PROFIBUS Series Products

PROFIBUS Remote I/O Module



	Unit: mm	
Front View	Back View	

CE FC

PROFI-5017C

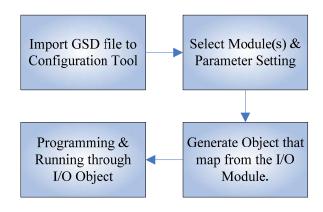
Dimensions

The PROFI-5017C 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-5017C provides ±4kV ESD protection contacting for all terminals (include I/O Terminals and PROFIBUS connector). By applying the PROFI-5017C, 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..

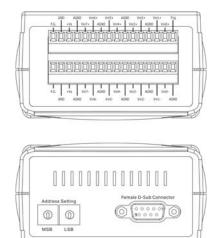
Features

- Support for PROFIBUS DP-V0 protocol
- Detect transmission rate automatically(Max. 12Mbps)
- Support device related & channel related diagnosis
- Address 0~126 set by rotary switches or SSA Telegram
- 14-bit resolution & 100ksps AD converter
- Network isolation protection
- 3000V_{DC} isolation protection on PROFIBUS
- 4kV ESD protection (contact for any terminal)
- Wide range of power input (DC 10~40 V_{DC}) and operating temperature (-25°C~+75°C)

Design Flowchart



Pin Assignments



Female D-Sub Connector

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

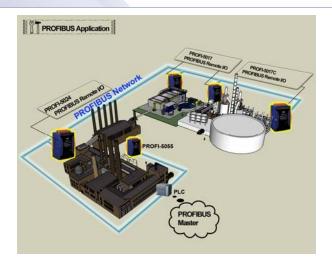


Hardware Specifications

CPU80186, 80 MHz or compatibleSRAM/Flash/EEPROM512 KB / 512 KB / 2 KBWatchdogWatchdog IC, CPU built-inESD Protection4 KV class APROFIBUS InterfaceControllerControllerSiemens SPC3TransceiverADI ADM2486Connector9-pin female D-SubBaud 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 MTransmission Distance (m)Depend on baud rate (for example, max. 1200 m at 9.6 kbps)Isolation3000 V _{DC} for DC-to-DC, 2500 Vrms for bus-to-logicProtocolDP-V0UART InterfaceCOMRS-232 on board (For updating firmware) _{Note L} .I/0Analog Input8 channel differential current input, Isolation Voltage:2500VrmsInput Range0 ~ 20mAAccuracy+/- 0.2% of FSRLEDPower supplyUnregulated +10 ~ +40 V _{DC} ProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower supplyUnregulated +10 ~ 40 V _{DC} ProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower forsumption3WMechanismInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °CHumidity5 - 95% RH, non-condensing	Hardware				
WatchdogWatchdog IC, CPU built-inESD Protection4 kV class APROFIBUS InterfaceControllerSiemens SPC3TransceiverADI ADM2486Connector9-pin female D-SubBaud 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 MTransmission Distance (m)Depend on baud rate (for example, max. 1200 m at 9.6 kbps)Isolation3000 V_{DC} for DC-to-DC, 2500 Vrms for bus-to-logicProtocolDP-V0UART InterfaceCOMRS-232 on board (For updating firmware)_Note 1.I/0Analog Input8 channel differential current input, Isolation Voltage:2500VrmsInput Range0 ~ 20mAAccuracy+/- 0.2% of FSRLEDPowerPower consumption3WMechanismInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	CPU	80186, 80 MHz or compatible			
ESD Protection 4 kV class A PROFIBUS Interface ControllerSiemens SPC3TransceiverADI ADM2486Connector9-pin female D-SubBaud 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 MTransmission Distance (m)Depend on baud rate (for example, max. 1200 m at 9.6 kbps)Isolation3000 V_{DC} for DC-to-DC, 2500 Vrms for bus-to-logicProtocolDP-V0 UART Interface COMRS-232 on board (For updating firmware) _{Note 1} .I/0Analog Input8 channel differential current input, Isolation Voltage:2500VrmsInput Range0 ~ 20mAAccuracy+/- 0.2% of FSR LED PowerPowerPower consumptionPWR LED, RUN LED, ERR LEDPower ConsumptionWinregulated +10 ~ +40 V_{DC} ProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower Consumption3WMechanismInstallationDIN-RailDimensions9 Imm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	SRAM/Flash/EEPROM	512 KB / 512 KB / 2 KB			
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TransceiverADI ADM2486Connector9-pin female D-SubBaud 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 MTransmission Distance (m)Depend on baud rate (for example, max. 1200 m at 9.6 kbps)Isolation3000 V _{DC} for DC-to-DC, 2500 Vrms for bus-to-logicProtocolDP-V0UART InterfaceCOMRS-232 on board (For updating firmware) _{Note 1} .I/0Analog InputA nalog Input8 channel differential current input, Isolation Voltage:2500VrmsInput Range0 ~ 20mAAccuracy+/- 0.2% of FSRLEDPowerPower supplyUnregulated +10 ~ +40 V _{DC} ProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower Consumption3WMechanismInstallationDIN-RailDimensions9 Inm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp. $-25 ~ 75 \degree$ CStorage Temp40 ~ 80 \degreeC	PROFIBUS Interface				
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Isolation3000 VDC for DC-to-DC, 2500 Vrms for bus-to-logicProtocolDP-V0UART InterfaceCOMRS-232 on board (For updating firmware)Note LI/0Analog Input8 channel differential current input, Isolation Voltage:2500VrmsInput Range0 ~ 20mAAccuracy+/- 0.2% of FSRLEDPowerPowerPower supplyUnregulated +10 ~ +40 VDCProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower consumption3WMechanismInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)Environment-25 ~ 75 °CStorage Temp40 ~ 80 °C	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			
ProtocolDP-V0UART InterfaceCOMRS-232 on board (For updating firmware)Note 1.I/0Analog Input& channel differential current input, Isolation Voltage:2500VrmsInput Range0 ~ 20mAAccuracy+/- 0.2% of FSRLEDRound LEDPWR LED, RUN LED, ERR LEDPowerPowerPower supplyUnregulated +10 ~ +40 VDCPower reverse polarity protection, Over-voltage brown-out protectionPower Consumption3WMechanismInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Transmission Distance (m)	Depend on baud rate (for example, max. 1200 m at 9.6 kbps)			
UART InterfaceCOMRS-232 on board (For updating firmware) _{Note 1} .1/0Analog Input8 channel differential current input, Isolation Voltage:2500VrmsInput Range0 ~ 20mAAccuracy+/- 0.2% of FSRLEDRound LEDPWR LED, RUN LED, ERR LEDPowerPower supplyUnregulated +10 ~ +40 V _{DC} ProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower Consumption3WMechanismInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Isolation	3000 V _{DC} for DC-to-DC, 2500 Vrms for bus-to-logic			
COMRS-232 on board (For updating firmware)_Note 1.I/0Analog Input8 channel differential current input, Isolation Voltage:2500VrmsInput Range0 ~ 20mAAccuracy+/- 0.2% of FSRLEDRound LEDPWR LED, RUN LED, ERR LEDPowerPower supplyUnregulated +10 ~ +40 V _{DC} ProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower Consumption3WMechanismInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Protocol	DP-V0			
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Accuracy+/- 0.2% of FSRLEDRound LEDPWR LED, RUN LED, ERR LEDPowerPower supplyUnregulated +10 ~ +40 V _{DC} ProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower Consumption3WMechanismInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Analog Input	8 channel differential current input, Isolation Voltage:2500Vrms			
LEDRound LEDPWR LED, RUN LED, ERR LEDPowerPower supplyUnregulated +10 ~ +40 V _{DC} ProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower Consumption3WMechanismInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Input Range	0 ~ 20mA			
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PowerPower supplyUnregulated +10 ~ +40 VDCProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower Consumption3WMechanismInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C					
Power supplyUnregulated +10 ~ +40 VDCProtectionPower reverse polarity protection, Over-voltage brown-out protectionPower Consumption3WMechanismInstallationInstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)Environment-25 ~ 75 °COperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Round LED	PWR LED, RUN LED, ERR LED			
Protection Power reverse polarity protection, Over-voltage brown-out protection Power Consumption 3W 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. -40 ~ 80 °C	Power				
Power Consumption 3W 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. -40 ~ 80 °C	Power supply	Unregulated $+10 \sim +40 \text{ V}_{\text{DC}}$			
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. -40 ~ 80 °C	Protection	Power reverse polarity protection, Over-voltage brown-out protection			
InstallationDIN-RailDimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Power Consumption	3W			
Dimensions91 mm x 128 mm x 52 mm (W x L x H)EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Mechanism				
EnvironmentOperating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Installation	DIN-Rail			
Operating Temp25 ~ 75 °CStorage Temp40 ~ 80 °C	Dimensions	91 mm x 128 mm x 52 mm (W x L x H)			
Storage Temp40 ~ 80 °C	Environment				
Humidity 5 ~ 95% RH, non-condensing	Storage Temp.	-40 ~ 80 °C			
	Humidity	5 ~ 95% RH, non-condensing			

Note 1: CA-0904 : transform from 4-pin connector to 9-pin Female D-Sub connector.

Application



Ordering Information

PROFI-5017C CR

PROFIBUS Remote I/O Module (8-Ch Isolated Analog Current Input)