

Sealed and Ruggedised Indicators

078/080/087 Series 240° Scale

The Crompton Instruments 078/080/087 series of heavy duty sealed instruments are designed to comply with the most stringent industrial, marine and military specifications.

This metal cased range offers bezel sizes of 57mm, 83mm and 110mm all fitted with toughened glass. Indicators comply with Ministry of Defence specification DEF STAN 66.7. and operate efficiently in the most adverse environments where extreme conditions of shock, vibration, dirt, humidity and temperature variation are present.

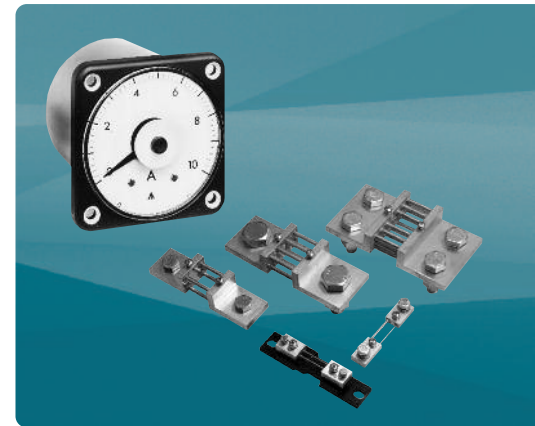
Description

Indicators have metal cases with bezel sizes of 50 x 57mm (083), 83mm Ø (084) and 110mm x 100mm (078/087). All indicators are fitted with toughened glass windows. The standard black matt finish can be replaced with options ranging from light admiralty grey to BS3181C No:697. To prevent fogging, all indicators have been dried, evacuated and filled with dry nitrogen during manufacturing. The case interior retains a constant pressure of at least 94kPa above the exterior with leakage not above the equivalent of 1.33 Pa ml/s of air. Except on model 083, panel sealing gaskets are standard equipment.

Standard instrument dials are finished in acrylic white matt with black printing and a parallel pointer. Scales form a true arc with zero on the left hand-side. Options include dial illumination, a centre, off-set or suppressed zero, colour index lines, bands, zones or segments, a black dial with white printing, and customer logo.

Specifications

Performance:	BSEN60051 (IEC51) DEF STAN 66-7 on request (087 only)
Accuracy:	Refer to Product Range table
Scaling:	BS89, BS3693 or DEF STAN 66-7 and 66-9
Dielectric test:	2kV r.m.s to BSEN61010-1
Overloads:	x 1.2 rated current for 2 hours x 10 rated current for 5 seconds x 1.2 rated voltage for 2 hours x 2 rated voltage for 5 seconds
Enclosure code:	IP67 (NEMA 6 and 6P)
Case:	Black matt metal filled with dry nitrogen
Bezel:	Black matt metal. Optional admiralty grey No. 697
Bezel window:	Toughened glass
Operating temperature:	-40°C to +70°C (-40°F to +158°F)
Storage temperature:	-55°C to +85°C (-67°F to 185°F)
Standard calibration:	23°C (73°F)
Approvals:	EMC and LVD DEF 66.7



Features

- Designed specifically for stringent industrial, marine and military specifications
- An extensive range of high accuracy measuring instruments in 3 case sizes
- Rugged Hi-Q taut-band suspension
- Bump, shock and vibration proof

Benefits

- Complies with BSEN60051 (IEC51)
- IP67 (NEMA 6 and 6P) protection
- Dial illumination option
- Parallax error-free platform dials for 078/087. Optional for 083/084

Applications

- Switchgear
- Distribution systems
- Generator sets
- Control panels
- Utility power monitoring
- Process control
- Motor control
- Marine
- Military

Approvals

- DEF STAN 66.7

Product Range – 078/080/087 Series 240° Scale

Type of instrument	Ranges	Accuracy class	Burden VA	Case code depth behind the bezel				Product code
DC ammeter shunt operated	50, 60, 75, 100, 150mV	2.5	See T118***	57	-	-	-	083-05A
DC ammeter shunt operated	50, 60, 75, 100, 150mV	1.5	See T118***	-	59	-	-	084-05A
DC ammeter shunt operated	50, 60, 75, 100, 150mV	1.5	See T118***	-	-	86	-	078-05A
DC ammeter shunt operated	50, 60, 75, 100, 150mV	1.5	See T118***	-	-	-	86	087-11A
DC ammeter	200µA-30A	2.5	See T118***	57	-	-	-	083-05A
DC ammeter	200µA-30A	1.5	See T118***	-	59	-	-	084-05A
DC ammeter	200µA-30A	1.0	See T118***	-	-	86	-	078-05A
DC ammeter	200µA-30A	1.0	See T118***	-	-	-	86	087-11A
DC ammeter suppressed zero	4/20mA	2.5	See T118***	57	-	-	-	083-05R
DC ammeter suppressed zero	4/20mA	1.5	See T118***	-	59	-	-	084-05R
DC ammeter suppressed zero	4/20mA	1.5	See T118***	-	-	86	-	078-05R
DC ammeter suppressed zero	4/20mA	1.5	See T118***	-	-	-	86	087-11R
DC voltmeter	50mV-600V	2.5	See T118***	57	-	-	-	083-05V
DC voltmeter	50mV-600V	1.5	See T118***	-	59	-	-	084-05V
DC voltmeter	50mV-800V	1.5	See T118***	-	-	86	-	078-05V
DC voltmeter	50mV-800V	1.0	See T118***	-	-	-	86	087-11V
DC voltmeter suppressed zero	1/5V	1.5	See T118***	-	-	86	-	078-05S
DC voltmeter suppressed zero	1/5V	1.5	See T118***	-	-	-	86	087-11S
AC rectified ammeter	200µA-1A	2.5	See T118***	57	-	-	-	083-05B
AC rectified ammeter	200µA-1A	2.5	See T118***	-	59	-	-	084-05B
AC rectified ammeter	200µA-30A	1.5	See T118***	-	-	86	-	078-05B
AC rectified ammeter	200µA-30A	1.5	See T118***	-	-	-	86	087-11B
AC rectified voltmeter	15-600V 25Hz/3kHz	2.5	See T118***	57	-	-	-	083-05W
AC rectified voltmeter	15-600V 25Hz/3kHz	2.5	See T118***	-	59	-	-	084-05W
AC rectified voltmeter	15-600V 25Hz/3kHz	1.5	See T118***	-	-	86	-	078-05W
AC rectified voltmeter	15-600V 25Hz/3kHz	1.5	See T118***	-	-	-	86	087-11W
Elapsed time meter	50 or 60Hz, 100-400V*			57	-	-	-	083-155 or 156
Elapsed time meter	12, 24V DC			57	-	-	-	083-151
Elapsed time meter	50 or 60Hz, 100-400V*			-	59	-	-	084-155 or 156
Elapsed time meter	12, 24V DC			-	59	-	-	084-151
Elapsed time meter	50 or 60Hz, 100-400V*			-	-	86	-	078-155 or 156
Frequency meter	50/60/400Hz 100-440V*	0.5%	4	57	-	-	-	083-41S
Frequency meter	50/60/400Hz 100-440V*	0.5%	4	-	59	-	-	084-41S/089-41S
Frequency meter	50/60/400Hz 100-440V*	0.5%	4	-	-	86	86	078/087-41L
Temperature indicator	RTD	1.5	See T118***	-	-	86	-	078-45 R
Wattmeter or VArmeter	0.2-10A/100-440V*	Balanced	Current	-	-	132	132	078/087-21 or 31
Transducer operated indicator	1, 5, 10, 20 or 4/20mA	1.0	See T118***	57	-	-	-	083-05
Transducer operated indicator	1, 5, 10, 20 or 4/20mA	1.0	See T118***	-	59	-	-	084-05
Transducer operated indicator	1, 5, 10, 20 or 4/20mA	1.0	See T118***	-	-	86	-	078-05
Transducer operated indicator	1, 5, 10, 20 or 4/20mA	1.0	See T118***	-	-	-	86	087-11

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

*** The T118 technical sheet is available on request.