

# 8 channels signal splitter, signal isolator 4...20mA or 0...10V

CAL150-8

LOREME

- **8 isolated 0..4...20mA current loop**  
active or passive inputs , 8 isolated 24V loop power supplies  
other combinations available:  
1 input / 8 outputs  
2 inputs / 2 x 4 outputs  
4 inputs / 4 x 2 outputs
- **Output terminal blocks or connectors**  
or pre-wired output cable
- **Universal power supply**  
20...265Vac-dc
- **Fully isolated**  
input / output / power supply and between channels
- **Option HART transparency**
- **Option SIL2 and SIL3 according to IEC 61508**



HART

This galvanic isolator includes up to 8 cells allowing replace simple PLC interface cards, providing safety related to current loops isolation, each input has its individual loop transmitter power supply.

## DESCRIPTION:

**Operating (individually for each entry):**

### Passive mode:

Current input 4 ..... 20 mA from an active transmitter.

### Active mode:

The input supply a 2 wired transmitter and measures the current consumed in the loop (25mA max.)

By design and its fixed transformation ratio of 1:1, the product provides good accuracy (+ / - 0.15%), a very low thermal drift (<0.01% / °C), and do not requires a recalibration providing excellent long-term stability.  
The total separation of circuits ensures high operational reliability and a complete independence of each channel, while strongly protecting the data acquisition system.

## FEATURE:

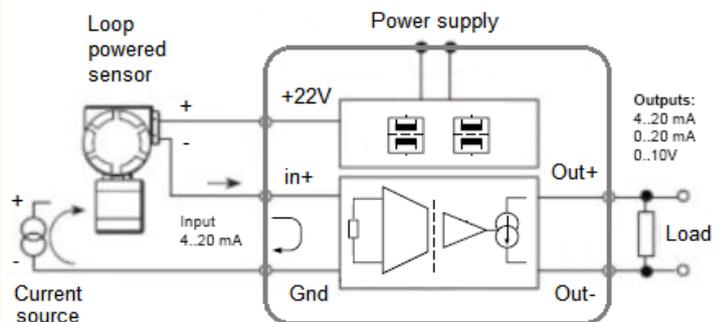
- DIN rail Enclosure 9 modules (160mm)
- Symmetrical DIN rail mounting
- IP20 protection rating
- Connection on pluggable spring terminal blocks (up to 1.5 mm<sup>2</sup>)
- Conformal coating for electronic protection
- Test terminals (accessible under the hinged front panel) to control output currents without opening the current loop (with a milliammeter),
- the Led in series with the output ease the visual diagnostic.

## Operational safety data:

Type A component , HFT = 0  
 $\lambda f$  : 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)



## One channel diagram:



## Version and order code:

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- **CAL150-8** 8 inputs 0...4...20mA / 8 outputs 0...4...20mA  
output wiring on spring terminal blocks
- **CAL150-8-HE10** 8 inputs 0...4...20mA / 8 outputs 0...4...20mA  
output wiring on HE10 connector
- **CAL150-8-SUBD** 8 inputs 0...4...20mA / 8 outputs 0...4...20mA  
output wiring on SUB-D connector

Option: -H version with bidirectional HART transparency  
 Option: SIL2/SIL3 (according to IEC61508)

Special version : input 0...10V , output 0...4...20mA  
 input 0..4...20mA , output 0...10V

- **CAL150-6-ALC250mA** : 6 inputs 4...20mA / 6 outputs 4...20mA  
with 250mA channel supply for 3 wires transmitters

INPUTS	
Current	0 ... 4 ... 20 mA
Input impedance	50 Ohms
OUTPUTS	
Current: 8 channels	0 ... 4 ... 20 mA
max load	600 Ohms
Voltage	0 ... 10 V
on internal shunt	500 Ohms
load Influence	< 0.03 % / 100 Ohms
output ripple (noise)	40 mV pp max.
response time	< 20 ms (load 500 Ohms)

AUXILIARY	
transmitter power supply (for each input channel)	22 V regulated +/- 10% 25mA isolated

**POWER SUPPLY**  
20...265 Vac / Vdc <10VA

ENVIRONMENT	
Operating temperature	-20 °C to 60 °C
Storage temperature	-25 °C to +85 °C
thermal drift	0.01% / °C
Humidity	85% non condensed
Weight	400 g
Protection rating	IP 20
Insulation resistance	> 500Mohms @ 500Vdc
Dielectric strength	1000Vrms continuous input/output 2500Vrms continuous Power
MTBF	> 3 500 000 Hrs @ 45°C
Life time	> 170 000 Hrs @ 30°C

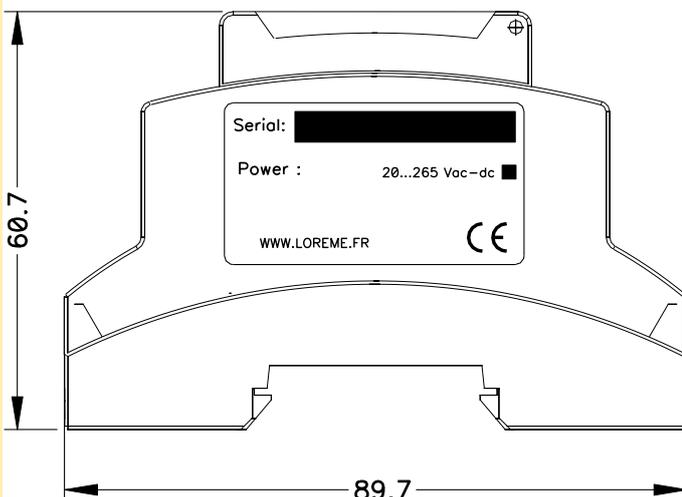
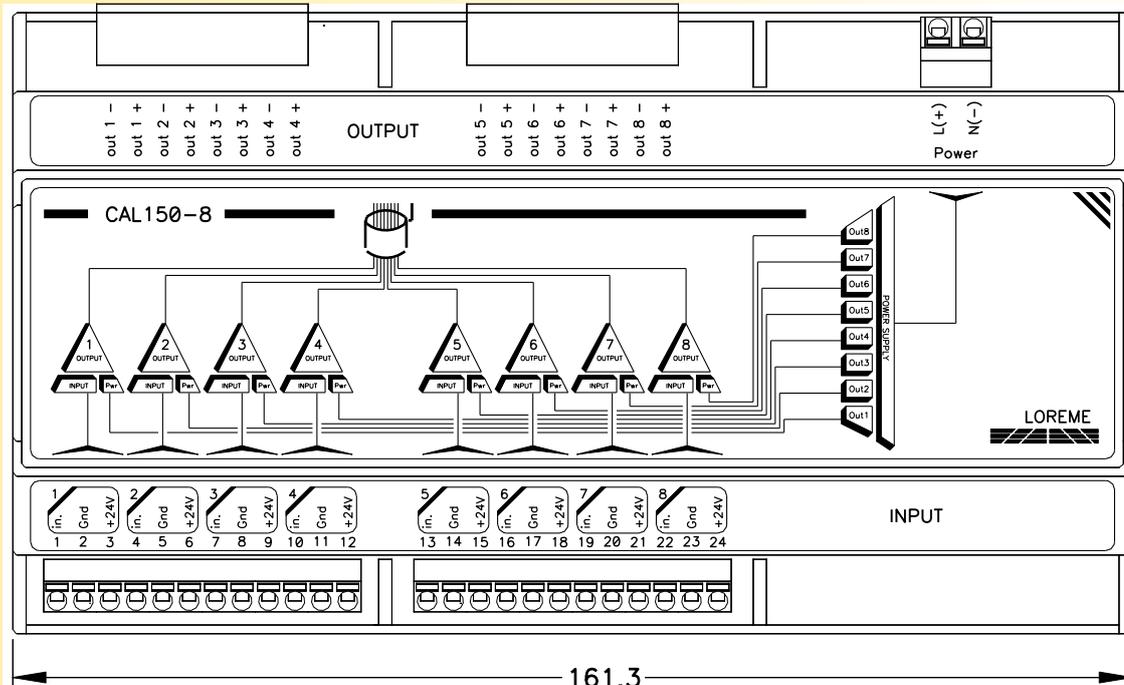
**Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE**

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	



### WIRING AND OUTLINE DIMENSIONS:

Connectors type and output wiring are dedicated to each specific request (terminal blocks, subD, HE10, ...)

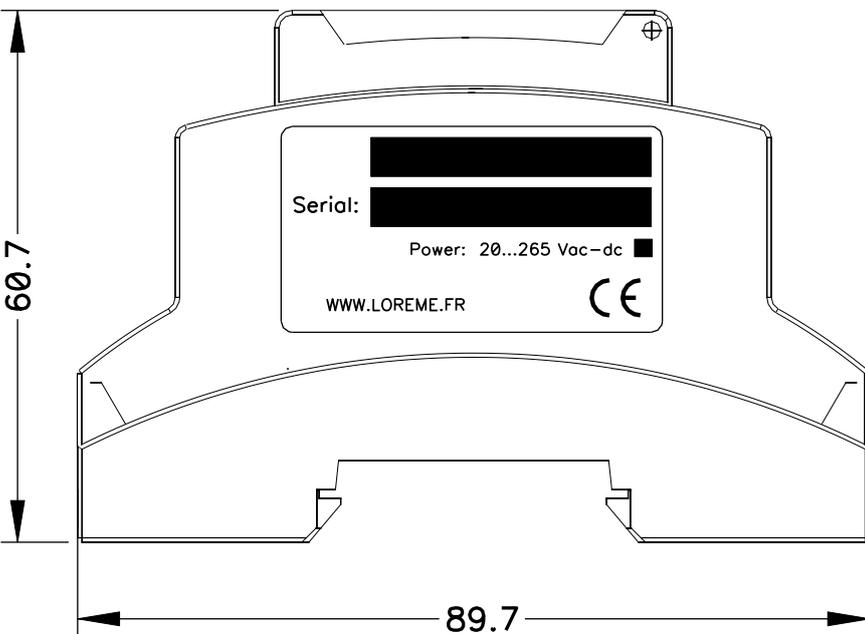
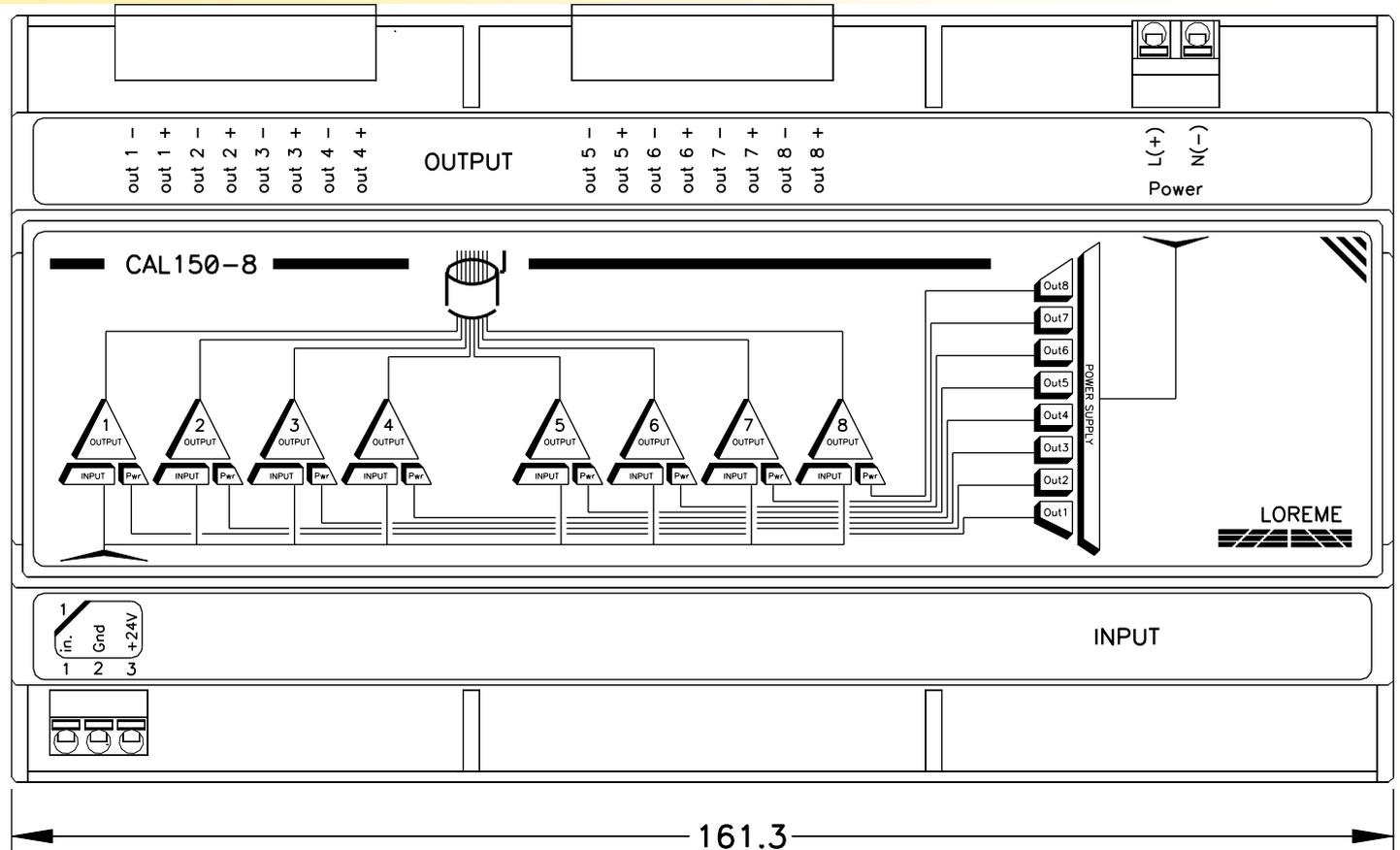


#### Input connection:

- \* 4 ... 20 mA passive mode :  
connect the transmitter between  
in (+) and GND (-) (for an active transmitter)
- \* 4 ... 20mA with loop powered transmitter:  
connect the transmitter between  
+24 V (+) and in (-)  
(for a loop powered transmitter)



**8 channels signal splitter, signal isolator**  
**1 input / 8 output version**



# 8 channels signal splitter, signal isolator

## 2 inputs / 2 x 4 outputs version

