



ECtox RS485 to 4-20 mA Conversion Module

—— Datasheet ——

Overview

The RS485 to 4-20 mA Conversion Module is a high-performance signal conversion device designed to achieve seamless conversion between RS485 digital signals and 4-20 mA analog signals of the ECtox Gas Sensor Devices in industrial automation systems, improving the versatility and compatibility of ECtox. For example, the signal of ECtox with an RS485 interface is converted into a 4-20 mA signal, connected to other devices or control systems such as PLC, DCS for data acquisition and analysis. The module is widely used in various industrial control fields, such as process control, automation instrumentation, intelligent buildings, etc., providing a convenient and reliable solution for signal transmission and integration between different devices.

Main Functions

Signal Conversion

From the RS485 interface of the ECtox gas detector into a 4-20 mA analog current signal to achieve interconnection between devices of different signal types. Communication, standard Modbus RTU protocol.

Easy Installation

It adopts standard industrial installation dimensions and interfaces, and can be easily installed in control cabinets, instrument panels and other equipment. At the same time, it provides clear wiring identification and instructions to facilitate users to install and wire.

Isolation Protection

With electrical isolation function, it can effectively isolate the circuits on the RS485 side and the 4-20 mA side to prevent signal interference and equipment damage. The isolation voltage can usually reach several thousand volts, which improves the reliability and safety of the system.

High-precision Conversion

The use of advanced signal processing technology and high-precision analog-to-digital / digital-to-analog conversion chips ensures the accuracy and stability of signal conversion. The output 4-20 mA signal has high linearity and low error, which can meet the requirements of various precision control and measurement applications.

Power supply, communication indicator light, parameter reset button.

Hardware and software dual monitors that ensure stable systems.

Features

- High precision, high reliability, industrial grade.
- Import 32 ARM processor.
- Built-in switching power supply circuit, wide supply voltage range and high conversion efficiency.
- The power supply and communication ports have reverse connection protection and overcurrent protection.
- Communication isolation, lightning surge protection, strong anti-interference.
- Key chips are all brand new and imported.
- Industrial-grade products to meet the needs of different fields.
- Easy to install, standard C45 (35 mm) universal rail installation or screw installation.

Technical Parameters

Supply voltage	6-12V DC
Supply current	0.1 A
Communication	RS485 (isolated)
Output current	4-20 mA
Output channels	1 road
Resolution	12 bit, voltage: 1 mV, current: 1 μ A
Accuracy	$\pm 1\%$ (one percent)
Communication protocol	Modbus RTU
Baud rate	9600
Communication distance	0-1200 Meters, can be extended by repeater
Indicator lights	Power / communication
Protection function	Overcurrent / overvoltage / reverse connection / lightning surge protection
Operating temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Operating humidity	0% to 85% RH (no condensation)
Installation	Standard C45 (35 mm) universal guide rail
Product size	76.32 g
Product weight	50 x 102 x 31.4 mm

Connection

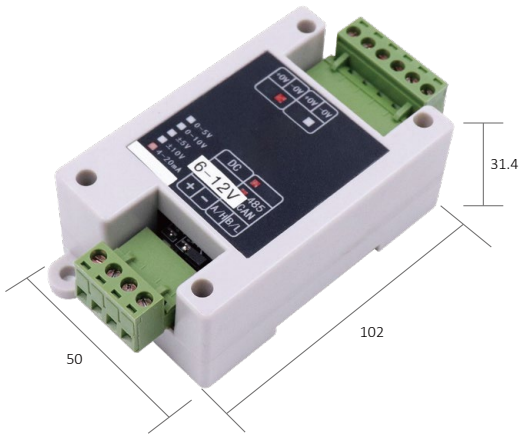
Identification	Function
+	Power supply positive pole (6V to 12V DC)
-	Negative pole of power supply
A	ECtox RS485+
B	ECtox RS485-
AO+	Current output positive
AO-	Current output negative

Ordering Information

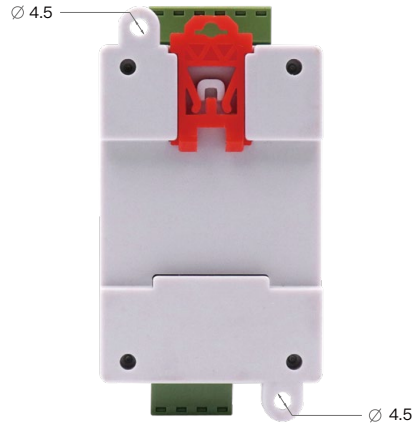
Product Name	Part Number
ECtox RS485 to 4-20 mA Conversion Module	02-RS485-420-1CH-01

Mechanical Diagram

ECtox RS485 to 4-20 mA Conversion Module unit: mm



Front View



Back View

Disclaimer

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Warning

AQ Sense module is designed for use in a variety of environmental conditions, but during storage, assembly and operation, due to the characteristics of the material, in order to ensure normal use, users should strictly follow this article and the general material application method when using the product. Illegal application will not be covered by the warranty. Although our products have high reliability, we recommend that you check them before use to ensure on-site use. At the end of the product's service life, do not discard any product parts in domestic waste, please dispose of them in accordance with local government waste recycling regulations.



AQ Sense GmbH

Wolfratshauser Str. 53, 82067 Ebenhausen, Germany

Tel: +49(0)8178 9999 231

Email: info@aq-sense.de

www.aq-sense.de

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