

005/6/8

Very high accuracy decade boxes with versatile wide ohm range

A versatile range of resistance decade boxes available in 5, 6 & 8 decades. High accuracy and wide range 0.001Ω to $11\text{ M}\Omega$ are combined in a compact lightweight metal case.

The switches have gold plated contacts to ensure a low contact resistance and negligible thermal E.M.F.

Some models employ the Waidner Wolf technique to eliminate any errors due to switch contact resistance and are particularly suited to Pt100 simulation with resolution as low as 0.001Ω ($\approx 0.0025^\circ\text{C}$).

Key Features

- High accuracy 0.01% and high performance
- Suitable for Pt100 and transducer simulation
- 5, 6 and 8 decades
- Long term stability $<20\text{ppm/year}$
- Low temperature co-efficient $<3\text{ppm}/^\circ\text{C}$
- Gold-plated switch contacts and solid copper input terminals
- Negligible thermal E.M.F.s
- Lightweight / small size
- Certificate of conformity
- In-house test figures (optional)

Ideal For

- Engineering departments
- Laboratories/workshops
- Calibration houses



www.seaward.co.uk/00Series

For USA, Canada and Mexico enquiries Tel: +1 (813) 886 - 2775

For all other enquiries Tel: +44 (0) 191 587 8741

Email: sales@seaward.co.uk

Technical Specifications

| 008 | | 006 | | | 005 | Decade | Accuracy | Current Max mA |
|-----|---|-----|---|---|-----|-------------|----------|----------------|
| B | A | C | B | A | B | | | |
| | ✓ | | | ✓ | | 10 x 0.001Ω | ±2% | 2000 |
| ✓ | ✓ | | ✓ | ✓ | ✓ | 10 x 0.01Ω | ±1% | 2000 |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 10 x 0.1Ω | ±0.5% | 2000 |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 10 x 1Ω | ±0.2% | 600 |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 10 x 10Ω | ±0.01% | 200 |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 10 x 100Ω | ±0.01% | 60 |
| ✓ | ✓ | ✓ | ✓ | | | 10 x 1kΩ | ±0.01% | 20 |
| ✓ | ✓ | ✓ | | | | 10 x 10kΩ | ±0.01% | 6 |
| ✓ | | | | | | 10 x 100kΩ | ±0.01% | 2 |
| | | | | | | 10 x 1MΩ | ±0.01% | 0.6 |

| Model | No. Decades | Total Resistance | Resolution | Suitable for Pt100 Simulation | Resolution °C when Simulating Pt100 | Residual Resistance |
|-------|-------------|------------------|------------|-------------------------------|-------------------------------------|---------------------|
| 005-B | 5 | 1,112.10Ω | 0.01 | ✓ | 0.025 | 1Ω |
| 006-A | 6 | 1,112.11Ω | 0.001 | ✓ | 0.0025 | 1Ω |
| 006-B | 6 | 11,112.10Ω | 0.01 | ✓ | 0.025 | 1Ω |
| 006-C | 6 | 111,111Ω | 0.1 | | | 0.07Ω |
| 008-A | 8 | 111,112.11Ω | 0.001 | ✓ | 0.0025 | 1Ω |
| 008-B | 8 | 1,111,112.1Ω | 0.01 | ✓ | 0.025 | 1Ω |

Calibration

Calibration certificates including UKAS traceable are available on request

Switches

Contact material gold plated brass
Contact resistance <5mΩ
Insulation resistance (all paths)>10GΩ

Resistors

Temperature Co-efficient

±3ppm/+20°C to + 85°C ±5ppm maximum over -55°C to +125°C 0.1, 0.01, & 0.001 dials 10ppm/°C

Full Load Stability

±35ppm/10,000 hours
±50ppm/26,000 hours

No Load Stability

±25ppm/10,000 hours
±35ppm/26,000 hours

General Specifications

Weight

005 - 0.5kg / 1lbs 006 - 0.6kg / 1lbs
008 - 0.8kg / 2lbs

Size

350 x 100 x 80mm / 14 x 3.9 x 3.1" (w x h x d) approx

Over full temperature range

-50°C to +125°C

Power Rating

0.33W (+85°C) 0.25W (+110°C)

Maximum Continuous Working Voltage

70VDC/33Vrms

Noise

Essentially non-measurable

Thermal E.M.F

<0.4µV/°C typical, <15µV/°C maximum

Windings

Exclusive 'air cushioned' technique provides virtually stressless elements for improved performance. Non-inductively wound. Direction of winding reversed at half turns point.

Services

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

Service and calibration by Calibrationhouse.

Go to www.calibrationhouse.com for more information.

Part Numbers

| | | | |
|-------|--------|-------|--------|
| 005-B | 930164 | 006-A | 930165 |
| 006-B | 930166 | 006-C | 930167 |
| 008-A | 930168 | 008-B | 930169 |