



FR-2017iT

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8/16-channel Isolated Analog Input Module With High Voltage Protection And Isolated Communication Line

Introduction

The FR-2017iT is a 12-bit, 8-channel differential or 16-channel single-ended analog inputs module that provides two ways to select input range (+/-150mV, +/-500mV, +/-1V, +/-5V, +/-10V, +/-20mA, 0~20mA and 4~20mA). One way provides switch selectable the same range at all channels and another each analog channel is allowed to configure an individual range by software selectable. It also has 240Vrms high over voltage protection for all analog inputs.

The FR-2000 I/O module has an FRnet interface. The users can daisy chain several FR-2000 modules together. Via FRnet, the FR-2000 modules can extend the remote I/O control of PC, PAC and PLC easily. Further information about the networking of FR-2017iT/2024iT; refer to literatures related to I-7188EF, I-8172W, and FRB-100/200/200U.

Features

- Built-in wire-saving FRnet control
- High-speed transmission reliability
- Simple synchronization mechanism
- No software overhead on protocol processing
- Supporting broadcasting (1:n data transmission)
- Duplicating output easily
- Fixed I/O scan-time and I/O synchronization
- DIN-Rail mountable

Specifications

Analog Input	
Input Channels	8 differential or 16 single-ended, switch selectable
Input Type	+/-150mV, +/-500mV, +/-1V, +/-5V, +/-10V +/-20mA, 0~20mA, 4~20mA (requires optional external 125 Ohm resistor for current input)
Resolution	16-bit (1 channel) / 12-bit (8/16 channels)
Sampling Rate	10 samples/ second (1 channel) / 50 samples/ second(8/16 channels) total
Accuracy	+/-0.1% (1 channel) / +/-0.5%(8/16 channels) or better
Bandwidth	15.7Hz (1 channel) / 78.7Hz (8/16 channels)
Zero Drift	+/-20uV/°C
Span Drift	+/-25ppm/°C
Input Impedance	Voltage: 2M Ohm (Differential), 1M Ohm (Single-ended)
Common Mode Rejection	86dB min.
Normal Mode Rejection	100dB
Individual Channel Configuration	Yes (by software, requires optional CA-0904 cable)
Over Voltage Protection	Differential: 240 Vrms, Single-ended: 150Vrms
Connection	20-Pin Removable Terminal Block
Interface	
Isolation Voltage	3000 Vrms
2-wire Cabling	Belden 8941 (2P twisted-pair cable), When different cables are used, the transmission distance may be changed
Transfer Distance	Max. 400m for speed 250K Max. 100m for speed 1M (Default)
LED Indicators	Power, Communication Run, Communication Error, Terminal resistor, Digital output
Transfer Speed	250Kbps and 1Mbps (Default) DIP Switch Selectable
Cyclic Scan Time	2.88ms for speed 250K 0.72ms for speed 1M (Default)

Power	
Input Voltage Range	+10 ~ +30 VDC (Non-isolation)
Power Consumption	2.4 W Max
Connector	5-Pin Removable Terminal Block
EMS Protection	
ESD (IEC 61000-4-2)	4 kV contact for power line, communication line and each channel 8 kV air for random point
EFT (IEC 61000-4-4)	4 kV for power liner
Surge (IEC 61000-4-5)	3 kV for power liner
Case	
Mechanical	Plastic
Flammability	UL 94V-0 materials
Dimensions (W x H x D)	32.5 x 110 x 102 mm
Installation	DIN-Rail
Environment	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-30 °C ~ +85 °C
Humidity	10% ~ 90% non-condensing

Ordering information

FR-2017iT	8/16-channel Isolated Analog Input Module With High Voltage Protection And Isolated Communication Line
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