

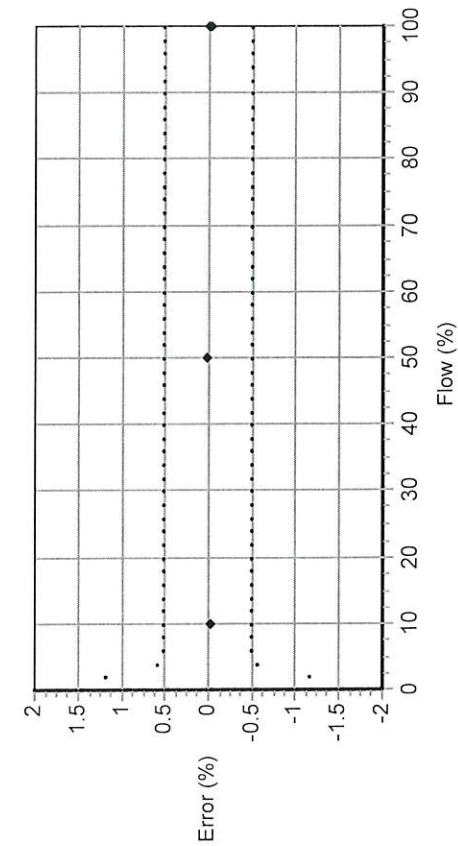
Product Code: CNG050S290NCAAEEZZZ
 Serial ID: 13193848
 Order ID: 10285247
 Line: 1.1
 Item: 1
 Customer Tag: 1804/206A



Process

Process ID : 1.34391928
 Process Time : 2018.03.30 21:46:59
 Process Stand : TSM1C@SSCB:1
 Stand Uncertainty : +/- 0.030%
 Fluid : H2O
 100% Rate : 38.6 KG/MIN
 Pickoff : 1
 Max Rate P/T : 30.54 PSIG/22.9 C

Detail



Results

Flow (%)	Flow Rate (kg/min)	Meter Total (kg)	Reference Total (kg)	Error (%)	Specification (±%)
100.0	38.6	38.91459	38.91901	-0.011	0.500
10.0	3.86	5.759635	5.760957	-0.023	0.500
50.0	19.3	19.35822	19.35468	0.018	0.500
100.0	38.6	38.95641	38.96343	-0.018	0.500

DensCal : 04068042414.25
 FCF : 138.04
 FT : 4.5

Dinesh Karki
 DINESH KARKI
 Technician

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

Product Code	Serial ID	Order ID	Line	Item	Customer Tag
CNG050S290NCAAEZZZ	13193848	10285247	1.1	1	
2700I13ABAEZWW	3401903	10285247	1.36	1	
PUCK700	33467157				

18041216A

Process

Process ID : 1.34392240
 Process Time : 2018.04.02 5:45:42
 Process Stand : SSCB-CONFIG1@SSCB



Sensor

Units

D1 : 0
 D2 : 1
 DFQ1 : 0
 DFQ2 : 0
 DT : 4.25
 DTG : 0
 Density Meter Factor : 1
 FCF : 138.04
 FD : 0
 FFQ : 0
 FT : 4.5
 FTG : 0
 Flow PCP : 30
 Flow PCF : 0
 K1 : 4068.051
 K2 : 4240.733
 Mass Flow Meter Factor : 1
 Volume Flow Meter Factor : 1

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
 Frequency1 Fault Value : 15000

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
 Special Mass Time Unit : SEC

18041216A

Faults

mA1 Fault Behavior : Downscale (Default)

mA1 Fault Value : 2

Other

Calibration Process ID : 1.34391928

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 : 3496612

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



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

4/30/2018

Dispenser Serial Number 18041216

Side A

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: 3401903
Sensor Serial Number 13193848
Flow Calibration Factor: 138.044.50
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: CNG050S290NCAAEEZZZ
 Serial ID: 13191012
 Order ID: 10285247
 Line: 2.1
 Item: 3
 Customer Tag: 18041216B

PUCK700
 33466985



Process



Process ID : 1.34391410
 Process Time : 2018.03.30 19:41:21
 Process Stand : TSMIC@SSCB:1
 Stand Uncertainty : +/- 0.030%
 Fluid : H2O
 100% Rate : 38.6 KG/MIN
 Pickoff : 1
 Max Rate P/T : 29.77 PSIG/23.5 C

Results

Status : PASS

D1 : 0
 D2 : 1
 K1 : 4072.864
 K2 : 4245.318
 DT : 4.25
 FD : 0

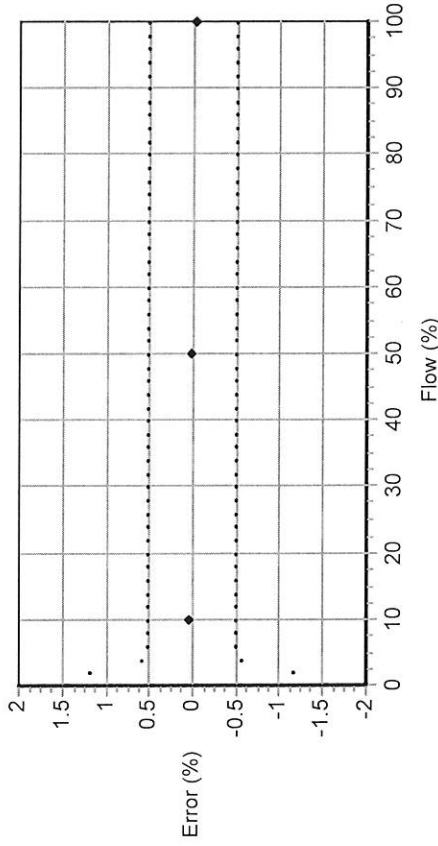
DTG : 0
 DFQ1 : 0
 DFQ2 : 0
 FlowCal : 137.884.50
 FFQ : 0
 FTG : 0

DensCal : 04073042454.25
 FCF : 137.88
 FT : 4.5

[Signature]
 18041216B

SUNIL SHRESTHA
 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	38.81745	38.82358	-0.016	0.500
10.0	3.86	5.768577	5.76565	0.051	0.500
50.0	19.3	19.35115	19.34654	0.024	0.500
100.0	38.6	39.40867	39.41835	-0.025	0.500

Micro Motion, Inc.

Transmitter Configuration Report

3401765

Product Code	Serial ID	Order ID	Line	Item	Customer Tag
CNG050S290NCAAEZZZ	13191012	10285247	2.1	3	
2700I13ABAEZWW	3401765	10285247	2.36	3	
PUCK700	33466985				

180412168

Process

Process ID : 1.34391975
Process Time : 2018.03.30 21:26:58
Process Stand : SSCB-CONFIG1@SSCB

Sensor

D1 : 0
D2 : 1
DFQ1 : 0
DFQ2 : 0
DT : 4.25
DTG : 0
Density Meter Factor : 1
FCF : 137.88
FD : 0
FFQ : 0
FT : 4.5
FTG : 0
Flow PCP : 30
Flow PCF : 0
K1 : 4072.864
K2 : 4245.318
Mass Flow Meter Factor : 1
Volume Flow Meter Factor : 1

Units

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
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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
Special Mass Time Unit : SEC

Faults

Frequency1 Fault Behavior : Upscale
Frequency1 Fault Value : 15000

180412/6B

Faults

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

Other

Calibration Process ID : 1.34391410

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 : 3496763

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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4/30/2018

Dispenser Serial Number 18041216

Side B

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

Transmitter Model Number: 2700
Sensor Model Number: CNG095
Transmitter Serial Number: 3401765
Sensor Serial Number 13191012
Flow Calibration Factor: 137.884.50
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