Logicbus Z109REG2-H

Logicbus Z109REG2-H Universal Converter

INSTRUCTION MANUAL

1. Introduction

This manual provides detailed instructions for the installation, configuration, operation, and maintenance of the Logicbus Z109REG2-H Universal Converter. The Z109REG2-H is designed to manage and convert various analog input signals (mA, V, PT100, Pt1000, Pt500, Ni100, TCs, Ohm) into standard mA/V output signals, ensuring reliable data integrity through 3-way galvanic isolation.

2. Safety Information

Please read and understand all safety instructions before installing or operating the device. Failure to follow these instructions may result in equipment damage, personal injury, or death.

- Installation and maintenance should only be performed by qualified personnel.
- Ensure the power supply is disconnected before making any electrical connections.
- Verify correct wiring according to the connection diagrams to prevent damage.
- Do not operate the device in environments exceeding its specified operating conditions.
- Protect the device from moisture, dust, and extreme temperatures.

3. Product Overview

The Z109REG2-H is a compact, DIN-rail mountable universal converter. It features clearly labeled terminal blocks for inputs, outputs, and power, along with status indicators on the front panel.

3.1. Front Panel and Connections

Figure 1: Front view of the Logicbus Z109REG2-H Universal Converter. This image displays the device's compact black housing, designed for DIN rail mounting. Visible on the front are two sets of screw terminals, labeled 1-3 and 13-16 at the top, and 7-9 and 10-12 at the bottom. Between these terminals, three LED indicators are present: 'PWR/TAL' (Power/Talk), 'ALARM', and 'COM' (Communication). The model number 'Z109REG-H' is also clearly printed on the lower half of the device's front face.

The front panel includes:

- **Terminal Blocks:** Numbered 1-3, 13-16 (top) and 7-9, 10-12 (bottom) for various input, output, and power connections.
- **PWR/TAL LED:** Indicates power status and communication activity.
- **ALARM LED:** Illuminates when an alarm condition is detected.
- **COM LED:** Indicates communication status.
- **Model Number:** Z109REG-H, identifying the device.

4. Setup

4.1. Mounting

The Z109REG2-H is designed for DIN rail mounting. Securely attach the device to a standard DIN rail in a suitable enclosure, ensuring adequate ventilation and clearance for wiring.

4.2. Wiring

Refer to the specific wiring diagrams provided with your product documentation for detailed connection instructions. General wiring principles are as follows:

- **Power Supply:** Connect the 85-265 V AC/DC power supply to the designated terminals. Ensure the power source matches the device's requirements.
- **Input Signals:** Connect your analog sensor (e.g., current, voltage, thermocouple, RTD, potentiometer) to the universal input terminals. The device supports 2-wire sensor powering (20 Vdc stabilized, 20mA max with short-circuit protection).
- **Output Signals:** Connect the standard mA/V output signals to your receiving device (e.g., PLC, DCS).
- **Digital Contact:** The relay (SPST) output can be configured as an ALARM or STROBE contact. Connect as required for your application.

4.3. Configuration

The Z109REG2-H offers multiple configuration methods:

- **DIP-Switches:** Basic configuration for input type, START-END scale, output mode (zero elevation, scale inversion), and output voltage type (mA or V) can be set using the internal DIP-switches. Consult the

product datasheet for switch settings.

- **PC Software:** For advanced configuration, connect the device to a PC. The software allows programming of beginning and end scale, additional input types, square root extraction, filter settings, burn-out detection, and relay output parameters.
- **Handheld Device:** A compatible handheld device can also be used for field configuration.

5. Operating Instructions

Once properly installed and configured, the Z109REG2-H operates automatically.

- **Power On:** Apply power to the device. The PWR/TAL LED should illuminate, indicating normal operation.
- **Monitoring:** Observe the ALARM LED for any fault conditions or out-of-scale readings. The COM LED indicates communication activity during configuration or data exchange.
- **STROBE Input:** If configured, the STROBE input can be used to activate the analog output on a PLC command, providing multiplexing capabilities.

6. Maintenance

The Z109REG2-H is designed for minimal maintenance. Regular checks include:

- **Cleaning:** Keep the device clean and free from dust. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Connection Integrity:** Periodically check all wiring connections for tightness and signs of corrosion.
- **Environmental Conditions:** Ensure the operating environment remains within specified temperature and humidity ranges.

7. Troubleshooting

If the device is not functioning as expected, consider the following troubleshooting steps:

- **No Power (PWR/TAL LED off):** Verify the power supply connections and voltage. Check for blown fuses in the power circuit.
- **Incorrect Output Reading:**
  - Check input sensor wiring and functionality.
  - Verify DIP-switch settings for input type and scale.
  - Confirm PC software configuration parameters (scale, filter, burn-out).
  - Ensure the output receiving device is correctly configured and calibrated.
- **ALARM LED On:** This indicates an out-of-scale condition or a setting error. Review input signal range and configuration settings.
- **Communication Issues (COM LED):** Ensure correct communication cable connection and PC software settings.

If problems persist, contact technical support.

8. Specifications

Feature	Specification

Feature	Specification
Model	Z109REG2-H
Input Types	Voltage, Current, Thermocouples, Thermoresistances (PT100, Pt1000, Pt500, Ni100), Potentiometer, Rheostat
Output Types	Isolated Analog Output (Voltage and Current)
Power Supply	85-265 V AC/DC
Sensor Power (2-wire)	20 Vdc stabilized, 20mA max with short-circuit protection
Configuration	DIP-switches, PC software, Handheld device
Galvanic Isolation	3-way (Power supply // Input // Output)
Insulation (Supply to Output/Input)	3750 Vac
Insulation (Output to Input)	1500 Vac
Digital Contact	Relay (SPST), programmable as ALARM or STROBE
Dimensions	5 x 1 x 4 inches (approx. 127 x 25.4 x 101.6 mm)
Weight	7.05 ounces (approx. 200 grams)
Manufacturer	Seneca

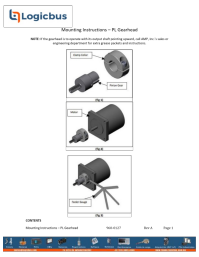
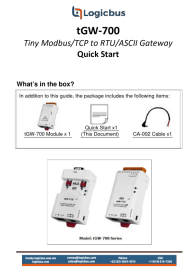
9. Warranty Information

Warranty terms and conditions for the Logicbus Z109REG2-H Universal Converter are provided by the manufacturer, Seneca, or your authorized reseller. Please refer to the documentation included with your purchase or contact your supplier for specific warranty details and duration.

10. Technical Support

For technical assistance, troubleshooting beyond the scope of this manual, or inquiries regarding product functionality, please contact your Logicbus supplier or the manufacturer, Seneca. Have your product model number (Z109REG2-H) and any relevant error messages or symptoms ready when contacting support.

Related Documents - Z109REG2-H

	[TLB Weight Transmitter - Logicbus] Discover the TLB Weight Transmitter by Logicbus, a versatile device for accurate weight measurement and transmission. Explore its features, communication protocols, and technical specifications.
	[Logicbus PL Gearhead Mounting Instructions (Model 960-0127)] Detailed mounting instructions for the Logicbus PL Planetary Gearhead, including assembly sequence, parts list, and torque specifications for NEMA gearheads. Model 960-0127.
	[NS-205 5-Port Industrial 10/100 Mbps Ethernet Switch | Logicbus] Discover the Logicbus NS-205, a robust 5-port industrial Ethernet switch offering 10/100 Mbps speeds, auto MDI/MDI-X, and auto-negotiation. Ideal for industrial environments with DIN rail mounting and wide operating temperature range.
	[Logicbus tGW-700 Quick Start Guide: Tiny Modbus/TCP to RTU/ASCII Gateway] This quick start guide provides essential information for setting up and configuring the Logicbus tGW-700, a Tiny Modbus/TCP to RTU/ASCII Gateway. Learn about installation, wiring, software setup, network configuration, and basic testing.
	[Logicbus L1000 Datasheet - Product Specifications and Contact Information] Official datasheet for the Logicbus L1000, providing product specifications and contact details for sales and support in the USA and Mexico. Learn more at www.logicbus.com.
	[Logicbus D-8635G Teclado Industrial con Trackball - Hoja de Datos] Hoja de datos del Logicbus D-8635G, un teclado industrial antivandálico de acero inoxidable con trackball integrado. Diseñado para quioscos y entornos exigentes, ofrece protección IP65/IP54, amplio rango de temperatura y compatibilidad con Windows, Mac y Android.