



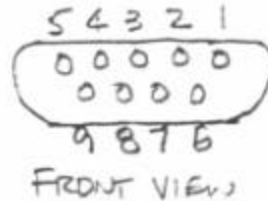
Serial Port Configuration and Command Syntax

The CEC serial port pin/function configuration is as follows:

Baud Rate: 9600
Parity: None
Data Bits: 8
Stop Bits: 1

The connector is configured as a standard 9-pin EIA-RS232 3-wire interface with the pin functions* :
Pin 2 – Received Data
Pin 3 – Transmitted Data
Pin 5 – Ground

*See Figure 1



The command syntax required to query the CEC for current operational parameters is as follows:

?nn-nnnn(cr-lf), where nn-nnnn represents the unit serial number (e.g. 98-6702). The query string must be preceded by the character “?” and concluded with a carriage return-line feed. (e.g. ?98-6702(cr-lf)). All characters are in ASCII format.

If the CEC determines that the query syntax is incorrect or is in a “busy” state, it will simply return the character “?” followed by a cr-lf. Check the format of the query syntax and resend. If it is correct, then the CEC will return a character string of the format:

*AA-AAAABB.BCC.CDD.DEFGHIJKLMNPP.PQQ.QRR.RSS.STT/TT/TTUU:UU:UU

This string is concluded with a “cr-lf” (carriage return-line feed combination).

Status string sorting guide:

- a) AA-AAAA : Unit serial number (e.g. 98-6702) found on the CEC Unit Label on the Back Panel
- b) BB.B : Current chamber temperature in Celsius (e.g. 22.0)
- c) CC.C : Maximum chamber temperature in Celsius (e.g. 22.5)
- d) DD.D : Minimum chamber temperature in Celsius (e.g. 21.5)
- e) E : Printer Status – 0=disabled, 1=external, 2=internal

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Serial Port Configuration and Command Syntax (Continued)

- f) F : Motion Flag – 0=Motion OK, 1=Motion Stopped
- g) G : Door Flag – 0=Door(s) Closed, 1=Door(s) Open
- h) H : Heat Flag – 0=Heat Cycle Off, 1=Heat Cycle On
- i) I : Cool Flag – 0=Cool Cycle Off, 1=Cool Cycle On
- j) J : High Alarm Flag – 0=No High Alarm, 1=High Alarm Present
- k) K : Low Alarm Flag – 0=No Low Alarm, 1=Low Alarm Present
- l) L : Temperature Alarm Delay – Units in 0-9 Minutes
- m) M : Motion Alarm Delay – Units in 0-9 Minutes
- n) N : Door Alarm Delay – Units in 0-9 Minutes
- p) PP.P : Process Low Temperature Set Point in Celsius (e.g. 21.8)
- q) QQ.Q : Process High Temperature Set Point in Celsius (e.g. 22.2)
- r) RR.R : Alarm High Temperature Set Point in Celsius (e.g. 24.0)
- s) SS.S : Alarm Low Temperature Set Point in Celsius (e.g. 20.0)
- t) TT/TT/TT : Current Date in MM/DD/YY format (e.g. 05/12/98), May 12, 1998
- u) UU:UU:UU : Current Time in HH:MM:SS format (e.g. 14:02:36), 2 o'clock PM, 2 minutes, and 36 seconds. In 24-hour format.

The entire string is concluded with a Carriage Return, Line Feed combination.