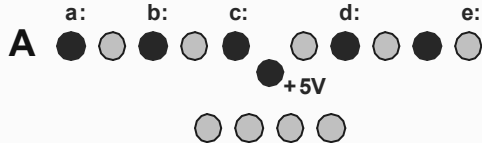


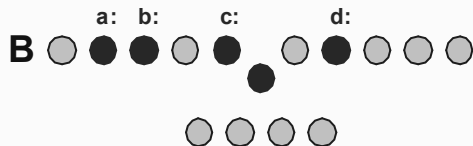
SYSTEM POWER UP:

F-STOP on, Interlock (door) open
 GENERAL ENABLE on (+24V)
 Main relays A and B are energized



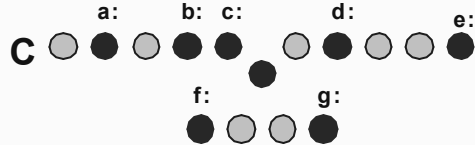
a: green: F-STOP on
 b: green: INTERLOCK (door) open
 c: green: SPI RELAY A Feedback on
 d: green: SPI RELAY B Feedback on
 e: red: FAULT Led on

F-STOP set to normal
 Fault Reset button pressed



a: yellow: F-STOP off (normal)
 b: green: INTERLOCK open
 c: green: SPI RELAY A Feedback on
 d: green: SPI RELAY B Feedback on

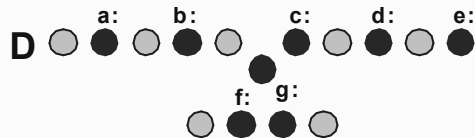
INTERLOCK (door) closed



a: yellow: F_STOP normal
 b: yellow: INTERLOCK (door) contact closed
 c: green: SPI RELAY A Feedback on
 d: green: SPI RELAY B Feedback on
 e: orange: INTERLOCK (door) closed
 f: orange: channel A 24V to Laser on
 g: orange: channel B 24V to Laser on
SYSTEM now in normal operating condition
 Load aux. 24V supply now app. 400mA

FAULT MAIN POWER SUPPLY

Main relay A and B are deenergized



a: yellow: F-STOP off
 b: yellow: INTERLOCK CONTACT closed
 c: yellow: Relay A Feedback deenergized
 d: yellow: Relay B Feedback deenergized
 e: orange: INTERLOCK (door) closed
 f: red: SWITCH FAULT channel A
 g: red: SWITCH FAULT channel B

Reasons for Fault:

24V Laser main supply off
 24V Laser supply < 22V
 Fault power mosfets

Reasons FAULT Led (red) on:

Fault F-STOP contacts
 Fault INTERLOCK contacts
 Fault SPI Relay A und B feedback contacts
 Fault switching slow (timing)
 F-STOP engaged
 After reset of F-STOP FAULT condition must be cleared by RESET BUTTON

IMPORTANT NOTE:

Relay coils A and B require free wheeling diodes or equivalent to protect switching mosfets!

LED MEANING and EVALUATION

SPISCU11 / SPIHPS11

| | | | | | |
|------------------------------------|---|----------|----------------|--------------|--|
| Title | | | SPISCU11_LED_E | | |
| LED EVALUATION SPISCU11 / SPIHPS11 | | | Revision | | |
| Size | Number | | | 24.10.15 KHW | |
| B | | | | | |
| Date: | 25-Oct-2015 | Sheet of | | | |
| File: | C:\Program Files\Design Explorer 99 SE\Drawings\state.ddb | | | | |