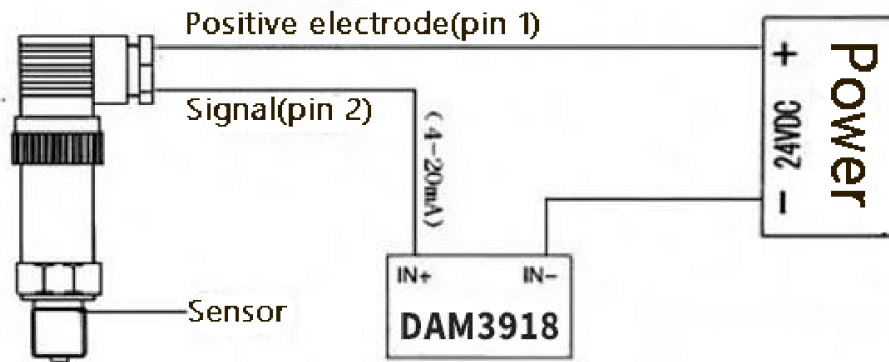# COM071

MODULE D'ACQUISITION DE DONNEES ANALOGIQUES ISOLEES A 8 CANAUX DFR0853
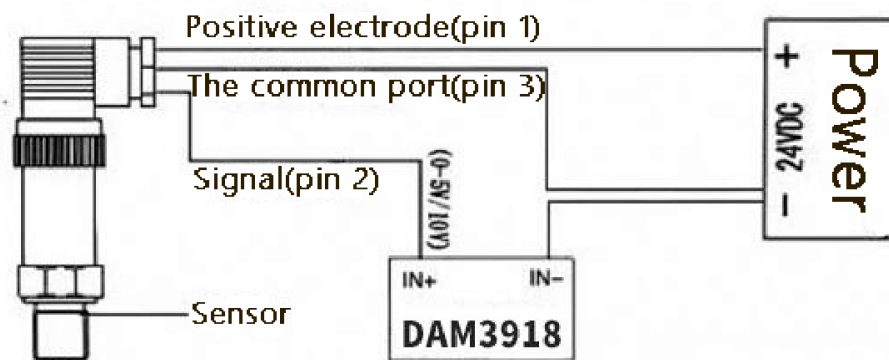

INTRODUCTION

This is an 8-channel single-end 12-bit analog data acquisition module with an accuracy of up to ±1‰, supporting 0-5V, 1-5V, 0-2.5V, 0-20mA, 4-20mA ranges. It can collect multiple channels simultaneously, and can also collect voltage and current at the same time. The module RS485 communication interface has optoelectronic isolation, and the application layer adopts the standard Modbus RTU protocol, which conforms to industrial standards. It can be conveniently used to communicate with the host computer. You can use this module to realize rapid networking, build a monitoring system, or connect with PLC, configuration software, Industrial Personal Computer, OPC, and other systems.

Each channel of the module is independent, which can set the range independently. There are a variety of ranges to choose from, and users can switch them at will according to their needs. In addition to supporting standard 4-wire sensors, it also supports 2-wire and 3-wire sensor inputs.

Two-wire current signal wiring diagram

Three-wire voltage signal wiring diagram

Security is extremely guaranteed. The product has communication isolation and input/output isolation, so that it can not only resist interference during use, ensure accurate and stable data transmission, but also in case of strong electricity, it will only burn out the collection product at most and the entire system will not be damaged. The module supports a 12-30V wide voltage power supply, and the interface adopts an anti-reverse design.

SPECIFICATION

- Input Channel: 8-channel single-end analog input

- Input Type: voltage input, current input

- Acquisition range: 0~5V, 1~5V, 0~2.5V, 0~20mA, 4~20mA, the default factory value is 4~20mA

- Sampling Rate: 1400sps (total channel), 50sps (single channel)

- Resolution: 12 bits

- Collection Accuracy: 1‰

- Input Impedance: voltage range: 10MΩ, current range: 249Ω

- Range Setting: each channel can independently configure the range

- Communication Interface: RS485

- Isolation Voltage: 1500VDC

- RS485 Transmission Rate:

    Maximum 180 times/second (total channel of a single module, in the case of 115200bps)

    Maximum 24 times/second (total channel of a single module, in the case of 9600bps)

    Maximum 3 times/second (total channel of a single module, in the case of 1200bps)

- Baud Rate: 1200~115200bps

- Watchdog: Software watchdog

- Power Supply Voltage: +12~30VDC

- Power Protection: power reverse protection

- Power Consumption: rated value 0.5W @ 24VDC

- Operating Temperature: -40℃～＋80℃

- Storage Temperature: -40℃～＋85℃

https://github.com/DFRobot/Wiki/raw/master/DFR0853%20Software-EN.rar

https://github.com/May-DFRobot/DFRobot/blob/master/DFR0853%20Product%20Instruction%20-%20EN.pdf