

# W 32 × H 57 mm 7-segment Display Units



## D1SC-N Series CATALOG

**For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.**

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

### Features

- Selectable decimal (0 to 9)/hexadecimal (0 to 9, A to F) display, input logic (positive/negative), data input method (serial/parallel)
- 12 - 24 VDC power supply
- Wide range on signal input voltage level (Low : max. 0 - 1.2 VDC, High: 4.5 - 24 VDC)
- Zero Blanking function

### Product Components

- Product × 1
- Instruction manual × 1
- Connector × 1
- Housing [5264-10] × 1
- Terminal [5263 (PBT)] × 1
- Sub-PCB for multi-stage connection × 1

### Specifications

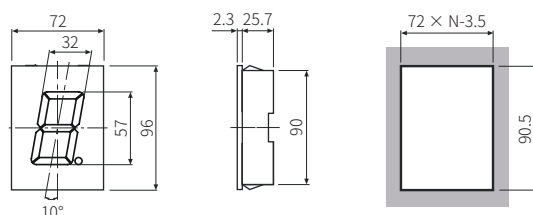
|                                 |                                                                                                                                                               |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Model</b>                    | <b>D1SC-N</b>                                                                                                                                                 |
| <b>Display method</b>           | 7-segment LED (red)                                                                                                                                           |
| <b>Power supply</b>             | 12 - 24 VDC                                                                                                                                                   |
| <b>Allowable voltage range</b>  | 90 to 110 % of power supply                                                                                                                                   |
| <b>Current consumption</b>      | ≤ 70 mA                                                                                                                                                       |
| <b>Character size (W×H)</b>     | 32 × 57 mm                                                                                                                                                    |
| <b>Display character</b>        | Decimal number: 0 to 9, decimal point, Minus<br>Hexadecimal number: 0 to 9, A to F, decimal point, Minus                                                      |
| <b>Input method</b>             | Parallel: Parallel 4-bit data, LATCH, Zero Blanking, decimal point<br>Serial : Serial 4/5-bit data, CLOCK, Zero Blanking, LATCH, decimal point <sup>01)</sup> |
| <b>Input resistance</b>         | 12 kΩ                                                                                                                                                         |
| <b>Input level</b>              | High: 4.5 - 24 VDC, Low: 0 - 1.2 VDC                                                                                                                          |
| <b>Max. Clock<sup>02)</sup></b> | ≤ 3 kHz                                                                                                                                                       |
| <b>Output</b>                   | Data output (serial input), Zero Blanking output                                                                                                              |
| <b>Input logic</b>              | Positive logic (PNP), negative logic (NPN) selectable (function set switches)                                                                                 |
| <b>Insulation resistance</b>    | ≥ 100 MΩ (500 VDC, megger)                                                                                                                                    |
| <b>Noise immunity</b>           | Between the power terminals or input terminals:<br>± 300 V the square wave noise (pulse width: 1 μs) by the noise simulator                                   |
| <b>Ambient temperature</b>      | 0 to 60 °C, storage: -10 to 85 °C (no freezing or condensation)                                                                                               |
| <b>Ambient humidity</b>         | 35 to 85 %RH (no freezing or condensation)                                                                                                                    |
| <b>Approval</b>                 | ERC                                                                                                                                                           |
| <b>Weight</b>                   | ≈ 100 g                                                                                                                                                       |

01) When applying the serial 4-bit input.

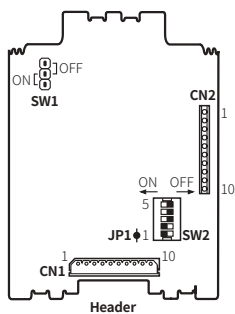
02) Max. Clock is for 50 : 50 (%) of duty ratio (ON, OFF ratio).

### Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.
- N: number of units, panel thickness: 2 to 4 mm



## Unit Descriptions



### ■ CN1 connector spec.

- Manufacturer: MOREX CO.,LTD. (Korea)
- Housing: 5264-10
- Header: 5264-10A (Straight)
- Terminal: 5263 (PBT)

### ■ Cable spec.

- AWG22 to 28 (cable diameter:  $\leq \varnothing 1.9$  mm)
- Shedding length of wire cover: 2.4 to 2.9 mm

### ■ CN2 connector spec.

- Use with the auxiliary PCB (W 8 × H 27 mm) for connecting multi-stage.
- 1:1 correspondence with CN1 terminal

### ■ I/O terminal (CN1, CN2)

| Terminal | Input |                      | Parallel input |          | Serial input |                      |
|----------|-------|----------------------|----------------|----------|--------------|----------------------|
|          | Code  | Function             | Code           | Function | Code         | Function             |
| 1        | V+    | 12 - 24 VDC          |                |          | VCC          | 12 - 24 VDC          |
| 2        | A     | 2 <sup>0</sup>       | Data input     |          | N·C          | -                    |
| 3        | B     | 2 <sup>1</sup>       |                |          | CK           | CLOCK input          |
| 4        | C     | 2 <sup>2</sup>       |                |          | DI           | Data input           |
| 5        | D     | 2 <sup>3</sup>       |                |          | DO           | Data output          |
| 6        | BI    | Zero Blanking input  |                |          | BI           | Zero Blanking input  |
| 7        | BO    | Zero Blanking output |                |          | BO           | Zero Blanking output |
| 8        | LE    | LATCH input          |                |          | LE           | LATCH input          |
| 9        | DP    | Decimal point input  |                |          | DP           | Decimal point input  |
| 10       | GND   | 0 V                  |                |          | GND          | 0 V                  |

### ■ Function set jumper (SW1) / Function set switches (SW2, JP1)

| No. | ON                                                                                                    |                | OFF                                                                                               | Function                           | Default |
|-----|-------------------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------|------------------------------------|---------|
| SW1 | Negative logic (NPN)                                                                                  |                | Positive logic (PNP)                                                                              | Input logic                        | ON      |
| SW2 | 1                                                                                                     | Decimal number | Hexadecimal number                                                                                | Display characters                 | ON      |
|     | 2                                                                                                     | Parallel       | Serial                                                                                            | Input                              | ON      |
|     | 3                                                                                                     | 5-bit          | 4-bit                                                                                             | Select serial input                | OFF     |
|     | 4                                                                                                     | Use            | Not used                                                                                          | Serial data output <sup>(01)</sup> | OFF     |
|     | 5                                                                                                     | Use            | Not used                                                                                          | Zero Blanking                      | OFF     |
| JP1 | 7-segment display  |                | Minus display  | Minus display                      | ON      |

01) Set as ON in serial input, as OFF in parallel input.