FR-2057/FR-2057T/ FR-2057HT

16-Channel Isolated Sink Digital Output Distributed I/O Module

FR-2057   **FR-2057T/FR-2057HT**

Introduction

The FR-2053/2053T/2053HT has 16-channel isolated photo coupler input, while the FR-2057/2057T/2057HT has 16-channel isolated photo-coupler output. The default signal connector of FR-2053 and FR-2057 is a 20-pin header. The "T" stands for screw terminal connector. According to different applications, the users can choose suitable modules. 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-2053/2057; refer to literature related to I-7188EF, I-8172W, FRB-100/200U.

Features

- Built-in Wire-saving FRnet DI/DO 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

Digital Output	
Output Channel	16
Output Type	Open-Collector (NPN)
Load Voltage	24 VDC, Max
Load Current	100mA, Max
Turn-on delay time	less than 1.0ms
Turn-off delay time	less than 1.5ms
Isolation Voltage	1500 Vrms
Interface	
2-wire cabling	2-wire cabling Belden 9841 (2P twisted-pair cable), When different cables are used, the transmission distance may change
Transfer distance	Max. 400m for FR-2057 Max. 100m for FR-2057T/FR-2057HT
LED Indicators	Power, Communication Run, Communication Error, Terminal resistor, Digital output
Transfer speed	250 kbps for FR-2057 1 Mbps for FR-2057T/FR-2057HT
Cyclic scan time	2.88ms for FR-2057 0.72ms for FR-2057T/FR-2057HT
Connection	20-pin header for FR-2057 series
	Removable 20-pin Terminal Block for FR-2057T/FR-2057HT
Power	
Input Voltage Range	+10 ~ +24 VDC (Non-isolation)
Power consumption	2 W Max.
Protection	Power reverse polarity protection
Frame Ground for EMS Protection	Yes
Connection	5-Pin Removable Terminal Block

Mechanical	
Casing	Plastic (Flammability UL 94V-0)
Dimensions (W x L x H)	33 mm x 102 mm x 110 mm
Installation	DIN-Rail
Mechanical	
Operating Temperature	-25°C ~ +75°C
Storage Temperature	-30°C ~ +85°C
Ambient Relative Humidity	10% ~ 90% RH, non-condensing

Ordering information

FR-2057	16-channel isolated digital output with 20-pin header
FR-2057T	16-channelisolated digital output module with 20-pin screw terminal connector
FR-2057HT	16-channelisolated digital output module with 20-pin screw terminal connector

Accessories

DN-20 (Pitch:5.08mm)	DIN-rail mounting terminal board with two CA-2010 cable, 1m
DN-20-381 (Pitch:3.81mm)	DIN-rail mounting terminal board with two CA-2010 cable, 1m