

Validyne P56 Serial Protocol – 7-28-10

Serial port should be set to 9600 8 N 1

All command strings must be terminated by a C/R (ASCII 0D)

All P56 response strings are terminated with a C/R

All Commands are Case Sensitive and must be Upper Case

Assign RS485 Address

Host Command: >99123456XX

99 = Broadcast for Address Code (all units listen)

123456 = Six Digit P56 Serial Number

XX = Address Assigned, 00 to 98

P56 Response: <XX123456

123456 = Six Digit Unit Serial Number

XX = Address Assigned, 00 to 98

Host Commands

>XXC

Where: > Command Header (ASCII 3e)

XX 2 digit RS485 address code, 0 to 99

M Command Code

Z = Set P56 Zero - if pressure reading within 10% of Zero

S = Set P56 Span - if pressure reading within 10% of FS

G = Ping

C=Calibration & Model Data

T = Temp Reading Request

P = Pressure Reading Request

P56 Responses

<XXM?*value*U

Where: < Data Response Header (ASCII 3c)

XX 2 digit address code, 0 to 99

M Command Identifier

Z = Set P56 Zero

S = Set P56 Span

G = Ping

C = Calibration & Model Data

? = Command Fails

* = Marker in string where value starts when value is returned

U = Units F, I or P

T = Temperature Reading, Deg F

Format: 0.0 F to 160.0 F

P = Pressure Reading, In H2O (Ranges < -30) psid (all other ranges)

- 20 Range 0.00 to +/-3.50 In H2O
- 22 Range 0.00 to +/-5.50 In H2O
- 24 Range 0.00 to +/-8.90 In H2O
- 26 Range 0.00 to +/-14.00 In H2O
- 28 Range 0.00 to +/-22.20 In H2O
- 30 Range 0.000 to +/-1.250 Psid
- 32 Range 0.000 to +/-2.000 Psid
- 34 Range 0.00 to +/-3.20 Psid
- 36 Range 0.00 to +/-5.00 Psid
- 38 Range 0.00 to +/-8.00 Psid
- 40 Range 0.00 to +/-12.50 Psid
- 42 Range 0.00 to +/-20.00 Psid
- 44 Range 0.0 to +/-32.0 Psid
- 46 Range 0.0 to +/-50.0 Psid
- 48 Range 0.0 to +/-80.0 Psid
- 50 Range 0.0 to +/-125.5 Psid
- 52 Range 0.0 to +/-200.0 Psid
- 54 Range 0 to +/-320 Psid
- 56 Range 0 to +/-500 Psid
- 58 Range 0 to +/-800 Psid
- 60 Range 0 to +/-1250 Psid
- 62 Range 0 to +/-2000 Psid
- 64 Range 0 to +/-3200 Psid

Examples:

Host String: >01Z (set zero at P56 RS485 address 01)

P56 Reply: <01Z (set zero successful)

<01*? (set zero not successful)

Note: Allow several seconds processing time for P56 to respond

Host String: >01S (set span for P56 at address 01)

P56 Reply: <01S (set span successful)

<01*? (set span unsuccessful)

Note: Allow several seconds processing time for P56 to respond

Host String: >01T (get temp reading from P56 at address 01)

P56 Reply: <01T*79.3*F (temp of 79.3F returned)

Host String: >01P (get pressure reading from P56 at address 01)

P56 Reply: <01P*172.3*P (pressure reading of 172.3 Psid returned)

Host String: >01P (get pressure reading from P56 at address 01)

P56 Reply: <01P*15.33*I (pressure reading of 15.33 In H2O returned)

Host String: >01C (get calibration and model data for P56 at address 01)

P56 Reply: <01C*P56D1N132S4A*123456*06-26-07*2.000P

P56D-1-N-1-32-S-4-A = Model Number

123456 = serial number

06-26-07 = calibration date

2.000P = calibrated FS, psid

Host String: >9912345609 (Set serial #123456 to RS485 bus address 09)

P56 Reply: <09123456 (s/n 123456 successfully set to address 09)

Host String: >99123456df (s/n 123456 being set to illegal address)

P56 Reply: <123456*? (illegal address response)

Host String: >01G (Ping P56 at address 01)

P56 Reply: <01G (successful reply)