

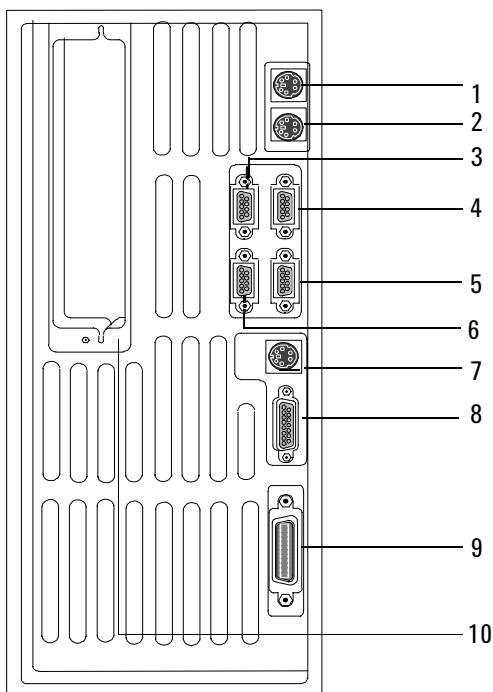
1210 External Connectors, 6890A and 6890 Plus

Overview

This section shows the pinouts for the external connectors on the back of the Agilent 6890A and 6890 Plus instruments. See section External Connectors, 6890N for the 6890N instrument.

These connectors are used for communications with external instruments.

Back of 6890 GC



Number	Description	Connector ID
1	Signal 1 – Analog output for integrators or A/D converters	J1
2	Signal 2 – Analog output for integrators or A/D converters	J2
3/6	Remote start-stop for synchronizing GC, integrators, automatic samplers, MSD, and other GCs	JP1/JP2
4	Modem – RS-232 for modem, computer, or controller devices	JP1
5	Sampler-RS-232 for 7673 Automatic Liquid Sampler	JP2
7	External event contact closures and 24 volt outputs for valve control	J4
8	BCD input for stream selection valves, headspace sampler, or other device	J6
9	GPIB for ChemStation and/or MSD	J5
10	Modular Input/Output (MIO) slot for INET card	

Figure 1210-1 6890 GC external connections

Overview

The table details the additional external connectors used on the 6890 Plus GC.

Note The external RS-232 connector for the sampler is not used on this model.

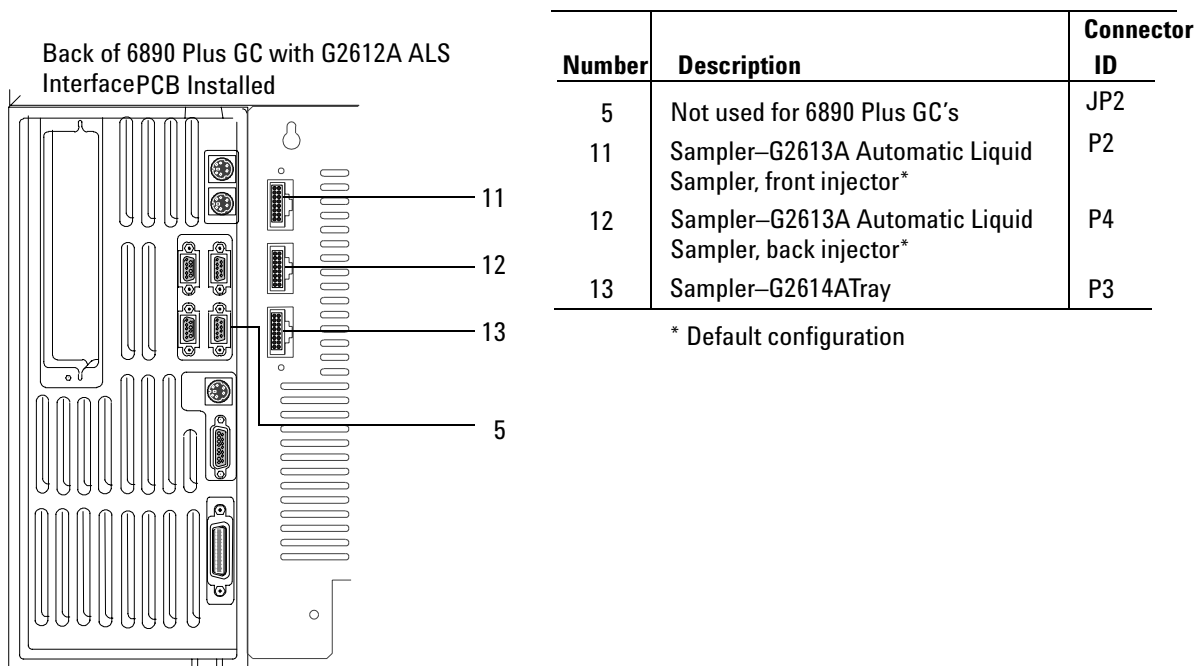
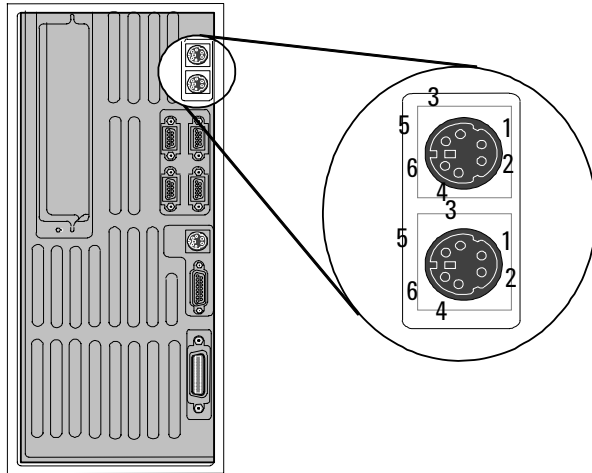
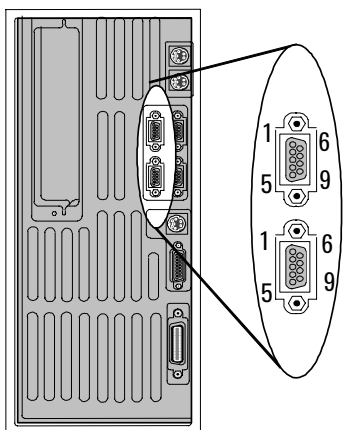


Figure 1210-2 6890 Plus GC external connections

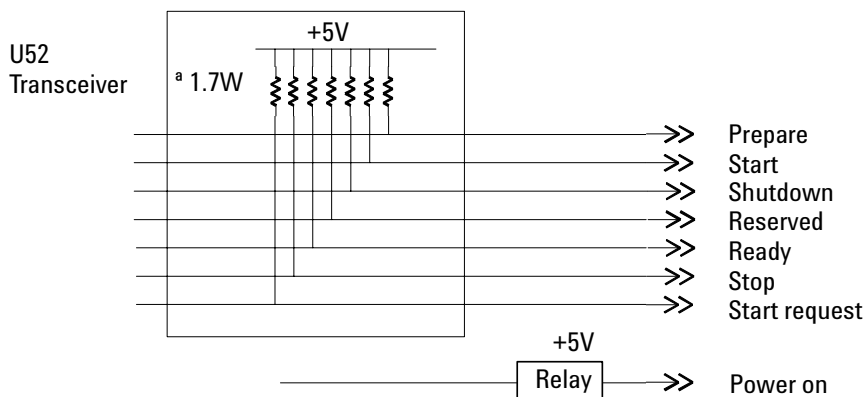
Signal 1/Signal 2 analog out

J1, J2	
Analog out	
Pin	Function
1	1 mV COM
2	1 V & 10 V COM
3	1 mV
4	1 V
5	Chassis GND
6	10V

APG remote start/stop



JP1, JP2 APG Bus		
Pin	Function	Logic
1	Digital ground	LOW true
2	Prepare	LOW true
3	Start	LOW true (input)
4	Shutdown	LOW true
5	Reserved	
6	Power on	HIGH true
7	Ready	HIGH true (output)
8	Stop	LOW true
9	Start request	LOW true (input)



Signal descriptions

Prepare (low)—Request to prepare for analysis. Receiver is any module performing pre-analysis activities.

Start (low)—Request to start run/timetable. Receiver is any module performing runtime-controlled activities.

Shutdown (low)—System has serious problem. Receiver is any module capable to reduce safety risk.

Power On (high)—All modules connected to system are switched on. Receiver is any module relying on operation of others.

Ready (high)—System is ready for next analysis. Receiver is any sequence controller.

Stop (low)—Request to reach system ready state as soon as possible (for example, stop run, abort or finish, and stop injection). Receiver is any module performing runtime-controlled activities.

Start Request (low)—Request to start injection cycle (for example, by a **Start** key on any module). Receiver is the automatic liquid sampler.

APG remote control

Remote control allows easy connection between single instruments or systems to ensure coordinated analysis with simple coupling requirements.

To provide maximum safety within a distributed analysis system, one line is dedicated to SHUTDOWN the system's critical parts in case any module detects a serious problem.

To detect whether all participating modules are switched on or properly powered, one line is defined to summarize the POWER ON state of all connected modules.

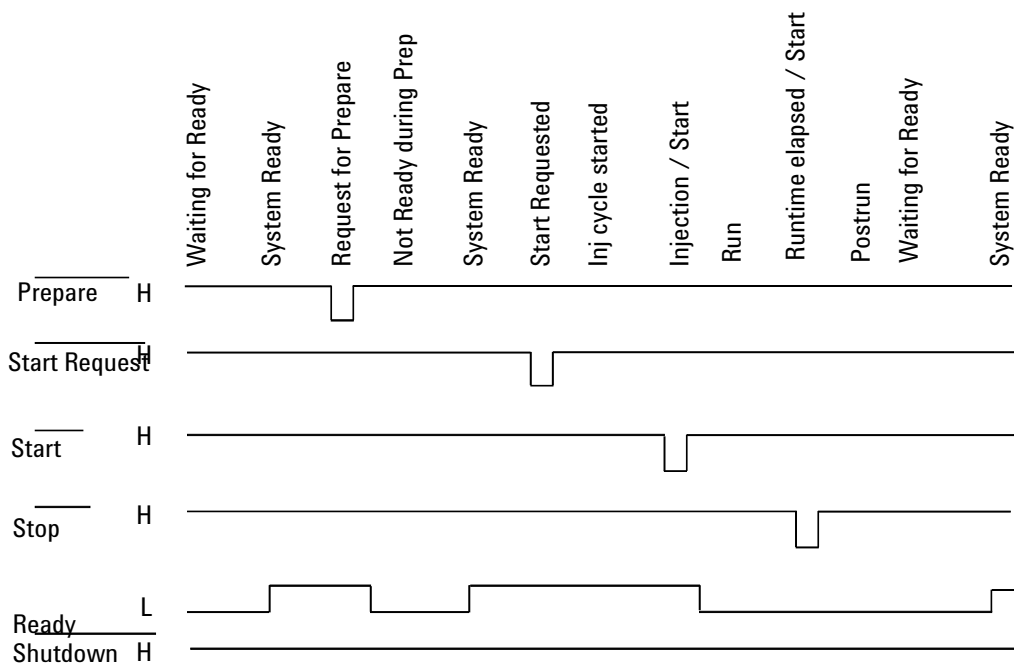


Figure 1210-3 Remote control analysis.

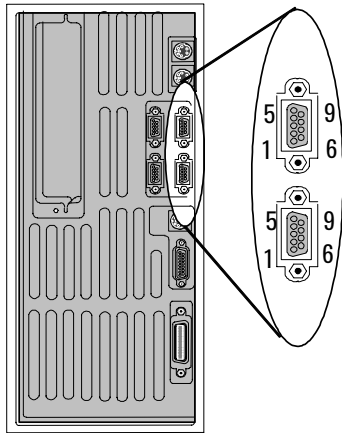
Control of analysis is maintained by signal readiness **READY** for next analysis, followed by **START** of run and optional **STOP** of run triggered on the respective lines. In addition, **PREPARE** and **START REQUEST** may be issued.

The signal levels are defined as standard TTL levels (0 V is logic true, +5 V is logic false).

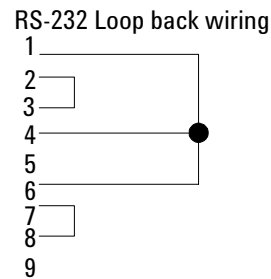
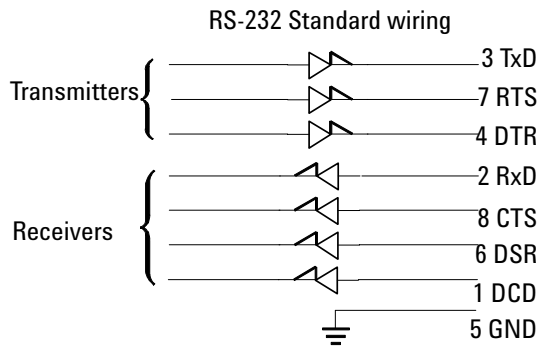
Input Load ≥ 2.2 kOhm against +5 V

Output type is open collector.

RS-232



JP1 (Host/Modem), JP2 (Sampler)		
RS-232		
Pin	Function	In/Out
1	DCD	INPUT
2	RxD	INPUT
3	TxD	OUTPUT
4	DTR	OUTPUT
5	GND	
6	DSR	INPUT
7	RTS	OUTPUT
8	CTS	INPUT
9	unused	INPUT (No Connect)



Signal descriptions

Data Carrier Detect—is connected to a general purpose input on the SC26C92. Currently, there are no plans to use this signal.

Receive Data

Transmit Data

Data Terminal Ready—will be set ON when the 6890 GC is ready for communications (self-test complete).

Digital Ground—is tied to the digital signal ground on the mainboard.

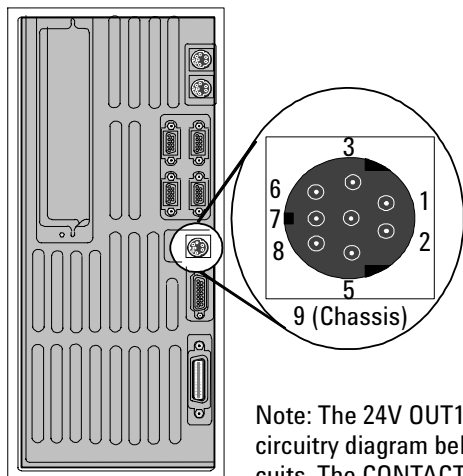
Data Set Ready—is connected to the SC26C92. Not currently used.

Request to Send—is set ON when the 6890 GC to the host when HARDWARE flow control set. If flow control is configured for XON/XOFF or NONE, RTS will stay ON. If HARDWARE handshake is configured, RTS is used to inform the host that the 6890 GC is ready to communicate and there is room in the data buffer for data. RTS will follow the same logic as XON/XOFF for pacing data.

Clear to Send—is used for pacing data from the 6890 GC to the host when HARDWARE flow control is set. When CTS is sensed in the OFF state, transmission will be suspended. If flow control is set to XON/XOFF or NONE, DSR will be ignored.

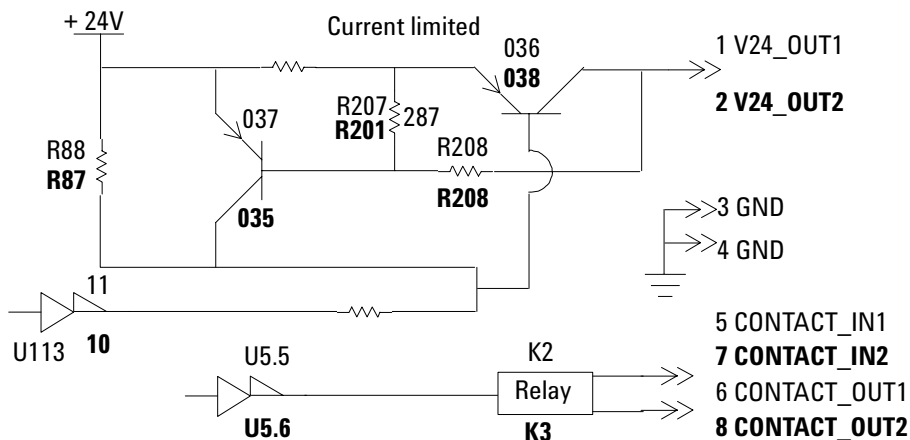
Clear to Send—Not currently used.

External event

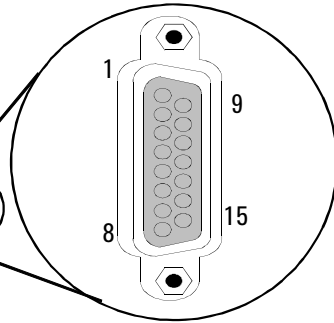
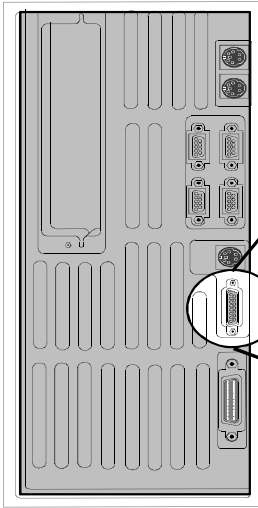


J4 External event			
Pin	Function	Max. rating	Valve
1	24 V Out 1	75 mA output	5
2	24 V Out 2	75 mA output	6
3	GND		
4	GND		
5	Contact 1	48V ac/dc, 250 mA	7
6	Contact 1		7
7	Contact 2	48V ac/dc, 250 mA	8
8	Contact 2		8
9	Chassis GND		

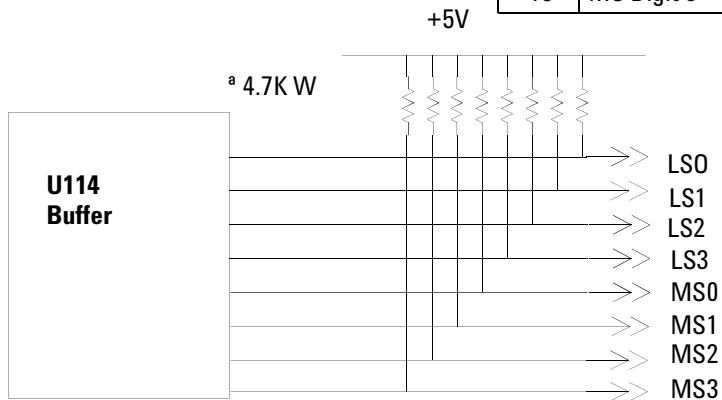
Note: The 24V OUT1 and 24V OUT2 signals are shown on the same circuitry diagram below, however they each have their own distinct circuits. The CONTACT1 and CONTACT2 signals are presented in the same manner. Bold designators refer to the bold signal to the right.



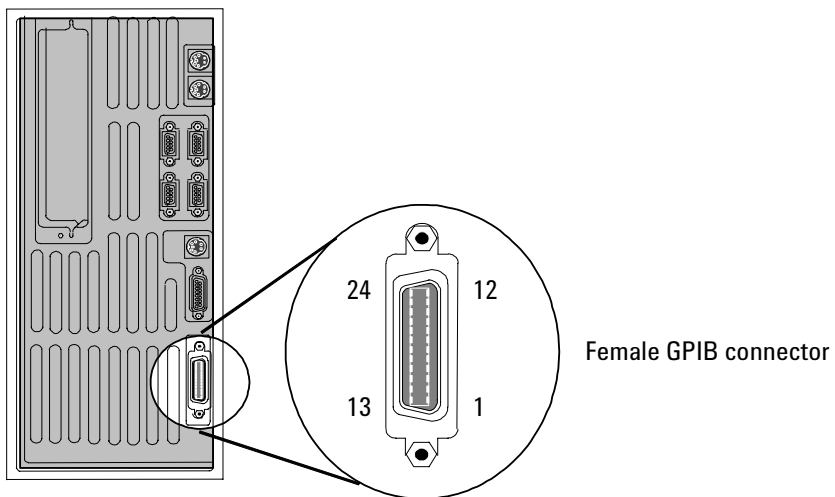
BCD inputs



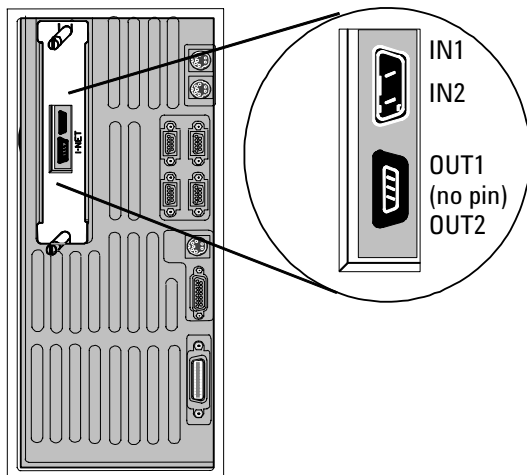
J6			
BCD Inputs (TTL)			
Pin Value	Function	Logic	Value
1	LS Digit 0	LOW true	1
2	LS Digit 1	LOW true	2
3	LS Digit 2	LOW true	4
4	LS Digit 3	LOW true	8
5	unused		
6	unused		
7	unused		
8	GND		
9	unused		
10	unused		
11	unused		
12	MS Digit 0	LOW true	10
13	MS Digit 1	LOW true	20
14	MS Digit 2	LOW true	40
15	MS Digit 3	LOW true	80



GPIB



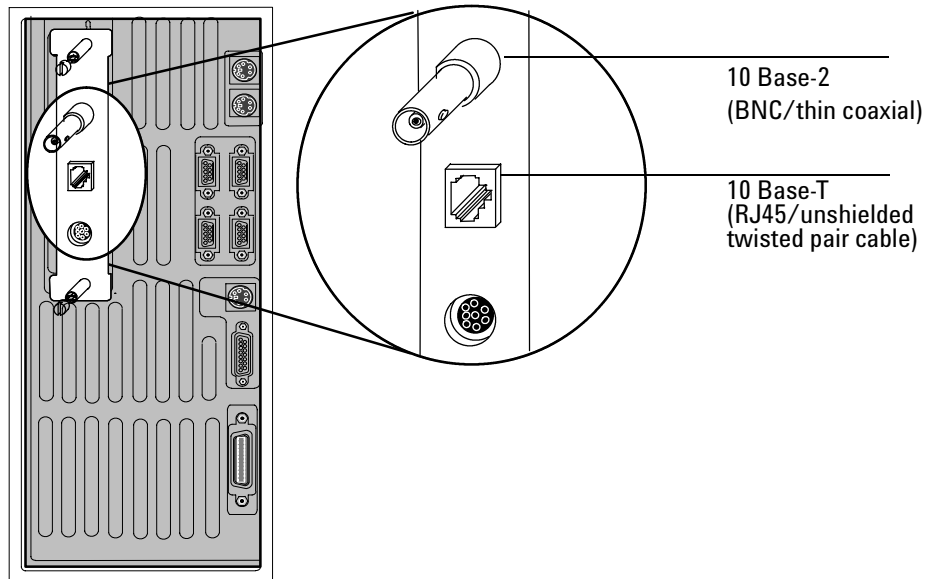
Modular Input/Output (MIO) INET



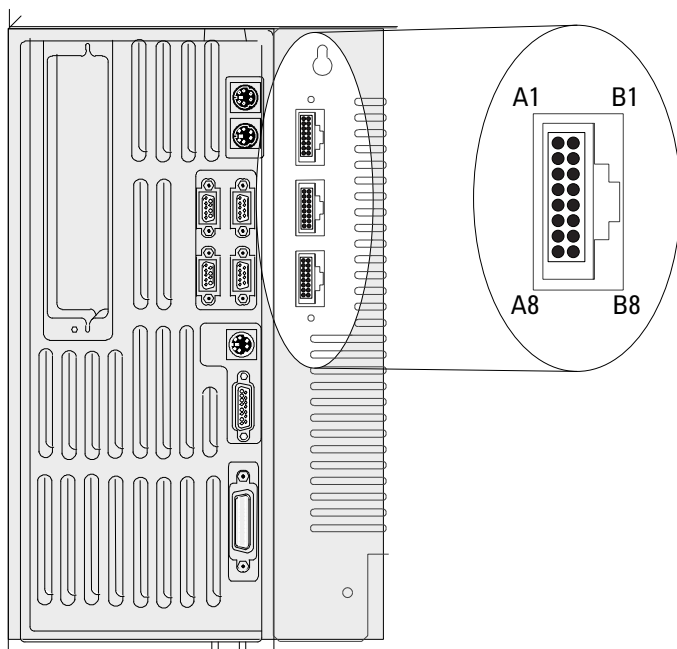
ET Input connector		
Pin	Function	In/Out
1	IN1	INPUT
2	IN2	INPUT

INET Output connector		
Pin	Function	In/Out
1	OUT1	OUTPUT
2	OUT2	OUTPUT

Modular Input/Output (MIO) LAN



Sampler injector or tray



Injector or tray	
Pin	Function
A1	RXD
A2	CTS
A3	DSR
A4	*RESET
A5	GND
A6	VAC1
A7	GND
A8	VAC2
B1	TXD
B2	RTS
B3	DTR
B4	GND
B5	GND
B6	VAC1
B7	GND
B8	VAC2