007 switchboard meters

FEATURES

- Low profile
- Class 1 accuracy
- Optional panel gasket
- Reliability
- Long scale 240°

APPROVALS

- UL approved file no. E203000

c UL us LISTED

BENEFITS

- Enhanced safety
- Reinforced insulation
- ANSI C39.1

The Crompton Instruments compact ANSI switchboard meter offers Class 1 accuracy metering performance packed in a low profile, depth saving case. The 007 switchboard meters are a direct drop-in replacement for our legacy switchboard products.

The compact case also offers a lightweight, heavy duty polycarbonate case which is electrically safe. The 4½ inch meter complies with ANSI-C39.1 specifications.

APPLICATIONS

- Switchgear
- Distribution systems
- Energy management
- Process control
- Building management

PRODUCT CODES

Model	Function
007-05FA	AC rms reading ammeter, linear scale, left zero
007-05GA	AC rms reading voltmeter, linear scale, left zero
007-05VA	DC voltmeter, left zero
007-05AA	DC milliammeter/millivoltmeter, left zero
007-05CA	DC milliammeter/millivoltmeter, centre zero
007-05RA	DC milliammeter, suppressed zero (4/20 mA etc)
007-055A	DC transducer indicator, scaled watts
007-056A	DC transducer indicator, scaled var
007-41LA	AC frequency meter
007-05BA	AC rectified ammeter
007-05PA	DC voltmeter, centre zero
007-05NA	DC voltmeter, centre zero
007-05ZA	DC voltmeter, expanded scale
007-05DA	DC ammeter, offset zero
007-05WA	AC rectified voltmeter
007-05YA	AC voltmeter, expanded scale

PRODUCT CODE AND ORDERING INFORMATION EXAMPLE

007-05GA-PZPZ-C7

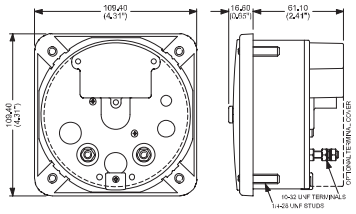
RMS compensated Switchboard meter.

HOW TO ORDER

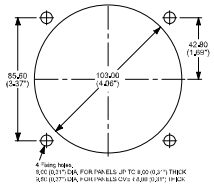
To order an equivalent for a 077, AB40 Or DB40 type meter, order exactly the same code, except replace 077 with 007.

E.g: 077-05FA-LSPK-C7 is 0-5A electrical scale, 0-100A dial AC ammeter, 50-60Hz. 007-05FA-LSPK-C7 provides identical specification in compact body style

DIMENSIONS



PANEL CUT OUT



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ANSI switchboard meters

FEATURES

- Rugged pivot and jewel movement
- Class 1 accuracy

APPROVALS

- c-UL UL listed
- E203000
- CE marked

BENEFITS

- Meets all the requirements of ANSI-C39.1 (1981)
- Parallax error-free platform dials
- Bump, shock and vibration proof
- Customised options and features

High quality range of switchboard instruments with Class 1 accuracy and which complies with American ANSI-C39.1 (1981) specifications. Available in 41/2" case size, the rugged design characteristics meet the needs of the most demanding environmental applications. This extensive range of analogue and digital/ analogue meters utilises high shock and provides 1% accuracy for all RMS AC and DC ranges. The range offers various customised options and features.

DESCRIPTION

Our Switchboard Meter series offers two case types; models 007 and 078.

Model 078 is high shock hermetically sealed and all models have heavy gauge pressed steel cases. Mounting is by four integral studs. Model 078 has a die-cast bezel and a projecting moulded toughened glass window, which incorporates a gas tight zero adjuster.

Model 007 is a one piece flame retardant polycarbonate moulding with a black matte finished bezel area, and a specially contoured window to minimise reflection from adjacent light sources.

Scales are 240° moving iron and 250° moving coil with parallax error-free platform dials. Standard dials are white matte with black printed scales and bar knife-edge pointers.

APPLICATIONS

- Switchgear
- Distribution systems
- Generator sets
- Control panels
- Energy management
- Building management
- Utility power monitoring
- Process control
- Motor control

SPECIFICATIONS

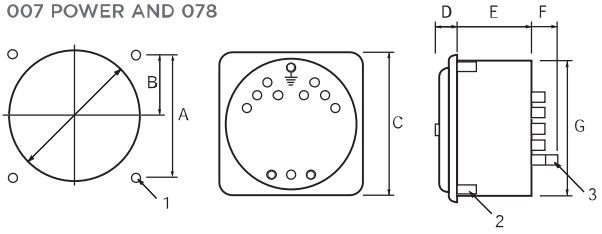
Performance	ANSI C39.1 (1981)
Accuracy	Class 1
Terminals	10 - 32 UNF terminals
Response time	Approximately 2.5 seconds to full scale (007 and 078)
Dielectric voltage	Withstand test 2.3 kV for 1 minute
Standard calibration	23°C
Operating temperature	0°C to +60°C. Model 078: -40°C to +70°C
Storage temperature	-10°C to +50°C
Extreme temperature range	-20°C to +65°C
Enclosure integrity	Model 007 to IP54 (NEMA 3S) splash proof, IP55 (NEMA 4) hoseproof is an optional extra Model 078 to IP67 (NEMA 6 and 6P)
Fixing on panel	4 integral 1/4 -28 UNF fixing studs
Certifications	c-UL-us, CE

DIMENSIONS (IN INCHES)

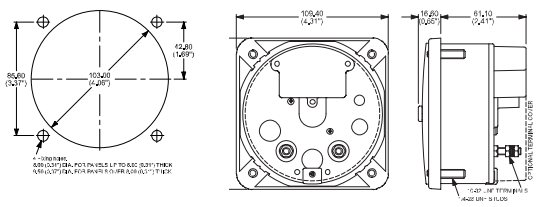
Model	Panel Cutout			Rear View		Side View		
	Dia	A	B	C	D	E	F	G
007 (Amps, Volts & Freq.)	4.06	3.37	1.69	4.31	0.65	2.41	-	4.05
007 Others	4.06	3.37	1.69	4.31	0.65	-	0.91	4.05
078	4.06	3.37	1.69	4.31	0.63	-	0.91	4.05

Dimension E on 007 others and 078 products varies with measured parameter.
See product code on following page.
Dimension F on 078 (Amps, Volts & Freq.) products is included with dimension E.
1-4 Fixing holes Ø 8mm. 2-1/4-28 UNF fixing studs. 3-10-32 UNF terminals.

007 POWER AND 078



007 AMPS | VOLTS | FREQUENCY ONLY



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ANSI switchboard meters

Type of instrument	Ranges	Dimension E		Product code
		007	078	
AC rectified ammeter	1 - 30 A	56	86	007/078-05B
AC rectified voltmeter	30 - 800 V	56	86	007/078-05W
AC voltmeter expanded scale	110 - 130 V	86	86	007/078-05Y
AC RMS ammeter	1 - 30 A	56	86	007/078-05F
AC RMS voltmeter	150 - 750 V	56	86	007/078-05G
Elapsed time meter (99999.99)	50 or 60 Hz / 100 - 440 V* and DC	56	56	007/078-155/156/077-151
Frequency meter	50, 60	86	86	007/078-41L
AC wattmeter or VArmeter	0.2 - 10 A/100 - 440 V*	132	132	007/078-21 or 31
LED synchroscope only	63.5 - 480 V****	86	-	077-14A
LED synchroscope and synchro check relay	63.5 - 480 V****	86	-	077-14 L/G/D/U
Phase sequence indicator	100 - 150, 151 - 300, 301 - 500 V	56	-	077-12P
Transducer operated indicator	1, 5, 10, 20, or 4/20 mA	56	56	007/078-05
DC ammeter moving coil	200 µA - 30 A 56	56	56	007/078-05A
DC voltmeter moving coil	50 mV - 600 V 56	56	56	007/078-05V
240° phase angle | power factor	1 or 5 A, 100 - 400 V, 50, 60	132	132	007/078-42
DIGI/Analogue AC ammeter	1 mA - 10 A	86	-	007-DIB
DIGI/Analogue AC voltmeter	200 mV - 600 V	86	-	007-DIW
DIGI/Analogue DC ammeter	1m A - 1 A	86	-	007-DIA
DIGI/Analogue DC voltmeter	20 mV - 600 V	86	-	007-DIV
DIGI/Analogue transducer indicator	DC mA	86	-	007-DIT
DIGI/Analogue tachometer	AC or DC rated	86	-	007-DI2

* 100-440V = (100/125, 200/250, 380/440).
**100-440V = (100/125, 200/250, 380/440). Frequencies 45/55, 55/65, 45/65, 46/54, 50/70, 58/62, 56/64.
****Nominal voltage to be specified.

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DC voltmeters

PRODUCT CODES – SENSITIVITY 1000 OHMS / VOLT - ACCURACY ±1%***

Rating	Scaling*	4 ½" square flange	
		Std. case catalogue number	Std. case hi-shock catalogue number
500MV-800V	To suit	•007-05VA-**	078-05VJ-**
0-15V	0-15V	•007-05VA-NDND	078-05VJ-NDND
0-30V	0-30V	•007-05VA-NLNL	078-05VJ-NLNL
0-50V	0-50V	•007-05VA-NTNT	078-05VJ-NTNT
0-75V	0-75V	•007-05VA-PBPB	078-05VJ-PBPB
0-150V	0-150V	•007-05VA-PZPZ	078-05VJ-PZPZ
0-300V	0-300V	•007-05VA-RXRX	078-05VJ-RXRX
0-400V	0-400V	•007-05VA-SCSC	078-05VJ-SCSC
0-500V	0-500V	•007-05VA-SFSF	078-05VJ-SFSF
0-600V	0-600V	•007-05VA-SJSJ	078-05VJ-SJSJ
0-750V	0-750V	007-05VA-SMSM	078-05VJ-SMSM
0-800V	0-800V	007-05VA-SNSN	078-05VJ-SNSN

PRODUCT CODES – ZERO CENTRE – SENSITIVITY 2000 OHMS / VOLT ACCURACY ±1%***

Rating	Scaling*	4 ½" square flange	
		Std. case catalogue number	Std. case hi-shock catalogue number
150-0-150V	150-0-150V	•007-05NA-RXRX	078-05NJ-RXRX
300-0-300V	300-0-300V	•007-05NA-SJSJ	078-05NJ-SJSJ
500-0-500V	500-0-500V	•007-05NA-SSSS	078-05NJ-SSSS
600-0-600V	600-0-600V	•007-05NA-SUSU	078-05NJ-SUSU

Frequency meters

PRODUCT CODES – 120V SELF CONTAINED***

Rating	Scaling*	4 ½" square flange	
		Std. case catalogue number	Std. case hi-shock catalogue number
50Hz +/-0.15	45-55Hz	•007-41LA-PNAG-AG	078-41LJ-PNAG-AG
50Hz +/-0.15	46-54Hz	•007-41LA-PNAH-AH	078-41LJ-PNAH-AH
50Hz +/-0.25	45-65Hz	•007-41LA-PNAJ-AJ	078-41LJ-PNAJ-AJ
60Hz +/-0.25	50-70Hz	•007-41LA-PNAL-AL	078-41LJ-PNAL-AL
60Hz +/-0.15	55-65Hz	•007-41LA-PNAN-AN	078-41LJ-PNAN-AN
60Hz +/-0.15	56-64Hz	•007-41LA-PNAO-AO	078-41LJ-PNAO-AO
60Hz+/-0.08	58-62Hz	•007-41LA-PNAT-AT	078-41LJ-PNAT-AT

For alternative voltage rating 200-250V, use code RN instead of PN.
For alternative voltage rating 380-480V, case types 007/078 use code SE instead of PN.
10-32 UNF terminals.

* Other scales are available.
** Specify scale required.
*** For case types 007/078 use 10-32 UNF terminals.
• c-UL-us certified.

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