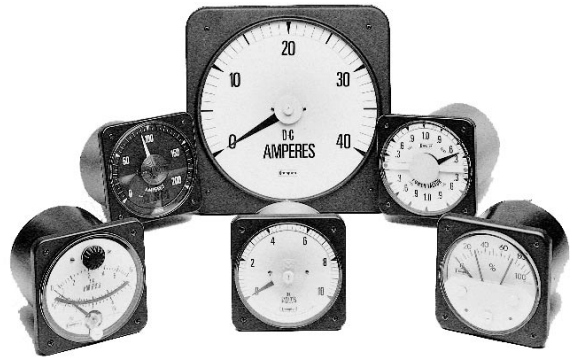


This high quality range of Switchboard instruments complies with the American specification ANSI-C39.1 (1981) accuracy class 1. Available in two case sizes, their rugged design characteristics suit the most demanding of environmental applications.



Approvals

- **UL Approved**
File No: E87815
- **CSA Approved**
File No: LR99712-1
- **ABS American Bureau of Shipping approved**
- **ISSEP Institute Scientifique de Service Public approved**

Description

Two case sizes, 4 1/2" (075, 077 & 078) and 9" (079) - 4 1/2" (078) is high shock hermetically sealed, all models have heavy gauge pressed steel cases. Mounting is by four integral studs. Standard fronts for Models 075 & 077 are a one piece flame retardant polycarbonate moulding with a matt black finished bezel area, and a specially contoured window to minimise reflection from adjacent light sources. Model 079 has a black pressed steel bezel with a toughened glass window. Model 078 has a die-cast

bezel and a projecting moulded toughened glass window, which incorporates a gas tight zero adjuster.

Options include

Supplementary red pointer (075 & 077), slave pointer, calibration for non standard ambient temperatures, special scales, trim potentiometers, etc are optional extras. Illuminated black or white dials with white or red light sources are also available as options.

Features

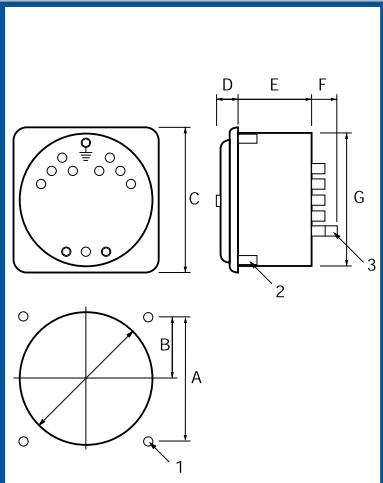
- **Rugged Hi-Q taut-band suspension**
- **Accuracy class 1**
- **Scales are 240° moving iron and 250° moving coil**
- **Response time is approximately 2.5 seconds to full scale (077 and 078) and 3.5 seconds (079)**
- **Overshoot is 33% maximum**
- **Bump, Shock and vibration proof**
- **Meets all the requirements of ANSI-C39.1 (1981)**
- **Models 075/077/079 to IP54(NEMA 3S) splash proof**
- **IP55 (NEMA 4) hoseproof is an optional extra**
- **Model 078 to IP67 (NEMA 6 & 6P)**
- **Parallax error-free platform dials**
- **BASEEFA intrinsically safe options certification code Ex ia 11c T4**
- **Operating temperature range 0°C to +40°C, -40°C to +70°C (078)**
- **Storage temperature -10°C to +50°C**
- **Extreme temperature range -20°C to +65°C**
- **Dielectric withstand: 2.3kV for 1 minute**
- **Calibrated at 23°C**
- **Non reflecting window (075/077/079)**
- **JIS dimensioned product available on request**

Dimensions

Model	Panel Cut-out			Rear View C	D	E	F	G
	Dia	A	B					
075	103	86	43	110	17	-	30	101
077	103	86	43	110	17	-	30	101
078	103	86	43	110	17	-	30	101
079	229	86	43	229	17	-	30	101

- 1 4 Fixing holes Ø 8mm.
- 2 1/4-28 UNF fixing studs.
- 3 10-32 UNF Terminals (M5 screw clamp terminal on model 075).

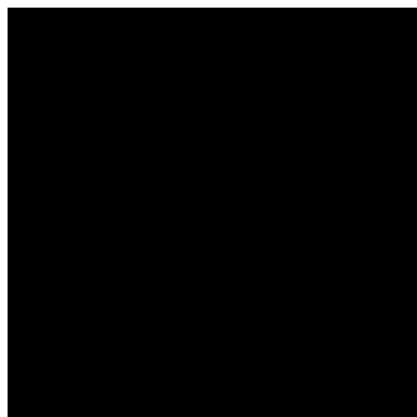
Dimension E varies with measured parameter - see selection table on page 29.



Features

- >>
- >>
- >>
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- >>

**Self contained HI-Q Taut Band moving coil
RMS compensated rectifier**



Manufactured in accordance with American National Standards ANSI C39.1, 1981

	±1% full scale at 23°C (73°F)	-10 to +50°C (14 to 122°F)
	250° full scale deflection	
077 & 078:	175.2 mm (6.9")	-20° to +65°C (-4° to +149°F)
079:	353 mm (13.9")	Standard 10-32 UNF stud optional M5 screw clamp
	2 piece, platform type	Vertical (scale)
077 & 078:	Approximately 2.5 seconds to full scale	2300V A.C. for 1 minute between electrical circuit and case
079:	Approximately 3.5 seconds to full scale	33% maximum
	0 to 40°C (32 to 104°F)	077 & 079: IP54, optional IP55
		078: IP67

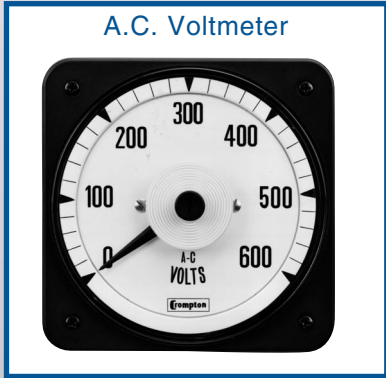
Peak Transient Suppression

A.C. Ammeters - 2 x continuous, 50 x for 1 second
 A.C. Voltmeters and frequency meters - 1.2 x continuous
 D.C. Ammeters - 2 x continuous 10 x for 1 second
 D.C. Voltmeters - 1.2 x continuous
 A.C. calibration 60Hz ±20%

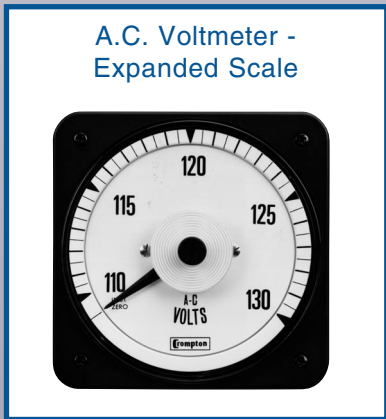
Center Scale Hz	Maximum Frequency Hz	Error In Hz	
45-55	50	0.15	3 seconds maximum
46-54	50	0.15	
45-65	55	0.25	0.6 times accuracy maximum with ±10°C from reference temperature
50-70	60	0.25	
55-65	60	0.15	2.0 times accuracy maximum with 0.5mT field
56-64	60	0.15	
58-62	60	0.08	
350-450	400	1.30	Up to 30% distortion
360-440	400	1.25	
380-420	400	0.80	

070 Series ANSI Switchboard Meters

RMS Reading A.C. Voltmeters



A.C. Voltmeter



A.C. Voltmeter - Expanded Scale

Rating	Scaling*	4 1/2" Square Flange		8 3/4" Square Flange
		Standard Case Catalogue No.	Sealed Case Hi-Shock Catalogue No.	Standard Case Catalogue No.

Self Contained 60Hz ±20% (Accuracy ±1%)* **

Rating	Scaling*	Standard Case Catalogue No.	Sealed Case Hi-Shock Catalogue No.	8 3/4" Square Flange Standard Case Catalogue No.
150V	0-150V	•/+077-05GA-PZPZ-C6	078-05GJ-PZPZ-C6	•079-05GA-PZPZ-C6
250V	0-250V	•/+077-05GA-RSRS-C6	078-05GJ-RSRS-C6	•079-05GA-RSRS-C6
300V	0-300V	•/+077-05GA-RXRX-C6	078-05GJ-RXRX-C6	•079-05GA-RXRX-C6
500V	0-500V	•/+077-05GA-SFSF-C6	078-05GJ-SFSF-C6	•079-05GA-SFSF-C6
600V	0-600V	•/+077-05GA-SJSJ-C6	078-05GJ-SJSJ-C6	•079-05GA-SJSJ-C6
750V	0-750V	077-05GA-SMSM-C6	078-05GJ-SMSM-C6	079-05GA-SMSM-C6

For A.C. rectified non-RMS compensated meter please replace the -05G in the product code with -05W

For connection diagram please see page 54 Fig. 4

Transformer Rated 50/60HZ (Accuracy ±1%) 0.8VA @150V***

Rating	Scaling*	Standard Case Catalogue No.	Sealed Case Hi-Shock Catalogue No.	8 3/4" Square Flange Standard Case Catalogue No.
150V	0-300V	•/+077-05GA-PZRX-C6	078-05GJ-PZRX-C6	•079-05GA-PZRX-C6
150V	0-600V	•/+077-05GA-PZSJ-C6	078-05GJ-PZSJ-C6	•079-05GA-PZSJ-C6
150V	0-750V	•/+077-05GA-PZSM-C6	078-05GJ-PZSM-C6	•079-05GA-PZSM-C6
150V	0-3000V	•/+077-05GA-PZUA-C6	078-05GJ-PZUA-C6	•079-05GA-PZUA-C6
150V	0-5250V	•/+077-05GA-PZUL-C6	078-05GJ-PZUL-C6	•079-05GA-PZUL-C6
150V	0-6000V	•/+077-05GA-PZUP-C6	078-05GJ-PZUP-C6	•079-05GA-PZUP-C6
150V	0-9000V	•/+077-05GA-PZUY-C6	078-05GJ-PZUY-C6	•079-05GA-PZUY-C6
150V	0-15KV	•/+077-05GA-PZWC-C6	078-05GJ-PZWC-C6	•079-05GA-PZWC-C6
150V	0-18KV	•/+077-05GA-PZWD-C6	078-05GJ-PZWD-C6	•079-05GA-PZWD-C6
150V	0-45KV	•/+077-05GA-PZWJ-C6	078-05GJ-PZWJ-C6	•079-05GA-PZWJ-C6
250V	0-600V	•/+077-05GA-RSSJ-C6	078-05GJ-RSSJ-C6	•079-05GA-RSSJ-C6

For A.C. rectified non-RMS compensated meter please replace the -05G in the product code with -05W

For connection diagram please see page 54 Fig. 5

Expanded Scale - Moving Coil Zener Diode*** (Accuracy ±0.3% of mid scale value) Self contained, 20-1000Hz

Rating	Scaling*	Standard Case Catalogue No.	Sealed Case Hi-Shock Catalogue No.	8 3/4" Square Flange Standard Case Catalogue No.
110-130V	110-130V	077-05YA-PNPN-C6	078-05YJ-PNPN-C6	079-05YA-PNPN-C6
110-130V	TO SUIT P.T.	077-05YA-PN** -C6	078-05YJ-PN** -C6	079-05YA-PN** -C6

For connection diagram please see page 54 Fig. 5

Instantaneous A.C. Voltmeter*** with Instantaneous maximum reading slave pointer

150V	TO SUIT P.T.	077-05XA-PZ** -C6
250V	TO SUIT P.T.	077-05XA-RS** -C6
300V	TO SUIT P.T.	077-05XA-RX** -C6

For connection diagram please see page 54 Fig. 5

077 moving iron ammeters and voltmeters available as listed above

• UL recognized File # E87815
+ CSA Approved File # LR52592

* Other scales are available

** Specify scale required

*** Case types 077/078/079 use 10-32 UNF terminals. For M5 screw clamp terminals stipulate case type 075