



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

Certificate of Calibration

Serial No. 173960 - 04-Apr-2018

Device Under Test

| | | | |
|----------------------------|-----------------------------------|---|-----------------------------|
| Customer: | Premier Control Technologies Ltd. | Calibration Procedure/Rev. #: | DOC-AUTOCAL-GASFLOW/Rev. 93 |
| Sales Order Number: | SO341748 | Calibrated By: | Kristofer Powell |
| Serial Number: | 173960 | Calibration Date: | 04-Apr-2018 |
| Model Number: | MCR-50SLPM-D | Certification Number: | 192152 |
| Software Version: | 7v16.0-R22 | Full Scale Pressure: | 160.00 PSIA |
| P/D/I Values: | 100 / 15000 / 0 | Pressure Accuracy: | +/-0.5% of Full Scale |
| Adder Codes: | 5M, 5IN, GAS: Air, DS | Temperature Accuracy: | +/-1.5°C |
| Process Gas: | Selectable | Standard Temp. & Pressure: | 25.00°C, 14.69595 PSIA |
| Calibration Gas: | Air | Normal Temp. & Pressure: | 0.00°C, 14.69595 PSIA |
| Range: | 50.00 SLPM | Calibration due 1 yr. after receipt: | |
| Gas Temperature: | 26.56°C | | |
| Ambient Humidity: | 31.14% | | |

Equipment Used

| | | | | | |
|---------------------|--------------------------------|---------------------|-------------|---------------------|-------------------------|
| Voltage: | TOOL-CMTR23 | Temperature: | TOOL-TEMP18 | Pressure: | TOOL-PRESSURE16- |
| Tool Due Date: | 03-Apr-2019 | Tool Due Date: | 09-Jun-2018 | | 140PSIG |
| Manufacturer/Model: | FLUKE 87V | Manufacturer/Model: | SELCO | Tool Due Date: | 04-Dec-2018 |
| Device Uncertainty: | +/- (0.1% + 1 digit) | Device Uncertainty: | +/- 0.75°C | Manufacturer/Model: | Alicat / P-100PSIG-D |
| Flow: | TOOL-FLOW41 | | | Device Uncertainty: | +/- 0.05% of full scale |
| Tool Due Date: | 08-May-2018 | | | | |
| Manufacturer/Model: | Alicat / MCM-30SLPM-D | | | | |
| Device Uncertainty: | +/- (0.3% Reading + 0.2% F.S.) | | | | |

All test equipment used for calibration is NIST traceable.

Calibration

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

Units of measure: SLPM

Calibration Pressure: Inlet: 0 PSIG

Outlet: VAC

Output 1 Configuration

mini-DIN Pin #6

Output 2 Configuration

mini-DIN Pin #2

| D.U.T. | Actual | In Tolerance | Output 1 | Output 2 |
|--------|--------|--------------|-----------|----------|
| 0.00 | 0.00 | Yes | 0.000 Vdc | 5.12 Vdc |
| 12.50 | 12.49 | Yes | 1.250 Vdc | 5.12 Vdc |
| 25.02 | 24.99 | Yes | 2.502 Vdc | 5.12 Vdc |
| 37.43 | 37.41 | Yes | 3.743 Vdc | 5.12 Vdc |
| 50.09 | 50.08 | Yes | 5.01 Vdc | 5.12 Vdc |

Notes: 0-5V set-point.

Tech Signature:

QC Signature:

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

CS1 Rev 17 Last Modified 15-May-2017





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Certificate of Calibration

Serial No. 173962 - 04-Apr-2018

Device Under Test

| | | | |
|----------------------------|-----------------------------------|---|-----------------------------|
| Customer: | Premier Control Technologies Ltd. | Calibration Procedure/Rev. #: | DOC-AUTOCAL-GASFLOW/Rev. 93 |
| Sales Order Number: | SO341748 | Calibrated By: | Alexander Farley |
| Serial Number: | 173962 | Calibration Date: | 04-Apr-2018 |
| Model Number: | MC-1SLPM-D | Certification Number: | 192219 |
| Software Version: | 7v16.0-R22 | Full Scale Pressure: | 160.00 PSIA |
| P/D/I Values: | 100 / 5000 / 0 | Pressure Accuracy: | +/-0.5% of Full Scale |
| Adder Codes: | 5M, 5IN, GAS: Air, DS | Temperature Accuracy: | +/-1.5°C |
| Process Gas: | Selectable | Standard Temp. & Pressure: | 25.00°C, 14.69595 PSIA |
| Calibration Gas: | Air | Normal Temp. & Pressure: | 0.00°C, 14.69595 PSIA |
| Range: | 1.000 SLPM | Calibration due 1 yr. after receipt: | |
| Gas Temperature: | 26.13°C | | |
| Ambient Humidity: | 31.46% | | |

Equipment Used

| | | | | | |
|---------------------|------------------------------|---------------------|-------------|---------------------|-------------------------|
| Voltage: | TOOL-CMTR24 | Temperature: | TOOL-TEMP18 | Pressure: | TOOL-PRESSURE16- |
| Tool Due Date: | 24-Apr-2018 | Tool Due Date: | 09-Jun-2018 | | 140PSIG |
| Manufacturer/Model: | FLUKE 87V | Manufacturer/Model: | SELCO | Tool Due Date: | 04-Dec-2018 |
| Device Uncertainty: | +/- (0.1% + 1 digit) | Device Uncertainty: | +/- 0.75°C | Manufacturer/Model: | Alicat / P-100PSIG-D |
| Flow: | TOOL-FLOW21 | | | Device Uncertainty: | +/- 0.05% of full scale |
| Tool Due Date: | 20-Apr-2018 | | | | |
| Manufacturer/Model: | Alicat / MCM-1.2SLPM-D | | | | |
| Device Uncertainty: | 0.4% of Reading + 0.2% of FS | | | | |

All test equipment used for calibration is NIST traceable.

Calibration

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

Units of measure: SLPM

Calibration Pressure: Inlet: 0 PSIG

Outlet: VAC

Output 1 Configuration

mini-DIN Pin #6

Output 2 Configuration

mini-DIN Pin #2

| D.U.T. | Actual | In Tolerance | Output 1 | Output 2 |
|--------|--------|--------------|-----------|----------|
| 0.000 | 0.000 | Yes | 0.000 Vdc | 5.12 Vdc |
| 0.249 | 0.250 | Yes | 1.245 Vdc | 5.12 Vdc |
| 0.499 | 0.500 | Yes | 2.495 Vdc | 5.12 Vdc |
| 0.749 | 0.750 | Yes | 3.745 Vdc | 5.12 Vdc |
| 0.999 | 1.000 | Yes | 5.00 Vdc | 5.12 Vdc |

Notes: 0-5V set-point.

Tech Signature:

QC Signature:

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

Certificate of Calibration

Serial No. 173961 - 04-Apr-2018

Device Under Test

| | | | |
|----------------------------|-----------------------------------|---|-----------------------------|
| Customer: | Premier Control Technologies Ltd. | Calibration Procedure/Rev. #: | DOC-AUTOCAL-GASFLOW/Rev. 93 |
| Sales Order Number: | SO341748 | Calibrated By: | Kristofer Powell |
| Serial Number: | 173961 | Calibration Date: | 04-Apr-2018 |
| Model Number: | MCP-20SLPM-D | Certification Number: | 192145 |
| Software Version: | 7v16.0-R22 | Full Scale Pressure: | 160.00 PSIA |
| P/D/I Values: | 100 / 12000 / 0 | Pressure Accuracy: | +/-0.5% of Full Scale |
| Adder Codes: | 5M, SIN, GAS: Air, DS | Temperature Accuracy: | +/-1.5°C |
| Process Gas: | Selectable | Standard Temp. & Pressure: | 25.00°C, 14.69595 PSIA |
| Calibration Gas: | Air | Normal Temp. & Pressure: | 0.00°C, 14.69595 PSIA |
| Range: | 20.00 SLPM | Calibration due 1 yr. after receipt: | |
| Gas Temperature: | 26.68°C | | |
| Ambient Humidity: | 31.21% | | |

Equipment Used

| | | | | | |
|---------------------|--------------------------------|---------------------|-------------|---------------------|-------------------------|
| Voltage: | TOOL-CMTR23 | Temperature: | TOOL-TEMP18 | Pressure: | TOOL-PRESSURE16- |
| Tool Due Date: | 03-Apr-2019 | Tool Due Date: | 09-Jun-2018 | | 140PSIG |
| Manufacturer/Model: | FLUKE 87V | Manufacturer/Model: | SELCO | Tool Due Date: | 04-Dec-2018 |
| Device Uncertainty: | +/- (0.1% + 1 digit) | Device Uncertainty: | +/- 0.75°C | Manufacturer/Model: | Alicat / P-100PSIG-D |
| Flow: | TOOL-FLOW41 | | | Device Uncertainty: | +/- 0.05% of full scale |
| Tool Due Date: | 08-May-2018 | | | | |
| Manufacturer/Model: | Alicat / MCM-30SLPM-D | | | | |
| Device Uncertainty: | +/- (0.3% Reading + 0.2% F.S.) | | | | |

All test equipment used for calibration is NIST traceable.

Calibration

Uncertainty: +/- (0.9% of Reading + 0.2% of Full Scale)
Units of measure: SLPM

Calibration Pressure: Inlet: 0 PSIG
Outlet: VAC

Output 1 Configuration

mini-DIN Pin #6

Output 2 Configuration

mini-DIN Pin #2

| D.U.T. | Actual | In Tolerance | Output 1 | Output 2 |
|--------|--------|--------------|-----------|----------|
| 0.00 | 0.00 | Yes | 0.000 Vdc | 5.12 Vdc |
| 5.01 | 5.00 | Yes | 1.252 Vdc | 5.12 Vdc |
| 10.00 | 10.00 | Yes | 2.500 Vdc | 5.12 Vdc |
| 15.01 | 15.00 | Yes | 3.750 Vdc | 5.12 Vdc |
| 20.02 | 20.00 | Yes | 5.00 Vdc | 5.12 Vdc |

Notes: 0-5V set-point.

Tech Signature:

QC Signature:

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