Valve Cart and Feed System: Controls - Valve Controls - Full Assembly

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Note: operational temperature for stepper motors used is between -10\*C & 130\*C

**Overview of Design and purpose.**

**Brief description of functionality**

**-> Input Protocols**

General Commands

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Device Identifier | | Command | | Additional information |
| CMD  (^)  Stand in ID | , | ABORT | , | IE: State with regards to the CD command |
| IGNITE |
| CD |
| Open// test command // |
| Close// test command // |

CD-Control Data:

CMD,CD,

N20F,(OPEN/CLOSE),

N20V,(OPEN/CLOSE),

RTV,(OPEN/CLOSE),

EVV,(OPEN/CLOSE),

MEV,(OPEN/CLOSE),

NCV,(OPEN/CLOSE),

**->Out put Protocols**

General Out-Put Overview

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Device Identifier | | Command | | Additional information |
| VCA  (^)  Valve cart ID | , | ES | , | IE: State with regards to the CD command |
| ER |
| FD |
| CF |

ES-State Error:

CMD,ES,

N20F,(OPEN/CLOSE),

N20V,(OPEN/CLOSE),

RTV,(OPEN/CLOSE),

EVV,(OPEN/CLOSE),

MEV,(OPEN/CLOSE),

NCV,(OPEN/CLOSE),

ER-General Error:

VCA,ER,Error:Incorect\_Imput – Catch all Error if the cart receives an incorrect input

VCA,ER,NOCONECTION – Error for if the Cart fails to receive input

FD-Feed Back Data:

CMD,FD,

N20F,(OPEN/CLOSE),

N20V,(OPEN/CLOSE),

RTV,(OPEN/CLOSE),

EVV,(OPEN/CLOSE),

MEV,(OPEN/CLOSE),

NCV,(OPEN/CLOSE),

CF-Confirm Data:

->Confirm reception of incoming command.

Eg: VCA,CF,CD

**->Reasoning**