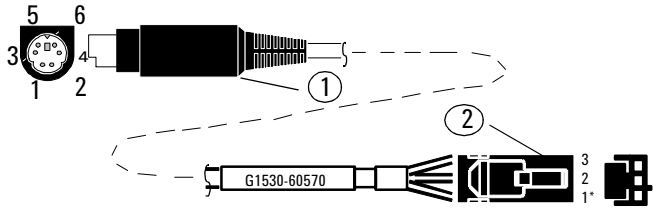
# 1020 Cable Electronics

## Analog signal outputs

There are two channels of analog output available on the back panel, labeled *Sig 1* and *Sig 2*. Two cables are available — one for 3395/6 series integrators and one for general use.

### Analog cable — GC to 3395A/B or 3396B/C Integrators and 35900 C/D/E Analog to Digital Interface instrument

Part no. G1530-60570

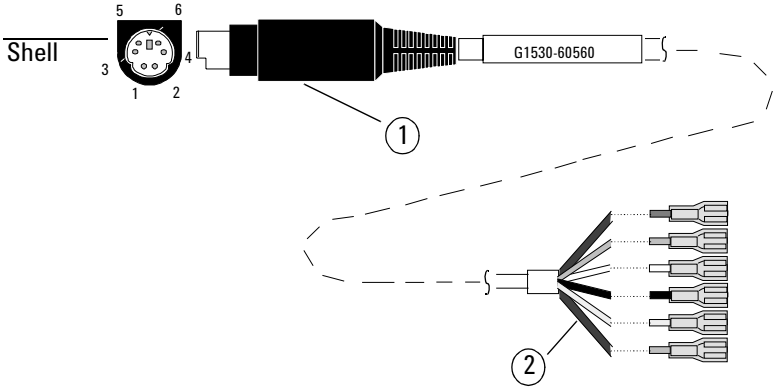



*1 next to triangle etched on connector

| Connector 1 | Signal Name | Color | Connector 2 |
|---|---|---|---|
| 4 | 1 V | Black | 3 |
| 2 | Common | White | 2 |
| Shell | Ground | Orange | 1 |

## Analog cable – general use

Part no. G1530-60560



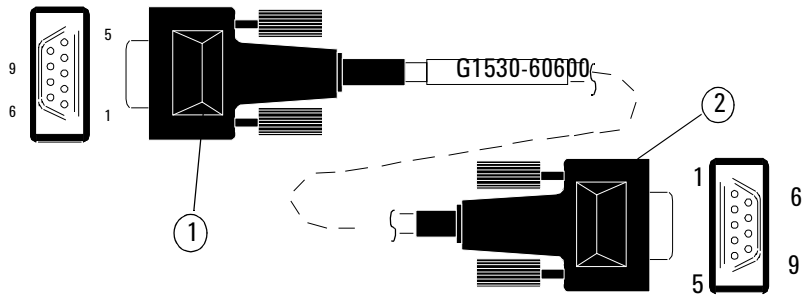

| Connector 1 | Signal name | Connector 2 — quick disconnects |
|---|---|---|
| 1 | 0 to 1 mV (–) | Brown |
| 2 | 0 to 1 V, 0 to 10 V(–) | White |
| 3 | 0 to 1 mV (+) | Red |
| 4 | 1 V (+) | Black |
| 6 | 10 V (+) | Blue |
| Shell | Ground | Orange |

# Automatic sampler, 6890A GC

This RS-232C serial port (labeled *sampler* on the back of the GC) is preconfigured to connect the GC to an Automatic Liquid Sampler.

## Cable pinouts, 6890 GC to Automatic Liquid Sampler

Part no. G1530-60600




| Connector 1 — 9 pin (female) | Connector 2 — 9 pin (female) |
|---|---|
| 1— DCD<br>6 — DSR | 4 — DTR |
| 2 — Rx | 3 — Tx |
| 3 — Tx | 2 — Rx |
| 4 — DTR | 6 — DSR<br>1 — DCD |
| 5 — Ground | 5 — Ground |
| 7 — RTS | 8 — CTS |
| 8 — CTS | 7 — RTS |
| 9 — RI | |

# Automatic sampler, 6890 Plus and 6890N GCs

## 6890 Plus

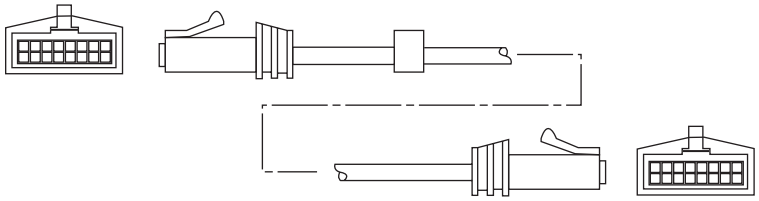
GC's with serial numbers > 20,000 require an additional PCB for use with an automatic liquid sampler. When an ALS Interface PCB is installed, three connectors are available for the 7683 Autosampler system.

## 6890N

There are three connectors, Sampler 1, Sampler 2, and Tray, for the 7683 Autosampler system.

### Cable pinouts, 6890 Plus/6890N GC to G2613A Injector

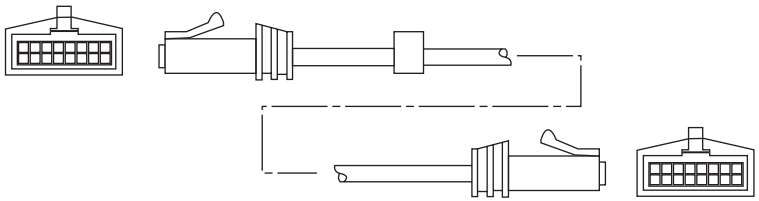
Part no. G2613-60590



| Connector 1 —16 pin (female) | | Connector 2 — 16 pin (female) | |
|---|---|---|---|
| A1 | RXD | A1 | TXD |
| A2 | CTS | A2 | RTS |
| A3 | DSR | A3 | DTR |
| A4 | NCTL Reset | A4 | NCTL Reset |
| A5 | GND | A5 | GND |
| A6 | VAC 1 | A6 | VAC 1 |
| A7 | GND | A7 | GND |
| A8 | VAC 2 | A8 | VAC 2 |
| B1 | TXD | B1 | RXD |
| B2 | RTS | B2 | CTS |
| B3 | DTR | B3 | DSR |
| B4 | GND | B4 | GND |
| B5 | GND | B5 | GND |
| B6 | VAC 1 | B6 | VAC 1 |
| B7 | GND | B7 | GND |
| B8 | VAC 2 | B8 | VAC 2 |

### Cable pinouts, 6890 Plus/6890N to G2614A Tray

Part no. G2614-60610



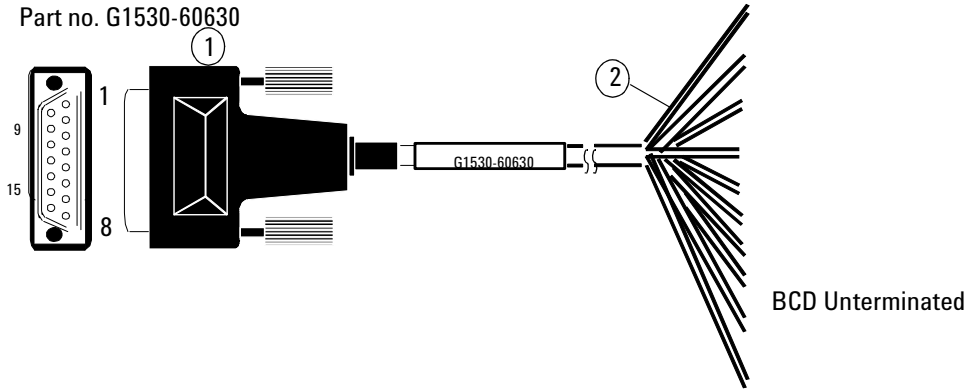
| Connector 1 —16 pin (female) | | Connector 2 — 16 pin (female) | |
|---|---|---|---|
| A1 | RXD | A1 | TXD |
| A2 | CTS | A2 | RTS |
| A3 | DSR | A3 | DTR |
| A4 | M Reset | A4 | M Reset |
| A5 | GND | A5 | GND |
| A6 | VAC 1 | A6 | VAC 1 |
| A7 | GND | A7 | GND |
| A8 | VAC 2 | A8 | VAC 2 |
| B1 | TXD | B1 | RXD |
| B2 | RTS | B2 | CTS |
| B3 | DTR | B3 | DSR |
| B4 | GND | B4 | GND |
| B5 | GND | B5 | GND |
| B6 | VAC 1 | B6 | VAC 1 |
| B7 | GND | B7 | GND |
| B8 | VAC 2 | B8 | VAC 2 |

# BCD Inputs

## 6890A and 6890 Plus

The BCD cable is used to read the position of a stream selection valve, headspace sampler, or other device. It consists of eight passive inputs that sense open/closed contacts.

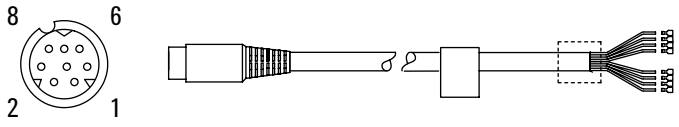
If you are using a multiposition (stream selection) valve, you must also have an external event cable.




| Connector 1 15 pin (male) | Signal name | Logic | Color |
|---|---|---|---|
| 1 | LS digit 0 | Low (true) | Black |
| 2 | LS digit 1 | Low (true) | Brown |
| 3 | LS digit 2 | Low (true) | Red |
| 4 | LS digit 3 | Low (true) | Orange |
| 5, 6, 7 | Unused | | |
| 8 | Ground | | Gray |
| 9, 10, 11 | Unused | | |
| 12 | MS digit 0 | Low (true) | Yellow |
| 13 | MS digit 1 | Low (true) | Green |
| 14 | MS digit 2 | Low (true) | Blue |
| 15 | MS digit 3 | Low (true) | Violet |

### 6890N

The connector provides the control relays and a BCD input for a stream selector Multi Valve.

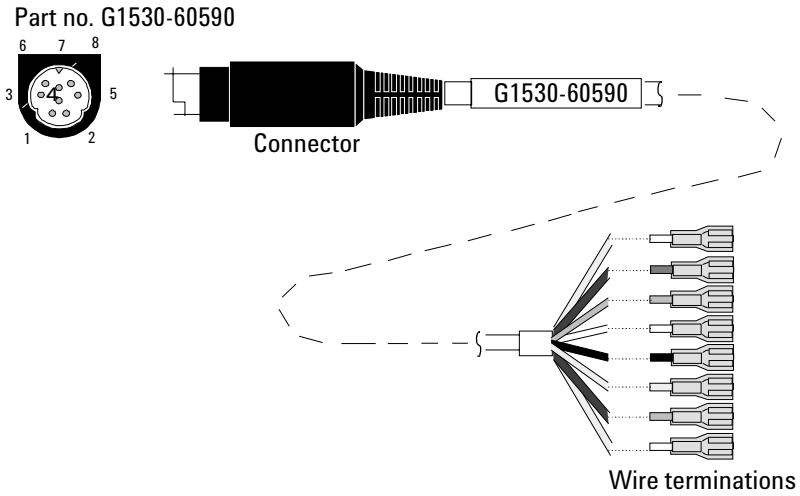



### BCD Connector

| Pin | Function | Color | Maximum rating |
|---|---|---|---|
| 1 | Relay | Yellow | 48 V AC/DC, 250 mA |
| 2 | Relay | Black | 48 V AC/DC, 250 mA |
| 3 | LS digit 0 | Red | |
| 4 | LS digit 1 | White | |
| 5 | LS digit 2 | Orange | |
| 6 | LS digit 3 | Green | |
| 7 | MS digit 0 | Brown or Violet | |
| 8 | GND | Blue | |
| Shield | Chassis GND | | |

# External event

Two passive relay contact closures and two 24-volt control outputs are available for controlling external devices. Devices connected to the passive contact closures must be connected to their own power source.

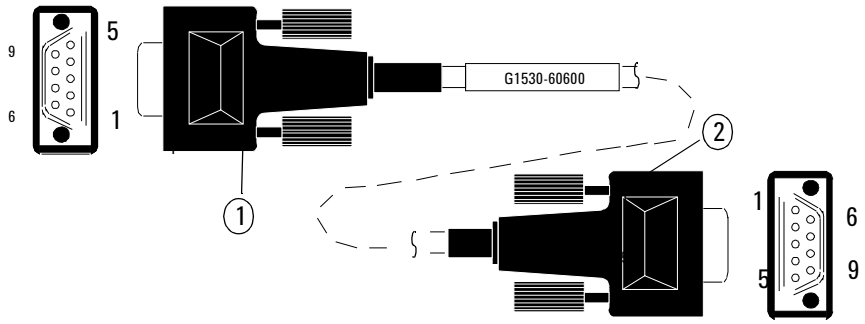



| Connector | Signal name | Maximum rating | Wire terminations | Corresponds to valve # |
|---|---|---|---|---|
| **24 volt control output** | | | | |
| 1 | 24 volt output 1 | 75 mA | Yellow | 5 |
| 2 | 24 volt output 2 | 75 mA | Black | 6 |
| 3 | Ground | | Red | |
| 4 | Ground | | White | |
| **Relay contact closures (Normally open)** | | | | |
| 5 | Contact closure 1 | 48V ac/dc, 250 mA | Orange | 7 |
| 6 | Contact closure 1 | | Green | 7 |
| 7 | Contact closure 2 | 48 V ac/dc, 250 mA | Brown or Violet | 8 |
| 8 | Contact closure 2 | | Blue | 8 |

# Modem/RS-232C

## Cable pinouts, 6890 GC to Computer via RS-232, 9-pin/9-pin

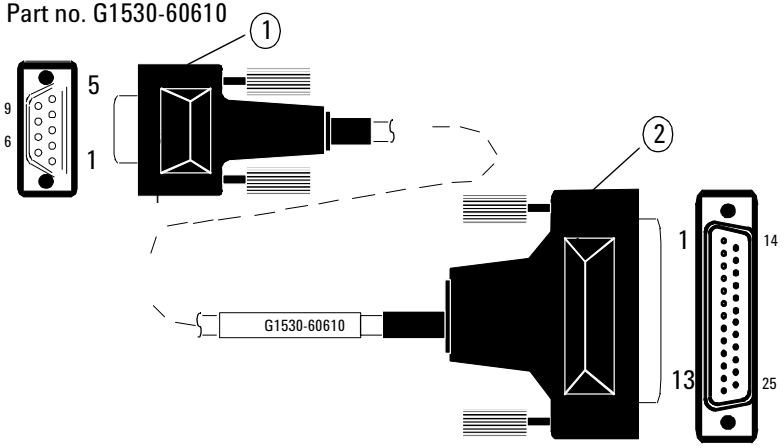
Part no. G1530-60600




| Connector 1 — 9 pin (female) | Connector 2 — 9 pin (female) |
|---|---|
| 1— DCD<br>6— DSR | 4 — DTR |
| 2 — Rx | 3 — Tx |
| 3 — Tx | 2 — Rx |
| 4 — DTR | 6 — DSR<br>1 — DCD |
| 5 — Ground | 5 — Ground |
| 7 — RTS | 8 — CTS |
| 8 — CTS | 7 — RTS |
| 9 — RI | |

## Cable pinouts, 6890 GC to Computer via RS-232, 9-pin/25-pin

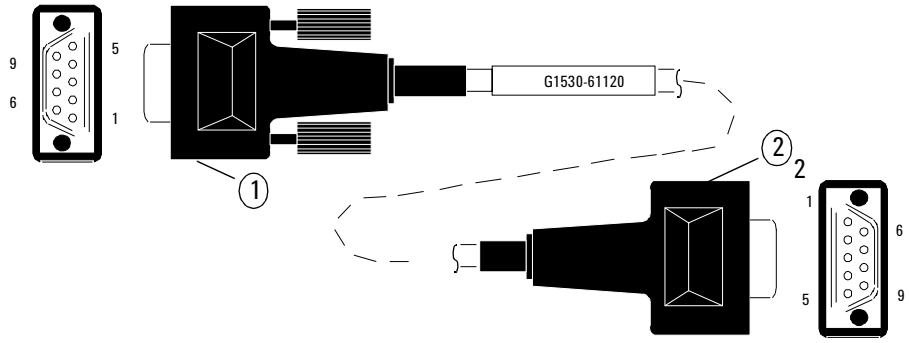
Part no. G1530-60610




| Connector 1 — 9 pin (female) | Connector 2 — 25 pin (male) |
|---|---|
| 1— DCD<br>6 — DSR | 20 — DTR |
| 2 — Rx | 2 — Tx |
| 3 — Tx | 3 — Rx |
| 4 — DTR | 6 — DSR<br>8 — DCD |
| 5 — Ground | 7 — Ground |
| 7 — RTS | 5 — CTS |
| 8 — CTS | 4 — RTS |
| 9 — RI | |

## Cable pinouts, 6890 GC to Modem, 9 pin/9-pin

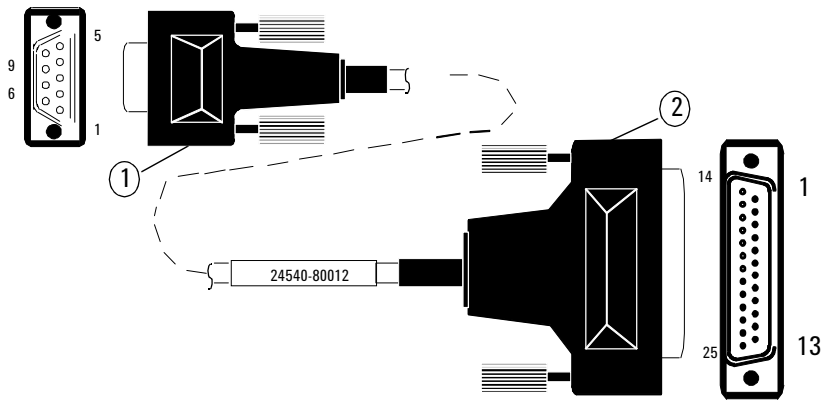
Part no. G1530-61120




| Connector 1 — 9 pin (female) | Signal name | Connector 2 — 9 pin (male) |
|---|---|---|
| 1 | DEC | 1 |
| 2 | RxD | 2 |
| 3 | TxD | 3 |
| 4 | DTR | 4 |
| 5 | GND | 5 |
| 6 | DSR | 6 |
| 7 | RTS | 7 |
| 8 | CTS | 8 |
| 9 | RI (Unused) | 9 |

## Cable pinouts, 6890 GC to Modem, 9-pin/25-pin

Part no. 24540-80012 or 24542M

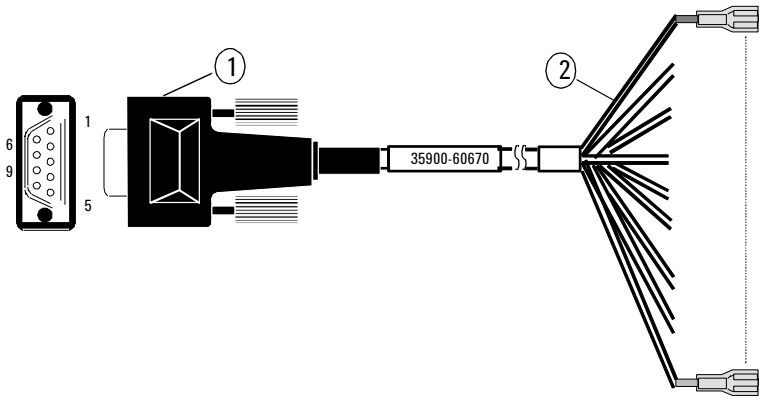



| Connector 1 — 9 pin (female) | Signal name | Connector 2 — 25 pin (male) |
|---|---|---|
| 1 | DCD | 8 |
| 2 | RxD | 3 |
| 3 | TxD | 2 |
| 4 | DTR | 20 |
| 5 | GND | 7 |
| 6 | DSR | 6 |
| 7 | RTS | 4 |
| 8 | CTS | 5 |
| 9 | (Unused) | 22 |

# Remote

## Cable pinouts, remote start/stop, general use

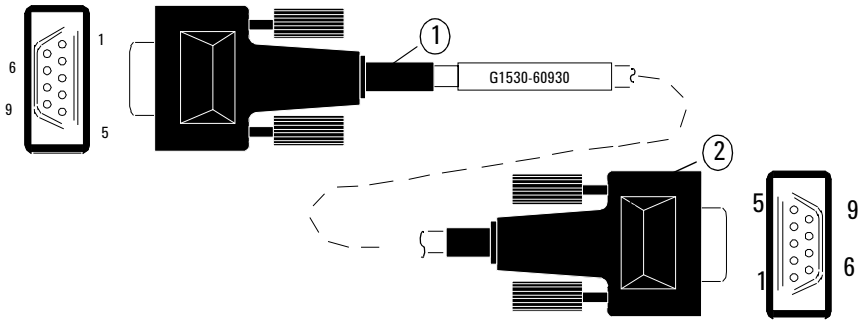
Part no. 35900-60670




| Connector 1<br>9 pin (male) | Signal name | Connector 2<br>(spade lugs) |
|---|---|---|
| 1 | GND | Black |
| 2 | Prepare (low true) | White |
| 3 | Start (low true) | Red |
| 4 | Shut down (6890A/Plus); start relay (6890N) | Green |
| 5 | Reserved (6890A/Plus); start relay (6890N) | Brown |
| 6 | Power on (6890A/Plus); no connection (6890N) | Blue |
| 7 | Ready (high true input) | Orange |
| 8 | Stop (low true) | Yellow |
| 9 | Start request (6890A/Plus); no connection (6890N) | Violet |

## Cable pinouts, GC to 35900C, D, E/MSD/Sampler, 2 meters

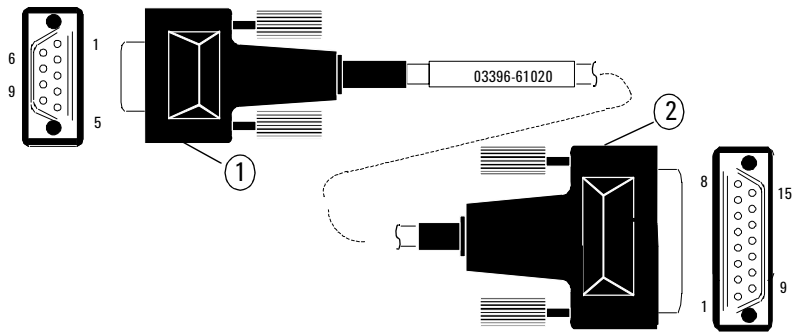
Part no. G1530-60930




| Connector 1 (male) | Signal name | Connector 2 (male) |
|---|---|---|
| 1 | GND | 1 |
| 2 | Prepare | 2 |
| 3 | Start | 3 |
| 4 | Shut down (6890A/Plus); start relay (6890N) | 4 |
| 5 | Reserved (6890A/Plus); start relay (6890N) | 5 |
| 6 | Power on (6890A/Plus); no connection (6890N) | 6 |
| 7 | Ready | 7 |
| 8 | Stop | 8 |
| 9 | Start request (6890A/Plus); no connection (6890N) | 9 |

## Cable pinouts, 6890 GC to 3395A/3396B Integrator

Part no. 03396-61020

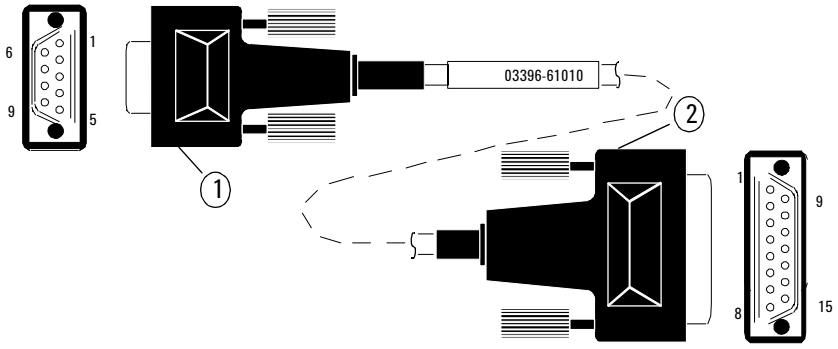



| Connector 1<br>9 pin (male) | Signal name | Connector 2<br>15 pin (male) |
|---|---|---|
| 1 | GND | 9 — Ground |
| 2 | Prepare | NC* |
| 3 | Start | 3 — Start in |
| 4 | Shut down (6890A/Plus); start relay (6890N) | NC* |
| 5 | Reserved (6890A/Plus); start relay (6890N) | NC* |
| 6 | Power on (6890A/Plus); no connection (6890N) | NC* |
| 7 | Ready | 14 — Ready out |
| 8 | Stop | NC* |
| 9 | Start request (6890A/Plus); no connection (6890N) | NC* |

*NC = no connection

## Cable pinouts, 6890 GC to 3395B/3396C Integrator

Part no. 03396-61010

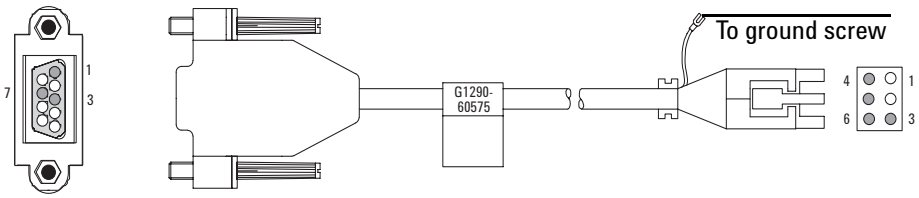



| Connector 1<br>9 pin (male) | Signal name | Connector 2<br>15 pin (male) |
|---|---|---|
| 1 | GND | 9 — Ground |
| 2 | Prepare | NC* |
| 3 | Start | 3 — Start in |
| 4 | Shut down (6890A/Plus); start relay (6890N) | NC* |
| 5 | Reserved (6890A/Plus); start relay (6890N) | NC* |
| 6 | Power on (6890A/Plus); no connection (6890N) | NC* |
| 7 | Ready | 14 — Ready out |
| 8 | Stop | 4 — STOP2 In |
| 9 | Start request (6890A/Plus); no connection (6890N) | NC* |

*NC = no connect

## Cable pinouts, 6890 GC to 7694 Headspace Sampler

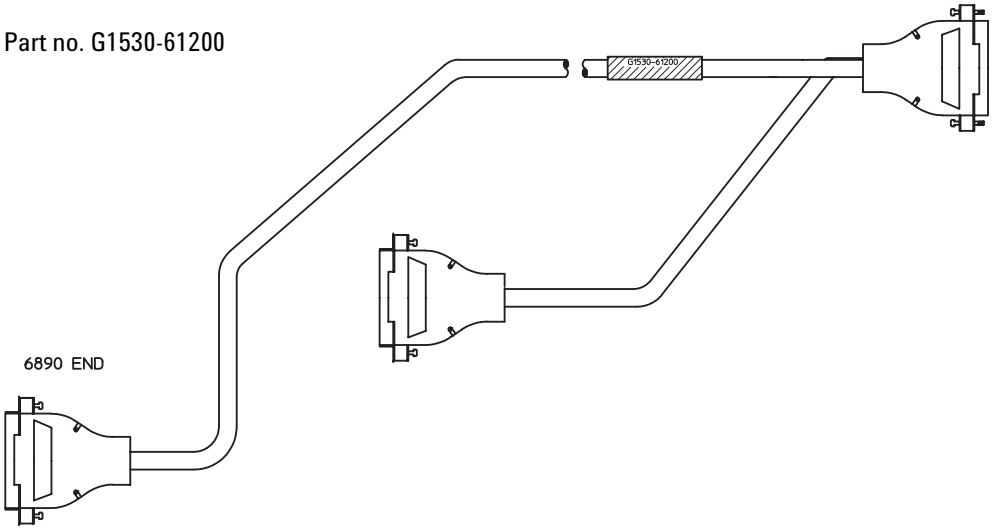
Part no. G1290-60575




| Connector 1<br>3-pin male | Signal name | Connector<br>4-pin male |
|---|---|---|
| 1 | GND | 4, 5 |
| 3 | Start | 6 |
| 7 | Ready | 3 |

## Cable pinouts, APG Remote Y-cable

Part no. G1530-61200




| Connector 1<br>9 pin (male) | Signal name |
|---|---|
| 1 | GND |
| 2 | Prepare |
| 3 | Start |
| 4 | Shut down (6890A/Plus); start relay (6890N) |
| 5 | Reserved (6890A/Plus); start relay (6890N) |
| 6 | Power on (6890A/Plus); no connection (6890N) |
| 7 | Ready |
| 8 | Stop |
| 9 | Start request (6890A/Plus); no connection (6890N) |