PROFIBUS Series Products

PROFIBUS Remote I/O Module

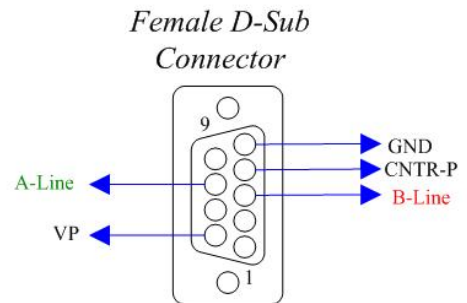CE FC

PROFI-5052

Dimensions

Front View   Back View   (mm)
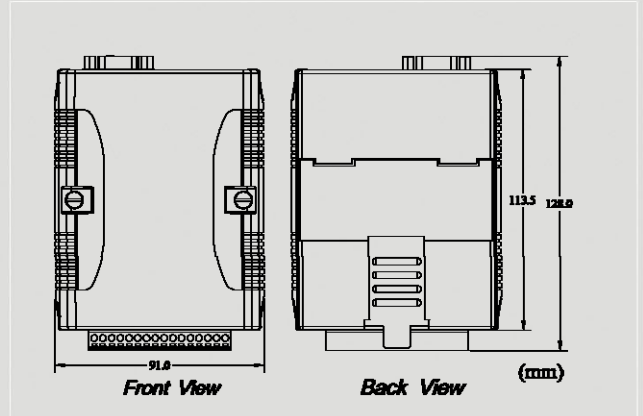
The PROFI-5052 is one of the PROFIBUS DP series products produced by ICP DAS. It provides the PROFIBUS DP communication protocol with any DP-Masters. The PROFI-5052 provides ±4KV ESD protection contacting for all terminals (include I/O Terminals and PROFIBUS connector). By applying the PROFI-5052, users 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..
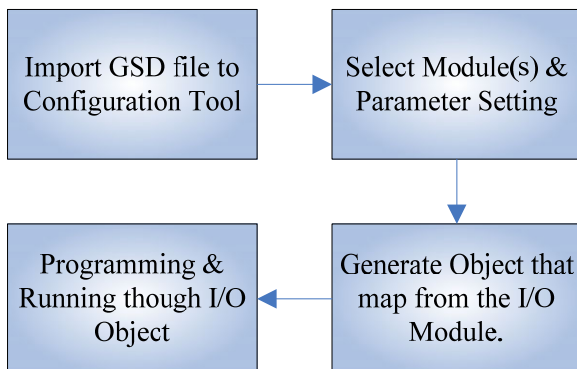
Features

- Support for PROFIBUS DP-V0 protocol
- Detect transmission rate automatically(Max. 12Mbps)
- Address 0~99 set by rotary switches
- Network Isolation Protection
- $3000V_{DC}$ isolation protection on PROFIBUS side
- 4KV ESD Protection (contact for any terminal).
- Wide range of power input (DC $10\sim40V_{DC}$) and operating temperature (-25°C~+75°C)
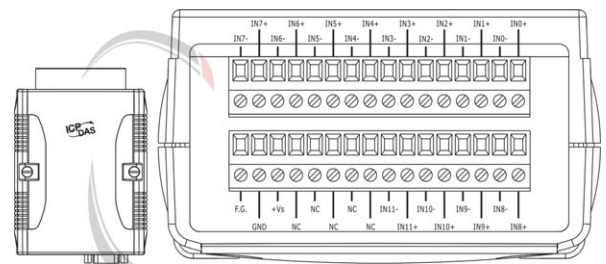
Pin Assignments

Female D-Sub Connector

A-Line
VP
GND
CNTR-P
B-Line

Design Flowchart

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

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

PROFI-5052

Hardware Specifications

Hardware	
ESD Protection	4 kV class A
PROFIBUS Interface	
Controller	Profichip VPCLS2
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
LED	
Round LED	PWR LED, RUN LED
Power	
Power supply	Unregulated +10 ~ +40 V_{DC}
Protection	Reverse polarity protection, Over-voltage brown-out protection
Power Consumption	1 W
I/O	
Digital Input	12 Channels (Sink or Source), Isolated from each other. Off Voltage Level: +1V Max. On Voltage Level: +4 ~ +30V Input Impedance: 3KΩ in series with opto-coupler Isolation Voltage: 5000 Vrms
Mechanism	
Installation	DIN-Rail
Dimensions	91 mm x 128 mm x 52 mm (W x L x H)
Environment	
Operating Temp.	-25 ~ 75℃
Storage Temp.	-30 ~ 85℃
Humidity	5 ~ 95% RH, non-condensing

Application
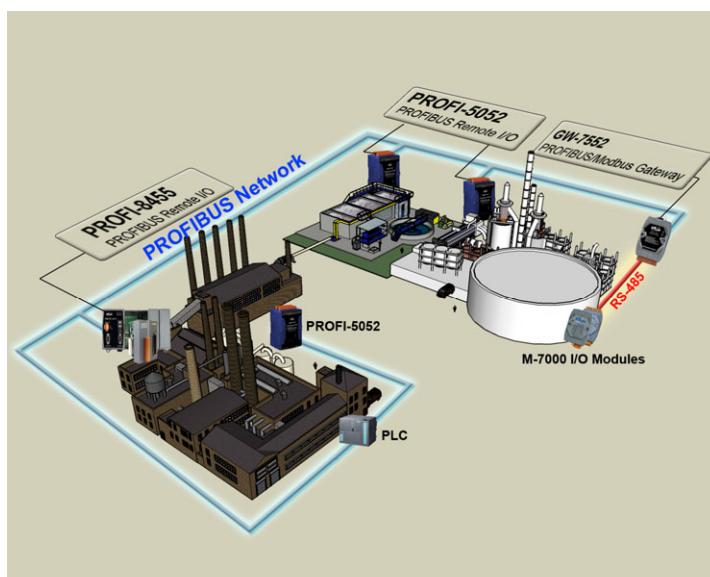
Ordering Information

PROFI-5052 CR	PROFIBUS Remote I/O Module (12-Ch Isolated Digital Input)