Installation Instruction – M5 Power Feed Current Monitor OB225E12

WARNING – Remove power from the End Feeds before installing CT's or wiring to the Current Monitor.

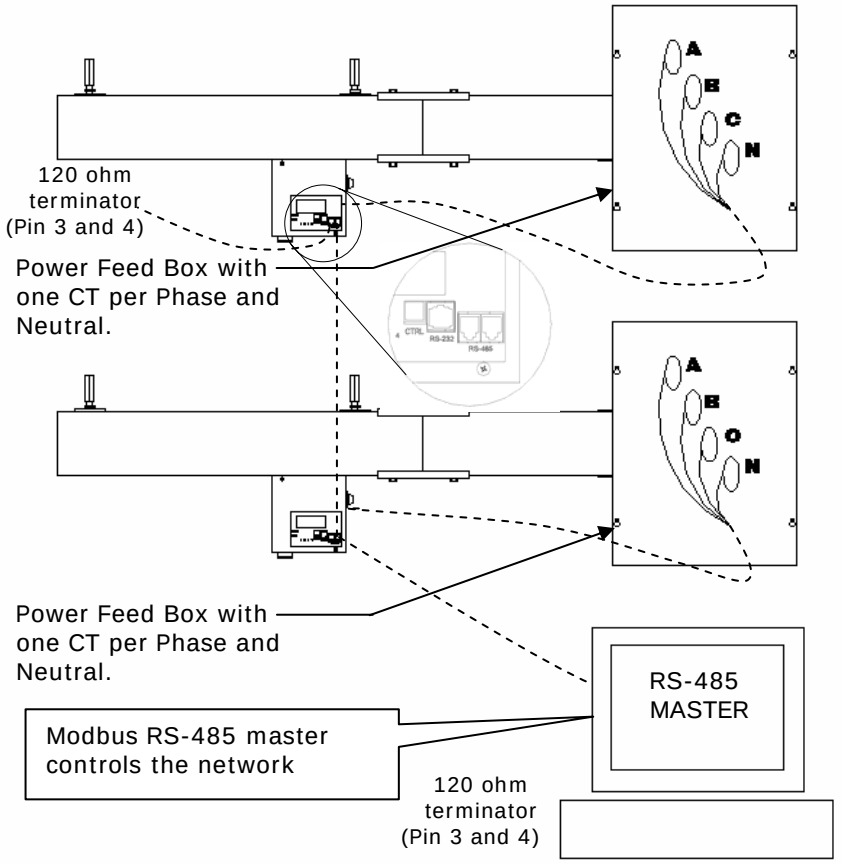
1) Solid Core Current Transformers (CT) are installed around the End Feed feeder cables.

2) It is recommended to remove power from the End Feed before making connections to the CT wires. However, if it is not possible to remove power and the CT's are already installed on the feeder cables, then connections may be made to the CT wires using the appropriate safety measures, such as insulated gloves. Caution is required for working in any live electrical box where exposed contacts are present.

3) Connect the CT wire leads to a **twisted pair** cable. An 18AWG (16 max) single cable with 8 conductors would be appropriate.

4) Route the cable to the Current Monitor plug-in unit. Knock outs are provided to bring the cable into the box. Removing the lid, note the terminal block on the back side. This is where the cable wires will connect.

TERMINAL	CHANNEL
5 & 6	1
7 & 8	2
9 & 10	3
11 & 12	4



5) Connect the twisted pair wires to the terminal block. The connections and CT are not polarized.

6) Secure lid and install Current Monitor plug-in unit. The Busway run may now be powered. Repeat for all End Feeds.

7) For Modbus RS-485 communications systems, each monitor must be assigned an Address 1-247. Unique addresses are assigned at the factory, but may be changed easily in the field.

8) Two RJ-11 ports are provided to daisy-chain communication between all monitors and the collection node (RS-485 Master). See RJ-11 wiring details in the figure at the right.

9) It is good practice to use terminating resistors (120 ohm) at the first monitor and the RS-485 Master. The M5TK-1 terminating kit is provided for this purpose. See top figure.

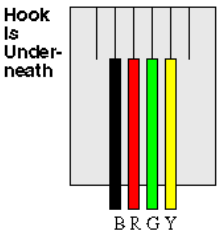
10) M5 monitors integrate into standard BMS software packages. See Modbus Point Map below.

#	R/W	NV	Description
1	R		Current, Channel 1
2	R		Current, Channel 2
3	R		Current, Channel 3
4	R		Current, Channel 4

= Channel number; R/W = Read/Write; R = Read-only; NV = Value stored in non-volatile memory
Greater or equal to 100A scale and values are in amps. Otherwise values are 1/10 amp.

Supported Modbus Commands: Read Holding Register (03h)

RJ-11 Plug Wiring



Pin Color/Connection
1: Not Connected
2: B – Not Connected
3: R – B (RS-485)
4: G – A (RS-485)
5: Y – Ground
6: Not Connected

Cable Specs:
- 2 pair 24 AWG min.
- TIA/EIA 568-B.2 CAT5E rated or better
- wire straight through