

Product Code

CNG050S290NCAAEZZZ

PUCK700

Serial ID

15329612

34284257

Order ID

10515828

Line Item

1.1 1

Customer Tag

23041413 B



Process

Process ID : 1.36964511

Process Time : 2022.09.22 9:44:07

Process Stand : TSM1A@SSCB:1

Stand Uncertainty : +/-0.030%

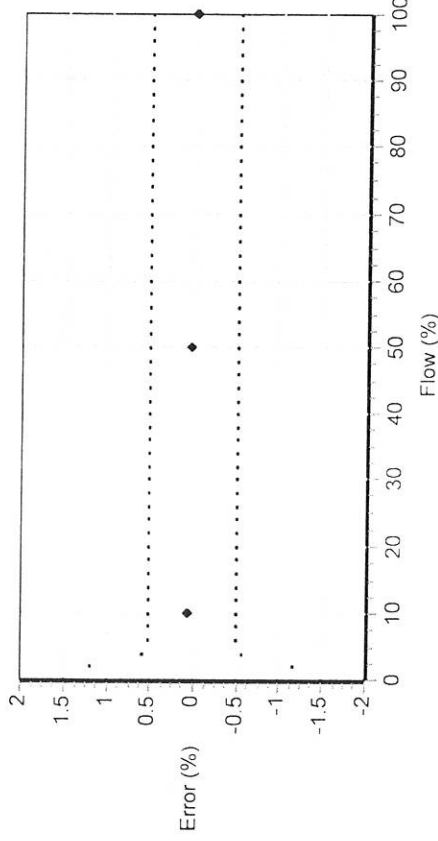
Fluid : H2O

100% Rate : 38.6 KG/MIN

Pickoff : 1

Max Rate P/T : 32.93 PSIG/22.2 C

Detail



Results

Status : PASS

D1 : 0

D2 : 1

K1 : 4029.775

K2 : 4197.603

DT : 4.25

FD : 0

DTG : 0

DFQ1 : 0

DFQ2 : 0

FlowCal : 140.964.50

FFQ : 0

FTG : 0

DensCal : 04030041984.25

FCF : 140.96

FT : 4.5

Flow (%)	Flow Rate (kg/min)	Meter Total (kg)	Reference Total (kg)	Error (%)	Specification (±%)
100.0	38.6	38.15803	38.15966	-0.004	0.500
10.0	3.86	4.036659	4.03376	0.072	0.500
50.0	19.3	19.37881	19.37054	0.043	0.500
100.0	38.6	38.00363	37.99607	0.020	0.500

Neil Wilson

WILSON, NEIL

Technician

This certificate is produced by an electronic data system and is valid without signature.

Product Code

CNG050S290NCAAEZZZ
 2700I13ABAEZMZ
 PUCK700

Serial ID

15329612
 12220672
 34284257

Order ID

10515828
 10515828

Line Item

1.1 1
 1.33 1

Customer Tag

23041413B

Process

Process ID : 1.36964946
 Process Time : 2022.09.22 12:37:13
 Process Stand : CONFIGURATION@SSCB

Sensor

D1 : 0
 D2 : 1
 DFQ1 : 0
 DFQ2 : 0
 DT : 4.25
 DTG : 0
 Dens PCF : 0
 Density Meter Factor : 1
 FCF : 140.96
 FD : 0
 FFQ : 0
 FT : 4.5
 FTG : 0
 Flow PCP : 30
 Flow PCF : 0
 K1 : 4029.775
 K2 : 4197.603
 Mass Flow Meter Factor : 1
 Volume Flow Meter Factor : 1

Units

Special Mass Time Unit : SEC
 Special Mass Total Text : NONE
 Special Volume Base Unit : L
 Special Volume Conv Factor : 1
 Special Volume Flow Text : NONE
 Special Volume Time Unit : SEC
 Special Volume Total Text : NONE
 Temperature Unit : C
 Volume Flow Unit : L/MIN

MVD Channel Assignments

Channel B Power : Active (internally powered)

Assignments

Event 1 Variable : Density
 Event 2 Variable : Density
 Frequency1 Scaling Method : Frequency = Flow
 Frequency Variable 1 : Mass Flow Rate
 mA1 Variable : Mass Flow Rate

Ranges

Event 1 Setpoint : 0
 Event 1 Type : Event Low (Event "OFF" if PV > SP)
 Event 2 Setpoint : 0
 Event 2 Type : Event Low (Event "OFF" if PV > SP)
 Frequency1 Active State : Active High
 Frequency1 Hertz : 1000
 Frequency1 Output Mode : Single
 Frequency1 Pulses/Unit : 1.554404
 Frequency1 Rate : 643.3333
 Frequency1 Units/Pulse : 0.64333333
 mA1 LRV : 0
 mA1 URV : 643.3333

Faults

Frequency1 Fault Behavior : Upscale

Units

Density Unit : G/CM3
 GSV Flow Unit : SCFM
 Mass Flow Unit : G/SEC
 Pressure Unit : POUNDS/SQUARE INCH
 Special GSV Base Time Unit : MIN
 Special GSV Base Volume Unit : Standard cubic feet
 Special GSV Conv Factor : 1
 Special GSV Flow Unit Text : NONE
 Special GSV Total Text : NONE
 Special Mass Base Unit : G
 Special Mass Conv Factor : 1
 Special Mass Flow Text : NONE

Faults

Frequency1 Fault Value : 15000
mA1 Fault Behavior : Downscale (Default)
mA1 Fault Value : 2

Other

Calibration Process ID : 1.36964511
Core Software Rev : 35
Density Cutoff : 0.2
Density Damping : 0.8
Density High Limit : 5
Density Low Limit : 0
Direction : FORWARD
Fault Dwell Time : 0
Feature Key : 1
Flow Damping : 0.8
HART Device ID : 4261524
LD Type : 0
Mass Flow Cutoff : 1.836
Pressure Comp Line Pressure : 0
Pressure Compensation State : OFF
RS485 Baud : 1200 baud
RS485 Parity : Odd
RS485 Protocol : HART
Slug Duration : 0
Tag :
Temperature Damping : 2.4
Transmitter Software Rev : 80
Volume Flow Cutoff : 0.11016

23041413B



Tulsa Gas Technologies, Inc.
4809 S. 101st East Ave Tulsa, OK 74146
PHONE: 918-665-2641 FAX: 918-665-2657

4/11/2023

Dispenser Serial Number 23041413

Side B

Micro Motion Transmitter Configuration

Required settings for correct operation of Micro Motion mass flow meter.

Transmitter Model Number: 2700
Sensor Model Number: CNG050
Transmitter Serial Number: 34284257
Sensor Serial Number: 15329612
Flow Calibration Factor: 140.964.50
Flow Units: LB/min

Communication on RS-485

Protocol: Modbus ASCII 7 Bit
Modbus Address: 1
Baud Rate: 9600
Parity: Even
Stop Bits: 1

HART Communication

Superimposed on Primary mA (PV)

Analog Output (4-20 mA)

Analog Variable (PV): Mass Flow
Lower Range Value: 0.2500 lb/min
Upper Range Value: 300.000 lb/min
mA Cutoff: 0.0000 lb/min

Freq/Rate

Frequency variable (TV): Mass Flow
Frequency Cutoff: 0.2500 lb/min
Pulses per Unit: 1000.00000 per lb

Temperature

Temp Units: deg F

Product Code

CNG050S290NCAAEZZZ

PUCk700

Serial ID

15329691

34284373

Order ID

10515828

Line Item

1.1 2

Customer Tag

23041413A

Process

Process ID : 1.36964297

Process Time : 2022.09.22 8:17:45

Process Stand : TSM1A@SSCB:1

Stand Uncertainty : +/-0.030%

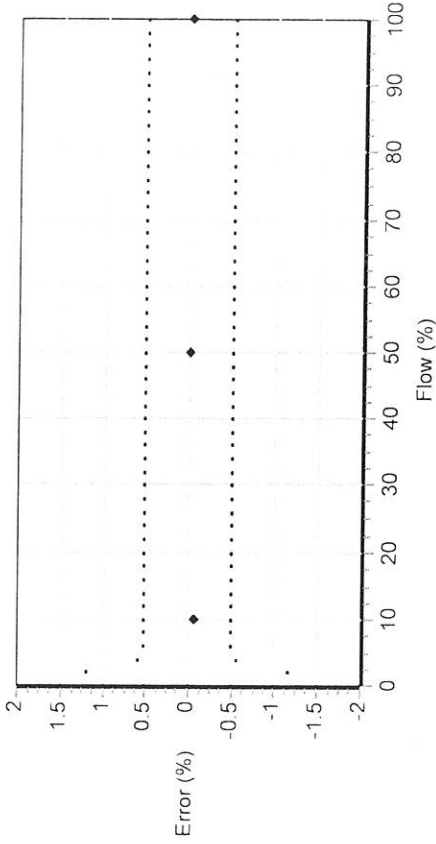
Fluid : H2O

100% Rate : 38.6 KG/MIN

Pickoff : 1

Max Rate P/T : 32.98 PSIG/22.1 C

Detail



Results

Status : PASS

D1 : 0

D2 : 1

K1 : 4078.449

K2 : 4248.41

DT : 4.25

FD : 0

DTG : 0

DFQ1 : 0

DFQ2 : 0

FlowCal : 138.994.50

FFQ : 0

FTG : 0

DensCal : 04078042484.25

FCF : 138.99

FT : 4.5

Flow (%)	Flow Rate (kg/min)	Meter Total (kg)	Reference Total (kg)	Error (%)	Specification (±%)
100.0	38.6	38.10914	38.10896	0.000	0.500
10.0	3.86	4.025465	4.02835	-0.072	0.500
50.0	19.3	19.36498	19.36458	0.002	0.500
100.0	38.6	38.01392	38.0133	0.002	0.500

Neil Wilson

WILSON, NEIL

Technician

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Product Code

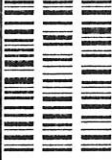
CNG0505290NCAAEZZZ
2700I13ABAEZMZ
PUCK700

Serial ID

15329691
12220671
34284373

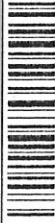
Order ID Line Item Customer Tag

10515828 1.1 2
10515828 1.33 2



Process

Process ID : 1.36965025
Process Time : 2022.09.22 13:10:49
Process Stand : CONFIGURATION@SSCB



Sensor

D1 : 0
D2 : 1
DFQ1 : 0
DFQ2 : 0
DT : 4.25
DTG : 0
Dens PCF : 0
Density Meter Factor : 1
FCF : 138.99
FD : 0
FFQ : 0
FT : 4.5
FTG : 0
Flow PCP : 30
Flow PCF : 0
K1 : 4078.449
K2 : 4248.41
Mass Flow Meter Factor : 1
Volume Flow Meter Factor : 1

Units

Special Mass Time Unit : SEC
Special Mass Total Text : NONE
Special Volume Base Unit : L
Special Volume Conv Factor : 1
Special Volume Flow Text : NONE
Special Volume Time Unit : SEC
Special Volume Total Text : NONE
Temperature Unit : C
Volume Flow Unit : L/MIN

MVD Channel Assignments

Channel B Power : Active (internally powered)

Assignments

Event 1 Variable : Density
Event 2 Variable : Density
Frequency1 Scaling Method : Frequency = Flow
Frequency Variable 1 : Mass Flow Rate
mA1 Variable : Mass Flow Rate

Ranges

Event 1 Setpoint : 0
Event 1 Type : Event Low (Event "OFF" if PV > SP)
Event 2 Setpoint : 0
Event 2 Type : Event Low (Event "OFF" if PV > SP)
Frequency1 Active State : Active High
Frequency1 Hertz : 1000
Frequency1 Output Mode : Single
Frequency1 Pulses/Unit : 1.554404
Frequency1 Rate : 643.3333
Frequency1 Units/Pulse : 0.64333333
mA1 LRV : 0
mA1 URV : 643.3333

Faults

Frequency1 Fault Behavior : Upscale

Units

Density Unit : G/CM3
GSV Flow Unit : SCFM
Mass Flow Unit : G/SEC
Pressure Unit : POUNDS/SQUARE INCH
Special GSV Base Time Unit : MIN
Special GSV Base Volume Unit : Standard cubic feet
Special GSV Conv Factor : 1
Special GSV Flow Unit Text : NONE
Special GSV Total Text : NONE
Special Mass Base Unit : G
Special Mass Conv Factor : 1
Special Mass Flow Text : NONE

Faults

Frequency1 Fault Value : 15000
 mA1 Fault Behavior : Downscale (Default)
 mA1 Fault Value : 2

Other

Calibration Process ID : 1.36964297
 Core Software Rev : 35
 Density Cutoff : 0.2
 Density Damping : 0.8
 Density High Limit : 5
 Density Low Limit : 0
 Direction : FORWARD
 Fault Dwell Time : 0
 Feature Key : 1
 Flow Damping : 0.8
 HART Device ID : 6219506
 LD Type : 0
 Mass Flow Cutoff : 1.836
 Pressure Comp Line Pressure : 0
 Pressure Compensation State : OFF
 RS485 Baud : 1200 baud
 RS485 Parity : Odd
 RS485 Protocol : HART
 Slug Duration : 0
 Tag :
 Temperature Damping : 2.4
 Transmitter Software Rev : 80
 Volume Flow Cutoff : 0.11016



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4/11/2023

Dispenser Serial Number 23041413

Side A

Micro Motion Transmitter Configuration

Required settings for correct operation of Micro Motion mass flow meter.

Transmitter Model Number: 2700
Sensor Model Number: CNG050
Transmitter Serial Number: 34284373
Sensor Serial Number: 15333211
Flow Calibration Factor: 139.994.50
Flow Units: LB/min

Communication on RS-485

Protocol: Modbus ASCII 7 Bit
Modbus Address: 1
Baud Rate: 9600
Parity: Even
Stop Bits: 1

HART Communication

Superimposed on Primary mA (PV)

Analog Output (4-20 mA)

Analog Variable (PV): Mass Flow
Lower Range Value: 0.2500 lb/min
Upper Range Value: 300.000 lb/min
mA Cutoff: 0.0000 lb/min

Freq/Rate

Frequency variable (TV): Mass Flow
Frequency Cutoff: 0.2500 lb/min
Pulses per Unit: 1000.00000 per lb

Temperature

Temp Units: deg F