TECHNICAL SPECIFICATION OF I/O FOR ELITE SERIES

Version: V1.3
Date: Feb.17.2023

Change List:

V1.1-->V1.2

1:Update the PIN 24 description from “Main Power Status” to “Laser is ON”

2:Update the PIN 19/20 description from “Reset” to “Reboot”

V1.2-->V1.3

1:Update the “Reset” function description that only valid to water flow alarm

I/O Specification

PIN #	Signal Name	Type	Functionality	Wire Color
1	EXLOCK_CH1B	IN	**Interlock Input (Dual Channels)** The interlock signal from External to Laser. When the connections of "EXLOCK_CH1A"&"EXLOCK_CH1B" and "EXLOCK_CH2A"&"EXLOCK_CH2B" are good, the Laser is good to work; If either connections between "EXLOCK_CH1A" and "EXLOCK_CH1B" or "EXLOCK_CH2A" and "EXLOCK_CH2B" are breached by a door interlock or other means, Laser emission is OFF.	Blue and White
2	EXLOCK_CH1A			Blue
3	EXLOCK_CH2B			Blue
4	EXLOCK_CH2A			Blue and White
5	REMOTE_AC_KEY_B	IN	**Key Switch for External Control** "KEY_B" is Negative(-), "KEY_A" is Positive(+); when those two pins are connected, the Laser is good to work with external control signal; when disconnected, Laser Emission is OFF.	Brown and White
6	REMOTE_AC_KEY_A			Brown
7	REMOTE_DC_PWR_SW1	IN	**External Start** External control Laser Emission ON/OFF; when "SW1" and "SW2" are connected, Laser Emission is ON; when disconnected, Laser Emission is OFF.	Yellow and Black
8	REMOTE_DC_PWR_SW2			Yellow
9	AN_OUT_PWR_5V	OUT	**Monitoring of Output Power** Send Laser output power to External.	Brown and White
10	AN_PWR_PEAK_10V	IN	**0-10V Output Power Control** External 0-10V input to control Laser output power, 1V--10%, 10V--100%.	Green
11	ISO_REF_VSS	AGND	**Ground** Analog ground for Pin 9,10,12.	Green and White
12	AN_BACK_PWR_5V	OUT	**Monitoring of Back Reflected Power** Monitor and feedback the reflectivity status.	Brown
13	PWM-	IN	**PWM Input** Digital Input with PWM signal to control output power.	Black and White
14	PWM+			Black
15	ENABLE-	IN	**Enable Signal** When voltage of those two pins is High(24V), the Laser is Enabled; When voltage of those two pins is Low(0V), the Laser is Disabled.	Red and White
16	ENABLE+			Red
17	EX_RED_CONTROL-	IN	**Guide Laser ON/OFF** When voltage of those two pins is High(24V), the guide laser is ON; When voltage of those two pins is Low(0V), the guide laser is OFF.	Yellow and Black
18	EX_RED_CONTROL+			Yellow
19	EX_RESET-	IN	**Reset** This input is used to reset the water flow Alarm, not valid to other error/alarm; The signal works with High(24V).	Green and White
20	EX_RESET+			Green
21	LASER_READY	OUT	**Laser Ready** This signal is High(24V) if the following criteria are met: ✓ Laser Power Supply is ON ; ✓ No error is present; Otherwise, the signal is Low(0V).	Black

22	ERROR/ALARM+	OUT	**Alarm** When there is no alarm, the signal is High(24V); When there is a alarm, the signal is Low(0V).	Black and White
23	LASER_EMISSION_ON	OUT	**Emission is ON** When the Emission is ON, the signal is High(24V); When the Emission is OFF, the signal is Low(0V).	Red
24	MAIN_PWR_STATE	OUT	**Laser is ON** Confirmation that laser power supply is switched ON When the key switch turns ON, the signal is High(24V); When the key switch turns OFF, the signal is Low(0V).	Red and White
25	ISO_COM	GND	**Ground** Digital Ground for Pin 21,22,23,24.	Orange
26	ISO_COM			Orange and Black
27	EMERGENCY1_INPUT-	IN	**Emergency Stop Input 1** If the two pins are connected , Laser Emission is ON, ALARM OFF; If the two pins are disconnected , Laser Emission is OFF, ALARM ON.	Orange and Black
28	EMERGENCY1_INPUT+			Orange
29	EMERGENCY_CH1B_OUTPUT	OUT	**Emergency Stop Output(Dual Channels)** When Laser Emission is ON, the signal is High(24V); When Laser Emission is OFF, the signal is Low(0V).	Purple and Black
30	EMERGENCY_CH1A_OUTPUT			Purple
31	EMERGENCY_CH2B_OUTPUT			Light Green and Black
32	EMERGENCY_CH2A_OUTPUT			Light Green
33	EMERGENCY2_INPUT-	IN	**Emergency Stop Input 2** When the two pins are connected , Laser Emission is ON, ALARM OFF; When the two pins are disconnected , Laser Emission is OFF, ALARM ON.	Light Blue and Black
34	EMERGENCY2_INPUT+			Light Blue

Remark: For pins are voltage driven (0…+3 V = LOW, +20…+30 V = HIGH).