

3.5.2 System Interface, Clock and Lock Connectors



WARNING: The system interface connector and Clock and Lock connectors may be at hazardous voltages. These connections may not be used in table top applications. In table top applications the safety cover must be in place. These connections may only be used when the equipment is enclosed in a rack, only within one rack, only with California Instruments supplied cables, and only between California Instruments equipment.

J21 and J20 are the Clock and Lock connectors and are used to synchronize and control the phase shift between the three outputs when 3 units are operating as a three phase system with the 15003iX - LK option.

The System Interface connector, J22, is used to connect the slave power sources to the Master power source (the one with the controller) in multiple box systems. The connector is also used for the external sync input, external modulation input and trigger output.

Table 3-2: System Interface Connector (J22)

J22	Description
1	Analog Common: analog signal common
2	MR B: Phase B master signal
3	Analog Common
4	CS B: Phase B current sum
5	CT Common: Current transformer common
6	OSC B: Phase B oscillator output
7	Analog Common
8	CL B: Phase B current limit reference
9	EXT MOD: External modulation input. A 10 volt input will modulate the output 10%. Original versions of iX power sources required a 100 volt input to modulate the output by 10%. If you experience problems using the external modulation input, contact California Instruments customer service.
10	$\overline{\text{OVR TEMP}}$: A logic low output to indicate an overtemperature condition.
11	$\overline{\text{CNF}}$: Output relay state: Logic HI = open, LOW = closed.
12	FLT C: Phase C current limit fault control
13	FLT A: Phase A current limit fault control
14	F STB LO: Trigger output Low signal. This is the emitter lead of an optically isolated NPN transistor. The internal power controller turns this transistor on to indicate a change of programmed values.
15	EX SYNC LO: External Sync Low signal. This is the ground return for the TTL external sync input. It connects to the cathode of an LED at the input of an optocoupler. Refer to

J22	Description
	J22-32.
16	AMP SHARE B
17	PARALLEL
18	CL ENA
19	MR C: Phase C master signal
20	MR A: Phase A master signal
21	CS C: Phase C current sum
22	CS A: Phase A current sum
23	OSC C: Phase C oscillator output
24	OSC A: Phase A oscillator output
25	CL C: Phase C current limit reference
26	CL A: Phase A current limit reference
27	D COM: Digital Common
28	RNG HI: Voltage range state: Logic HI = high range, LOW = low range
29	$\overline{\text{OVL}}$: Overload
30	FLT B: Phase B current limit fault control
31	F STB HI: Trigger output HI. A low-going pulse, >400 μ s, that indicates voltage or frequency change. Isolated output that requires a pull-up resistor, 22K Ω , to +5 VDC. Use J22 pin 14 (F STB LO) for common.
32	EX SYNC HI, External Sync input HI. This is an input that can be used to synchronize the outputs of the AC Power System. This input requires a logic high level of at least +4.5 VDC at 5 mA. The input should have a duty cycle 50 $\pm$ 30%. J22-15 is the common input. The External Sync input is optically isolated. It must be enabled from the SNC screen.
33	AMP SHARE C
34	AMP SHARE A
35	FLICKER / $\overline{\text{BYPASS}}$
36	REMOTE ON: This is a logic input that can be used to remove the programmed output voltage. A logic low on this pin will cause the output voltages to be programmed to 0.0 volts and the output relays to open. A logic high will cause the programmed output voltage to be restored at the output terminals. A contact closure between this pin and J22-27 (D COM) will simulate a logic low state.