

For over 60 years, Jewell Instruments and our predecessor companies have provided high quality panel meter solutions for a wide range of aerospace, industrial and commercial applications. JEWELL and MODUTEC are some of the most trusted brands in the industry. They are known for:

- reliable, high quality, products
- superb applications knowledge
- custom designs for unique requirements
- “extended staff” relationships with customers
- creative engineering expertise

## Jewell Instruments

The only panel meter manufacturer that offers a full spectrum of panel meters. Analog, digital. Any size, and shape. Surface mount, window mount, bezel mount. We have decades of broad-based experience resulting in our superior breadth of product — and our ability to meet your custom needs. Jewell Instruments can provide a proven, quick and cost-effective solution to your panel meter needs.

Analog panel meters can be either electrical or electronic. Application areas include:

### Electrical

- **Field Strength Meters**
- **Power Generation**
- **Power Distribution Panel**
- **Control Panels**
- **Switchgear Panels**
- **Power Supplies**
- **Power Conditioners**
- **Voltage Regulators**
- **UPS Systems**
- **Automatic Transfer Switches**
- **Generator Paralleling Switchgear**

### Electronic

- **Liquid Level**
- **Flow**
- **Pressure Monitors**
- **Volume Units**
- **Laboratory Equipment**
- **Test Equipment**
- **Broadcast Equipment**
- **Stereo Equipment**
- **Medical**
- **Temperature**
- **Battery Level**
- **Speed**
- **Tension Control**
- **Kilns**
- **Marine**
- **Chart Recorders**
- **Field Strength**

Digital panel meter applications include:

### Digital

- **Telecommunications**
- **Welders**
- **Agricultural**
- **Water Purification**
- **Desalinization**

# Key

| Meter Codes       | Shape         |
|-------------------|---------------|
| 1 = Surface Mount | V=Vertical    |
| 2 = Window Mount  | H=Horizontal  |
| 3 = Bezel Mount   | Med=Medallion |
| 4 = Edgewise      | Sq=Square     |
| 5 = Switchboard   | R=Round       |
|                   | Rec=Rectangle |

| Model             | Page | Mount Code | Shape  | Sizes  |    |        |        |        |    |        |    | Accuracy |    |    |     | AC Rectified | AC Iron Vane | DC | Self-Shielding |
|-------------------|------|------------|--------|--------|----|--------|--------|--------|----|--------|----|----------|----|----|-----|--------------|--------------|----|----------------|
|                   |      |            |        | 1 1/2" | 2" | 2 1/2" | 3 1/2" | 4 1/2" | 5" | 5 1/2" | 6" | 8"       | 2% | 3% | 4%  |              |              |    |                |
| Surface Mount     |      |            |        |        |    |        |        |        |    |        |    |          |    |    |     |              |              |    |                |
| S Series          | 4    | 1          | Rec    | •      |    | •      | •      | •      |    | •      |    | •        | •  |    |     | •            | •            | •  | •              |
| 2810 Series       | 4    | 1          | Sq     |        |    |        | •      | •      |    |        |    | •        | •  |    |     | •            | •            | •  | •              |
| PB Series         | 4    | 1          | Sq     | •      |    | •      | •      | •      |    |        |    | •        | •  |    |     | •            | •            | •  | •              |
| HS Series         | 5    | 1          | R      | •      |    | •      | •      |        |    |        |    | •        | •  |    |     | •            |              | •  | •              |
| 45 Series         | 5    | 1          | Sq     |        |    |        |        |        | •  |        |    | •        | •  |    |     | •            |              | •  | •              |
| 50 Series         | 5    | 1          | R, Rec |        |    | •      | •      |        | •  |        |    | •        | •  |    |     | •            |              | •  | •              |
| MS Series         | 6    | 1          | Rec    | •      |    | •      | •      |        |    |        |    | •        | •  |    |     | •            |              | •  | •              |
| 200 & 300 Series  | 6    | 1          | R      |        |    | •      | •      |        |    |        |    | •        | •  |    |     | •            | •            | •  | •              |
| 72 Series         | 6    | 1          | Sq     |        |    | •      | •      |        |    |        |    |          |    |    | •   | •            |              | •  | •              |
| 73 Series         | 6    | 1          | R      |        |    | •      |        |        |    |        |    |          |    |    | •   | •            |              | •  | •              |
| 25 Series         | 6    | 1          | R      |        |    | •      |        |        |    |        |    | •        |    |    |     |              |              | •  | •              |
| Model 133 & 135   | 7    | 1          | Sq     | •      |    |        |        |        |    |        |    |          | •  | •  |     | •            |              | •  |                |
| Model 4632 & 4652 | 7    | 1          | R      |        |    |        |        | •      |    |        |    | •        | •  |    |     | •            |              | •  | •              |
| Model 3432 & 3452 | 7    | 1          | R      |        |    |        | •      |        |    |        |    | •        |    |    |     | •            |              | •  | •              |
| Model 443 & 445   | 7    | 1          | R      |        |    |        |        | •      |    |        |    | •        |    |    |     | •            |              | •  | •              |
| Model 35          | 7    | 1          | R      |        |    |        | •      |        |    |        |    | •        | •  |    |     | •            |              | •  | •              |
| 55 & 56 Series    | 8    | 1          | Sq     |        |    | •      |        |        |    |        |    |          |    |    | •   |              |              | •  |                |
| MM Series         | 8    | 1          | Med    | •      |    | •      | •      |        |    |        |    | •        | •  |    |     | •            |              | •  |                |
| MAS Series        | 8    | 1          | Rec    | •      |    | •      | •      |        |    |        |    |          |    |    | •   | •            |              | •  |                |
| OMS & MSQ Series  | 8    | 1          | Rec    | •      |    | •      |        |        |    |        |    |          |    |    | •   | •            |              | •  |                |
| 42 & 44 Series    | 8    | 1          | Sq     |        |    | •      |        |        |    |        |    |          |    |    | •   | •            |              | •  |                |
| Window Mount      |      |            |        |        |    |        |        |        |    |        |    |          |    |    |     |              |              |    |                |
| World Meter       | 9    | 2          | Rec    | •      |    | •      | •      | •      |    |        |    | •        | •  |    |     | •            |              | •  | •              |
| W Series          | 9    | 2          | Rec    | •      |    | •      | •      | •      |    | •      |    | •        | •  |    |     | •            | •            | •  | •              |
| Bezel Mount       |      |            |        |        |    |        |        |        |    |        |    |          |    |    |     |              |              |    |                |
| SWM Series        | 9    | 1,2,3      | Rec    |        |    | •      | •      | •      |    |        |    | •        | •  |    |     | •            |              | •  | •              |
| 55 Series         | 9    | 1,2,3      | Sq     |        |    |        | •      |        |    |        |    |          |    |    | •   | •            |              | •  |                |
| 2000 Series       | 10   | 1,3        | Sq     |        |    | •      |        | •      |    | •      |    | •        |    |    |     |              |              | •  | •              |
| 70 Series         | 10   | 1,3        | Sq     | •      |    | •      | •      |        | •  |        | •  | •        | •  |    |     | •            |              | •  |                |
| BA Series         | 10   | 3          | Rec    | •      |    | •      | •      | •      |    | •      |    | •        | •  |    |     | •            | •            | •  | •              |
| 58 Series         | 10   | 3          | Rec    |        |    | •      |        |        |    |        |    |          |    |    | •   |              |              | •  |                |
| Edgewise          |      |            |        |        |    |        |        |        |    |        |    |          |    |    |     |              |              |    |                |
| E Series          | 11   | 4          | H,V    |        | •  |        |        |        |    |        |    | •        |    |    |     | •            |              | •  | •              |
| MD & ME           | 11   | 4          | H,V    | •      | •  |        |        |        |    |        |    |          |    |    | •   | •            |              | •  |                |
| 13 & 13F          | 11   | 4          | H,V    |        | •  |        |        |        |    |        |    |          |    |    | •   | •            |              | •  |                |
| Model 12          | 11   | 4          | H,V    | •      |    |        |        |        |    |        |    |          |    |    | 20% |              |              | •  |                |
| 802 Series        | 11   | 4          | H      |        |    |        |        |        |    |        |    |          |    |    | •   |              |              | •  |                |
| Model 111         | 12   | 4          | H,V    | •      |    |        |        |        |    |        |    | •        | •  |    |     |              |              | •  | •              |
| Model 121         | 12   | 4          | H,V    |        | •  |        |        |        |    |        |    | •        | •  |    |     | •            |              | •  | •              |
| Model 131         | 12   | 4          | H,V    |        |    | •      |        |        |    |        |    | •        | •  |    |     | •            |              | •  | •              |
| Model 231         | 12   | 4          | H,V    |        |    | •      |        |        |    |        |    | •        | •  |    |     | •            |              | •  | •              |
| Switchboard       |      |            |        |        |    |        |        |        |    |        |    |          |    |    |     |              |              |    |                |
| 2830 Series       | 13   | 5          | Sq     |        |    |        |        | •      |    |        |    | •        |    |    |     | •            |              | •  | •              |
| Model 4931        | 13   | 5          | Sq     |        |    |        |        | •      |    |        |    | •        |    |    |     | •            |              |    | •              |
| Model 496         | 13   | 5          | Sq     |        |    |        |        | •      |    |        |    | •        |    |    |     |              | •            |    | •              |
| Model 4951        | 13   | 5          | Sq     |        |    |        |        | •      |    |        |    | •        |    |    |     |              |              | •  | •              |
| Model 4981        | 13   | 5          | Sq     |        |    |        |        | •      |    |        |    | •        |    |    |     | •            |              | •  | •              |
| Model 497         | 13   | 5          | Sq     |        |    |        |        |        |    |        |    | •        |    |    |     | •            |              | •  | •              |
| Model 4951-568    | 13   | 5          | Sq     |        |    |        |        | •      |    |        |    | >.025%   |    |    |     | •            |              | •  | •              |
| Model 4951-727    | 12   | 5          | Sq     |        |    |        |        | •      |    |        |    | >.025%   |    |    |     | •            |              | •  | •              |
| Model 4991        | 12   | 5          | Sq     |        |    |        |        | •      |    |        |    |          | •  |    |     | •            |              | •  | •              |
|                   |      |            |        |        |    |        |        |        |    |        |    |          |    |    |     |              |              |    |                |



Surface Mount



Window Mount



Bezel Mount



Edgewise



Switchboard

## Meter Movements

### Taut-band

Taut-band suspension core-magnet construction and wrap-around powdered-iron pole piece provide inherent ruggedness and exceptional self-shielding. Recommended for rugged environments when high shock loads are the norm.

### Pivot & Jewel

Pivot and jewel suspension is a standout for high torque, low internal friction, great accuracy and excellent tracking and repeatability. Recommended for rugged environments when vibration is common.

### Moving Magnet

A moving magnet suspension with a permanent coil and a moving magnet is a much more cost-effective solution than a traditional d'Arsonval movement. With an accuracy level of 5%, it has a price/performance advantage when indication, and not pinpoint accuracy, is the meter's functional requirement.

### AC Meters

AC meters are available in either rectifier type or iron-vane version.

- Rectifier type is the standard taut-band movement for alternating current (AC).
- Iron-vane movements are compact pivot and jewel suspensions. They have the advantage of insensitivity to input distortion, making them the appropriate choice for applications encountering environmental vibration.

*Many options are available for our meters; they are almost infinitely customizable. Please call one of our experienced Applications Specialists or visit our Web site: [www.jewellinstruments.com](http://www.jewellinstruments.com) to view a detailed Specifications Sheet.*

All of Jewell Instruments analog meters meet the ANSI C39.1 standard.

## Economy

*Often designing means tradeoffs; size vs. space, accuracy vs. cost. Our complete line of panel meters addresses these issues with many efficient designs — providing economies of space and cost. Talk to one of our Applications Specialists to discuss your space, pricing requirements and solutions we provide — both standard and custom.*

### Space Saving

We can incorporate a surface mount panel meter into your design without losing volumetric efficiency. **Value** — Price and performance are what equals value in today's marketplace. Often a decision based on price alone can lead to unsatisfactory results. We understand that at Jewell Instruments and deliver the best overall value available.



#### 55 & 56 Series — MODUTEC

Designed for economy, Series 55 and 56 meters silhouette movement gives them a flat back, with nothing protruding but the terminals and attachment lugs. An excellent choice when real estate is an issue with low cost as a bonus.

**Surface, square, 2 1/2", DC 5%**



#### MM Series — Jewell

The MM Series panel meter introduced the now ever-popular medallion shape. This space-saving design offers high visibility and rugged durability while blending with today's high technology applications.

**Surface, medallion, 1 1/2", 2 1/2", 3 1/2", DC 2%, AC rectified 3%**



#### MAS Series — MODUTEC

Attractive contemporary designs with a low aspect ratio are key benefits of the MAS Series. All meters have operating zero adjusters and scales printed on translucent plastic, permitting beautifully diffused lighting, using the optional external light kit or custom light source.

**Surface, rectangle, 1 1/2", 2 1/2", 3 1/2", DC 5%, AC rectified 5%**



#### OMS & MSQ Series — MODUTEC

Traditional meters with modern styling and a low price tag. These meters have operating zero adjusters and scales printed on translucent plastic, permitting diffused back-lighting.

**Surface, rectangle, 1 1/2", 2 1/2", DC 5%, AC rectified 5%**



#### 42 & 44 Series — MODUTEC

A clear plastic cover, with translucent ribbing over the pivot area, gives these meters a clean, open look that is compatible with any surrounding. The case is zinc-plated steel, damage resistant and designed for easy installation.

**Surface, square, 2 1/2", DC 5%, AC rectified 5%**