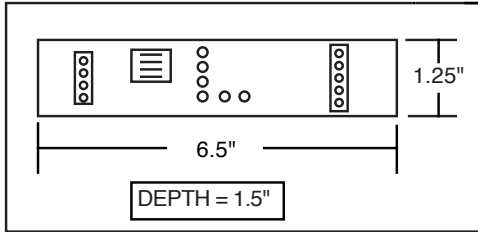


FUNCTIONAL DEVICES INC.

POWER-LINE CARRIER

ACCESSORIES FOR COMMAND SYNTHESIZERS

- IMCR5 --- SPLITTER / COMBINER
- IM24, IMCD ----- OPTOISOLATOR MODULE
- IM64 ----- DIODE MATRIX MODULE



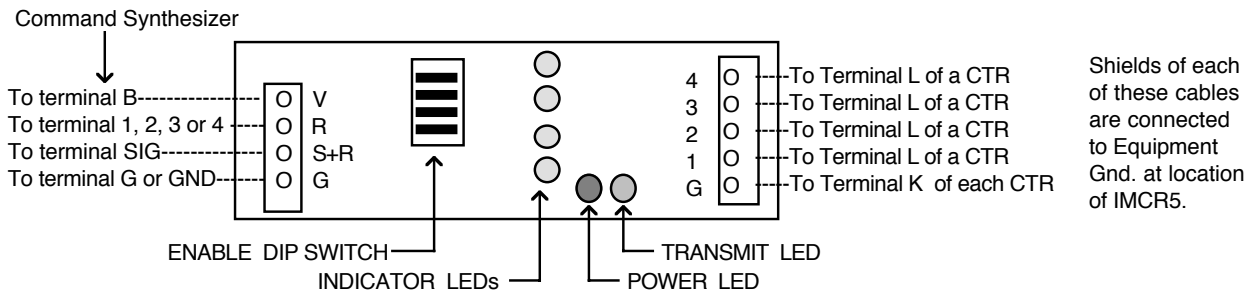
MODEL IMCR5 SPLITTER / COMBINER

DESCRIPTION

The IMCR5 is required whenever there are more CTRs connected to the Command Synthesizer than there are terminals provided. Each of the numbered terminals of the Command Synthesizer that was intended to connect to one CTR can, by the addition of an IMCR5, connect with up to four CTRs. IMCR5 **must** be located within the Command Synthesizer Housing.

IMCR5 amplifies and splits the outgoing PLC signal into four separate outputs for CTRs and combines the return PLC signal coming from four CTRs so that it appears to the Command Synthesizer as if it were coming from one CTR. Four LEDs indicate which of the connected CTRs is providing the return PLC answer and a four-position DIP switch allows independent control over which CTRs are included or excluded. These diagnostic features can be valuable during installation.

Some earlier model two-way Command Synthesizers required that two cables, each a twisted pair with shield, must be connected to each CTR. One carried the outgoing PLC carrier and the other carried the return PLC (decoded by the CTR). IMCR5 combines the outgoing and incoming PLC functions in such a way that they can both be carried on the same twisted pair to the CTRs.



SPECIFICATIONS

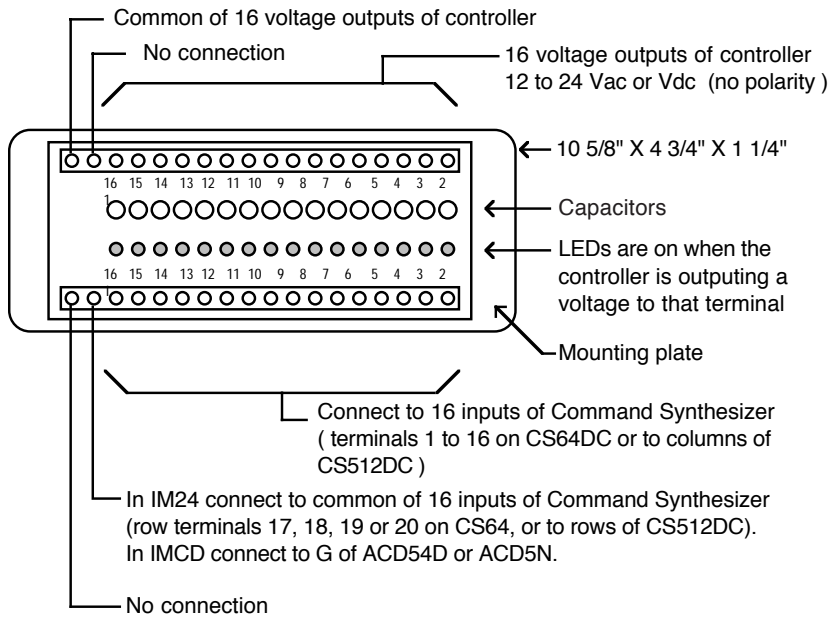
- 12 to 40 Vdc or 12 to 24 Vac power input, 80 mA (supplied between terminals V and G by Command Synthesizer or by special ordered 120Vac to 16Vac plug-in transformer).
- Must be mounted inside of Command Synthesizer housing. Four adhesive base mounting posts are provided.
- 6.5" wide X 1.25" high X 1.5" deep
- Can communicate with four CTRs, each having a separate cable connection (twisted pair with shield) with a distance limitation of 1500 feet for 22 gauge, 2500 feet for 20 gauge and 4000 feet for 18 gauge.
- Operating temperature range 32° to 120° F, storage temperature range -40° to 185° F.
- Humidity range 5 to 95 % (noncondensing).
- Contains a transmit LED, a power LED, and four LEDs, each indicating the PLC answer coming from one CTR
- Contains four-position enable DIP switch, each switch used to include or exclude the PLC answer coming from one CTR.
- Can be used to combine outgoing PLC commands and return PLC answers to be carried by one pair of wires.

MODEL IM24 & IMCD

OPTOISOLATOR MODULE

DESCRIPTION

The IM24 provides interfacing between a Command Synthesizer and a controller that outputs a voltage to control digital outs. It converts 16 voltages to the equivalent of relay outputs, where the relay contact closes when the voltage is present. It also has an LED for each output point, which lights when the voltage for that point is present. Order Model IM24 for use with any CS Command Synthesizer. Order Model IMCD for use with any CD Command Synthesizer.

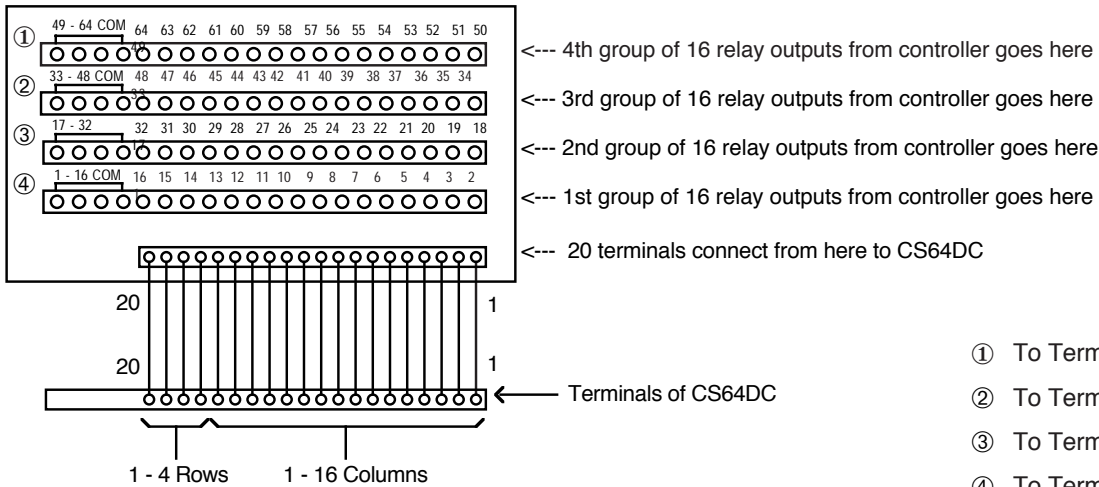


No electrical power is required for IM24.

Operating temperature range is 32° to 120° F, storage temperature range is -40° to 185° F.
Humidity range is 5 to 95% (noncondensing).

MODEL IM64

DIODE MATRIX BOARD



- ① To Terminal 20 of CS64DC
- ② To Terminal 19 of CS64DC
- ③ To Terminal 18 of CS64DC
- ④ To Terminal 17 of CS64DC

DESCRIPTION

IM64 provides the matrix of silicon diodes required if more than 1 row (16 loads) is being controlled by a CS64DC. Terminals 1 to 20 are connected to terminals 1 to 20 of the CS64DC. One side of the output of each group of 16 relays (DOs) of the controller is connected to its corresponding numbered terminal on IM64. The other sides of those 16 relay outputs are joined and connected to a common terminal on IM64.

No electrical power is required for IM64.

Operating temperature range is 32° to 120° F, storage temperature range is -40° to 185° F.
Humidity range is 5 to 95% (noncondensing).