

Title: **VALUMASS SERIES INSTALLATION, WIRING, AND DIMENSIONS**

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*Eldridge Products, Inc.*

**Valumass**<sup>™</sup>

**Thermal Mass Flow Meters**

**400-440 & 500-540 Series**

*Installation, Wiring, and Dimensions*



**[www.epiflow.com](http://www.epiflow.com)**

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**Applicable Models:**

**Series 400-440**

**Series 500-540**

**Approvals**

CE Approved Instrument



400 & 440 Series Flow Transmitter: Manufacturer rated as Type 4X, IP66

500 & 540 Series Flow Transmitter: Manufacturer rated as flame proof Ex, Type 4X, IP66

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## Introduction, Power Requirements, and Signal Interface

### Introduction

Your Valumass™ flow meter includes a flow sensing element, temperature sensing element, digital SIM/Base board, digital controller board and a transmitter enclosure. The flow sensor is mounted in an insertion probe support or an inline flow section. Depending upon your requirements, all these components may be integrated into one flow transmitter assembly or you may have a flow transmitter and a second, remote electronics enclosure. In either configuration, the digital controller converts the nonlinear input signal received from the flow sensor to linear 0–5/10 VDC & 4–20 mA output signals. RS485 Modbus RTU communications are embedded in the firmware as standard, with optional BACnet communications available.

### Unpacking Your Instrument

Although your Valumass™ thermal mass flow meter instruments are rugged, they should be inspected upon delivery to assure that no damage has taken place during transit. *If upon inspection it is found that damage has occurred, notify the carrier immediately and place a claim for damaged goods.* The shipping container or crate should be handled with care and carefully opened to avoid possible damage to the contents. After the container is opened the contents should be carefully removed and the individual pieces checked against the packing list. Please note that the packing list will show all the options that were ordered for your instrument. Most of these options will be incorporated into the flow meter itself and will not be separate components. The last verification is to check that the equipment and calibration range as shown on the documentation match your purchase order specifications. *If you discover a discrepancy or have any questions about what you have received, contact EPI immediately.*

### Power Requirements

Power requirements for Valumass™ flow meters with the “-DC24” option is user-supplied 18 to 24 Volts DC @ 250 mA.

Power requirements for Valumass™ flow meters with the “-AC115” option is 100 - 120 VAC 50/60 Hz standard.

Power requirements for Valumass™ flow meters with the “-AC230” option is 210 - 240 VAC 50/60 Hz Standard.

Our recommendation on wire size is 18 Ga. stranded for all AC wiring. If conduit is used to enclose the power input line, it should be suitable for the application, electrically conductive, and connected within the enclosure to the earth ground. If the flow meter includes a remote electronics assembly, then the flow transmitter power is provided by the connection to the remote assembly. Ten feet of five-wire connection cable is provided with the standard remote assembly. If more cable is required, please inform your EPI sales representative at the time of order. The transmitter is independent of cable length and will not suffer any signal degradation with length changes. The 4–20mA analog output wire should be sized for no more than 5 Ohms resistance across the loop and not less than 22 AWG.

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**Signal Interface**

All Valumass™ flow meters provide both 0–5/10 Volts DC and 4–20 mA flow and temperature analog output signals as well as RS485 Modbus RTU communications, with optional BACnet communications available. Voltage signals should not be sent over long distances due to small currents causing voltage drops across the wire pair. If the voltage is to be sent over a distance (i.e., 50 feet), the wire AWG should be sized to reduce the voltage drop to acceptable levels. Knowing your load impedance is the only way this calculation may be achieved. Our 4–20 mA signal is provided to prevent this sort of signal loss. Current loops are normally not susceptible to noise and are not affected by voltage drops around the loop. However, it is important when using a current loop not to exceed the level of load resistance that the current loop may drive.

Examples:	DC Voltage Input		Coefficient		Resistance Loop Ohms Max.
*24 VDC Powered EPI Flowmeter Power Input Supply:	24	x	32.708	=	785
115/230 VAC Powered EPI Flowmeter Power Input Supply:	20	x	32.708	=	654
Isolated - Customer Powered 4-20 mA Current Loop:	24	x	34.167	=	820
*Isolated - Customer Powered 4-20 mA Current Loop:	20	x	34.167	=	683

\*Same formula applies for less than 24 VDC input, substitute lesser value in equation.

*In our standard configuration, our flow meters 4-20 mA output signal is not loop-powered. However, this option is available upon request. If a flow meter must be changed from the standard configuration to loop-powered in the field, contact the factory for assistance. The loop power is only for the output signal and does not provide power to the rest of the electronics.*

ValuMass™ Series flowmeters also have the option to provide a 0 – 1 kHz frequency output proportional to the calibrated flow rate. The signal is both Sink and Source capable. The following specifications apply when this option is ordered:

Sinking (User provides power input)	40 VDC max. 200mA max.
Sourcing (ValuMass™ provides power input)	15 VDC 50mA max. 300-ohm min.

Frequency Output Formula:

$$\text{Frequency Span } x \text{ (Actual Flow Rate / Full Scale)} = \text{Frequency Output}$$

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## General Installation and Guidelines

The Valumass™ thermal dispersion sensor must be exposed to the flowing gas within the process pipe at a location that provides a uniform and consistent flow profile across the pipe diameter. Anomalies in the actual flow profile or installations in non-circular ducts may require adjustments for the best accuracy. Although changes to the process gas composition, gas temperature, line pressure, etc. can affect the overall accuracy of the flow readings, these effects are often minimal when compared to their effect on other flow measurement technologies.

The temperature parameters for the transmitter are listed in the specification section of this manual. Acceptable limits for the gas temperature and the environmental temperature limits to which the transmitter electronics may be subjected are also provided.

We recommend installing the flow meter at a location where the gas is dry or above the dew point temperature. Installations which allow large droplets of water to condense and contact the sensing element must be avoided. Applications with large quantities of gas-borne particulates should also be avoided as the sensor may become dirty which could affect the heat loss to the flowing gas and therefore have a negative impact on the overall accuracy of the flow readings.

Optimum installation requires sufficient straight run to allow a uniform, non-swirling, fully developed flow profile within the flow conduit. ***The illustration on the next page is provided as a general guideline for minimum straight run requirements.*** Depending upon the specific location details, straight run requirements to produce a satisfactory flow profile may vary. It is best to avoid installations which are immediately downstream of bends, abrupt cross-sectional area increases or decreases, fans, louvers, or other equipment installed in the line. These situations can cause non-uniform flow profiles and swirl which can result in signal errors. Problematic flow profiles require flow conditioning to improve meter performance.

Our inline style flow meters are calibrated with the sensors in a fixed position within the provided flow section. Our insertion flow meters are calibrated near the ANSI Point-of-Average-Flow (.243r) positioning in the process line with a fully developed flow profile. You may need to make minor adjustments in the sensor position for best results in your process line. With either style of flow meter, you may also need to utilize the Valumass™ software using flow signal adjustments for the most accurate flow readings due to a non-uniform flow profile in your process line.

The Valumass™ firmware supports two methods of flow signal adjustments for superior accuracy: C-Factor, or Point-Wise adjustments for the most accurate flow readings:

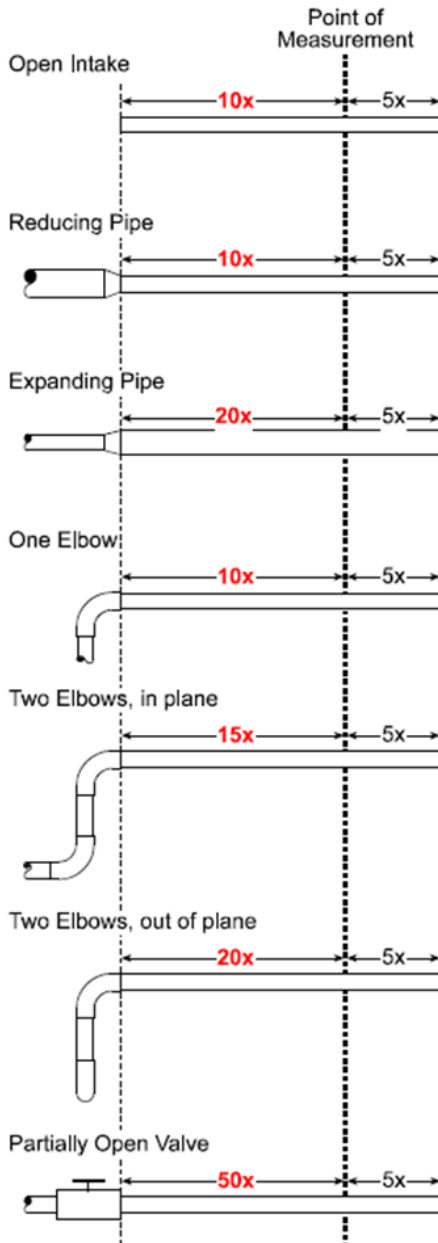
***Please see the EPICom Live User Manual for complete description of these menus and their functions or consult the factory for additional information.***

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***Straight Run Requirements***

*General Guideline for Minimum Straight Run Requirements*



**Note:**

**10x within the illustration represents 10 ID lengths and 15x represents 15 ID lengths and so forth.**

**Some of EPI inline flow meters come with flow conditioning plates that can assist with shorter upstream conditions. Consult the factory for additional information concerning options to reduce the required straight run.**





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***Installation of Inline Flow Meters***

The inline style flow meter assembly includes the flow sensing element, temperature sensing element, digital SIM/Base board, digital controller board, transmitter enclosure, and flow section. Depending on the flow section size and/or other requirements, the flow section may include a nozzle or flow conditioning plates. The flow section is typically specified to match the user's flow conduit and is plumbed directly in the flow line. Inline mounting styles are available through EPI for line sizes 1/4" pipe and larger. Consult our factory for flow section end mounting options.

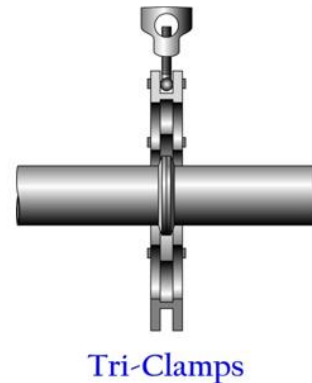
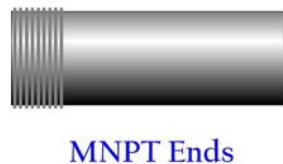
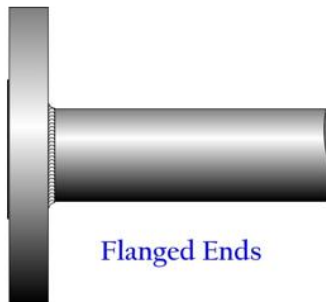
Inline flow meters are calibrated with the flow sensing element mounted in place within the flow section. The sensor should not be removed as the accuracy of the flow signal will be affected. Should ever it become necessary to remove the sensing element for any reason, the element should be replaced in the same alignment as it was originally positioned. Please consult the factory before disassembling.

Inline flow meters will have the flow direction marked on their flow section for a visual reference during installation.

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***Available end connection styles***

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***Installation of Insertion Flow Meters***

The insertion style flow meters include the flow sensing element, temperature sensing element, digital SIM/Base board, digital controller board, transmitter enclosure, and the probe assembly which supports the sensing elements. This design requires the probe assembly to be inserted into the process gas flow conduit.

Insertion models are available with a ½" O. D. Probe. Insertion style flow meters may be installed with properly sized bored-through tube fittings to mount them in place. Tube fittings, with or without mounting flange, are available from the factory as an option. Installing the tube fitting consists of preparing the flow conduit to accept the fitting by first drilling a clearance hole for the transmitter probe assembly, welding it in place, or threading it into the proper size half coupling which has been welded to the flow conduit. The tube length will be determined by EPI based upon the installation specifications.

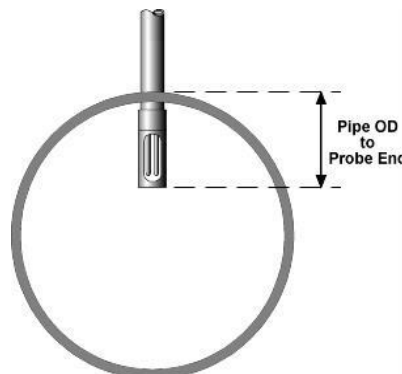
Optional ball valve assemblies are available through EPI which allow the removal of the insertion style flow meters for service, calibration, cleaning, etc. The valve provides a means to seal off leaks of the process gas at the point of insertion after the probe assembly has been removed. The ball valve assembly installation requires fitting the flow section to which the insertion probe assembly will be inserted with a threaded half coupling of the proper size to accommodate the ball valve retractor. In some instances, this requires direct threading together (or with a reducing bushing) of the retractor assembly. In other cases, it requires welding the half coupling in place and drilling a clearance hole through for the probe assembly. If the flow section is under pressure, a hot tap drill rig (not available through EPI) may be required.

The maximum pressure for insertion style flow meters is stated in the General Specifications section of this manual. To reduce the possibility of personal injury when servicing the flow meter, each size is rated such that the maximum force applied to the transmitter is approximately 25 pounds. ***Caution should be exercised if applying higher pressure and a holding device may be required to prevent the transmitter from being projected out of the process line when removing or replacing the transmitter assembly.***

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*Visual representation of installation at the recommended insertion depth*

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**Insertion Depth Guidelines**

\*The information below assumes a well-developed flow profile in the process line

Sch 40 Nominal Pipe Size	Inside Diameter (inches)	Wall Thickness (inches)	Cross-sectional Area (ft <sup>2</sup> )	Pipe OD to Probe End (inches)
2"	2.067	0.154	0.0233	1.3
2.5"	2.469	0.203	0.0332	1.3
3"	3.068	0.216	0.0513	1.3
4"	4.026	0.237	0.0884	1.7
6"	6.065	0.280	0.2006	1.8
8"	7.981	0.322	0.3474	2.1
10"	10.020	0.365	0.5476	2.4
12"	12.000	0.375	0.7854	2.6
14"	13.250	0.375	0.9575	2.8
16"	15.250	0.375	1.2684	3.0
18"	17.250	0.375	1.6230	3.2
20"	19.250	0.375	2.0211	3.5
24"	23.250	0.375	2.9483	4.0

\*For other pipe sizes: please use the insertion depth with the nearest inside diameter associated with your process pipe, or contact the EPI Service department

**Final Equation:** Depth + Fitting Height = Total Depth from top of fitting to probe end.

**EXAMPLE WITH 4" SCH40 PIPE USING A 1.8" TALL (INSTALLED HEIGHT) COMPRESSION FITTING:**

Depth for 4" Sch40 pipe from chart: 1.7"

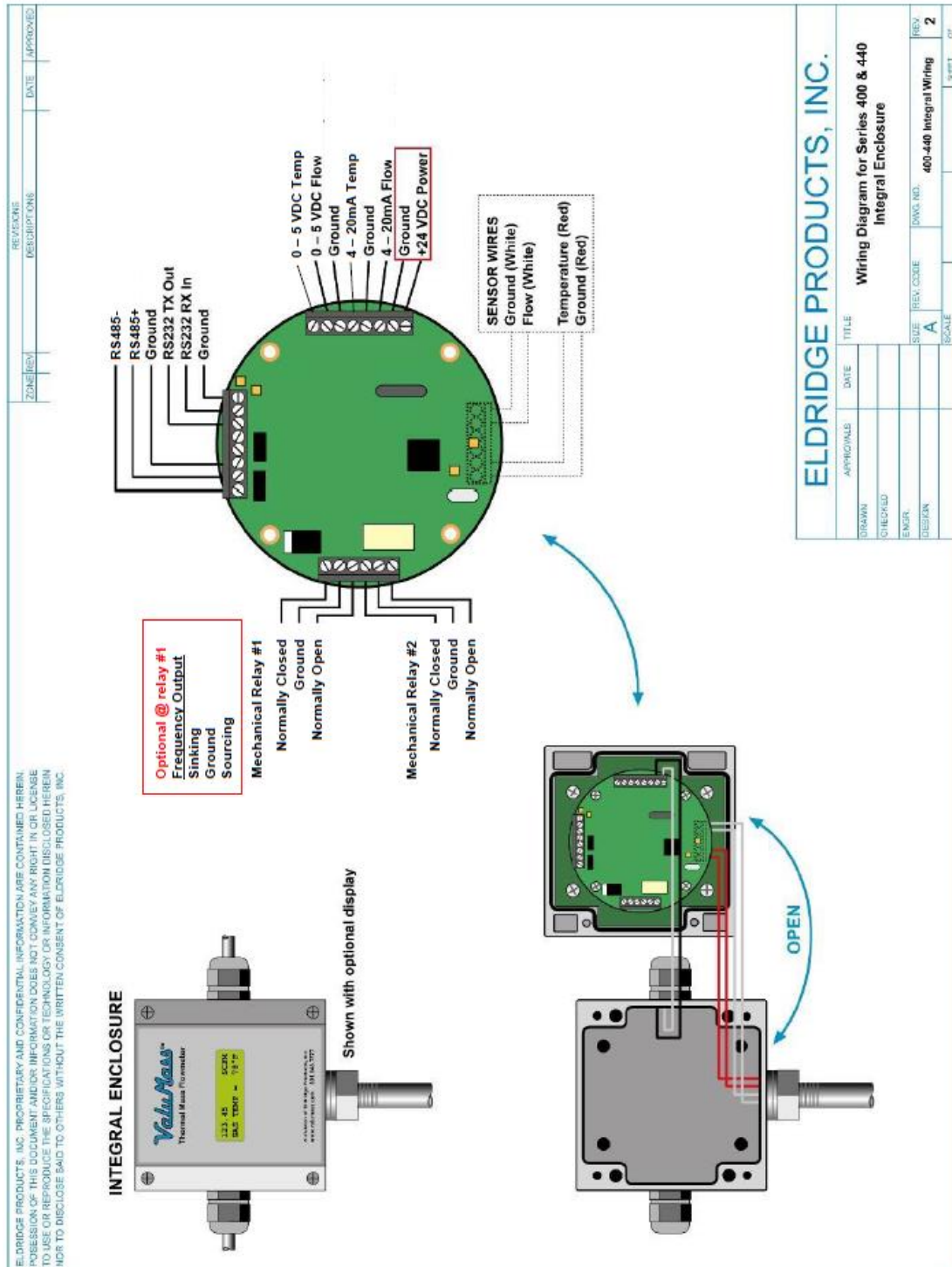
1.7" (depth) + 1.8" (fitting height) = 3.5" (total depth from top of fitting to probe end)

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**Wiring Diagrams**

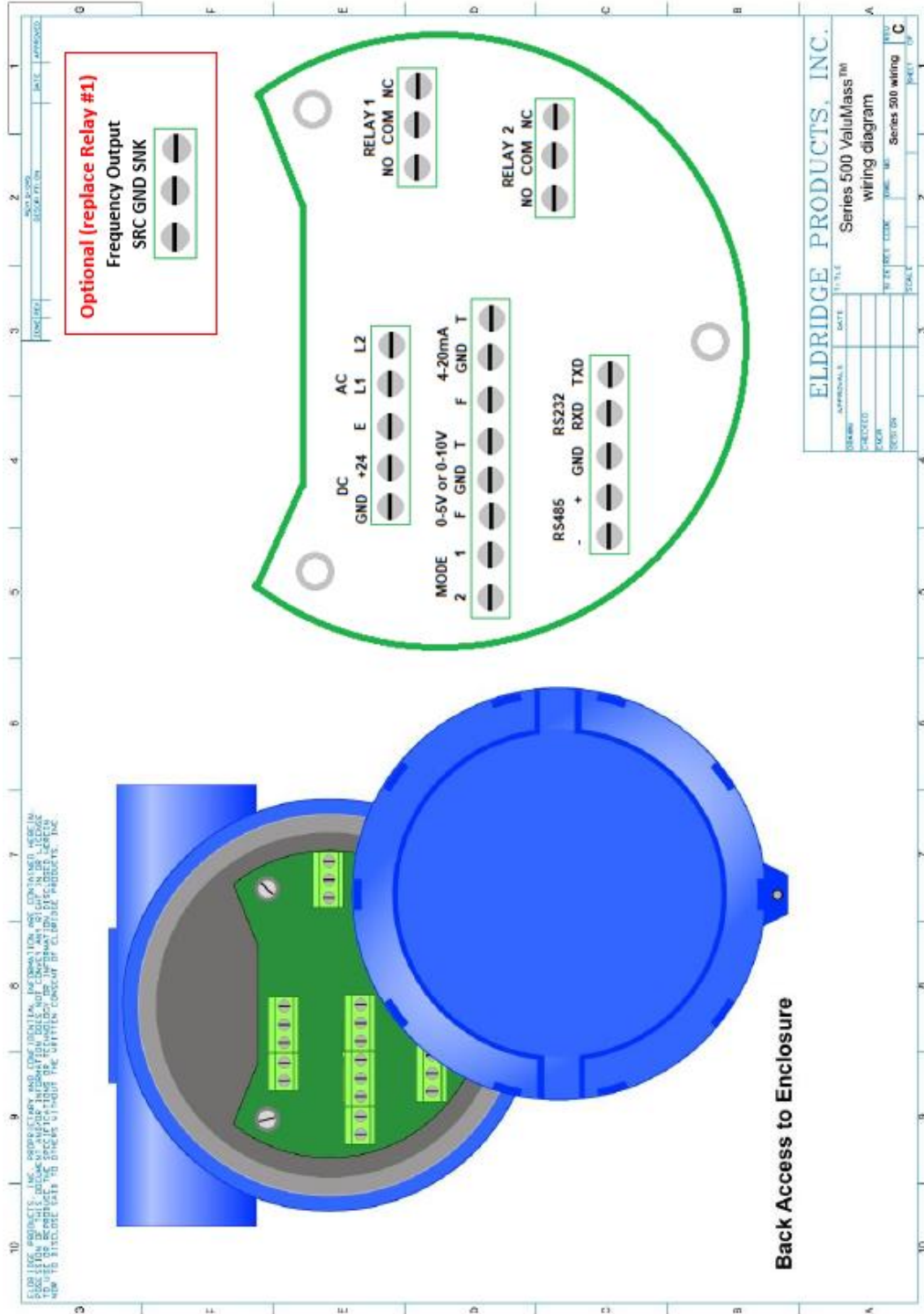
**400 & 440 Series**



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**500 & 540 Series**



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**AC Transformer**

**Specifications**  
 Power — 115 VAC 50/60 Hz (230 VAC Optional)  
 Output — Variable VSC based on load  
 115 VAC — JP1 & JP2  
 230 VAC — JP3

Power input levels shall be specified by Eldridge Products and shall not be exceeded.

T1 — 6 VA (Volt Amp)  
 F1 — 115 VAC = 100mA; 230 VAC = 50mA  
 C1 — 470µF, 25V  
 C2 — 0.1µ, 50V  
 C3 — 470µF, 25V  
 D1 — Bridge Rectifier 100V  
 JP1 — 0 ohm resistor  
 JP2 — 0 ohm resistor  
 JP3 — 0 ohm resistor  
 PCB — 70100501  
 Z1 — Transorb (115 VAC)  
 Z2 — Transorb (230 VAC)

Acceptable T1  
 Prem SPW 1305, 6VA 115/230

Acceptable F1  
 Littelfuse 218 Series or equal  
 Wickmann Series 195 or equal

**ELDRIDGE PRODUCTS, INC.**  
 TITLE  
 Component Layout & Parts List  
 115VAC or 230VA  
 Input Power Supply

DRAWING NUMBER  
 MP AC Transformer Rev0

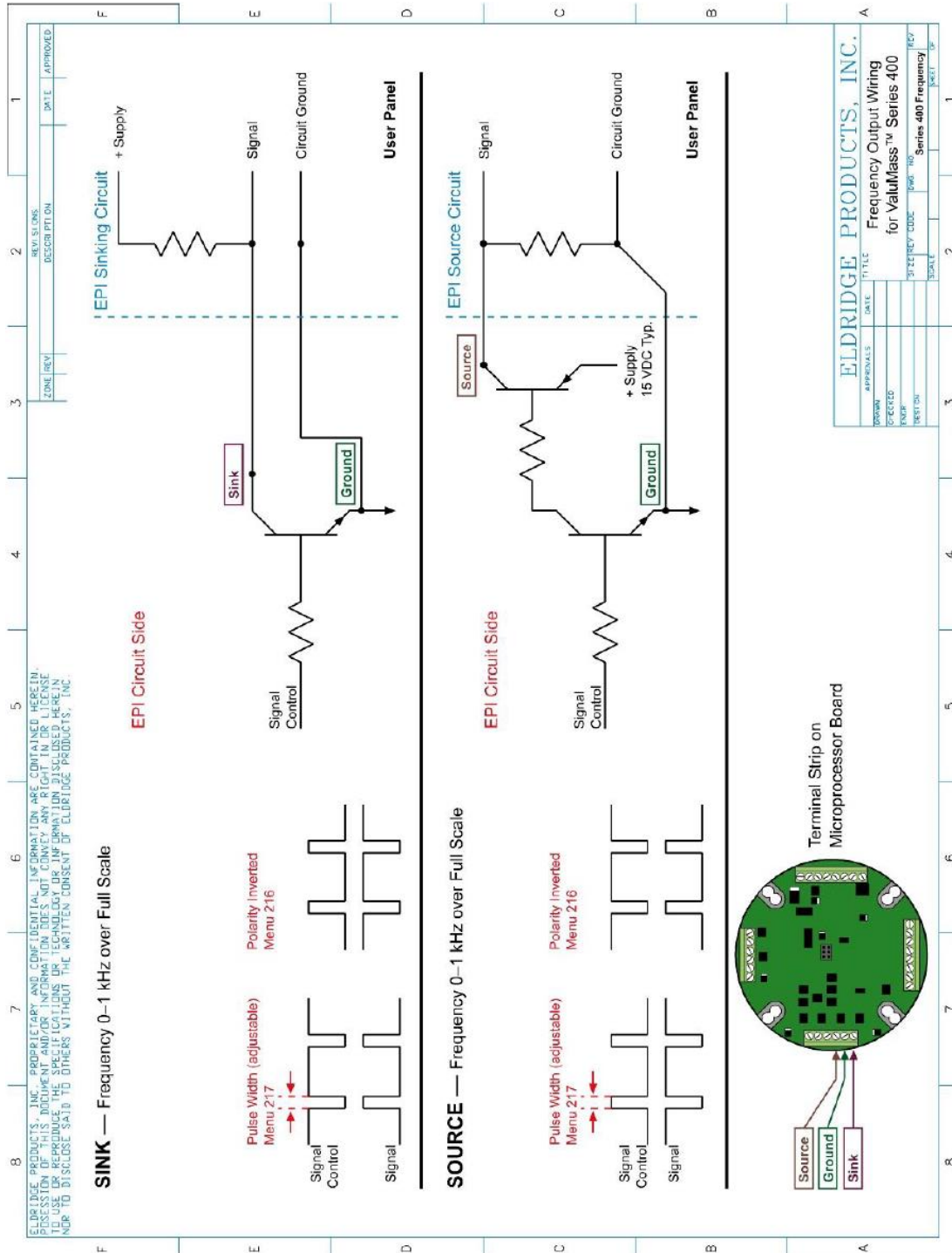
**MD C019S**



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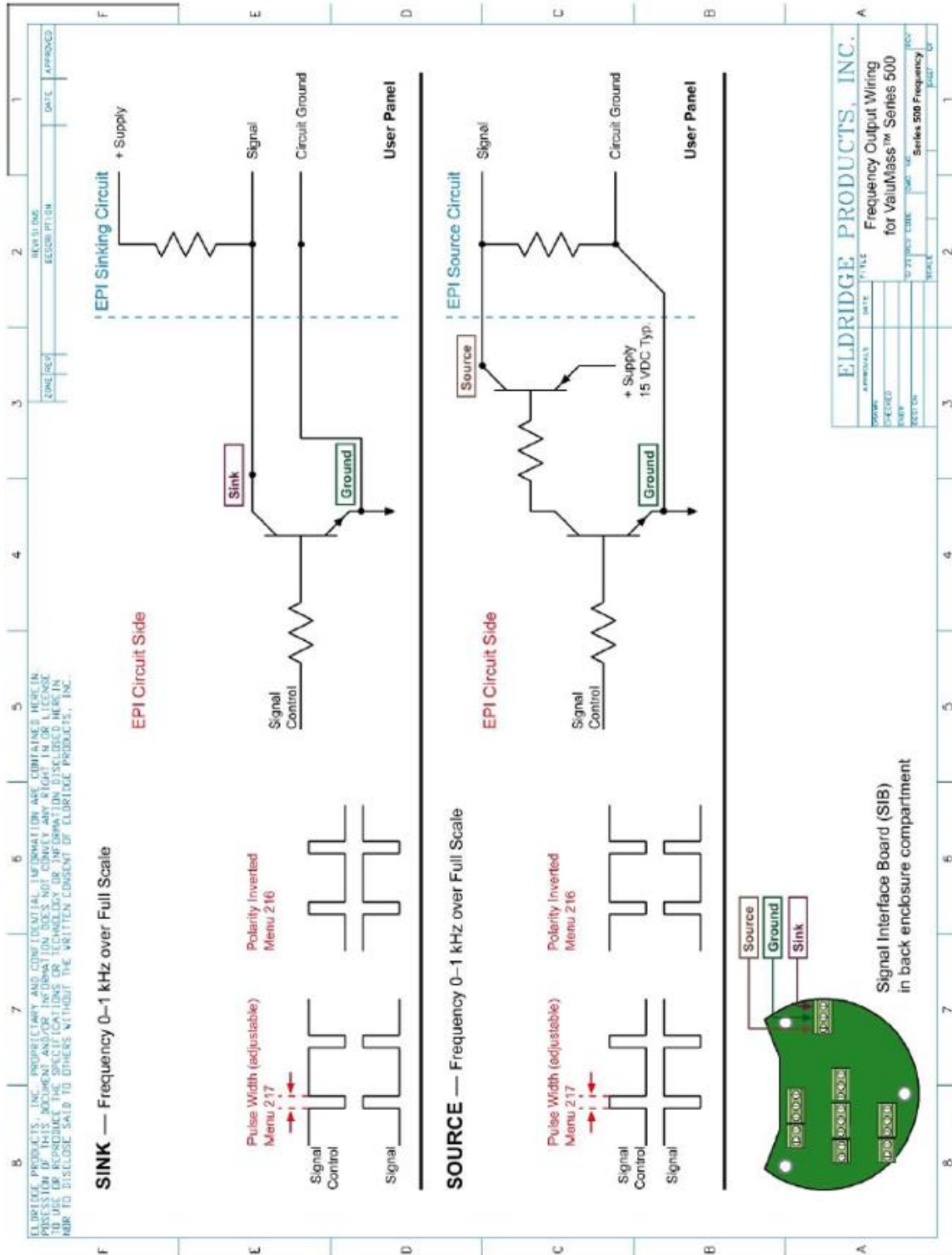
**Frequency Output (400 & 440 Series)**



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*Frequency Output (500 & 540 Series)*



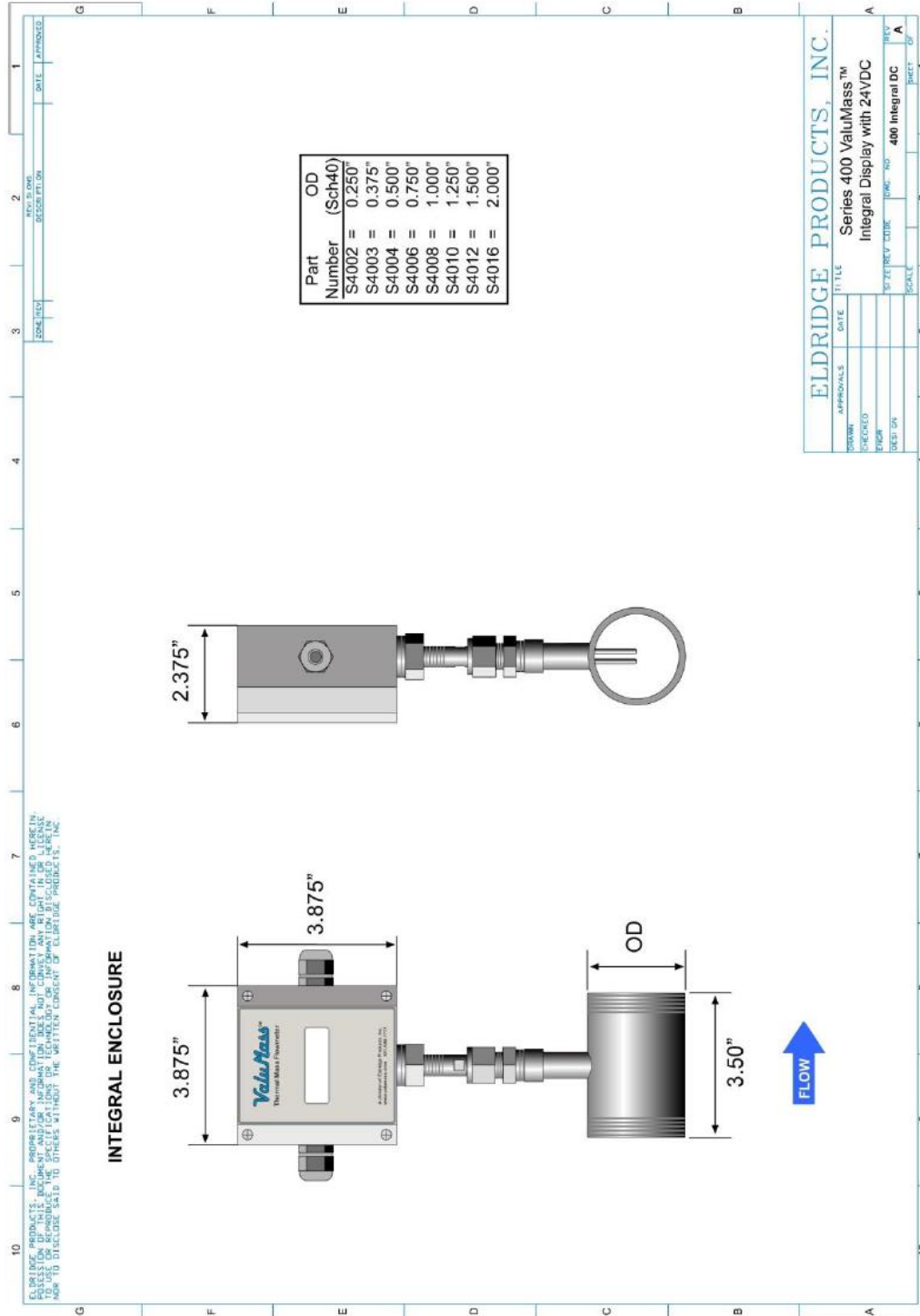


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**Dimensional Diagrams**

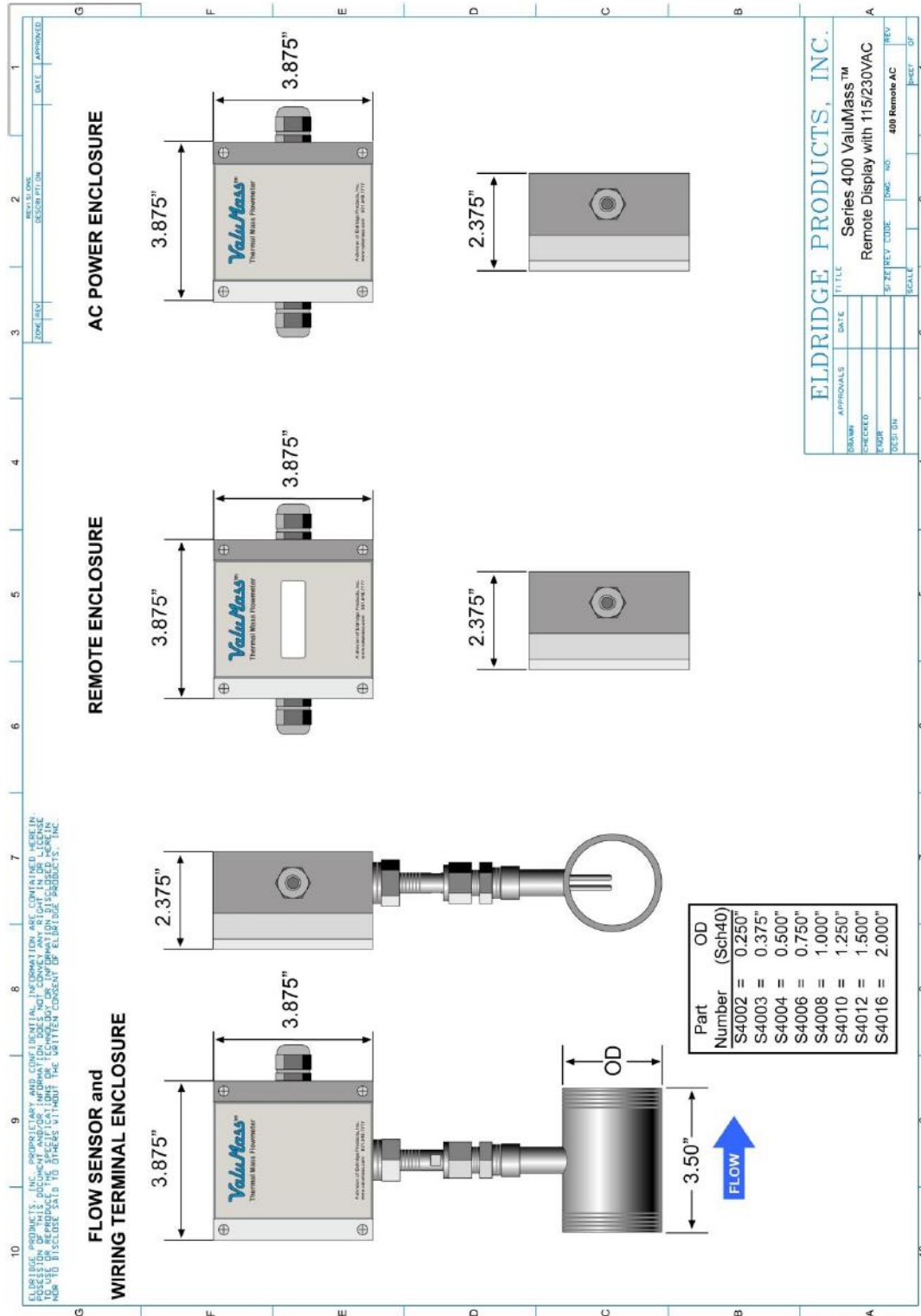
**400 Series (Integral)**



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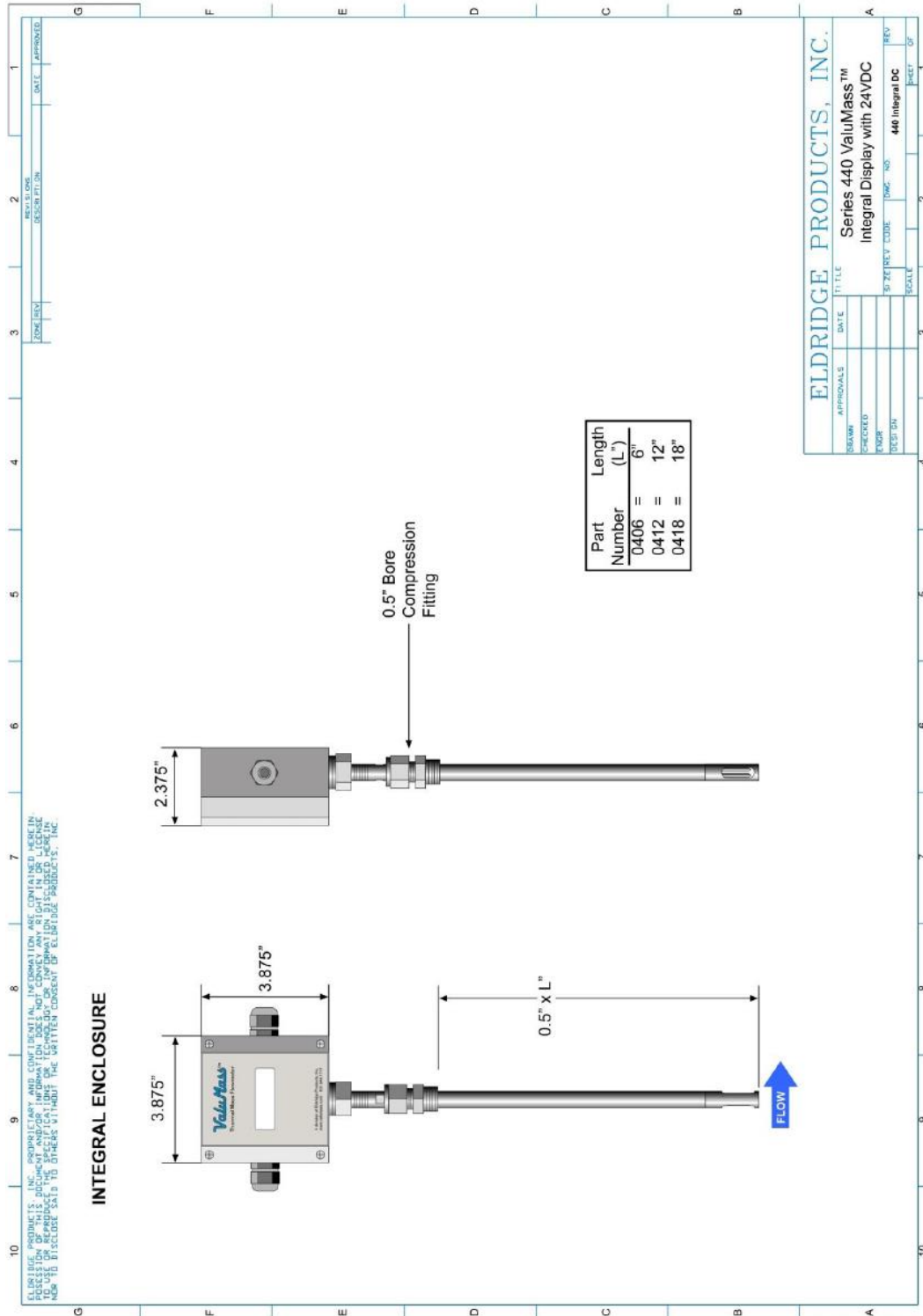
**400 Series (Remote Electronics or 115/230VAC)**



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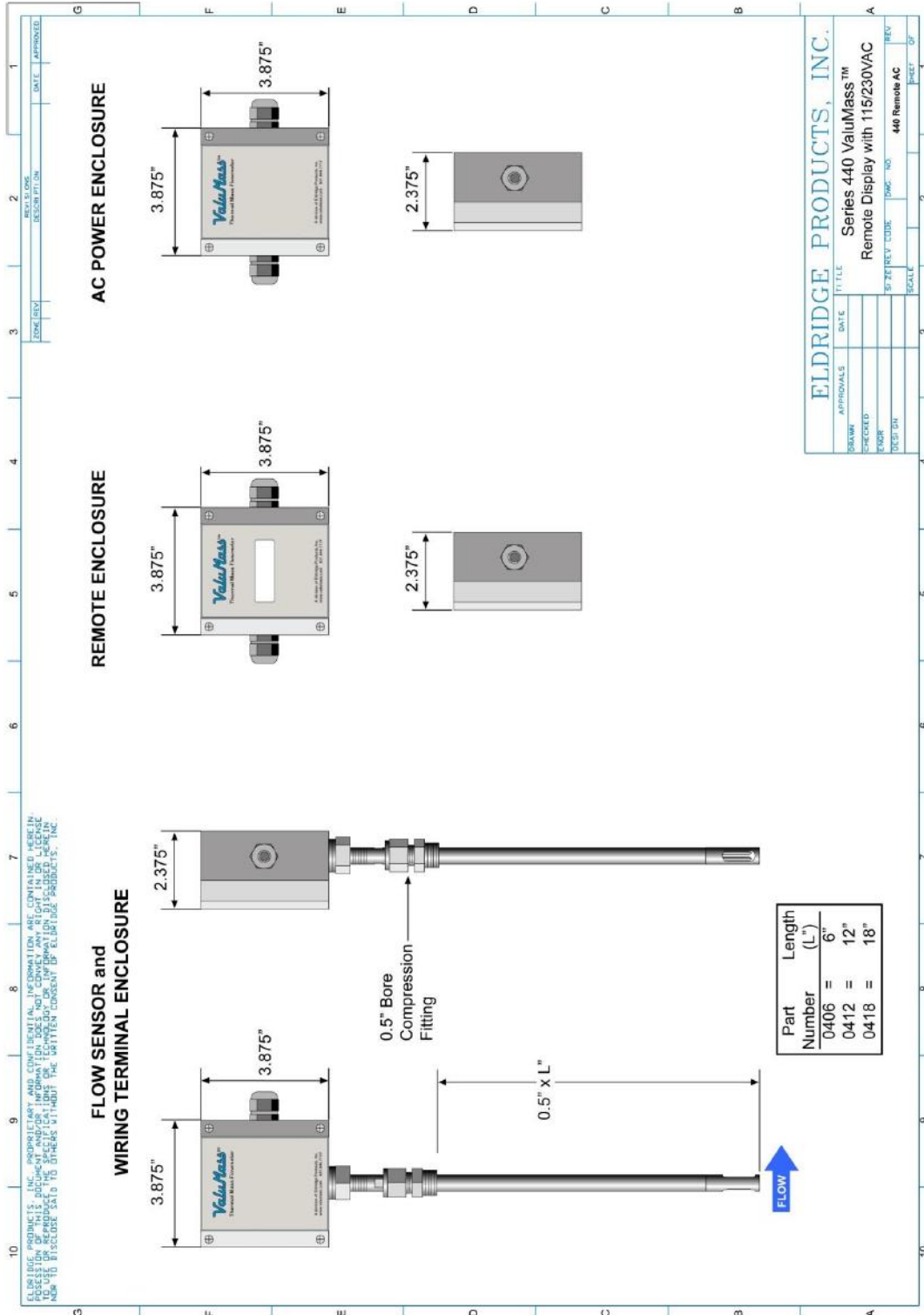
**440 Series (Integral)**



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**440 Series (Remote Electronics or 115/230VAC)**



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**500 Series (Integral)**

0.5" FNPT

2.75"

3.375"

2.00"

**ELDRIDGE PRODUCTS, INC.**

APPROVALS	DATE	TITLE
DESIGN		Series 500 ValuMass™
CHECKED		Dimensional Drawing
ENGR.		
DESIGN		
SIZE	REV CODE	DWG. NO.
A		500 Dim Drawing
SCALE		SHEET
		OF

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4.50"

4.75"

3.50"

OD

FLOW

Part Number	OD (Sch40)
S4002	= 0.250"
S4003	= 0.375"
S4004	= 0.500"
S4006	= 0.750"
S4008	= 1.000"
S4010	= 1.250"
S4012	= 1.500"
S4016	= 2.000"

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**500 Series (Remote Electronics)**

ZONE/REV	REVISIONS DESCRIPTIONS	DATE	APPROVED

Part Number	OD (Sch-40)
S4002	= 0.250"
S4003	= 0.375"
S4004	= 0.500"
S4006	= 0.750"
S4008	= 1.000"
S4010	= 1.250"
S4012	= 1.500"
S4016	= 2.000"

ELDRIDGE PRODUCTS, INC.

DESIGN	DATE	TITLE
		Series 500 ValuMass™ with Remote Electronics Option
CHECKED		
EMKR.		
DESIGN		

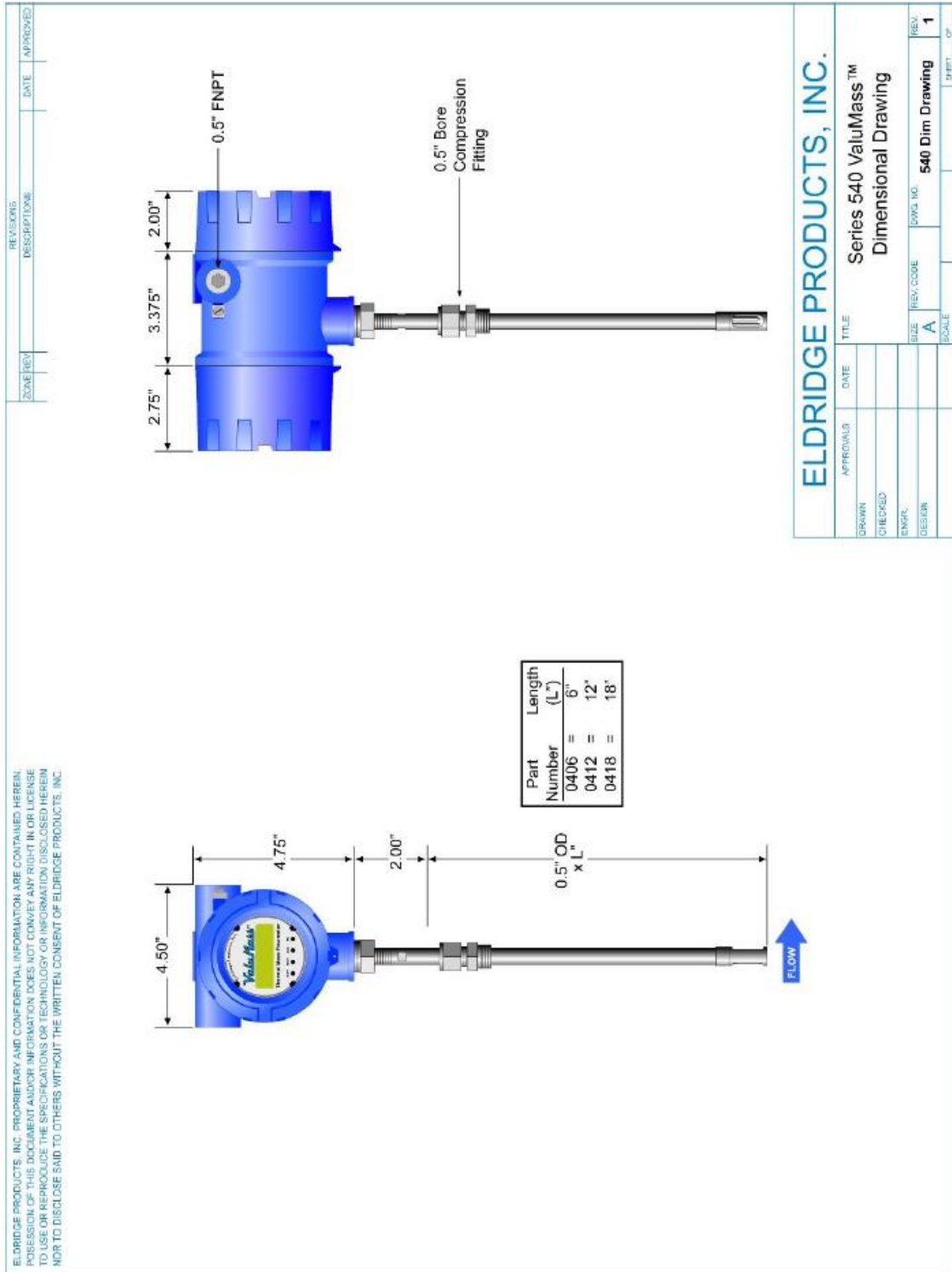
SIZE	REV. CODE	DWG. NO.	500 Remote Drawing	REV. 2
A				
SCALE				SHEET 01 OF 01



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**540 Series (Integral)**





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**540 Series (Remote Electronics)**

ZONE	REV	REVIEWS	DATE	APPROVED

Part Number	Length (L")
0406	6"
0412	12"
0418	18"

**ELDRIDGE PRODUCTS, INC.**

APPROVALS	DATE	TITLE

Series 540 ValuMass™  
with Remote Electronics Option

SIZE	REV. CODE	DWG. NO.	REV.
A		540 Remote Drawing	1

SCALE:      SHEET: 1 OF 1

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## Factory Calibration

The factory calibration of an Eldridge Products Inc. thermal gas mass flow meter is a complex process. Our first step is to perform a temperature compensation of each flow sensor to eliminate temperature effects on the flow readings within a specified gas temperature range. Once this calibration process has been performed, it need not be done again, unless the sensor or sensor interface module be replaced.

Next, we perform a flow calibration of every flow meter. Although all flow curves are similar, they are different enough to require individual calibrations to be run for each flow meter to yield the best accuracy.

Lastly, we program the flow meter's microprocessor with the linearizing coefficients, specific flow range values, etc. as required to meet the requirements for each flow meter.

Flow calibration is a process of comparing or verifying the meter under strict test conditions against a meter of better accuracy used as a calibration standard. EPI flow calibrations are traceable to NIST through traceability of the instrumentation and equipment used.

Flow readings are checked against a calibration standard at many flow points and the data is graphed. From this graph the non-linearity of the raw flow signal is determined and aligned through our signal processor to yield a linear flow output signal.

Although thermal gas mass flow meters have good, long-term stability, EPI recommends a factory calibration and certification be performed as necessary to conform to most quality assurance programs. Where quality assurance programs do not require recertification, it shall be left at the users' discretion when to recertify.

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*Every calibrated flow meter is shipped with both product quality certificate of conformance and calibration accuracy forms.*

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### THE PRODUCT QUALITY CERTIFICATE OF CONFORMANCE CONTAINS:

- ✓ PRODUCT INSPECTION & QUALITY STATEMENT
- ✓ CONFORMANCE STATEMENT
- ✓ CUSTOMER AND ORDER INFORMATION
- ✓ FLOW METER INFORMATION AND CALIBRATION PARAMETERS
- ✓ CUSTOMER STATED PROCESS CONDITIONS
- ✓ APPROVALS (IF APPLICABLE)

### THE CALIBRATION ACCURACY FORM CONTAINS:

- ✓ ACCURACY SPECIFICATION
- ✓ PASS OR FAILURE OF CALIBRATION VALUES
- ✓ CUSTOMER STATED PROCESS CONDITIONS
- ✓ CONFORMANCE STATEMENT

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**General Specifications and Information**

**400 & 440 Series Specifications**

<b>Linear Signal Output</b>	0-5 VDC & 4-20mA flow outputs (Flow and Temperature)
<b>Mechanical Event Relay(s)</b>	1-Amp @ 30 VDC, user-selectable alarm functions (See EPICom Live User Manual for list of functions) <i>Frequency Output replaces Relay #1 if specified</i>
<b>Communication Protocols</b>	RS232 & RS485 Modbus RTU; Optional BACnet
<b>Display LCD 2-line 16-character</b>	Rate, Total, Milliwatts, Temperature, Event
<b>Accuracy including linearity*</b>	+/- (1% of reading + 0.5% of full scale + GTC)
<b>Repeatability</b>	+/- 0.2% of full scale
<b>Sensor response time</b>	1 second to 63% of final value
<b>Turn down ratio</b>	100:1 @ 1500 SFPM / 7.6 NMPS minimum full scale
<b>Withstands ambient temperature (electronics)</b>	0° to 130° F (-18° to 55° C)
<b>Suitable process gas temperature range**</b>	0°F to 257° F (-18°C to 125° C) Consult factory for extended range
<b>Gas temperature coefficient (GTC)</b>	0.02 % full scale/°C
<b>Gas pressure effect</b>	Negligible over +/- 20% of absolute calibration pressure
<b>Pressure rating maximum</b>	Inline: 500 PSIG Insertion (Stainless steel ferrule): 500 PSIG Insertion (Teflon ferrule): 25 PSIG
<b>Input power requirement</b>	6 Watts 24 Vdc @ 250mA (Standard) 120 Vac 50/60 Hz (Optional) 240 Vac 50/60 Hz (Optional)
<b>Flow Meter power requirements</b>	5 watts maximum
<b>Date/Time RAM Back-up</b>	Lithium Battery, 2.5-3.5v, 10-year life
<b>Wetted materials</b>	316L Stainless Steel unless specified
<b>Standard temperature &amp; pressure (STP)</b>	70°F & 29.92" Hg (Air 0.075 lb./cubic foot) Optional 0°C & 1.0132 BarA (Air 0.081 lb./cubic foot) Or user specified STP at time of order
<b>NIST traceable calibration</b>	Standard

\*EPI is not responsible for measurement errors due to flow profile irregularities caused by installation, piping configurations, surface corrosion or scale, valve placement, etc.

\*\* Specify overage process operating temperature, with high & low limits.

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**500 & 540 Series Specifications**

<b>Linear Signal Output</b>	0-5 VDC & 4-20mA flow outputs (Flow and Temperature)
<b>Mechanical Event Relay(s)</b>	1-Amp @ 30 VDC, user-selectable alarm functions (See EPICom Live User Manual for list of functions) <i>Frequency Output replaces Relay #1 if specified</i>
<b>Communication Protocols</b>	RS232 & RS485 Modbus RTU; Optional BACnet
<b>Display LCD 2-line 16-character</b>	Rate, Total, Milliwatts, Temperature, Event
<b>Accuracy including linearity*</b>	+/- (1% of reading + 0.5% of full scale + GTC)
<b>Repeatability</b>	+/- 0.2% of full scale
<b>Sensor response time</b>	1 second to 63% of final value
<b>Turn down ratio</b>	100:1 @ 1500 SFPM / 7.6 NMPS minimum full scale
<b>Withstands ambient temperature (electronics)</b>	0° to 130° F (-18° to 55° C)
<b>Suitable process gas temperature range**</b>	0°F to 257° F (-18°C to 125° C) Consult factory for extended range
<b>Gas temperature coefficient (GTC)</b>	0.02 % full scale/°C
<b>Gas pressure effect</b>	Negligible over +/- 20% of absolute calibration pressure
<b>Pressure rating maximum</b>	Inline: 500 PSIG Insertion (Stainless steel ferrule): 500 PSIG Insertion (Teflon ferrule): 25 PSIG
<b>Input power requirement</b>	6 Watts 24 Vdc @ 250mA (Standard) 120 Vac 50/60 Hz (Optional) 240 Vac 50/60 Hz (Optional)
<b>Flow Meter power requirements</b>	5 watts maximum
<b>Date/Time RAM Back-up</b>	Lithium Battery, 2.5-3.5v, 10-year life
<b>Wetted materials</b>	316L Stainless Steel unless specified
<b>Standard temperature &amp; pressure (STP)</b>	70°F & 29.92" Hg (Air 0.075 lb./cubic foot) Optional 0°C & 1.0132 BarA (Air 0.081 lb./cubic foot) Or user specified STP at time of order
<b>NIST traceable calibration</b>	Standard

\*EPI is not responsible for measurement errors due to flow profile irregularities caused by installation, piping configurations, surface corrosion or scale, valve placement, etc.

\*\* Specify overage process operating temperature, with high & low limits.

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**Specification Notice**

Specifications contained herein are subject to change without notice, EPI cannot guarantee the applicability or suitability of our products in all situations since it is impossible to anticipate or control every condition under which our products and specifications may be used.

**Terms and Conditions**

Eldridge Products Inc. Terms & Conditions are available on [www.epiflow.com](http://www.epiflow.com)

**Approvals**

 CE Approved Instrument

400 & 440 Series Flow Transmitter: Manufacturer rated as Type 4X, IP66

500 & 540 Series Flow Transmitter: Manufacturer rated as flame proof Ex, Type 4X, IP66

**Limited Warranty**

Eldridge Products, Inc. (EPI) warrants its products to be free from defects in materials and workmanship for one year from the date of factory shipment. If there is a defect, the purchaser must notify EPI of the defect within the warranty period. Upon receipt of the defective product, EPI will either repair or replace the defective product at its sole option. EPI MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AS TO THE PRODUCTS. EPI MAKES NO WARRANTY THAT THE GOODS SOLD TO ANY PURCHASER ARE FIT FOR ANY PARTICULAR PURPOSE. FURTHERMORE, EPI MAKES NO WARRANTY OF MERCHANTABILITY WITH RESPECT TO ANY PRODUCTS SOLD TO ANY PURCHASERS. There are no other warranties that extend beyond the description on any brochure or price quote.

**Limited Acceptance**

Acceptance of any offer is limited to its terms. Acceptances or confirmations that state additional or differing terms from this price quote shall be operative as acceptances, but all additional or differing terms shall be deemed material alterations within the meaning of Commercial Code Section 2207(2)(b), and notice of objection to them pursuant to Commercial Code Section 2207(2)(c) is hereby given. The laws of the State of California govern this contract and venue is Monterey County. Risk of loss passes F.O.B. EPI factory. Payment due in full in US Dollars within credit terms granted from factory shipment. Additional fees shall include interest on unpaid balances that are outstanding for more than granted credit terms, plus all collection costs and attorneys' fees incurred in collecting any outstanding balance. All additional or differing terms do not become part of the contract between EPI and any purchaser.

The terms of any offer are expressly limited to the terms detailed in any product brochure or price quote. Any modification to any of the terms of this offer must be in writing and must be signed by an officer of EPI.

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### ***Service Work***

If repair work or calibration is desired; Please contact [service@epiflow.com](mailto:service@epiflow.com) or call the factory and a return materials authorization (RMA) number will be issued for each job.

All units sent in for service work shall include the entirety of the flow meter(s) with a completed RMA form. Please make sure the sensor and/or probe are protected, and all flow meters are packaged with foam or bubble wrap to avoid damage.

All meters should be shipped to:

**Eldridge Products, Inc.**  
**465 Reservation Rd.**  
**Marina, CA. 93933**  
**Attn: Service Department [RMA Number]**

Each flow meter returned is subject to evaluation. THERE IS MINIMUM METER EVALUATION CHARGE OF \$250. THIS CHARGE INCLUDES ANALYSIS OF FUNCTIONALITY, HARDWARE, FIRMWARE, VISUAL INSPECTION, AND PAYABLE WITH OR WITHOUT SUBSEQUENT ADDITIONAL REPAIR/SERVICE WORK.

Once evaluation of your flow meter(s) is complete, a price quotation for the repair/service work to be performed will be issued.

### ***Storage***

EPI recommends equipment and instrumentation be stored in an environmentally controlled storage shelter or warehouse when not in use. All openings should be sealed off to prevent foreign materials from entering the instrumentation.

### ***EPITerm Software***

[Please follow link for EPITerm Software](#)

### ***EPITerm Interface User Manual***

[Please follow link for EPITerm Interface User Manual](#)

### ***Customer Satisfaction Survey***

Thank you for your recent business with Eldridge Products Inc. and hope you will participate in our customer satisfaction survey. It takes 5-10 minutes

[Take the EPI Customer Satisfaction Survey now](#)

**About this survey:** Your information and responses will remain anonymous, while its contents will be used for improving our company offerings.

**\*Once completed:** save a copy, and email it to [Service@epiflow.com](mailto:Service@epiflow.com)



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## EU Declaration of Conformity

This is to declare, in accordance with **Directives 2014/34/EU, 97/23/EC, 2004/108/EC, 93/68/EEC, 92/31/EEC, 89/336/EEC**, that the following products are designed and manufactured in accordance with the requirements of the directives. The product has been constructed with sound engineering practice and safety principles. Routine verification and testing have been performed.

**Manufacturer:**

Eldridge Products, Inc.

465 Reservation Road, Marina, California 93933, USA

**Product Description:**

Inline style Mass Flowmeters Integral and Remote, Series 400 and 500.

Insertion style Mass Flowmeters Integral and Remote, Series 440 and 550.

**Product Certifications :**

**Eldridge Products, Inc.**

465 Reservation Road

Marina, CA 93933

Tel: 800-321-3569 or 831-648-7777

Fax: (831) 648-7780

Email: [Sales@epiflow.com](mailto:Sales@epiflow.com) or [Service@epiflow.com](mailto:Service@epiflow.com)

## THERMAL MASS FLOW METERS

