



## Compact 2A Thermocouple Vacuum Controller

### Part Number: 2-3014-042

#### Operating Specifications

<b>Operating Range</b>	1*10 <sup>-3</sup> Torr to 20 Torr
<b>Communications</b>	N/A
<b>Analog Output</b>	0 to 10 V DC
<b>Analog Output Resolution</b>	12 bits
<b>Programmable Set Points</b>	N/A
<b>Set Point Type</b>	N/A
<b>Supply Voltage</b>	115 V AC, 50-60Hz (230 V Optional)
<b>Maximum Power</b>	5 W
<b>Calibration Medium</b>	Dry air or nitrogen
<b>Operating Temperature</b>	0 °C to 50 °C
<b>Storage Temperature</b>	-20 °C to 70 °C
<b>Display Readable Distance</b>	1 m (3 ft)
<b>Maximum Sensors Controlled</b>	1
<b>Maximum Sensors Displayed</b>	1
<b>Response Time</b>	≤10 ms
<b>Accuracy</b>	
1 to 10 mTorr	±1 mTorr
10 to 100 mTorr	±10% of reading
100 mTorr to 1 Torr	±20% of reading
1 Torr to 20 Torr	Indication only

#### Physical Characteristics

<b>Weight without Sensor</b>	1.4 kg (3 lbs)
<b>Front Panel Dimensions</b>	
Width	5.100"
Height	3.980"

#### Key Features and Benefits

- Competitively priced
- Very compact design
- Analog 0 to 10 V DC output
- Excellent customer service and support
- Rapid turn-around for calibration and service

#### Applications and Industries

- E-beam welding
- Freeze dryers
- Liquefied Natural Gas (LNG), industrial gas, cryogenics
- National labs, research, and development
- Vacuum distillation
- Vacuum glove boxes

#### Materials Exposed to Vacuum

Please refer to the appropriate sensor datasheet for materials exposed to vacuum. Datasheets are available to download on our website at [frederickscompany.com/resources/](http://frederickscompany.com/resources/).

#### Certifications, Compliance, and Ratings

- RoHS compliant
- NIST traceable calibration optional

#### Description

The Televac® Compact 2A Thermocouple Vacuum Controller can be connected to a single Televac® 2A thermocouple, 2A VacuMini, or 2A NASA Mini vacuum gauge. It includes a 0 to 10 V DC analog output for the connected vacuum gauge for simple integration with a PC or PLC, and can act as a vacuum pressure controller for process control in your vacuum system.

#### Ordering Information

Part Number	Description
2-3014-042	Compact 2A Thermocouple Vacuum Controller

#### Cables and Accessories

Part Number	Description
2-9800-077	10' 2A cable
2-9800-078	20' 2A cable
2-9800-079	35' 2A cable
2-9800-080	50' 2A cable
2-9800-081	10' 2A coiled cable
2-9800-096	10' 2A Mini cable
2-9800-082	10' 2A Mini coiled cable

#### Compatible Vacuum Gauges

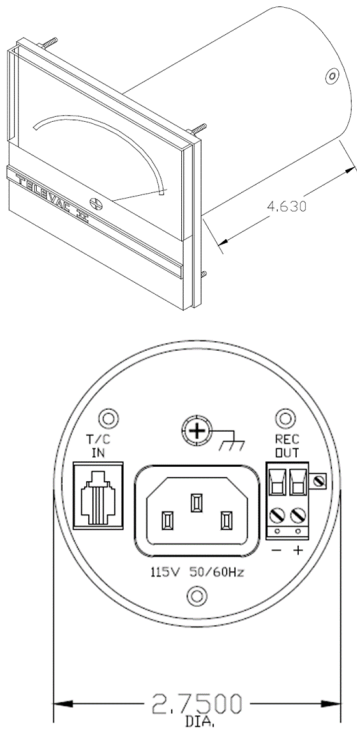
Part Number	Description
2-2100-10	2A 1/8" NPT Nickel-plated Brass
2-2100-016	2A NW16/KF16 Nickel-plated Brass
2-2100-025	2A NW25/KF25 Nickel-plated Brass
2-2126-001	2A 1/8" NPT Stainless Steel
2-2126-030	2A NW16/KF16 Stainless Steel
2-2126-031	2A NW25/KF25 Stainless Steel
2-2126-040	2A 8-VCO Male Stainless Steel
2-2126-041	2A 8-VCO Female Stainless Steel
2-2126-042	2A 8-VCR Male Stainless Steel
2-2126-043	2A 8-VCR Female Stainless Steel
2-2126-044	2A 4-VCR Male Stainless Steel
2-2126-045	2A 4-VCR Female Stainless Steel
2-2126-050	2A 1.33" CF Stainless Steel
2-2126-052	2A 2.75" CF Stainless Steel
2-2100-102	2A VacuMini 1/8" NPT Stainless Steel
2-2100-31	2A NASA Mini 1/8" NPT Stainless Steel
2-2100-97	2A NASA Mini VCR 4 male Stainless Steel

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**Compact 2A Thermocouple Vacuum Controller**  
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**Dimensional Drawing**



**Additional Images**



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**Additional Documentation**

Manual	<a href="#">Compact 2A Thermocouple Instruction Manual</a>
AN3010	<a href="#">Torr Scientific/Torr Decimal/mTorr/Micron Conversions</a>
AN3015	<a href="#">Recommended Practices for Vacuum Calibration</a>
AN3020	<a href="#">Vacuum Terminology Reference</a>
Resource	<a href="#">Televac® Tolerances</a>

**Company Information**

**Specialty manufacturing services that promise precision -** Since 1935, Fredericks has specialized exclusively in tilt and vacuum measurement products. Today, our precise manufacturing processes produce the most accurate and advanced products on the market, ensuring perfection every time. A true specialty service provider, we are willing and eager to put our experience and capabilities to good use, helping OEMs achieve even the most complex designs.

**High performance products designed and manufactured with pride -** Fredericks is a global provider and U.S. manufacturer and designer of high-performance tilt and vacuum measurement products. Built to last, our products are made with state-of-the-art sensing technology, proven processes, and an intrinsic passion for the trade. Offering simple integration and quality and safety benchmarks, our customers benefit not just from standard-setting reliability, but from our commitment to competitive pricing and performance.

**A partnership that prioritizes uptime, lead time, and service -** Fredericks guarantees customer satisfaction and our 'not too big, not too small' operation is what enables us to offer a true partnership experience. Our dedicated representatives and engineers offer exceptionally responsive service and some of the fastest lead times in the industry, knowing that uptime is the key to your success. With anytime-access to our leadership team and solutions that enhance your products, you will feel the Fredericks difference.

**Vacuum measurement tools built for the toughest jobs -** Fredericks' world-class vacuum sensors, gauges, and control instrumentation are engineered for the most demanding applications and environments. Our patented Televac® and ETI vacuum brands feature cold-cathode technology, thermocouple and convection gauges, and precision-manufactured hot ionization gauges. Dedicated solely to vacuum gauging and calibration services, we provide industrial heating, national laboratories, cryogenics, and industrial gas applications, among many others, with fast lead times and industry-leading performance. Covering the entire practical vacuum range, our products deliver rapid response vacuum readings and sensitivity.

**Contact Us**

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