

Veris Industries H921

Veris H921 Split-Core Current Transducer Instruction Manual

Model: H921

1. INTRODUCTION

The Veris H921 Split-Core Current Transducer is designed to provide accurate load trending information through a proportional 4-20mA output signal. This device is suitable for monitoring AC current in various industrial applications, including motor control, fan/pump status, and general electrical load analysis. Its loop-powered design simplifies installation, requiring only two wires for both power and signal transmission. The self-gripping split-core mechanism facilitates quick retrofit installations, reducing both cabling and commissioning expenses compared to traditional 3-wire sensors. Field setup of the sensed amperage range is made easy with integrated preset slide-switches, eliminating the need for external jumpers.

2. SAFETY INFORMATION

WARNING: Risk of Electric Shock.

- Installation and servicing must be performed by qualified personnel only.
- Disconnect all power to the circuit before installing or servicing this device.
- Ensure proper grounding and wiring according to local electrical codes.
- Do not exceed the specified voltage and current ratings of the device.
- This device is intended for use in pollution degree 2 environments.

3. PRODUCT OVERVIEW

The Veris H921 (Hawkeye 921) is a compact, split-core current transducer. It features a hinged design that allows for easy clamping around an electrical conductor without interrupting the circuit. The device converts the measured AC current into a standard 4-20mA analog output signal, which can be used by building management systems (BMS), programmable logic controllers (PLCs), or data loggers.



Figure 1: An image showing the Veris H921 split-core current transducer. The device is black with white text, featuring a hinged split-core design for easy installation around a conductor. Visible labels include 'Hawkeye 921', 'Isolation: 600VAC', 'Sensed Amps: 3.5 to 135A max.', and terminal connections.

Key Features:

- **Split-Core Design:** Allows for quick installation without disconnecting the conductor.
- **4-20mA Output:** Standard analog output for compatibility with various control systems.
- **Loop Powered:** Simplifies wiring with only two connections for power and signal.
- **Preset Slide-Switches:** Easy field selection of amperage range.
- **High Isolation:** 600VAC rms (UL) / 300VAC RMS (CE) insulation class.

4. SETUP AND INSTALLATION

Follow these steps for proper installation of the Veris H921 Current Transducer:

1. **Power Disconnection:** Ensure all power to the circuit where the transducer will be installed is completely disconnected and locked out. Verify with a suitable voltage tester.
2. **Select Amperage Range:** Use the integrated slide-switches on the device to select the appropriate sensed amperage range for your application. Refer to the device labeling for available ranges.
3. **Open Split-Core:** Gently open the hinged split-core mechanism of the transducer.
4. **Position Transducer:** Place the transducer around the single conductor carrying the AC current to be measured. Ensure the conductor passes through the center of the transducer's opening.
5. **Close Split-Core:** Securely close the split-core until it latches firmly.
6. **Wiring Connections:** Connect the two-wire loop-powered output to your control system (e.g., PLC, BMS input). The maximum wire size for the terminal block is 14 AWG. Tighten terminal block screws to a nominal torque of 4 in-lbs (0.45 N-m). Observe polarity if specified by your control system.
7. **Power Restoration:** Once all connections are secure and verified, restore power to the circuit.

5. OPERATING INSTRUCTIONS

The Veris H921 operates by continuously monitoring the AC current flowing through the conductor it encircles and converting this measurement into a proportional 4-20mA output signal.

- **Output Signal:** The transducer provides a 4-20mA output. A 4mA signal typically corresponds to 0A sensed current (or the minimum of the selected range), while a 20mA signal corresponds to the maximum of the selected amperage range.
- **Load Trending:** The 4-20mA output can be read by a compatible input module on a control system to display or log the real-time current draw of the monitored equipment.
- **Response Time:** The device has a response time of 2 seconds, meaning changes in current will be reflected in the output within this timeframe.

6. MAINTENANCE

The Veris H921 Current Transducer is designed for reliable, long-term operation with minimal maintenance. However, periodic checks are recommended:

- **Visual Inspection:** Periodically inspect the transducer for any signs of physical damage, loose connections, or environmental degradation.
- **Cleanliness:** Ensure the device is free from excessive dust, dirt, or moisture, which could affect performance. Clean with a dry, soft cloth if necessary.
- **Connection Integrity:** Verify that terminal connections remain tight and secure.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges.

7. TROUBLESHOOTING

If you encounter issues with your Veris H921 Current Transducer, consider the following:

- **No Output or Incorrect Reading:**
 - Verify that power is supplied to the circuit and the transducer.
 - Check all wiring connections for proper polarity and tightness.
 - Ensure the split-core is fully closed and latched around the conductor.
 - Confirm the selected amperage range on the slide-switches matches the expected current.
 - Check the input module of your control system for proper configuration and functionality.
 - Measure the actual current with a calibrated clamp meter to compare against the transducer's output.
- **Intermittent Readings:**
 - Inspect for loose wiring connections or damaged insulation.
 - Ensure the transducer is not exposed to excessive vibration or electromagnetic interference.

If problems persist after troubleshooting, contact Veris Industries technical support.

8. SPECIFICATIONS

Model Number	H921
Manufacturer	Veris
Sensor Power	30mA (max) @ 12-30VDC

Output Signal	4-20mA proportional
Insulation Class	600VAC rms (UL), 300VAC RMS (CE)
Frequency	50/60Hz
Temperature Range	-15° to 60°C (5° to 140°F)
Humidity Range	10-90% RH non-condensing
Accuracy	±2%FS from 10% - 100% of selected range (not less than ±0.4A)
Response Time	2 seconds
Terminal Block Max Wire Size	14 AWG
Terminal Block Torque	4 in-lbs (0.45 N-m)
Agency Approvals	UL 508 open device listing, CE: EN61010-1:2001-2 CAT III deg. 2 basic insulation
Product Dimensions	4.72 x 4.72 x 1.97 inches

9. WARRANTY INFORMATION

Veris Industries products are typically covered by a limited warranty against defects in materials and workmanship. For specific warranty terms and conditions applicable to your H921 Current Transducer, please refer to the documentation provided with your purchase or visit the official Veris Industries website. Keep your proof of purchase for warranty claims.

10. SUPPORT AND CONTACT

For technical assistance, product inquiries, or support regarding your Veris H921 Current Transducer, please contact Veris Industries directly:

- **Website:** Visit the [Veris Industries website](#) for product information, FAQs, and support resources.
- **Customer Service:** Refer to the contact section on the Veris Industries website for phone numbers or email addresses for customer support.

When contacting support, please have your product model (H921) and any relevant installation details ready.