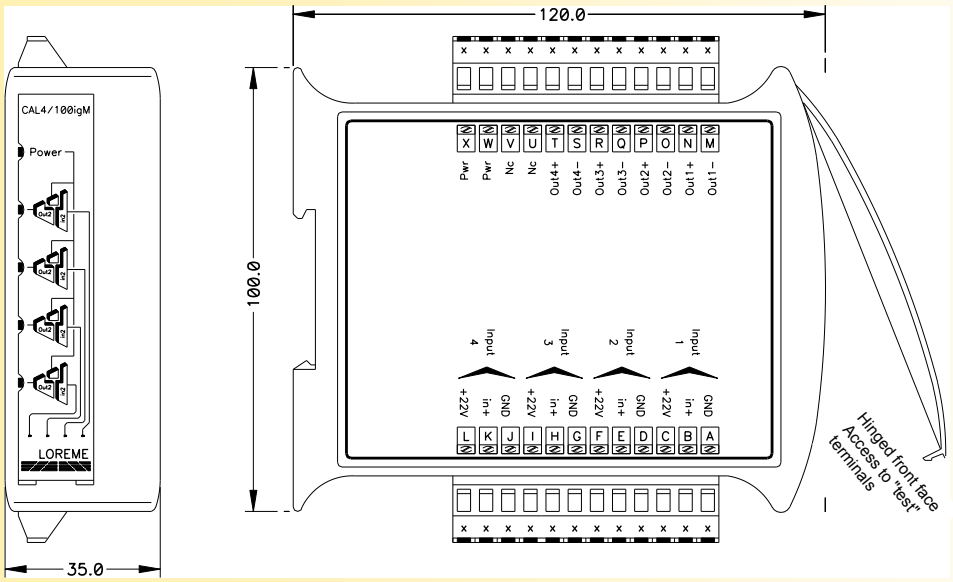
Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

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:





Input connections:

for 4-20mA passive input :
between in+ and GND
(for active transmitter)

for 4-20mA with loop power supply:
between +22V and in+
(for loop powered transmitter)

The inputs are isolated, they can be connected in series to have 1 input split to 4 outputs.