

Digital Metering Systems

Integra 500 Series

MetersUSA
Meters@MetersUSA.com
www.MetersUSA.com

Features

- » High contrast LCD
- » Three data lines
- » Large characters
- » Captions on display & label
- » 96 DIN case 150mm long
- » Average sensing
- » Self powered
- » Disable/enable reset
- » One button operation

Accuracy

Voltage:	1.5% of nominal
Current:	1.5% of nominal
Current Demand:	3% of nominal
Temperature Coefficient:	typical 0.013%/°C
Circuitry Response time to step input:	<10 seconds

Fully featured entry level product range for cost effective digital multi function metering.

Applications include:

- Generating sets
- Low voltage switchgear and distribution
- Distribution pillars
- Feeder panels
- Maximum demand/energy monitoring



Integra 510

Three Phase Ammeter, Voltmeter and Frequency Meter

Competitively priced Integra 510 is a viable alternative to conventional analogue Instrumentation with huge savings in material and labour to the panel builder.

The high contrast, large character LCD display provides readings for current per phase and system average, voltage per phase and system average in addition to system frequency.

This integrated unit typically replaces three conventional ammeters, a voltmeter, a selector switch plus a frequency meter.

This allows the equipment manufacturer to improve productivity and provide the user with a simple to use digital meter and the flexibility of programming different current transformer ratios (8000A Maximum),

Measures & Displays:

- Current L1, L2, L3
- Voltage Line to Line or
- Voltage Phase to neutral
- System Frequency

Integra 520/530/540

Three Phase Maximum Demand Ammeter and Voltmeter

The Integra 520 is one of Crompton Instruments most recent additions to its digital metering system family. Designed to measure and display current, current demand, maximum demand and the voltage of a three-phase system.

Integrating high accuracy measurement technology with the simplicity and visibility of a single display system giving maximum demand measure a totally new look.

Models 530 and 540 include one or two maximum demand alarm relays.

Integra 530 & 540 options

Relay Outputs for:

- Maximum Demand (530)
- Two Stage Maximum Demand (540)

Measures & Displays:

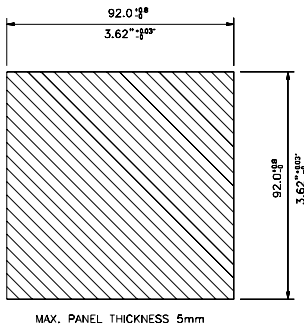
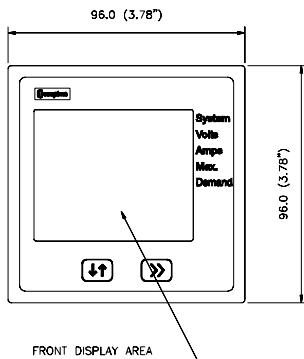
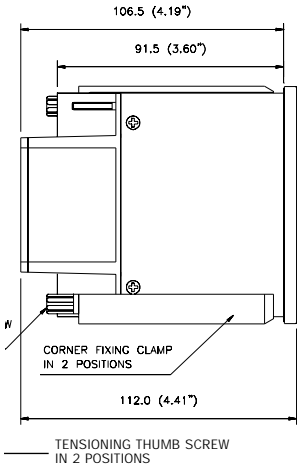
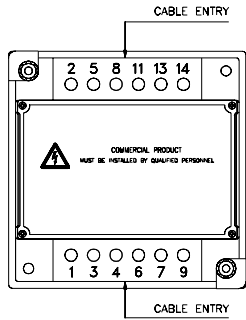
- Current L1, L2, L3
- Demand L1, L2, L3
- Maximum Demand L1, L2, L3
- Voltage Line to Line
- Voltage Phase to neutral

Digital Metering Systems

Integra 500 Series

MetersUSA
Meters@MetersUSA.com
www.MetersUSA.com

Case Dimensions and Panel Cut Out



Integra 510

Applications Include

- Generating Sets.
- Low Voltage Switchgear.
- Feeder Panels.

Programmable Features

- Current Transformer Ratio 1A to 8000.

Benefits

- Nine Measurements From One Unit.
- Replaces several conventional meters and switches.
- Simple To Use.
- Programmable Current Transformer Ratios.
- Measures Down to 2.5% of Nominal Input.
- Readable in Bright Sunlight.
- Provides a totally "New Look" to basic metering.

Integra 520/530/540

Applications Include

- Low Voltage Switchgear and Distribution.
- Distribution Pillars.
- Feeder panels.
- Maximum Demand/Energy Monitoring.

Programmable Features

- Current Transformer Ratio: 1A to 8000.
- Demand Integration Time or Time Lag 8, 15, 30 or 60 Minutes.
- Enable or Disable Reset of Maximum Demand.
- Relay Trip Point Models 530 and 540.

Benefits

- Twelve Measurements From One Unit.
- Measures Down to 2.5% of Nominal Input.
- Simple To Use.
- Programmable Current Transformer Ratios.
- Programmable Demand Integration Time Period.
- Replaces Three Combined MDI & a Voltmeter.
- Readable in Bright Sunlight.

Enclosure	IP54 Protection Code DIN Standard 96mm x 96mm UL94V-0 Flame retardant material Screw clamp terminals Weight, 0.7kg
Display	High Contrast Custom LCD 4 Digits per line 10.5mm high
Environmental	Operating Temperature: -10 to 70°C Storage Temperature: -20 to 80°C Relative Humidity: 0 to 95% Shock: 30g in 3 Planes Vibration: 10 - 55Hz (0.15mm)
Isolation	Dielectric voltage withstand between circuits and accessible surfaces: 3.25kV rms 50Hz for 1 minute (300-600V L-L) 2.2kV rms 50Hz for 1 minute (150-300V L-L) Maximum Working Voltage between circuits: 600V rms AC Power Surge Voltage: IEC 61000-4-5, 1.2/50 microseconds 4kV High frequency disturbance test: IEC 61000-4-4, 2kV peak all meas. inputs
Standards Applied	Terms, Definitions & Test Methods: IEC688:1992 (BSEN 60688) EMC Emissions: BSEN 50081-1 (1994 Class B) EMC Immunity: BSEN 50082-2 (1995 Class B) Safety: UL3111-1, IEC1010-1 (BSEN61010-1) EU Low Voltage Directive: 73/23/EEC amended by 93/68/EEC EU EMC Directive: 89/336/EEC amended by 93/68/EEC

Digital Metering Systems

Quadratic Integra 500 Series

MetersUSA
 Meters@MetersUSA.com
 www.MetersUSA.com

Specification Overview

Displayed Parameters	Integra 510	Integra 520/530/540
System	Three Phase - Three Wire (Model 244-513) Three Phase - Four Wire (Model 244-514) Frequency 45 - 66Hz	Three Phase - Three Wire (Model 244-523) Three Phase - Four Wire (Model 244-524) Frequency 45 - 66Hz
Voltage	100 - 120 Volts A.C. L-L 190 - 240 Volts A.C. L-L 380 - 480 Volts A.C. L-L	100 - 120 Volts A.C. L-L 190 - 240 Volts A.C. L-L 380 - 480 Volts A.C. L-L
Current	5 Amps (Standard) 1 Amp (Optional)	5 Amps (Standard) 1 Amp (Optional)
Auxiliary Supply	Self Powered 100 - 120 Volts A.C. 190 - 240 Volts A.C. 380 - 480 Volts A.C. Tolerance -10% of lower to +20% of upper range	Self Powered 100 - 120 Volts A.C. (115V Nominal) 190 - 240 Volts A.C. (230V Nominal) 380 - 480 Volts A.C. (460V Nominal) Tolerance -10% of lower to +20% of upper range
Measuring Range	Current 2.5% - 120% Voltage 2.5% - 120% (Aux. Powered) Voltage 75% - 120% (Self Powered) Average Sensing, RMS Calibrated	Current 2.5% - 120% Voltage 2.5% - 120% (Aux. Powered) Voltage 75% - 120% (Self Powered) Average Sensing, RMS Calibrated
Accuracy	Voltage $\pm 1.5\%$ of Nominal Current $\pm 1.5\%$ of Nominal Temp. Coef 0.013%/°C typical	Voltage $\pm 1.5\%$ of Nominal Current $\pm 1.5\%$ of Nominal Current Demand $\pm 3\%$ of Nominal Temp. Coef 0.013%/°C typical
Burden	0.6VA nominal per current phase 0.2VA nominal per voltage line 3VA Auxiliary Powered 3VA L3-N or L2-L3 Self Powered (6VA for models with Relay Outputs)	0.6VA nominal per current phase 0.2VA nominal per voltage line 3VA Auxiliary Powered 3VA L3-N or L2-L3 Self Powered (6VA for models with Relay Outputs)
Relay Outputs		Single Pole Changeover - Rated 8A 250V A.C. 1 x Model 244-53*, 2 x Model 244-54*
Trip Point Settings		Range 0 - 99.99A (CT = 1 - 80A) 0 - 999.9A (CT = 81 - 800A) 0 - 9999A (CT = 801 - 8000A) Resolution 0.01A (CT = 1 - 80A) 0.1A (CT = 81 - 800A) 1A (CT = 801 - 8000A)
Overload		Current 1.2 x Continuous 20 x for 1 second 10 x for 3 seconds 5 x for 5 seconds Voltage 1.2 x Continuous 2 x for 1 second
Update Time	<10 seconds	7.5 seconds approx.

Connection Diagram

