

Diode matrix encoder decoder Decimal binary gray bcd converter

• **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

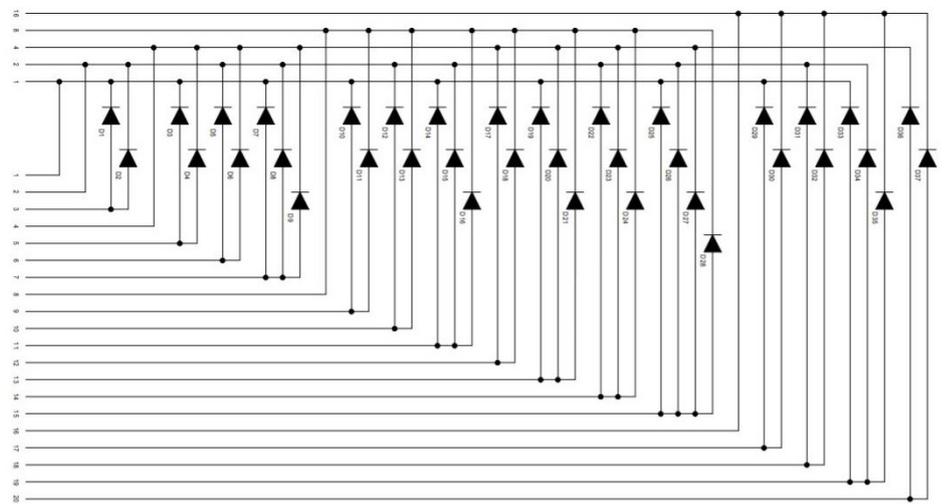
• **Wide range of applications :**

- 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

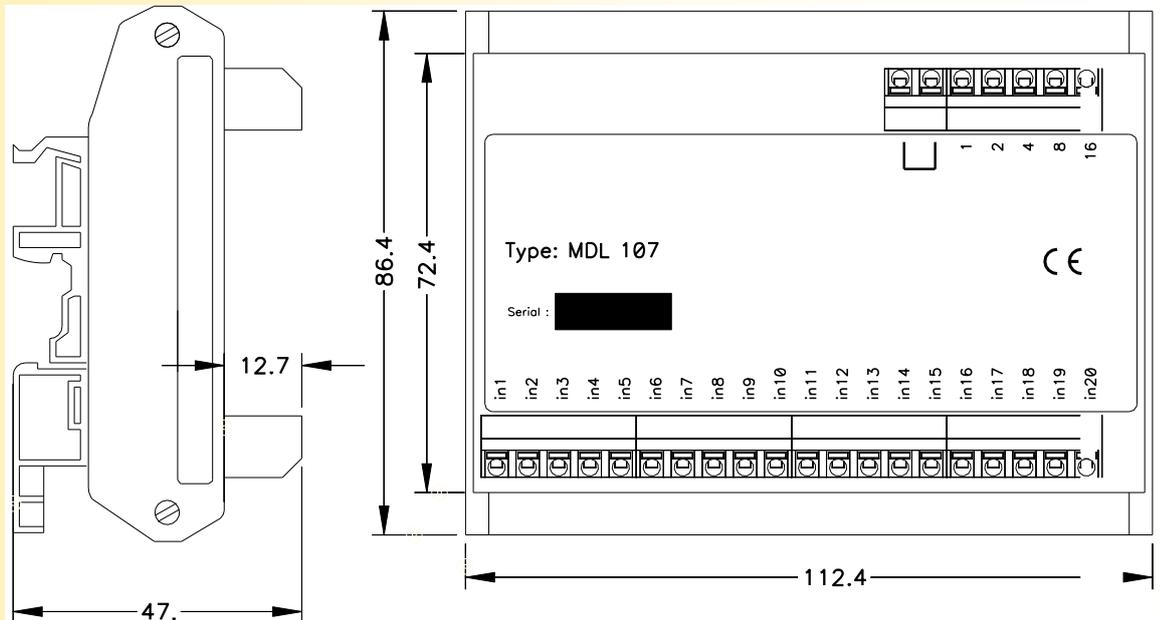
Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

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**

