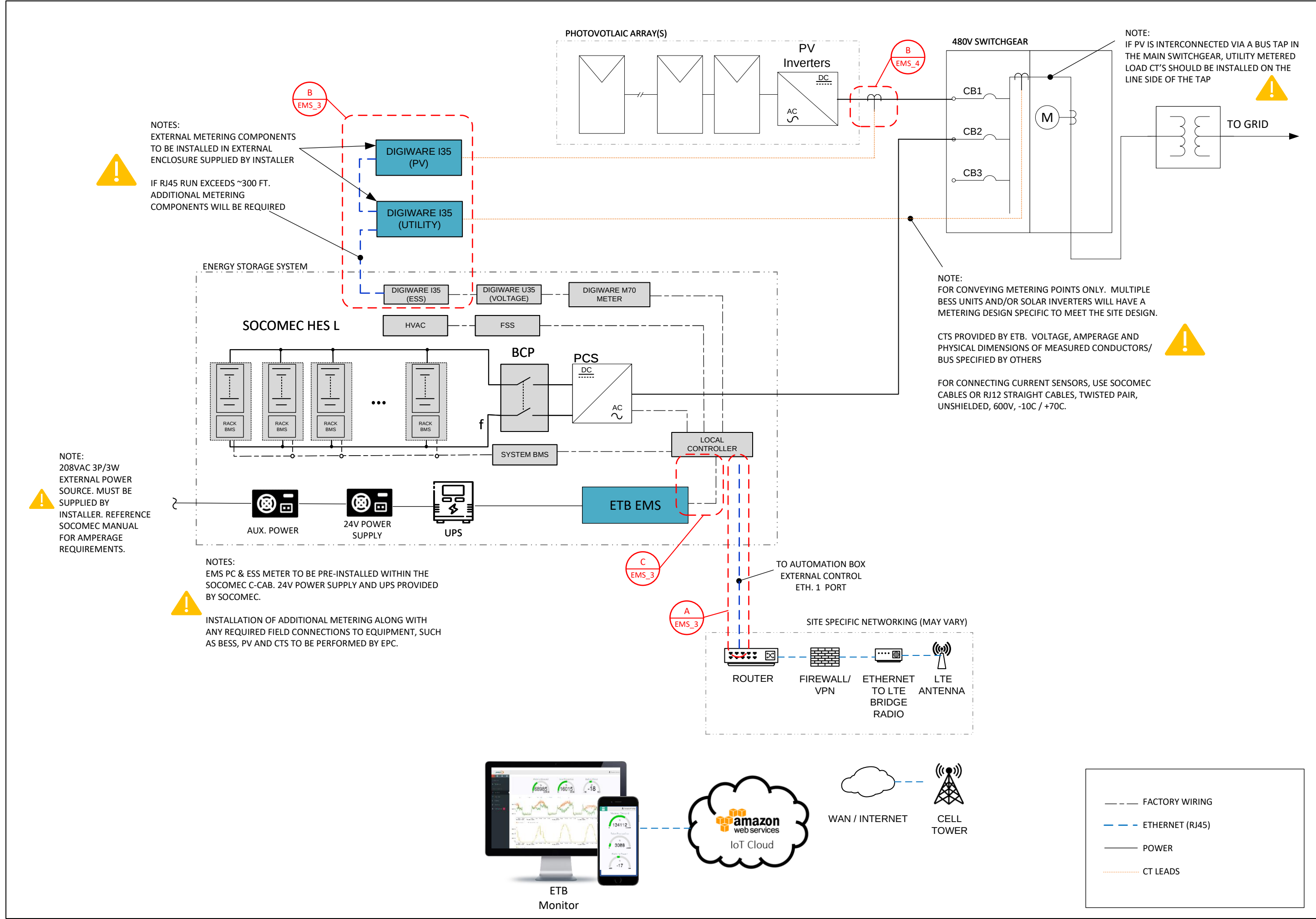






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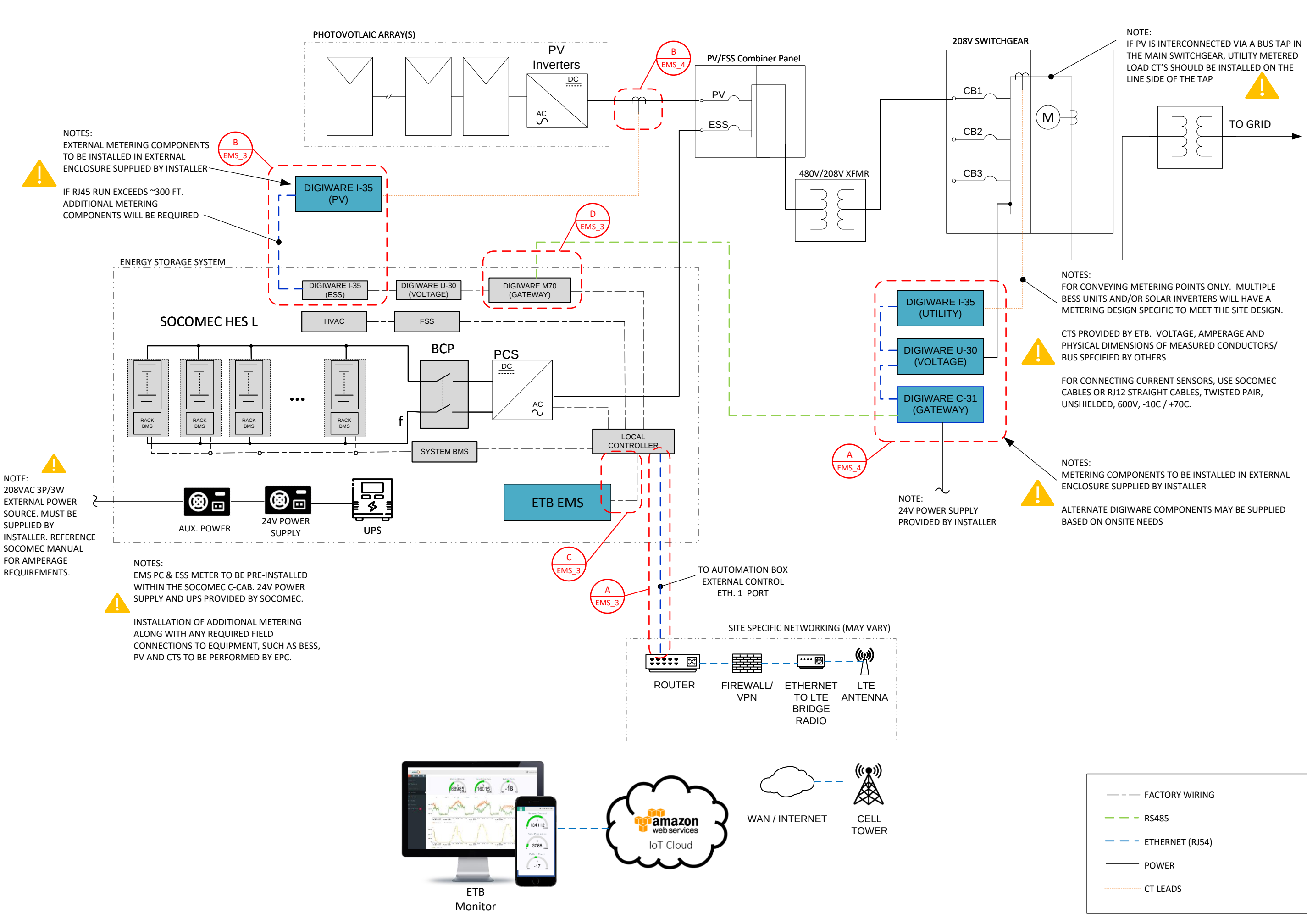
DESCRIPTION:				
NETWORKING SINGLE LINE - 480V				
SYSTEM TYPE:				
SOCOMEH HES L				
BY	KM	KM	LL	
DATE	05.10.22	10.11.22	07.16.24	
DESCRIPTION	SINGLE LINE PUBLISHED	QR CODE ADDED	ETB CONTROLLER UPDATE	
REV.	1	2	3	



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ETB Controller
Installation
Manuals

TITLE:	
ETB CONTROLLER SINGLE LINE	
DRAWING NUMBER:	
EMS_1	
SCALE:	
NS	
SHEET:	
1 OF 4	

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CODES, UTILITY
REQUIREMENTS AND LOCAL
CODE ENFORCEMENT.





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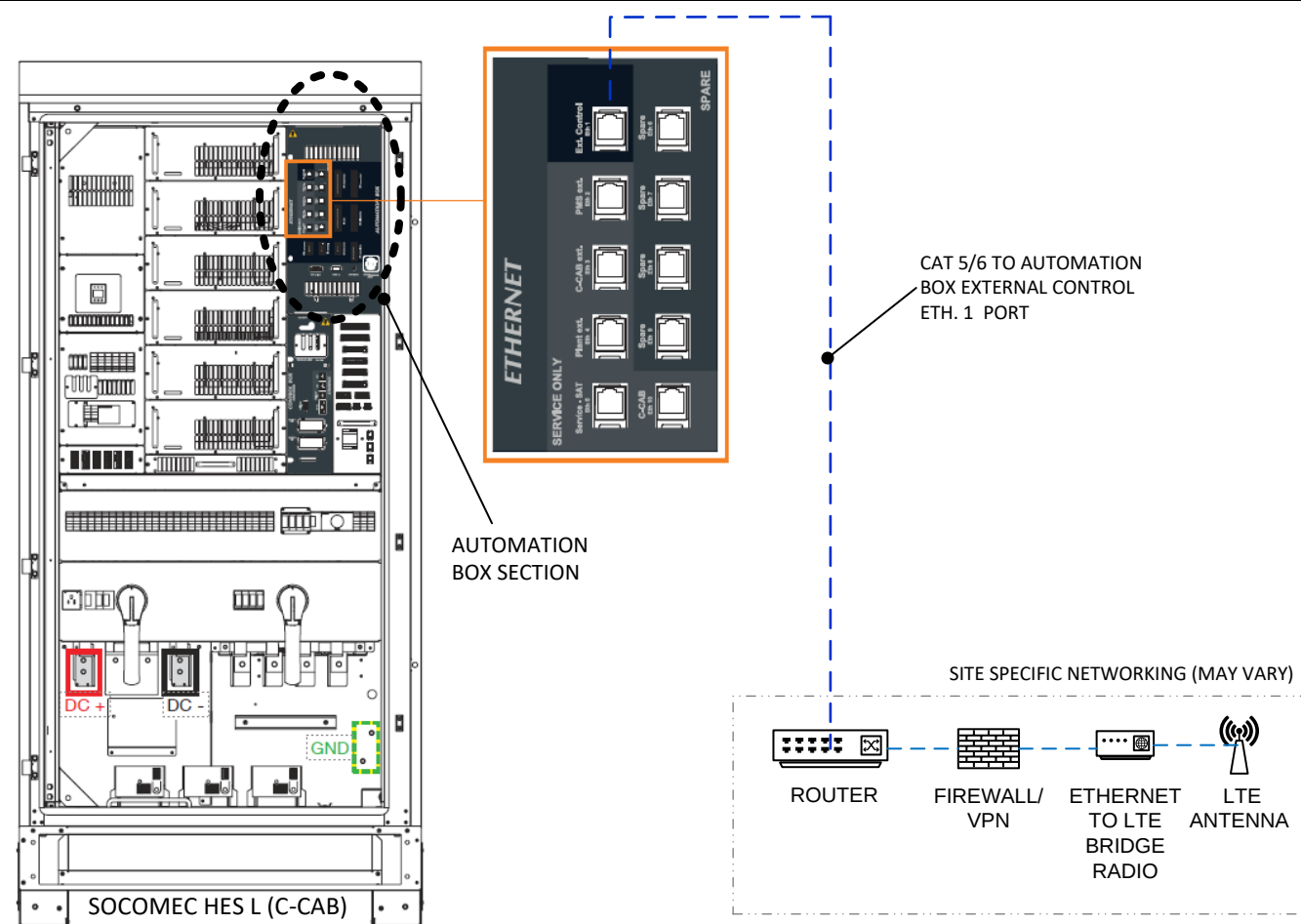
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NETWORKING SINGLE LINE - 208V				
SYSTEM TYPE:				
SOCOMECHES L				
BY	KM	KM	LL	
DATE	05.10.22	10.11.22	07.16.24	
DESCRIPTION	SINGLE LINE PUBLISHED	QR CODE ADDED	ETB CONTROLLER UPDATE	
REV.	1	2	3	



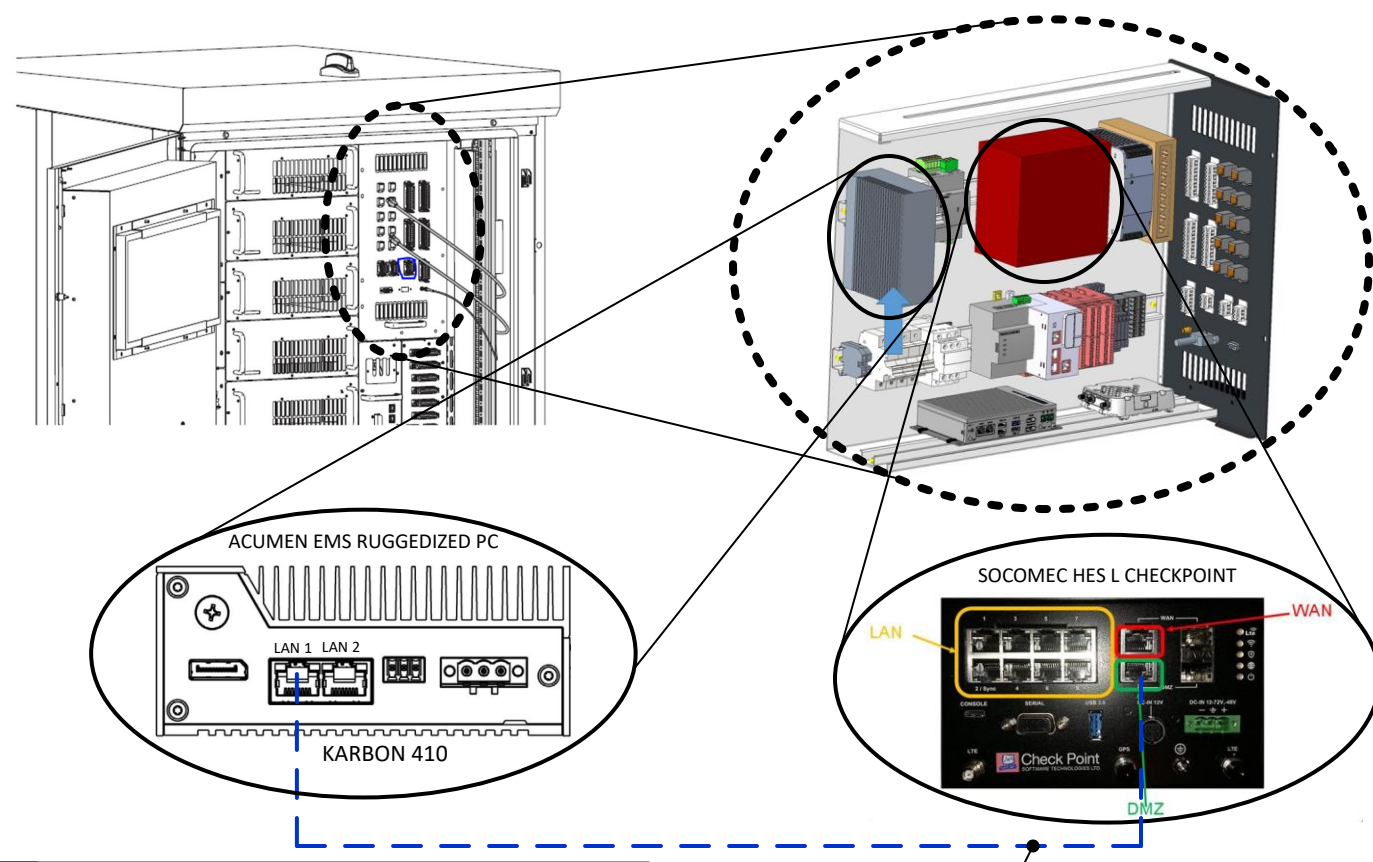
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TITLE:	
ETB CONTROLLER SINGLE LINE	
DRAWING NUMBER:	
EMS_2	
SCALE:	
NS	
SHEET:	
2 OF 4	

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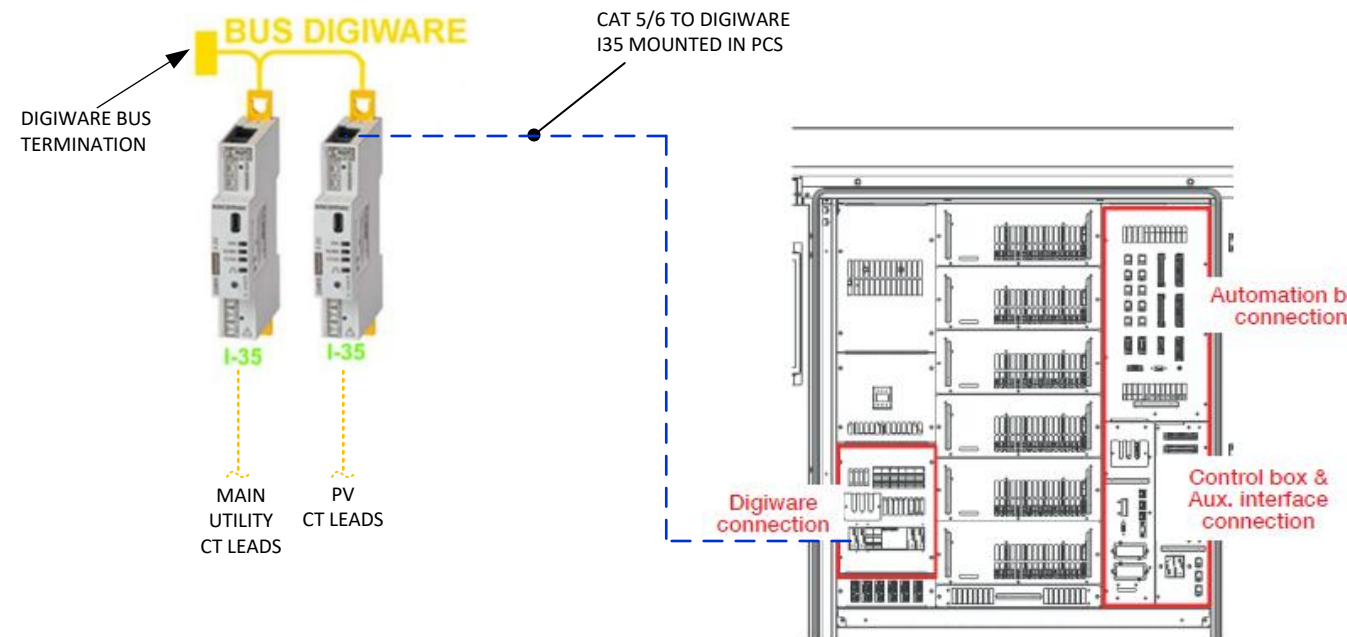
A	INTERNET CONNECTION
---	---------------------



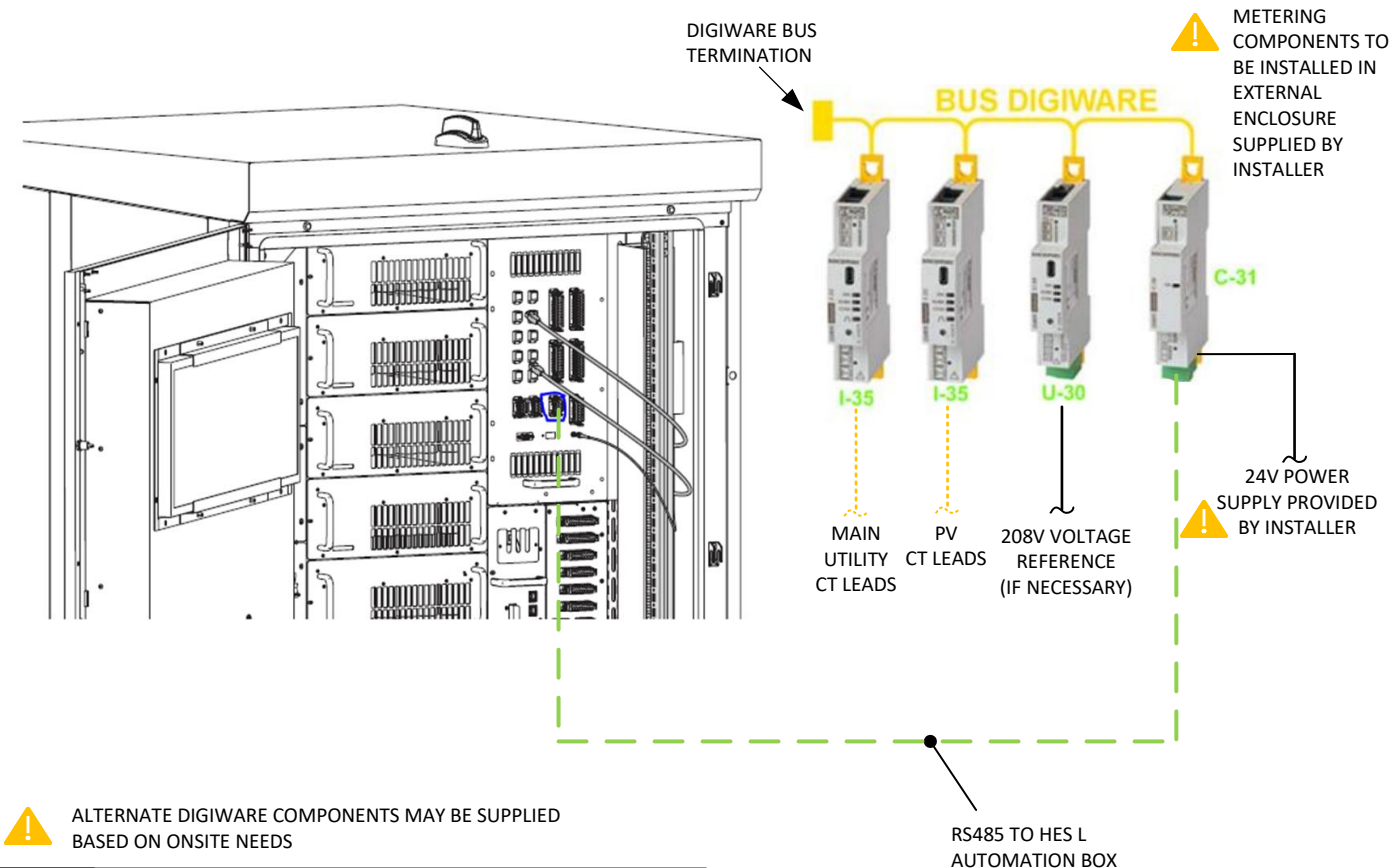
C ACUMEN CONNECTION TO PMS

 **INSTALLER MUST CONFIRM CAT5 TERMINATION FROM EMS LAN1 TO CHECK POINT DMZ PORT**

 **METERING COMPONENTS TO BE INSTALLED IN EXTERNAL ENCLOSURE SUPPLIED BY INSTALLER**



B STANDARD METER CONNECTION



D	208V/>300'+ METER CONNECTION
---	------------------------------

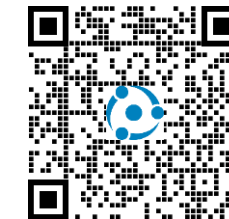


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DESCRIPTION:	INTERNET & METERING CONNECTION DETAILS
SYSTEM TYPE:	

SOCOMECHES L

REV.	DESCRIPTION	DATE	BY
1	DETAILS PUBLISHED	05.10.22	KM
2	QR CODE ADDED	10.11.22	KM
3	ETB CONTROLLER UPDATE	07.16.24	LL



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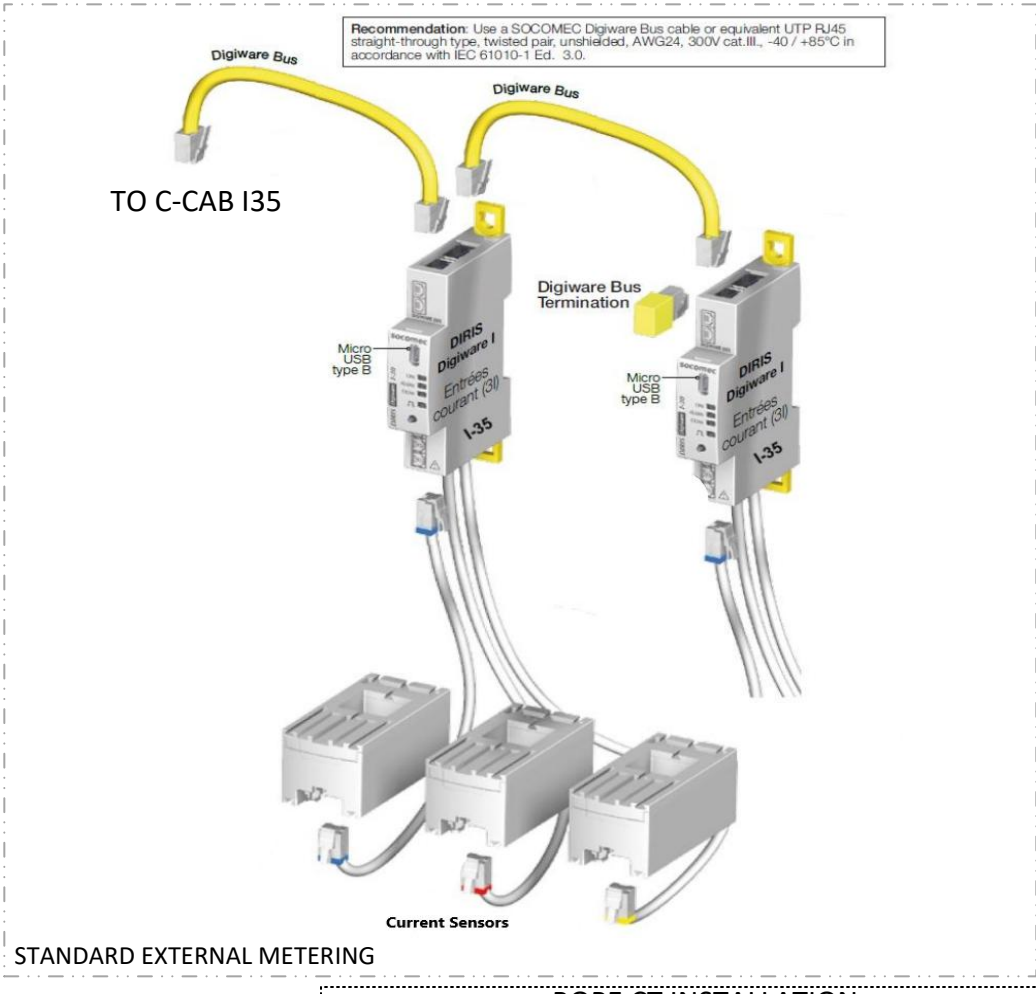
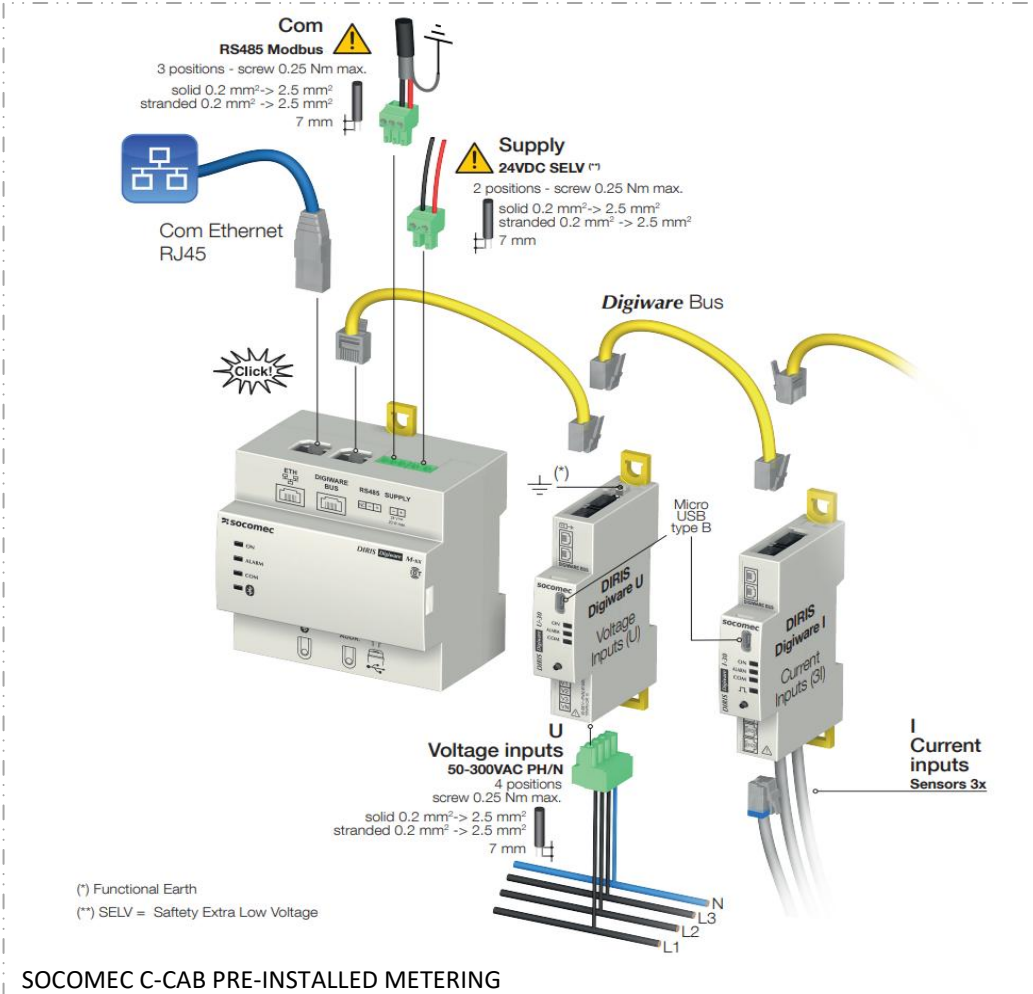
TITLE:
ETB CONTROLLER
SINGLE LINE

DRAWING NUMBER:
EMS

SCALE: NS

SHEET: 3 OF 4

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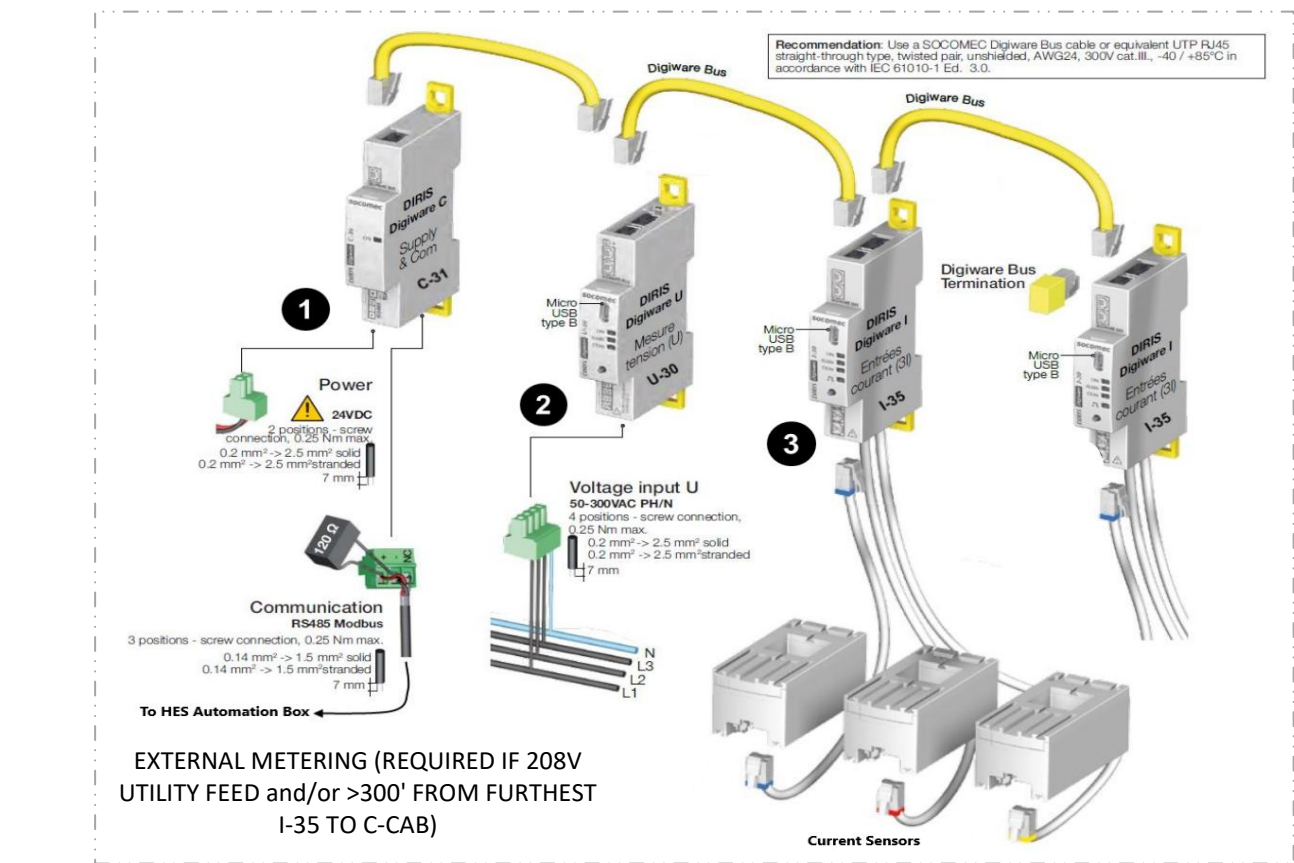
NOTE: VOLTAGE REFERENCE CONDUCTORS MAY BE BROWN/ ORANGE/YELLOW OR OTHER COLOR SCHEMES BASED ON CONNECTION VOLTAGE.

VOLTAGE TAPS **MUST** BE TAKEN AT THE SAME REFERENCE VOLTAGE (LOAD) THE CTS ARE MEASURING. IDEALLY THIS WOULD BE WITHIN THE SAME PANELBOARD THAT THE CTS ARE LOCATED.

DIGIWARE BUS TERMINATION MUST BE INSTALLED ON LAST UNIT IN THE DIGIWARE BUS

ALTERNATE DIGIWARE METERING COMPONENTS MAY BE SUPPLIED BASED ON ONSITE NEEDS

- 1 DIGIWARE C-31 GATEWAY. REQUIRED WHEN ADDING ADDITIONAL VOLTAGE SENSORS OR IF DIGIWARE BUS EXCEEDS 300'
- 2 DIGIWARE U-30 VOLTAGE SENSOR. REQUIRED WHEN MEASURING VOLTAGE OTHER THAN 480V
- 3 DIGIWARE I-35 CURRENT SENSOR. USED TO MEASURE CURRENT AT ESS, PV, MAIN OR OTHER MEASURED POINTS



ROPE CT INSTALLATION

ROPE CTS SHOULD BE INSTALLED PROPERLY TO REDUCE THE MAXIMUM ERROR BASED ON POSITIONING. IDEALLY THE CONDUCTOR BEING MONITORED WILL BE PERPENDICULAR TO THE ROPE CT LOOP, AND PASS THROUGH THE CENTER OF THE ROPE CT AS SHOWN BELOW. TIE-WRAPS OR OTHER NON-CONDUCTIVE FASTENERS CAN BE USED TO CENTER THE ROPE CT AROUND THE CONDUCTOR.

SOLID & SPLIT CORE CT INSTALLATION

Power Utility

Solar CTs CT1 CT2 CT3

Grid CTs CT4 CT5 CT6

Three-Phase (208V or 480V) Inverter

Power Distribution Panel

SOCOME C ESS

L1 L2 L3

SPLIT AND SOLID CORE CT'S SHOULD BE INSTALLED WITH THE STICKER SIDE FACING THE LOAD BEING MEASURED. CERTAIN CT'S MAY HAVE AN ARROW, IN WHICH CASE ENSURE THE ARROW IS POINTING TOWARDS THE LOAD BEING MEASURED.

Position Number Position Description Error

1	Centered	< 0.4%
2, 3, 4	Near outer edge	< 2.0%
5	Near connector	< 4.0%

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DESCRIPTION: METER DETAILS

SYSTEM TYPE: SOCOME C HES L

BY	DATE	DESCRIPTION	REV.
KM	05.10.22	DETAILS PUBLISHED	1
KM	10.11.22	QR CODE ADDED	2
LL	07.16.24	ETB CONTROLLER UPDATE	3

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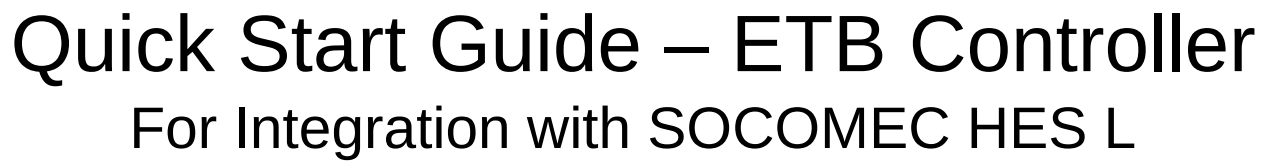
TITLE: ETB CONTROLLER SINGLE LINE

DRAWING NUMBER: EMS_4

SCALE: NS

SHEET: 4 OF 4

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Digiware Sensors
(vary per site)



- Flat-head Screwdriver
- Philips-head Screwdriver
- Drill and Bits
- Adjustable Wrench
- Wire Cutters
- Wire Strippers
- Volt-meter
- DIN rail, self tapping screws
- Comms cabling

Follow these installation steps and then contact Energy Toolbase Software, Inc. (866-415-1445) for further commissioning activities. The steps below represent a typical installation, unique site features might warrant adjustment or additional steps. For more detailed instructions please reference the ETB Controller installation manual.

[illegible]

DIGIWARE BUS TERMINATION

BUS DIGIWARE

CAT 5/6 TO DIGIWARE I-35 MOUNTED IN PCS

I-35

CT LEADS

DC +

DC -

**METERING COMPONENTS
TO BE INSTALLED IN
EXTERNAL ENCLOSURE
SUPPLIED BY INSTALLER**

**! 24V POWER
SUPPLY
PROVIDED BY
INSTALLER**

BUS DIGIWARE

**DIGIWARE BUS
TERMINATION**

CT LEADS

CT LEADS

**208V
VOLTAGE
REFERENCE**

**RS485 TO HES L
AUTOMATION
BOX**

 VOLTAGE TAPS **MUST** BE TAKEN AT THE SAME REFERENCE VOLTAGE (LOAD) THE CTS ARE MEASURING. IDEALLY THIS WOULD BE WITHIN THE SAME PANELBOARD THAT THE CTS ARE LOCATED.