



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

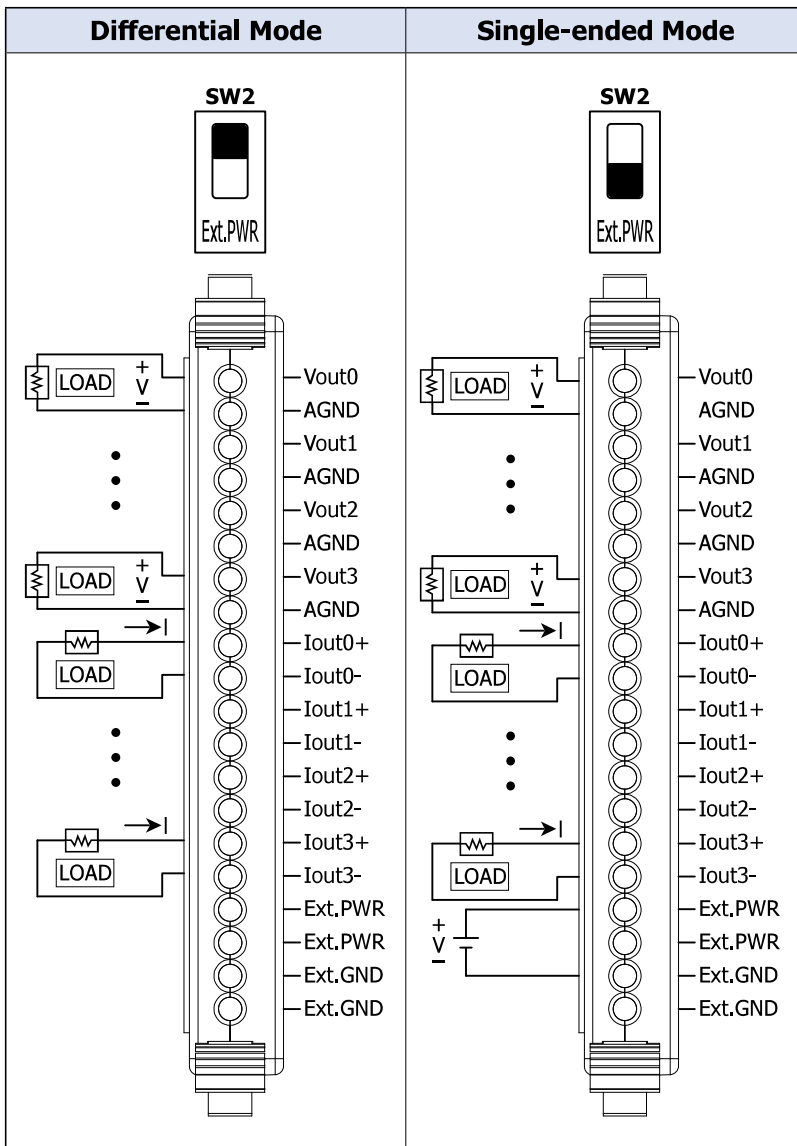
The FR-2024iT is a 12-bit, 4-ch analog outputs module that provides programmable output range (0 ~ + 10 VDC, -10 VDC ~ +10 VDC, 0 ~ +5 VDC, -5 VDC ~ +5 VDC, 0 ~ +20mA, +4mA ~ +20mA) . There are options for power on value and Safe Value for your consideration. The FR-2000 I/O module has an FRnet interface. 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, FRB-200U.

Specifications

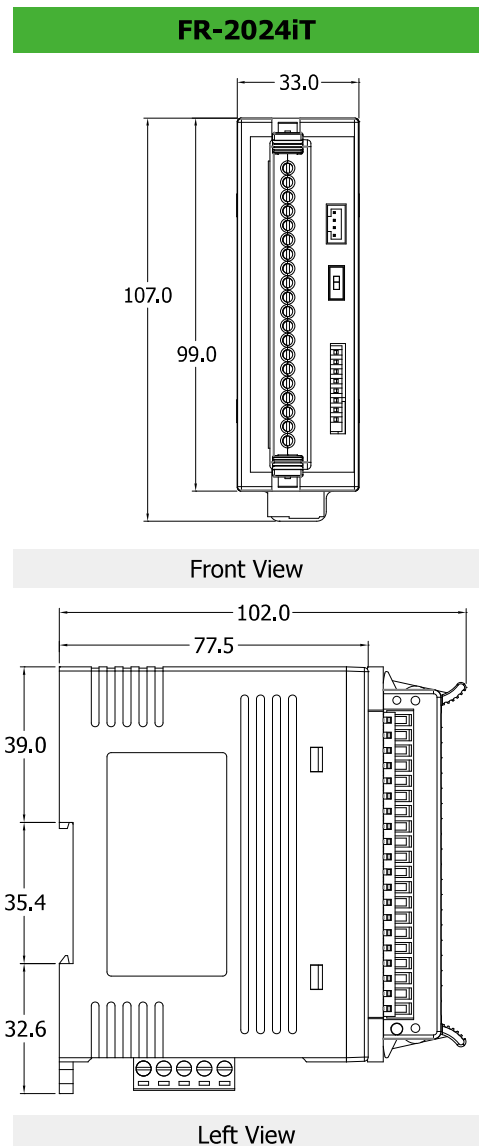
Isolation	
Intra-module Isolation	2500 VDC
EMS Protection	
EFT (IEC 61000-4-4)	±4 kV contact for power liner
ESD (IEC 61000-4-2)	±4 kV contact for power liner, communication line and each channel ±8 kV air for random point
Surge (IEC 61000-4-5)	± 3 kV for power liner
LED Indicators	
Status	Power, Communication Run, Communication Error, Terminal Resistor, Analog Output
Analog Output	
Channels	4
Type	Voltage Current
Range	Current: 0 ~ 20 mA, 4 ~ 20 mA Voltage: 0 ~ 5V, ±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
FRnet	
Wire Cable	Belden 9841 (2P twisted-pair cable), When different cables are used, the transmission distance may be changed
Transfer Speed	250 kbps and 1Mbps (Default) DIP Switch Selectable

Transfer Distance	Max. 400 m for speed 250 K Max. 100 m for speed 1M (Default)
Cyclic Time	2.88 ms for speed 250 K 0.72 ms for speed 1 M (Default)
Power	
Input Range	+10 VDC ~ +30 VDC (Non-isolated)
Consumption	2.88 W Max.
Mechanical	
Casing	Plastic
Dimensions (mm)	33 x 102 x 107 (W x L x H)
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +85 °C
Humidity	10 ~ 90% RH, Non-condensing

Pin Assignments and Wire Connections



Dimensions (Units: mm)



Ordering Information

FR-2024iT CR	FRnet I/O Module with 4-channel Isolated AO and Isolated Communication Line (RoHS)
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