

# CROMPTON INSTRUMENTS INTEGRA SL 1 SINGLE LOAD DIGITAL METERING SYSTEM



**PROVIDES MEASUREMENT, ISOLATION AND CONVERSION OF ALL MAIN ELECTRICAL PARAMETERS FROM A THREE-PHASE LOAD, IN A SINGLE METER.**

## KEY FEATURES

- Modbus RTU RS485 as standard
- User-programmable CT ratio and system configuration
- True rms measurement
- Continuous busbar or individual busbar metering

## BENEFITS

- Cost-effective
- UK manufactured
- CL0.5 accuracy
- Modbus communications
- Fully configurable
- Additional facility to accumulate the total system power/kWhs - displaying the combined system total parameters

## APPLICATIONS

- Switchgear distribution systems
- Energy/Building
- Management Systems

## RELEVANT STANDARDS AND TEST REPORTS

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

TE Connectivity's (TE) Crompton Instruments Integra SL1 is designed, developed and manufactured in the UK, the Integra SL1 is a digital metering system which provides measurement, isolation and conversion of all main electrical parameters from a three-phase load, in a single meter. It can be used in single and three-phase unbalanced four-wire electrical systems and as an accuracy of CL0.5.

The Integra SL1 has an integrated microprocessor for exceptional waveform handling of distorted waveforms, and is ideal for low voltage applications. It provides a cost effective way of metering split load distribution and panel boards, in a single metering solution.

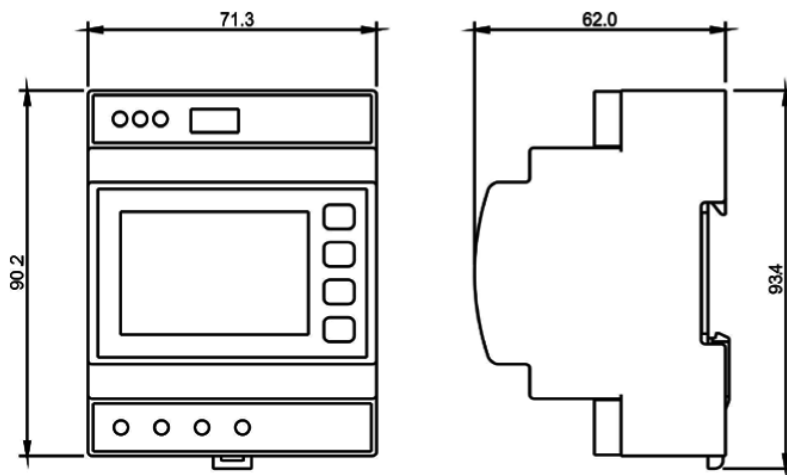
## ORDERING INFORMATION

Model	Part number
Integra SL1 multifunction DIN-rail LCD Input 400 V L-L, 100 mA AC Modbus RTU RS 485 Self powered	SL1-01

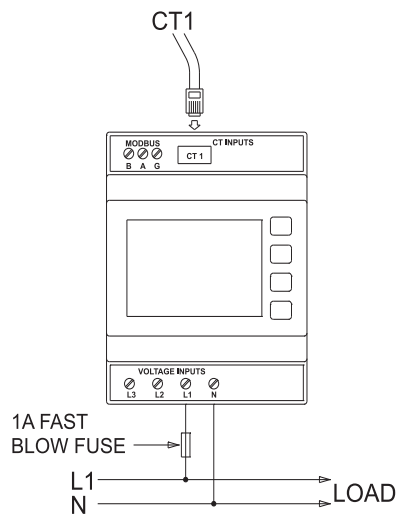
## DISPLAYED PARAMETERS

Power (Load 1)
Current L1
Current L2
Current L3
kW L1
kW L2
kW L3
Average System Volts
Average System Current
Average System kW
kWh Import

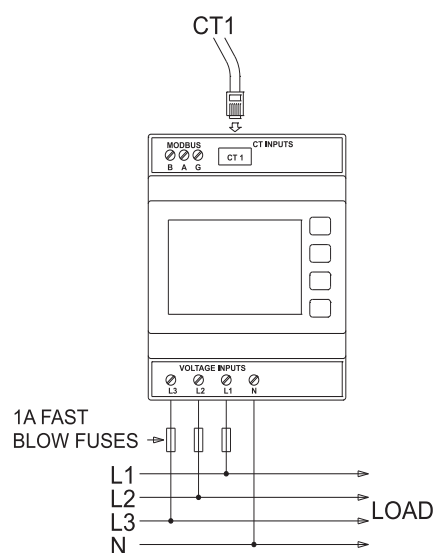
## DIMENSIONAL INFORMATION & CONNECTION DIAGRAM



Single-phase, 2-wire



3 phase, 4-wire



RJ 12 connection



## TECHNICAL SPECIFICATIONS

Parameters	
Nominal input voltage	100 V to 230 V AC rms., L - N. 173 V to 400 V AC rms., L - L
Max. continuous input overload voltage	120% of nominal
Max. short duration input voltage (1 sec)	2 x nominal voltage
Nominal input voltage burden	0.2 VA per phase (Except L1) **Self powered using the meter electrical input from L1 (6 VA)
Nominal input current	100 mA AC rms. per CT
System CT primary values	1-9999 A (selectable from display)
CT burden	0.1 VA
Accuracy	
Voltage (V)	< 0.5% of reading
Current (A)	< 0.5% of reading
Frequency (Hz)	< 0.2% of mid range
Power factor (PF)	1% of unit
Active power (W)	+/- 0.5% of reading
Active energy (kWh)	+/- 0.5% of reading 62053-22
Range	
Voltage (V)	5% to 120% for nominal
Current (A)	5% to 120% of nominal
Frequency	45 - 65 Hz
Power	1 - 144% of nominal 0.8 capacitive - 1 - 0.8
Power factor	Inductive (functional 4 quadrant, 0-1 lag lead)
Energy	6-digit resolution and to be displayed in kWh (Maximum display 999999, before rollover to 0)
Outputs	
Communication protocol	RS485 Modbus RTU
Type	2-wire half duplex
Baud rate	9600, 19200, 38400

## 3-in-1 Current Transformers for use with Single Load SL1

### FEATURES

- Busbar DIN-rail and metal feet (mounting hardware supplied)
- RJ12 socket for fast connection
- Cable included (length 1.5 m)
- Low 60A ratio for more energy efficient loads
- Aperture hole centres 25, 35, 45, 70 mm



### STANDARDS

- IEC61869-2



### BENEFITS

- RJ12 connection for simple and easy error free installation



ALL CURRENT TRANSFORMERS ARE SUPPLIED WITH A 1.5M CONNECTING CABLE, WITH RJ12 CONNECTOR TERMINATION AT EACH END.

The 3-in-1 current transformer range are for use with the Integra digital metering system SL1-01/DL1-01/TL1-01 and INT 1221 combines three traditional current transformers in one moulding case with a RJ12 connection for simple and easy error free installation.

Specification	
System voltage	720V maximum
Test voltage	3kV for 1 minute
System frequency	50Hz or 60Hz
Primary ratings	100mA AC rms. per CT
Overload withstand	1.2 x rated current continuously
Enclosure	Flame retardant grade classified UL94V-O
Aperture hole centres	25mm, 35mm, 45mm, 70mm
Operating temperature	-20°C to +85°C
Compliant with accuracy	IEC61869-2 Class 0.5, Class 1

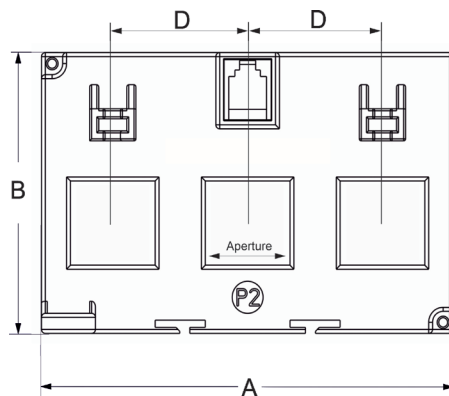
Part number	Primary Current	VA at Class 1	VA at Class 0.5	A (Width) mm	B (Height) mm	C (Depth) mm	D (Hole Centres) mm	Aperture mm
DL3N1-25-60/0.1	60A	0.25	-	76	78	30	25	3 @ 25 x 15
DL3N1-25-100/0.1	100A	0.35	0.25	76	78	30	25	3 @ 25 x 15
DL3N1-25-125/0.1	125A	0.35	0.25	76	78	30	25	3 @ 25 x 15
DL3N1-25-160/0.1	160A	0.35	0.25	76	78	30	25	3 @ 25 x 15

DL3N1-35-60/0.1	60A	0.25	-	107	70	35	35	3 @ 22 x 22
DL3N1-35-125/0.1	125A	0.5	0.25	107	70	35	35	3 @ 22 x 22
DL3N1-35-160/0.1	160A	0.35	0.25	107	70	35	35	3 @ 22 x 22
DL3N1-35-250/0.1	250A	0.5	0.25	107	70	35	35	3 @ 22 x 22

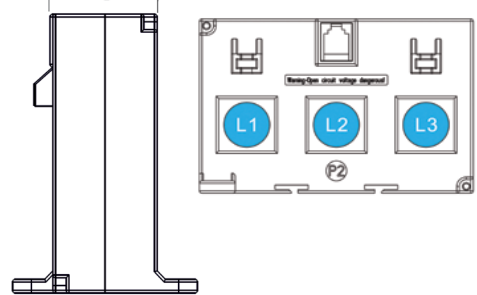
DL3N1-45-250/0.1	250A	0.25	-	142	86	40	45	3 @ 27 x 32
DL3N1-45-400/0.1	400A	-	0.25	142	86	40	45	3 @ 27 x 32
DL3N1-45-600/0.1	600A	-	0.25	142	86	40	45	3 @ 27 x 32

DL3N1-70-400/0.1	400A	-	0.25	212	100	40	70	3 @ 40 x 52
DL3N1-70-600/0.1	600A	-	0.25	212	100	40	70	3 @ 40 x 52
DL3N1-70-800/0.1	800A	-	0.25	212	100	40	70	3 @ 40 x 52

### DIMENSIONAL INFORMATION



### PHASE ORIENTATION



### FOR MORE INFORMATION:

TE Technical Support Centres

Learn more: [TE.com/energy](https://www.te.com/energy)

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