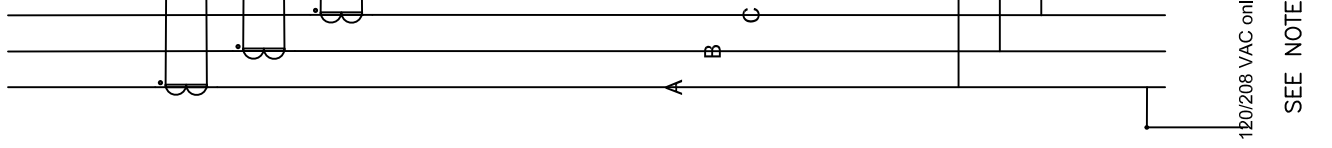
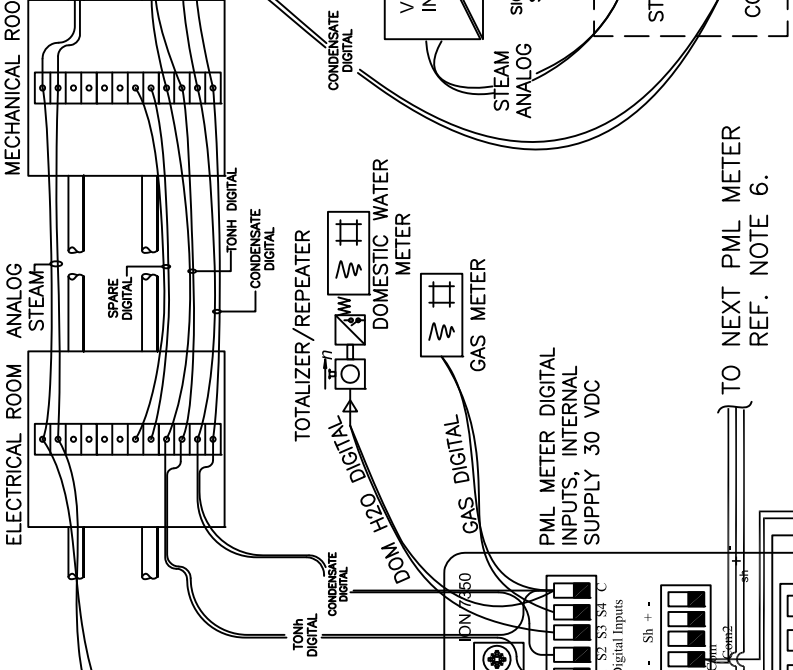


SYSTEM CURRENT TRANSFORMER CONNECTION: MATCH MAX. SYSTEM LOAD.
(CT RATIO: XXXX:5)
SEE NOTE 12.



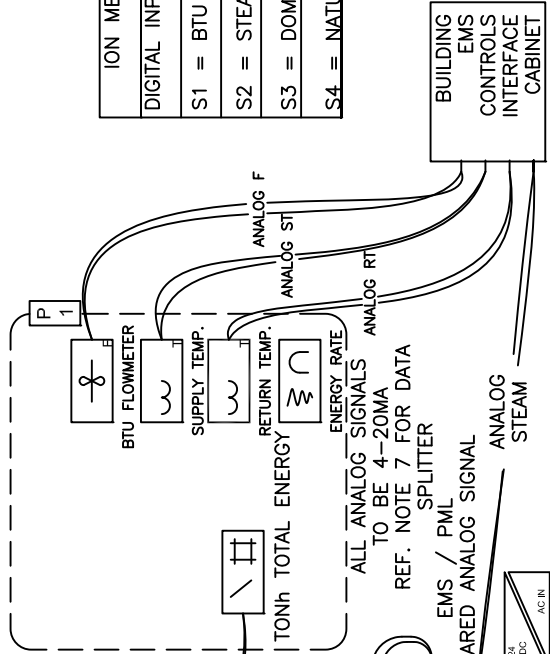
UTILITY METERS JUNCTION BOX INTERFACE, MINIMUM 6"x6"x4" WITH HINGED DOOR & 3/4" CONDUIT
NOTE: DIRECT POINT TO POINT CABLE PULL IS PREFERRED.



ION METER: DIGITAL & ANALOG CONNECTION SCHEDULE

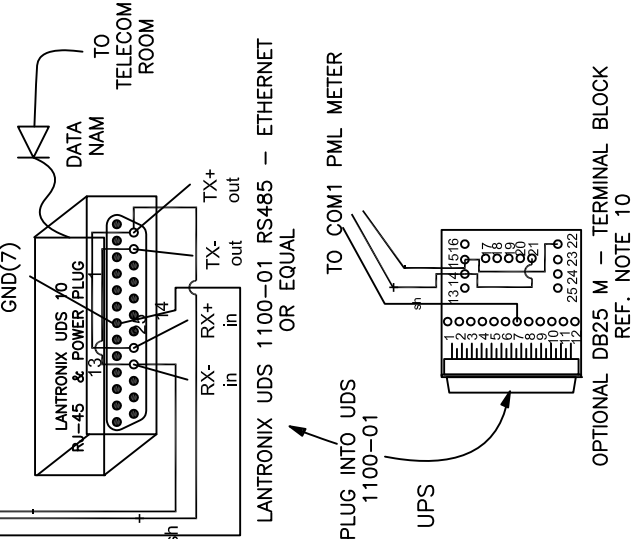
DIGITAL INPUTS:	ANALOG INPUTS (4-20 MA):
S1 = BTU ENERGY TOTAL (TON)	A11 = STEAM RATE
S2 = STEAM PULSE OR CONDENSATE	A12 = OPEN
S3 = DOMESTIC WATER	A13 = OPEN
S4 = NATURAL GAS	A14 = OPEN

ONICON SYSTEM 10 P1 OR EQUAL - NO KNOWN EQUAL WITH LCD DISPLAY OPTIONAL ANALOG OUTPUTS REF. NOTE 8.



NOTES:

1. WHEN CONNECTING TO THE CAMPUS ETHERNET USE THE LANTRONIX UDS-1100-01 (OR EQUAL) AS INDICATED ON THIS DRAWING.
2. REFER TO DIVISION 26, POWER MONITORS
3. WIRING SCHEMATIC REFER TO POWER MEASUREMENT LTD. MANUALS FOR A 4 WIRE WYE: 3 ELEMENT DIRECT CONNECT
4. FOR THE CT'S, THE COMMON LINES CAN BE JUMPED AT THE SHORTING BLOCK OR ON THE POWER MONITOR (PREFERRED). (COMMON LINES: I12, I22 & I32). THE SHORTING BLOCK MUST BE ACCESSIBLE FROM A FRONT PANEL NEAR THE POWER MONITOR AND SHALL BE GROUNDED.
5. SYSTEM VOLTAGE INPUT CONNECTION(DIRECT): MAX. 347 VAC LN (600 VAC LL) TYPICAL CONNECTION 277/480 VAC NOTE: (PTS ONLY REQUIRED FOR VOLTAGES OVER 347 LN (600 LL))
6. SERIAL CABLE: RS485 20-24 AWG, SHIELDED TWISTED PAIR. SINGLE OR MULTIPLE METER CONNECTION. MULTIPLE METERS TO BE WIRED IN SERIES (DAISY CHAIN) WITH A TERMINATING RESISTOR AT THE END OF A STRAIGHT LINE TOPOLOGY. (NO TERMINATING RESISTOR REQUIRED FOR A LOOP TOPOLOGY). GROUND SHIELD TO PIN 7 ON THE RS485 - ETHERNET CONVERTER AND LEAVE OPEN AT FIRST METER. FROM THE FIRST METER CONNECT GROUND AND LEAVE OPEN NEXT DOWNSTREAM METER AND REPEAT FOR ALL SUBSEQUENT METERS. IF ONLY ONE METER IS INSTALLED, DO NOT GROUND THE SHIELD AT THE METER.
7. ONLY USE DATA SPLITTERS ON BTU METERING SYSTEM FOR SHARING DATA SIGNALS FLOW, TIN, TOUT INSTRUMENTS TO MORE THAN ONE SYSTEM LIKE EMS, JOHNSON, HONEYWELL, OR EQUAL - SIGNAL SPLITTERS CAN BE INSTALLED BEFORE INPUT TO THE BTU SYSTEM OR FROM THE OUTPUT FROM THE BTU SYSTEM. FOR JUST UTILITIES & EMS NO SPLITTER IS REQUIRED.
8. ONICON SYSTEM 10-P1 OR EQUAL OUTPUT OPTIONS: ANALOG OUTPUTS AS SHOWN ABOVE (FLOW, SUPPLY TEMP, RETURN TEMP & ENERGY RATE). INCLUDE A P1 OPTION FOR BUILDINGS WITH BUILDING EMS.
9. LANTRONIX UDS 1100-01 OR EQUAL (RS485 - ETHERNET CONVERTER); DB25 FEMALE DCE INTERFACE RX-(15&22)=-, BLACK). SHORT (TX+ & RX+(14&21)=+ RED), SHORT (TX- & RX-(15&22)=-, BLACK).
10. OPTIONAL DB25 M - TERMINAL BLOCK, LANTRONIX UDS-M-SBC OR PHOENIX CONTACT SUBCON 25/M-SH, OR EQUAL CAN BE USED IN PLACE OF A DB 25 CABLE FOR EASE OF WIRING. ASSEMBLE PER MANUFACTURES SPECIFICATIONS.
11. POWER METER INPUT SUPPLY POWER IS 95 - 240 VAC. POWER GREATER THAN 240 VAC REQUIRES A TRANSFORMER.
12. CT RATIO SHALL BE AS REQUIRED BY BUILDINGS ELECTRICAL SERVICE CAPACITY.



OPTIONAL DB25 M - TERMINAL BLOCK REF. NOTE 10

OUTLET REQUIRED FOR UPS POWER FOR RS485 / ETHERNET CONVERTER MODULE.

UNIVERSITY OF CALIFORNIA, DAVIS

BUILDING ELECTRICAL METER AND UTILITY METERS CONNECTION DIAGRAM-ION 7350

REVISION: 1

SCALE: NONE	DATE: JULY 2011
DWN: KH	APPROVED
CHK: ES	FILE NO. E-03