

# DO4000 Series

Hand held, general purpose, portable digital micro ohmmeters combining all the features you might need

The series DO4000 digital micro ohmmeters offer true portability without any sacrifice to accuracy or functionality.

These ruggedly constructed instruments are housed in a stylish plastic case, with easy to use keyboard. The measured values are displayed on a large LCD screen which allows for ease of viewing.

Automatic or manual range selection is available and many advanced features are included. The table to the right will help with your selection needs as there are three models in the range.

| Key Features  | DO4000 | DO4001 | DO4002 |
|---|--------|--------|--------|
| True 4 terminal measurement eliminates lead resistance errors | ✓      | ✓      | ✓      |
| Measuring range from 40mΩ to 4kΩ                              | ✓      | ✓      |        |
| Measuring range from 4mΩ to 400Ω                              |        |        | ✓      |
| 10μΩ resolution   | ✓      | ✓      |        |
| 1μΩ resolution  |        |        | ✓      |
| True zero capabilities  | ✓      | ✓      | ✓      |
| Digital calibration   | ✓      | ✓      | ✓      |
| Auto/manual range selection                                   | ✓      | ✓      | ✓      |
| Automatic temperature compensation                            |        | ✓      |        |
| Temperature measuring range -50 to +800°C                     |        | ✓      |        |
| Open circuit lead warning on display                          | ✓      | ✓      | ✓      |
| 100mA measuring current                                       | ✓      | ✓      |        |
| 1A measuring current  |        |        | ✓      |
| Auto power off to maximise battery life                       | ✓      | ✓      | ✓      |

#### Ideal For

- Aerospace
- Automotive
- Manufacturing
- Military
- Utilities - electrical, water and gas



## Technical Specifications

| DO4000/DO4001 Specifications |            |                 |                            |                              |
|------------------------------|------------|-----------------|----------------------------|------------------------------|
| Range                        | Resolution | Typical Current | Accuracy @ 20°C±5°C 1 year | Temperature Coefficient (°C) |
| 4kΩ                          | 1Ω         | 100μA           | ±(0.05% Rdg +0.02% FS)     | 30ppm Rdg + 1ppm FS          |
| 400Ω                         | 100mΩ      | 1mA             | ±(0.05% Rdg +0.02% FS)     | 30ppm Rdg + 1ppm FS          |
| 40Ω                          | 10mΩ       | 10mA            | ±(0.05% Rdg +0.02% FS)     | 30ppm Rdg + 1ppm FS          |
| 4Ω                           | 1mΩ        | 10mA            | ± (0.05% Rdg +0.03% FS)    | 30ppm Rdg + 4ppm FS          |
| 400mΩ                        | 100μΩ      | 10mA            | ± (0.05% Rdg +0.05% FS)    | 30ppm Rdg + 25ppm FS         |
| 40mΩ                         | 10μΩ       | 100mA           | ± (0.05% Rdg +0.01% FS)    | 30ppm Rdg + 25ppm FS         |

| DO4002 Specifications |            |                 |                            |                              |
|-----------------------|------------|-----------------|----------------------------|------------------------------|
| Range                 | Resolution | Typical Current | Accuracy @ 20°C±5°C 1 year | Temperature Coefficient (°C) |
| 400Ω                  | 100mΩ      | 1mA             | ± (0.05% Rdg +0.02% FS)    | 30ppm Rdg + 1ppm FS          |
| 4Ω                    | 10mΩ       | 10mA            | ± (0.05% Rdg +0.02% FS)    | 30ppm Rdg + 1ppm FS          |
| 40Ω                   | 1mΩ        | 100mA           | ± (0.05% Rdg +0.02% FS)    | 30ppm Rdg + 1ppm FS          |
| 400mΩ                 | 100μΩ      | 1A              | ± (0.05% Rdg +0.03% FS)    | 30ppm Rdg + 4ppm FS          |
| 40mΩ                  | 10μΩ       | 1A              | ± (0.05% Rdg +0.05% FS)    | 30ppm Rdg + 25ppm FS         |
| 4mΩ                   | 1μΩ        | 1A              | ± (0.05% Rdg +0.01% FS)    | 30ppm Rdg + 25ppm FS         |

### Measurement

4 terminal Kelvin/Thomson principle eliminates errors due to lead resistance

### Display

15mm LCD 4000 count with automatic decimal point and polarity indication

### Ranges

6 automatic or manual selection with LED indication

### Terminals

4mm safety sockets

### Safety

EN 61010-1 EMC-EN 61236

### Zero & Ave

Buttons to null measurement offsets

### Protection

415Vrms maximum at the measuring terminals will blow internal protection fuse

### Calibration

Digital security key protected

### Battery

Removable pack with 5 1.5V non-rechargeable batteries. Separate rechargeable pack, charger and docking station as optional extras

## General Specifications

| DO4000 Series Optional Accessories |   |              |
|------------------------------------|---|--------------|
| Code                               | Item  | Part Numbers |
| 4000-01                            | Rechargeable battery pack includes battery cassette with rechargeable batteries. Docking station also acts as bench stand and charger | 930184       |
| 4000-02                            | Replaceable battery holder with non-rechargeable batteries  | 100124       |
| 4000-03                            | Replaceable battery holder with rechargeable batteries  | 100125       |
| CB02                               | Carrying bag with shoulder strap and lead pouch that has a clear front panel to enable full operation                                 | 200290       |
| HS01-P                             | 2 x Duplex handspike with 3m lead length  | 190077       |
| HS02-P                             | Duplex handspikes with 3 and 15m lead length  | 190057       |
| LS03-P                             | Lead set with 3m leads terminated in large Kelvin clips type KC3  | 190045       |
| LS04-P                             | Lead set with 3 and 15m lead length terminated in large Kelvin clips type KC3   | 190046       |
| LS05                               | Lead set with 4 x 1m leads terminated in banana plugs, 4 x crocodile clips, 4 x test probes and 2 x Kelvin clips type KC1             | 190004       |
| LS06-P                             | Lead set with 1m leads terminated in miniature Kelvin clips type KC2  | 190050       |
| MTS2                               | Calibration standard  | 930242       |
| CH01                               | Concentric handspikes   | 930108       |
| PT01-4000                          | Rod type Pt100 probe with 2m lead   | 190035       |
| PT03-4000                          | Stubby Pt100 probe for ambient temperature measurement  | 190037       |

### Dimensions

215 x 130 x 55mm / 8.5 x 5.1 x 2.2" (w x h x d) approx  
467 x 374 x 216mm / 18 x 15 x 8.5" (w x h x d) packed in carton

### Mass

0.8kg / 2lbs approx

### Working Temperature

0 to +40°C rel. humidity 80% max. non-condensing

### Storage Temperature

-20 to +50°C

### Services

1 year warranty (subject to product registration with Seaward. Visit [www.seaward.co.uk/register-product](http://www.seaward.co.uk/register-product))

Service and calibration by Calibrationhouse.

Go to [www.calibrationhouse.com](http://www.calibrationhouse.com) for more information.

### Part Numbers

DO4000: 930000 DO4001: 930001 DO4002: 930139



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

**Keison Products,**

**P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.**

**Tel: +44 (0)330 088 0560**

**Fax: +44 (0)1245 808399**

**Email: [sales@keison.co.uk](mailto:sales@keison.co.uk)**

Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.