Sealed and Ruggedised Indicators

080 Series 90° scale

A range of metal cased, sealed instruments for use in industrial and military applications involving extreme shock, vibration, temperature, dirt or humidity.

Sizes 081, 082, 083 and 084 comply with Ministry of Defence specification DEF STAN 66-7 or DEF STAN 66-9 for all ratings listed in the standard.

Size 089 complies with MIL-M-10304 dimensionally.



Features

- ***BSEN60051 (081 to 084)***
- ***DEF STAN 66-7 and 66-9 on request (081 - 084 and 089)***
- ***Rugged Hi-Q taut-band suspension***
- ***Extreme shock, vibration, temperature, dirt and humidity resistant***
- ***Illumination option***

Description

Five bezel sizes of 32mm Ø (081), 45mm Ø (082), 57 x 57mm (083), 83mm Ø (084) and 89mm Ø (089). Barrel diameters of 26mm (081), 37mm (082), 53mm (083), and 67mm (084 and 089). Toughened glass windows are used throughout the series. In order to avoid fogging they are dried, evacuated and filled with dry nitrogen.

Except on model 083, panel sealing gaskets are provided as standard.

The smaller cases, Models 081 and 082, are made from nickel-plated brass and anodised aluminium alloy. Single hole fixing is made by means of a threaded clamp ring which screws onto the barrel, they also have ceramic insulated terminals and no zero adjuster is fitted.

Models 083, 084 and 089 have steel cases with fixing holes in the flange. Sealed zero adjusters are provided.

Standard instrument dials are finished in matt white with black printing and parallel pointer. The scales form a true arc with zero on the left.

Options

Options available include a centre zero, off-set zero or suppressed zero, colour index lines, bands, zones or segments, black dial with white printing, customer logo.

Model 081:
Through dial, white or red bulb, 12 or 24V illumination.

Models 081/082:
Betalite through dial, 12 or 24V, illumination.

Models 082/083/084/089:
Through dial, red or clear LED 12 or 24V illumination.

Models 083/084/089:
Edge, White or Red bulb, 12 or 24V, illumination.

Instruments operated by separate transducers to indicate watts, vars, frequency, phase angle, current, voltage or physical/mechanical parameters are available.

Specification

Scaling:	To BS89, BS3693 or DEF STAN 66-7 and 66-9 (081 to 084)
Accuracy:	081 Class 5, others Class 2.5
Frequency Meter	0.5% of Mid Frequency (083, 084, 089)
Enclosure code:	
083/084/089:	to IP67 (NEMA 6 & 6P)
081/082:	to IP68
Ambient temperature range:	
081 to 084:	-40°C to +70°C
089	-55˚C to 65˚C
Calibrated:	at 23°C.

Dielectric Test @50Hz:	750V r.m.s (081) 1kV r.m.s (082) 2kV r.m.s (083/084/089) <50V 500V r.m.s All for 1 minute
Overloads:	x 1.2 rated current or voltage for 2 hours x 10 rated current for 5 seconds x 2 rated voltage for 5 seconds
Burden:	
A.C. Ammeter:	1VA Maximum
A.C. Voltmeter:	3VA Maximum
Frequency Meter:	4VA Maximum
Elapsed Time Meter:	2.5VA Maximum

Crompton INSTRUMENTS

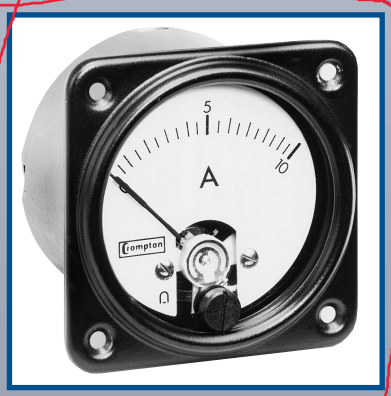
Analogue Instruments

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Product Range

Type of Instrument	Ranges	Case Code 081	082	083	084	089	Product Code
A.C. Ammeter Moving iron	1-30A	-	-	✓	-	-	083-75A
A.C. Ammeter Moving iron	1-30A	-	-	-	✓	-	084-75A
A.C. Ammeter Moving iron	1-30A	-	-	-	-	✓	089-75A
A.C. Voltmeter Moving iron	5-300V	-	-	✓	-	-	083-75V
A.C. Voltmeter Moving iron	5-500V	-	-	-	✓	-	084-75V
A.C. Voltmeter Moving iron	5-500V	-	-	-	-	✓	089-75V
D.C. Ammeter Shunt Operated	50, 60, 75, 100, 150mV	✓	-	-	-	-	081-80A
D.C. Ammeter Shunt Operated	50, 60, 75, 100, 150mV	-	✓	-	-	-	082-80A
D.C. Ammeter Shunt Operated	50, 60, 75, 100, 150mV	-	-	✓	-	-	083-80A
D.C. Ammeter Shunt Operated	50, 60, 75, 100, 150mV	-	-	-	✓	-	084-80A
D.C. Ammeter Shunt Operated	50, 60, 75, 100, 150mV	-	-	-	-	✓	089-80A
D.C. Ammeter	50µA-20mA, 4/20mA	✓	-	-	-	-	081-80A
D.C. Ammeter	50µA-10A	-	✓	-	-	-	082-80A
D.C. Ammeter	50µA-30A	-	-	✓	-	-	083-80A
D.C. Ammeter	50µA-30A	-	-	-	✓	-	084-80A
D.C. Ammeter	50µA-30A	-	-	-	-	✓	089-80A
D.C. Ammeter Suppressed Zero	4/20mA	✓	-	-	-	-	081-80R
D.C. Ammeter Suppressed Zero	4/20mA	-	✓	-	-	-	082-80R
D.C. Ammeter Suppressed Zero	4/20mA	-	-	✓	-	-	083-80R
D.C. Ammeter Suppressed Zero	4/20mA	-	-	-	✓	-	084-80R
D.C. Ammeter Suppressed Zero	4/20mA	-	-	-	-	✓	089-80R
D.C. Voltmeter	50mV-300V	✓	-	-	-	-	081-80V
D.C. Voltmeter	50mV-300V	-	✓	-	-	-	082-80V
D.C. Voltmeter	50mV-300V 1000Ω/V	-	-	✓	-	-	083-80V
D.C. Voltmeter	50mV-300V	-	-	-	✓	-	084-80V
D.C. Voltmeter	50mV-300V	-	-	-	-	✓	089-80V
D.C. Voltmeter Suppressed Zero	1/5V	✓	-	-	-	-	081-80S
D.C. Voltmeter Suppressed Zero	1/5V	-	✓	-	-	-	082-80S
D.C. Voltmeter Suppressed Zero	1/5V	-	-	✓	-	-	083-80S
D.C. Voltmeter Suppressed Zero	1/5V	-	-	-	✓	-	084-80S
D.C. Voltmeter Suppressed Zero	1/5V	-	-	-	-	✓	089-80S
A.C. Rectified Ammeter	100µA-500mA.25Hz/3kHz	-	✓	-	-	-	082-80B
A.C. Rectified Ammeter	100µA-500mA.25Hz/3kHz	-	-	✓	-	-	083-80B
A.C. Rectified Ammeter	100µA-500mA.25Hz/3kHz	-	-	-	✓	-	084-80B
A.C. Rectified Ammeter	100µA-500mA.25Hz/3kHz	-	-	-	-	✓	089-80B
A.C. Rectified Voltmeter	5-300V	-	✓	-	-	-	082-80W
A.C. Rectified Voltmeter	5-600V 900Ω/V	-	-	✓	-	-	083-80W
A.C. Rectified Voltmeter	5-600V	-	-	-	✓	-	084-80W
A.C. Rectified Voltmeter	5-600V	-	-	-	-	✓	089-80W
Elapsed time meter (99999.9)	12 or 24V D.C.	-	✓	✓	✓	-	082/083/084-151
Elapsed time meter (99999.9)	50Hz / 100-440V*	-	-	✓	✓	-	083/084-155
Elapsed time meter (99999.9)	60Hz / 100-440V*	-	-	✓	✓	-	083/084-156
Elapsed time meter (99999.9)	50Hz / 100-440V*	-	-	-	-	✓	089-155
Elapsed time meter (99999.9)	60Hz / 100-440V*	-	-	-	-	✓	089-156
Frequency meter	50 or 60 or 400Hz/100-440V*	-	-	✓	-	-	083-41S
Frequency meter	50 or 60 or 400Hz/100-440V*	-	-	-	✓	-	084-41S
Frequency meter	50 or 60 or 400Hz/100-440V*	-	-	-	-	✓	089-41S
Transducer Indicator Speed	1, 5, 10, 20 & 4/20mA	✓	✓	✓	✓	✓	81/082/083/084/089-802
Transducer Indicator Frequency	1, 5, 10, 20, & 4/20mA	✓	✓	✓	✓	✓	81/082/083/084/089-803
Transducer Indicator Phase Angle	1, 5, 10, 20, & 4/20mA	✓	✓	✓	✓	✓	81/082/083/084/089-804
Transducer Indicator Watts	1, 5, 10, 20, & 4/20mA	✓	✓	✓	✓	✓	81/082/083/084/089-805
Transducer Indicator Vars	1, 5, 10, 20, & 4/20mA	✓	✓	✓	✓	✓	81/082/083/084/089-806
Transducer Indicator VA	1, 5, 10, 20, & 4/20mA	✓	✓	✓	✓	✓	81/082/083/084/089-807

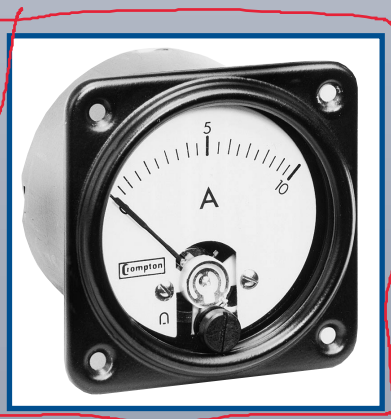
* 100-440V = (100/125 or 200/250 or 380/440)

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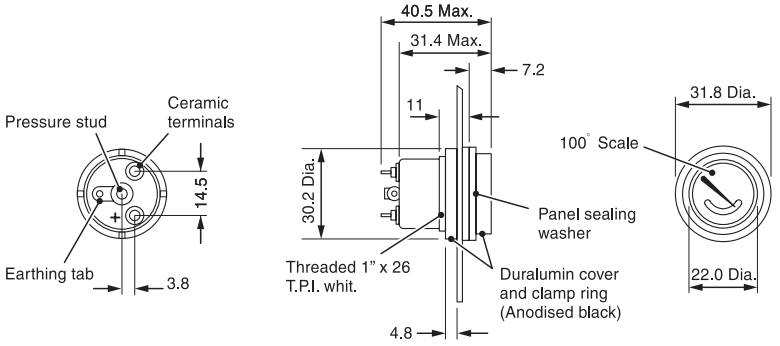




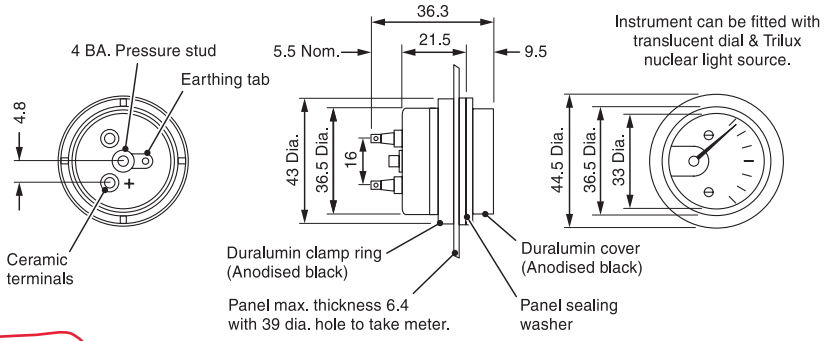
Sealed and Ruggedised Indicators

080 Series Dimensions

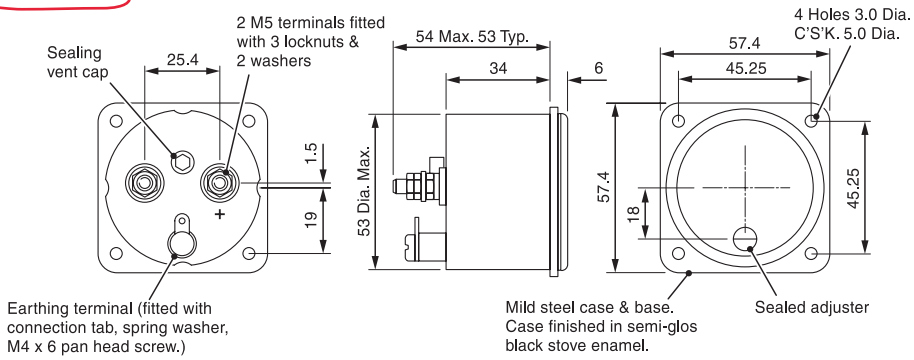
Model 081



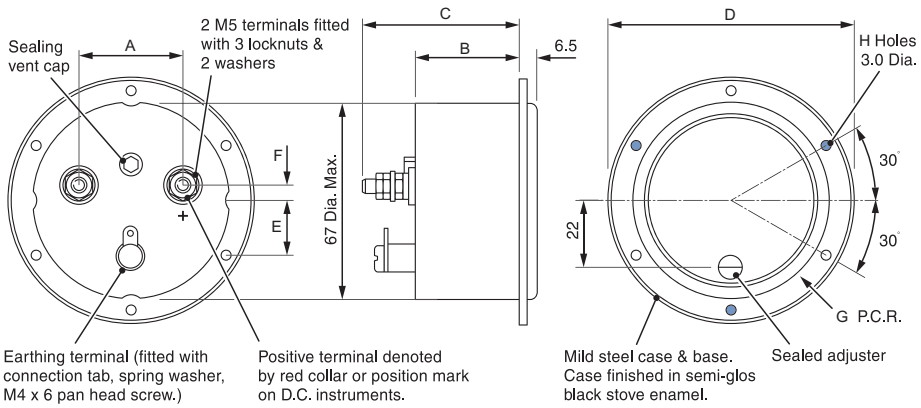
Model 082



Model 083



Model 084/089



*When fitted with terminal shunt for ranges above 20 amps.

	A	B	C	D	E	F	G	H	J
084	35.0	33.5	53*	82.5	19	5	36.5	6	6.5
089	25.4	44.0	59	88.9	20	0	40.1	3	7

Panel Cut out 68.3ø - Holes 3.8ø

These ● holes on 084 only.

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