

Diode matrix encoder decoder (Tap position, Tap changer) Decimal binary gray bcd converter

MDL107

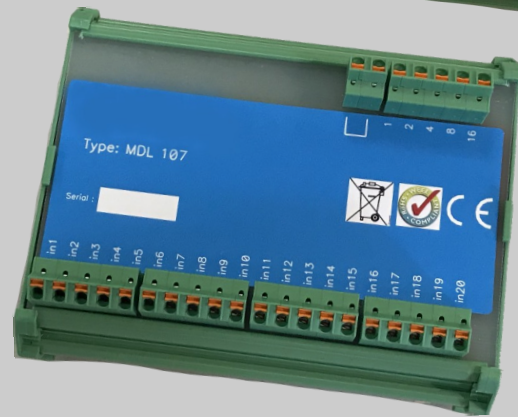


• Many design available:

- Decimal to binary
- Decimal to BCD
- Decimal to Gray
- or according to customer specifications
- up to 32 inputs
- Optional LED for status indication

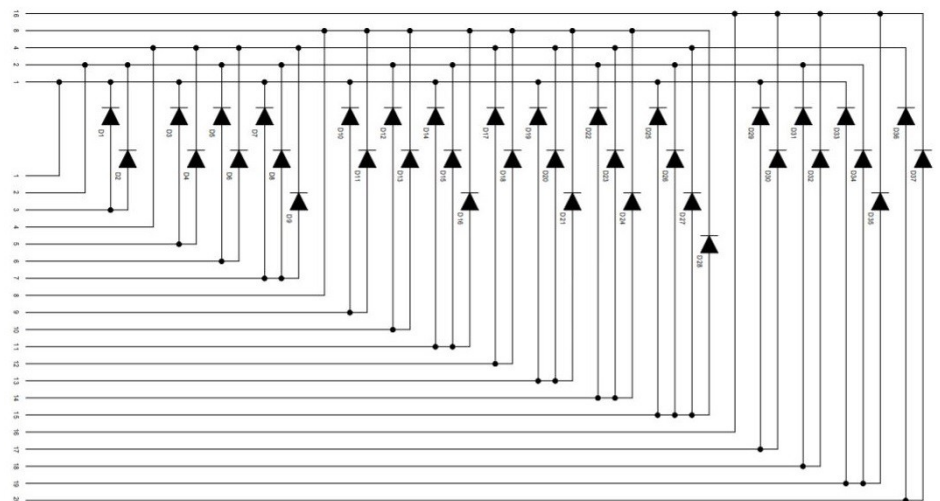
• Wide range of applications :

- PLC interface
- Button keyboard encoding
- Simple logical function



The diode matrix module MDL107 is made for classic functions of digital input encoding it is distinguished by its great adaptability to the constraints of each application : encoding type (binary, gray, bcd). The diodes reference may be adapted to users specific needing.

| Decimal number | Binary Code | | | | Gray Code | | | |
|----------------|-------------|----|----|----|-----------|----|----|----|
| | B4 | B3 | B2 | B1 | G4 | G3 | G2 | G1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 3 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 4 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 5 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 6 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| 7 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 8 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 9 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| 10 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 11 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 12 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| 13 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 14 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |



Feature, implantation and wiring

- Symmetrical DIN rail mounting according to EN50022
- Wiring on spring terminal blocs (1.5mm² section)
- Protection rating IP20 + conformal coating
- LED for inputs status indication in option
- customer number assignment for specific diodes or schema
- Great EMC protection
- Surge protection 24Vdc to 400Vdc in option

Applications

- Keyboard interface for PLC
- Discrete logical function
- Alarms grouping

Version and order code:

[Request a quote](#)

- MDL107-Binaire-ee** : ee up to 32 inputs, binary coding
- MDL107-Gray-ee** : ee up to 32 inputs, gray coding
- MDL107-BCD-ee** : ee up to 32 inputs, BCD coding
- MDL107-xxx** : following specific user schema

diodes type RR264M-400 in standard (1A - 400V)
other type of diodes possible on request

- Option : **/TVS** with transient voltage suppression diodes (rated operating voltage to be defined)
- /A** LED for indication of inputs status

Technical specification of standard diodes

Type RR264M-400
 maxi reverse voltage : 400V
 direct current : 1A
 switching time : < 100us
 reverse current : 10uA @ 400V
 forward voltage : 1.1V @ 0.7Adc

OPTION TVS (surge protection)

voltage input limiter : from 30Vdc to 400 Vdc bidirectional
 limiter type "transil diode" : 600 W (10 / 1000 us)

ENVIRONMENT

Operating temperature: -25 to 60 °C
 Storage temperature: -40 to +85 °C
 Humidity: 85 % non condensing

Protection rating: (following : EN 60 529) IP 20

Weight: 150 g.

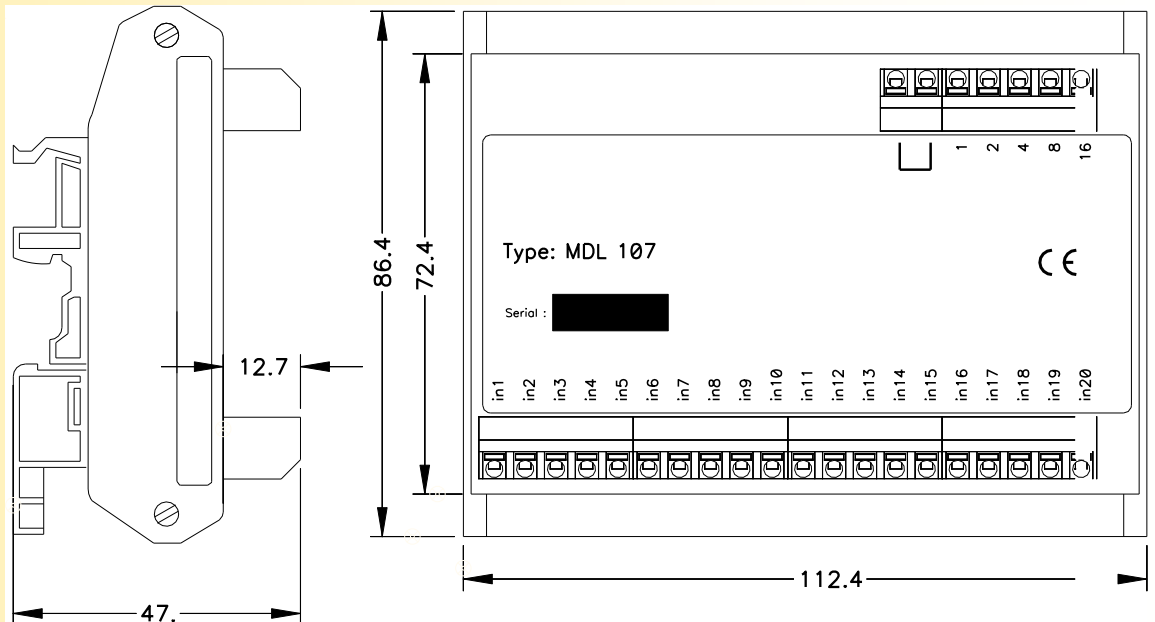
MTBF (MIL HDBK 217F) > 6 000 000 Hrs @ 25°C
 Life time > 500 000 Hrs @ 30°C

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

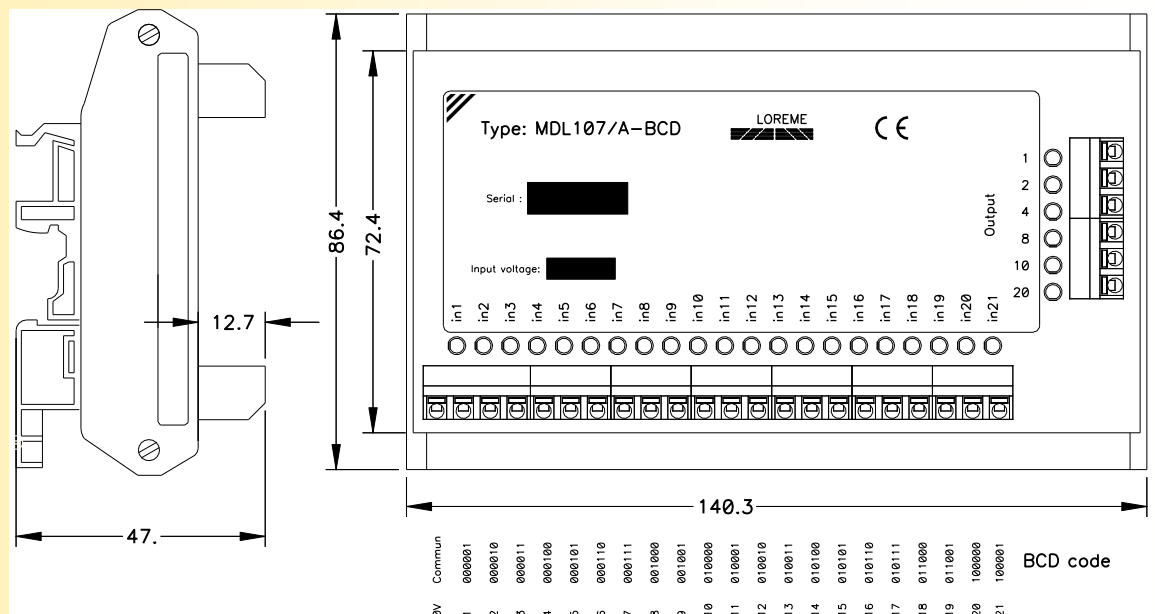
| Immunity standard for industrial environments EN 61000-6-2 | | Emission standard for industrial environments EN 61000-6-4 |
|---|-------------------------|---|
| EN 61000-4-2 ESD | EN 61000-4-8 AC MF | EN 55011 group 1 class A |
| EN 61000-4-3 RF | EN 61000-4-9 pulse MF | |
| EN 61000-4-4 EFT | EN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

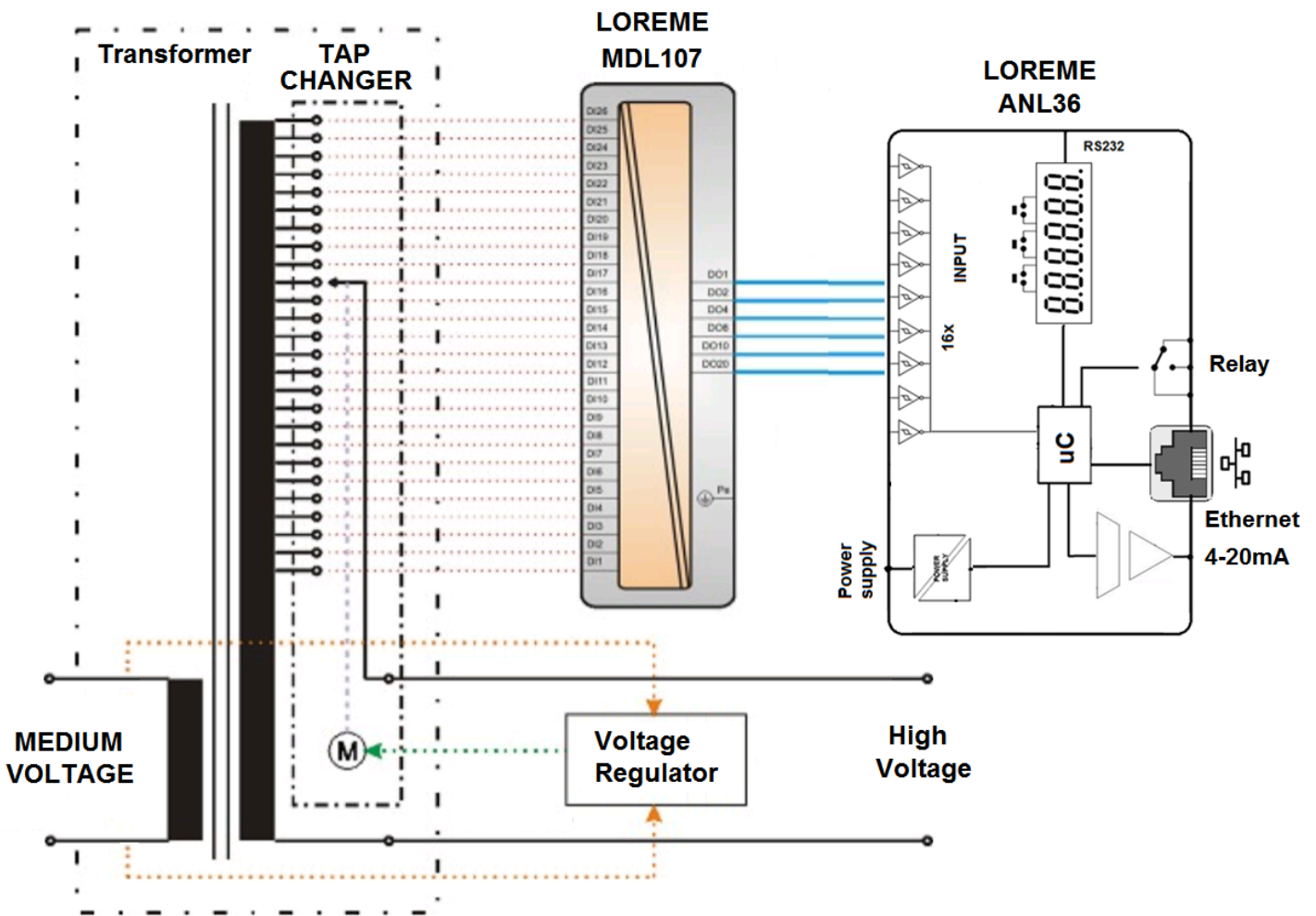
WIRING AND OUTLINE DIMENSIONS:

**Version
20 input
binary output
without LEDs**



**Version
21 input
BCD output
With LEDs**





6 DIGITS DISPLAY with BINARY, BCD, GRAY inputs, 4-20mA output and Ethernet ANL36

- **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
- **Application :** Interface for parallel output encoders
http://www.loreme.fr/fichtech/ANL36_eng.pdf

