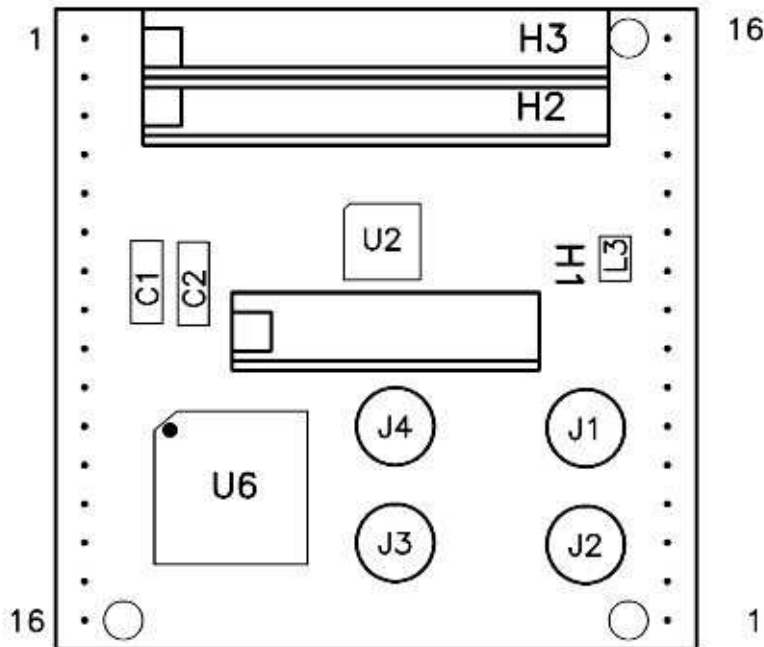# ● RIK0095A - AC Matrix 8X24

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Purpose: To describe the RIK0095A Fixtrure AC Matrix and its use.

The Fixture AC Matrix provides for DC and AC switching of fixture resources to the fixture pogo interface. Any one of 8 common pins or multiples thereof can be attached to any of 24 switched pins.

programming the 8X24 Mux:

General Format: A#CX=Y where A# is "Action at Module Location #.
               CX = Common line Y (Header 1 at location 1-8)
               = Y is the X location (Header 2 or 3 at locations 1-12)

Multiple Switch Settings:
       When more than one switch setting is required for a particular fixture path the format
       is as above with each setting seperated with a semicolon. Also the "**A**" in all subsequent settings
       from the are not included.

       For example if header 1 pin 1 (h1-1) is to be connected to header 2 pin 1 (h2-1) and header 1 pin 3
       (h1-3) is to be connected to header 3 pin 4 (h3-4) the string as written will apear as **A6C1=19;6C3=3**.
       This is assuming that the module is sitting in the M6 carrier position.

Connecting two or more common pins:
       When it is required to connect common pins together use the above format where "Y" is the same value.

       For example if h1-1 and h1-4 are to be connected together the switch string would be **A6C1=10;6C4=10.**
       This again is assuming that the module is sitting in the M6 carrier position.

Programming Table:

For Header Location	Y=	Module Schematic Designation	For Header Location	Y=	Module Schematic Designation
h2-p1	19	X6-0	h3-p1	6	X5-1
h2-p2	20	X7-0	h3-p2	5	X4-1
h2-p3	21	X8-0	h3-p3	4	X3-1
h2-p4	22	X9-0	h3-p4	3	X2-1
h2-p5	23	X10-0	h3-p5	2	X1-1
h2-p6	24	X11-0	h3-p6	1	X0-1
h2-p7	13	X0-0	h3-p7	12	X11-1
h2-p8	14	X1-0	h3-p8	11	X10-1
h2-p9	15	X2-0	h3-p9	10	X9-1
h2-p10	16	X3-0	h3-p10	9	X8-1
h2-p11	17	X4-0	h3-p11	8	X7-1
h2-p12	18	X5-0	h3-p12	7	X6-1

Isolation:

In applications where isolation may be an issue the selection of header pins should be done in regard to the "Module Schematic Designation". This designation helps to identify the actual Mux IC pin location in relation to the next pin. Using the format as utilized in the table, Xn refers to the pin number on the IC. The dash number refers
to which IC on the module is being switched (there are two on the module). For example X7-1 refers to pin 7 of the second IC on the module. Select pins that are at least seperated by one pin when isolation is of concern.

Default Settings:

When using the 8X24 mux it is good practice to set up an open default condition for all common pins. This will prevent insertion of a DUT into a potentially live socket. To do this:
1. Create a path definition in the software fixture file.
2. In the "Mode" field type in the word "default" in all lower case letters.
3. In the "Switch" field type in A#C1=0;#C2=0;#C3=0;#C4=0;#C5=0;#C6=0;#C7=0;#C8=0. The "#" should denote the module location on the carrier board. This command will thus open all the common pins.
4. In the test plan, place the corresponding path definition into the disconnect settings panel.