

**LOREME**



## *LOREME electronic catalogue*

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# Transmitter and isolator

## Head mounting converter

[Analog temperature transmitter for sensors head mounting  
PT100, PT1000 or potentiometer input](#) type CAL40

 GET A QUOTE

- **CALP40** Pt100, Pt1000 temperature transmitter
- **CALpot40** potentiometer input
- **CALP40Si** ATEX version, Intrinsically safe
- **Shockproof head mounting system** spring mounting
- **2 wires transmitter** 4-20mA loop powered
- **Led indicators for quick control of loop and sensor** Green LED for current loop presence  
Red LED for sensor failure
- **SIL2 and SIL3 conformity** according to IEC 61508



SIL2 SIL3

[Isolated temperature transmitter PT100 and thermocouple  
For sensors head mounting](#) CNL40iG

 GET A QUOTE

- **Universal:** RTD (3 or 4 wires), thermocouple, mV, mA
- **CNL40iG** Galvanic insulation
- **CNL40iGH** + HART protocol
- **CNL40iGL** Low cost version
- **Fully configurable** RS232 and HART 
- **FDT certified DTM HART Drivers** 
- **Loop powered:** Powered by the 4-20 mA loop current
- **SIL2 conformity** according to IEC 61508



[Field mounted transmitter with loop powered indicator  
ATEX SIL2](#) INP201

 GET A QUOTE

- **LCD display:** 10000 points  
configurable display range
- **2 wires technology** 4-20mA current loop powered
- **Mounting** temperature probe or pipe mounted  
IP65 protection
- **INP201i:** 316 Stainless Steel version
- **INP201H:** Hart protocol option 
- **INP201ADF** ATEX / IECEx option  
Explosion-proof 
- **SIL2 compliance** According to IEC 61508 



[Programmable temperature transmitter PT100 and  
thermocouple for sensors head mounting](#) type CNL40

 GET A QUOTE

- **CNL40 :** RTD PT100 and thermocouples input
- **CNL40D:** Double version  
2 independents transmitters in one enclosure
- **CNL40L :** Low cost version
- **Fully configurable :** RS232 USB link
- **Loop powered**  
powered by 4-20mA current loop, without isolation



[Programmable temperature transmitter PT100  
For miniature sensors head mounting](#) type CNL27

 GET A QUOTE

- **Miniature head mounting**  
25mm diameter, 19mm mounting hole spacing
- **RTD 100ohms input**  
2 wires
- **Configurable measure range**  
communication on the current loop
- **2 wires technique**  
powered by the 4-20mA current loop  
without insulation
- **Application**  
Tertiary sector, air-conditioning



[Field mount loop powered temperature transmitter with  
LCD display](#) INP101

 GET A QUOTE

- **Loop powered** (isolated 4-20mA)
- **LCD display:** 10000 points
- **Outside mounting**  
IP67 protection
- **Explosion-proof protection**  
IECEx and ATEX 
- **INP101V:** rotating display  
for horizontal or vertical mounting
- **INP101 i:** 316 Stainless Steel version 
- **HART protocol**  
(available option on all models)
- **FDT DTM certified HART drivers** 
- **SIL2 compliance**  
according to IEC 61508 



# Transmitter and isolator

## Voltage and 4-20mA current loop isolator and splitter

### 4-20 mA Current loop isolator and signal splitter

SIL3 / SIL2

CAL23DmA

GET A QUOTE

- Input current :** (0...4....20mA )  
With or without sensor power supply
- Simulation plug :** (Automatic input switching )  
Allowing full loops control without disconnection
- 4 ways galvanic isolation** (1000 V)
- 2 Active or Passive Current Outputs**  
Independents outputs  
Max Load : 750 ohms
- Analog design**
- pluggable terminal blocks**
- Universal power supply** : 20 to 265 Vac/Vdc or 24Vdc
- HART transparency**
- SIL2 and SIL3 compliance** according IEC61508



### 4-20mA signal isolator, splitter with 2, 3, 4 outputs

SIL2 / SIL3

CAL4/100ig CAL4/100igM

GET 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** (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**



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

CAL25IG

GET A QUOTE

- 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



### Self powered galvanic isolator for 0..4..20mA current loop

SIL2 / SIL3

CAL25igD

GET A QUOTE

- Up to 8 isolated channels**  
Available with 1 to 8 independents channels
- High density**  
8 isolators in 23mm width case
- No auxiliary supply**  
Loop powered
- Excellent linearity :** 0.1%
- Low response time :** < 2 ms
- Low insertion loss :** < 65 ohms
- Pluggable terminal blocks**
- Option SIL2 and SIL3 according to IEC 61508**
- Application**  
isolation between PLC



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

CAL150-8

GET A QUOTE

- 8 isolated 0..4...20mA current loop**  
active or passive inputs  
8 isolated 24V loop power supplies
- Output on 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**



## Isolated loop powered transmitter

### 4-20mA loop powered analog transmitter DIN rail mounting, Pt100 and thermocouple

CAL25

GET A QUOTE

- CALP25**  
2- or 3-wires Pt100, PT1000
- CALT25**  
Thermocouple
- CAL25**  
mV, mA, potentiometer
- 2-wire transmitter,** 4-20 mA loop powered
- 3-wire transmitter,** 0-10 V output
- LED indicators for power and sensor**  
Green LED for 4-20mA loop current OK  
Red LED for sensor breaking detection
- SIL2 and SIL3 compliance** according to IEC 61508



### Analogue isolated transmitter for Pt100, thermocouple, ... loop powered 4..20mA, DIN rail mounting type CAL45

CAL45

GET A QUOTE

- CALP45:** Pt100 to Pt1000 input
- CALT45:** Thermocouple input
- CAL45:** mV, V (dc), mA (dc), potentiometer input
- 2-wire transmitter:** (powered by the 4-20 mA loop)
- isolation:** input / output
- LED to the immediate control of the loop and sensor**  
(Green LED 4 ... 20mA loop OK, red LED fault detection)



# Transmitter and isolator

## Isolated loop powered transmitter

Programmable temperature transmitter PT100, thermocouple 4-20mA current loop powered

CNL25D

 GET A QUOTE

- **Input :** Pt100 RTD, thermocouple

- **Low profile:** 17 mm width

- **Pluggable terminal blocks**

- **2 wires technology :**

powered by the 4-20mA current loop

- **Fully configurable :** Usb-RS232 link



Programmable temperature and process isolated transmitter 4...20mA loop powered

CNL45D

 GET A QUOTE

- **Process and temperature measurement**

voltage V ,mV, current mA, potentiometer  
thermocouple, PT100

- **2 wire technology**

Powered by the 4-20mA current loop

- **Galvanic isolation**

- **Fully configurable**

- **Measure display (10 000 pts)**

- **High thermal stability**



Isolated loop powered transmitter Temperature and process inputs

CNL45

 GET A QUOTE

- **Programmable temperature and process input**

Volt ,mV, mA, potentiometer  
thermocouple, RTD PT100

- **2 wire Loop powered**

powered by 4-20mA current loop

- **Galvanic isolation**

1000V input / output

- **Fully configurable**

RS232 link

- **High thermal stability**

50 ppm



Programmable, isolated temperature transmitter, 4...20mA loop powered, option SIL2

CNL25igD

 GET A QUOTE

- **Temperature and process inputs**

RTD Pt100 2,3 or 4 wires, thermocouple,  
mV, mA, Potentiometer

- **2 wires technology output :** 4-20mA current loop powered

- **Galvanic isolation :** input / output

- **Fully configurable:** USB-serial link

- **CNL25igDH:** Hart protocol 

Drivers DTM HART FDT certified

- **CNL25igD-2:** 2 independent transmitters. High density application

- **SIL2 compliance** according to IEC 61508

- **compact size :** 18mm width case



4...20mA loop powered temperature transmitter miniature, isolated, programmable

CNL25IG

 GET A QUOTE

- **Temperature and process inputs**

voltage V, mV, mA current, potentiometer  
thermocouple, Pt100

- **2 wires technology**

4-20mA loop current powered

- **Galvanic isolation**

- **Fully configurable**

- **low profile DIN rail mounted enclosure**



## Isolated signal conditioner with auxiliary power supply

ISOLATED ANALOG SIGNAL CONDITIONER  
GALVANIC ISOLATION

CAL23D

 GET A QUOTE

- **Process inputs:** mV, V, mA, A, Ohms, potentiometer  
direct input up to 1000Vdc and 10Adc

- **3-way 2.5kVAC galvanic isolation**

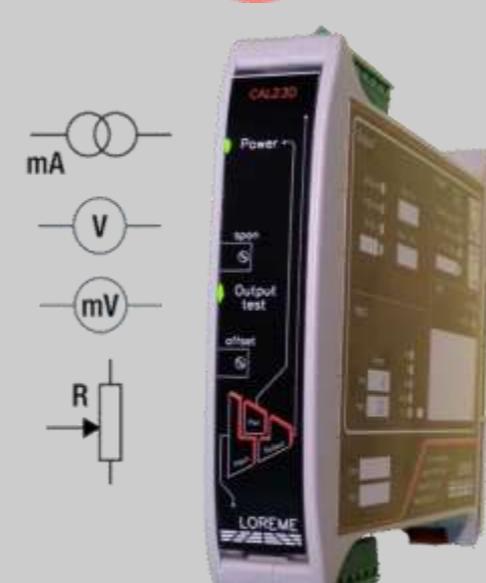
- **Active or passive current mode**  
For input and output,  
2 or 3 wires sensor power supply: 22V, 200mA

- **Typical 10ms response time** 1kHz bandwidth in option

- **High output load resistance** > 1500 ohms

- **Universal power supply** 20 to 265Vac-dc or 10 to 30Vdc

- **Application :** current loop isolator  
DC voltage or current measurement.



High voltage, bipolar, fast galvanic isolator  
measure shunt isolator

CAL23DT-HV

 GET A QUOTE

- **Voltage or current input :**

0..100mV (+/-100mV) to 0...1000V (+/- 1000V)  
0...1mA (+/- 1mA) to 0...10A (+/- 10A)

- **High galvanic isolation**

dielectric strength 5KVac / 7KVdc

- **Voltage output**

0..10V (+/- 10V)

- **Fast signals**

bandwidth up to 30Khz

- **Applications:**

Energy, railway



# Transmitter and isolator

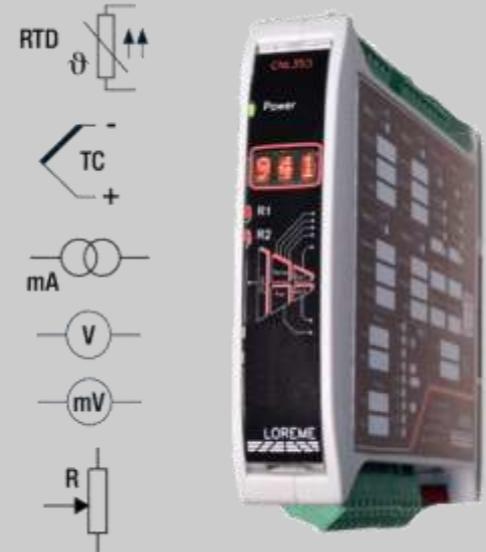
## Isolated signal conditioner with auxiliary power supply

### [Programmable analog signal conditioner](#)

CNL35D

GET A  
QUOTE

- **Wide range of analog inputs**  
Process: voltage, current, sensor power supply, potentiometer  
Temperature: thermocouples, PT100, Ni100
- **1 isolated analog output 4..20mA, 0...10V**
- **2 relays outputs**
- **Measure display and front face configuration**
- **Pluggable connectors**
- **Universal supply 20....265Vac-dc**



### [Universal programmable converter for analog signals](#)

TYPE: CNL35L and Threshold Detector DNL35L

GET A  
QUOTE

- **Wide range of process and temperature analog inputs**

voltage, current, sensor power supply, resistance, potentiometer, frequency, duty cycle, strain gauge, Thermocouples, PT100 3wires and 4 wires, PT1000, Ni100, Ni1000

- **1 or 2 isolated analog outputs**

( version without analog outputs "threshold detector" ref.: DNL35L )

- **Up to 4 relay outputs**

- **Low response time: 35 ms**

- **Measure display (10 000 pts)**

(programmable in front face or by USB-RS232 cable)

- **Pluggable connectors**

- **Universal power supply 20....265Vac-dc**

• **SIL2 option** according to IEC 61508



### [High voltage Isolation amplifier](#)

#### Signal conditioner

CNL34DHig

GET A  
QUOTE

- **Process and temperature input**  
platinum RTD, thermocouple,  
mV (shunt), mA
- **High voltage galvanic isolation**  
dielectric strength of 10kVac / 15kVdc continuous
- **Fully configurable**  
RS232 link
- **Universal power supply Ac / Dc**



### [Isolated analog signal conditioners](#)

CAL30, CAL35

GET A  
QUOTE

- **All inputs via interchangeable measure card**

Volt, mV, mA, potentiometer, frequency, Hall effect current sensor, thermocouple, PT100, PT1000, integrator for Rogowski coil sensor

- **Unipolar or bipolar analog output:**

0...4..20mA, 0...1...10V, +/-20 mA, +/-10V, frequency

- **Special function**

Maximum value selector between 2 analog inputs  
Minimum value selector between 2 analog inputs  
Voltage to frequency converter, ....  
Adder, differentiator, absolute value, ...

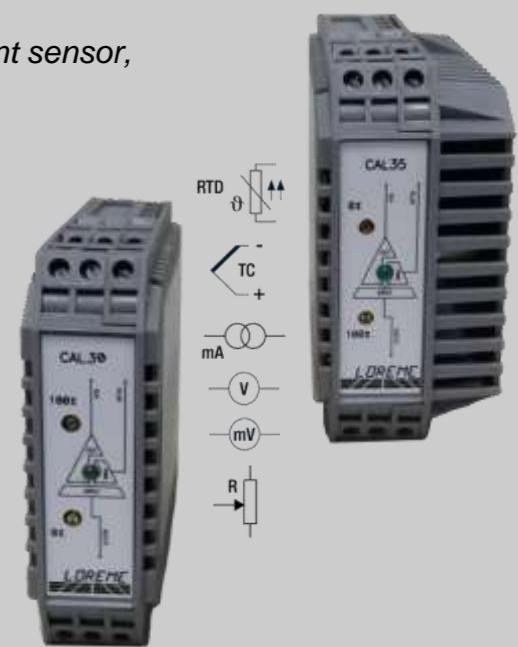
- **Three way galvanic insulation**

Input / Output / power supply

- **Fast signals version**

response time < 50 us

Bandwidth up to 20 KHz



## High output power signal amplifier

### [High output current analog signal amplifier conditioner](#)

CAL 101L / CAL 140 / CAL240

GET A  
QUOTE

- **Application :**  
valve control, positioner, actuators...  
Voltage or current amplifier,  
High magnitude signal conditioner  
Amplifier integrator for ROGOWSKI coil sensor  
(1Aac or 5Aac output)
- **Current or voltage output**  
unipolar up to 60V / 5A  
bipolar up to +/- 30V / 5A
- **Maximum output power: 150 VA**
- **Fully protected**  
short-circuit  
overloads  
thermal
- **3-way galvanic insulation**  
input / output / power supply
- **up to 20Khz of bandwidth on request**  
Response time mini < 0.1ms



## Multi channel PT100 converter

### [6 channels PT100 converter output 0...10V](#)

Type : CTL105

GET A  
QUOTE

- **Up to 6 measure channels**  
RTD 100 input  
0 ... 10V outputs
- **Fully configurable**  
Scale, filter, offset, ...
- **Low cost applications**



### [Multi-channels PT100 temperature converter LCD display](#)

Maxi, Mini, average output

TEMAX105LCD

GET A  
QUOTE

- **Temperature input**

Up to 4 platinum RTD

- **2 wires transmitter**

(4-20mA current loop powered)

Output current is an image of maximum, minimum or average of temperature inputs

- **Display : 2 lines of 16 characters LCD**

Display simultaneously the four temperature inputs

- **Fully configurable**



# Transmitter and isolator

## Binary BCD gray converter

[Binary Gray BCD converter to 4-20mA or 0-10V output for parallel outputs encoders](#)  
TYPE: CNA105



- **18 parallel digital inputs**  
(16bits + sign + lock)  
BCD, Gray, Binary input formats
- **Analog output**  
0...4...20mA, 0...10Volts, 16 bits resolutions
- **Optional relay output (CNA105/R)**  
2 programmable thresholds
- **Application :**  
Interface for parallel outputs encoders



[Analog to digital converter  
4-20mA to BCD - GRAY - BINARY](#)

TYPE : CAN105



- **Analog input**  
4...20mA, 12bits resolution
- **Parallel digital outputs**  
Gray, Binary or BCD code  
(14bits + Enable output)
- **Ethernet Modbus TCP link in option**



[Gray code comparator for parallel outputs encoder](#)  
TYPE : CCN165

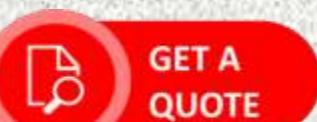


- **2 groups of 25 parallels digital inputs**  
(from 4 to 25 bits in gray code )
- **3 relays outputs + 1 Watchdog output**  
programmable differential threshold  
on inputs
- **Application :**  
Synch control of 2 sensors



## SSI position sensor conditioner

[SSI encoder to 0..4..20mA analog output converter](#)  
type : CNL35SSi



- **Synchronous Serial interface (SSI) input**  
Master or slave mode  
8 to 32bits SSI frame in binary or gray format  
Encoder may be powered by converter
- **Display**  
4 digits for measure  
Easy programming with explicit text message
- **option :**  
Up to 2 relays  
Up to 2 isolated analog output
- **Plug-in connectors**
- **Universal supply (Ac and Dc)**



[SSI to parallel converter with Ethernet for absolute encoder](#)  
TYPE : CSSIP105



- **Synchronous Serial interface input (SSI)**  
Master or slave mode  
8 to 25bits SSI frame in binary or gray format  
can provide supply for encoder
- **Parallels outputs**  
25bits + DATA Valid output  
GRAY or BIN format
- **option Ethernet modbus tcp link**



## Duty cycle PWM output conditioner

[Analog converter Pulse Width Modulation output  
For driving Static Relay](#)  
type: CMi30 & CMi31



- **Direct control of synchronous static relay**  
Whole wave train (PWM)
  - fix dosing mode
  - Analog setpoint converter mode
- **Switchable setpoint**
  - Internal potentiometer
  - External (4 ... 20mA, 0 ... 10V, potentiometer)
- **Application:**
  - Control of heating resistors for:
    - Ovens, bath oils, industrial process
    - Climatic chambers
    - Test benches .....
- **Voltage output signal or static relay dry contact:**
  - 0...10V ; .....



[Power controller with pulse width modulation output  
For driving SSR](#)  
type : CMi70



- **Direct control of synchronous static relay**  
whole wave trains modulation
- **selectable setpoint input**
  - 4..20mA , 0...10V , 0...20V, potentiometer
- **Application:**
  - Control of heaters for:
    - Ovens, bath oils, industrial process
    - Climatic chambers
    - Test benches .....



# Transmitter and isolator

## Duty cycle PWM output conditioner

[Programmable converter with duty cycle output.](#)

DNL35-MLi



GET A  
QUOTE

- **Process input**

(Volt, mA, sensor power, potentiometer, )

- **2 , 3 or 4 relays outputs**

( programmable output in PWM)

- **Measure display (10 000 pts)**

(Programmable by front face or RS232)

- **Universal power supply**

• **Low cycle time : 20ms**



## Resistor or potentiometer output conditioner

[Analog input converter with resistor or potentiometer output](#)

type : CNLB20pot



GET A  
QUOTE

- **Voltage, current, temperature input**

4..20mA , 0..10V , Pt100 , Thermocouple ....

- **Fully configurable**

- **resistance (Ohms) output 2 or 3 wires**

256 conversion steps

- **user adaptable transfer function**

with 51 points linearization

- **Fully isolated**

- **Pluggable connectors**



# Thermometer Hygrometer

## Room thermometer and hygrometer

### Thermo hygrometer probe with PoE Ethernet interface option: barometer and data recorder

SAi60

GET A QUOTE

- Ambient temperature and humidity probe
- Barometer (atmospheric pressure)
- Recording and export data (Excel format)
  - Graphics display on Web server

- Communication:
  - Modbus TCP (Ethernet) 6 concurrent connections
  - Embedded Web Server
  - SNMP
  - Send alarms email, SMTP protocol

- Powered by the Ethernet switch  
Power over Ethernet (POE)

- High visibility LCD display (OLED)
- Configurable sound alarm with internal buzzer

- Applications:
  - Clean room, calibration laboratories,
  - museums and exhibition halls,
  - data center, warehouses,
  - air-conditioned room, ambient probes

- Optional remote sensors
  - Humidity and temperature sensor with up to 10m cable length



### Room thermo hygrometer with radio link option : Barometer and remote sensor

WAi60

GET A QUOTE

- Room temperature and hygrometry
- Optional Barometer (atmospheric pressure)

- Bidirectional HF link
  - 2.4Ghz IEEE802.15.4
  - Up to 32 devices in one network

- Optimum reliability
  - Mesh networks between devices (probes)
  - Up to 8 jump to reach a device
  - Dynamic reconfiguration of path according to environment
  - Transmission rate > 99.999%

- Great autonomy
  - > 2 years with 4 standard AAA batteries
  - with refresh rate of 60sec

- Applications :
  - Sterile chambers, calibration laboratories
  - Museums and exhibition halls
  - Clean room, datacenter, warehouse
  - air-conditioned room, room sensor

- Optional remote sensor
  - with up to 10m cable length



### PROBE for room temperature and surface temperature INSIDE and OUTSIDE application

GET A QUOTE

#### • SPAI - CAL:

Room temperature measure



SPAE-CAL

#### • SPAI - A:

Room temperature measure with LCD display



SPAI-A

#### • SPAE - CAL:

Waterproof outside temperature measure (IP 65)



SPC-CAL

#### • SPAE-CNL/H:

Waterproof outside temperature measure (IP 65) with HART transmitter

#### • SPAE01/CAL:

Surface probe (piping)

#### • Loop powered (4 - 20 mA)

12 to 35 V power supply



SPAE-CNL/H

### Room thermometer with PoE Ethernet interface and remote temperature probes

SPAi60

GET A QUOTE

- Ambient temperature in wall mounting
  - embedded temperature sensor
- Option: input for remote temperature probes
  - Up to 4 inputs for RTD 100 or RTD 1000

#### • Communication:

- Modbus TCP, 6 simultaneous connections
- Embedded Web Server, SNMP,
- Send alarms email, SMTP protocol

- Recording measurements option (Excel format)
  - Graphics display on Web server

- Powered by the Ethernet switch
  - Power over Ethernet (PoE)

#### • LCD display

#### • Applications:

- sterile room,
- calibration laboratories,
- Museums and exhibition halls,
- Clean room, data center, warehouses,
- air-conditioned room, ambient probes

ethernetPoE



### HARDENED ROOM SENSOR RS485 MODBUS link for environment monitoring

SAD120

GET A QUOTE

#### • Integrated sensors:

- Temperature (-40°C...+85°C)
- Humidity (0....100%)
- Barometric pressure (500.....1150hPa)
- Dew point (calculated)
- Remote dust sensor (0.1....0.5mg/m³)
- Remote anemometer sensor (5...180km/h)

#### • Communication

- RS485 half duplex, Modbus RTU protocol

#### • Power supply

- 24V Dc

#### • IP66 painted aluminum case

- Wall mounting (optional DIN rail adapter)
- Rugged M12 - 5 pin connectors (RS485, power)

#### • LCD display 4 lines of 16 characters

(temperature, humidity, atmospheric pressure, dust or speed)



### HYGROMETER: SHL20, HRA40 THERMO-HYGROMETER

type: HRA40

GET A QUOTE

#### • HRAE40: Outdoor hygrometer

type: HRA40



#### • HRAE40/T: Outdoor thermo-hygrometer

Surface mounted device  
Protection rating IP65



#### • HRAi40: Indoor hygrometer

#### • HRAi40/T: Indoor thermo-hygrometer

Surface mounted device  
Protection rating IP20



• Available in 4-20mA loop powered or with 0-10V output

# Thermometer Hygrometer

## Duct mounted thermometer and hygrometer

HYGROMETER FOR AIR DUCTS

SHL18

THERMO-HYGROMETER FOR AIR DUCTS

SHL18T



- **SHL18-v:** Hygrometer  
1 voltage output 0...10V

- **SHL18T-v:** Thermo-hygrometer  
2 voltage outputs 0...10V

- **Application:**  
room measurement, air duct, oven  
Mounting with clamp or flange



GET A QUOTE

Duct mounting hygrometer / thermo-hygrometer

HRG40



GET A QUOTE

- **HRG 40:** Hygrometer

HRG40/A



- **HRG 40/T:** Thermo-hygrometer  
accuracy +/- 2% RH, +/- 0.4°C from 5 to 40°C

HRG40

- **HRG 40L:** Low cost version  
accuracy +/- 3.5% RH, +/- 0.5°C to 25°C

- **HRG 40 /A:** Version with display  
10000 pts LCD

- **Use in hard environment**

- **Protection rating IP65**



Temperature probe with conditioner  
interchangeable with M12 connector

SPM12-TR18



OBTENIR UN DEVIS

- **SPM12-TR18 :** set of PT100 probe with 4-20mA conditioner

- **TR18 :** Transmitter alone

- RTD 100 3 or 4 wires (female M12 4 pins)
- 4-20mA current loop powered
- Connection with M12 male compatible 4 or 5 pins
- Measure scales configurable (USB link)



- **SPM12 :** Temperature probe alone

- All version to defined  
smooth, to screw, cable, ...
- Wiring on M12 male 4 pins

# Indicator and display

## Outdoor display / loop powered display

### 4-20mA loop powered Display meter

[type: 95600](#)

GET A QUOTE

- **95600 / 95601:**

LCD panel meter 96x48mm  
95600 analogue version  
95601 programmable version with push buttons



- **95600RD:**

Din rail mounting version



- **95600EXT:**

IP66 waterproof mounting with  
wall or pipe support  
Explosion-proof ATEX version



- **4..20mA Loop powered display**

without external supply  
Hart transparency



- **Wide temperature range LCD display**

Configurable display range



### Rugged LED display Ethernet controlled

[type: ANL201](#)

GET A QUOTE

- **ANL201:**

IP66 external mounted version  
on pipe or wall mounted



- **ANL201ADF:**

Explosion-proof ATEX option

- **Display drive by numerical link (remote display)**

Ethernet, Wifi ou RS485

- **24Vdc Auxiliary power supply**

48Vdc option

- **5 digits LED display**

Red or green

## Panel meter (temperature and analog signal)

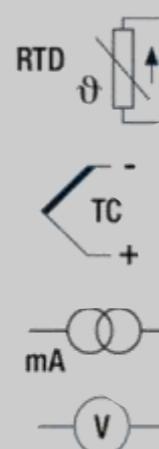
### Small panel meter PT100, Thermocouple, 4-20mA, 0-10V Panel mount Thermostat

[type: 94000](#)

GET A QUOTE

- **Process input version**

Input: 0..10 Volts ; 0...4...20 mA,  
Sensor power supply



- **Temperature input version**

PT100 ; PT1000; Ni100; Ni1000; ...  
Thermocouple : J,K,T

- **Size 72 x 36 mm**

Low depth

- **1000 pts LED display**

Available in red, green, yellow, blue

- **Relay output option :**

94000/R

- **4..20mA analog output option :**

94000/S

- **RS485 Modbus link option:**



### PROGRAMMABLE PANEL INDICATOR (format: 96 x 48mm)

[TYPE : INL35](#)

GET A QUOTE

- **Universal : all process and temperature inputs**

Volt, mV, mA, sensor power supply, potentiometer, frequency, strain gauge,  
thermocouple, PT100

Programmable via the front face and USB-RS232 link



- **Display :**

10 000 pts for measure,  
unit display on 4 alphanumeric digits

- **Up to 4 relay outputs**

- **option :** Isolated analog output,  
RS485 link modbus / profibus,  
Ethernet Modbus TCP link

- **Pluggable terminal blocks**

- **Universal power supply AC-DC**

- **Applications:** thermometry, weighing, tachometer, measurement process,  
signal conditioning, threshold relays, control, .....

### 96 x 48 mm 6 DIGITS PANEL METER 0...4...20mA input HIGH PRECISION / HIGH SPEED

[INL36](#)

GET A QUOTE

- **24 bits 0...4...20 mA current input**

Configurable acquisition 7 to 3500 samples / second

Very low noise

< 250 nA at 7 samples / second

< 25 µA at 3500 samples / second

- **Measure display 1 000 000 pts**

- **4 digits display for the unit**

- **Up to 4 relay outputs**

- **option : Isolated analog output**

RS485 link modbus/profibus

Ethernet Modbus TCP link



### PROGRAMMABLE PROCESS INDICATOR

[TYPE : INL35L](#)

GET A QUOTE

- **All process inputs**

Volt, mV, mA, 2 wires sensor power supply, potentiometer, frequency, strain gauge

- **5 digits, 100 000 pts display measure**

- **Up to 4 relays**

- **option : Isolated analog output**

RS485 link modbus or profibus

Ethernet Modbus TCP link

- **Pluggable connectors**

- **Universal power supply**

- **Fast response time: 35 ms**

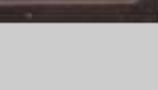
- **Size 96x48mm**



### LARGE LED PANEL METER

[TYPE : INL144](#)

GET A QUOTE



# Indicator and display

## Bargraph for analog signal

[Miniature single LED BARGRAPH meter configurable  
\(96x 24 mm\)](#) [BGL24](#)

[GET A QUOTE](#)

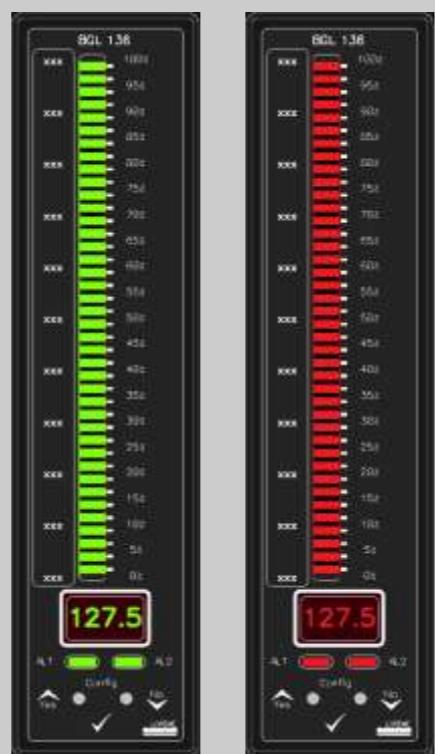
- **Process inputs:** mA, V, Hz
- **Display:** 20 led column, 10 000 points display
- **BGL24:** Bargraph with 4 digits display.
- **BGL24/R:** 2 alarms relays option.
- **BGL144L :** low cost version, without 4 digits display.



[BARGRAPH PANEL METER single channel  
with 4 digits display](#) [BGL136](#)

[GET A QUOTE](#)

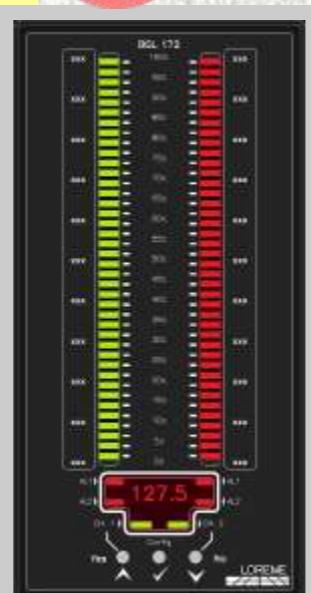
- **Analog input**  
0.4...20mA, 0....10...20V (user configurable)
- **Display:**  
40 segments LED bargraph, 10 000pts LED display  
Available in colour : red, yellow, blue  
possibility to have more than one colour for the ramp
- **BGL136**  
Single LED bar with 4 digits display
- **BGL136/R**  
with alarm relay
- **DIN format**  
144 x 36 mm



[LED BARGRAPH WITH SINGLE OR DUAL CHANNEL  
Format : 144 x 72 mm](#) [BGL172](#)

[GET A QUOTE](#)

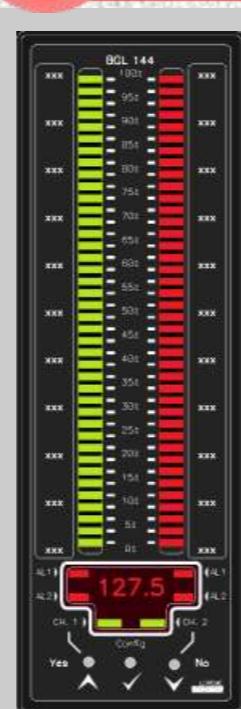
- **Process Input:** mA, mV, V (configurable)
- **Display:**  
40 leds strip light, 10 000 pts red led display  
available in Green, Yellow, Blue colors
- **BGL172-1:** Single strip light with display version
- **BGL172-2:** Dual strip light with display version
- **BGL172/R:** with alarms relays option



[LED BARGRAPH METER single or dual channel  
size: 144 x 48mm](#) [BGL144](#)

[GET A QUOTE](#)

- **Process Input:** mA, mV, V (Configurable)
- **Display:** 40 segment LED array, 10 000 pts led display  
Available in Red, Green, Yellow, Blue
- **BGL144-1:** Single strip light with display version
- **BGL144-2:** Dual strip light with display version
- **BGL144-L:** Low cost version, without display
- **BGL144/R:** option: alarms relays
- **BGL144/S:** option: analog output 4...20mA / 0...10V
- **BGL144/R:** option: communication  
Modbus, Profibus, Ethernet Modbus TCP, SNMP
- **BGL144 H:** Horizontal mounting version



[LED BARGRAPH WITH CIRCULAR STRIP LIGHT  
96 x 96 mm](#)

[BGCL96](#)

[GET A QUOTE](#)

- **Process and temperature inputs**

Volt ,mV, mA, sensor power supply, potentiometer, frequency, strain gauge, thermocouple, PT100  
(programmable in front face or with serial link)

- **Circular strip light 55 Leds** (choice of colors )

- **4 digits measure display**

- **Up to 4 relays output**

- **option : isolated analog output**

RS485 Modbus/Profibus link

ETHERNET Modbus TCP link

- **plug in terminals**

- **Ultra wide input power supply**

- **Applications :** thermometry, weighing, frequency , process  
signal conditioning, trip amplifier, control, ....



[LARGE LED BARGRAPH METER  
288 x 36 mm](#)

[BGL288](#)

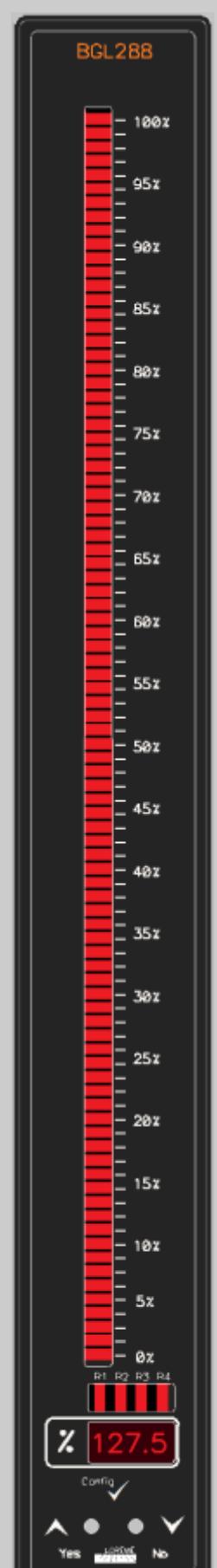
[GET A QUOTE](#)

- **Process Input:** mA, V (Selectable)

- **Display:** 90 leds ramp, 10 000 pts red display  
available in green or yellow colours

- **BGL288:** Single channel with measure display version

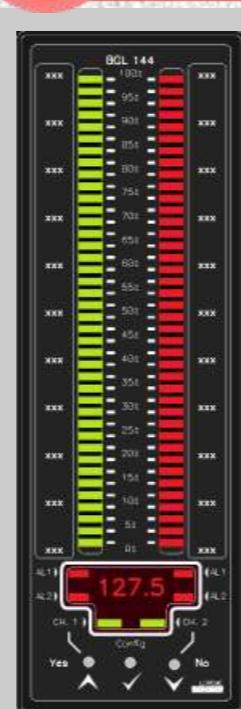
- **BGL288-L:** Low-cost, without measure display



[LED BARGRAPH METER single or dual channel  
size: 144 x 48mm](#) [BGL144](#)

[GET A QUOTE](#)

- **Process Input:** mA, mV, V (Configurable)
- **Display:** 40 segment LED array, 10 000 pts led display  
Available in Red, Green, Yellow, Blue
- **BGL144-1:** Single strip light with display version
- **BGL144-2:** Dual strip light with display version
- **BGL144-L:** Low cost version, without display
- **BGL144/R:** option: alarms relays
- **BGL144/S:** option: analog output 4...20mA / 0...10V
- **BGL144/R:** option: communication  
Modbus, Profibus, Ethernet Modbus TCP, SNMP
- **BGL144 H:** Horizontal mounting version



# Indicator and display

## Multi channel temperature and analog signal display

Measure and acquisition unit with isolated inputs, and alarms relays INL100 and INL150

GET A QUOTE

- All temperature, process and analog inputs

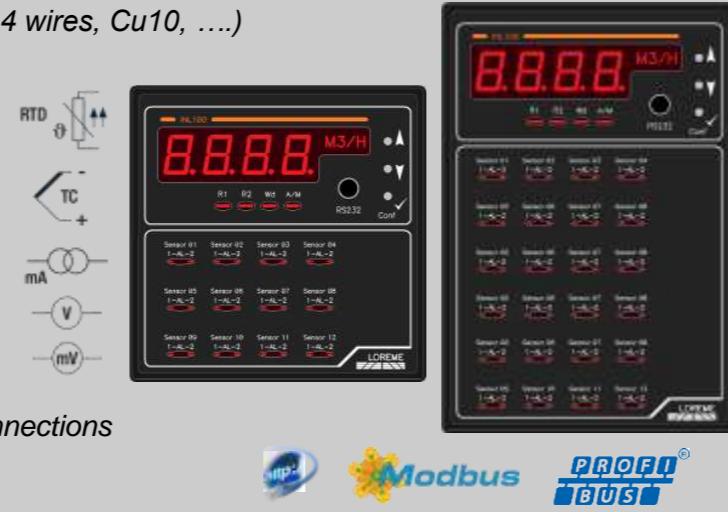
INL100 , INL150 (mV, thermocouple, PT100 3 or 4 wires, Cu10, ....)  
INL100P , INL150P (4...20 mA and 0...10V)

- INL100: 4, 8 or 12 isolated inputs.
- INL150: 16, 20 or 24 isolated inputs.
  - individual setting for each inputs.
  - 2 alarm thresholds per inputs.
  - option: analog output.

- Communication:

- Profibus-DP
- Modbus RTU
- Modbus-TCP (Ethernet) 6 simultaneous connections
- Embedded Web Server
- SNMP

- Application: - process monitoring, protection relay, data logger, ...



GET A QUOTE

Silo temperature monitoring unit

INL100N and INL150N

- Up to 576 temperature points on a single device (INL150N 576 points - INL100N 288 points)

- 3 wires cable by Silo probe

- Digital sensors in 3 wires link (-55°C to +125°C)

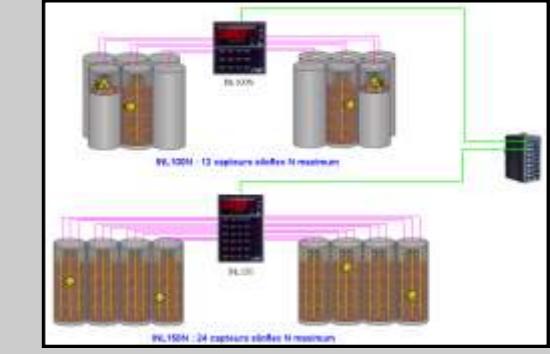
- Polling time 25 ms / measurement point (576 measures in 15 seconds)

- Accuracy: +/- 0.5 °C

- Output relay (pre-alarm, alarm and Watchdog)

- Communication option

- Modbus
- Modbus TCP (on Ethernet)
- Profibus



GET A QUOTE

## Alarms annunciator

Alarm Annunciator, Indicator Panel

AFL100

GET A QUOTE

- AFL100/8: 8 digital inputs
- AFL100/16: 16 digital inputs
- AFL100L: low cost version (LED display only)

- Option AFL100/R: 1 feedback relay per digital input

- Communication

- AFL100/CP: RS485 Profibus-DP link
- AFL100/CM: RS485 Modbus link
- AFL100/CMTCP: Ethernet Modbus-TCP link

- Universal power supply : 20 .... 265 Vac-dc



Analog alarms annunciator panel

AFL144HV

GET A QUOTE

- 16 digital input. Dry contact

- 1 output relay per input (status copy)
- 3 output relay for alarm groups
- Choice of alarm group for each input
- Tricolour led for indication

- Alarm memorized and fugitive

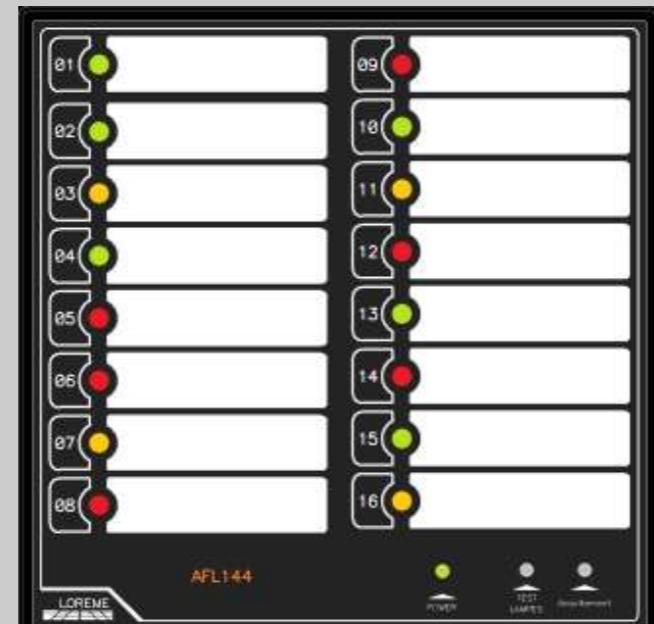
- Led indication for each input channel
- Double output relay for alarm group (memorized and fugitive)
- Acknowledge by front face or digital input
- Lamp test by front face or digital input

- Passive technology

Increase functional safety

- Large format : 144 x 144 mm

- Universal power supply : 20....265 Vac/dc



Analog alarms annunciator panel

AFL144

GET A QUOTE

- 16 digital inputs. 127Vdc inputs

- 1 output relay per input (status copy)
- 3 output relays for alarm groups (2 contacts)
- Choice of alarm group for each input
- Tricolour led for indication

- Alarm memorized and fugitive

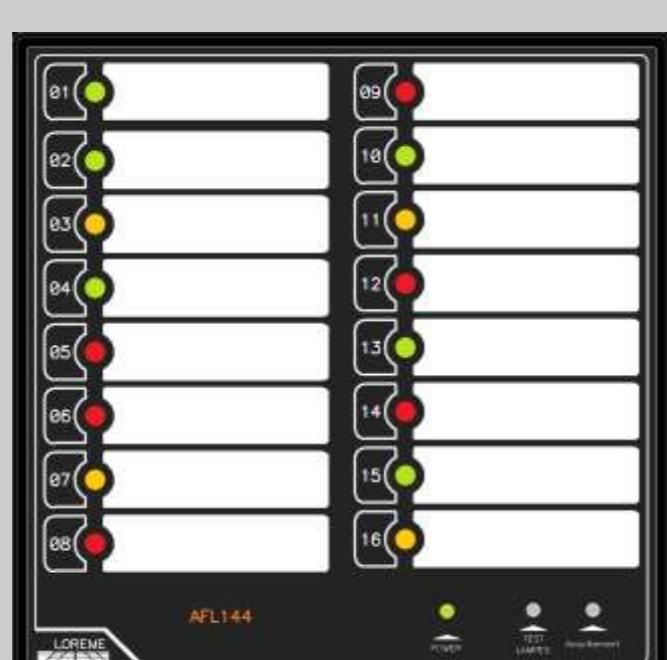
- Led indication for each input channel
- Output relay for fugitive alarm (pulse)
- Acknowledge by front face or digital input
- Lamp test by front face or digital input

- Passive technology

Increase functional safety

- Large format : 144 x 144 mm

- Universal power supply : 127Vdc +/- 20%



GET A QUOTE

## SSI position display

SSI INDICATOR FOR ABSOLUTE ENCODER (96 x 48mm)

INL35ssi

GET A QUOTE

- Synchronous Serial interface (SSI) input

Master or slave mode  
8 to 32bits SSI frame in binary or gray format  
Encoder powered by indicator

- Display

6 digits for value, 4 digits for unit  
Easy programming with explicit text message

- option :

Up to 3 relays  
Isolated analogue output  
RS485 Modbus/Profibus link  
ETHERNET Modbus TCP or Profinet io link

- Plug-in connectors

- Universal supply (Ac and Dc)



PROFIBUS

PROFINET

GET A QUOTE

## Remote display controlled through network

NUMERIC DISPLAY FOR ETHERNET Modbus TCP or RS485 Modbus RTU networks

ANL48

GET A QUOTE

- measure transmitting by numerical link

- Ethernet Modbus TCP client mode (master) or server mode (slave)
- RS485 Modbus/Profibus slave mode

- Measure display on 5 digits

- Watchdog

- relay contact on communication loss

- option : 2 alarms relays outputs

- option : isolated analog output



yes

no

Conf

mm.

GET A QUOTE

## Binary BCD Gray display

6 DIGITS DISPLAY with BINARY, BCD, GRAY inputs, 4-20mA output and Ethernet

ANL36

GET A QUOTE

- 16 parallel digital inputs

Voltage or dry contact input  
BCD, GRAY, BINARY format

- Display, 96 x 48 mm format

measure on 6 digits  
unit on 4 alphanumeric digits

- option :

isolated analog output  
relay output  
RS485 link, Modbus RTU  
Ethernet link, Modbus TCP



GET A QUOTE

- Application : Interface for parallel output encoders

# DC AC current sensor

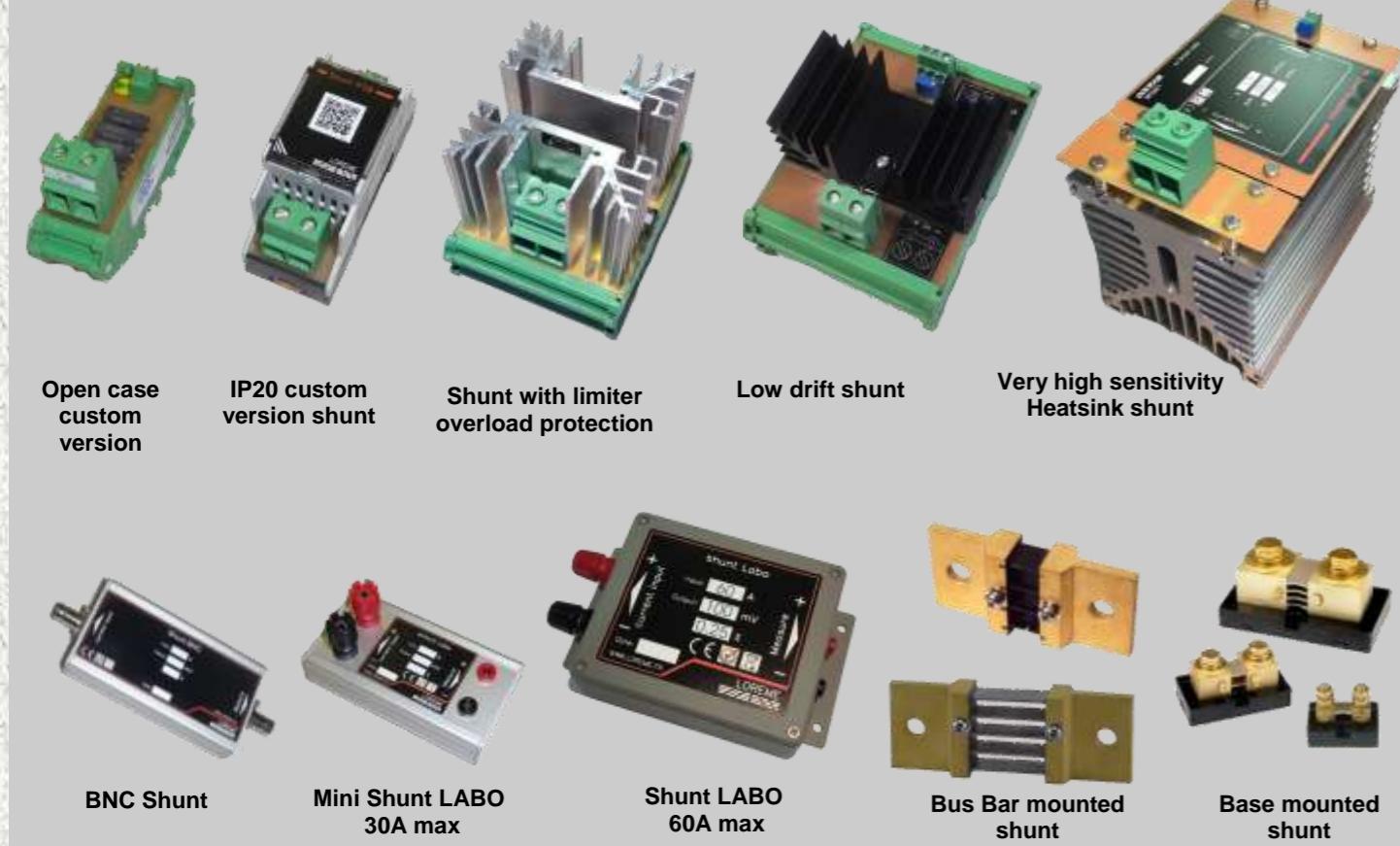
## Current shunt / Voltage divider

### Precision current SHUNT



GET A  
QUOTE

- AC or DC current measurement Up to 100kHz
- High accuracy +/- 0.25% typical, +/- 0.1% on request
- Wide measure range 0.01A.....15 000A Voltage output on request



### Accurate voltage divider 0.1% to 0.02% Laboratory version

DVT labo



GET A  
QUOTE

- Division ratio from 10/1 up to 10000/1  
Other ratio on request

- Ratio accuracy 0.1% or 0.02%  
Thermal stability < 10 ppm / °C

- Nominal input up to 2000V  
Use for Dc signal or Ac up to 100Khz

- CLASS II isolation  
Dielectric withstand test voltage 6000Vac



- Applications  
Instrumentation, test bench, sensor calibration,...



## Split core current transformer mV output

### Low cost split core current transformer for alternative current 50Hz, 60Hz, 400Hz

type : TioL



GET A  
QUOTE

- Compact split core current transformer

333mV calibrated output

- Fast opening/closing without tools

Installation on an existing circuit without interruption.

No secondary open-circuit problem.

- Available for current from 0.01A to 500A

Hole diameter: 6, 10, 16, 24 and 36 mm

- Interchangeable

0.5% calibrated output voltage

- " Low cost " version



### SPLIT-CORE CURRENT TRANSFORMER miniature current sensor

type : Tio



GET A  
QUOTE

- Compact current transformer

Low level output. Voltage or current

- Fast opening/closing without tool

Installation on an existing circuit without interruption.

No secondary open-circuit problem.

- Available for currents from 1A to 500A

Passage hole diameter: 8, 12, 17, 24 and 36mm

- 0.5% calibrated output voltage

alternative (Tio-AC) : 200mV, 333mV, 500mV

continuous (Tio-DC) : 500mV



### Split core transformer for AC current measurement

type : TiOLH



GET A  
QUOTE

- Split core current transformer

333mV calibrated output

- Fast opening/closing without tools

Installation on an existing circuit without interruption.

No secondary open-circuit problem.

- Available for current up to 3000Aac

Hole diameter 150mm maxi

- Interchangeable

0.5% calibrated output voltage



# DC AC current sensor

## Current transformer 5A output

### SPLIT-CORE CURRENT TRANSFORMER

5 Amperes output

type : Tio5A-d40



GET A  
QUOTE

- Split-core transformer with 40mm hole diameter  
fast closing with clip



- Available for currents from 100A to 800A

- Current output 5 Aac class 1

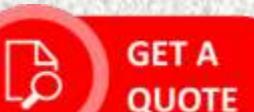
- Fast opening/closing without tool

Installation on an existing circuit without interruption.

### SPLIT CORE CURRENT TRANSFORMER

5A output

type : Ti05A-d105



GET A  
QUOTE

- Tape wrapped current transformer

split core  
closed with serflex clamp  
105mm hole diameter



- Available current up to 3000A

- 5A class 1 output current

- Fast opening / closing

Installation without disconnecting  
cable or busbar circuits

### CURRENT TRANSFORMERS

type : Ti5A-d28



GET A  
QUOTE

- Encapsulated current transformer

Wall mounting or DIN rail mounting (accessories supplied)



- Primary current available from 100A to 800A

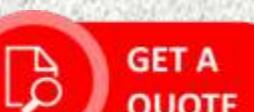
- Output current 5Aac class 1

- 28mm through hole diameter

or for busbar : 41x11mm ; 13x31mm with locking screws  
Compact size: 60mm width  
build in sealable terminals covers

### CURRENT TRANSFORMERS

type : Ti5A-d50



GET A  
QUOTE

- Encapsulated current transformers

Wall mounting or DIN rail mounting (accessories supplied)



- Primary current available from 600A to 1600A

- Output current 5Aac class 1

- 50mm through hole diameter

or for busbar : 60x12mm ; 50x30mm with locking screws  
Compact size  
build in sealable terminals covers

### THREE-PHASE CURRENT TRANSFORMERS

type : T3i5A-d21



GET A  
QUOTE

- 3 phase moulded case current transformer

Wall mounting or DIN rail mounting



- Primary current available from 100A to 250A

- Current output 5 Aac class 1

- 21mm orifice pass through size

or busbar: 25x21mm  
compact size: 105mm width  
build in sealable terminals covers

### MULTI-RATIO SPLIT CORE CURRENT TRANSFORMER

type : Tio5AM



GET A  
QUOTE

- Multi-ratio split core current transformer

Selection of ratio by wiring

- Primary current from 100A to 1000A

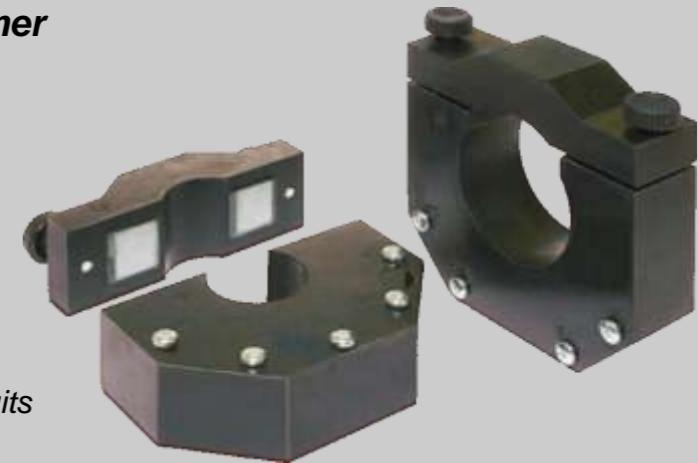
Hole diameter: 40mm and 65mm

- Output current 5Aac class 1

- Fast Opening / Closing operation

Easy mounting on existing networks

Without disconnecting cable or busbar circuits



### CURRENT TRANSFORMERS

type : Ti5A-d21



GET A  
QUOTE

- Encapsulated current transformer

Wall mounting or DIN rail mounting (accessories included)

- Primary current available from 40A to 300A

- Current output 5 Aac class 1

- 21mm Hole diameter

compact size: 45mm width

build in sealable terminals covers



### CURRENT TRANSFORMERS

type : Ti5A-d40



GET A  
QUOTE

- Encapsulated current transformers

Wall mounting or DIN rail mounting (accessories supplied)

- Primary current available from 120A to 800A

- Output current 5Aac class 1

- 40mm through hole diameter

or for busbar : 50x10mm ; 40x30mm with locking screws

Compact size : 70mm width

build in sealable terminals covers



### CURRENT TRANSFORMERS

type : Ti5A-d80



GET A  
QUOTE

- Encapsulated current transformers

Wall mounting or DIN rail mounting (accessories supplied)

- Primary current available from 800A to 3000A

- Output current 5Aac class 1

- 80mm through hole diameter

or for busbar : 80x50mm ; 100x30mm with locking screws

Compact size

build in sealable terminals covers



# DC AC current sensor

## Current transformer 4-20mA output

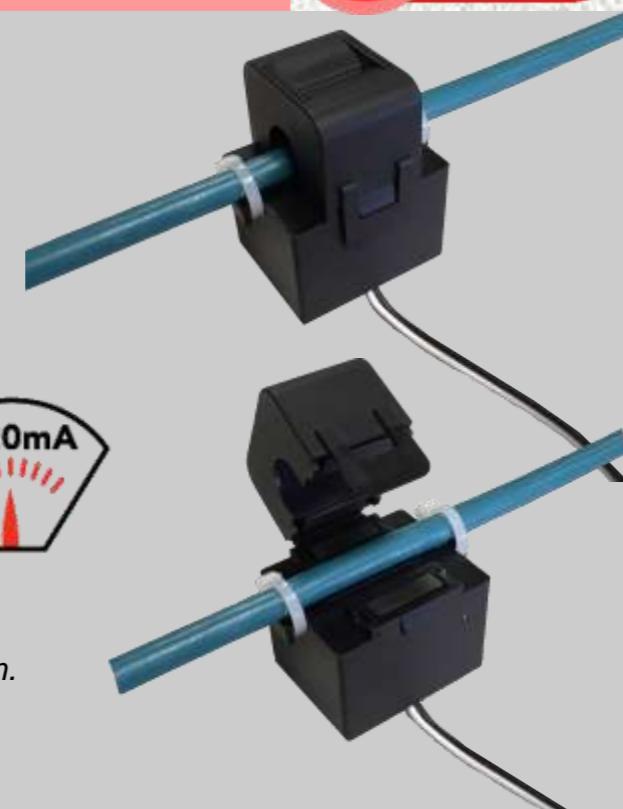
### SPLIT-CORE CURRENT TRANSFORMER RMS measure 50Hz, 60Hz, 400Hz, 4-20mA output

TiO420

GET A QUOTE

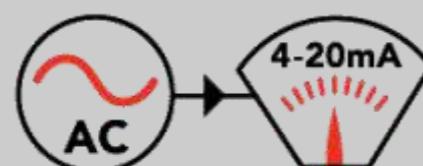
- **Split-core current transformer**

Cable aperture : 12mm and 20mm  
RMS current : 5Aac to 150Aac in 12mm  
RMS current : 5Aac to 250Aac in 20mm  
Frequency range : 20Hz to 6kHz



- **4-20mA current output. Loop powered**

TRMS transducer  
directly embedded in  
current sensor



- **Fast opening/closing without tool**

Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Fixing directly on wire with cable ties

CURRENT

TRANS

DUCER

4-20mA

output

type : Ti420-d21



GET A QUOTE

### CURRENT TRANSDUCER 4-20mA output

type : Ti420-d21

- **Molded case current transformer**

Base or DIN rail mounting



- **Current from 10A to 150A**

- **4-20mA Loop powered output**

- **21mm hole diameter**

Compact size : 45 mm width  
Built in sealable terminal covers

### Split-core current transformer, 4-20mA output RMS measure 50Hz, 60Hz, 400Hz

Tio420-d16



GET A QUOTE

- **Compact split-core current transformer**

Cable aperture : 16mm  
RMS current measurement: 20Aac up to 150Aac  
Frequency range : 45Hz to 400Hz

- **4-20mA current output. Loop powered**

TRMS transducer  
directly embedded in  
current sensor



- **3KV isolation**

- **Fast opening/closing without tool**

Implementation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Surface mounting or DIN rail mounting option

## Zero sequence current transformer

### CORE BALANCE CURRENT TRANSFORMER to detect Earth leakage current

type : Tleak

GET A QUOTE

- **Measure or detecting leakage current**

single-phase or three-phase with  
or without neutral applications



- **Hole diameter : 32, 50, 70 and 120 mm**

- **Voltage or current output**

provide a proportional signal to the leakage current.  
Can be used with a threshold relay or  
a measuring central.

- **Surface mounting with fixing slots**

Slim design

## Rogowski coil

### Flexible opening current sensor (Rogowski coil) ROGOFLEX® Option amplifier 1Aac or 5Aac output



GET A QUOTE

- **Wide dynamic range**

From few ampere to several hundred kA  
Insensitive to overloads, high linearity

- **Non-intrusive**

no power consumption,  
no heating,  
no secondary open-circuit problem

- **Large sizes**

Available up to 6 meter length  
(1.9 meter diameter), low weight

- **Fully shielded and sealed**

Insensitive to external RF fields  
IP66 UV resistant

- **Option : protection enclosure**

Outdoor application, IP54 protection rating  
connectors protection



### Flexible Rogowski current sensors (Rogowski coil) Type : ROGOFLEX-LT and ROGOFLEX-LC



GET A QUOTE

- **Wide dynamic range**

measuring current up to several kilo-ampere.  
Insensitive to overloads, no saturation, high linearity.

- **Nonintrusive**

no power consumption, no heating.  
no secondary opening problem.

- **Available in 3 sizes**

diameter of 95 mm, 140 mm, 190 mm  
low weight

- **Fully shielded and sealed**

insensitive to external RF fields.  
IP67 protection rating.

- **1A output amplifier**

allowing direct replacement  
of current transformers.



# DC AC current sensor

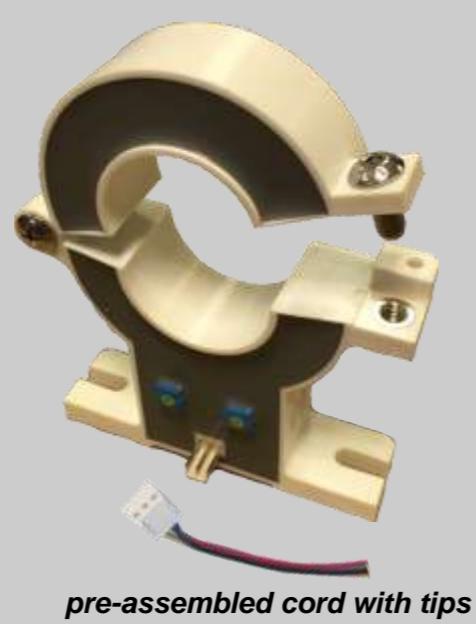
## Hall effect current sensor voltage output

[Hall effect split-core current sensor](#)  
5V power supply, 0...5V output

Hco5V-d31

GET A QUOTE

- Hall effect technology**  
measure for direct and pulsed current up to 50KHz (unipolar).
- Fast opening / closing system**  
Installation without interrupting the primary current  
Closing with safety screw lock, surface mounting flanges
- Available for current up to 3750A**  
31mm aperture
- Measure amplifier embedded**  
Voltage output 0...5V calibrated (0.5%)  
Power supply 5Vdc, 8mA
- 3kV insulation**



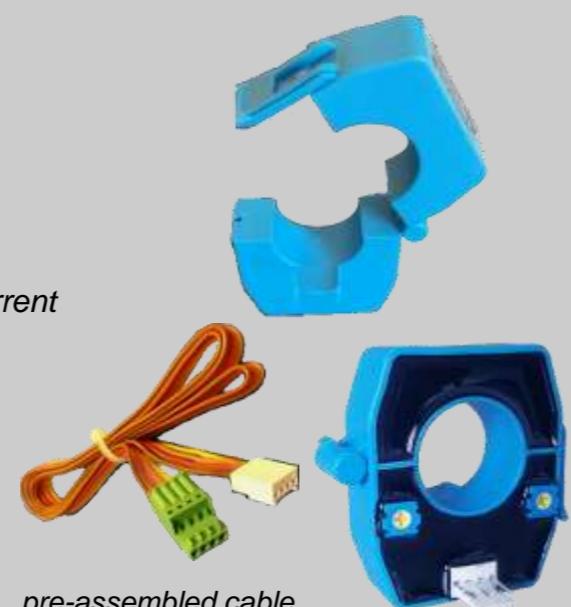
pre-assembled cord with tips

[Hall effect split-core current sensor](#)  
AC and DC currents, 12V power supply

Hco12V-d20

GET A QUOTE

- Hall effect technology**  
measure DC or AC current up to 20KHz.  
High overloads strength, no insertion loss
- Available for current up to +/- 600A**  
20mm cable aperture  
voltage output : 2.5V +/- 1V calibrated (0.5%)  
The output voltage reflect the waveform of primary current  
12V power supply ( provide by the measure device)
- Fast opening/closing without tool**  
Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Fixing on measure cable with clamp.
- 3kV insulation**



pre-assembled cable

[HALL EFFECT SPLIT-CORE CURRENT SENSOR for ALTERNATING AND DIRECT CURRENT](#)

Hco d12

GET A QUOTE

- Hall effect technology**  
For direct and alternating current up to 20kHz.
- Fast opening/closing by screw**  
Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Safety screw closure system.
- 12mm aperture**  
Available for current up to +/- 1000A
- Interchangeable** : Calibrated (0.5%)  
Output: +/- 4V for I nominal, +/-10V maxi  
Power supply : +/-15V by measure electronic.
- 2.5kV insulation**



pre-assembled cord for LOREME devices

[HALL EFFECT SPLIT-CORE CURRENT SENSOR for ALTERNATING and DIRECT CURRENT](#)

Hco d21

GET A QUOTE

- Hall effect technology**  
For direct and alternating current up to 20kHz.
- Fast opening/closing**  
Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Secure closure with screw, mounting bracket.
- 21mm cable aperture**  
Available for current up to +/-1250A
- Interchangeable** : Calibrated (0.5%)  
Output: +/- 4V for I nominal, +/-10V maxi  
Power supply: +/-15V by measure electronic.
- 3kV insulation**



pre-assembled cord for LOREME devices

[SPLIT CORE HALL EFFECT CURRENT SENSOR](#)  
ALTERNATIVE and DIRECT CURRENT

Hco d8

GET A QUOTE

- Hall effect technology**  
For direct and alternating current up to 2kHz.
- Fast opening/closing without tool**  
Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Fast cable clamp connection.
- Available for currents up to +/-80A**  
8 mm aperture  
miniature low profile
- Pluggable and interchangeable**  
calibrated +/- 1V voltage output (0.5%)  
12V power supply (provided by measure electronic)
- 2.5kV insulation**



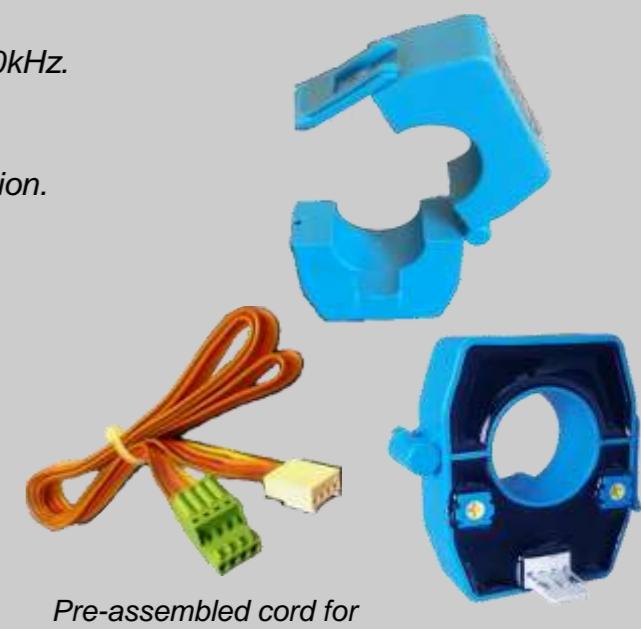
pre-assembled cord for LOREME devices

[HALL EFFECT SPLIT-CORE CURRENT SENSOR for ALTERNATING and DIRECT CURRENT](#)

Hco d20

GET A QUOTE

- Hall effect technology**  
For direct current and alternating current up to 20kHz.
- Fast opening/closing without tool**  
Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Fast cable clamp connection.
- 20mm cable aperture**  
Available for current up to +/-1500A
- Interchangeable** : Calibrated (0.5%)  
Output: +/- 4V nominal, +/-10V maxi  
Powered by measure electronic (+/-15V).
- 3kV insulation**



Pre-assembled cord for LOREME devices

[HALL EFFECT SPLIT-CORE CURRENT SENSOR for ALTERNATING and DIRECT CURRENT](#)

Hco d31

GET A QUOTE

- Hall effect technology**  
For direct and alternating current up to 50kHz.
- Fast opening/closing**  
Installation on an existing circuit.  
No secondary open-circuit problem.  
Secure closure with screw, mounting bracket.
- 31mm aperture**  
Available for current up to +/-3750A
- Interchangeable** : calibrated (0.5%)  
Voltage output +/- 4V for I nominal, +/- 10V maxi  
Power supply: +/-15V provide by measure electronic.
- 3kV insulation**



pre-assembled cord for LOREME devices

# DC AC current sensor

## Hall effect current sensor voltage output

### HALL EFFECT SPLIT-CORE CURRENT SENSOR for ALTERNATING and DIRECT CURRENT

Hco d35



GET A QUOTE

- **Hall effect technology. Non-intrusive**

For direct and alternating current up to 20kHz.

- **Fast opening/closing**

Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Closure system with screw, mounting bracket.

- **35mm cable aperture**

Available for current up to +/- 2000A  
Overload current admissible >50 rated current

- **Interchangeable :** Calibrated (0.5%)

Output +/- 4V for I nominal, +/-10V for I maxi  
Powered by measure electronic (+/-15V).

- **3kV insulation**



### HALL EFFECT SPLIT-CORE CURRENT SENSOR for ALTERNATING and DIRECT CURRENT

Hco d60



GET A QUOTE

- **Hall effect technology**

For direct and alternating current up to 3kHz.

- **Fast opening/closing**

Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Closure system with screw, mounting bracket.

- **60mm cable aperture**

Available for current up to +/- 5000A

- **Interchangeable :** calibrated (0.5%)

Output: +/- 4V for I nominal, +/- 10V for I maxi  
Powered by measure electronic (+/- 15V).

- **5kV insulation**



### SPLIT-CORE HALL EFFECT CURRENT SENSOR for DIRECT and ALTERNATING CURRENT

Hco 104R36



GET A QUOTE

- **Hall effect technology**

For direct current and alternating current up to 3kHz.

- **Fast opening/closing**

Installation on an existing circuit without interruption.

No secondary open-circuit problem.

Secure closure system by screw.

- **Available for current up to +/- 7500A**

Aperture size 104 x 36mm

- **Pluggable and interchangeable**

Calibrated voltage output +/- 4V (0.5%)  
Supply provided by measure electronic (+/-15V).

- **6kV insulation**



### HALL EFFECT SPLIT-CORE CURRENT SENSOR for ALTERNATING and DIRECT CURRENT

Hco d40



GET A QUOTE

- **Hall effect technology**

For direct and alternating current up to 20kHz.

- **Fast opening/closing**

Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Closure system with screw, mounting bracket.

- **40mm cable aperture**

Available for current up to +/- 5000A

- **Interchangeable :** Calibrated (0.5%)  
Output +/- 4V nominal, +/-10V maxi  
Powered by measure electronic (+/-15V).

- **5kV insulation**



pre-assembled cord for LOREME devices

### SPLIT-CORE HALL EFFECT CURRENT SENSOR for DIRECT and ALTERNATING CURRENT

Hco 85R27



GET A QUOTE

- **Hall effect technology**

For direct current or alternating current up to 20kHz.

- **Fast opening/closing**

Installation on an existing circuit without interruption.  
No secondary open-circuit problem.  
Secure closure system by screw. Mounting bracket

- **Current up to +/- 3000A**

Aperture size 85 x 27mm

- **Pluggable and interchangeable**

Calibrated voltage output +/- 4V (0.5%)  
Supply provided by measure electronic (+/-15V).

- **6kV insulation**



pre-assembled cord for LOREME devices

### HALL EFFECT CURRENT SENSOR for DIRECT AND ALTERNATIVE CURRENT

Hc 210R100



GET A QUOTE

- **Hall effect technology**

AC or DC current measurement

3Khz bandwidth

Suitable to pulsed and mixed current AC+DC

- **Current up to +/- 20000A**

Aperture size 210 x 100mm

- **Pluggable and interchangeable**

Calibrated +/- 4V voltage output (0.5%)  
Powered by measure electronic (+/-15V).

- **3kV insulation**



# DC AC current sensor

## Hall effect current sensor 4-20mA output

[Hall effect split-core direct current sensor transducer,  
Through hole current sensor 4-20mA output](#) [Hco420-d21](#)

 GET A QUOTE

- **Hall effect technology**

Direct current measurement or pulsed current up to 20KHz (unipolar)

- **4-20mA active output, power supply 24Vdc (3 wires)**  
built-in transmitter in sensor.

- **Fast opening / closing system**

Installation without interrupting the primary current  
Closing with safety screw lock, surface mounting brackets

- **21mm sensing aperture**

Available for current up to 500A

- **Pluggable terminal blocks**

- **3kV insulation**



 GET A QUOTE

[Hall effect split-core current sensor / transducer, True RMS  
AC+DC measurement, 4-20mA output](#) [Hco420-d31](#)

 GET A QUOTE

- **Hall effect technology**

True RMS measurement for direct and alternating current 50Hz 60Hz 400Hz.

- **Loop powered 4-20mA output**  
Embedded TRMS transmitter.

- **Fast opening / closing system**

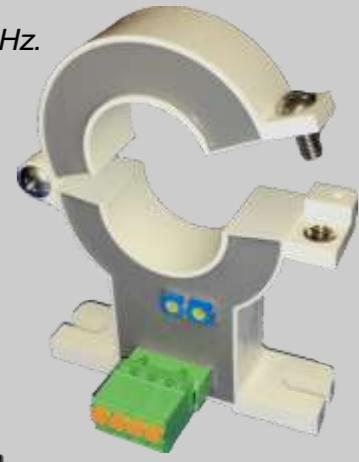
Installation without interrupting the primary current  
No secondary open-circuit problem  
Closing with safety screw lock, surface mounting flanges

- **Available for current up to 1500A**

31mm aperture

- **Pluggable terminal blocks**

- **3kV insulation**



[Hall effect split-core direct current sensor transducer,  
through hole current sensor 4-20mA output](#) [Hco420-d40](#)

 GET A QUOTE

- **Hall effect technology**

Direct current and pulsed current (<10Khz) measurement (unipolar).

- **4..20mA active output current, 24V power supply**

Embedded transmitter in sensor.

- **Fast opening / closing system**

Implementation on existing circuit

Closing with safety screw lock, surface mounting bracket

- **40mm cable aperture**

Available for current up to 2000A

- **Pluggable terminal blocks**

- **3kV isolation**



## Hall effect current sensor RS485 output

[HALL EFFECT CURRENT SENSOR Ac + Dc  
RS485 Modbus link and voltage output](#)

[HCM d15](#)

 GET A QUOTE

- **Encapsulated sensor, 15mm aperture**

configurable current scales in unipolar or bipolar  
25A TRMS or 50A TRMS up to 2kHz  
+/- 25Adc or +/-50Adc range setting by dip switch

- **High resistance to overload**

300A continuous , 2000A pulse without alteration

- **Non intrusive**

Installation on existing circuit  
No insertion loss on measured circuit  
No alteration of efficiency and integrity on primary circuit

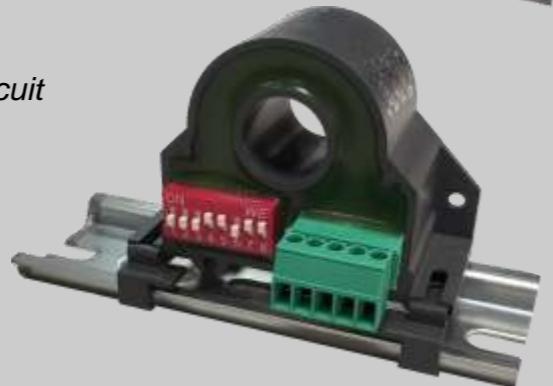
- **RS485 Modbus communication link**

Configurable by dip switch  


- **0..10V analog output**

- **> 3 KV insulation**

- **0.5% accuracy**



[HALL EFFECT CURRENT SENSOR Ac + Dc  
RS485 Modbus link and voltage output](#)

[HCM d33](#)

 GET A QUOTE

- **Encapsulated sensor, 33mm aperture**

configurable current scales in unipolar or bipolar  
150A TRMS or 300A TRMS up to 2kHz  
+/- 150Adc or +/-300Adc range setting by dip switch

- **High resistance to overload**

1000A continuous , 2000A pulse without alteration

- **Non intrusive**

Installation on existing circuit  
No insertion loss on measured circuit  
No alteration of efficiency and integrity on primary circuit

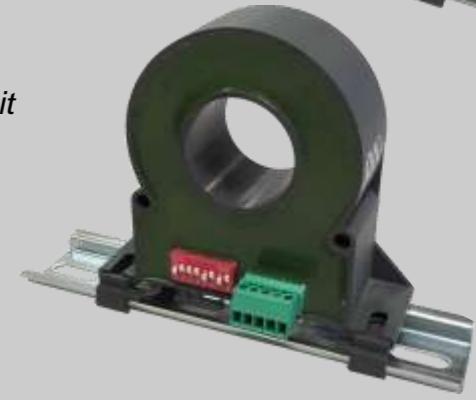
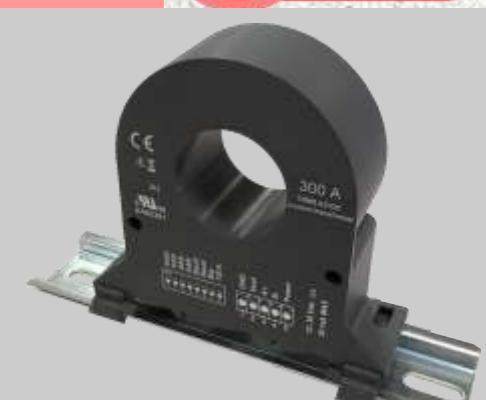
- **RS485 Modbus communication link**

Configurable by dip switch  


- **0..10V analog output**

- **> 3 KV insulation**

- **0.5% accuracy**



# DC AC current sensor

## Hall effect current sensor for low current AC or DC or Leakage current

### CURRENT DETECTION SENSOR, DC LEAKAGE SENSOR

[HcL d20](#)

GET A  
QUOTE

- **High sensitivity**

measure of DC current < 1mA. non intrusive

- **highly overload resistant**

up to 10000 x rated current without alteration

- **Non intrusive**

No insertion loss in measured circuit

No alteration of efficiency and integrity on primary circuit

- **Available for current < 100 mA**

20mm hole diameter

- **Disconnectable and interchangeable**

Calibrated voltage output +/- 4V ( 0.5% )

Powered by measure electronic

- **Isolation >3 Kv**



### Leakage current sensor AC and DC with dual analog signal output

[HcLRMS d35](#)

GET A  
QUOTE

- **35 mm aperture**

- **High sensitivity, Hall effect technology**

Small DC current measurement from 0.1mA to 100mA

One bipolar +/-5V output for DC current measurement

One unipolar 0...5V output for AC RMS measurement

measure AC current from 10Hz to 30kHz

+/-15V sensor power supply. Provide by electronic measurement

- **High overload capability**

Up to 1000 x rated current without alteration.

- **non intrusive**

Installation on an existing circuit without interruption.

No insertion loss in measurement circuit.

No alteration of efficiency and integrity of primary circuit.

- **>3kV isolation**



### Leakage current sensor AC and DC with dual signal output

[HcLRMS d20](#)

GET A  
QUOTE

- **20 mm aperture**

- **High sensitivity, Hall effect technology**

Small DC current measurement from 0.1mA to 100mA

One bipolar +/-5V output for DC current measurement

One unipolar 0...5V output for AC RMS measurement

measure AC current from 10Hz to 30kHz

+/-15V sensor power supply. Provide by electronic measurement

- **High overload capability**

Up to 1000 x rated current without alteration.

- **non intrusive**

Installation on an existing circuit without interruption.

No insertion loss in measurement circuit.

No alteration of efficiency and integrity of primary circuit.

- **>3kV isolation**



### SPLIT-CORE LEAKAGE CURRENT SENSOR DC CURRENT TRANSDUCER

[HcLo d33](#)

GET A  
QUOTE

- **High sensitivity, Hall effect technology**

small DC current measurement from 1mA to 2.4A.

- **High overload capability**

up to 1000 x rated current without alteration.

- **non intrusive, split-core system**

Installation on an existing circuit without interruption.

No insertion loss in measurement circuit.

No alteration of efficiency and integrity of primary circuit.

- **33mm sensing aperture**

Available for current up to +/- 2.4 Adc

- **Pluggable and interchangeable**

Calibrated voltage output +/- 4V (0.5%)

Power supply: +/-15V provide by measure electronic.

- **3kV insulation**



# AC DC electric measurement

## Voltage, current, frequency measurement

### True RMS current and voltage transducer for alternating and direct signals

- RMS measures AC + DC:** Dc to 440Hz  
PWM, phase angle variation, wave train, high level harmonics signals
- Multi-sensor input current:**  
Shunt, transformer, Rogowski coil, Hall effect sensor, or direct input 1A and 5A
- Programmable:**  
voltmeter, ammeter, frequency meter
- 4 digits measure display**  
U, I, Hz
- 2 isolated analog outputs**  
double outputs  
simultaneous current and voltage transducer
- 3 relay outputs**
- Universal ac/dc power supply**

CPL35L

GET A QUOTE

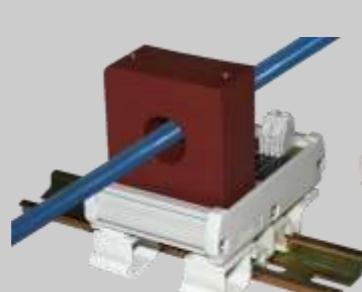


### 50Hz...400Hz AC voltage and current transmitter 4-20mA loop powered

CAL45CA

GET A QUOTE

- Measure of sinusoidal alternating signals**  
(voltage or current)
- Direct input up to 250A and 1000V**
- Galvanic insulation** (up to 5000V)
- Accuracy:** +/- 0.5 %
- CAL45CA:** measure 5Aac/dc ; 500Vac/dc
- CAL45CAD:**  
measure: up to 50Aac ; 1000Vac
- CAL45CAH:** high current version  
(11 switchable input ranges from 10A to 200A)  
(Hole diameter : 18 mm)
- CAL45CAH-iwatch:**  
Version allowing the memorization of high speed phenomena ~ 10ms settling time.



### Miniature current sensor transmitter for DC current

CAL25CC

GET A QUOTE

- DC current input :**  
from 1A up to 10 Adc (or +/-1A à +/- 10A)
- Hall effect technology:**  
Through measure cable or wiring measure
- Current or voltage input**  
Unipolar or bipolar : 0..4..20mA , +/-20mA , +/-10V,... isolated from power supply
- Available for direct replacement of shunt**  
isolated mV output (no thermal dissipation)
- Small footprint:**  
17 mm width
- Wide power supply range :**  
4.5...18Vdc , 18...36Vdc , 9...36Vdc , 18...75Vdc, .....



### SENSOR TRANSMITTER FOR DC CURRENT CAL35CC, CAL35CC-H, CAL35CC-O

GET A QUOTE

- DC Current input:**  
from 1A to 1000 Adc (or +/- 1A to +/- 1000A)  
Up to 50kHz bandwidth, optional TRMS measurement version

- Hall effect Technology :**  
through-hole design or terminal blocks design for input

- Current or Voltage Output**  
Unipolar or bipolar: 0 .. 4 .. 20mA, +/-20mA, +/-10V, ... isolated from power supply

- Direct shunt replacement**  
isolated mV output (no heat dissipation)

- CAL35CC**  
screw terminals input 25mm<sup>2</sup> (5A....100A max)

- CAL35CC-H closed through-hole input design**  
max diameter (max current): 10 mm (100A), 15mm (300A), 26 mm (1000A), 32 mm (1000A)

- CAL35CC-O split core sensor input design**  
hole diameter 21 mm, current measure up to 1000A

- Power supply:** 4.5...18Vdc, 18...36Vdc, 9...36Vdc, 18...75Vdc, ...



### Analog conditioner for alternative current and voltage, shunt, current transformer or Rogowski coil

CAL35CAD

GET A QUOTE

- CAL35CAD**

Converter for sinusoidal AC signal.

- CAL35CAD-RMS (True RMS version)**

PWM, phase angle variation, wave train, and signal with high harmonics level

- Option embedded through hole CT**  
measure up to 50Aac

- CAL35CAD-ROGO**

Input for Rogowski coil sensor up to 100 kA



### Transmitter for current and voltage measurement RMS (AC) or TRMS (AC+DC)

CAL35CA

GET A QUOTE

- CAL35CA**

measure converter for alternative sinusoidal signals 50Hz, 60Hz and 400Hz (voltage or current)

- CAL35CA/A**

Self-powered version (powered by measured signal)

- CAL35RMS** True rms version (AC)

DC component suppressed all type of signals up to 500kHz  
PWM, Phase angle variation, Wave train,

- CAL35TRMS**

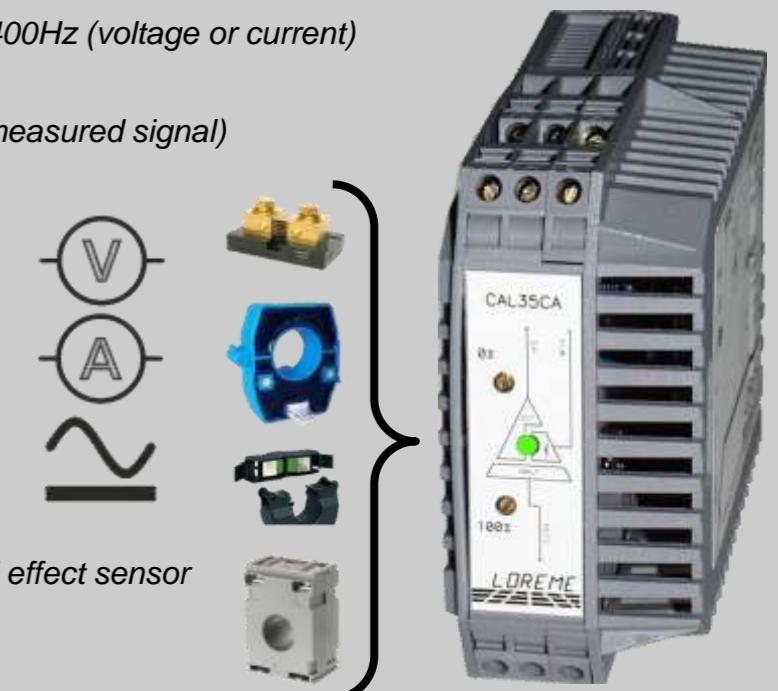
TRMS measure (AC + DC)  
all type of signals up to 500kHz

- CAL35TRMS-HALL**

TRMS measure (AC + DC) with Hall effect sensor  
sensor power supply embedded

- CAL35CA-Rogo**

converter with Rogowski coil sensor input



## AC or DC power measurement single phase / three phase

### Measure transducer TRMS AC and DC Wattmeter, Voltmeter, Ammeter,....

CPL35

GET A QUOTE

- RMS measure AC + DC:** 0...440Hz  
Single-phase, bi-phase, balanced three-phase with or without neutral  
PWM, wave train, phase angle variation, high level harmonics signals
- multi-sensor for current measurement:**  
Shunt, transformer, Rogowski coil, Hall effect sensor or direct input 1A / 5A
- Programmable:**  
Voltmeter, ammeter, wattmeter, varmeter, power factor, Cos phi, frequency meter
- 4 digits measure display:** U, I, Cos, P, Q, Hz
- Outputs :** 2 analog outputs, 2 relay outputs, Ethernet link Modbus-TCP and SNMP
- Wide range universal ac/dc power supply**



### POWER CONVERTER AND ENERGY METER FOR ELECTRIC NETWORKS type : CPL105

GET A QUOTE

- Three-phase or single phase network**

Measure U, I, Cos, P, Q, W

- Multi sensor :** CT, Rogowski coil sensor

- Ethernet Modbus TCP or SNMP link**



Embedded web server

6 Modbus TCP connections

Possibility to connect device with internal Bus on DIN rail

- RS485 Modbus RTU link**

- 3 output relays**

- Display :** LCD 2 lines of 16 characters



- Can be use as 3 isolated single phase meters**

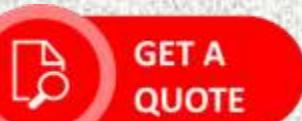


# AC DC electric measurement

## AC or DC power measurement single phase / three phase

[Wattmeter, energy counter for three-phases unbalanced network, electrical measure transmitter](#)

CPL101



- Three phase unbalanced network

with or without neutral, frequency range: 40 to 400Hz.

- Programmable:

function : voltmeter, ammeter, frequency meter, wattmeter, varmeter, power factor

- Up to 3 isolated analog outputs

0...4...20mA , 0...10V , +/- 20mA , +/-10V

- 1 relay output

threshold relay or energy counter

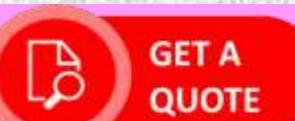
• CPL101/C: RS485 link, Modbus option

• CPL101T: Fast version (response time: 100ms)



[Hardened TRMS converter for AC and DC signals Wattmeter, Voltmeter, Ammeter,....](#)

CPL36



- RMS measure AC + DC hardened version:

Single-phase or balanced three-phase 0...440 Hz with or without neutral

PWM, wave train,

Phase angle variation,

high level harmonics signals

- multi-sensor for current measurement:

Shunt, transformer, Rogowski coil,

Hall effect sensor or 1A and 5A direct inputs

- Programmable:

Voltmeter, ammeter, wattmeter, varmeter,

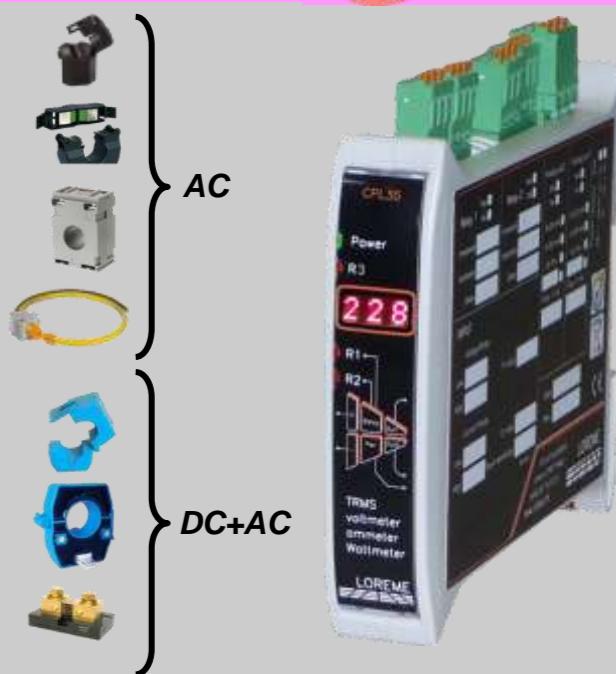
power factor, Cos phi, frequency meter

- 4 digits measure display

U, I, Cos, P, Q, Hz

- 2 isolated analog outputs and 2 relay outputs

• Wide range universal ac/dc power supply



## Multi channel electrical measurement

[Measurement unit for distribution panel \(DPM\) Wattmeter, Energy meter for 18 feeders](#)

CPL165



- Energy meter for 18 electrical feeders.

Three-phase or single-phase, measure U, I, Cos, P, W

- Measure current from 1A to 500A

With small split-core current transformers (CT)

Diameter of passage: 12 to 36mm

- Ethernet Modbus TCP or SNMP link

Embedded Web Server

6 Modbus TCP concurrent connections

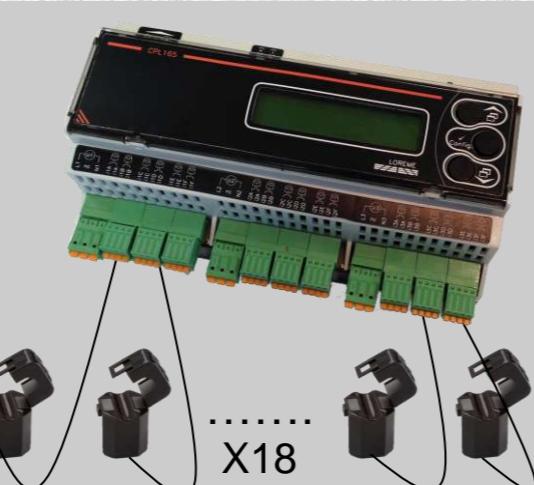
Bus connection possibility directly onto the DIN rail

Modbus link possibility over RS485

- Application:

Energy efficiency, building management

Data center : intelligent PDU, Measure of PUE ( Power Usage Effectiveness )



[Measurement for single phase distribution panel](#)

type : CPL165L



[Communicating sensor for direct current voltmeter and wattmeter in option](#)

CNL36CC



- DC current input from 0.1Adc up to 1000Adc

Option: voltage input up to +/- 300Vdc (230Vac) and power measurement.

- Communication:

Ethernet link Modbus TCP protocol

1 IP address for 32 modules

(Internal bus integrated on DIN rail)

Modbus TCP (6 simultaneous connection)

SNMP, embedded web server,

RS485 Modbus RTU

• CNL36CC: Input on screw terminal 25mm<sup>2</sup>, 80A max.

• CNL36CC-H: Input for HALL effect sensor, 1000A max

• Shared power supply through the internal bus



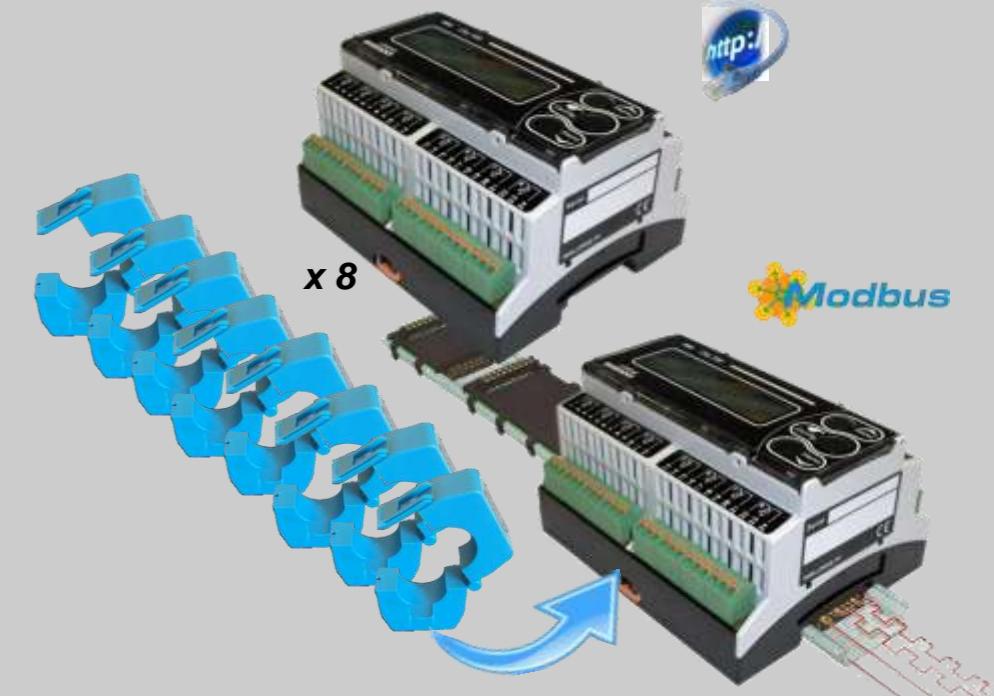
[Current measurement unit , Data Logger with Ethernet PoE link](#)

SCAi60



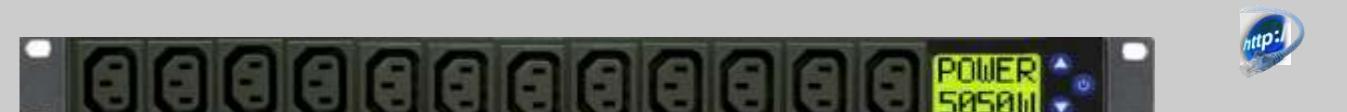
[8 channels communicating measurement unit for direct current](#)

CML100CC



[Metered rack PDU Remote monitoring and management](#)

PDU431



# AC DC electric measurement

## Panel meter for AC and DC electrical network

[Panel Voltmeter - Ammeter - Frequency meter](#)  
Direct or alternative current 50Hz, 60Hz, 400Hz

[94000CA](#)

[GET A QUOTE](#)

- Voltage input up to 800 Vrms (AC + DC) 94000uCA  
Two input ranges: 100V and 800V

- Current input (AC and DC)  
94000iCA : direct input. Up to 10A  
94000iCHall : for remote Hall effect sensor up to 80A  
94000iCmV : mV input for shunt or Tio (current transformer)  
94000iCROGO: input for Rogowski coil sensor

- Frequency measurement 94000-Hz

- 1000 pts Led display for measurement  
Available in Red, Green, Yellow, Blue

- Relay output option: 94000CA/R

- 4-20mA analog output option

- Size 72 x 36 mm  
Compact depth



[Wattmeter and energy counter TRMS \(true RMS\)](#)  
Direct or alternative current 50Hz, 60Hz, 400Hz

[IPL36](#)

[GET A QUOTE](#)

- TRMS measurement AC + DC:

Single-phase or balanced three-phase 0...440 Hz  
PWM, Wave train,  
Phase angle variation,  
High level harmonics signals



- Multi sensors for current measurement :

Shunt, transformer, Rogowski coil,  
Hall effect sensor or direct input 1A and 5A.

- Programmable:

voltmeter, ammeter, wattmeter, var meter,  
power factor, Cos phi, frequency meter.

- 6 digits measure display, 96 x 48mm format  
4 digits alphanumerical display for measure unit  
Display: U, I, Cos, P, Q, S, Hz (energy in option)

- option:

isolated analog output, 2 relay outputs, RS485 Modbus,  
Ethernet Modbus TCP (6 connections) and SNMP

- Universal wide range ac/dc power supply



[GET A QUOTE](#)

## Phase meter

[PHASE METER FOR ALTERNATING VOLTAGES](#)  
[PHL165](#)



[GET A QUOTE](#)

- Phase angle measurement -180°....+180°

Accuracy: better than 1°  
Resolution: 0.1°  
Phase angle offset and sign configurable  
Frequency range from 40 to 70 Hz

- Two isolated voltage inputs

Two input range 150Vac and 400Vac

- Up to 3 analog outputs

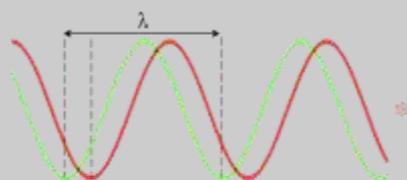
- 2 relay outputs option

- Ethernet Modbus TCP link option

Embedded Web server  
6 Modbus TCP concurrent connections

- LCD display

2 lines of 16 characters



[TRMS panel Voltmeter, Ammeter, frequency meter](#)  
Direct and alternative current 50Hz, 60Hz, 400Hz

[IPL36L](#)

[GET A QUOTE](#)

- RMS measures AC + DC:

Single phase or balanced three phase 0...440Hz  
PWM, wave train,  
Phase angle variation,  
high level harmonics signals.



- Multi sensor for current measurement:

Shunt, transformer, Rogowski coil,  
Hall effect sensor or direct input 1A and 5A.

- Programmable:

function: voltmeter, ammeter, frequency meter

- 6 digits measure display

4 digits alphanumerical display for the unit

Display: U, I, Hz

- option:

isolated analog output, 2 relay outputs

RS485 Modbus RTU

Ethernet Modbus TCP (6 concurrent connections) and SNMP

- Universal ac/dc wide range power supply



[PROGRAMMABLE ELECTRICAL NETWORK ANALYSER](#)

[IPL144V](#)

[GET A QUOTE](#)

- Network:

direct, alternative, one-phased,  
three-phased, balanced, unbalanced,  
with neutral, without neutral,  
3 values on 3 digits,

1 value on 4 digits,  
available in red, green, yellow, blue,



- Display:

- IPL144V/R: 2 relays in alarm or counting,

- IPL144V/CM: 1 MODBUS/JBUS RS485 link,

- IPL144V/CP: 1 PROFIBUS DP RS485 link,

- Universal power supply

## Load shedding unit

[Load shedding contactor](#)  
single and three phase

[DLB105](#)

[GET A QUOTE](#)

- Multi-step load shedding

DLB105/BIN 8 step, binary coded output

DLB105/R 3 step, direct output

- Real time clock

Peak and Off-peak hours

Daylight Saving Time



- Display : LCD, 2 lines, 16 characters

Display of all electrical parameters

- Fully configurable

Power limits, delay of load shedding,  
delay of reloading, reloading threshold

# AC DC electric measurement

## Power controller, dimmer

[SINGLE-PHASE POWER CONTROLLER / DIMMER](#)  
DIN rail mounting, for resistive or inductive load    [VPL50](#)



- **Firing mode**  
Phase angle modulation
- **Output power : 600 Watts max**  
Current range from 0.1A to 2.5A  
Embedded fast fuse
- **Proportional internal setpoint**  
Setting by multi-turn trimmer
- **Application :**  
Fan speed control  
pump flow rates adjustment  
motor control  
light dimmer,..



[SINGLE PHASE POWER CONTROLER](#)

[VPL72](#)



- **Selectable firing mode**  
Phase angle variation  
Burst fired
- **Output power**  
**VPL72 - 115 : 5 kW, 115 Volts version**  
**VPL72 - 230 : 9 kW, 230 Volts version**  
**VPL72 - 400 : 16 kW, 400 Volts version**  
Current range: 0.1A to 40A  
also available in 24 Vac and 48 Vac, .....
- **Selectable setpoint mode**  
Internal potentiometer  
External (4...20mA or 0...10V)
- **Application :** Plastics processing  
Small oven, environmental chamber, test bench, lighting, IR light, band heaters, dryers, ...



[SINGLE-PHASE POWER CONTROLLER](#)

[VPL73](#)



- **2 firing mode :**  
Full wave train **VPL73-TR**  
Phase angle modulation **VPL73-PH**
- **Output power : up to 6KW**  
Current range: 0.2A to 25A  
Fast fuse embedded
- **Proportional internal setpoint**  
Setting by potentiometer
- **Application :**  
Plastics processing,  
small ovens, dryers  
environmental chambers,  
test bench.  
Heating clamps  
(not for inductive loads)



[SINGLE PHASE POWER CONTROLLER](#)

[VPL74](#)



- **firing mode : full wave train**  
Voltage range: from 200 Vac to 440Vac  
also available in 24Vac, 48Vac, 115Vac,..
- **Output power : 7KW à 230V - 12KW à 400V**  
Current range: 0.1A to 30A  
Fast fuse embedded
- **Proportional internal setpoint**  
Setting by potentiometer
- **Application :** Plastics processing,  
small ovens, dryers  
environmental chambers,  
test bench.  
Heating clamps  
(not for inductive loads)



# Threshold relay - protection relay

## Industrial electronic thermostat

### Temperature threshold relay RTD and thermocouple

Industrial thermostat

THL36

 GET A QUOTE

- Suitable for heating and cooling mode.**

Application : protection relay, thermostat  
threshold relay,.....

- Temperature input**

PT100 - 3 wires / Thermocouples J,K,T

- Fully configurable via front face**

With push button under the cover

- Relay output (changeover contact)**

10A switching current

- 1000 pts LED display for the measure**

- DIN Rail mounting**

- Option : EN 14597 conformity**

Temperature regulating and limiting devices  
for heat generating systems.



### Thermostat regulator for heating cables and ribbons.

THL105

 GET A QUOTE

- Temperature display**

LCD 2 lines of 16 characters  
(temperature , set point , output state)

- Temperature input**

Pt100 - 2 wires (-50 °C .....+ 250 °C)

- Fully configurable**

with pushbuttons

- Breaking capacity 16 A resistive**

- Mounting in IP66 waterproof enclosure**

Transparent cover



### Thermostat for heating cable or heating element

high switching capacity

THL37

 GET A QUOTE

- Temperature sensor input**

PT100 -3 wires / Thermocouples J,K,T

- Fully configurable with front face**

By push buttons

- 20A power switching (resistive load)**

- Measure / setpoint display : 1000pts green led**

- DIN rail mounting or IP65 sealed case**

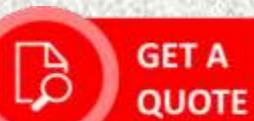


## Threshold relay for process signal

### SIL2 / SIL3 high safety operational level

analogue threshold relay

DSL1-35mA-SIL

 GET A QUOTE

- Current input**

4...20 mA

- 1 adjustable threshold with multi-turn potentiometer**

And input loop break detection

- Positive security**

Relays activated below the threshold

- 2 electromechanical changeover contact outputs**

Independent relays

- Safety Integrity Level: SIL2 / SIL3**

conform to IEC 61508



### Analog threshold relay

High safety level operation SIL3

DSL1-35mA-NUC

 GET A QUOTE

- Current input**

4...20 mA

- 1 adjustable threshold with multi-turn potentiometer**

And input loop breaking detection

- Relay security selectable by dipswitch**

Relays activated over or below the threshold

- 2 electromechanical changeover contact outputs**

Independent relays

- Traceability of internal components**

provided with the List of Manufacturing Operation  
and Individual control sheet (Nuclear application)

- Operational Safety level : SIL2 / SIL3**

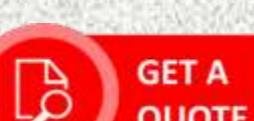
according to IEC 61508



### Threshold relay, threshold detection for analog signals

protection relay

DSL35L

 GET A QUOTE

- Wide range of process and temperature inputs**

Volt ,mA, potentiometer,  
CTN ,CTP , .....

- 1000 pts LED display for measurement**

- Internal or external threshold**

setting with push buttons (under the cover)  
or with analog signal (4...20mA/0...10V) **DSL35-Cext**

- 1 or 2 output relays, 10A changeover contact**

- Application**

thermal protection relay  
threshold relay for 4 ... 20mA loop  
thermostat .....



### ANALOG THRESHOLD DETECTOR

THRESHOLD RELAY

DSL35

 GET A QUOTE

- All process and temperature inputs**

Volt, mV, mA, Aac, Adc, RMS, TRMS  
with or without sensor supply,  
potentiometer, frequency,  
thermocouple, PT100, CTN, CTP, ....  
Namur proximity sensor (IEC 60497-5-6)

- DSL1-35: 1 threshold / 1 relay (SPDT contact)**

- DSL2-35: 2 thresholds / 2 relays (SPDT contact)**

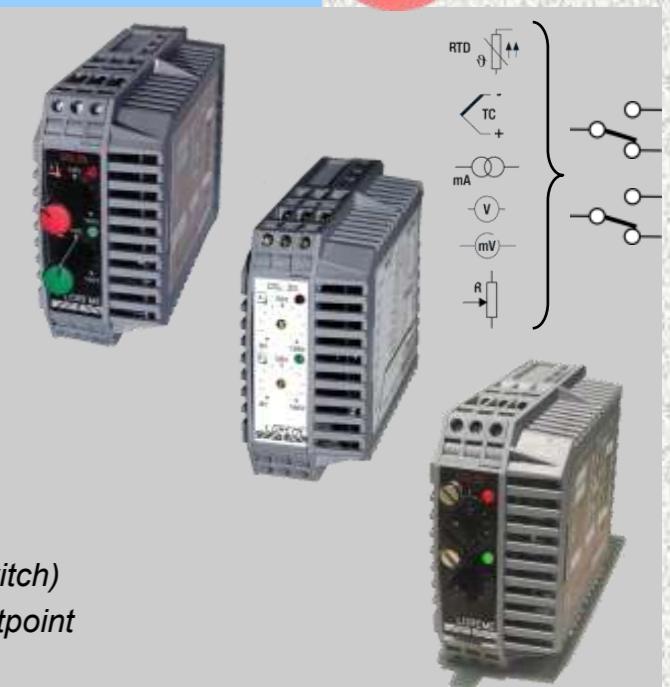
- Fast version < 3 ms ref: **DSL35T****

- Solid state or electromechanical relay output**

- Positive or negative safety (selection with internal switch)**

- Internal (potentiometer) or external (volt, mA, pot) setpoint**

- AC or DC Power supply. from 5Vdc up to 400Vac.**



# Threshold relay - protection relay

## Relay for AC-DC voltage and frequency

### Protection monitoring relay for AC and DC current phase control relay

RPL23

GET A QUOTE

- **DC and AC Voltage monitoring** (5Hz...50Hz...60Hz...70Hz - 400Hz)

RPL23 : 50VAc-Dc..... 800Vac, 1200Vdc

RPL23-BT : 12Vac-Dc.....250Vac, 375Vdc

True RMS measurement (AC+DC)

Monitor : Undervoltage, overvoltage, phase asymmetry, phase loss, under frequency, over frequency

For single phase or three-phase network or DC voltage compatible with variable speed drive (PWM filter embedded)

- **Phase order control** (option)

- **RPL23uC**: specific version for voltage dips detection

- **RPL23peak**: specific version for peak voltage detection

- **RPL23Ho** : specific version for zero sequence voltage detection

- **RPL23F** : specific version for frequency monitoring

- **Voltage display and default indication**

- **Fully configurable** with pushbutton under the front face

- **Auxiliary power supply** universal 20... 265Vac-dc or 100... 400Vac-dc

- **SIL2 option** in accordance to IEC 61508



### Protection relay for DC current and voltage

High isolation voltage ( 10kV)

RPL34HiG

GET A QUOTE

- **Voltage, current and power monitoring**

Voltage measurement : +/-1500Vdc max

Current measurement : +/-150mVdc maxi on external shunt

Calculation of consumed or generated power

- **3 configurable alarms relay**

Over or under voltage, over or under current

Overpowering, under load, ...

- **4-20mA output** (option)

- **isolation**: 10kVdc

10mm internal creepage distance

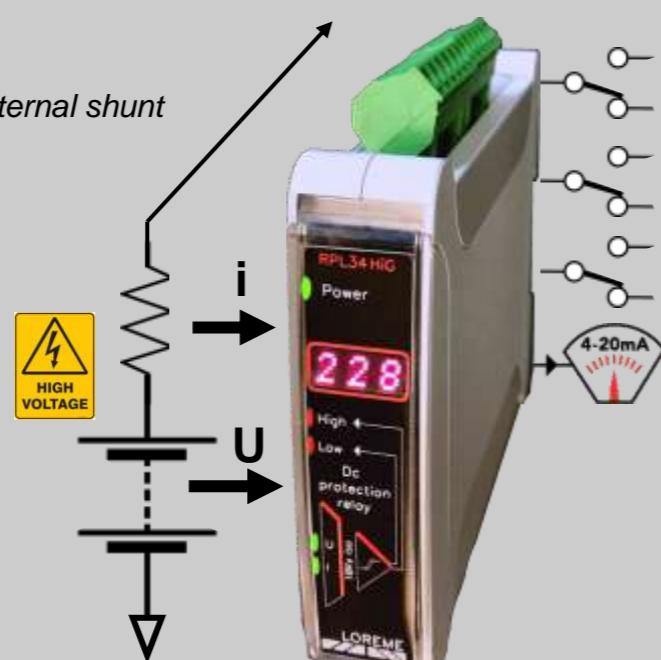
- **Display** Measure and default

- **Configuration**

user setting with front face pushbuttons

- **Power supply** universal 20... 265Vac-dc

- **SIL2 option** in accordance to IEC 61508



### Voltage presence relay for capacitive divider, transformer, resistive bridge AC + DC

RPT23

GET A QUOTE

- **AC and DC voltage monitoring**

TRMS measure : 10 .....600Vac, 1000Vdc

Voltage presence / absence detection thresholds for single-phase, three-phase networks or DC voltage

- **Direct measurement or via capacitive divider or transformer**

High input impedance

compatible with neon indicators on voltage divider output

- **Display** voltages and status indicators for fast diagnostic

- **Fully configurable** with pushbutton under the front panel

- **Auxiliary power supply** universal 20... 265Vac-dc, 100... 400Vac-dc

- **option SIL2** in accordance to IEC 61508



## Relay for AC and DC current

### Threshold relay for direct or alternative current Current monitoring relay

DSL35LCC

GET A QUOTE

- **DC or DC+AC current monitoring**

DC or TRMS measurement

#### DSL35LCC

Terminal blocks version, embedded sensor  
Range : +/- 1A to +/- 125Adc

#### DSL35LCCCHALL

Remote sensor version  
Range : +/- 0.1A to +/- 600 Adc

- **1 relay output, changeover contact**

Configurable alarm via front face

Threshold, delays, hysteresis

- **1000 pts Led display for measure**

- **Application**

Solar, battery,  
Dc current motor monitoring



### Inverse-time thermal protection and overcurrent protection relay for DC current

RPS23

GET A QUOTE

- **All types of protection curves**

Constant time, inverse time

very inverse time or extremely inverse time curves ...

- **1 , 2 , 3 or 4 relay outputs**

- **Measure display (10 000 pts)**

Configuration on front face

- **Option: 1 or 2 isolated analog outputs**

option: measure converter function

- **Universal power supply**

- **Option SIL2** According to IEC 61508



### Threshold relay, protection relay for alternative current

DSL35LCA

GET A QUOTE

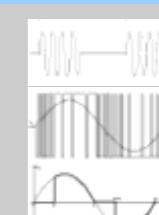
- **Alternative current control**

Up to 500Aac 50Hz/ 60Hz/ 400Hz

RMS measure for all input type,

PWM, phase angle variation,

wave train, signal with high harmonics content



- **DSL35LCA - peak** : peak detection

- **Measure input by split-core current transformer**

- **1000 pts LED display for measurement**

- **2 adjustable thresholds by the front face**

threshold, delays, hysteresis

- **2 relays output 10A changeover contact**

- **DIN rail mounting**



### Battery Protection Relay

RPB45S

GET A QUOTE

- **Bidirectional battery protection**

Charge current control

Discharge current control

- **3 relay outputs**

- **Measure display (10 000 pts)**

(front face programming)

- **Isolated Analog Output**

(measure copy function)

- **Pluggable connectors**

- **Universal power supply**



# Threshold relay - protection relay

## Relay for AC and DC current

### AC current sensing relay

DIL36

GET A QUOTE

- Non intrusive current detection

0.1A threshold detection, input current > 200A

- Remote split core current sensor

- 24Vdc, 200mA output

can power a lamp indicator or a contactor

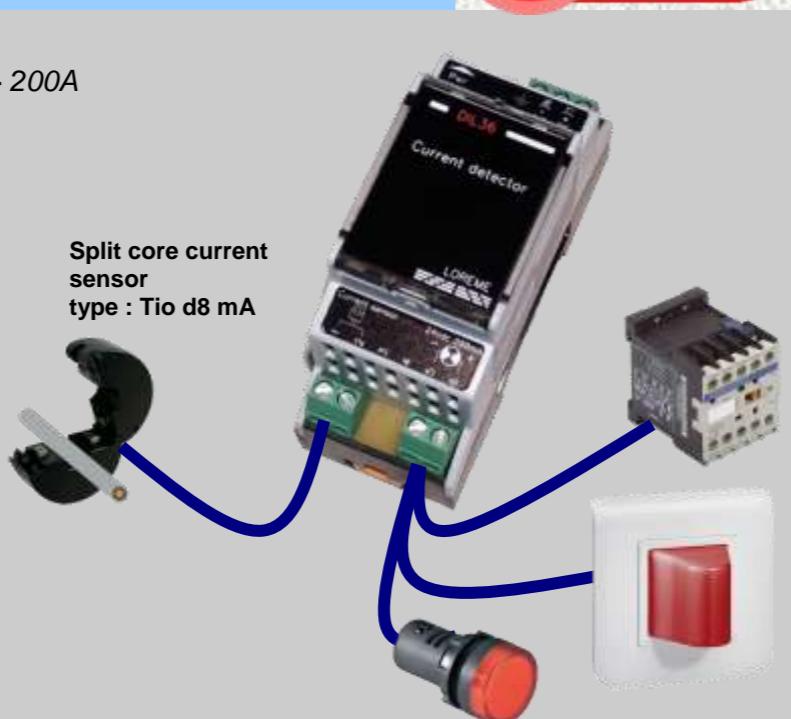
- DIN rail mounting

- Application

non intrusive detection of starting up of machine or installation  
Radiology equipment

- Universal power supply

20....265Vac-dc



### Threshold protection relay for three-phase network with remote split core current sensors

RCL105

GET A QUOTE

- 3 current inputs up to 100A

Three-phase or three single phase networks

- Split core current sensors

Calibrated 333mV output (sensor type TioL)

- 3 relay outputs

Monitoring of each phases

- Front face LCD 2 lines of 16 characters

Display of three currents

Thresholds settings

- Can be used like 3 single phase relays



## Leakage current protection relay

### Earth leakage protection relay isolation controller

DSL36LEAK

GET A QUOTE

- Leakage current monitoring

10mAac to 1Aac (50Hz, 60Hz, 400Hz in option)  
improve immunity to nuisance tripping (RMS measurement)

- Input for core balance transformers

type Tleak

- Leakage current display

3 digits green LED display

- 2 configurable thresholds

Threshold, delay

- 1 or 2 relays. Changeover contact

10A switching capacity

- DIN rail mounting



## Phase order relay

### PHASE SEQUENCE / PHASE FAILURE DETECTION RELAY

DOP23

GET A QUOTE

- Indication of the phase order in a three-phase systems

Network frequency : 50Hz , 60Hz and 400Hz (40Hz....500Hz)

- Led status indicator

Normal , reverse and phase loss

- Output contact for phase order ok

Electromagnetic or static relays version

- Self powered

- Unplug terminal blocks



## Level relay and resistive level sensor

### Resistive level probe Type : SNL

### Threshold relay for resistive level sensor RNL35L

GET A QUOTE

- Multi-level probe for conductive liquids.

fully static design

Up to 5 levels (adjustable length electrodes)

Maximum pressure 6 bar

Peak temperature 150 ° C (HT version)

Waterproof IP66, cable output or connection head

316L Stainless Steel Electrodes wrapped with Teflon

- Application

Level control or regulation

For tank or duct

Monitoring the presence or absence of fluid

(tank overflow , leak detection , pump control,.....)



# Power supply and DC-DC converter

## Instrumentation power supply AC-DC DC-DC

### High reliability DC power supply

For 4...20mA current loop SIL2 / SIL3

AL45D

GET A QUOTE

- **Linear low noise version or high density switching power**

AC or DC input

- **Fully protected**

short-circuits, overload, thermal

- **1 to 8 isolated outputs**

Fully independent circuits

- **Long life version, extended temperature**

AL45DLL "long life" with polymer capacitors

- **Applications**

4..20 mA loop power supply  
with current limited (safety for measurement transmitters),  
Hart protocol, very low noise.

- **SIL2 and SIL3 compliance** according to IEC 61508 (redundant version)



SIL2 SIL3

### SMALL INSTRUMENTATION POWER SUPPLIES

AC-DC & DC-DC type AL25

GET A QUOTE

- **Universal input: 20....265 Vac-dc**

SMPS version

- **Total protection**

short-circuits, overload, thermal

- **1 to 3 insulated output (1 Watt per output)**

3.3 V.....24 V up to 72 V by coupling  
30 mA.....500 mA depending of output voltage

- **very small footprint**

62 x 63 x 23mm

- **Applications**

4..20 mA loop power supply, instrumentation.



## PoE injector (Power over Ethernet)

### POWER OVER ETHERNET INJECTOR

DIN rail mounting

type: AL36PoE

GET A QUOTE

- **Direct integrated on Ethernet network**

between switch and PoE device  
Allows upgrade existing network to PoE  
Supply over Ethernet cable

- **Fully protected**

short circuit, overload, thermal

- **48V output, 5 Watts on Rj45**

IEEE 802.3af compliant

- **Universal supply : 20....265 Vac-dc**

- **Applications**

Using PoE device on network without switch PoE



### 15 W POWER OVER ETHERNET INJECTOR

DIN rail mounting

AL53PoE

GET A QUOTE

- **Direct integrated on Ethernet network**

between switch and PoE device  
Allows upgrade existing network to PoE  
Supply over Ethernet cable

- **Fully protected**

short circuit, overload, thermal

- **48V output, 15 Watts on RJ45**

IEEE 802.3af compliant, class 0,1,2,3

- **Universal supply : 85...265 Vac and 120...370 Vdc**

- **Applications**

Integration of POE products on networks without POE Switch



## DIN rail medium power supply AC-DC and DC-DC

### MEDIUM POWER SUPPLY (10...100 Watts)

DC or AC 50...400Hz input

type : AL140L

GET A QUOTE

- **DIN Rail mounting**

100 Watts total

1 to 3 isolated outputs

- **Universal input : 85....265 Vac-dc**

(50Hz - 60Hz - 400Hz) switching regulation

- **Fully protected**

short-circuits, overload, thermal

- **Fully isolated**

between each output

- **Output coupling possible for redundancy.**

Independent internal modules for maximum security



### MID RANGE POWER SUPPLY 500Watts max

24Vdc / 48Vdc / 60Vdc / 110Vdc / 127Vdc

type:AL125

GET A QUOTE

- **DIN RAIL or surface mounting**

500 Watts total, up to 3 isolated outputs

Voltage output : 3.3Vdc .... 400Vdc

Symmetrical voltage output : +/-3.3Vdc ... +/-200Vdc

- **Universal Input: Ac-Dc**

85 ... 265Vac (50Hz, 60Hz, 400Hz)

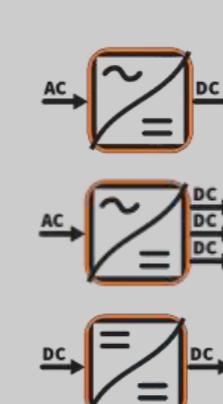
100 ... 370Vdc

- **Fully protected**

Short circuit,  
overload and thermal

- **AL125/Wd**

Watchdog relay output, changeover contact



# Power supply and DC-DC converter

## Medium power DIN rail power supply AC-DC and DC-DC

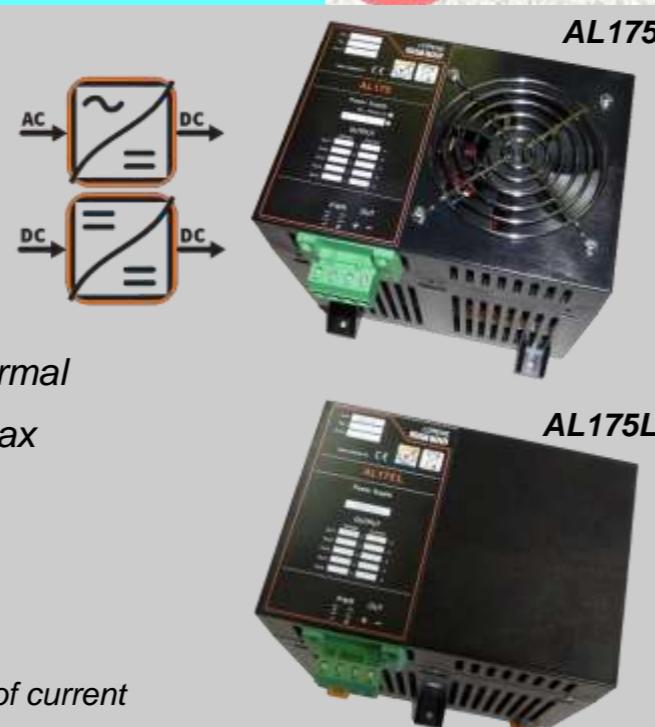
POWER SUPPLY AC-DC or DC-DC up to 1000 Watts  
110Vdc, 115Vdc, 125Vdc, 127Vdc...

[AL175](#)

 GET A QUOTE

• **DIN RAIL or surface mounting**

1000 Watts total, 1 to 5 x 200 W outputs  
Output voltage: 5Vdc.....250Vdc  
(application : 110Vdc and 127Vdc)



• **AC or DC Input:** Switching-mode power supply  
85 .... 265Vac (50Hz, 60Hz, 400Hz)  
100 ... 370Vdc; 200 ... 1200Vdc

• **Fully protected :** Short circuit, overload, thermal

• **AL175L** natural convection, 400 Watts max  
• **AL175** fan cooling, 1000 Watts max

• **AL175R** redundant version

• **Option:** Ethernet link for monitoring

Internal ORing diode for parallel coupling  
Watchdog relay for "output OK"  
Analog output 0...10V or 4...20mA. copy of current

POWER SUPPLY AC-DC or DC-DC up to 2500 Watts  
Output: 110 Vdc 115Vdc 125Vdc, 127 Vdc ...

[AL200](#)

 GET A QUOTE

• **DIN RAIL or surface mounting**

**AL200:** 2500 Watts total, up to 5 x 500 W outputs  
**AL200L:** 2000 Watts total, up to 4 x 500 W outputs  
Output voltage: 12Vdc....110Vdc....127Vdc....240Vdc  
**AL200V:** adjustable with potentiometer or analog input

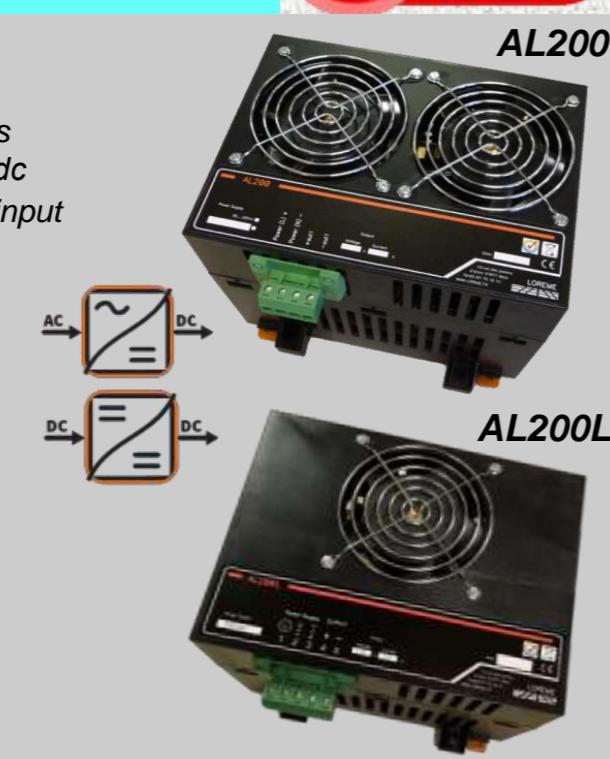
• **Input voltage:** DC, 50Hz, 60Hz and 400Hz

85 .... 265 Vac single-phase  
180....550Vac Two-phase / Three-phase  
9...36Vdc, 18....72Vdc, 40Vdc ..160Vdc  
120...340Vdc, 254..780Vdc  
200Vdc ... 1500Vdc (photovoltaic)

• **Fully protected:** Short circuit, overload, thermal

• **Options :**

Ethernet link for remote monitoring  
Internal ORing diode for parallel coupling,  
Watchdog relay monitoring the output voltage,  
Battery-backed version  
Analog output 0...10V, 4-20mA copy of output current



DIN RAIL MEDIUM POWER SUPPLY

Wide input range and 400Hz version

[ALDRW](#)

 GET A QUOTE

• **Universal input**

single phase and three phases  
Available in 400Hz version  
180...550 Vac / 250...780 Vdc  
Switching power supply

• **DIN rail mounting**

120W version, type ALDRW120  
240W version, type ALDRW240  
480W version, type ALDRW480  
Output voltage: 24 Vdc or 48 Vdc

• **Fully protected**

Short circuits, overload, thermal

• **Built in Power factor correction**

• **Cooling by free air convection**

• **Contact relay for output DC ok**



Power supply with adjustable output via external setpoint  
variable output up to 127Vdc

[AL175V](#)

 GET A QUOTE

• **Adjustable output with external setpoint**

200 Watts maxi

• **Setpoint input**

0...10V, 4...20mA or potentiometer

• **Adjustable range**

0...30Vdc / 5A; 0...48Vdc / 2A; 0...60Vdc / 1.8A  
0...115Vdc / 1A; 0...127Vdc / 1A; other on request

• **AC or DC Power supply**

48Vac; 85 .... 265Vac (50Hz, 60Hz, 400Hz)  
100 ... 370Vdc; 200 ... 1200Vdc

• **Fully protected**

Short circuit, overload, thermal

• **DIN RAIL or surface mounting**

fan air cooling



DIN RAIL MEDIUM POWER SUPPLIES

Single phase or three phases input

[ALDR](#)

 GET A QUOTE

• **Ac and Dc Inputs**

Single phase version: 85...265 Vac / 120...370 Vdc  
Three phases versions (HV): 340...550 Vac / 480...780 Vdc  
Switching power supply

• **DIN RAIL mounting**

Available power:  
120Watts; 240Watts; 480Watts; 960Watts  
Output voltage : 24 Vdc / 28Vdc / 48 Vdc

• **Fully protected**

Short circuits,  
overload,  
over temperature



• **Built in power factor correction**

• **Natural air cooling**

# Power supply and DC-DC converter

## Rack power supply AC-DC and DC-DC

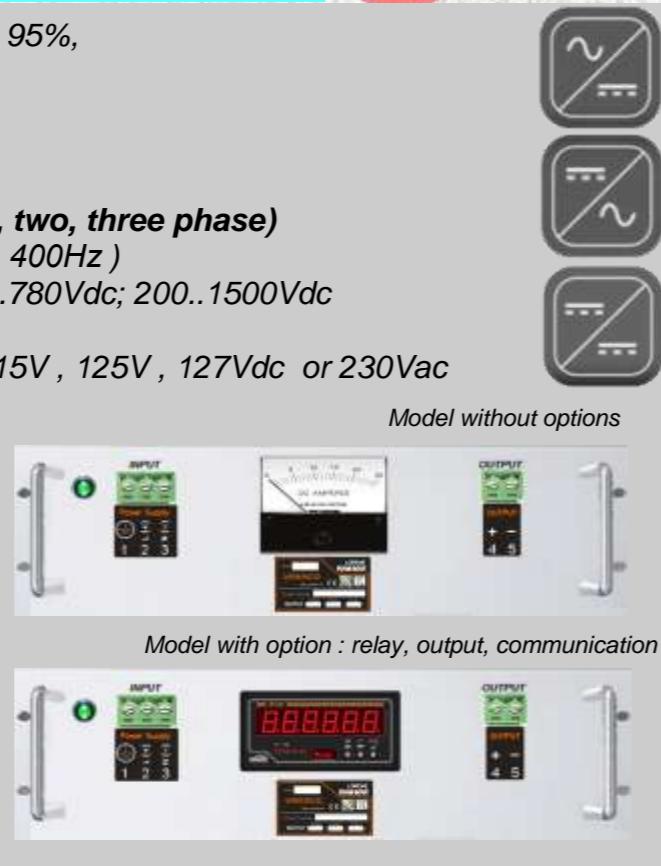
### Rack mount AC-DC Power supply or DC-DC converter DC-AC inverter 2U or 3U 19 inch rack

WRKMOD



GET A  
QUOTE

- **Power up to 10000 watts** high efficiency up to 95%, Low residual ripple, excellent regulation
- **Increase power with parallel coupling**
- **Modular design in 2U or 3U 19 inch rack**  
Wide range of input voltage (DC or AC single, two, three phase)  
85...265Vac 180...550Vdc ( 50Hz , 60Hz , 400Hz )  
18..75Vdc; 40..160Vdc; 110..370Vdc; 254..780Vdc; 200..1500Vdc
- **Wide range of output voltage**  
5V, 12V, 15V, 24V, 48V, 72V, 110V, 115V, 125V, 127Vdc or 230Vac
- **Protection**  
- Short circuit, overload, thermal
- **Option**  
- Watchdog relay output, internal ORing diode  
- Battery charger (current limiter)  
- Output analog signal : 0..10V / 4..20mA (remote monitoring: power, current or voltage)  
- Communication RS485 / Ethernet ( Modbus , SNMP )
- **Isolation** - 2500V
- **Application:** Photovoltaic, wind power, regulation of a fluctuating voltage for inverters, ...



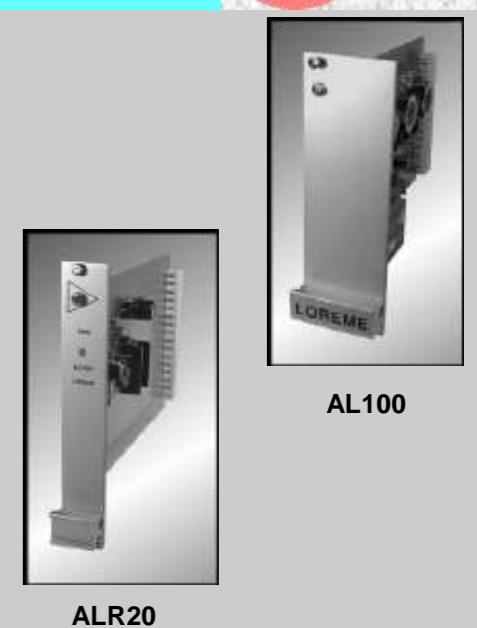
### RACK INSTRUMENTATION POWER SUPPLIES

ALR20 & AL100



GET A  
QUOTE

- **Linear or SMPS version**
- **Total protection**  
short-circuits, overload, thermal
- **1 to 8 insulated outputs AL100**
- **1 to 4 insulated outputs ALR20**
- **small footprint**  
SMPS version 23 mm  
linear version 35 mm
- **Applications**  
4..20 mA loop power supply,  
instrumentation, sensors,....



### RACK MOUNTED MEDIUM POWER SUPPLY

ALPK



GET A  
QUOTE

- **Rack mounting**  
75 Watts total  
up to 3 outputs
- **Universal input : 85....265 Vac-dc**  
switching mode power supply
- **Fully protected**  
short circuit  
overload  
thermal
- **Fully isolated**  
between each outputs



## converter DC-DC AC-DC DC-AC

### DC-DC CONVERTER up to 127Vdc AC-DC CONVERTER up to 127Vdc

type: WRD  
type: WRACD



GET A  
QUOTE

- **Wide range of input and output voltage**
- **Input:** 12V, 24V, 36V, 48V, 110V, 127V
- **Output :** 3.3V, 5V, 12V, 24V, 36V, 48V, 110V, 120V, 125V, 127V
- **Power from 5 to 90 watts**
- **1 to 8 outputs**
- **Protection**  
- short circuits  
- overload  
- thermal
- **High efficiency up to 92%**
- **1500V input / output isolation**
- **Low ripple**
- **Excellent regulation**
- **Application**  
- Regulation of voltage fluctuation, solar, battery, ....



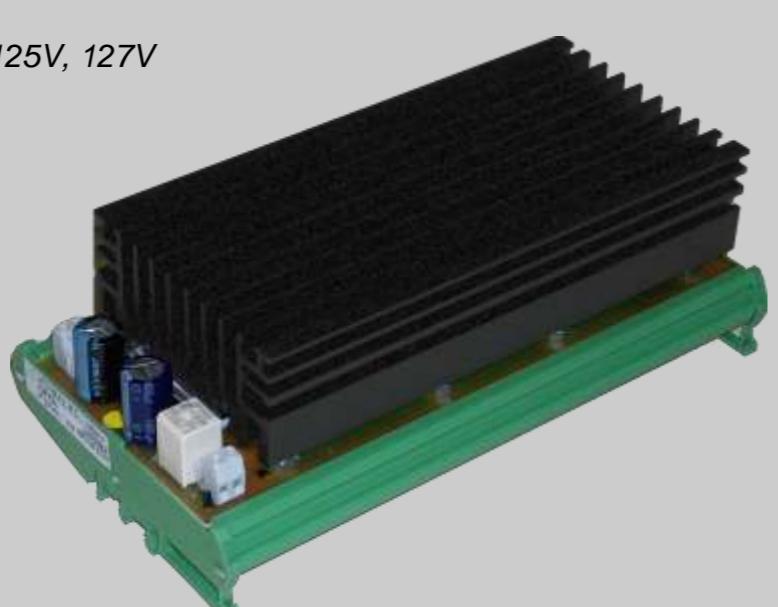
### DC-DC / AC-DC Modular Converter Up to 1500Vdc input

WRMod



GET A  
QUOTE

- **Power from 25 to 240 watts**
- **Modular design**  
Wide range for input voltage  
9..36Vdc, 18..75Vdc, 40..160Vdc, 110..370Vdc, 200..1500Vdc  
Wide range for output voltage  
5V, 12V, 15V, 24V, 48V, 72V, 110V, 115V, 125V, 127V
- **Protection**  
Short circuit, overload, thermal
- **High efficiency up to 95%**
- **input / output isolated**
- **Low ripple**
- **Excellent regulation**
- **Extend temperature range version**
- **Application:**  
- Photovoltaic, wind power  
- Regulation of a varying voltage



### DC-DC Converter or DC-AC sinusoidal converter AC-DC High density POWER SUPPLY

WRHD



GET A  
QUOTE

- **Power from 25 to 1000 watts** High density
- **Wide range of voltage**  
inputs DC : 12Vdc....370Vdc  
AC : 85Vac...530Vac  
output DC : 12Vdc....125Vdc  
AC : 115Vac / 230Vac 50Hz/60Hz
- **Protection**  
short circuit, overload, thermal
- **Up to 96% efficiency**
- **2500V input/output isolation**
- **Wall , DIN rail or Rack mounting**
- **Application**  
- Solar, battery, Fuel cells  
- Automatism, renewable energies



# Power supply and DC-DC converter

## Battery charger

[300 Watts industrial battery charger 12V, 24V, 48V  
for lead acid battery and lithium battery](#)

[CHL300](#)



GET A  
QUOTE

- **3 stages charger :** fast / normal / float

Constant current, constant voltage, maintenance current

- **300 Watts power** high power density

• **12V battery** from 60Ah to 200Ah

• **24V battery** from 30Ah to 100Ah

• **48V battery** from 15Ah to 50Ah

• **Input voltage** 115 / 230 Vac

• **Protection :** short-circuit,  
reverse polarity, overvoltage, thermal

• **High efficiency up to 88%**

natural air cooling

• **LED loading indication**

RED: charging, GREEN: end of charge

• **Wall mounting or DIN rail mounting**



## Redundancy module

[REDUNDANCY MODULE with DIODE: MPA2 MPA2L  
250Vdc / 127Vdc / 110Vdc / 48Vdc / 24Vdc / 12Vdc](#)



GET A  
QUOTE

- **For parallel connection of 2 DC power supplies**

Increases system availability and safety

Ensures uninterrupted redundancy when one of the power supplies fails.

• **MPA2L(HV) : 12Vdc ... 127Vdc (280Vdc) maxi 10A**

Low dissipation, dropout voltage < 1V

Option : control relay

• **MPA2 : 24Vdc version**

+ monitoring relay  
for power supplies diagnosis

+ resettable thermal protection  
for each power supplies

Option: inrush current limiter

until the output voltage is set.

• **Application**

Uninterruptible power supply,

installation requiring a high level of availability.



[REDUNDANCY MODULE with DIODE: 24Vdc - 20Amp  
MPA24-20](#)



GET A  
QUOTE

- **For parallel connection of 2 DC power supplies**

Increases system availability and safety

Ensures uninterrupted redundancy

Allowing the replace of one power supply without stop

• **24Vdc output, up to 20A**

Control relays and signalisation Led  
allowing the diagnosis of power supplies

• **Application**

Uninterruptible power supply,

installation requiring a high level of availability.



[REDUNDANCY MODULE with DIODE: MPAx  
250Vdc / 127Vdc / 125Vdc / 115Vdc / 110Vdc / 48Vdc / 24Vdc](#)



GET A  
QUOTE

- **For parallel connection of 2 DC power supplies**

Increases system availability and safety

Ensures uninterrupted redundancy

Allowing the replace of one power supply without stop

• **Using range : 20Vdc ... 280Vdc**

**MPA3** : 20A nominal, 30A maxi (natural convection)

**MPA4** : 40A nominal, 50A maxi (ventilated model)

**MPA5** : 200A nominal, 250A maxi (ventilated model)  
monitoring relay in option

• **DIN rail or wall mounting**

• **Application**

Uninterruptible power supply,  
installation requiring a high level of availability.



E 32

# Power supply and DC-DC converter

## Inrush current limiter

### INRUSH CURRENT LIMITER

AC + DC

LCA36

GET A  
QUOTE

- Limiting the inrush current at start-up

avoid to oversize protections  
protection of power sources like batteries  
increases system availability and safety  
avoid the blocking of power supplies

- Wide operational range

Rating voltage 12 to 270Vac or dc  
Rating current up to 16A

- Applications

Current clamping for capacitive loads  
DC/DC converter, power supply ...



### INRUSH CURRENT LIMITER

for DIRECT CURRENT

LCA25

GET A  
QUOTE

- Limiting the inrush current at start-up

current clamping for capacitive load or DC-DC converter  
avoid to oversize protections  
increases system availability and safety  
avoid the blocking of power supplies

- Wide operational range

Rating voltage 20 to 270Vdc  
Rating current up to 3A



### active INRUSH CURRENT LIMITER temporized action

Type: LCA37

GET A  
QUOTE

- Limites the inrush current at start-up

avoid to oversize protections  
protection of power sources like batteries  
increases system availability and safety  
avoid the blocking of power supplies

- Wide operating range possible

Nominal voltage from 20Vdc to 300Vdc  
or 48 Vac to 265Vac  
Nominal current up to 16A  
Bypass relay embedded

- Applications

Current limiter for capacitive load  
DC/DC converter, power supplies ...



### Active INRUSH CURRENT LIMITER delayed action

high current AC+ DC

LCA125

GET A  
QUOTE

- Limits the inrush current at start-up

avoid to oversize protections  
protection of power sources like batteries  
increases system availability and safety  
avoid the blocking of power supplies  
allows the soft start of motors

- Wide operating range available

Voltage from 20Vdc to 300Vdc or 48 Vac to 265Vac  
Nominal current up to 30A  
Limitation current up to 100A  
Bypass relay embedded

- Applications

Current limiter for capacitive load  
DC/DC converter, power supplies ...



## Surge arrester and overvoltage protection

### surge arrester , modular DIN rail surge protection

transient voltage surge suppressor

Type: PFL25

GET A  
QUOTE

- PFL25-MOV surge protector for power line Ac / Dc

Absorb the lightning impulse and surge  
power line protection in alternative or continuous  
according to EN 61000-4-5 chock wave

- PFL25-TVS limiter, overvoltage arrester

Limit the transient voltage  
Protection for analog lines : PT100 , 4.20mA , ...  
Protection for transmission lines : RS485 , RS232 , ...  
Protection for remote sensors  
according to 61000-4-4 fast electrical transient valve

- Avantages Increase the reliability of systems  
(DC/DC converter , power supplies , instrumentation)

- Application high voltage substation, variable speed drive



# Remote input / output

## BUS100 description

[Remote modular Input / Output system, ETHERNET link type BUS100](#)

- 1 Ethernet Modbus TCP link for 12 modules (optional Wifi or GSM network)

Internal bus for communication between modules

- **Input / Output communicating module**

Up to 24 isolated inputs/outputs by module

- **temperature inputs module**

RTD (PT100, PT1000)

Thermistor CTN , CTP

Thermocouple (B,E,J,K,R,S,T,...)

- **Process input module**

0...1....5....10Volts ; 0...4....20mA ; ....

- **Digital input Module**

Read state, counting, time measurement

- **Relays output module**

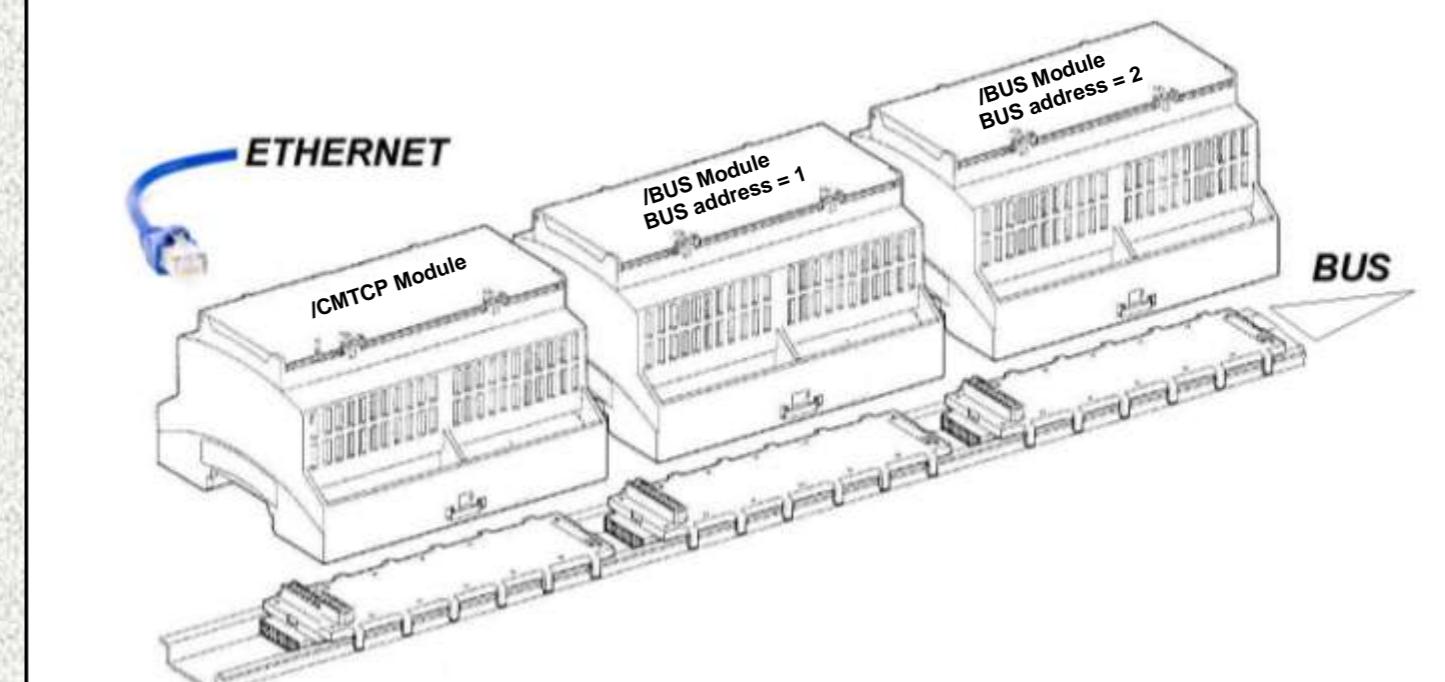
Command, alarm, ...

- **Analog outputs module**

0...4..20mA, 0....10V, +/-10V, +/-20mA

- **Wattmeter, energy meter module**

Measure : voltage, current, power, phase, energy, ....



## Application :

- remote measuring and command interface for calculator, PLC, PC ...
- Monitoring, supervision, management .....

## Analog inputs

[Isolated 4 channels analog measurement device.](#)

[Remote analog acquisition](#)

[type : CML70](#)

[GET A QUOTE](#)

- 4 isolated analog inputs

CML70T thermocouple, PT100 3 wires

CML70P 0.4...20 mA and 0...10V

CML70PT4 thermocouple, PT100 4 wires

- individual configuration of each inputs.

- 1 alarm threshold by input.



## Communication :

- Modbus RTU
- Modbus-TCP (Ethernet) 6 simultaneous connections
- Embedded web server
- SNMP

## Application :

- Acquisition interface, measure, control, monitoring: motor, transformer, alternator ...
- protection relay: temperature, pressure, current....

[Measurement unit, remote acquisition unit](#)

[Temperature, current, process](#)

[CML100](#)

[GET A QUOTE](#)

- Up to 16 measure inputs per module

Rtd sensor inputs (PT100 , PT1000)

Thermocouples inputs (J,K,S,T)

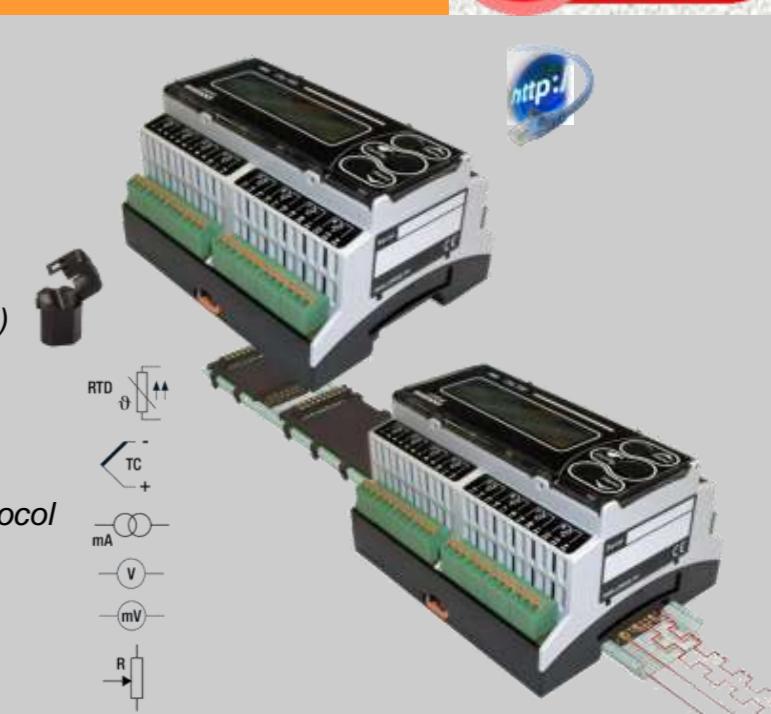
Thermistor CTN , CTP inputs

0...1....5....10Volts ; 0...4....20mA

Strain gauges

Current : 0...5A.....100Aac

with small split core transformer (Tio Dc)



## Ethernet Modbus TCP / SNMP link

6 Modbus TCP concurrent connections

Bus connection onto the DIN rail

Embedded Web Server and SNMP protocol

## RS485 Modbus RTU link

## 2 threshold relays

Local alarm

[High-accuracy measurement unit with isolated inputs](#)

[Type: CML106](#)

[GET A QUOTE](#)

- 8 isolated analog input, temperature and process

- 4 input channels for 4-wires PT100

- 4 input channels for 4...20 mA current

## Communication :

- Modbus-TCP (Ethernet) 6 simultaneous connections
- Embedded Web Server



## Application :

- measurement, control, management
- acquisition interface
- monitoring: motor, transformer, generator ...
- protection: temperature, pressure, current ....



[Remote acquisition unit with isolated inputs for Temperature or process](#)

[Type : CML105](#)

[GET A QUOTE](#)

- 8 isolated analog inputs, temperature and process

CML105T mV, thermocouple, PT100

CML105P 4-20 mA and 0-10V

Individual configuration of each input.

2 alarm thresholds per input.

## Communication :

- Modbus RTU RS485
- Modbus TCP (Ethernet), 6 simultaneously connections
- Embedded Web Server
- SNMP



## Application :

Acquisition interface, protection relay



## Digital inputs

[Pulse concentrator / remote digital inputs](#)

[Parallel to Ethernet converter](#)

[TYPE : ELL100](#)

[GET A QUOTE](#)

- from 4 to 16 digital inputs with functions:

State registers

32 bits counters

"ON" and "OFF " elapsed time counters

inter-pulse duration (power or flow rate)

frequency up to 6 Hz



## Ethernet Modbus TCP or SNMP link

Bus connection possibility onto the DIN rail

Embedded Web Server

Option: Power over Ethernet (POE)

## Application:

Interface for metering electrical energy, gas, water, air.

State control, operating hours counting.....

Remote diagnostics, test equipment, automation, .....

Parallel (Gray, BCD, Binary) to Ethernet converter

## Analog outputs

Remote communicating module with analog and relay outputs : SRAL165

## Digital outputs

Remote communicating module with relay outputs: SRL165

# Special functions

## Silo temperature monitoring

[Transmitter and repeater for SILO temperature sensor](#)  
PT1000 or CTN ATEX zone 21 and 22

[TNL120](#)

[GET A QUOTE](#)

- up to 24 temperature inputs per module

Configurable : - PT1000 platinum probes.  
- NTC, PTC thermistor.

+ Ambient temperature measurement.

- Bidirectional RF link

2.4 GHz band according to IEEE802.15.4.

- Great autonomy

> 3 years with 4 AA lithium batteries  
with a refresh rate of 5 minutes  
or 24Vdc auxiliary power supply

- Fully compatible

With sensors: Chopin, Serdia,  
Tripette and Renaud, JUMO, MAI, Foss.  
easily replaces these solutions:  
No multiplexing, no adjustment.

- Upgradable

- Incorporation of new sensors curves  
by updating the product.

- Characterization of measuring elements  
on request (Plot of temperature curve).



[Radio link receiver hub](#)  
[Ethernet MODBUS-TCP output](#)

[SML160](#)

[GET A QUOTE](#)

- Bidirectional RF link

2.4 GHz band according to IEEE802.15.4  
Up to 32 transmitters per receiver on one network  
Several networks can coexist  
Integrated or remote antenna

- Communication

- Modbus TCP (Ethernet) 6 concurrent connections  
- Embedded web server (viewing and configuration)

- Power supply over Ethernet cable

- Power over Ethernet (PoE)

- Indoor, outdoor use

- Integrated antenna  
- IP66 waterproof



[Silo temperature monitoring unit](#)

[CML36](#)

[GET A QUOTE](#)

- 14 temperature measures per module

RTD PT1000, Thermistor CTN inputs

- Power supply and communication bus

Into the DIN rail. up to 32 modules Interconnected

- 1 Ethernet Modbus TCP link

For the entire BUS, up to  
448 measurement points,  
embedded Web Server



- ATEX dust zone 21 and 22 :

Mounting in a box, all certified : II 2 D Ex tb IIIC T80°C Db

- Application:

Silo-thermometry, Acquisition Interface for PLC,  
process monitoring, supervision ...

- fully compatible:

With silo sensors: Chopin, Serdia, Tripette and Renaud, JUMO, AMI, Foss ....  
Advantageously replaces these solutions: no multiplexing, no adjustment,  
automatic detection and compensation of sensors

- Upgradable : introduction of new sensors curves by product update.

Characterization of measuring elements on request (record of the curve).



[Silo temperature monitoring unit  
for digital sensors](#)

[CML36N](#)

[GET A QUOTE](#)

- 24 temperature measures per module

2 or 3 wires digital sensors  
DS18B20 type for sensor elements  
automatic detection of the sensors in the probe

- Power supply and communication bus

Incorporated into the DIN rail.  
32 modules Interconnection

- 1 Ethernet Modbus TCP link

for all the BUS,  
1472 measurement points.  
Embedded Web Server

- ATEX dust zone 21 and 22 :

boxed, the whole is certified : II 2 D Ex tb IIIC T80°C Db

- Open solution:

full compatibility with digital silo sensors: AMI and OPi (2 or 3 wires)  
Advantageously replaces these solutions: the failure of a sensor does not cause  
the loss of several probes (probe bus separation)

evolving system: introduction of a new digital sensors type by product firmware update



## Frequency divider

[FREQUENCY DIVIDER](#)  
[PULSE DIVIDER](#)

[DFL35](#)

[GET A QUOTE](#)

- Voltage or dry contact input

- Selectable division factor  
from 2 up to 4096

- Isolated, potential-free output contact  
200Hz max output frequency

- Galvanic isolation

- Application  
frequency adaptation, flow, speed,  
pulse distribution, signal shaping,  
signal level adaptation,...

- AC or DC power supply. 5Vdc to 400Vac



## Setpoint generator (current - voltage)

[PANEL METER SETPOINT GENERATORS](#)  
4..20mA or 0..10V analog output

[GET A QUOTE](#)

- Setpoint generator voltage or current output 0..10V , 4..20mA , 0..20mA , ...
- Several setting mode potentiometer, push button, switches, logical input
- Wide range of enclosure size 72x36mm , 96x48mm , 96x 96mm , 144 x 72 mm



## Switch / selector

[SWITCH FOR THERMOCOUPLE, PT100, mA](#)  
[COM48 COM96 COM192](#)

[GET A QUOTE](#)

- COM48 COM96

- Passive blind switch  
- 96 x 48 mm or 96 x 96mm format  
- up to 24 positions  
- For digital or analog signals

- COM96/A

- 10 000 points display  
- Analog output in option

- COM192

- Version with momentary contact switches

- High adaptability

- Switching a wide range of signals  
- mV, mA, Volt, PT100, thermocouples, .....

- Excellent reliability

- Low resistance golden switches  
- Very low thermoelectric emf



# Special functions

## Relay interface and PLC inputs

[Interface relay / Contactors plate /Pulse replicator](#)

[Pre-wired PLC outputs](#)

Type : IRL

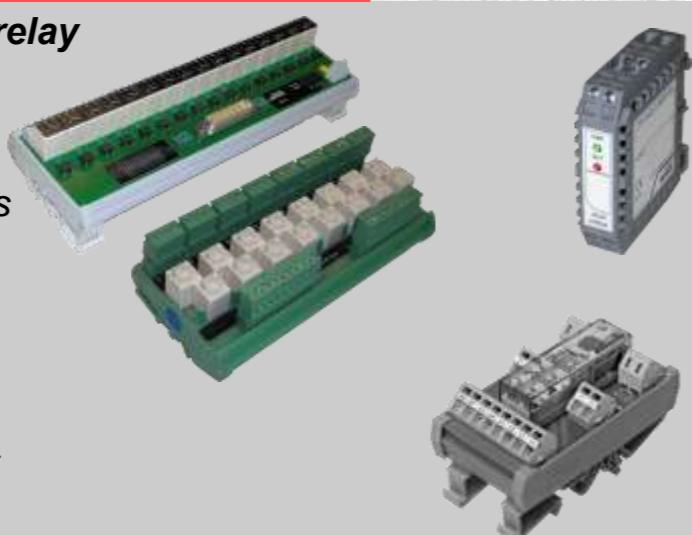
 GET A QUOTE

- Standard interface : 1, 2, 4, 8, 16 or 32 relay

PLC interface  
pulse replicator (IRL25-2)

Connections:

- screw terminal, spring terminal blocks
- SUBD, HE10, ...



- SIL2 option : with safety relay  
all contacts are forcibly guided contact according to EN50205

- Interface relay or specific contactors:

Electromechanic or static up to 50A on PCB

On specific specifications

No minimum quantity

power interface for machines

coil voltage up to 127Vdc / 400Vac



[Insulation and digital level adaptation interface \(optocoupler\)](#)

Type : OPT25ig

 GET A QUOTE

- Standard insulation interface : 1,2,4, 8, 16 or 32 channels

Interfacing with PLC

Impedance or level adaptation

digital level isolator

- can be used in digital input or output

- EMC protection



- Board for specific interface

According to customer specifications :

Impedance or level adaptation

and EMC protection

Communicating version on industrial bus

(Profibus , Modbus , Modbus TCP, .....)

[Prewiring system for PLC Connection interface](#)

IAL8

 GET A QUOTE

- Connection interface standard : 8 channels

PLC interface

Inputs limitation and protection

Visual diagnosis with led

Available in RTD100 inputs,  
0..4..20mA inputs or output



- Specific interface board

according to user specific request

for all type of inputs signal, number of channels

CEM protection and limitation

Communicating version with industrial protocols

(Profibus , Modbus , Modbus TCP, .....)

## Sequencer

[SEQUENCER for DEDUSTING / CLEANING PLANTS](#)

TYPE : SEO165

 GET A QUOTE

- 16 outputs relays

Breaking capacity of 250V-6A

- Programmable cycle

Automatic, timed or manual starting

- Application

dedusting valve,  
cleaning unit,

- Application

dedusting valve,



## Line continuity monitoring

[Line monitoring module , continuity detector SIL2 / SIL3](#)

DCL105-8

 GET A QUOTE

- 8 simultaneous lines monitoring

1 green Led per channel "line ok, presence of load"

1 red Led per channel "line break , missing load"

1 inhibition switch per channel

1 relay output : synthesis / watchdog

- Control load presence when powered or not

By injection of a quiescent current (0.3mA)

Wide range of load capacity (from 10 mA to 2A)



- Analog technology

Allowing to increase functional safety

- Operational Safety level : SIL2 / SIL3

According to IEC 61508

- Applications

Load Monitoring for safety devices (siren, horn, flash, flashing light)

- Continuity check for indicator lights and warning lights

## RFID reader

[125KHz RFID reader, ethernet MODBUS-TCP link](#)

RFID90

 GET A QUOTE

RFID

- Reader for EM4102 iso card tags

- Frequency 125Khz, read distance <10 cm



- Communication

- Modbus TCP (Ethernet) 4 concurrent connections.

- Embedded Web Server.

- SNMP option.

- Specific protocol on request.



- Dual power supply

- Power over Ethernet (PoE).

- Auxiliary power supply 8....28 Vdc.



- Applications

- Access control, automatic identification, inventory tracking, payment systems.

etherenetPoE

- Indoor or outdoor use

- Integrated antenna.

- IP66 protection.



## Communicating battery charger

[Communication battery charger with Ethernet link](#)

For Lithium, Nimh, or Nicd battery

CHL70

 GET A QUOTE



- Battery charger for automatic charge bench

Programmable charge current setpoint

programmable compliance voltage

battery voltage measurement

charge current measurement

continuous regulation of setpoint current

protection circuit for over voltage or short circuit

Relay for battery disconnecting

Relay for battery report on external circuit



- Ethernet Modbus tcp link

Embedded web server

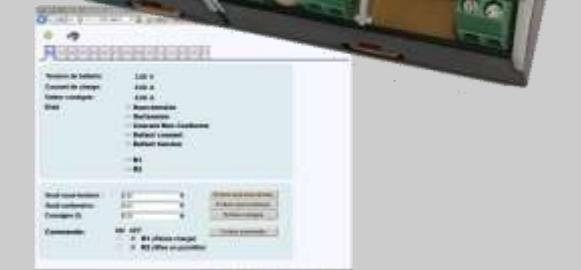
- Internal communication bus

incorporated in DIN rail support

up to 15 charger on one bus

- Application :

Intelligent automatic charger



## Special functions

### High frequency transmission and GSM

[Modular temperature transmission with GSM network for isolated sites](#)

SGL70

GET A QUOTE



[HF radio temperature transmitter wireless stand-alone module](#)

EML120 - RML120

GET A QUOTE



[Measurement system with radiofrequency mesh network Emitter for 4-20mA analog signal.](#)

TNL120-mA

GET A QUOTE

- **Bidirectional RF link**  
2.4Ghz band according to IEEE802.15.4 with antenna



- **Maximum reliability**  
Meshing of all devices  
Up to 8 jumps are possible to reach the receiver  
Dynamic reconfiguration of path depending of environment  
Transmission efficiency > 99.999%



- **Analog input**  
4...20 mA + ambient temperature

- **Great autonomy**  
> 2 years avec 4 standard batteries type AA with a refresh rate of 60 seconds or with auxiliary power supply: 5Vdc from 30Vdc

- **Evolving**  
- up to 32 devices per network

### Timer

[Panel mounted timer, delay time  
Programmable timer](#)

type : TML94

GET A QUOTE

- **Timeout period setting by front face**

0 to 999 minutes

- **1A switch over contact relay output**

- **Starting with external digital input**

- **Led display 1000 points**

Display of remaining time  
Led for output relay state indication



### Diode network module

[Diode Network Modules type MDL70 for 250Vdc / 127Vdc / 110Vdc / 48Vdc /24Vdc applications](#)

GET A QUOTE

- **Several configurations available :**  
MDL70-cc : 22 diodes with common cathode  
MDL70-ac : 22 diodes with common anode  
MDL70-dl : 12 diodes for free wiring  
MDL70-xxx : according to custom specifications

- **Wide range of application :**  
Centralization of control signals  
Decoupling of defect signalling system  
Flyback diode for inductive load

- **Diode model configurable on request**  
type BY500-800 by default ( 5A - 800V )

- **Fast transient burst protection in option**  
MDL70 /TVS with transil protection diodes on each input



## Specific customer studies

### Position sensor with Reed contact

type : POSREED

- Analog and all or nothing output**

4..20mA proportional to the displacement  
Dry contact of end of stroke or  
particular position

- Modular design**

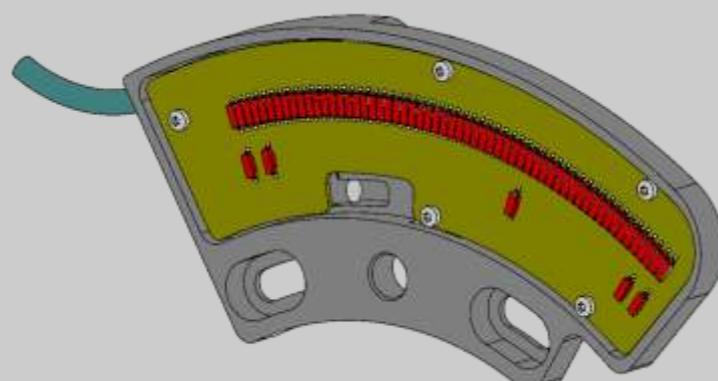
Adapt to a measurement  
linear or angular  
Configurable resolution

- Low response time**

500  $\mu$ s rising time

- High reliability**

lifetime > 10<sup>7</sup> operations



### Measurement, monitoring and remote data transmission module

TRT200

- Monitoring 2 purge stations by TRT200**

- Display and keypad on the front**

- 230Vac power supply or Peltier cell**  
Automatic switching

- Backup battery backup**

- built-in add-ons**

Pressure, analog input  
Hourly counting, pulse counting,  
2 way telephone switch



### Measure interface, VULCATHERM control

VULCANIC type : IO165 reference : 30789-30

- Peripheral module for programmable logic controller**

temperature measurement (PT100 and Thermocouples)  
pressure measurement (4..20mA with sensor supply)

level measurement by resistive probes

digital inputs and frequency (flowmeter)

external setpoint input

relay outputs + integrated fuse protection

motorized proportional valve control output

static relay control (PWM and phase angle)

alarm buzzer output machine

- Modbus RS485 link**

- Local display**



## HEADQUATERS:

LOREME

12, rue des Potiers d'Etain Actipôle BORNY - B.P. 35014  
57071 METZ CEDEX 3

Phone: 03.87.76.32.51 -

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