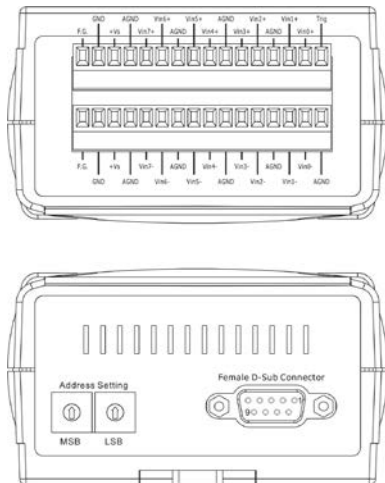# PROFI-5024
PROFIBUS Remote I/O Module

Features

- Support for PROFIBUS DP-V0 protocol
- Detect transmission rate automatically(Max.12Mbps)
- Support device-related & channel-related diagnosis
- Address 0~126 set by rotary switches or SSA telegram
- 14-bits resolution DAC
- Network isolation protection
- 3000V_{DC} isolation protection on PROFIBUS
- 4kVESD protection (contact for any terminal)
- Wide range of power input (DC 10~40V_{DC}) and operating temperature (-25°C~+75°C)

Introduction

The PROFI-5024 is one of the PROFIBUS DP series products produced by ICP DAS. It provides the PROFIBUS DP communication protocol with any DP-Masters. The PROFI-5024 provides ±4kV ESD protection contacting for all terminals (include I/O Terminals and PROFIBUS connector). By applying the PROFI-5024, users can easily establish a PROFIBUS DP network with other DP-Masters. In advance, it can be used in the application of building automation, remote data acquisition, environment control and monitoring, laboratory equipment & research, factory automation, etc...

Pin Assignments

Design Flowchart

Import GSD file to Configuration Tool → Select Module(s) & Parameter Setting → Generate Object that map from the I/O Module. → Programming & Running through I/O Object

Dimensions (Units: mm)

Female D-Sub Connector

Pin No.	Signal	Meaning
3	A-Line	Receive/Transmit data-minus
4	CNTR-P	Repeater control signal, RTS
5	GND	Power ground of active
6	VP	Power 5 volt of active
8	B-Line	Receive/Transmit data-plus

Unit: mm

Front View

Back View
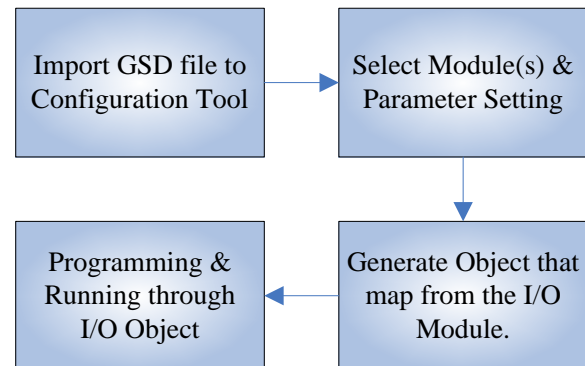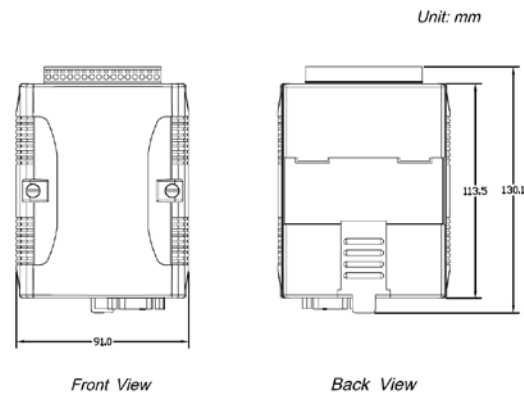
◼ Specifications

Hardware	
CPU	80186, 80 MHz or compatible
SRAM/Flash/EEPROM	512 KB / 512 KB / 2 KB
Watchdog	Watchdog IC, CPU built-in
ESD Protection	4 kV class A
PROFIBUS Interface	
Controller	Siemens SPC3
Transceiver	ADI ADM2486
Connector	9-pin female D-Sub
Baud Rate (bps)	9.6 k, 19.2 k, 45.45 k, 93.75 k, 187.5 k, 500 k, 1.5 M, 3 M, 6 M, 12 M
Transmission Distance (m)	Depend on baud rate (for example, max. 1200 m at 9.6 kbps)
Isolation	3000 V_{DC} for DC-to-DC, 2500 Vrms for bus-to-logic
Protocol	DP-V0
UART Interface	
COM	RS-232 on board (For updating firmware)Note 1.
I/O	
Analog Output	4 Channel Voltage & Current Output, Isolation Voltage:3750Vrms
Output Range	+/- 10V, 0 ~ 20mA, 4 ~ 20mA
Accuracy	+/- 0.1% of FSR for Voltage Output ; +/- 0.2% of FSR for Current Output
LED	
Round LED	PWR LED, RUN LED, ERR LED
Power	
Power supply	Unregulated +10 ~ +40 V_{DC}
Protection	Power reverse polarity protection, Over-voltage brown-out protection
Power Consumption	4W
Mechanism	
Installation	DIN-Rail
Dimensions	91 mm x 128 mm x 52 mm (W x L x H)
Environment	
Operating Temp.	-25 ~ 75°C
Storage Temp.	-30 ~ 80°C
Humidity	10~90% RH,non-condens

◼ Application
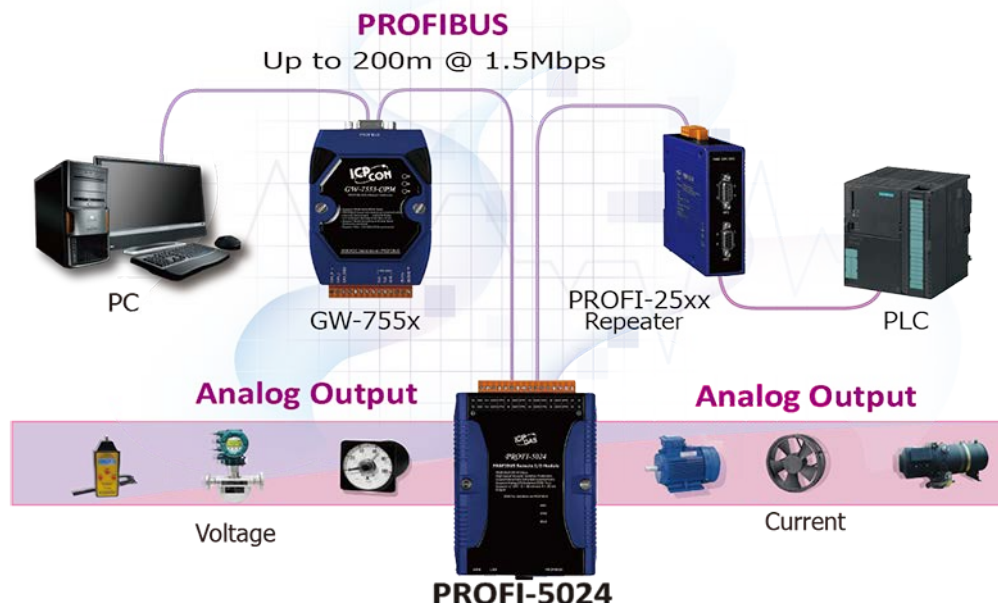
◼ Ordering Information

PROFI-5024/S CR	PROFIBUS Remote I/O Module (4-Ch Isolated Analog Voltage & Current Output)