



MADE IN UK

TE'S CROMPTON INSTRUMENTS INTEGRA 1221 DIGITAL METERING SYSTEM

FEATURES

- DIN 96 enclosure
- Backlit LCD screen
- Voltage IN-OUT connections
- RJ12 CT connection 100mA
- Programmable L1 to L3 reversal
- Programmable VT, CT ratios
- Modbus™ RTU
- Individual harmonics to 63rd
- Non-volatile memory 1MB

APPLICATIONS

- Commercial Buildings Disclosures
- Nabers
- National Construction Code (NCC)
- Greenstar Energy Management

APPROVALS

- IEC BS EN 61010-1:2010
- BS EN 61326-1:2013
- IEC 62053-21 Class 1
- IEC 62053-24 Class 1

The Crompton Instruments Integra 1221 digital metering system (dms) from TE Connectivity enables cost effective solution for the measurement and display of all electrical parameters including total harmonic distortion (THD) up to the 63rd harmonic.

DISPLAY

High definition screen features programmable backlight for high contrast visibility in low light and direct sunlight applications. The light can be programmed to automatically dim after a set period of time for energy saving.

New “petal” array icons shows the percentage of full scale power of the measured system and the instantaneous power factor (PF) measurement gives clear PF indication. Total power consumption is displayed on the screen at all time.

RJ12 CT CONNECTION WIRING SOLUTION

Integra 1221 dms and the 3-in-1 current transformers include RJ12 plugs and sockets for easy connectivity and installation and the solution is available with wired looms to reduce assembly time and connection errors. IN-OUT voltage connections reduce wiring and installation time.

COMMUNICATION

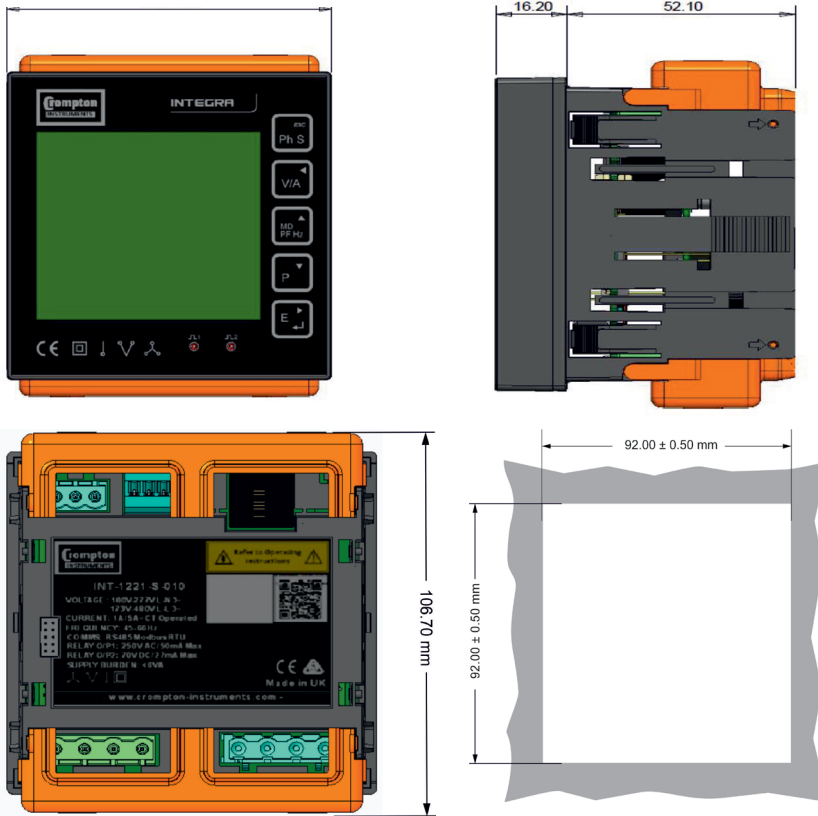
Modbus RTU (RS485) standard on all models. Modbus TCP ethernet optional module available.

ENCLOSURE AND SYSTEM

The DIN 96 panel mounted enclosure includes integral panel mounting clips for quick and easy fitting and 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. Optional IP64 kit available.

CROMPTON INSTRUMENTS INTEGRA 1221 DIGITAL METERING SYSTEM

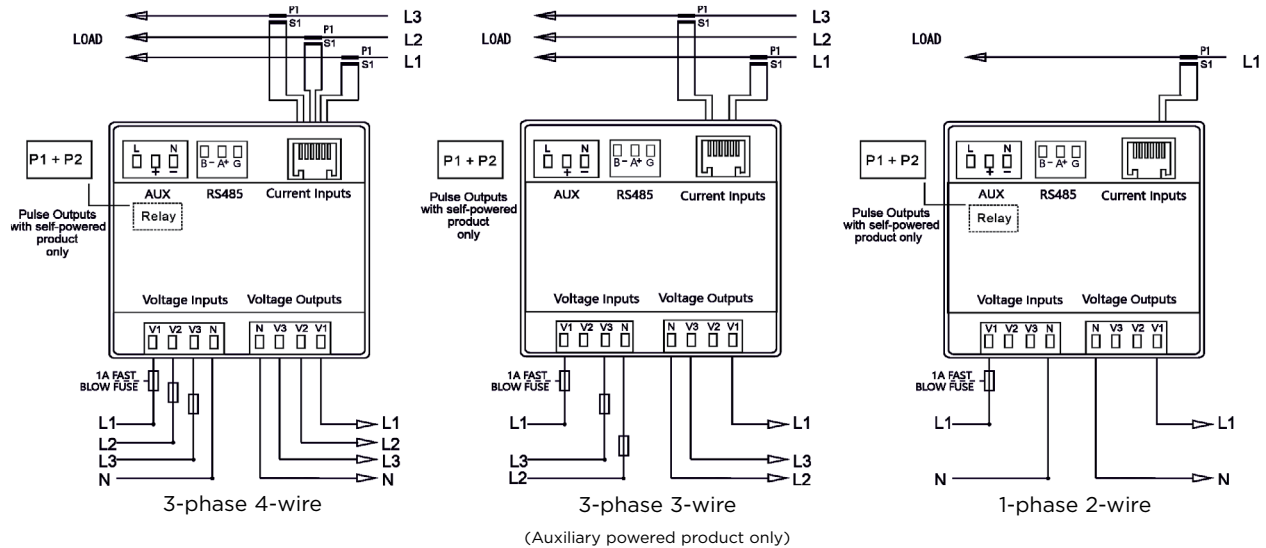
DIMENSIONS



DISPLAYED PARAMETERS

- Voltage per phase L-N, L-L
- Current per phase and Max Demand
- Power Factor - per phase and system
- Total Harmonic Distortion - Voltage and Current per phase
- Neutral current
- Frequency system
- Phase Sequence
- Active Power (P) per phase, total and Max Demand
- Reactive Power (Q) per phase, total and Max Demand
- Apparent Power (S) per phase, total and Max Demand
- Energy - Active and Reactive Importing and Total
- Energy - Active and Reactive Exporting and Total

AUXILIARY AND SELF POWERED WIRING DIAGRAMS



PRODUCT CODES

Description

INTEGRA 1221 multifunction panel meter - Self powered

LCD Display. Input 480 V L-L

2 pulsed outputs, Modbus RS485

Part number

INT-1221-S-010

INTEGRA 1221 multifunction panel meter - Auxiliary powered 100 - 250 V AC/DC +/- 20%

LCD Display Input 480 V L-L

Modbus RS485


INT-1221-M-010

Optional Ethernet Module

OPT-ETH

Optional Sealing Gasket & push fixing clamps for IP64 seal to panel

INT-IP6X

SPECIFICATIONS		PARAMETERS			
Input		Button	Scr	Parameter	
Nominal input voltage	100 - 277 V AC L-N (173-480 V L-L) 576 V L-L MAX		1	Watts L1 Volts L1 Current L1 Active Energy L1	
Max. continuous input overload voltage	120% of nominal			2	Watts L2 Volts L2 Current L2 Active Energy L2
Max. short duration input voltage	2 x nominal voltage for 1 second				3
Nominal input voltage burden	< 0.2 VA per phase		4		
Nominal input current	100 mA			5	
Nom. Input current burden	< 0.1 VA				6
Max. continuous input overload current	120% of nominal		1		
Max. short duration input current	20 x nominal current for 1 second			2	
Power Supply (Auxiliary model only)					3
Nominal Supply	100 - 250V AC DC +/-20%		4		
Supply burden	<6 VA			5	
Accuracy					6
Voltage (V)	+/- 0.5% of range maximum		1		
Current (A)	+/- 0.5% of range maximum	2		PF per phase	
Frequency (Hz)	+/- 0.2% of mid-frequency			3	MD per phase
Power factor (PF)	+/- 1% of unity (0.01)		4		System Max demand P, Q, S.
Active power (W)	+/- 0.5% of reading	1			Active Power (P) L1, L2, L3
Reactive power (VAr)	+/- 0.5% of reading			2	Reactive Power (Q) L1, L2, L3
Apparent power (VA)	+/- 0.5% of reading		3		Apparent Power (S) L1, L2, L3
Active energy (kWh)	+/- 0.5% of reading to IEC 62053-21	4			System Powers P,Q,S
Reactive energy (kVArh)	+/- 0.5% of reading to IEC 62053-24			1	Imp Active Energy Exp Active Energy
THD	2% to 63rd harmonic		2		Imp Reactive Energy Exp Reactive Energy
Measured Range		3			Total Active Energy Total Reactive Energy
Voltage (V)	5 - 120% of nominal (Min 100 V - self powered)			1	
Current (A)	5 - 120% of nominal		2		
Frequency (Hz)	44 - 66 Hz	3			
Power (W, VAR, VA)	5 - 144% of nominal (bi-directional)			4	
Energy	8 digit, upto 9999999.9 MWh		1		
Power factor	4 quadrant	2			
THD	0 - 40% upto 63rd harmonic			3	
Environment			1		
Operating temperature	-25°C to +70°C	2			
Storage temperature	-40°C to +80°C			3	
Relative humidity	0 to 95%, non-condensing		4		
Shock	30 g in 3 planes	1			
Vibration	10 Hz to 50 Hz, IEC 60068-2-6, 2 g			2	
Surge voltage	4 kV (IEC 61000-4-5)		3		
Impulse voltage	6 kV (IEC 60060-1)	4			
Electromagnetic immunity	80 MHz - 2 GHz at 10 V/m IEC 61000-4-3			1	
Electrostatic discharge	15 kV (IEC 61000-4-2)		2		
Altitude	3000 m	3			
Warm-up	1 minute			4	
Outputs			1		
Pulsed outputs (self powered only)	Opto-coupled, potential-free SPST-NO contact	2			
Contact rating current	50 mA at 250 V AC 27 mA at 70 V DC			3	
Contact rating voltage	5-27 V DC		4		
Pulse width	60/100/200 ms	1			
Pulse rate	0.001/0.01 /0.1/1/10/100/1000 kWh/kVArh			2	
Pulsed output relay (non-configurable)	2400IMP/kWh		3		
Communications		4			
Type	Modbus RTU (RS485)			1	
Baud rate	2400, 4800, 9600, 19200, 38400		2		
Address	1 to 247	3			
Enclosure				4	
Enclosure style	DIN 96 panel mount		1		
Dimensions	96x96x62 mm	2			
Panel cut-out	92x92 mm			3	
Panel thickness	1-5 mm		4		
Protection rating	Front IP54, Rear IP30, IP64 (with additional kit)	1			
Material	UL 94-VO			2	
Weight	340 g		3		
Cable size	0.05 mm ² - 2.5 mm ² stranded wire	4			
Terminals	Voltage and Current : Shrouded screw clamp			1	
			2		
		3			

3-IN-1 CURRENT TRANSFORMERS



The 3-in-1 current transformer range are for use with the INTEGRA 1221 digital metering system which combines three traditional current transformers in one moulding case with a RJ12 connection and 1.5m cable included for simple and easy error free installation. Available with 25, 35, 45 and 70mm centers.

Product Codes	Primary Current	VA at Class 1	VA at Class 0.5	Aperture mm
RJ1N1-40/5				
RJ1N1-60/5				
RJ1N1-100/5				
RJ1N1-125/5				
RJ1N1-160/5				
RJ3N1-25-40/0.1	40A			3 @ 25 x 15
RJ3N1-25-60/0.1	60A			3 @ 25 x 15
RJ3N1-25-125/0.1	125A			3 @ 25 x 15
RJ3N1-25-160/0.1	160A			3 @ 25 x 15
RJ3N1-35-60/0.1	60A	0.25	-	3 @ 22 x 22
RJ3N1-35-125/0.1	125A	0.5	0.25	3 @ 22 x 22
RJ3N1-35-160/0.1	160A	0.35	0.25	3 @ 22 x 22
RJ3N1-35-250/0.1	250A	0.5	0.25	3 @ 22 x 22
RJ3N1-45-250/0.1	250A	0.25	-	3 @ 27 x 32
RJ3N1-45-400/0.1	400A	-	0.25	3 @ 27 x 32
RJ3N1-45-600/0.1	600A	-	0.25	3 @ 27 x 32
RJ3N1-70-400/0.1	400A	-	0.25	3 @ 40 x 52
RJ3N1-70-600/0.1	600A	-	0.25	3 @ 40 x 52
RJ3N1-70-800/0.1	800A	-	0.25	3 @ 40 x 52

Voltage Meter to Meter Loom

The meter to meter loom connects the voltage for upto 32 meters using high quality LSZH cable fitted with suitable plugs and socket for safe and easy voltage connections.



Part Number	Length
Q2C-VMM-0600-01	600 mm
Q2C-VMM-0900-01	900 mm
Q2C-VMM-1200-01	1200 mm
Q2C-VMM-1500-01	1500 mm
Q2C-VMM-2000-01	2000 mm
Other lengths available	

Voltage Meter to Open Loom

The meter to open loom connects the voltage supply from the fused connections to the meter using high quality LSZH cable fitted with suitable plugs and socket for safe and easy voltage connections.



Part Number	Length
Q2C-VFO-0600-01	600 mm
Q2C-VFO-1000-01	900 mm
Q2C-VFO-1200-01	1200 mm
Q2C-VFO-1500-01	1500 mm
Other lengths available	

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