

Alicat Scientific, Inc.

7641 N. Business Park Dr., Tucson, AZ 85743 U.S.A., 1.888.290.6060

Calibration Data Sheet

Certification Number: 148273

Customer:	Alicat Scientific, Inc.
Sales Order Number:	SO327201
Serial Number:	127404
Model Number:	MWB-500SCCM-TFT
Software Version:	6v13.0-R22 (2v01)
P/D/I Values:	100 / 5000 / 0
Adder Codes:	5M, GAS: Air, RANGE: 200.00 SCCM, BD, TOTBD1, HC
Process Gas:	Selectable
Range:	200.00 SCCM(-200.00 to +200.00)
Gas Temperature:	21.9°C
Ambient Humidity:	35%
Calibration Procedure/Rev. #:	DOC-AUTOCAL-GASFLOW/Rev. 88
Calibrated By:	Pablo De La Cruz
Calibration Date:	19-Jan-2016
Full Scale Pressure:	60.00 PSIA
Pressure Accuracy:	+/-0.5% of Full Scale
Temperature Accuracy:	+/-1.5°C
Standard Temp. & Pressure:	25.00°C, 14.69595 PSIA
Normal Temp. & Pressure:	0.00°C, 14.69595 PSIA
Calibration due 1 yr. after receipt:	

Equipment Used

Flow:	TOOL-MOLBOX1	Temperature:	TOOL-TEMP18
Tool Due Date:	17-Dec-2021	Tool Due Date:	09-Jun-2018
Manufacturer/Model:	DH Instruments / Molbox1 A700K	Manufacturer/Model:	SELCO
Device Uncertainty:	NA \ Determined by Molbloc	Device Uncertainty:	+/- 0.75°C
Voltage:	TOOL-CMTR15	Pressure:	TOOL-PRESSURE8
Tool Due Date:	11-Sep-2020	Tool Due Date:	09-Mar-2018
Manufacturer/Model:	FLUKE 87V	Manufacturer/Model:	Alicat / P-100PSIG-D
Device Uncertainty:	+/- (0.1% + 1 digit)	Device Uncertainty:	+/- 0.2% of full scale
Flow:	TOOL-MOLBLOC3		
Tool Due Date:	05-Dec-2020		
Manufacturer/Model:	DH Instruments / 1E3-VCR-V-Q		
Device Uncertainty:	+/- 0.2% of reading		

All test equipment used for calibration is NIST traceable.

Calibration

Uncertainty: +/- (0.4% of Reading + 0.2% of Full Scale)
Units of measure: SCCM

Calibration Pressure: N/A

Output 1 Configuration
mini-DIN Pin #6

Output 2 Configuration
mini-DIN Pin #2

D.U.T.	Actual	In Tolerance	Output 1	Output 2
-200.56	-200.00	Yes	0.000 Vdc	5.12 Vdc
-200.96	-199.92	Yes	0.000 Vdc	5.12 Vdc
-150.55	-149.93	Yes	0.618 Vdc	5.12 Vdc
-100.29	-99.98	Yes	1.246 Vdc	5.12 Vdc
-50.16	-50.00	Yes	1.873 Vdc	5.12 Vdc
0.00	0.00	Yes	2.500 Vdc	5.12 Vdc
49.99	49.99	Yes	3.125 Vdc	5.12 Vdc
99.93	99.99	Yes	3.749 Vdc	5.12 Vdc
149.93	150.00	Yes	4.37 Vdc	5.12 Vdc
199.99	200.00	Yes	5.00 Vdc	5.12 Vdc

Notes: Max range of totalizer is -99999.99 to +99999.99. Total will increase with positive flow and decrease with negative flow. Total will rollover and display error message when it reaches max.

Calibrated By:

Pablo De La Cruz

1/19/2016 9:02:00 AM

QC Signature:

Alicat Scientific, Inc. is an ISO 9001 certified company.

CS1 Rev 17 Last Modified 15-May-2017

EXAMPLE



Alicat Scientific, Inc.

7641 N. Business Park Dr., Tucson, AZ 85743 U.S.A., 1.888.290.6060

Calibration Data Sheet

Certification Number: 156144

Customer:	Alicat Scientific, Inc.
Sales Order Number:	SO333632
Serial Number:	144192
Model Number:	MWB-500SCCM-D
Software Version:	6v21.0-R22
Adder Codes:	5M, GAS: Air, TOT, BD, HC
Process Gas:	Selectable
Range:	500.0 SCCM (-500.0 to +500.0)
Gas Temperature:	24.8°C
Ambient Humidity:	42.53%
Calibration Procedure/Rev. #:	DOC-AUTOCAL-GASFLOW/Rev. 92
Calibrated By:	Matt LaFever
Calibration Date:	16-Jan-2017
Full Scale Pressure:	60.00 PSIA
Pressure Accuracy:	+/-0.5% of Full Scale
Temperature Accuracy:	+/-1.5°C
Standard Temp. & Pressure:	25.00°C, 14.69595 PSIA
Normal Temp. & Pressure:	0.00°C, 14.69595 PSIA
Calibration due 1 yr. after receipt:	

Equipment Used

Flow:	TOOL-MOLBOX3	Temperature:	TOOL-TEMP18
Tool Due Date:	04-Nov-2021	Tool Due Date:	09-Jun-2018
Manufacturer/Model:	DH Instruments / Molbox1-A	Manufacturer/Model:	SELCO
Device Uncertainty:	NA \ Determined by Molbloc	Device Uncertainty:	+/- 0.75°C
Pressure:	TOOL-PRESSURE8	Flow:	TOOL-MOLBLOC9
Tool Due Date:	09-Mar-2018	Tool Due Date:	23-Jul-2020
Manufacturer/Model:	Alicat / P-100PSIG-D	Manufacturer/Model:	DH Instruments / 1E3-VCR-V-Q
Device Uncertainty:	+/- 0.2% of full scale	Device Uncertainty:	+/- 0.2% of reading
Voltage:	TOOL-CMTR25		
Tool Due Date:	11-Sep-2020		
Manufacturer/Model:	Fluke / 87V		
Device Uncertainty:	+/- (0.1% + 1 digit)		

All test equipment used for calibration is NIST traceable.

Calibration

Uncertainty: +/- (0.4% of Reading + 0.2% of Full Scale)

Calibration Pressure: N/A

Units of measure: SCCM

Output 1 Configuration

mini-DIN Pin #6

Output 2 Configuration

mini-DIN Pin #2

D.U.T.	Actual	In Tolerance	Output 1	Output 2
-501.0	-499.7	Yes	0.000 Vdc	5.12 Vdc
-373.0	-372.4	Yes	0.635 Vdc	5.12 Vdc
-252.1	-252.1	Yes	1.240 Vdc	5.12 Vdc
-125.0	-125.4	Yes	1.875 Vdc	5.12 Vdc
0.0	0.0	Yes	2.500 Vdc	5.12 Vdc
125.0	125.3	Yes	3.125 Vdc	5.12 Vdc
249.4	249.6	Yes	3.747 Vdc	5.12 Vdc
374.8	375.0	Yes	4.37 Vdc	5.12 Vdc
500.3	500.4	Yes	5.00 Vdc	5.12 Vdc

Notes: Max range of totalizer is 999999.9. Total will rollover and display error message when it reaches max.

Calibrated By:
QC Signature:

Matt LaFever

1/16/2017 9:50:00 AM

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CS1 Rev 17 Last Modified 15-May-2017

EXAMPLE



Alicat Scientific, Inc.

7641 N. Business Park Dr., Tucson, AZ 85743 U.S.A., 1.888.290.6060

Calibration Data Sheet

Certification Number: 133786

Customer:	Alicat Scientific, Inc.
Sales Order Number:	SO327201
Serial Number:	127403
Model Number:	MWB-500SCCM-TFT
Software Version:	5v12.0-R22 (2v01)
Adder Codes:	5M, GAS: Air, RANGE: 200.00 SCCM, BD, TOTBD1, HC
Process Gas:	Selectable
Range:	200.00 SCCM(-200.00 to +200.00)
Gas Temperature:	22.2°C
Ambient Humidity:	34%
Calibration Procedure/Rev. #:	DOC-AUTOCAL-GASFLOW/Rev. 88
Calibrated By:	Pablo De La Cruz
Calibration Date:	19-Jan-2016
Full Scale Pressure:	60.00 PSIA
Pressure Accuracy:	+/-0.5% of Full Scale
Temperature Accuracy:	+/-1.5°C
Standard Temp. & Pressure:	25°C, 14.6959 PSIA
Calibration due 1 yr. after receipt:	

Equipment Used

Flow:	TOOL-MOLBOX1	Temperature:	TOOL-TEMP18
Tool Due Date:	17-Dec-2021	Tool Due Date:	09-Jun-2018
Manufacturer/Model:	DH Instruments / Molbox1 A700K	Manufacturer/Model:	SELCO
Device Uncertainty:	NA \ Determined by Molbloc	Device Uncertainty:	+/- 0.75°C
Voltage:	TOOL-CMTR15	Pressure:	TOOL-PRESSURE8
Tool Due Date:	11-Sep-2020	Tool Due Date:	09-Mar-2018
Manufacturer/Model:	FLUKE 87V	Manufacturer/Model:	Alicat / P-100PSIG-D
Device Uncertainty:	+/- (0.1% + 1 digit)	Device Uncertainty:	+/- 0.2% of full scale
Flow:	TOOL-MOLBLOC3		
Tool Due Date:	05-Dec-2020		
Manufacturer/Model:	DH Instruments / 1E3-VCR-V-Q		
Device Uncertainty:	+/- 0.2% of reading		

All test equipment used for calibration is NIST traceable.

Calibration

Uncertainty: +/- (0.4% of Reading + 0.2% of Full Scale)
Units of measure: SCCM

Calibration Pressure: N/A

Output 1 Configuration
mini-DIN Pin #6

Output 2 Configuration
mini-DIN Pin #2

D.U.T.	Actual	In Tolerance	Output 1	Output 2
-200.04	-200.00	Yes	0.000 Vdc	5.12 Vdc
-100.21	-100.00	Yes	1.247 Vdc	5.12 Vdc
0.00	0.00	Yes	2.500 Vdc	5.12 Vdc
99.60	100.00	Yes	3.745 Vdc	5.12 Vdc
199.85	200.00	Yes	5.00 Vdc	5.12 Vdc

Notes: Max range of totalizer is -99999.99 to +99999.99. Total will increase with positive flow and decrease with negative flow. Total will rollover and display error message when it reaches max.

Calibrated By: Pablo De La Cruz
QC Signature:

1/19/2016 8:53:00 AM

EXAMPLE



Alicat Scientific, Inc.

7641 N. Business Park Dr., Tucson, AZ 85743 U.S.A., 1.888.290.6060

Calibration Data Sheet

Certification Number: 133789

Customer: Alicat Scientific, Inc.
Sales Order Number: SO327201
Serial Number: 127404
Model Number: MWB-500SCCM-TFT
Software Version: 5v12.0-R22 (2v01)
P/D/I Values: 100 / 5000 / 0
Adder Codes: 5M, GAS: Air, RANGE: 200.00 SCCM, BD, TOTBD1, HC
Process Gas: Selectable
Range: 200.00 SCCM(-200.00 to +200.00)
Gas Temperature: 21.9°C
Ambient Humidity: 35%
Calibration Procedure/Rev. #: DOC-AUTOCAL-GASFLOW/Rev. 88
Calibrated By: Pablo De La Cruz
Calibration Date: 19-Jan-2016
Full Scale Pressure: 60.00 PSIA
Pressure Accuracy: +/-0.5% of Full Scale
Temperature Accuracy: +/-1.5°C
Standard Temp. & Pressure: 25°C, 14.6959 PSIA
Calibration due 1 yr. after receipt:

Equipment Used

Flow: TOOL-MOLBOX1
Tool Due Date: 17-Dec-2021
Manufacturer/Model: DH Instruments / Molbox1 A700K
Device Uncertainty: NA \ Determined by Molbloc

Temperature: TOOL-TEMP18
Tool Due Date: 09-Jun-2018
Manufacturer/Model: SELCO
Device Uncertainty: +/- 0.75°C

Voltage: TOOL-CMTR15
Tool Due Date: 11-Sep-2020
Manufacturer/Model: FLUKE 87V
Device Uncertainty: +/- (0.1% + 1 digit)

Pressure: TOOL-PRESSURE8
Tool Due Date: 09-Mar-2018
Manufacturer/Model: Alicat / P-100PSIG-D
Device Uncertainty: +/- 0.2% of full scale

Flow: TOOL-MOLBLOC3
Tool Due Date: 05-Dec-2020
Manufacturer/Model: DH Instruments / 1E3-VCR-V-Q
Device Uncertainty: +/- 0.2% of reading

All test equipment used for calibration is NIST traceable.

Calibration

Uncertainty: +/- (0.4% of Reading + 0.2% of Full Scale)

Calibration Pressure: N/A

Units of measure: SCCM

Output 1 Configuration

mini-DIN Pin #6

Output 2 Configuration

mini-DIN Pin #2

D.U.T.	Actual	In Tolerance	Output 1	Output 2
-200.56	-200.00	Yes	0.000 Vdc	5.12 Vdc
-100.20	-100.00	Yes	1.248 Vdc	5.12 Vdc
0.00	0.00	Yes	2.500 Vdc	5.12 Vdc
99.70	100.00	Yes	3.746 Vdc	5.12 Vdc
199.84	200.00	Yes	5.00 Vdc	5.12 Vdc

Notes: Max range of totalizer is -99999.99 to +99999.99. Total will increase with positive flow and decrease with negative flow. Total will rollover and display error message when it reaches max.

Calibrated By: Pablo De La Cruz

1/19/2016 9:01:00 AM

QC Signature:

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CS1 Rev 17 Last Modified 15-May-2017

EXAMPLE



Alicat Scientific, Inc.

7641 N. Business Park Dr., Tucson, AZ 85743 U.S.A., 1.888.290.6060

Calibration Data Sheet

Certification Number: 133793

Customer: Alicat Scientific, Inc.
Sales Order Number: SO327201
Serial Number: 127405
Model Number: MWB-500SCCM-TFT
Software Version: 5v12.0-R22 (2v01)
P/D/I Values: 100 / 5000 / 0
Adder Codes: 5M, GAS: Air, RANGE: 200.00 SCCM, BD, TOTBD1, HC
Process Gas: Selectable
Range: 200.00 SCCM(-200.00 to +200.00)
Gas Temperature: 21.5°C
Ambient Humidity: 36%
Calibration Procedure/Rev. #: DOC-AUTOCAL-GASFLOW/Rev. 88
Calibrated By: Pablo De La Cruz
Calibration Date: 19-Jan-2016
Full Scale Pressure: 60.00 PSIA
Pressure Accuracy: +/-0.5% of Full Scale
Temperature Accuracy: +/-1.5°C
Standard Temp. & Pressure: 25°C, 14.6959 PSIA
Calibration due 1 yr. after receipt:

Equipment Used

Flow:	TOOL-MOLBOX1	Temperature:	TOOL-TEMP18
Tool Due Date:	17-Dec-2021	Tool Due Date:	09-Jun-2018
Manufacturer/Model:	DH Instruments / Molbox1 A700K	Manufacturer/Model:	SELCO
Device Uncertainty:	NA \ Determined by Molbloc	Device Uncertainty:	+/- 0.75°C
Voltage:	TOOL-CMTR15	Pressure:	TOOL-PRESSURE8
Tool Due Date:	11-Sep-2020	Tool Due Date:	09-Mar-2018
Manufacturer/Model:	FLUKE 87V	Manufacturer/Model:	Alicat / P-100PSIG-D
Device Uncertainty:	+/- (0.1% + 1 digit)	Device Uncertainty:	+/- 0.2% of full scale
Flow:	TOOL-MOLBLOC3		
Tool Due Date:	05-Dec-2020		
Manufacturer/Model:	DH Instruments / 1E3-VCR-V-Q		
Device Uncertainty:	+/- 0.2% of reading		

All test equipment used for calibration is NIST traceable.

Calibration

Uncertainty: +/- (0.4% of Reading + 0.2% of Full Scale)

Calibration Pressure: N/A

Units of measure: SCCM

Output 1 Configuration

mini-DIN Pin #6

Output 2 Configuration

mini-DIN Pin #2

D.U.T.	Actual	In Tolerance	Output 1	Output 2
-199.96	-200.00	Yes	0.000 Vdc	5.12 Vdc
-100.05	-100.00	Yes	1.249 Vdc	5.12 Vdc
0.00	0.00	Yes	2.500 Vdc	5.12 Vdc
99.99	100.00	Yes	3.750 Vdc	5.12 Vdc
200.03	200.00	Yes	5.00 Vdc	5.12 Vdc

Notes: Max range of totalizer is -99999.99 to +99999.99. Total will increase with positive flow and decrease with negative flow. Total will rollover and display error message when it reaches max.

Calibrated By: Pablo De La Cruz

1/19/2016 9:08:00 AM

QC Signature:

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CS1 Rev 17 Last Modified 15-May-2017

EXAMPLE



Analyt-MTC

Calibration Data Sheet

Certification Number: 241779

Return Number:	R37479
Serial Number:	164033
Model Number:	35809MLWB-METROHM
Software Version:	6v21.0-R22
Process Gas:	Selectable
Range:	500.0 SCCM
Gas Temperature:	25.74°C
Ambient Humidity:	45.44%
Calibration Procedure/Rev. #:	DOC-AUTOCAL-GASFLOW/Rev. 93
Calibrated By:	Karl Powell
Calibration Date:	23-Aug-2019
Full Scale Pressure:	4000 mbar
Pressure Accuracy:	+/-0.5% of Full Scale
Temperature Accuracy:	+/-1.5°C
Standard Temp. & Pressure:	21.00°C, 14.69232 PSIA
Normal Temp. & Pressure:	0.00°C, 14.69595 PSIA
Calibration due 1 yr. after receipt:	

Equipment Used

Flow:	TOOL-FLOW65	Voltage:	TOOL-CMTR27
Tool Due Date:	10-May-2020	Tool Due Date:	11-Sep-2020
Manufacturer/Model:	Alicat / MCM-500SCCM-D	Manufacturer/Model:	Fluke / 87V
Device Uncertainty:	±0.32% Reading or ±0.02% F.S.	Device Uncertainty:	+/- (0.1% + 1 digit)

All test equipment used for calibration is NIST traceable.

Calibration

Uncertainty: +/- (0.8% of Reading + 0.2% of Full Scale)
Units of measure: SCCM

Calibration Pressure: N/A

Output 1 Configuration

mini-DIN Pin #6

As Found

D.U.T.	Actual	In Tolerance
0.0	0.0	Yes
48.7	124.9	No
97.6	249.9	No
146.6	374.8	No
195.6	499.8	No

Output 2 Configuration

mini-DIN Pin #2

As Left

D.U.T.	Actual	In Tolerance	Output 1	Output 2
0.0	0.0	Yes	0.000 Vdc	5.12 Vdc
125.0	124.9	Yes	1.250 Vdc	5.12 Vdc
250.0	249.9	Yes	2.500 Vdc	5.12 Vdc
374.9	374.9	Yes	3.749 Vdc	5.12 Vdc
499.9	499.8	Yes	5.00 Vdc	5.12 Vdc

Calibrated By:
QC Signature:

Karl Powell

8/23/2019 11:12:00 AM

CS1 Rev 17 Last Modified 15-May-2017

