

Analog to digital converter

TYPE : CAN105

LOREME

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



The CAN105 is an analog to digital converter providing the transfer of an input signal (4...20mA) on parallel digital outputs (in Gray, Binary, or BCD format). The LCD screen allows a quick diagnostic of device (display of input current value, display range, display of state of digital outputs).

Description :

Analog input :

Input passive current 4...20 mA, 225 ohms of input impedance
Max input : 22 mA , 12 bits resolution (4096 points)
Oversampling (1 ms measuring) and measure filtering
Rate of 25 measures per second. (internal cycle of 40 ms)

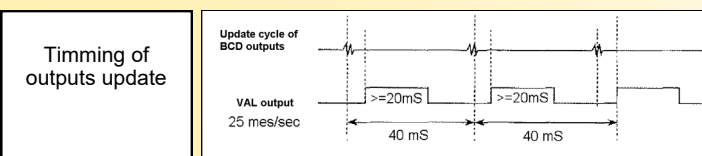
Parallel digital outputs:

- 14 digitals outputs (3.5 digits or 2999 points in BCD)
- 1 enabling output to indicate a stable outputs state

The outputs are made with not polarized static relay. The current in this outputs can be incoming or outgoing. The logical state of outputs can be configured in normally open or normally close.

Outputs are galvanically isolated from input and power supply.
After a power on, the device need a 500ms delay to update outputs.
Maximum switching parameters for digital outputs : 60V / 500mA or 350V/100mA with option "-RHV" (external polarization voltage)

The resolution and the code format are configurable:
BCD , GRAY or BINARY with 1 to 14bits resolution.
The outputs refresh rate is 40ms with a "stable outputs state" time of 20ms (indicated by the state of "VAL"/ "Enable" output).
The output code follow the input measurement until saturation of input (around 22mA).



Communication: (optional)

Ethernet 10/100 base T (connexion RJ45)
Protocol : Modbus TCP on port 502
Functions : Status and measures reading.

Front pannel:

LCD display 2 lines, 16 characters (with backlight)
Display of analogical input signal,
input value in display user range, logical state of outputs,
and coding format.

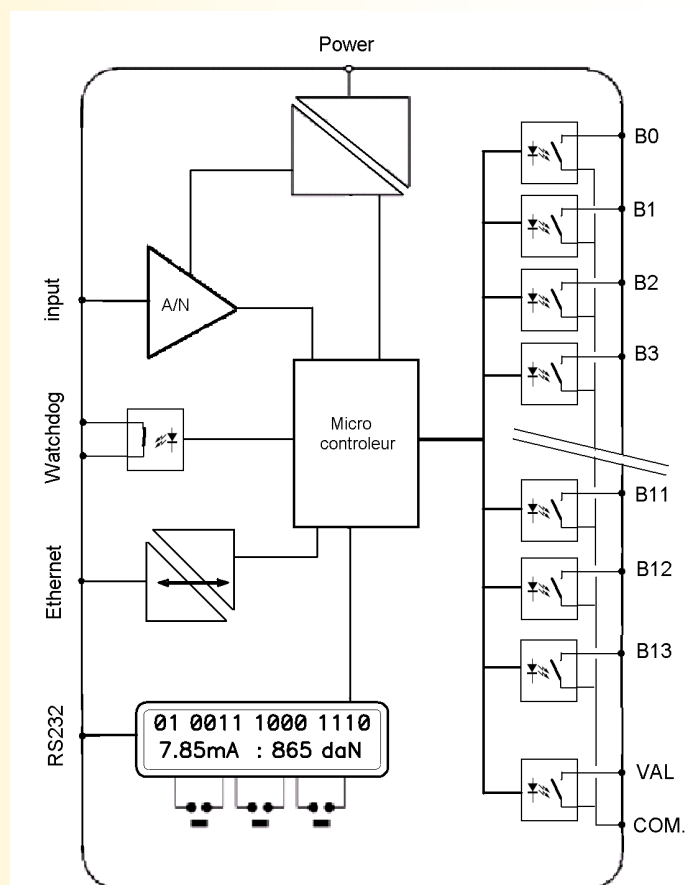
Configuration:

The three push buttons allows the user to easily configure the device.

Feature:

- Rail DIN mounting (symmetrical),
- connection with spring terminal blocks up to 1.5 mm²,
- conformal coating .
- protection rating : IP20 (enclosure / terminal blocks)
- Optional IP65 box mounting
- Watchdog contact (normally close) open in failure detection.

Synoptic:



Version and order code:

CAN105 : Configurable version : BCD, GRAY, BINARY
CAN105-RHV : option for outputs static relays 350V/100mA
CAN105BCD : 4...20 mA input, BCD output
 Fixed version, specific customer code

Communication (Optional):

CAN105xxx/CMTCP : Ethernet MODBUS TCP link

ANALOG INPUT (12 bits resolution)

Type	Range	Accuracy
Current	0 ... 4 ... 20 mA	+/- 10 μ A
Input impedance:	225 Ohms	
Maximum input value:	22 mA (before saturation)	
Measurement rate :	25 per second	+/- 1%
Response time :	40 ms to 60s (programmable)	
(running average, smoothing measurement)		

OUTPUT (14 bit + Val.)

Static relay (MOS FET) technology
 Maximum voltage switching: 60V not polarized
 (AC or DC switch)
 Maximum current switching: 500 mA
 (current derating : 5 mA /°C for T°amb > 25°C)
 Opening Leakage current : 1 μ A
 Closed resistance : < 2 ohms
 Closed time response : < 2 ms
 Open time response : < 0.5 ms
 (All outputs have a common point)

Option relays - **RHV** (High voltage static relays version)
 Maximum voltage switching : 350V not polarized (AC or DC)
 Maximum current switching: 100 mA

POWER SUPPLY (to define at order)

20 to 70 Vac-dc, 3 VA or 85 to 265 Vac-dc, 3 VA or 11 to 30Vdc, 3 VA

COMMUNICATION

Ethernet 10 /100 Base T, RJ45 connector,
 Protocol Modbus TCP : Port 502
 Maximal Rate : 25 request / second.

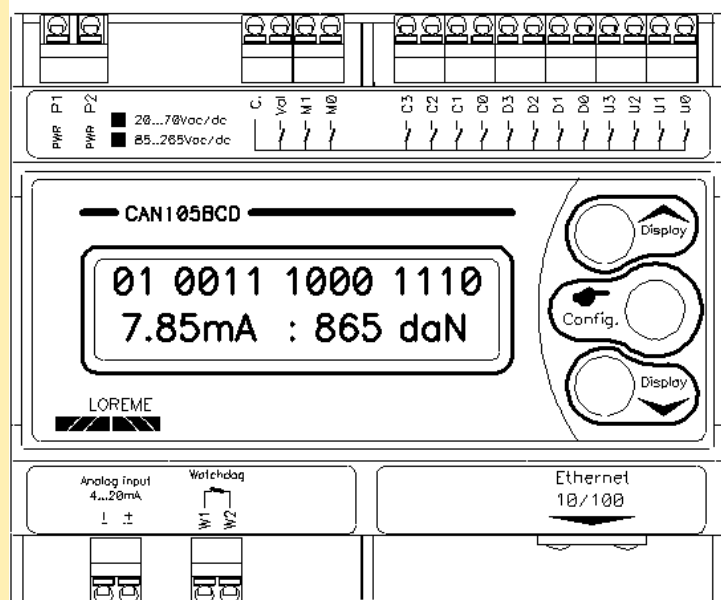
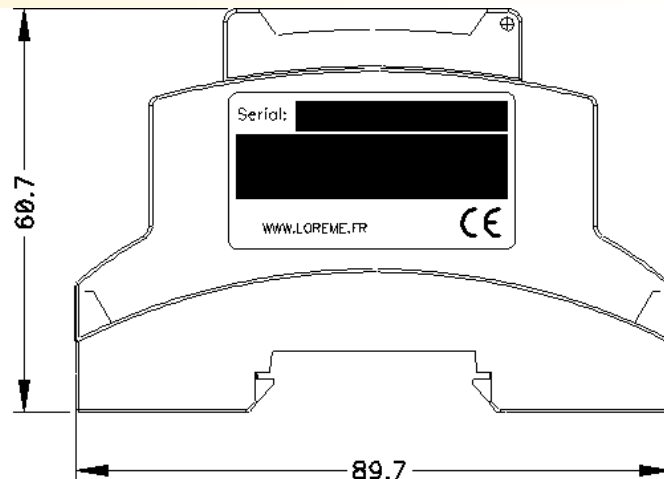
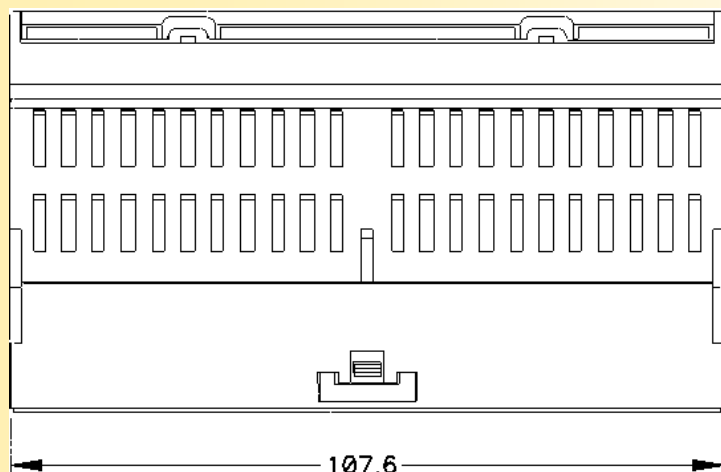
ENVIRONMENT

Operating temperature	-20 to 60 °C
Storage temperature	-20 to 85 °C
drift	< 0.01 % / °C
Humidity	85 % not condensing
Weight	250 g
Protection rating	IP 20
Dielectric strength :	1500 Vrms continuous
(Input / power supply / output)	

No isolation between outputs: Common point.

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

Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	EN 61000-4-8 AC MF	EN 55011 group 1 class A
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
EN 61000-4-4 EFT	EN 61000-4-11 AC dips	
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	
EN 61000-4-6 RF	EN 61000-4-29 DC dips	

**WIRING AND OUTLINE DIMENSIONS:****OPTION: IP65 BOX**

Height: 200mm, width (external):159mm, depth: 112mm
 Colour : Light Grey Protection: IP65 Material: Polystyrol