

# Distributors



BPX Electro Mechanical Co. Ltd.  
[www.bpx.co.uk](http://www.bpx.co.uk)



Park Electrical Services  
[www.pes-group.co.uk](http://www.pes-group.co.uk)



CCA Control Components Anglia  
[www.cca.eu.com](http://www.cca.eu.com)



Routeco  
[www.routeco.com](http://www.routeco.com)



Worcester Electrical Distributors Ltd.  
[www.worcesterelectrical.co.uk](http://www.worcesterelectrical.co.uk)



Scattergood & Johnson Ltd.  
[www.scatts.co.uk](http://www.scatts.co.uk)



Greenville Industrial, Drives and Controls  
[www.greenvilleidc.com](http://www.greenvilleidc.com)



TLA Electrical Distributors  
[www.tlauk.net](http://www.tlauk.net)



Haslam  
[www.aphaslam.ie](http://www.aphaslam.ie)



Ventam Systems Ltd.  
[www.ventamsystems.co.uk](http://www.ventamsystems.co.uk)

While Tyco Electronics and its affiliates referenced herein have made every reasonable effort to ensure the accuracy of the information contained in this catalog, Tyco Electronics cannot assure that this information is error free. For this reason, Tyco Electronics does not make any representation or offer any guarantee that such information is accurate, correct, reliable or current. Tyco Electronics reserves the right to make any adjustments to the information at any time. Tyco Electronics expressly disclaims any implied warranty regarding the information contained herein, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose. Tyco Electronics' only obligations are those stated in Tyco Electronics' Standard Terms and Conditions of Sale. Tyco Electronics will in no case be liable for any incidental, indirect or consequential damages arising from or in connection with, including, but not limited to, the sale, resale, use or misuse of its products. Users should rely on their own judgement to evaluate the suitability of a product for a certain purpose and test each product for its intended application. TE logo and Tyco Electronics are trademarks. CROMPTON and Paladin are trademarks of Crompton Parkinson Ltd. and is used by Tyco Electronics under licence. Other trademarks or company names used herein are the property of their respective owners.

**Energy Division – economical solutions for the electrical power industry: cable accessories, connectors & fittings, electrical equipment, instruments, lighting controls, insulators & insulation enhancement and surge arresters.**

**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](mailto:electrical@tycoelectronics.com)

[www.crompton-instruments.com](http://www.crompton-instruments.com)  
<http://energy.tycoelectronics.com>

 **Tyco Electronics**  
 Our commitment. Your advantage.



Energy Division

# Crompton Instruments Catalyst Preferred range Catalogue and Price List Addition 3

# Crompton Instruments Power Measurement, Control and Protection Solutions

Tyco Electronics offers one of the largest product ranges of power measurement, control and protection instrumentation for switchgear and generator set manufacturers, panel builders and OEMs. Crompton Instruments branded products offer proven reliability across a diverse array of industries including power generation, process control, test and measurement, utility, marine, defence and energy management applications.

This combined catalogue and price list presents a small selection of our complete product portfolio and is in no way exhaustive.

For comprehensive information of our complete product range please visit our web site [www.crompton-instruments.com](http://www.crompton-instruments.com)



## Delivery Guideline Codes

**A** - 3 days

**B** - 10 days

**C** - Consult customer services for best delivery

**\*Note: max order guidelines apply**

## Contents

### Product Range

	Page
<b>Integra Ci Digital Metering System</b>	<b>4 - 7</b>
<b>Kilowatt Hour Energy Meters</b>	<b>8</b>
<b>Current Transformers</b>	<b>9 - 16</b>
<b>Earth Leakage Relays</b>	<b>17</b>
<b>Analogue Instruments</b>	<b>18 - 28</b>
<b>Shunts</b>	<b>29</b>

[www.crompton-instruments.com](http://www.crompton-instruments.com)

Customer service 0870 870 7500  
(Fax 0870 240 5287)

### For orders via email

[cromptonorders@tycoelectronics.com](mailto:cromptonorders@tycoelectronics.com)

### For general enquiries

[crompton.info@tycoelectronics.com](mailto:crompton.info@tycoelectronics.com)

### For technical enquiries

[cromptontechnical@tycoelectronics.com](mailto:cromptontechnical@tycoelectronics.com)

# New Products



**Integra Ci1 Energy Meter**  
• Watt and VAr hour meter



**Integra Ci3 Digital Metering System**  
• Cost-effective DMS



**Split Core Current Transformers**



**Ebony M53Q Current Transformer**  
• Miniature CT  
• 45 x 30 x 65mm

**3-in-1 Current Transformer**



# Instrumentation, power measurement and control

Crompton Instruments products have been synonymous with innovation for over a century. Beginning with a variant of the Serrin arc lamp, this heritage continues with the Integra digital metering systems, demonstrating a continuing commitment to putting new technology to work in the marketplace.

The focus on measuring energy began with Colonel Crompton's patented concept for a revolving energy counter and his support for a combined circuit measuring voltage and current. Starting with analogue instruments, the product range had widened by the 1970s to include transducers, protector trip relays and current transformers. During the 1990s, this portfolio was strengthened with a progressive upgrade to micro-based integrated technology from discrete circuitry.

Crompton Instruments products take a dual-track approach: providing both cost efficient and user-friendly technology.

Crompton measuring and control solutions provide a cost effective upgrades to existing analogue equipment and efficient alternatives to multi-function relays. Products like the Integra digital metering systems provide sophisticated, yet user-friendly innovation, combining microprocessor technology with button-driven menus. The extensive use of remote communication protocols allow individual instruments to be fully integrated into comprehensive energy management systems.

Crompton Instruments products: applied innovation for the entire electrical energy circle, from power generation to final consumers.

Over the past years, Tyco Electronics has rapidly grown to become one of the world's largest passive component manufacturer. Leading product brands such as Raychem, AMP, Elcon, P&B and many others, offers customers a large portfolio of connectors, relays, circuit breakers, fibre optic and wireless products, motors and other power components in 25 product segments.

## Energy Division – Connecting the world of power

The Energy Division, a global operating unit of Tyco Electronics, provides products and systems for a wide range of industries including power utilities, equipment manufacturers, and transportation. Each business unit within the Division comes with specialised products or systems and focused set of application skills. In addition to Crompton Instruments, other product brands include AMP, Axicom, Bowthorpe EMP, Dorman Smith, Dulmison, Raychem and Simel.

By globally synchronising product development and manufacturing capacities, the Energy Division is

able to bring innovative and technology driven products quickly to market. The Division's significant position in individual segments and its combined size and expertise allow it to provide customers with a high level of engineering assistance and continuous after-sales support.

**Tyco Electronics Energy Division is a leading supplier of:**

- Cable accessories
- Connectors and fittings
- Insulators and insulation
- Surge arresters
- Switching, protection and lightning
- Power measurement and control



# Crompton Instruments

complete product range

## Integra Multi-function Metering Systems

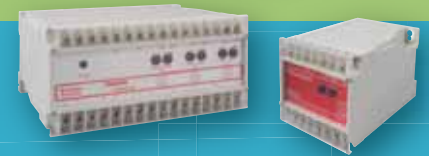
Integra range of multi-function metering systems measure, display and communicate over 100 parameters. Integra systems can be integrated into energy management and SCADA systems. Options include pulsed, analogue and RS485 communication protocols, a choice of DIN, DIN-rail and ANSI case-styles and LED or LCD displays.



[www.crompton-instruments.com/integra.html](http://www.crompton-instruments.com/integra.html)

## Integra and Paladin Transducers

Extensive range of transducers providing measurement, isolation and conversion of electrical parameters into industry standard DC output signals, offering single or multiple analogue outputs within a single case housing.



[www.crompton-instruments.com/transducer.html](http://www.crompton-instruments.com/transducer.html)

## kWh Meters

DIN-rail mounted or self-contained panel meters measure combined kWh or kVAh with pulsed or analogue output options and selectable CT and VT ratios. Microprocessor controlled circuitry provides up to Class 1.0 accuracy with outputs displayed directly on the instrument monitor or a remote PC.



[www.crompton-instruments.com/kwh.html](http://www.crompton-instruments.com/kwh.html)

## Protector Trip Relays

Trip relays continuously monitor and protect any electrical parameter within a set point limit. The range offers single and multi parameter units, earth leakage protection, ground fault relays, vector shift and ROCOF.



[www.crompton-instruments.com/protector.html](http://www.crompton-instruments.com/protector.html)

## Analogue Instruments

Traditional range of analogue instruments includes ANSI switchboard meters, panel indicators, sealed and ruggedized instruments, and complementary selector switches for line-to-line and line-to-neutral readings. All instruments are available in a range of styles, sizes and performance specifications.



[www.crompton-instruments.com/analogue.html](http://www.crompton-instruments.com/analogue.html)

## Current Transformers

Extensive range of current transformers for reducing high primary currents down to a consistent 5 or 1 Amp secondary current. Options include moulded case width, busbar and aperture sizes, tape wound, 3-in-1, balanced and split cores, current ratings and various mounting options.



[www.crompton-instruments.com/ct.html](http://www.crompton-instruments.com/ct.html)

## Meter Relays and Digital Indicators

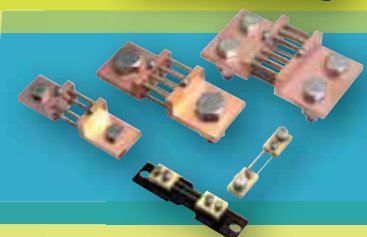
Meter relays and digital indicators are ideal for monitoring, process control and load shedding applications. This range includes digital and analogue meter relays, digital bargraph indicators and controllers.



[www.crompton-instruments.com/relay.html](http://www.crompton-instruments.com/relay.html)

## Shunts

Shunts provides an accurate dc millivolt signal, exactly proportional to the system current, to drive ammeter indicators, overload protection and control devices. This range includes industrial, switchboard, DEF 66-13, DIN, base mounted, tag end, lightweight and panel meter shunts in a variety of formats and configurations.



[www.crompton-instruments.com/shunt.html](http://www.crompton-instruments.com/shunt.html)

## Integra Ci1 Energy Meter

The Integra Ci1 energy meter is specially designed and developed as a cost effective Watt hour and VAR hour meter to complement the current Integra Ci series. The Integra Ci1 self-contained 96mm DIN panel mounted Watt hour, VAR hour meter measures the real consumption of active and reactive energy to Class 1.0 accuracy.

The backlit LCD screen displays 8 character counter indicating Watt hour or VAR hour units. The optional modules enables transfer of energy measurements to building management systems (BMS) via pulsed or digital communication options.

### Programmable Functions

Integra Ci1 provides simple programming to suit single phase 2-wire, three-phase three wire and three-phase four-wire un-balanced system configurations, CT ratio settings and configuration of selected communication options. To prevent unauthorised access to the product configuration settings, all set-up screens offer password protection.

### Display

Direct access to display the programmed set CT ratio, Watt hours import and export, VAR hours import and export and the phase sequence test routine for both voltage and current phases. During the accumulation of the Wh or VARh the running icon will flash at a rate dependant on the displayed parameter.

### Plug-in Modules

Plug-in modules allow to fit either maximum of two isolated pulsed output relays or a RS485 communication module and one isolated pulsed output relay. The communication output module can be programmed internally to respond either to Modbus® RTU or Johnson Controls.

### Panel Mounting

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

### Parameters

Button	Screen	Parameters
CT	1	CT ratio
Wh	2	IMPORT Wh
	3	EXPORT Wh
VARh	4	IMPORT VARh
	5	EXPORT VARh
TEST	6	Phase sequence diagnostic



Running icon indicates Wh and VAhr accumulation.

### Product Code

Description	Part number	Delivery	£
Integra Ci1 base unit	CI1-01	A	75.00
<b>Options</b>			
Pulsed output	CI-PUL-01	A	20.00
RS485 communication output	CI-MOD-01	A	40.00
<b>Accessories</b>			
IP65 protective cover	3 G365 02	A	60.00
IP54 panel gasket	3 C345 01	A	3.00

# 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.

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 screen and user programmable CT ratios, all accessible via an intuitive user interface. Integra Ci3 dms measures 17 electrical parameters including total harmonic distortion (THD) up to the 31st harmonic.

## Programmable Functions

Integra Ci3 dms is programmable to suit single-phase two-wire, 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 screen. 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 offers two output ports at the rear of the product, to allow the fitting of either two isolated pulsed output relays or a RS485 communication module such as Modbus® or Johnson Controls communication output. These are configurable via internal settings.

## 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	Delivery	£
Integra Ci3 base unit	CI3-01	A	99.00
<b>Options</b>			
Pulsed output	CI-PUL-01	A	20.00
RS485 communication output	CI-MOD-01	A	40.00
<b>Accessories</b>			
IP65 protective cover	3 G365 02	A	60.00
IP54 panel gasket	3 C345 01	A	3.00



## 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

## Integra 1630 Digital Metering System



Multi-function Integra 1630 digital metering system provides high accuracy 0.2% measurement, display and communication of all major electrical and power quality parameters including total harmonic distortion (THD) up to the 31st harmonic. To suit user requirements, the range includes single-phase, three-phase three-wire and three-phase four-wire capability, all selectable at the point of installation.

### Features

- Auxiliaries: 100/250V ac/dc (12/48V dc optional)
- Options: Profibus™, Modbus® TCP, Bacnet IP, RS485, Pulsed output

### Measured Parameters

- System (average) volts
- System (average) current
- System (total) kW
- System volts (average) THD%
- System current (average) THD%
- Phase - neutral
- Voltage (VL-N) (4 wire only)
- Phase - phase
- Voltage (L-L) (3 wire only)
- Voltage THD% (4 wire only)
- Phase current
- Current THD %
- Neutral current (4 wire only)
- Frequency
- Power factor (overall)
- kVAh kVA kW
- kWh import (7-digit resolution)
- kVAh import (7-digit resolution)
- kWh export (7-digit resolution)
- kVAh export (7-digit resolution)
- kW demand
- Current demand
- Maximum kW demand
- Maximum current demand
- Hours run

Metasys, Modbus®, Profibus™, Bacnet and IEEE are trademarks

### RS485 Modbus® RTU

Integra 1630 digital metering systems offer an RS485 communication port for direct connection to SCADA systems using the Modbus® RTU protocol or the Johnson Controls Metasys N2 protocol. Remote monitoring enables the user to record systems parameters in real time, using high resolution numbers. The Integra 1630 dms establishes the format for the master's query automatically, and responds with the correct protocol using IEEE floating point values. The Modbus® protocol option also offers user programmable word order and support for function 8 subfunction 0, return query data diagnostic.

### Product Description and Order Codes

Description	Cat. no.	Delivery	£
1-phase, 3-phase 3/4-wire, 100-240V L-L, 5A CT input, Aux. 100-250V ac/dc	INT-1630-L-5-M-option	C	160.00
1-phase, 3-phase 3/4-wire, 241-480V L-L, 5A CT input, Aux. 100-250V ac/dc	INT-1630-M-5-M-option	C	160.00
<b>Options</b>			<b>Add</b>
No options	000	C	0.00
1 pulsed output	100	C	10.00
2 pulsed outputs	200	C	15.00
RS485 interface Modbus®	010	C	20.00
RS485 interface Modbus® + 1kWhr pulsed output	110	C	25.00
RS485 interface Modbus® + 2kWhr pulsed outputs	210	C	30.00
Profibus™ DP	050	C	235.00
Profibus™ DP + 2 pulsed outputs	250	C	250.00
Modbus® TCP	070	C	185.00
Modbus® IP Bacnet	080	C	195.00
Extended collar	OPT-1630-collar	C	0.10

## Integra 1530 Digital Metering System

Integra 1530 digital metering system is available with:

- Lonworks
- Analogue output
- True neutral current measurement

Please consult customer services for further information.  
Customer service 0870 870 7500



# Dintegra 1260 Digital Metering System

Multi-function Dintegra 1260 digital metering system provides programmable measurement, display and communication of up to 50 major electrical and power quality parameters including true rms system values, total harmonic distortion and power quality data.

### Measured Parameters

- Volts THD%
- Current THD%
- Phase - neutral voltages (VL-N)
- Phase - phase voltages (VL-L)
- System average phase - neutral voltages (VL-N)
- System average phase - phase voltages (VL-L)
- Phase current (I)
- Total current (ΣI)
- Power factor (PF)
- Frequency (Hz)
- Active power (P)
- Min, max and demand values
- Reactive power (Q)
- Apparent power (S)
- Total active power (ΣP)
- Total reactive power (ΣQ)
- Total apparent power (ΣS)
- Active energy - import (kWh)
- Active energy - export (kWh)
- Reactive energy - capacitive (kVARh)
- Reactive energy - inductive (kVARh)

### Product Description and Order Codes

Description	Cat. no.	Delivery	£
3-phase, 10-300V L-N 5A CT input, Aux. 230V ac +/-10% 2 pulsed output+ RS485 Modbus®	DRI-1260-210	A	178.00



# Tegra 710, 810 Digital Metering System

The Tegra 710 and 810 multi-function digital metering systems display and communicate major electrical parameters. To suit user requirements the range includes single-phase, three-phase three-wire and three-phase four-wire capabilities under low voltage with unbalanced loads.

### Measured Parameters

- System volts
- System current
- System active power
- System apparent power
- System reactive power
- Phase - neutral voltages (VL-N)
- Phase - phase voltages (VL-L)
- Phase - current
- Frequency (of voltage V1)
- Active power per phase
- Apparent power per phase
- Reactive power per phase
- Power factor (PF)
- Total active energy Wh
- Total reactive energy VARh
- Phase angle
- Mean and peak values
- Time and date
- Hours run

### Tegra 710 4 module DIN-rail mounted

Description	Cat. no.	Delivery	£
DIN-rail 4 module LCD screen 50-500V L-L, 0.25-6A ac, Aux. 230V ac, 2 Relay O/P	TEGRA-710-200	A	140.00
DIN-rail 4 module LCD screen 50-500V L-L, 0.25-6A ac, Aux. 230V ac, RS485 Modbus® O/P	TEGRA-710-010	A	155.00

### Tegra 810 DIN 72mm panel mounted

Description	Cat. no.	Delivery	£
72mm panel mounted LCD screen 50-500V L-L, 0.25-6A ac, Aux. 230V ac, 2 Relay O/P	TEGRA-810-200	A	140.00
72mm panel mounted LCD screen 50-500V L-L, 0.25-6A ac, Aux. 230V ac, RS485 Modbus® O/P	TEGRA-810-010	A	155.00

