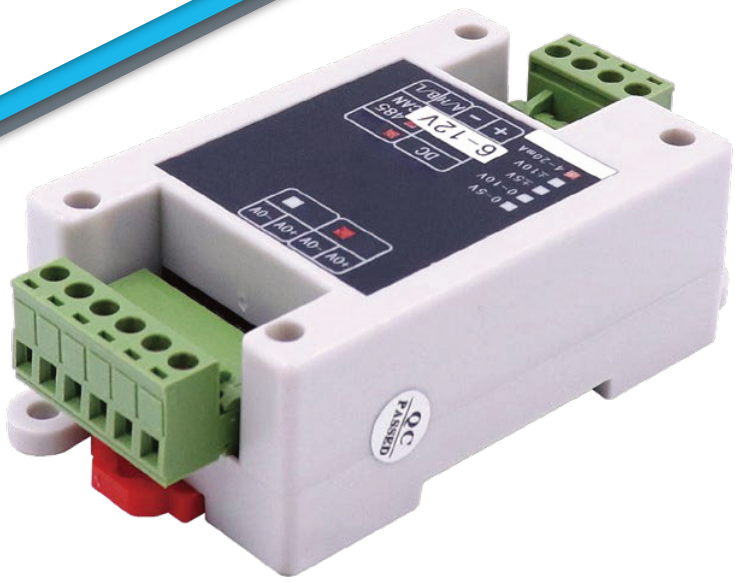
SGX SENSORTECH

An Amphenol Company



RS485-Conversion-MOD

Dedicated to:

- **NH3-500-Probe**

RS485 to 4-20mA analogue Conversion Module for NH3-500-Probe

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) U Universal rail installation or screw installation.

Principle

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 SGX Probe gas detectors in industrial automation systems, improving the versatility and compatibility of SGX Probe . For example, the signal of SGX Probe with 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.

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Main Functions

Signal Conversion

From the RS485 interface of the SGX Probe 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

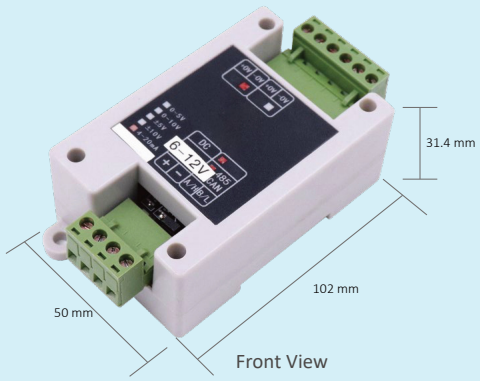
The use of advanced signal processing technology and high-precision analog-to-digital / digital-to-analog conversion chips ensures the accuracy and stability of signal conversion. The output 4-20 mA signal has highlinearity and low error, which can meet the requirements of various precisioncontrol and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

Power supply, communication indicator light, parameter reset button.
Hardware and software dual watchdogs, keep stable systems.

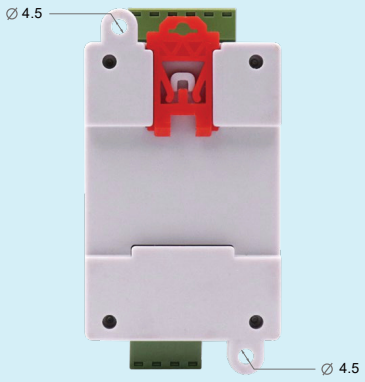
Technical Parameters

Supply voltage	6V to 30V DC
Supply current	0.1 A
Communication	RS485 (isolated)
Output current	4 mA to 20 mA
Output channels	1 road
Resolution	12 bit, voltage: 1 mV, current: 1 μA
Accuracy	± 1 %
Communication protocol	Modbus RTU
Baud rate	9600
Communication distance	0 to 1200 meters, can be extended by repeater
Indicator lights	Power / communication
Protection function	Overcurrent / overvoltage / reverse connection / lightning surge protection
Operating temperature	-40 ℃ to +85 ℃
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

Mechanical Diagram



Front View



Back View

Connection

Identification	Function
+	Power supply positive pole (6 - 30V DC)
-	Negative pole of power supply
A	RS485+
B	RS485-
AO+	Current output positive
AO-	Current output negative