

SIM : Interlock I/O Connector Pinouts and Functions

Pin #	Function	Description	Signal Levels
1	Amplifier Output	Used for driving slave amplifiers, monitoring amplifier output voltage	Can be greater than $\pm 200V_{peak}$. NOTE: Wired to amplifier output, resistor limit (5.6 ohm, $\frac{1}{4}W$).
2	Sampled Common	Used for driving slave amplifiers (Reference), Controlled Current or Controlled Voltage	Amplifier External Reference, $5V_{peak}$ max from Common
3	Input, 1+	High Level Input, Slave Input, Unity gain, aka "Non-inverting Input"	Can accept output of "Amplifier Output", $\pm 200V_{peak}$, or Sample Common.
4	Interlock	Multiple amplifier interlock, status, remote off	Status; 0–8Vdc amplifier to standby, 12–15Vdc amplifier(s) in "Run" state. When connected to interlock common amplifier(s) will be forced to standby. To interlock multiple amplifiers (sharing the same sample common power connections) connect Interlock together (daisy chain).
5	Amp Ready	Used for OPTOC, individual amplifier status (Not optocoupled)	To drive customer optocoupler, $-1.2V$ at 6mA to Interlock Common.
6	I MON +	Non-inverted Current Monitor Output; 7548/7796 : 1V/20A unbalanced, 2V/20A balanced, not isolated; 7224 : 1V/5A unbalanced, 2V/5A balanced, not isolated.	Low voltage output; 7548/7796 : $\pm 200A_{peak}$ output = $\pm 10V_{peak}$, unbalanced; $\pm 20V_{peak}$, balanced. 7224 : $\pm 50A_{peak}$ output = $\pm 10V_{peak}$, unbalanced; $\pm 20V_{peak}$, balanced.
7	Current Sum 1 (+)	Current monitor summing + input for slave 1, "Parallel, Controlled Current" applications only	Accepts input from I MON – slave output.
8	Current Sum 2 (+)	Current monitor summing + input for slave 2, "Parallel, Controlled Current" applications only	Accepts input from I MON – slave output.
9	Current Sum 3 (+)	Current monitor summing + input for slave 3, "Parallel, Controlled Current" applications only	Accepts input from I MON – slave output.
10	Sample Common	Amplifier Reference, used for OverTemp, Overload, Run and OverVoltage outputs	Amplifier External Reference.
11	Overtemp + Out	Amplifier status, amp ready reports if a "Power Transformers or "Output Wells" is "Over Temp", Amplifier will be forced to standby	Pulls to ground must be used with internal $-24V$ supply. Can run an optocoupler.
12	Run + Out	Amplifier status, amp ready reports amplifier is in the "Run" state	Pulls to ground must be used with internal $-24V$ supply. Can run an optocoupler.
13	$-24V$	Power from amplifier for external logic, Optical Isolating Module (OPTOC)	$-24V_{dc}$, 30mA
14	Common	Used for driving slave amplifiers, Controlled Voltage only	Amplifier Internal Reference.
15	Input, 1 –	High Level Input, Slave Input, Unity gain, aka "Inverting Input"	Can accept output of "Amplifier Output", $\pm 200V_{peak}$, or Sample Common.
16	$+24V$	Power from amplifier for external logic, Optical Isolating Module (OPTOC)	$24V_{dc}$, 30mA.
17	Interlock Common	Used for OPTOC module and external status, remote on/off.	Amplifier External Reference.
18	Spare	No function	
19	I MON –	Inverted Current Monitor Output; 7548/7796 : 1V/20A unbalanced, 2V/20A balanced, not isolated; 7224 : 1V/5A unbalanced and 2V/5A balanced, not isolated.	Low voltage output; 7548/7796 : $\pm 200A_{peak}$ output = $\pm 10V_{peak}$, unbalanced; $\pm 20V_{peak}$, balanced; 7224 : $\pm 50A_{peak}$ output = $\pm 10V_{peak}$, unbalanced; $\pm 20V_{peak}$, balanced.
20	Current Sum 1(-)	Current monitor summing – input for slave 1, "Parallel, Controlled Current" applications only	Accepts input from I MON + slave output.
21	Current Sum 2(-)	Current monitor summing – input for slave 2, "Parallel, Controlled Current" applications only	Accepts input from I MON + slave output.
22	Current Sum 3(-)	Current monitor summing – input for slave 3, "Parallel, Controlled Current" applications only	Accepts input from I MON + slave output.
23	Overload Out	Amplifier status, amp ready reports "Overload" status, indicates voltage limit, current limit, or distorted output	Pulls to ground must be used with internal $-24V$ supply. Can run an optocoupler.
24	Overvoltage Out	Amplifier status, amp ready reports AC Line Over Voltage	Pulls to ground must be used with internal $-24V$ supply. Can run an optocoupler.
25	Reset	Remote Reset, restores operation after "OverloadLatch" or "OverTemp"	Requires $-15V_{dc}$ to reset amplifier