

## 2081 Panelmeter for BCD, Gray and Binary inputs

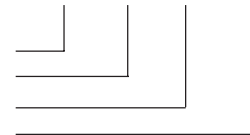
- 5-digit display
- BCD, Gray and Binary inputs selectable
- Red or green display
- Configuration easy via front panel keys
- Easily changeable for other sensor inputs
- Power supply 85..240 VAC or 12..32VDC/ 24 VAC
- Front panel protection IP65



The panelmeter 2081 is designed for BCD, Gray, and Binary code inputs. Input selection is easy via front panel keys. There are two power supply alternatives, 85..240 VAC and 12..32 VDC or 24 VAC, both galvanically isolated from inputs. The panelmeter generates power supply of 24 VDC, 100 mA for e.g. the closing contacts of the PLC. Brightness of the display is selectable. Front panel protection is IP65.

The panelmeter series 2000 is very flexible and easy to modify by changing input cards for different kinds of sensors, such as temperature sensors, pulse sensors, serial inputs etc. The modification does not require any calibration. The optional cards are the same for all the instruments in this product family. Each panelmeter type has its own datasheet.

|                        |                                   |
|------------------------|-----------------------------------|
| Input                  | 1 = 5-24 VDC, 0 = <1V             |
| Input resistance       | >10kΩ                             |
| Operating temp.        | -10..+60 °C                       |
| Terminals              | removable, 1,5 mm <sup>2</sup>    |
| Supply for input loop  | 24 VDC, max 150 mA                |
| Power supply           | 85..240 VAC or 12..32 VDC/ 24 VAC |
| Front panel protection | IP65, with a rubber gasket        |
| Weight                 | 240 g                             |



### Technical specifications:

|                |   |          |
|----------------|---|----------|
| Display:       | BCD code  | 5 digits |
|                | Gray code   | 0..65535 |
|                | Binary code   | 0..65535 |
| Display colour | bright red (or green) LED,<br>brightness selectable |          |
| Digit height   | 14.5 mm   |          |

| Dec. | 4-bit Binary                          | 4-bit Gray Code                       | Display |
|------|---------------------------------------|---------------------------------------|---------|
| 0    | <sub>MSB</sub> 0 0 0 0 <sub>LSB</sub> | <sub>MSB</sub> 0 0 0 0 <sub>LSB</sub> | 0       |
| 1    | 0 0 0 1                               | 0 0 0 1                               | 1       |
| 2    | 0 0 1 0                               | 0 0 1 1                               | 2       |
| 3    | 0 0 1 1                               | 0 0 1 0                               | 3       |
| 4    | 0 1 0 0                               | 0 1 1 0                               | 4       |
| 5    | 0 1 0 1                               | 0 1 1 1                               | 5       |
| 6    | 0 1 1 0                               | 0 1 0 1                               | 6       |
| 7    | 0 1 1 1                               | 0 1 0 0                               | 7       |

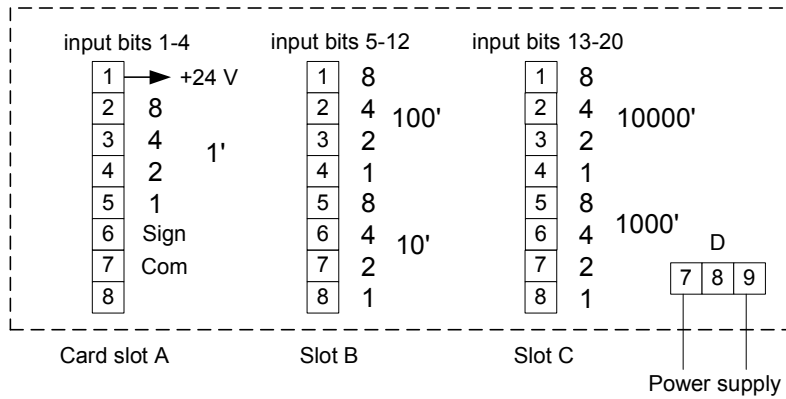
Applications:  
Binary code is simple to use from PLC I/O-lines. Gray code changes only one bit at a time. The most common Gray code application is angle sensors (aerials etc.)

| BCD-Code |            |         |
|----------|------------|---------|
| Number   | Code       | Example |
| 1        | 8, 4, 2, 1 | 0001= 1 |
| 2        | 8, 4, 2, 1 | 0010= 2 |
| 3        | 8, 4, 2, 1 | 0011= 3 |
| 4        | 8, 4, 2, 1 | 0100= 4 |
| 5        | 8, 4, 2, 1 | 0101= 5 |
| 6        | 8, 4, 2, 1 | 0110= 6 |

**Number 9 in BCD code is selected as 1001**  
i.e. 1001 = 8 + \_ + \_ + 1 = 9

## Terminal connections:

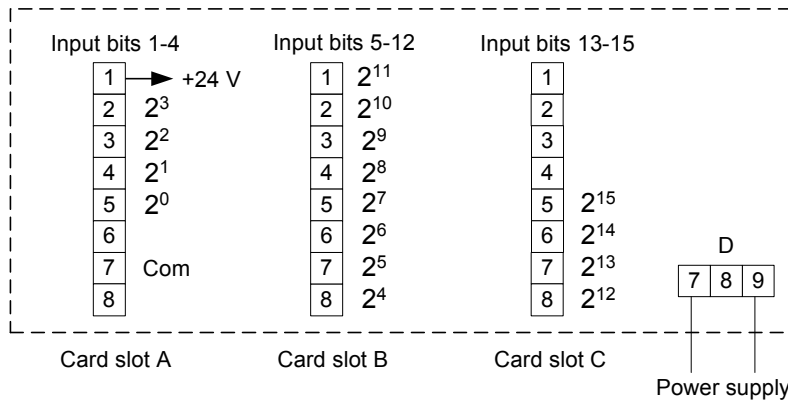
### BCD code connection



A number is displayed by connecting voltage (+24 V) to the appropriate terminals. For example the reading 123 appears by connecting 24 V to terminals A5, A4, B7 and B4. Voltage supply 24 V, max 100mA, terminals 1(+) and 7 (-).

Power supply 85..240 VAC or 12..32 VDC / 24VAC. No polarity.

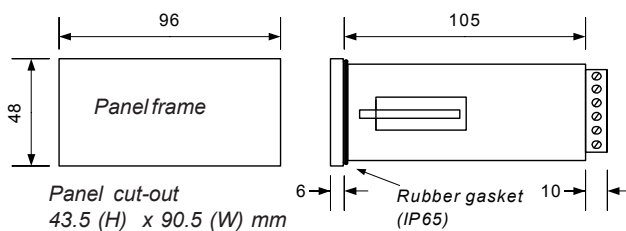
### Binary and Gray code connection



The bit is '1' when voltage is 5-24V and '0' when voltage is 0V. For example binary value 123 is selected by connecting '1' to connectors A5, A4, A2, B7, B6, B7 and B8. Voltage supply 24 V, max 100mA, terminals 1(+) and 7 (-).

Power supply 85..240 VAC or 12..32 VDC / 24VAC. No polarity.

## Dimensions:



Card slot A is for sensor inputs and slots B and C for optional cards.

Adding optional cards is fast and simple without any tools.

