

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 system configuration

Benefits

- Cost effective
- Intuitive navigation
- Crompton renowned quality
- UK manufactured
- Easy 'clip-in' panel mounting
- Ex-stock delivery

Standards

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

CE

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 utilising the latest 'state-of-the-art' microprocessor and manufacturing technology. Designed, developed and manufactured in the UK, 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 display and user programmable CT ratios, all accessible via an intuitive user interface. Integra Ci3 dms measures 17 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 to display any current range.

Display

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

Plug in Modules

Integra Ci3 dms features two output options ports at the rear of the product. This allows to fit either pulsed relay or communication modules, e.g. Modbus[™] communication output.

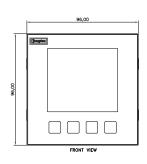
Panel Mounting

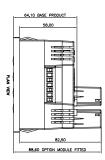
Integral retention clips allow fast, safe and secure panel mounting in various material thicknesses without the need for external screws or clips.

Product Code

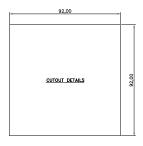
Description	Part number
Integra Ci3 base unit	CI3-01
Options Pulsed output Modbus™ RS485	CI-PUL-01 CI-MOD-01
Accessories	CI-MOD-OI
IP65 protective cover	3 G365 02
IP54 panel gasket	3 C345 O1

Dimensions





Panel cut-out



Specifications

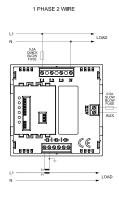
InputNominal input voltage100-289V AC L-N (173-500V AC L-L)Max. continuous input120% of nominaloverload voltage2 x range maximum (1 second applicationMax. short duration2 x range maximum (1 second applicationinput voltagerepeated 5 times at 5 minute intervals)Nominal input voltage burden< 0.2VA per phaseNominal input current5A AC rmsMax. continuous input120% of nominaloverload currentMax. short durationMax. short duration10 x nominal (1 second application repeated input currentFrequency45-66HzAuxiliary	:d 5
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Frequency 45-66Hz	
Auxiliany	
Auxiliary	
Operating range 110-400V AC nominal +/-10% (99-440V A absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)	С
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™ 1 Modbus™ channel per module	
output module (maximum of 1 module fitted per Ci3)	
Type 2-wire half duplex	
Baud rate 2400, 4800, 9600, 19200, 38400	
Other communication modules available ir	า 2010
Enclosure	
Enclosure style DIN 96 panel mount	
Dimensions 96x96x64.1mm (depth behind panel witho	ut
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 min	
between comms and measuring inputs, co	mm
and aux, aux and measuring inputs	

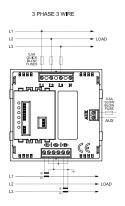


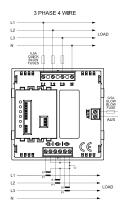
Parameters

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

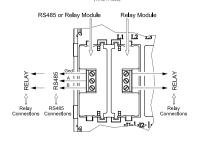
Wiring Diagrams







OPTION MODULES





Features

- CT ratios from 5/5 to 4000/5
- Accuracy up to Class 0.5
- Integral terminal cover
- High impact, flame retardant moulded case
- Busbar, DIN-rail or foot mounting options

Benefits

- Wide range of apertures and case sizes
- Reduction of high currents for ease of metering
- Long product life

Approvals

- BS EN 61010-1
- IEC 61010-1
- IEC 60044-1
- UL Recognized file no: E257877 (MA5Y, M55E, M53J, M63N, M93L, MB5D, MB5Z only)

CE

Moulded Case Current Transformers Ebony Series Measuring and Protection

The range of Crompton Instruments Ebony current transformers offers wide system current ratings, apertures, busbar and case sizes to suit every application. Manufactured to meet IEC 60044-1:2003, the range benefits include ratio rating from 5/5 to 4000/5, accuracy up to class 0.5, integral terminal cover for safety and multiple mounting options.

Specifications

Active energy accuracy:	Class 1 in accordance with CEI-EN 62053-21 standard	
System voltage:	720V maximum	
Test voltage:	3kV for 1 minute	
System frequency:	50/60Hz	
Short circuit thermal current (Ith):	60 x rated primary current for 1 second	
Overload withstand:	1.2 x rated current continuously	
Dynamic current (Idyn):	= 2.55 x lth	
Saturation coefficient:	<5 for through aperture models	
	<10 for wound primary	
Service temperature:	-20°C to 85°C	
Insulation class:	Class E	
BS2757 IEC85:		
Enclosure code:	IP40	
Integral terminal cover:	IP20B	
Complies with:	IEC 60044-1:2003	
Humidity:	Up to 95% RH (non condensing)	
Secondary terminals screw clamp:	Up to 10mm ² cable	
'Fast On':	6.3mm type	

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Tyco Electronics UK Ltd Energy Division Freebournes Road Witham, Essex CM8 3AH

Phone: +44 (0)870 870 7500 Fax: +44 (0)870 240 5287 Email: electrical@tycoelectronics.com www.crompton-instruments.com

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