
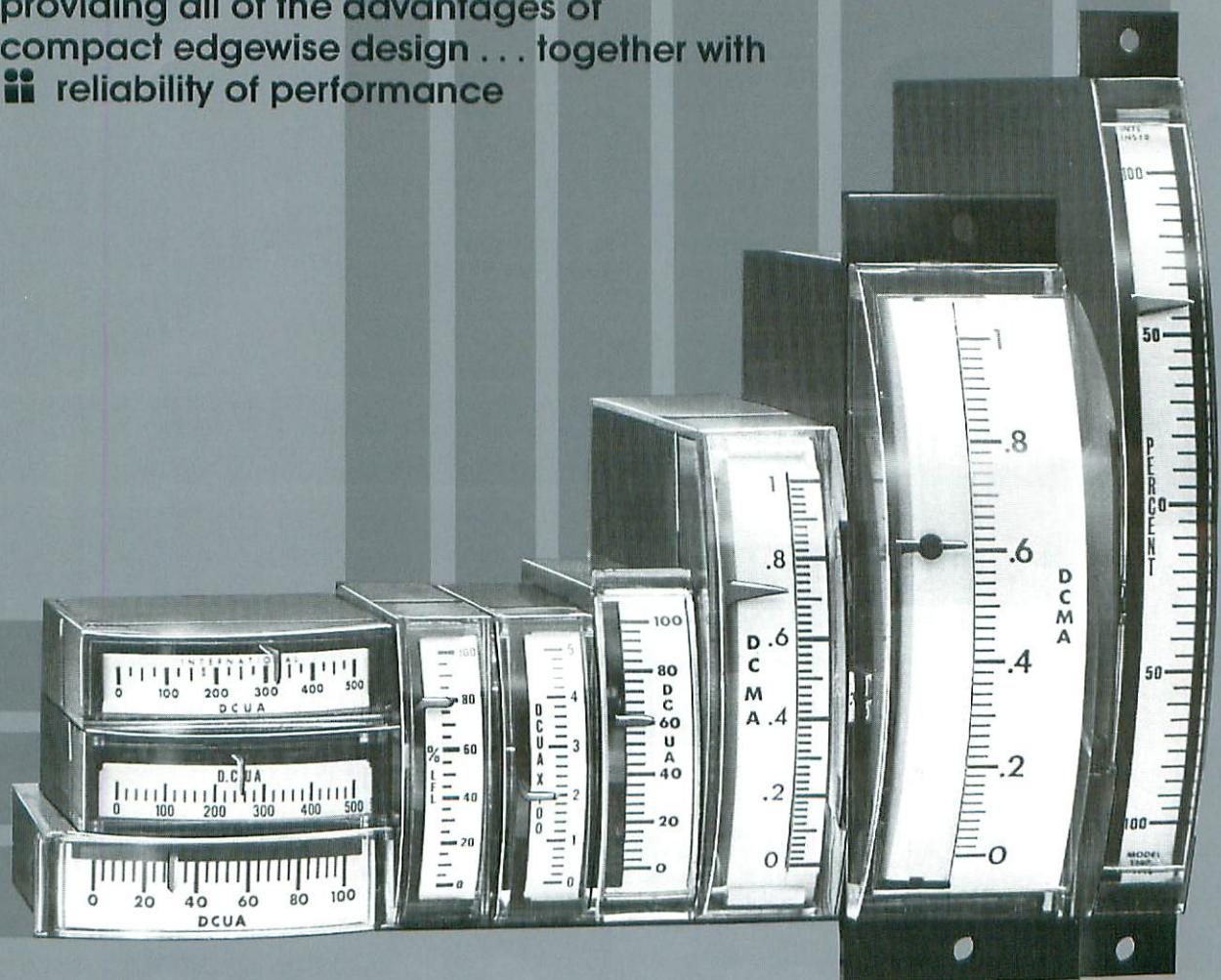


I. Edgewise Panel Meters: Standard Models.

A complete line of standard meters
providing all of the advantages of
compact edgewise design . . . together with
 reliability of performance



we deliver. analog. edgewise. rounds. squares. and more. on time.

Table A: STANDARD MODELS

| Model/Size/Wt. | Description |
|------------------------|--|
| 1120/1121 | Special order. Case crystal acrylic. Available VU or DB. |
| 1122 1½ in./4 oz. | Lowest price pivot-and-jewel model. Optionally available VU or DB. Case and crystal: tough acrylic. Color: black. |
| 1123 | Identical to 1122 but with glass crystal and metal cover. |
| 1127 1½ in./2 oz. | Mechanically similar to 1122 but taut-band movement. Optional VU or DB. Case: steel, acrylic crystal. Color: black. |
| 1128 1½ in./2.5 oz. | Mechanical variant of 1122. Optional VU or DB. Case: steel plate with clear acrylic crystal. Color: black. |
| 1136 2½ in./5 oz. | External front zero adjust. Anti-parallax scale. Optional VU, DB or illuminated. Case: steel, acrylic crystal. Color: white. |
| 1140 4 in./6 oz. | Ultra-thin design. Optional with external front zero adjust. Case: steel, acrylic crystal. Color: black. |
| 1142 2½ in./2.5 oz. | Exact retrofit for Simpson 1622, improved reliability and competitive pricing. Case: steel, acrylic crystal. Black. |
| 1145 3½ in./9 oz. | External front zero adjust. Anti-parallax scale. Optional VU or DB. Case: steel, acrylic crystal. Color: black. |
| 2601 3½ in./16 oz. | Designed to be used "in family" with Model 2602/2603 Controllers (see Product Bulletin No. IV). |

HOW TO ORDER

Establish Order No., as shown below, or call Order Dept., (203) 481-5721, and describe your requirements.

| Model No. | H or V | Zero Position | Range/Scale |
|--------------|------------------|---|-----------------|
| From Table A | Hor. or Vertical | Hor.: L, C or R (left, center, right) Vert.: T, C or B (top, center, bottom) | From Table B |
| 1120 | H | L | DC μ A 0-50 |

OPTIONS AND SPECIAL ORDERS: Almost any deviation from the standard specifications detailed in this bulletin — as well as almost any new and challenging concept that falls within our product area — is available as an option or special order.

WHATEVER YOUR UNUSUAL REQUIREMENTS, call our Customer Service Dept., (203) 481-5721.

Table B: RANGES/SCALES/RESISTANCES

| Model | DC Microammeters | | | | DC Milliammeters | | | | | | | | DC Millivoltmeters | |
|-----------|------------------|-------|-------|-------|------------------|-----|------|------|-------|-------|-------|------|--------------------|-------|
| | 0-50 | 0-100 | 0-200 | 0-500 | 0-1 | 0-5 | 0-10 | 0-50 | 0-100 | 0-200 | 0-500 | 4-20 | 0-50 | 0-100 |
| 1120/1121 | 4520 | 1360 | 556 | 103 | 37 | 4.2 | 3 | 6.8 | 6.8 | 6.8 | N/A | 1.5 | 20 | 40 |
| 1122/1123 | N/A | 2200 | 730 | 145 | 26 | 2.5 | 1.5 | <1 | <1 | <1 | <1 | 1.4 | 25 | 50 |
| 1127 | N/A | 1340 | 1520 | 300 | 50 | 20 | 10 | 2 | 1 | <1 | <1 | 4 | N/A | 50 |
| 1128 | N/A | 2200 | 820 | 220 | 45 | 3 | 1.5 | <1 | <1 | <1 | <1 | 1.1 | 12.5 | 25 |
| 1136/1142 | N/A | 2300 | 760 | 150 | 26 | 2.5 | 1.5 | <1 | <1 | <1 | <1 | 1.5 | 20 | 40 |
| 1140 | N/A | 2500 | 2300 | 350 | 92 | 4 | 2.5 | <1 | <1 | <1 | <1 | 1.4 | 9 | 18 |
| 1145 | 3600 | 2125 | 930 | 165 | 43 | 2.8 | 1.7 | <1 | <1 | <1 | <1 | 1.3 | 9 | 18 |
| 2601 | 4500 | 3500 | 1300 | 560 | 115 | 5.4 | 2 | <1 | <1 | <1 | <1 | 1.5 | 12.8 | 25.6 |

OTHER STANDARD RANGES AVAILABLE INCLUDE:

- DC Ammeters.** Limited ranges, internal shunt.
- AC Milliammeters and AC Ammeters.**
- AC & DC Voltmeters.** All meters 1000 ohm/volt standard, ranges available up to 100 volts. Consult factory for higher ranges and other ohm/volt sensitivities.

SPECIFICATIONS

| | 1120/1121 | 1122/1123 | 1127 | 1128 | 1136 | 1140 | 1142 | 1145 | 2601* | |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-------------------------------|-----------------|-----------------|----------------------|----------------|---|
| Accuracy (% of F.S.) | DC:3 AC:5 | ← | | DC: 2 AC: 3 | | | | | | → |
| Repeatability | ← | | | | In accordance with ANSI-C39.1 | | | | | → |
| Overload | ← | | | | In accordance with ANSI-C39.1 | | | | | → |
| Response time (sec. max.) | 2 | 2.5 | 3.0 | 2.5 | 2.5 | 2 | 2 | 2 | 2 | |
| Dielectric (VRMS 60Hz/1 min.) | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 1500 | 500 | |
| Overshoot (max) | 50% | 50% | 30% | 25% | 50% | 20% | 20% | 50% | 50% | |
| Terminals (variations avail.) | Solder Terminal | Solder Terminal | Solder Terminal | Solder Terminal | Threaded Stud(4-48) | Solder Terminal | Solder Terminal | Threaded Stud(10-32) | Terminal Block | |
| Scale length-inches (mm) | 1.24(31.5) | 1.24(31.5) | 1.24(31.5) | 1.30(33.0) | 2.0(50.8) | 3.7(94.0) | 2.2(55.8) | 2.7(68.6) | 2.4(61.0) | |
| Zero adjustment | No† | No† | Yes | No | Yes† | No† | Yes† | Yes† | Yes† | |
| Pointer (other colors avail.) | Black Lance | Red Lance | Red Lance | Red Lance | Red Delta | Red Bar | Red Bar | Black Target | Red Lance | |
| Weight (oz) | 4 | 4 | 2 | 2.5 | 5 | 6 | 2.5 | 9 | 16 | |

* For matching controller see Product Data Bulletin IV.

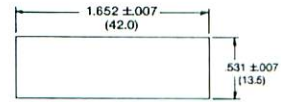
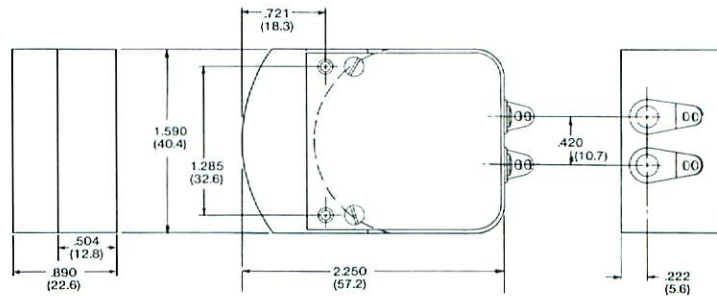
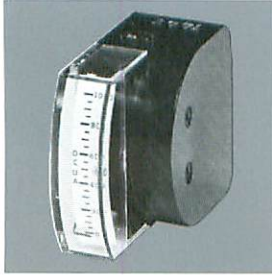
† Can be omitted ‡ Can be supplied

NOTES: (1) Specifications not listed above (e.g. shock, vibration, temperature) are typically in accordance with ANSI C39.1 (2) Illumination available on selected models. Consult factory for details.

MECHANICAL DATA

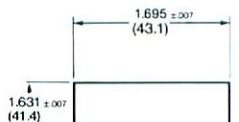
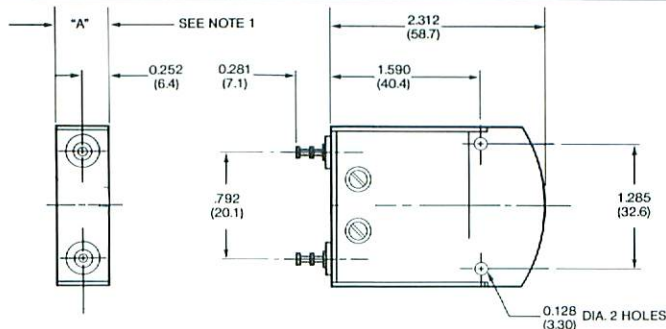
All dimensions
— inches (mm)

Model 1120/1121



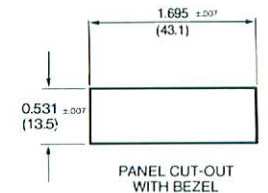
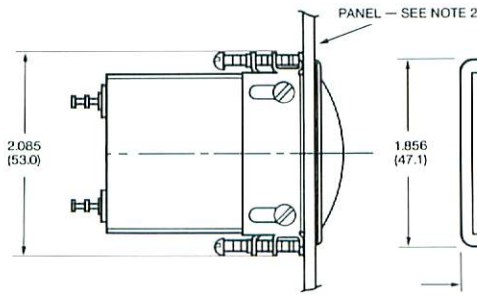
PANEL CUT-OUT
FOR DUAL MOUNTING CUT-OUT
1.687 x 1.040

Model 1122/1123



PANEL CUT-OUT
WITHOUT BEZEL

BEZEL MOUNTING

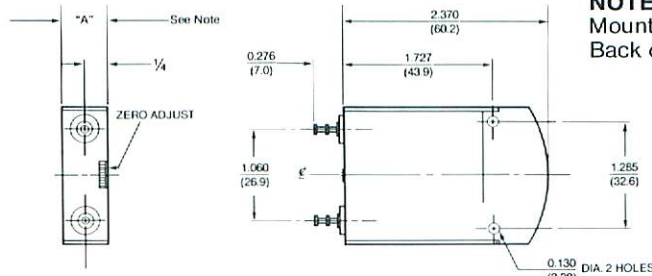
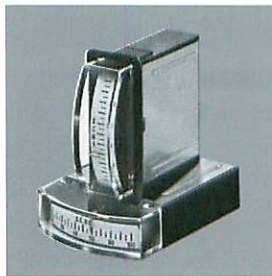


PANEL CUT-OUT
WITH BEZEL

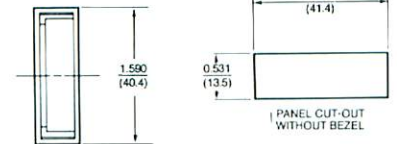
NOTES:

- "A" is 0.515 (13.0) Maximum at Location of Mounting Panel, and 0.525 (13.3) Maximum at Back of Unit Near Terminals.
- Maximum Panel thickness — 0.150 (3.81)

Model 1127



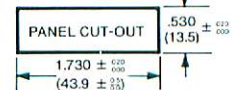
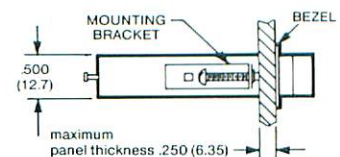
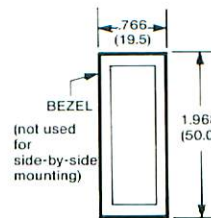
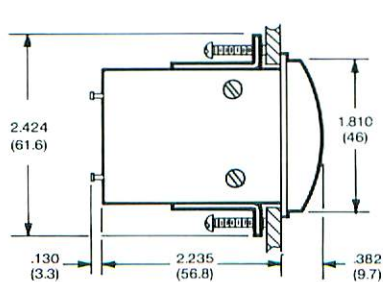
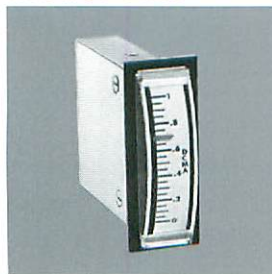
NOTE: "A" is 0.515 (13.0) Maximum at Location of Mounting Panel, and 0.525 (13.3) Maximum at Back of Unit Near Terminals.



PANEL CUT-OUT
WITHOUT BEZEL

BEZEL MOUNTING: SEE DETAIL UNDER MODEL 1122/1123 IMMEDIATELY ABOVE

Model 1128



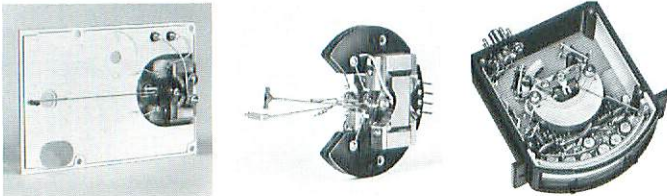
PANEL CUT-OUT

Custom Meters and Meter Movements from the specialists in High-Performance Edgewise Technology


International Instruments mounts and calibrates meters in customer supplied bases, or mounts and ships movements in plastic containers for installation by the customer.

Exclusive cantilevered coil construction produces torque to weight ratios on the order of four times greater than conventional edgewise movements of similar size.

Single, through-pivot shaft, used instead of stub shafts attached to two sides of the coil, eliminates pivot

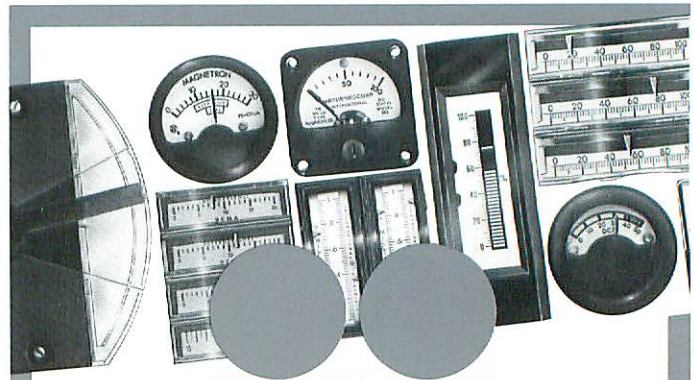


misalignment and helps maintain linearity and repeatability. Effective coil positioning permits longer pointer arms, special pointer shapes and even meter relay flags.

Dual and triple meter movements. Two or three movements can be mounted on a single base. Applications often require that two or three related signals be compared at a single control station, sometimes with the additional requirement that two of the units be tracked in unison. Difficult . . . but easily handled by  movements.

Long pointer movements. Permit shorter reading arcs. Previously discussed cantilevered coil construction allows flatter edgewise presentation and reduces reading errors near scale extremities.


Custom control alarm systems. International Instruments is recognized as a leader in control and alarm instrumentation. Many of the control packages designed around customers' specialized requirements include solid-state devices, with or without meters.



Who we are . . .

International Instruments, the world's leading manufacturer of edgewise panel meters, was founded in 1947 with the purpose of developing a series of analog instruments that realized the full potential of the flat, stackable, compact edgewise style of meter.


Today we offer a complete edgewise family of panel meters, alarm/control devices and electronic display instruments, supplemented by a special line of ruggedized miniature meters and the innovative Flat-Pak[®] line of "space-saver" meters.

 has been a member of the Prime Technology group of companies since 1984. Applications assistance is immediately available from the factory or a comprehensive network of distributors, representatives and agents strategically located throughout the world.

For further information . . .

For further detail on products, options or special orders, or for additional mechanical data and engineering drawings, call and ask for Customer Service:

(203) 481-5721

If it is more convenient, you may also contact  through the following TWX and FAX numbers. You may also write to the address listed beneath our signature.

TWX: 710-452-3092

FAX: 203-481-8937

Product Data Bulletins available from

Order by Bulletin Number:

- I — Edgewise Meters: Standard Models.
- II — Edgewise Meters: Single/Dual Models.
- III — Edgewise Meters: Mil. Spec. Models.
- IV — Edgewise Meters: Alarm/Control Models.
- V — Electronic Controllers and Indicators.
- VI — Square & Rounds (Ruggedized/Mil.)
- VII — Flat-Pak[®] Meters.
- VIII — Full Line (Short Form) Catalog.



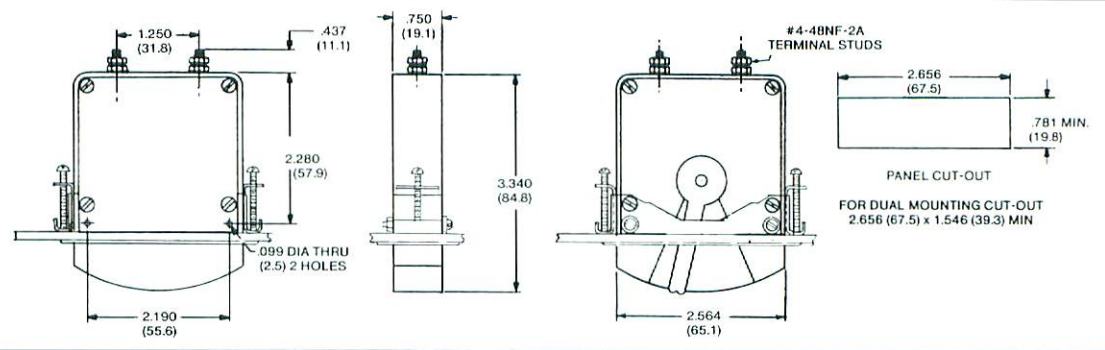
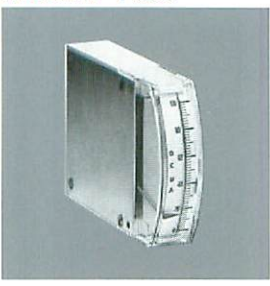
INTERNATIONAL INSTRUMENTS

A Prime Technology Company

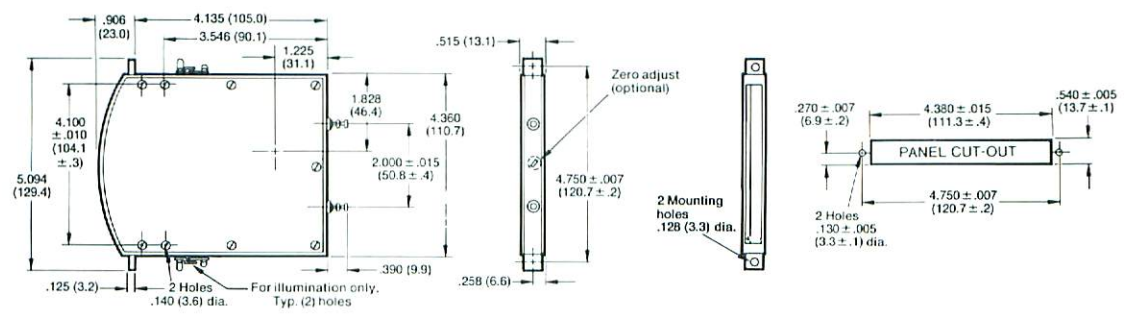
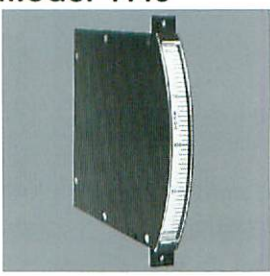
P.O. Box 185, Twin Lakes Road, North Branford, Connecticut 06471 • Telephone: (203) 481-5721/TWX: 710-452-3092/FAX: (203) 481-8937

All dimensions nominal and subject to change without notice. Please request latest mechanical data from factory before preparing buying specifications or critical engineering drawings. (See back cover.)

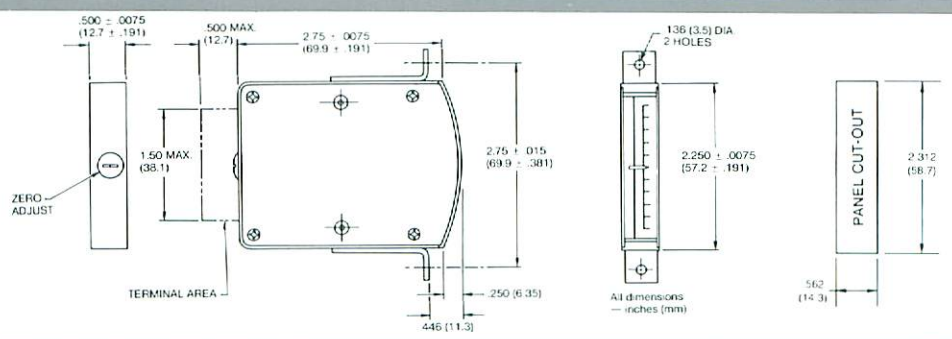
Model 1136



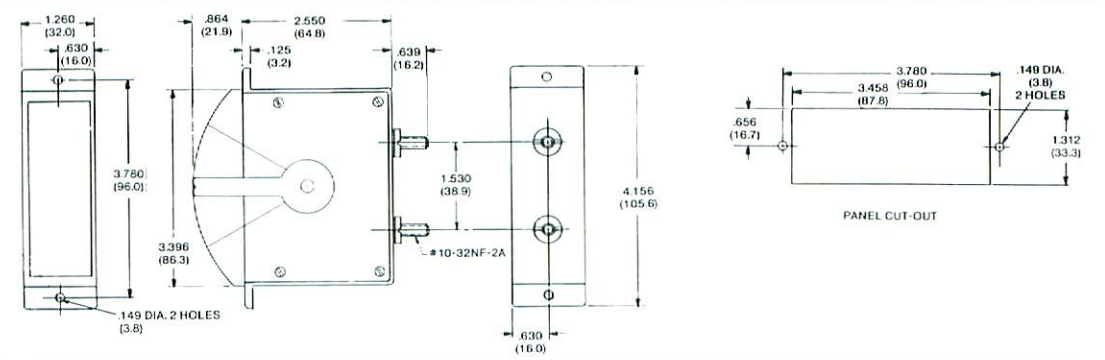
Model 1140



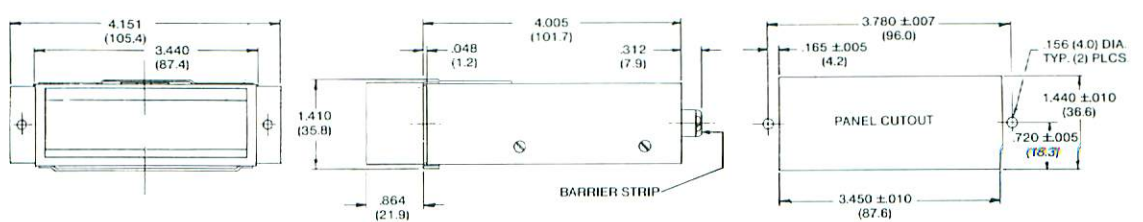
Model 1142



Model 1145



Model 2601



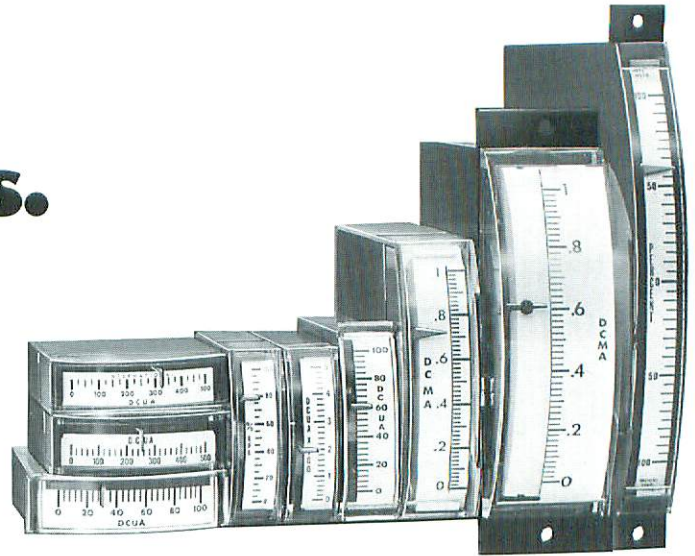
Edgewise Panel Meters: Standard Models.

- Compact edgewise design for high density data presentation.
- Designed for industrial, commercial, military and OEM applications.
- Supported by companion lines of single/dual, switchboard-class, mil. spec. and alarm/control models.

Edgewise meters from International Instruments are the industry's most comprehensive line of these space-saving, flush-stacking instruments. This bulletin presents Standard Models only. Other bulletins provide showings of single/dual models, switchboard-class units, special mil. spec. instruments, alarm/control meters and pyrometer/controllers. (See **Product Data Bulletins** from ■■ on back cover.)

Standard Models are designed for a wide range of commercial, industrial and electronic OEM applications. They offer all of the advantages of ■■ edgewise design, including compact installation, superior readability, magnetic shielding and reliable performance.

- **Standard scale faces** are white background with black markings. (White-on-black or other color combinations available on special order.)
- **High-visibility pointers** combine with bi-level design to produce instruments of maximum



readability, even in high density panels that stack many meters side by side.

- **Zero position** is left on horizontal meters, bottom on vertical meters, all other positions optional.
- **External zero adjust** is available on all models as either standard or optional.
- **D'Arsonval movements,*** employing highly polished jewels and Alnico V magnets, produce torque-to-weight ratios (meter efficiency) four times greater than those offered by conventional movements.
- **Exclusive Cantilevered Coil Construction.** This new ■■ approach to movement design is the key to ultra-thin meter profiles (as slim as 1/2 inch) and complete magnetic shielding. The superior shielding characteristics hold compass effect to under 1/2° (as compared to current aircraft specifications which permit 4°) and allow virtually unlimited "stacking" of instruments for optimum utilization of space. The single pivot-through-shaft assembly eliminates zero shift, assuring pivot alignment by removing the pivot axis from the active field. Other benefits include higher torque-to-weight ratio and excellent linearity and repeatability.
- **Illumination.** Although ambient light sources are normally sufficient when using ■■ high-visibility scales, internal white or red illumination is available on some models.
- **Rugged housings** are all-steel, combinations of steel and tough plastic, or sealed watertight aluminum, depending upon the application for which the model is primarily designed. Although most general-duty commercial models come with a clear plastic front section, several models are alternately available with glass and metal front covers.

ADVANTAGES

- **Space-saving.** Edgewise unit takes up about one-third the space required by conventional meters.
- **Flush-stacking.** Side-by-side or top-to-bottom.
- **Ease of comparative readout.** Maximum information compacted into minimal panel area.
- **Graphic display that is easier to take in at a glance.** Choice of horizontal or vertical presentation offers more meaningful presentation of right/left or high/low information.
- **Internal shielding** against magnetic interaction permits stacking without limit.
- **Bi-level scales** reduce the incidence of parallax reading error.
- **Horizontal and vertical format** available in all models.

For calibration of ■■ meters we recommend the General Resistance RTD-100, the most reliable and accurate instrument available for this purpose as well as for the testing and analysis of RTD temperature measuring systems.

*Model 1127 provides the exclusive ■■ Flat-Pak® taut-band movement rather than pivot-and-jewel.