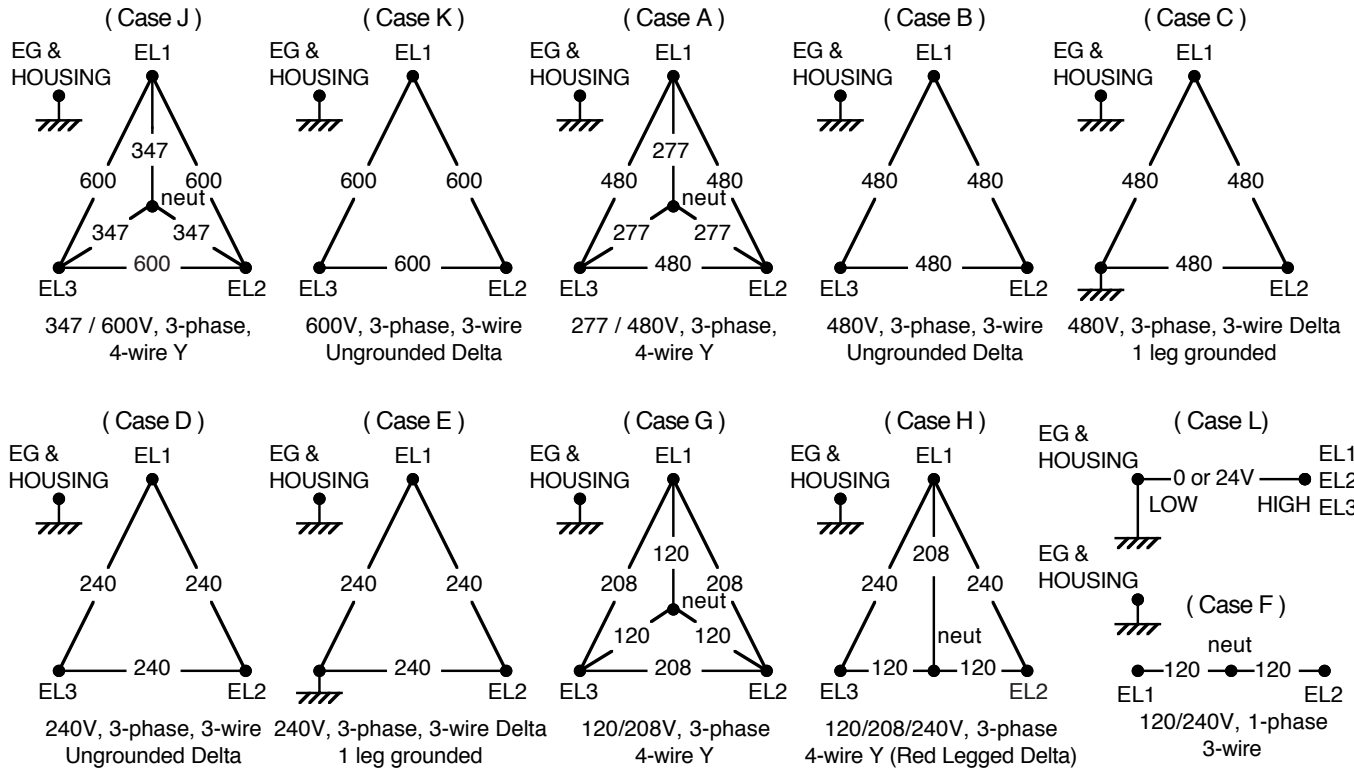
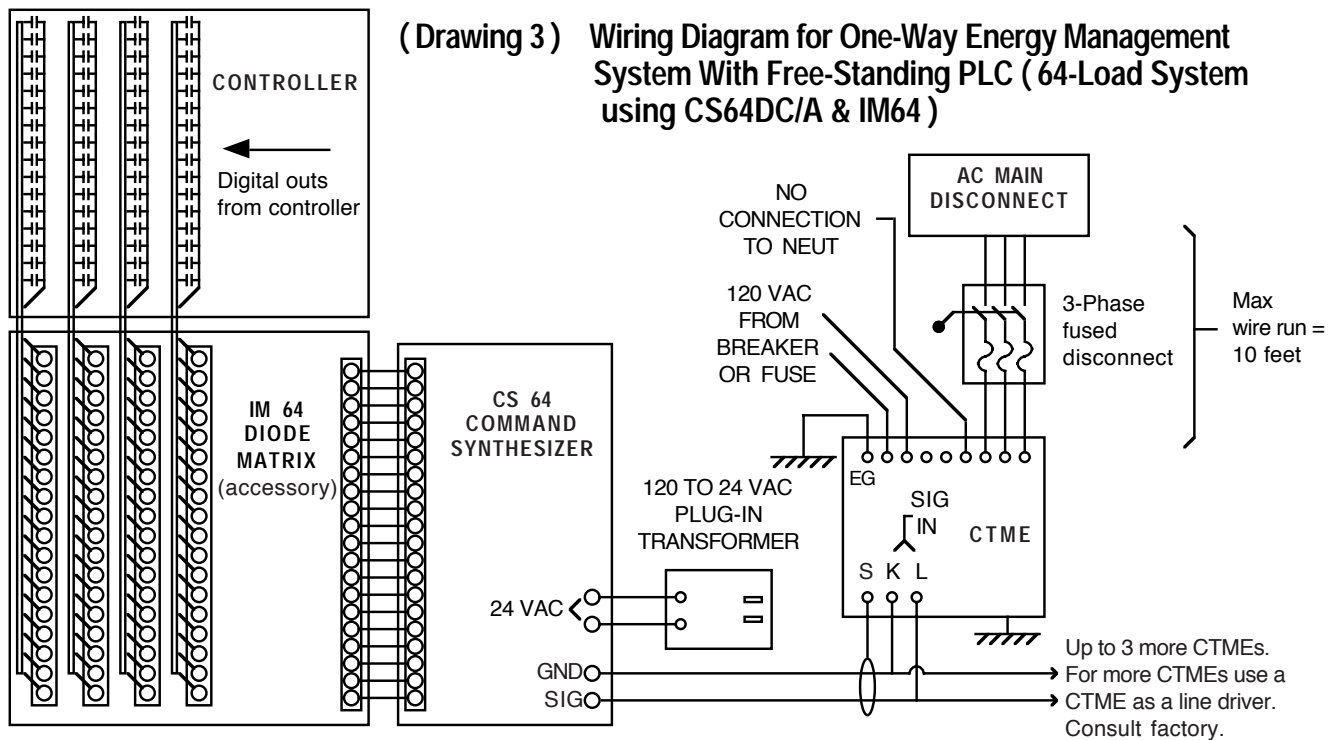


(Drawing 2) Commonly Found Ac Power Sources

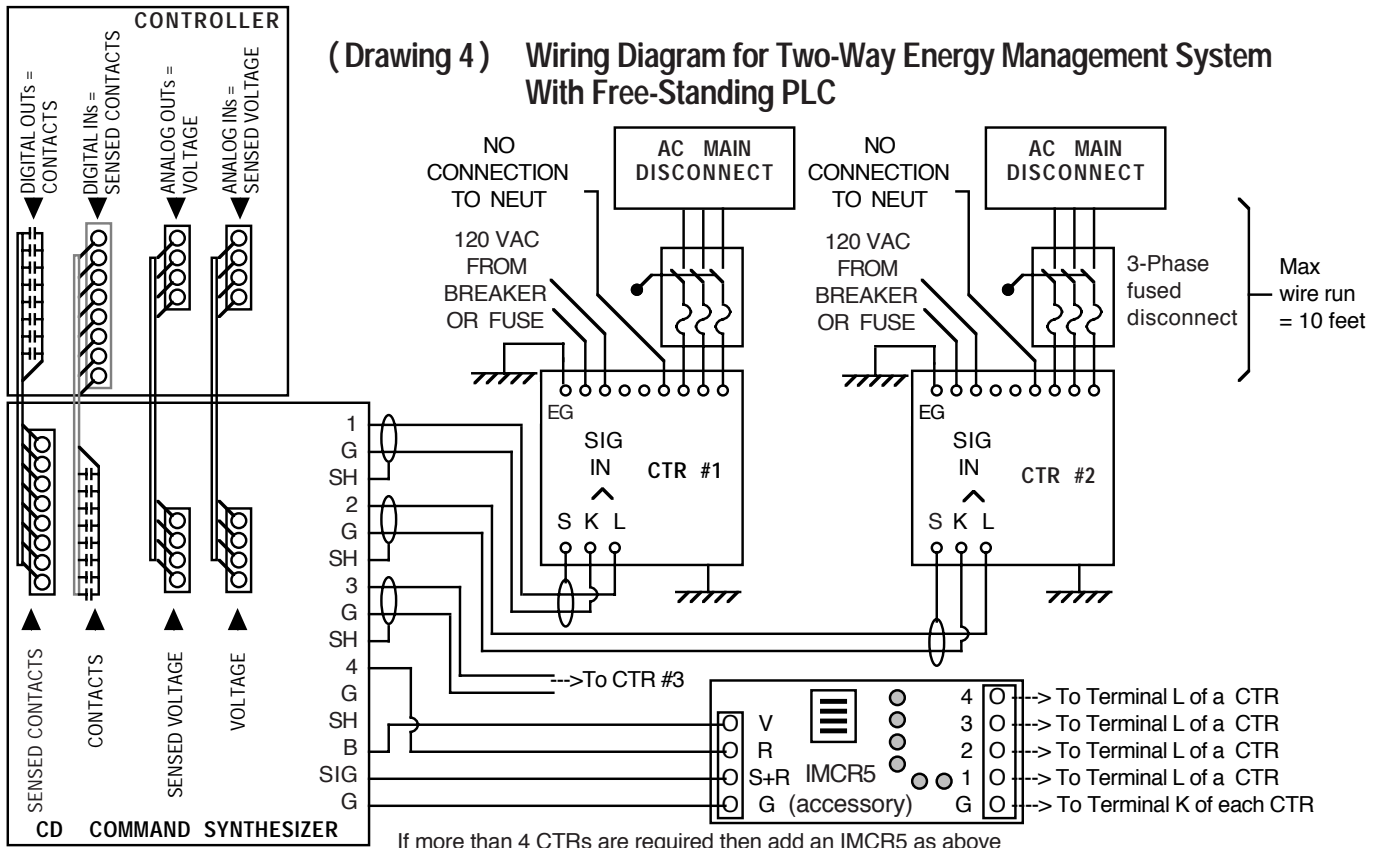


EL1, EL2, EL3, EG and HOUSING refer to connections made by the CTME/CTR to the ac service and ground. There is no connection to neutral.

Power-factor-correction capacitors must not be used from energized lines to neutral or to equipment ground. When one leg is grounded (cases C, E & possibly K) then power-factor-correction capacitors must not be used at all.



(Drawing 4) Wiring Diagram for Two-Way Energy Management System With Free-Standing PLC

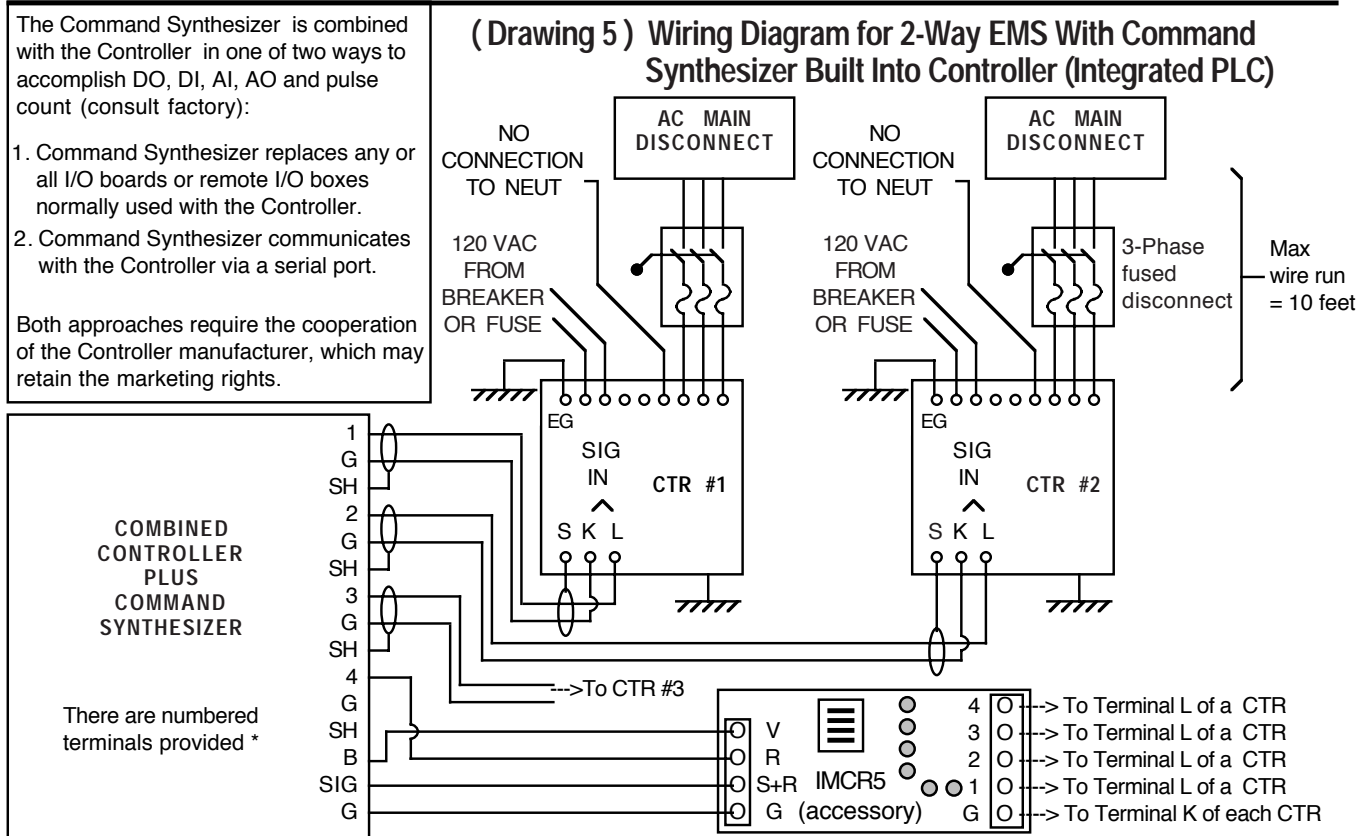


The Command Synthesizer is combined with the Controller in one of two ways to accomplish DO, DI, AI, AO and pulse count (consult factory):

1. Command Synthesizer replaces any or all I/O boards or remote I/O boxes normally used with the Controller.
2. Command Synthesizer communicates with the Controller via a serial port.

Both approaches require the cooperation of the Controller manufacturer, which may retain the marketing rights.

(Drawing 5) Wiring Diagram for 2-Way EMS With Command Synthesizer Built Into Controller (Integrated PLC)



COMBINED CONTROLLER PLUS COMMAND SYNTHESIZER

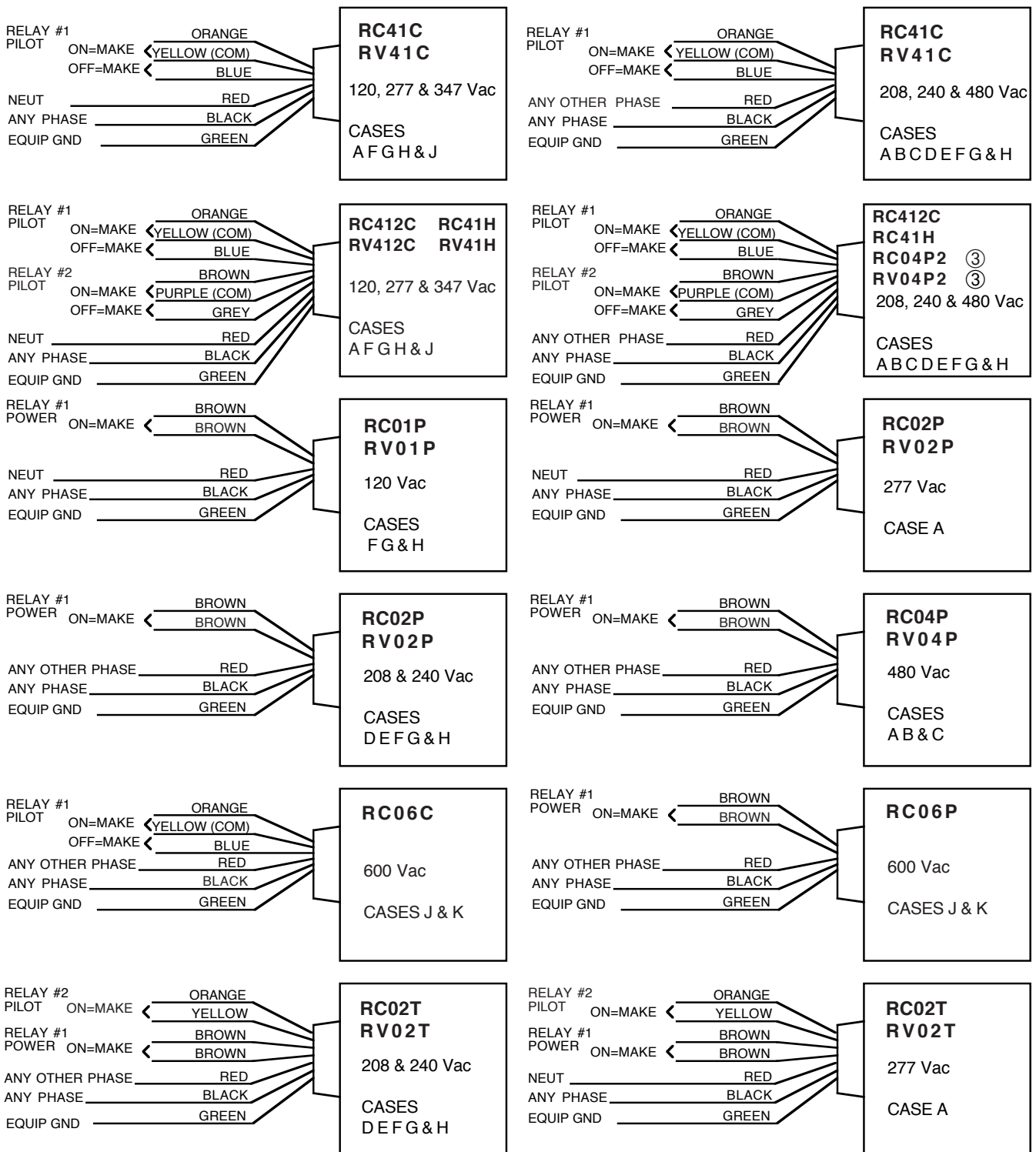
There are numbered terminals provided *

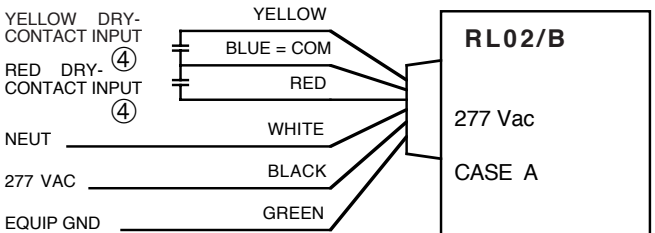
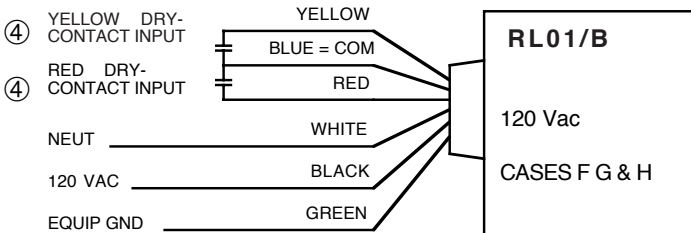
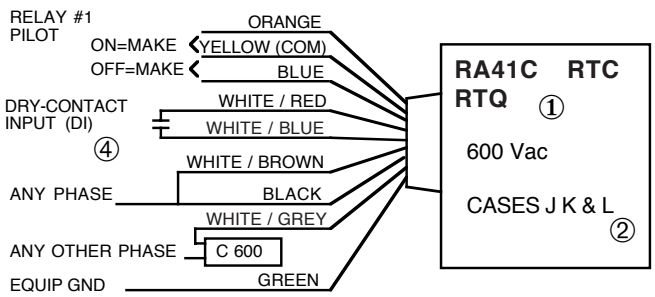
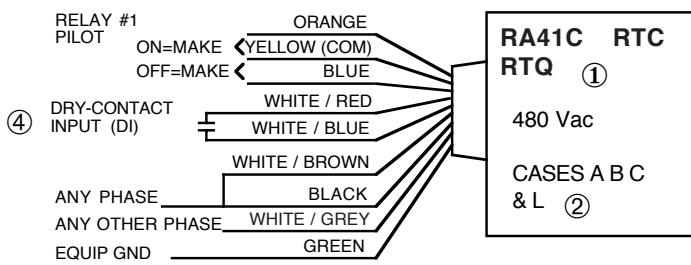
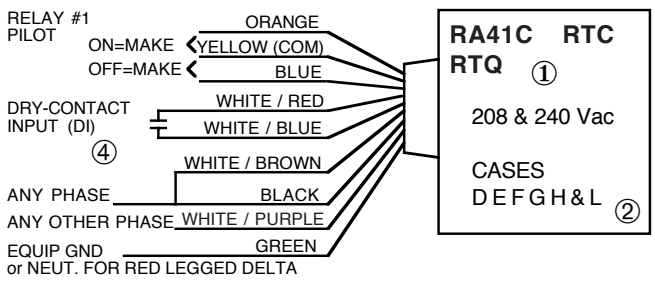
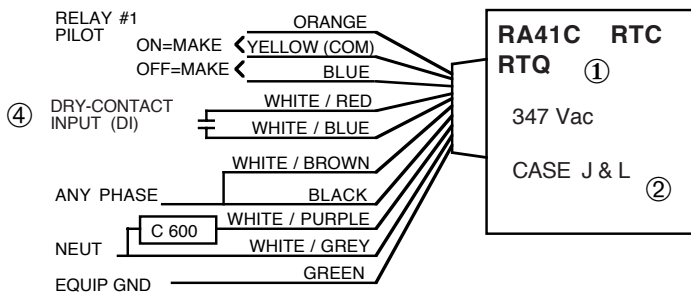
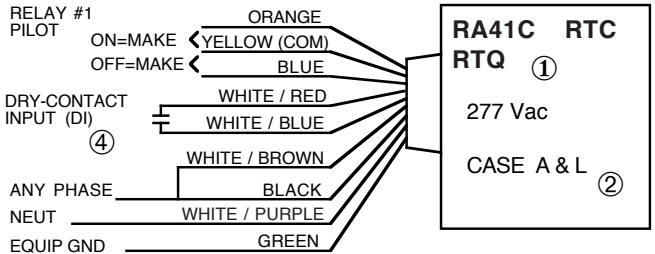
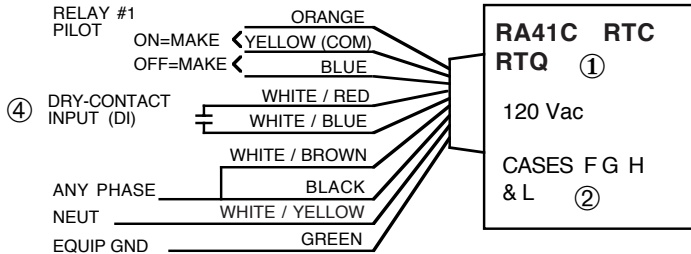
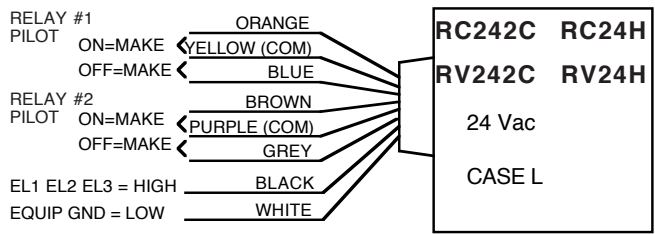
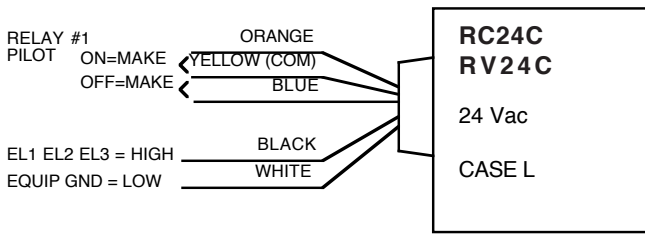
* If more CTRs are required than there are numbered terminals, then add an IMCR5 as above

4. RESPONDER WIRING

4.1 WIRING DIAGRAMS

See Drawing 2 for commonly found ac power sources. See Drawings 3, 4 & 5 for the wiring of CTME & CTR.
Ac wiring of all Responders is shown below.



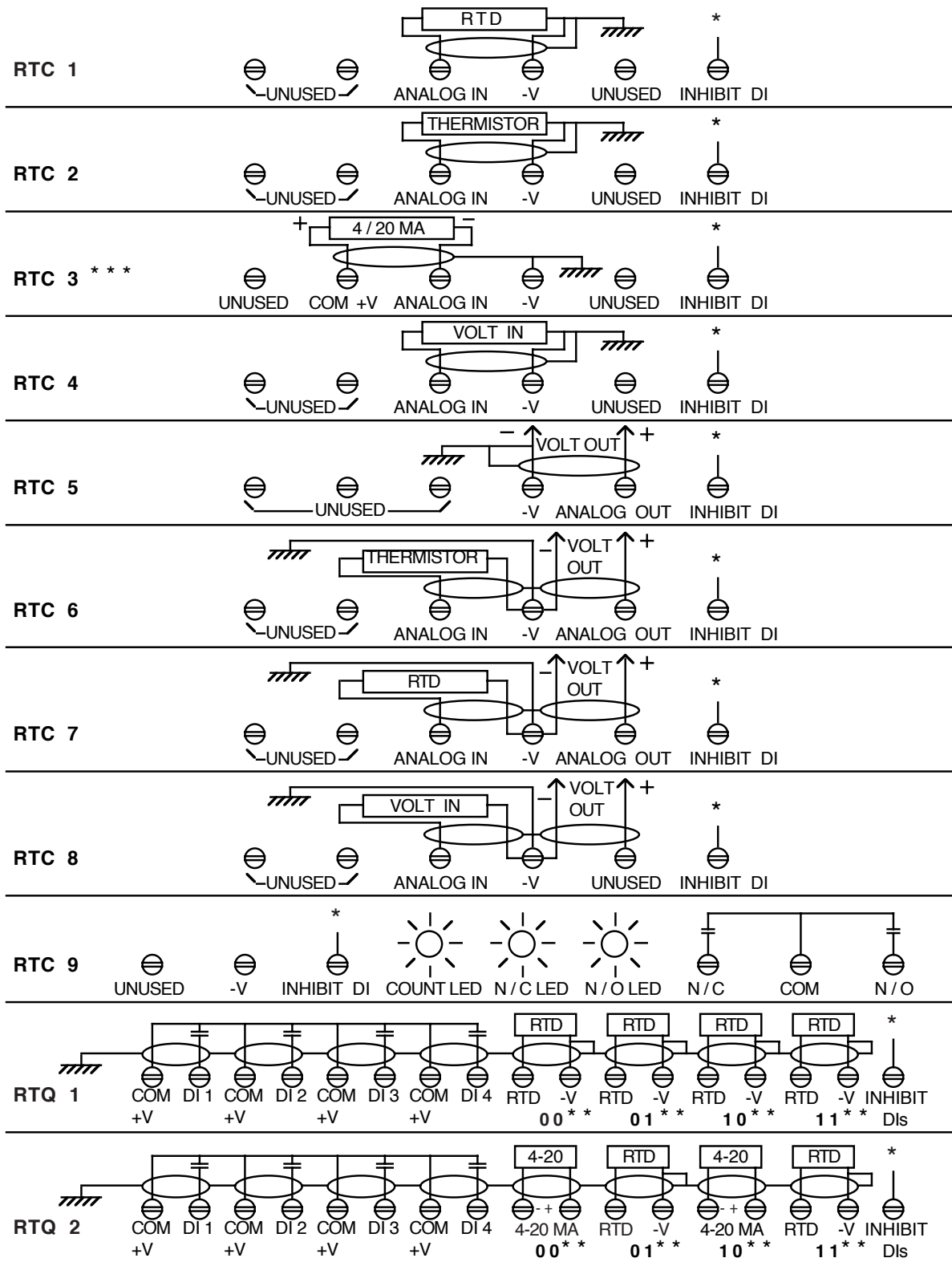


- ① There are no relay connections or WHITE/RED & WHITE/BLUE wires in RTQ1. All dry-contact and analog inputs are by means of the external terminal strip. Therefore, the ORANGE, YELLOW, BLUE, WHITE/RED and WHITE/BLUE wires are not present.
- ② In case L wire as above except WHITE / BROWN goes to HIGH wire coming from EL1, EL2 & EL3 of CTR and GREEN wire goes to LOW wire coming from equipment ground of CTR and also to equipment ground at location of Responder.
- ③ RC04P2 and RV04P2 are only used at 480 Vac and cases A, B & C. Relay is DPDT power and wires shown as relay #2 are second set of relay contacts.
- ④ Shielding is recommended. See Responder specifications.

See Data Sheet specifications for maximum wire runs to sensors.

WARNING: In cases C and E of Drawing 2 the grounded leg should not be used for connecting BLACK wire of RCs, RVs, and RLs nor for connecting BROWN / WHITE wire of RAs and RTs.

Digital-in, analog-in and analog-out wiring to RTC and RTQ Responders is shown below.



* Short "INHIBIT DI" to "-V" to inhibit RTC or RTQ from sending back any DIs

** These are the low bits of the ID

*** If 4-20 mA has its own voltage source, connect between -V and the - terminal of the 4-20 mA input with the + output of the 4-20 mA current source on the - terminal of the 4-20 mA input and the -terminal of the 4-20 mA current source on the -V terminal.

See Data Sheet specifications for maximum wire runs to sensors.