



Model: FR-2024iT

FR-2024iT

4-channel Isolated Analog Output Module

Introduction

The FR-2024iT is a 12-bit, 4-ch analog outputs module that provides programmable output range (0 ~ + 10 VDC, -10 VDC ~ +10 VDC, 0 ~ +5 VDC, -5 VDC ~ +5 VDC, 0 ~ +20mA, +4mA ~ +20mA) . There are options for power on value and Safe Value for your consideration. It also has 240Vrms high over voltage protection for all analog outputs.

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 Output	
Output Channels	4
Output Type	0~20mA, 4~20mA, 0~5V, +/-5V, 0~10V, +/-10V
Resolution	12-bit
Accuracy	+/- 0.1% of FSR
Zero Drift	Voltage: +/-30μV/ °C Current: +/-0.2μA/ °C
Span Drift	+/- 20ppm/°C
DA Output Response Time	10ms per channel
Programmable Output Slope	0.125 to 2048 mA/second 0.0625 to 1024 V/second
Voltage Output Capability	10 V@20 mA
Current Load Resistance	External +24V : 1050 Ohms
Power-Up and Safe Value	Yes
Interface	
Isolation Voltage	2500 VDC
2-wire Cabling	Belden 9841 (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	2.88 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-2024iT	4-channel Isolated Analog Output Module
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