



FR-2024iT

4-channel Isolated Analog Output Distributed I/O Module with Isolated Communication Line

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



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.

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-8172W, and FRB-100U/200U.

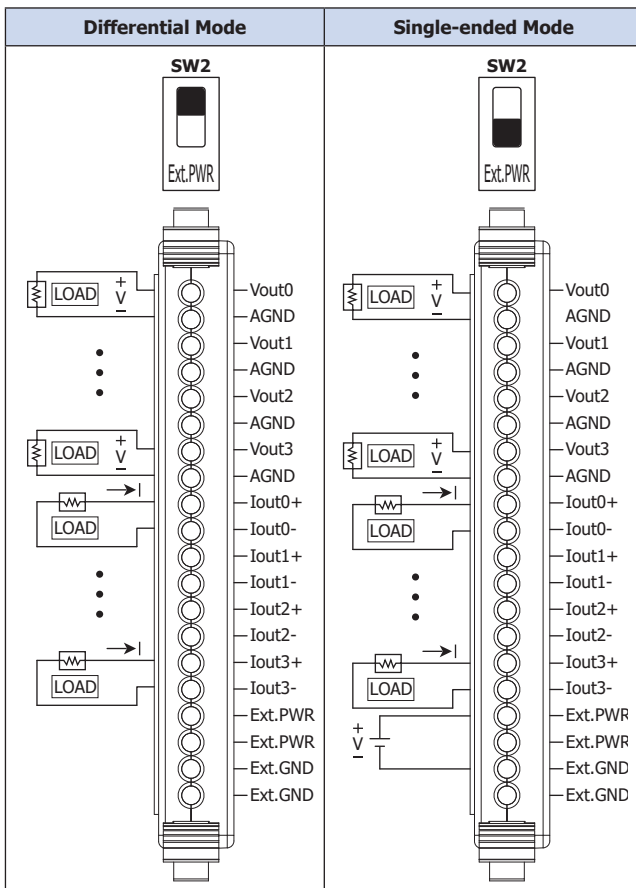
System Specifications

Interface	
Isolation Voltage	3000 Vrms
Wire Cable	Belden 9841 (2P twisted-pair cable), When different cables are used, the transmission distance may be changed
Transfer Speed	250 kbps and 1 Mbps (Default); DIP Switch Selectable
Transfer Distance	Max. 400 m for speed 250 K; Max. 100 m for speed 1M (Default)
Cyclic Scan Time	2.88 ms for speed 250 K; 0.72 ms for speed 1 M (Default)
LED Indicators	
Power LED Indicator	Yes
I/O LED Indicator	Yes
Isolation	
Intra-module Isolation, Field-to-Logic	3000 Vrms
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV contact for power liner, communication line and each channel, ±8 kV air for random point
EFT (IEC 61000-4-4)	±4 kV contact for power liner
Surge (IEC 61000-4-5)	±3 kV for power liner
Power	
Input Range	+10 ~ +30 Vdc (Non-isolation)
Consumption	2.88 W Max.
Reverse Polarity Protection	-
Connector	5-Pin Removable Terminal Block
Mechanical	
Casing	Plastic
Flammability	UL 94V-0 materials
Dimensions (W x L x H)	33 mm x 102 mm x 107 mm
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-30 to +80°C
Humidity	10 to 90% RH, Non-condensing

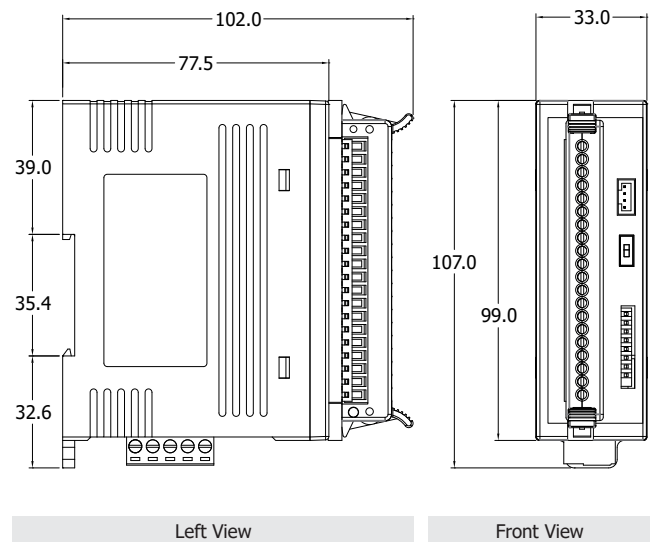
I/O Specifications

Analog Output	
Channels	4
Type	0 ~ 20 mA, 4 ~ 20 mA, 0 ~ 5 V, ±5 V, 0 ~ 10 V, ±10 V
Resolution	12-bit
Accuracy	±0.1% of FSR
Zero Drift	Voltage: ±30 μV/ °C, Current: ±0.2 μA/ °C
Span Drift	±20 ppm/°C
DA Output Response Time	10 ms 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 Ω
Power on Value	Yes
Safe Value	Yes
Connection	20-Pin Removable Terminal Block

Pin Assignments and Wire Connections



Dimensions (Units: mm)



Ordering Information

FR-2024IT CR	4-channel Isolated Analog Output Module With Isolated Communication Line (RoHS)
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