

## Digital instruments

# DC Series

Digital indicator for panel mounting



## Description

- Fully programmable: scale, transformer ratio, etc.
- Measurement of V, A, Hz or °C.
- Measurement in true root mean square (TRMS), ac types. Excellent quality / price ratio
- Measurement of maximum and minimum values
- Optional relay output, depending on the type

## Application

- The high luminosity 4-digit digital display indicates the voltage, current, frequency or instantaneous temperature, with the maximum and minimum values of medium and low voltage lines.

## Features

|   |                                   |   |
|---|-----------------------------------|---|
| <b>Power supply circuit</b>                         | 115 / 230 Vac (±10%)              |   |
| Frequency   | 40...70 Hz                        |   |
| Consumption   | 4 V·A                             |   |
| <b>Measurement circuit</b>                          |                                   |   |
| Resolution  | 10 bits                           |   |
| Display refresh rate                                | 1s                                |   |
| Accuracy  | ± 0.5 FE (± 1 digit)              |   |
| No. of samples per cycle (AC)                       | 32 / cycle                        |   |
| No. of samples per reading (DC)                     | 64 / reading                      |   |
| <b>Display</b>                                      |                                   |   |
| Digits  | 4                                 |   |
| Decimal place                                       | Programmable                      |   |
| Range   | 0...9999 (ac) / -1999...9999 (dc) |   |
| Scale excess indicator                              | "- - -"                           |   |
| <b>Insulation between the input and measurement</b> |                                   |   |
| Test voltage  | 3 kV, 50 Hz, 1 min                |   |
| Impulse test  | 4 kV (1.2 / 50 μs)                |   |
| <b>Ambient conditions</b>                           |                                   |   |
| Storage temperature                                 | - 40 ... +70 °C                   |   |
| Operating temperature                               | -10 ... +65 °C                    |   |
| Altitude  | 2000 m                            |   |
| <b>Build features</b>                               |                                   |   |
| Box material  | ABS V0, grey anthracite           |   |
| Degree of protection                                | Fitted unit (front panel)         | IP 54 (IP 65 with front panel protection) |
|   | Box and terminals                 | IP 20                                     |
| Weight  |                                   | 250 g                                     |
| <b>Standards</b>                                    |                                   |   |
| IEC 1010, IEC 348, IEC 664, EN 50081-1, EN 50082-1  |                                   |   |

## Digital instruments

# DC Series

Digital indicator for panel mounting



## Description

- Fully programmable: scale, transformer ratio, etc.
- Measurement of V, A, Hz or °C.
- Measurement in true root mean square (TRMS), ac types. Excellent quality / price ratio
- Measurement of maximum and minimum values
- Optional relay output, depending on the type

## Application

- The high luminosity 4-digit digital display indicates the voltage, current, frequency or instantaneous temperature, with the maximum and minimum values of medium and low voltage lines.

## Features

|   |                                   |   |
|---|-----------------------------------|---|
| <b>Power supply circuit</b>                         | 115 / 230 Vac (±10%)              |   |
| Frequency   | 40...70 Hz                        |   |
| Consumption   | 4 V·A                             |   |
| <b>Measurement circuit</b>                          |                                   |   |
| Resolution  | 10 bits                           |   |
| Display refresh rate                                | 1s                                |   |
| Accuracy  | ± 0.5 FE (± 1 digit)              |   |
| No. of samples per cycle (AC)                       | 32 / cycle                        |   |
| No. of samples per reading (DC)                     | 64 / reading                      |   |
| <b>Display</b>                                      |                                   |   |
| Digits  | 4                                 |   |
| Decimal place                                       | Programmable                      |   |
| Range   | 0...9999 (ac) / -1999...9999 (dc) |   |
| Scale excess indicator                              | "- - -"                           |   |
| <b>Insulation between the input and measurement</b> |                                   |   |
| Test voltage  | 3 kV, 50 Hz, 1 min                |   |
| Impulse test  | 4 kV (1.2 / 50 μs)                |   |
| <b>Ambient conditions</b>                           |                                   |   |
| Storage temperature                                 | - 40 ... +70 °C                   |   |
| Operating temperature                               | -10 ... +65 °C                    |   |
| Altitude  | 2000 m                            |   |
| <b>Build features</b>                               |                                   |   |
| Box material  | ABS V0, grey anthracite           |   |
| Degree of protection                                | Fitted unit (front panel)         | IP 54 (IP 65 with front panel protection) |
|   | Box and terminals                 | IP 20                                     |
| Weight  |                                   | 250 g                                     |
| <b>Standards</b>                                    |                                   |   |
| IEC 1010, IEC 348, IEC 664, EN 50081-1, EN 50082-1  |                                   |   |

## Digital instruments

**DC series**

Digital indicator for panel mounting



## References

**DC. Voltmeter**

| Measurement | Scale                         | Input   | Size    | Type                     | Code   |
|-------------|-------------------------------|---|---------|--------------------------|--------|
| AC          | 150, 300, 600 V <sub>ac</sub> | Direct: 600 V<br>Transformer: Programmable                | 48 x 48 | DC 48 B V <sub>ac</sub>  | M20210 |
|             |                               |   | 72 x 72 | DC 72 B V <sub>ac</sub>  | M20220 |
| DC          | 10, 50, 200 V <sub>dc</sub>   | Direct: -200 / +200V<br>Process: 0...10 V                 | 48 x 48 | DC 48 B V <sub>dc</sub>  | M20213 |
|             |                               |   | 72 x 72 | DC 72 B V <sub>dc</sub>  | M20223 |
| DC          | 600 V <sub>dc</sub>           | -600 / 600 V  | 48 x 48 | DC 48 B V <sub>dc</sub>  | M20214 |
|             |                               |   | 72 x 72 | DC 72 B V <sub>dc</sub>  | M20224 |
| DC          | 60, 150, 200 mV <sub>dc</sub> | Direct: -200 mV / +200 mV<br>Shunt: .../60 mV, .../150 mV | 48 x 48 | DC 48 B mV <sub>dc</sub> | M20217 |
|             |                               |   | 72 x 72 | DC 72 B mV <sub>dc</sub> | M20227 |

**DC. Ammeter**

| Measurement | Scale         | Input  | Size    | Type                         | Code   |
|-------------|---------------|--|---------|------------------------------|--------|
| AC          | ... / 5 A     | Direct: 5 A<br>Transformer: .../5 A                  | 48 x 48 | DC 48 B A <sub>ac</sub>      | M20211 |
|             |               |  | 72 x 72 | DC 72 B A <sub>ac</sub>      | M20221 |
| AC          | ... / 5 A     | Direct: 5 A<br>Transformer: .../5 A                  | 72 x 72 | DC 72 MD A <sub>ac</sub> (*) | M2022A |
| AC          | 10 A          | Direct: 10 A   | 48 x 48 | DC 48 B A <sub>ac</sub>      | M20212 |
|             |               |  | 72 x 72 | DC 72 B A <sub>ac</sub>      | M20222 |
| DC          | 5, 20, 200 mA | Direct: -200 mV / +200 mV<br>Process: 0 or 4...20 mV | 48 x 48 | DC 48 B A <sub>dc</sub>      | M20215 |
|             |               |  | 72 x 72 | DC 72 B A <sub>dc</sub>      | M20225 |
| DC          | 10 A          | Direct: 10 A   | 48 x 48 | DC 48 B A <sub>dc</sub>      | M20216 |
|             |               |  | 72 x 72 | DC 72 B A <sub>dc</sub>      | M20226 |

(\*) Output relay available

**DC. Frequency meter**

| Measurement | Scale                                | Input      | Size    | Type                     | Code   |
|-------------|--------------------------------------|------------|---------|--------------------------|--------|
| AC          | Hz < 100, 2 dec.<br>Hz > 100, 1 dec. | 40...600 V | 48 x 48 | DC 48 B Hz <sub>ac</sub> | M20218 |
|             |                                      |            | 72 x 72 | DC 72 B Hz <sub>ac</sub> | M20228 |

## Digital instruments

**DC series**

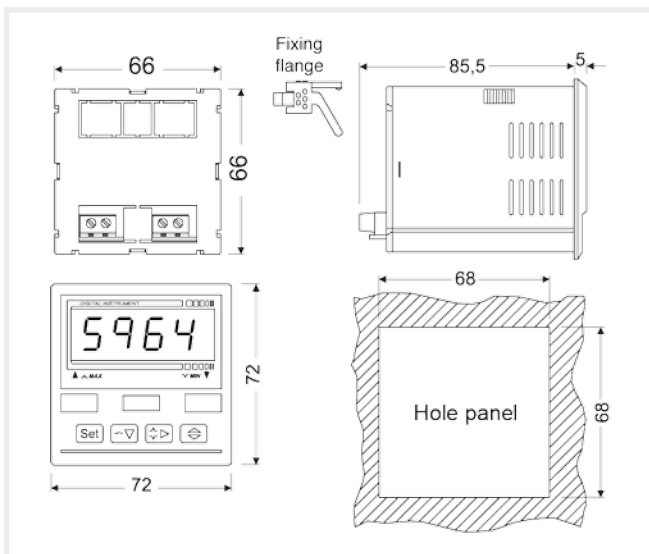
Digital indicator for panel mounting


**References**
**DC. Temperature**

| Measurement | Relays | Input            | Size    | Type             | Code   |
|-------------|--------|------------------|---------|------------------|--------|
| °C          | -      | -200 ... +200 °C | 72 x 72 | DC 72 TMP22      | M20621 |
|             | 1      | -200 ... +200 °C | 72 x 72 | DC 72 TMP22 - 1R | M20623 |
|             | -      | -200 ... +800 °C | 72 x 72 | DC 72 TMP28      | M20622 |
|             | 1      | -200 ... +800 °C | 72 x 72 | DC 72 TMP28 - 1R | M20624 |

**Coding table**

| M                      | 2 | X                   | X | X | X | 0             | 0 | X | X |
|------------------------|---|---------------------|---|---|---|---------------|---|---|---|
| Code                   |   |                     |   |   |   | Internal Code |   | ↑ | ↑ |
| Auxiliary power supply |   | Standard (230 V)    |   |   |   | 0             |   | ↑ | ↑ |
|                        |   | 100 ... 120 Vac     |   |   |   | 1             |   |   |   |
|                        |   | 480 ... 500 Vac     |   |   |   | 4             |   |   |   |
|                        |   | 18 ... 36 Vdc       |   |   |   | 7             |   |   |   |
| Current input          |   | Standard (.../ 5 A) |   |   |   | 0             |   | ↑ | ↑ |
|                        |   | ... / 1 A           |   |   |   | 1             |   |   |   |

**Dimensions**

**Connections**
