

Product Code CNG050S290NCAAEZZZ Serial ID 13286271 Order ID 10344503 Line 1.1 Item 1 Customer Tag 19091268A

Process ID : 5.28042194 Process Time : 2019.08.24 8:46:46 Process Stand : TSGCNGGSSCN:1 Stand Uncertainty : +/-0.030%

Fluid : H2O 100% Rate : 38.6 KG/MIN Pickoff : 1 Max Rate P/T : 44.4 PSIG/25.4 C

Status : PASS

D1 : 0 D2 : 1 K1 : 4061.566 K2 : 4233.695 DT : 4.25 FD : 0 DTG : 0 DFC1 : 0 DFC2 : 0 FlowCal : 138.434.50 FFQ : 0 FTG : 0 DensCal : 04062042344.25 FCF : 138.43 FT : 4.5

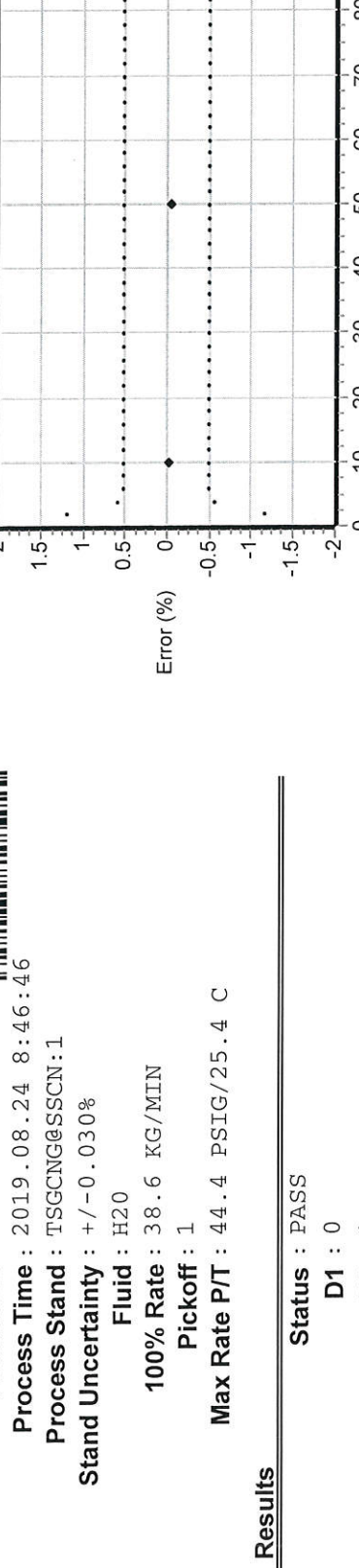
Meter Total (kg) 38.08791 Reference Total (kg) 38.0932 Error (%) -0.014

Flow Rate (kg/min) 38.6 Flow Rate (kg/min) 3.797983 Reference Total (kg) 3.798832 Error (%) -0.022

Flow (%) 100.0 Flow (%) 50.0 Flow (%) 100.0 Reference Total (kg) 19.72204 Error (%) -0.042

Specification (±%) 0.500 Specification (±%) 0.500 Specification (±%) 0.500

Process Detail



Results

WANG, TENGFEI Technician This certificate is produced by an electronic data system and is valid without signature. Traceable to one or more of the following National Metrology Institutes: NIM-China, NIST-USA, and VSL-The Netherlands

Product Code	Serial ID	Order ID	Line	Item	Customer Tag
CNG050S290NCAAEZZZ	13286271	10344503	1.1	1	
2700I13ABAEZMZ	3446776	10344503	1.33	1	
PUCK700	26053058				

Process

Process ID : 1.35425378
 Process Time : 2019.09.19 21:42:22
 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 : 138.43
 FD : 0
 FFQ : 0
 FT : 4.5
 FTG : 0
 Flow PCP : 30
 Flow PCF : 0
 K1 : 4061.566
 K2 : 4233.695
 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

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 Behavior : Upscale

Faults

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

Other

Calibration Process ID : 5.28042194
Core Software Rev : 35
Density Cutoff : 0.2
Density Damping : 1.6
Density High Limit : 5
Density Low Limit : 0
Direction : FORWARD
Fault Dwell Time : 0
Feature Key : 1
Flow Damping : 0.8
HART Device ID : 6045765
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 : 4.8
Transmitter Software Rev : 80
Volume Flow Cutoff : 0.11016

19091268A



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

10/8/2019

Dispenser Serial Number 19091268A

Micro Motion Transmitter Configuration

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

Transmitter Model Number: 2700
Sensor Model Number: CNG095
Transmitter Serial Number: 3446776
Sensor Serial Number: 13286271
Flow Calibration Factor: 138.434.50
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: 00000 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 Serial ID: 13287779 Order ID: 10344503 Line: 1.1 Item: 2 Customer Tag: 1909/268B

Process ID: 5.28065444 Process Time: 2019.09.02 19:42:14 Process Stand: TSGCNG@SSCN:1 Stand Uncertainty: +/- 0.030% Fluid: H2O 100% Rate: 38.6 KG/MIN Pickoff: 1 Max Rate P/T: 48.67 PSIG/26.2 C

Process **Detail**



Process ID : 5.28065444
 Process Time : 2019.09.02 19:42:14
 Process Stand : TSGCNG@SSCN:1

Stand Uncertainty : +/- 0.030%
 Fluid : H2O

100% Rate : 38.6 KG/MIN
 Pickoff : 1

Max Rate P/T : 48.67 PSIG/26.2 C

Results

Status : PASS

D1 : 0

D2 : 1

K1 : 4054.782

K2 : 4226.486

DT : 4.25

FD : 0

DTG : 0

DFQ1 : 0

DFQ2 : 0

FlowCal : 138.624.50

FFQ : 0

FTG : 0

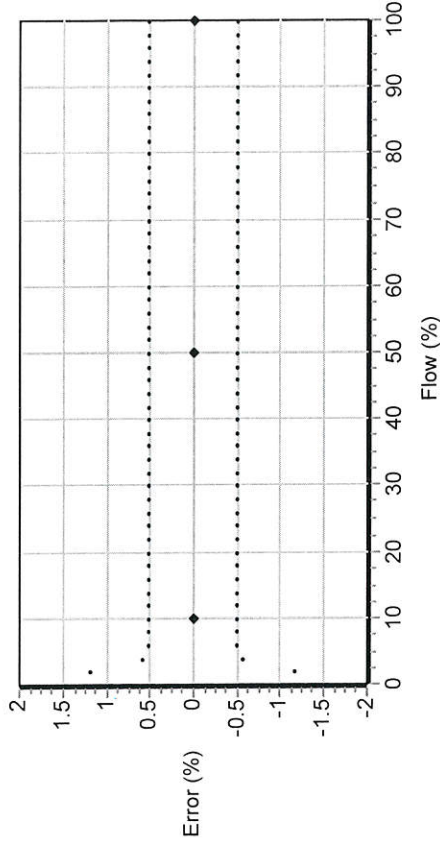
DensCal : 04055042264.25

FCF : 138.62

FT : 4.5

LI, MENG
 Technician

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



Flow (%)	Flow Rate (kg/min)	Meter Total (kg)	Reference Total (kg)	Error (%)	Specification (±%)
100.0	38.6	38.13809	38.13324	0.013	0.500
10.0	3.86	3.791807	3.791353	0.012	0.500
50.0	19.3	19.79569	19.79458	0.006	0.500
100.0	38.6	39.54956	39.55392	-0.011	0.500

Product Code

CNG050S290NCAAEZZZ

2700I13ABAEZMZ

PUCK700

Serial ID

13287779

3446873

26053458

Order ID

10344503

10344503

Item Customer Tag

1.1 2

1.33 2

190912685

Process

Process ID : 1.35424964

Process Time : 2019.09.19 18:19:18

Process Stand : CONFIGURATION@SSCB

Sensor

Units

D1 : 0

D2 : 1

DFQ1 : 0

DFQ2 : 0

DT : 4.25

DTG : 0

Dens PCF : 0

Density Meter Factor : 1

FCF : 138.62

FD : 0

FFQ : 0

FT : 4.5

FTG : 0

Flow PCP : 30

Flow PCF : 0

K1 : 4054.782

K2 : 4226.486

Mass Flow Meter Factor : 1

Volume Flow Meter Factor : 1

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

Faults

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

Other

Calibration Process ID : 5.28065444
Core Software Rev : 35
Density Cutoff : 0.2
Density Damping : 1.6
Density High Limit : 5
Density Low Limit : 0
Direction : FORWARD
Fault Dwell Time : 0
Feature Key : 1
Flow Damping : 0.8
HART Device ID : 3741520
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 : 4.8
Transmitter Software Rev : 80
Volume Flow Cutoff : 0.11016

19091268B



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

10/8/2019

Dispenser Serial Number 19091268B

Micro Motion Transmitter Configuration

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

Transmitter Model Number: 2700
Sensor Model Number: CNG095
Transmitter Serial Number: 3446873
Sensor Serial Number 13287779
Flow Calibration Factor: 138.624.50
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 00000 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