



Energy Division

Crompton Instruments Integra Ci3 Digital Metering System



Features

- DIN 96 enclosure
- Backlit LCD screen
- Bezel depth 6.1mm
- Plug-in output modules
- Programmable CT ratio
- True RMS measurement
- User programmable

Benefits

- Intuitive navigation
- Easy 'clip-in' panel mounting
- Plug and Play Modules for communications
- Universal unit for multiple system configurations

Standards

- RoHS compliant
- IEC 61326
- IEC 61010-1
- IEC 62053-21



Integra Ci3 Digital Metering System

The Integra Ci3 Digital Metering System (DMS) represents the first model of a new generation of digital metering systems designed to complement the current Crompton Instruments Integra series.

The Integra Ci3 meter is an accurate and cost effective solution for measurement and display of all major electrical and power quality parameters. Its easy programming, mounting and user-friendly navigation make the Integra Ci3 DMS an ideal choice for customers who require reliable energy measurement.

Integra Ci3 DMS is built to high quality standards and incorporates the latest 'state-of-the-art' microprocessor technology. The Integra Ci3 DMS builds on Crompton Instruments' long established reputation for metering product quality.

The product features a DIN 96 panel mounted enclosure, backlit LCD screen and user programmable CT ratios, all accessible via an intuitive user interface. Integra Ci3 DMS measures 15 electrical parameters including total harmonic distortion (THD) measurement up to the 31st harmonic.

Programmable Functions

Integra Ci3 DMS is programmable to suit single-phase, three-phase three-wire and three-phase four-wire system configurations. Programmable CT ratios enable it to display any current range.

Display

The parameters can be viewed on a backlit LCD screen. The 15 screens are accessible via four buttons on the front panel allowing the user to scroll between various screens making the navigation very user-friendly, intuitive and above all – simple.

Plug and Play Modules

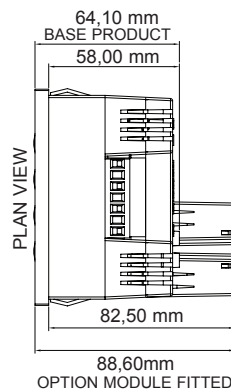
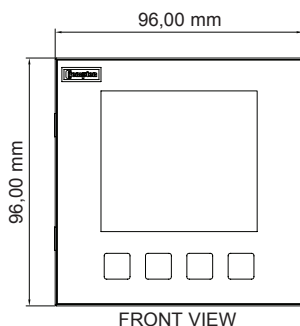
Integra Ci3 DMS features two output ports at the rear of the meter. These ports accept pulsed relay and communication modules, e.g. Mod Bus™.

Panel Mounting

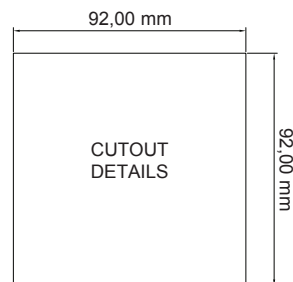
Integral retention clips allow fast, safe and secure panel mounting in various material thicknesses without the need for external screws or clips.

Description	Part number
Integra Ci3 base unit	CI3-01
Options	
Pulsed output	CI-PUL-01
Modbus™ RS485	CI-MOD-01
Accessories	
IP65 protective cover	3 G365 02
IP54 panel gasket	3 C345 01

Dimensions



Panel Cut-Out



Specifications

Input

Nominal input voltage	100-289V AC L-N (173-500V AC L-L)
Max. continuous input overload voltage	120% of nominal
Max. short duration input voltage	2 x range maximum (1 second application repeated 5 times at 5 minute intervals)
Nominal input voltage burden	< 0.2VA per phase
Nominal input current	5A AC rms
Max. continuous input overload current	120% of nominal
Max. short duration input current	10 x nominal (1 second application repeated 5 times at 5 minute intervals)
Frequency	45-66Hz

Auxiliary

Operating range	110-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)
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Accuracy

Voltage (V)	0.5%
Current (A)	0.5%
Neutral current calculated (A)	4%
Frequency (Hz)	0.1 Hz
Power factor (PF)	1% of unity
Active power (W)	+/- 1% of range
Reactive power (VAr)	+/- 1% of range
Apparent power (VA)	+/- 1% of range
Active energy (kWh)	Class 1 (IEC 62053-21)
Reactive energy (kVArh)	+/- 1% of range
THD	1% up to 31st harmonic
Response time	1sec

Output modules (optional)

Pulsed output relays	1 per module (2 modules fitted per Ci3)
Contact rating	50mA max at 250V AC
Type	Solid state relay
RS485 Modbus™ output module	1 Modbus™ channel per module (maximum of 1 module fitted per Ci3)
Type	2-wire half duplex
Baud rate	2400, 4800, 9600, 19200, 38400
	Other communication modules available in 2010

Enclosure

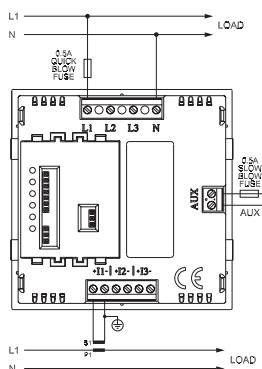
Enclosure style	DIN 96 panel mount
Dimensions	96x96x64.1mm (depth behind panel without module 58mm, with module 82.5mm)
Panel cut-out	92x92mm
Panel thickness	1-5mm
Front protection rating	IP52
Case protection rating	IP30
Material	Polycarbonate to UL94V0
Weight	300g
Terminals	Shrouded screw-clamp 0.05-4mm wire

Environment

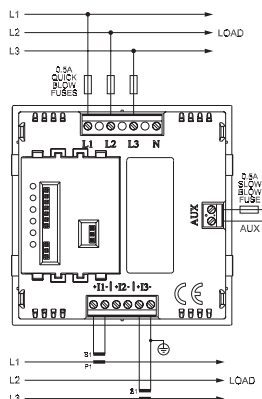
Operating temperature	-10°C to +55°C
Storage temperature	-20°C to +70°C
Relative humidity	0-90% non-condensing
Shock	30g in 3 planes
Vibration	10Hz to 50Hz
Dielectric voltage	Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and measuring inputs

Wiring Diagrams

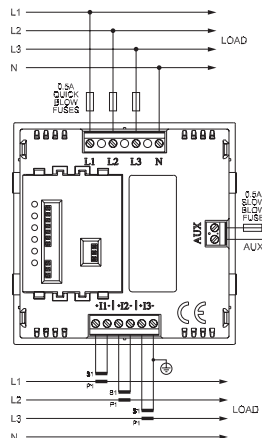
1 PHASE 2 WIRE



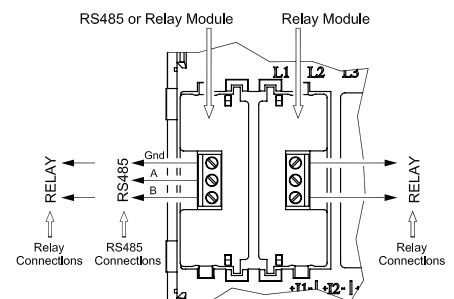
3 PHASE 3 WIRE



3 PHASE 4 WIRE



OPTION MODULES (When Fitted)



Parameters

Button	Screen	Parameters
V/Hz	1	Volts L1 - N Volts L2 - N Volts L3 - N
	2	Volts L1 - L2 Volts L2 - L3 Volts L3 - L1
	3	Frequency
	4	Volts L1 - N THD% Volts L2 - N THD% Volts L3 - N THD%
	5	Volts L1 - L2 THD% Volts L2 - L3 THD% Volts L3 - L1 THD%
A	1	Current L1 Current L2 Current L3
	2	Neutral Current
	3	L1 Current Max Demand L2 Current Max Demand L3 Current Max Demand
	4	Neutral Current Max Demand
	5	Current L1 THD% Current L2 THD% Current L3 THD%
P/PF	1	kW kVAr kVA
	2	kW Max Demand
	3	Power Factor
E	1	kWh
	2	kVArh

ANSI Current Transformers

Crompton Instruments ANSI current transformers offer a wide range of system current ratings, apertures, and case sizes to suit every application. Manufactured to meet IEEE, IEC, UL, and ANSI specifications. The secondary current range includes ratio rating from 5/5 to 4000/5.

For additional information on CTs request brochure CI-EPP-UL-CT 02/08

Features & Benefits

- Manufactured to ANSI specifications.
- CT ratios from 5/5 to 4000/5.
- Wide range of apertures and case sizes.
- Cases molded to accommodate various mounting methods.
- High impact, flame retardant moulded cases.
- Many models and ratios in stock.



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