



FR-2057TA/HTA/TW/iT

16-channel Isolated Digital Output Distributed I/O Module

Features

- Built-in Wire-saving FRnet DI/DO control
- 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
- High-speed transmission reliability
(only for FR-2057HTA, FR-2057iT and FR-2057TW)



Introduction

The FR-2057TA/2057TW/2057iT I/O module has an FRnet interface. The users can daisy chain several FR-2057TA/2057TW/2057iT modules together. Via FRnet, the FR-2057TA/2057TW/2057iT modules can extend the remote I/O control of PC, PAC and PLC easily.

Further information about the networking of FR-2057TA/2057TW/2057iT; refer to literature related to I-8172W, FRB-100U/200U. According to different applications, the users can choose suitable modules.

The FR-2057TA/FR-2057HTA has 16-channel isolated source output.
The FR-2057iT/FR-2057TW has 16-channel isolated sink output.

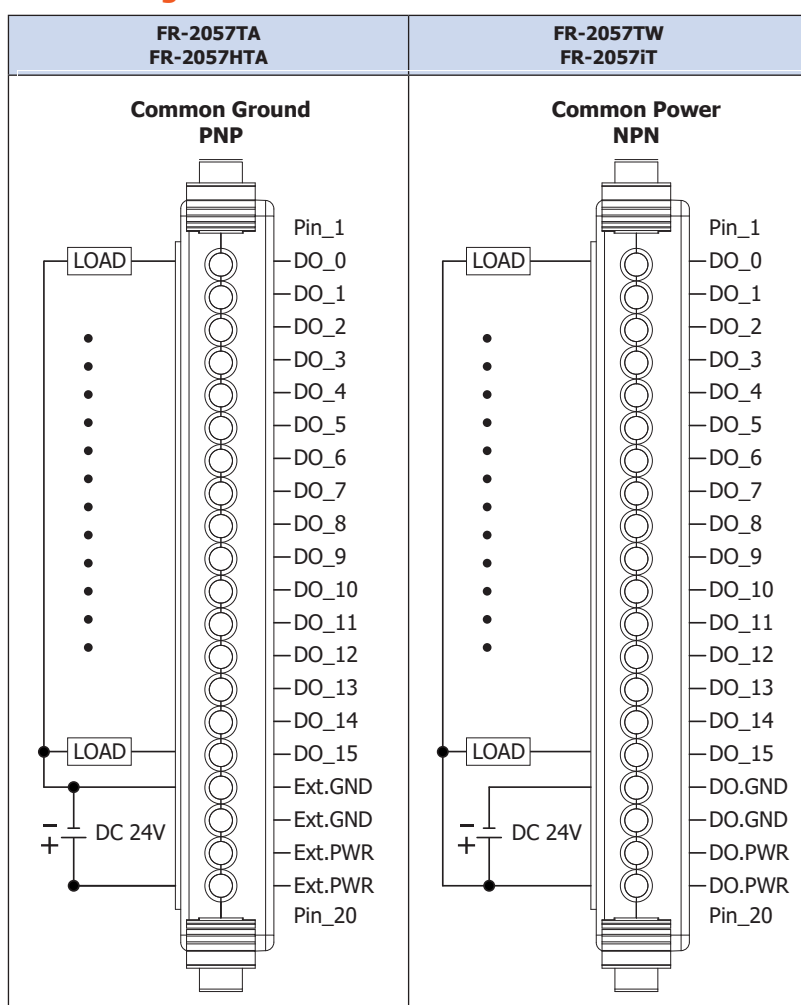
System Specifications

| Models | FR-2057TA | FR-2057HTA | FR-2057TW | FR-2057IT |
|--|--|-------------------------------|--|-----------|
| Interface | | | | |
| Isolation Voltage | - | | | 3000 Vrms |
| Wire Cable | 2-wire cabling Belden 9841 (2P twisted-pair cable), When different cables are used, the transmission distance may change | | | |
| Transfer Speed | 250 kbps | 1 Mbps | 250 kbps and 1 Mbps (Default); DIP Switch Settings | |
| Transfer Distance | Max. 400 m | Max. 100 m | Max. 400 m for speed 250 kbps; Max. 100 m for speed 1 Mbps (Default) | |
| Cyclic Scan Time | 2.88 ms | 0.72 ms | 2.88 ms for speed 250 kbps; 0.72 ms for speed 1 Mbps (Default) | |
| LED Indicators | | | | |
| Power LED Indicator | Yes | | | |
| I/O LED Indicator | Yes | | | |
| Isolation | | | | |
| Intra-module Isolation, Field-to-Logic | 3750 Vrms | | | |
| EMS Protection | | | | |
| ESD (IEC 61000-4-2) | Yes | | | |
| EFT (IEC 61000-4-4) | Yes | | | |
| Surge (IEC 61000-4-5) | Yes | | | |
| Power | | | | |
| Input Range | +10 VDC ~ +24 VDC (Non-isolated) | +10 ~ +30 VDC (Non-isolation) | | |
| Consumption | 2 W Max. | 2.4 W Max. | | |
| Reverse Polarity Protection | Yes | | | |
| 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 +85°C | | | |
| Humidity | 10 to 90% RH, Non-condensing | | | |

I/O Specifications

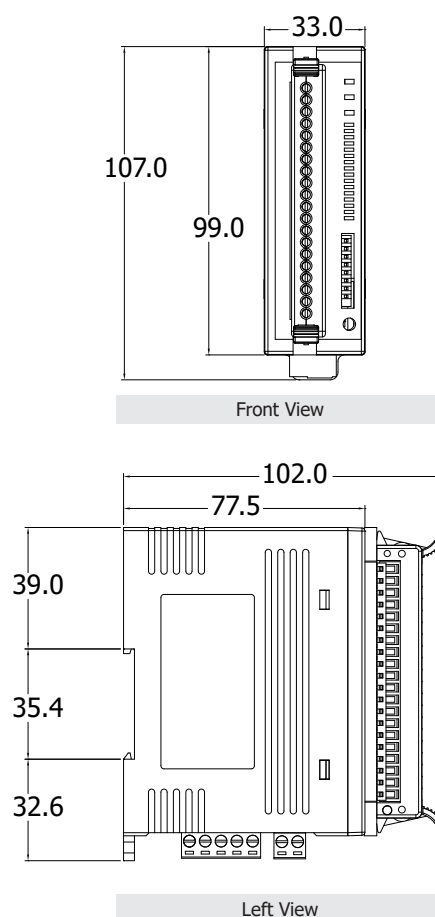
| Models | FR-2057TA | FR-2057HTA | FR-2057TW | FR-2057iT |
|-----------------------|---------------------------------|------------|-------------|-----------------------|
| Digital Output | | | | |
| Channels | 16 | | | |
| Type | Open-Collector | | | |
| Sink/Source (NPN/PNP) | Source (PNP) | | Sink (NPN) | |
| Isolation | 3750 Vrms | | | |
| Load Voltage | 30 VDC Max. | | | +5 VDC ~ +30 VDC Max. |
| Max. Load Current | 100 mA Max. | | 250 mA Max. | 100 mA Max. |
| Connection | 20-Pin Removable Terminal Block | | | |

Pin Assignments and Wire Connections



Dimensions (Units: mm)

FR-2057TA/FR-2057HTA/FR-2057TW/FR-2057iT



Ordering Information

| | |
|----------------------|---|
| FR-2057TA CR | 16-channel isolated Source output module with 20-pin screw terminal connector (RoHS) |
| FR-2057HTA CR | High-speed 16-channel isolated Source output module with 20-pin screw terminal connector (RoHS) |
| FR-2057TW CR | 16-channel Sink type Isolated High Current Output Module (RoHS) |
| FR-2057iT CR | 16-channel Sink Type Isolated Output Module With Isolated Communication line (RoHS) |