SR. NO.: 12 - 02 - E1 -

MODEL : E1000 (DUAL SOURCE & RS485)

SUPPLY VOLTAGE: 3 x 240 V AC , 50 Hz

CURRENT INPUT : Whole Current (5-60 Amps)

ROUTINE AND FUNCTION TESTS CONDUCTED TO RELEVANT STANDARDS AND OUR SPECIFICATIONS/LITERATURE/O&M MANUAL. TRACEABILITY : TESTED AGAINST MTE STANDARD MODEL PRS 1.3 HAVING BASIC ACCURACY OF 0.01%. SR. NO. OF STANDARD METER : 26138 TRACEABLE UPTO INTERNATIONAL STANDARDS, DERIVED USING APPROPRIATE RATIO TECHNIQUES. NEXT CALIBRATION DUE ON 09/02/ 2013.

RESULT OF TESTS : OK.

SPECIAL REMARKS : DP & DN TERMINAL ARE 150 TO 270VAC INPUT TO SELECT DG COUNTER.
A+ & B- TERMINALS ARE FOR RS485 O/P.

TEST ENGINEER : K.S.T   **DATE :** 10/02/2012

E1000
DUAL SOURCE WHOLE CURRENT DIGITAL ENERGY METER.

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This document contains the latest technical /application information on the DIGITAL ENERGY METER type E1000 . Trinity Energy systems Pvt. Ltd. reserves the right to modify or revise the contents/ specifications of this document without prior notice.
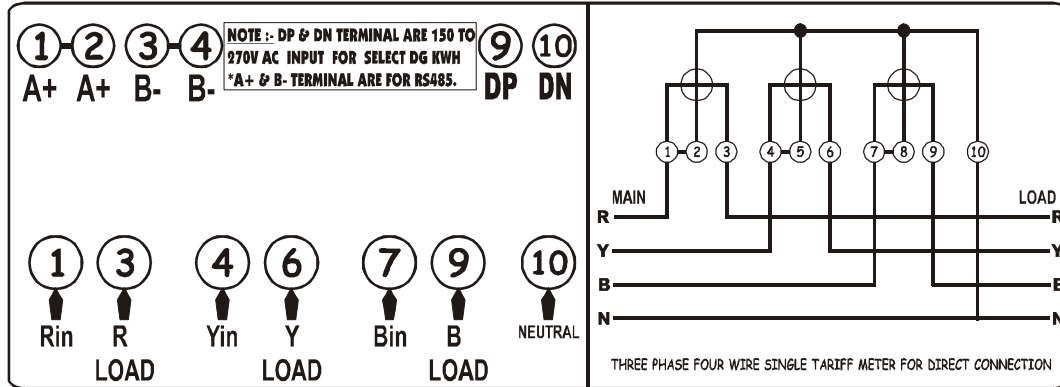
Effective date : 07 / 07 / 2008

TRINITY

INSTALLATION & COMMISIONING

Follow the following steps to install / comission the unit.

1. Mount the unit using the clamps at back side of meter.
2. Make the connection as per connection diagram shown below.

3. Switch on the Mains three phase supply. The unit will come alive and starts to display METER ADDR(RS485)Then parameters.
4. The unit is ready for operation.

5. *DP & DN TERMINALS ARE FOR SENSING DG OPERATION. APPLY 150V AC TO 250V AC ON THESE TERMINALS TO SENSE DG IN OPERATION.*

DISPLAY PARAMETERS

There are Six parameters:

1) EB Kwh indication done by displaying '1' on the top of the Kwh value.

2) DG Kwh indication done by displaying '2' on the top of the Kwh value.

3) Total Kwh indication done by displaying both '1' and '2' on the top of the Kwh value.

4) EB Kvarh indication done by displaying '1' on the top of the Kvarh value.

5) DG Kvarh indication done by displaying '2' on the top of the Kvarh value.

6) Total Kvarh indication done by displaying both '1' and '2' on the top of the Kvarh value.

The display will show all three parameter in a scrolling manner with scrolling time of 8 second.

COMMUNICATION PROTOCOL AND REGISTER MAP

Protocol details for RS485 MODBUS communication of Trinity meter type E1000 with PC BASED DAS package.
Communication Line Parameters : 9600 / 8 / N / 1
The register map is described below . All addresses are in decimal . All parameters are unsigned long . If illegal address is sent in the query or the host tries to read more than 32 bytes of data in one query , exception message is generated.

The parameter name (description) and multiplication factors are also mentioned.

Reserved values are for future use . They are transmitted as zeroes.

Address	Parameter	MF
3030	EBKwh	X100
3032	DGKwh	X100
3034	TOTAL Kwh	X100
3036	EBKvarh	X100
3038	DGKvarh	X100
3040	TOTAL Kvarh	X100

For providing resolution , KWh is multiplied with 100 before transmitting . Thus if the KWh value is 278.99 , it is sent out as 27899 .

■ If an attempt is made to read from some address other than the valid address , the exception response is sent .

EXCEPTION CODE
In the event that the the query from the HOST has no communication error , but there is some error in specifying the address of registers to be read, the meter returns an exception message .The format of the exception message will be as under :

Unit Address	0x83	Exception code	CRC	CRC

Exception Code can have only one value : **02** . If the address is not a valid address or host has requested more than 6 bytes of data , this code is returned .