

**BEST OF
CLASS**



Backlighting Options

• Non-Backlit LCD Black on Grey Background

Get Digital Accuracy with an Analog Footprint

The DW Series is a cost-effective solution to retrofitting an analog panel cutout with a digital meter.

- The DW is easy-reading with large display and wider viewing angles
- No additional wires makes installation faster and easier
- Automatic polarity indication
- Custom nomenclature optional

The MODUTEC DW Series is available as DC and AC Power Monitors and Process Monitors. Please refer to the DW Spec sheet found on our Web site www.jewellinstruments.com for specification and part numbers.

Specifications

Display

| | |
|-----------------------|--|
| Digits: | 3 1/2 (± 1999) |
| Type: | 7 segment reflective LCD |
| Digit Height: | 0.5" (12.7mm) |
| Polarity: | Automatic (-) displayed |
| Decimal Point: | Factory set. Provisions for selection by user optional |
| Overload: | Three lower digits blank for readings greater than 1999 counts |

DC Inputs

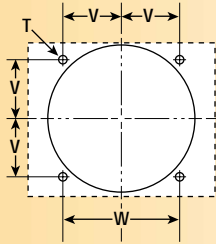
| | |
|---|---|
| Input Resistance: | 200mV & 2V ranges >100megohm, 20V & 200V ranges 1 megohm |
| Input Voltage Drop (current Meters): | 200mV typical at fs |
| Overvoltage (voltmeters): | ±300 VDC |
| Accuracy: | 0.1% ±2 digits |
| Tempco: | 100 ppm/°C typical |
| Conversion Rate: | 2.5 per second |
| Normal Mode Rejection: | 60db typical |
| Common Mode Rejection: | >86db |
| Common Mode Voltage Range: | ±1V maximum |
| Operating Range: | 32°F to 122°F (0°C to +50°C) |
| Storage Temperature: | -4°F to 158°F (-20°C to + 70°C) |

Applications

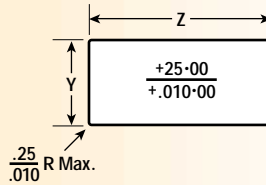
- ▶ Telecommunications
- ▶ Water Purification
- ▶ Sewage Treatment
- ▶ Flow
- ▶ Process
- ▶ Desalinization
- ▶ AC & DC Amps
- ▶ AC & DC Volts

DW Series (mm/in)

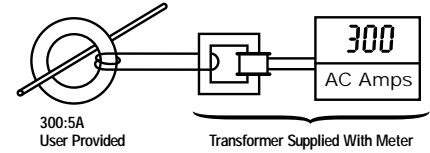
Panel Cutout for DW Series Surface Mount



Panel Cutout for DW Series Windo™ Mount

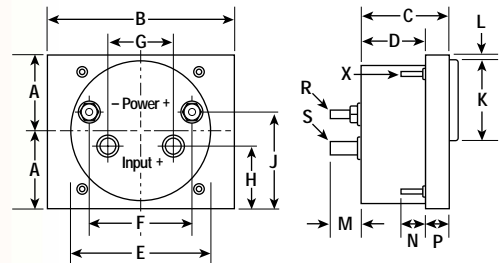


Connection for High Current Measurement



| | A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | T | V | W | X | Y | Z | |
|------|-----|-------|------|------|------|------|------|------|------|------|-------|-----|------|------|------|-------|-------|------|------|------|------|-------|------|
| 2.5" | mm | 29.1 | 76.5 | 40.5 | 33.0 | 53.8 | 38.1 | 28.5 | 24.1 | 36.8 | 32.0 | 1.5 | 12.7 | 12.7 | 3.7 | M-3.5 | M-5 | 3.2 | 23.9 | 56.4 | M-3 | 32.3 | 73.7 |
| | in. | 1.145 | 3.01 | 1.6 | 1.30 | 2.12 | 1.50 | 1.12 | .95 | 1.45 | 1.26 | .06 | .50 | .50 | .145 | 6-32 | 10-32 | 1.25 | .94 | 2.22 | 4-40 | 1.27 | 2.9 |
| 3.5" | mm | 36.8 | 94.7 | 41.1 | 33.0 | 67.6 | 38.1 | 28.5 | 36.8 | 49.5 | 40.3 | 1.8 | 12.7 | 12.7 | 3.7 | M-3.5 | M-5 | 3.2 | 28.4 | 71.6 | M-3 | 40.5 | 91.7 |
| | in. | 1.45 | 3.73 | 1.62 | 1.30 | 2.66 | 1.50 | 1.12 | 1.45 | 1.95 | 1.585 | .07 | .50 | .50 | .145 | 6-32 | 10-32 | 1.25 | 1.12 | 2.82 | 4-40 | 1.595 | 3.61 |

DW Series Dimensional Drawings



DW Series Specifications

| Range | 2.5" Meter Part Number | 3.5" Meter Part Number |
|--|------------------------|------------------------|
| <i>DC Microammeters</i> | | |
| 0-200 | 2DW-DUA-200-* | 3DW-DUA-200-* |
| <i>DC Milliammeters</i> | | |
| 0-2 | 2DW-DMA-002-* | 3DW-DMA-002-* |
| 0-20 | 2DW-DMA-020-* | 3DW-DMA-020-* |
| 0-200 | 2DW-DMA-200-* | 3DW-DMA-200-* |
| <i>DC Milliammeters — 2 wire, self-powered</i> | | |
| 4-20 ¹ | L2DW-DMA-020 | L3DW-DMA-020 |
| 4-20 ² | P2DW-DMA-020 | P3DW-DMA-020 |

¹Requires 1.5 VDC Loop-drop
²Requires 2.75 VDC Loop-drop

To Order: Select range and size from listing above. Complete the catalog number by replacing * with the power options suffix from below.

| Power Option | Description | Suffix |
|--------------------------|---|--------|
| 115VAC | 115VAC ±10%, 50 or 60 Hz | P115 |
| 230VAC | 230VAC ±10%, 50 or 60 Hz | P230 |
| 5VDC | + 5VDC ±5% at 3mA, typical ³ | P5 |
| 10-28VDC (auto & marine) | + 10 to +28VDC at 5mA, typical ³ | P10-28 |
| Battery | 9VDC nom., 7.2 to 12 VDC at 150µA, typical ⁴ | P9 |

³Meters must have low input connected to DC supply return

⁴Meters must have input isolated from battery

Specifications and ordering information for DC & AC power monitors and Process Monitors can be found on our website.

DW Series Specifications (continued)

DC Power Monitors

| | |
|-------------------------------|-----------------------------------|
| Range: | 10VDC to 28VDC |
| Resolution: | 0.1VDC |
| Accuracy: | (±0.1% + 2 counts) with shunt amp |
| Display: | 0.5" high digits LCD |
| Power Requirements: | 10VDC to 28VDC @ 20MA |
| Operating Temperature: | 32°F to 122°F (0°C to 50°C) |
| Storage Temperature: | -4°F to 149°F (-20°C to 65°C) |

Circuit boards are conformal coated for protection

Volt Meters: Marine battery meters

| Size | Part Number |
|--------|----------------|
| 2 1/2" | P2DW-DVV-10/28 |
| 3 1/2" | P3DW-DVV-10/28 |

Amp Meters

| Size | Range | Shunt | Part Number |
|--------|----------|-------|----------------------|
| 2 1/2" | 0-50.0A | 50mV | 2DWS-DAA-050-P10-28 |
| 2 1/2" | 0-500A | 50mV | 2DWS-DAA-500-P10-28 |
| 2 1/2" | 0-10.00A | 100mV | 2DWS-DAA-010-P10-28 |
| 2 1/2" | 0-100.0A | 100mV | 2DWS-DAA-100-P10-28 |
| 2 1/2" | 0-1000A | 100mV | 2DWS-DAA-1000-P10-28 |
| 3 1/2" | 0-50.0A | 50mV | 2DWS-DAA-050-P10-28 |
| 3 1/2" | 0-500A | 50mV | 2DWS-DAA-500-P10-28 |
| 3 1/2" | 0-10.00A | 100mV | 2DWS-DAA-010-P10-28 |
| 3 1/2" | 0-100.0A | 100mV | 2DWS-DAA-100-P10-28 |
| 3 1/2" | 0-1000A | 100mV | 2DWS-DAA-1000-P10-28 |

AC Power Monitors

| | |
|-------------------------------|-------------------------------|
| Range: | 80-130VAC, 160-260VAC |
| Resolution: | 1V |
| Accuracy: | (±0.5% + 1 count) |
| Display: | 0.5" high digits LCD |
| Power Requirements: | 2VA Typical |
| Operating Temperature: | 32°F to 122°F (0°C to 50°C) |
| Storage Temperature: | -4°F to 149°F (-20°C to 65°C) |

Circuit boards are conformal coated for protection

Volt Meters

| Size | Range | Part Number |
|--------|------------|------------------|
| 2 1/2" | 80-130VAC | P2DW-AVV-80/130 |
| 3 1/2" | 80-130VAC | P3DW-AVV-80/130 |
| 2 1/2" | 160-260VAC | P2DW-AVV-160/260 |
| 3 1/2" | 160-260VAC | P3DW-AVV-160/260 |

DW Series Specifications (continued)

| | |
|-------------------------------|-------------------------------|
| Range: | 0-50 AMP AC ¹ |
| Resolution: | 0.1 AMP |
| Accuracy: | (±0.5% + 5 counts) |
| Display: | 0.5" high digits LCD |
| Power Requirements: | 2VA Typical |
| Operating Temperature: | 32°F to 122°F (0°C to 50°C) |
| Storage Temperature: | -4°F to 149°F (-20°C to 65°C) |

Circuit boards are conformal coated for protection
 Calibrated with external transformer that is shipped with meter.

Amp Meters

| Size | Power | Part Number |
|--------|--------|-------------------|
| 2 1/2" | 115VAC | 2DW-AAAX-050-P115 |
| 3 1/2" | 115VAC | 3DW-AAAX-050-P115 |
| 2 1/2" | 230VAC | 2DW-AAAX-050-P230 |
| 3 1/2" | 230VAC | 3DW-AAAX-050-P230 |

Process Monitors

| Type | Range | 2 1/2" Meters Part Number | 3 1/2" Meters Part Number |
|---|-------|---------------------------|---------------------------|
| DC Milliammeters (Loop Receiver, 4-wire) | 4-20 | N2DW-DMA-020-* | N3DW-DMA-020-* |
| | 10-50 | N2DW-DMA-050-* | N3DW-DMA-050-* |
| DC Millivoltmeters | 0-200 | 2DW-DMV-200-* | 3DW-DMV-200-* |
| DC Voltmeters | 0-2 | 2DW-DVV-002-* | 3DW-DVV-002-* |
| | 0-20 | 2DW-DVV-020-* | 3DW-DVV-020-* |
| | 0-200 | 2DW-DVV-200-* | 3DW-DVV-200-* |

To Order: Select range and size from listing above. Complete the catalog number by replacing * with the power options suffix from below.

Power Options:

| Option | Description | * Suffix |
|-------------------------|---|----------|
| 115VAC | 115VAC ±10%, 50 or 60 Hz | P115 |
| 230VAC | 230VAC ±10%, 50 or 60 Hz | P230 |
| 5VDC | + 5VDC ±5% at 3mA, typical ² | P5 |
| 1-28VDC (auto & marine) | + 10 to +28VDC at 5mA, typical ² | P10-28 |
| Battery | 9VDC nom., 7.2 to 12 VDC at 150µA, typical ³ | P9 |

¹ For higher currents, a 0-5 Amp AC input version is available for use with a user supplied current transformer. The value of full-scale current displayed for the 5 Amp input needs to be specified. e.g.: 2DW-AAAX-300-P115 would be a 2 1/2", 115VAC powered meter for use with a customer supplied 300 to 5 Amp current transformer.

² Meters must have low input connected to DC supply return

³ Meters must have input isolated from battery