

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

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
- High-speed transmission reliability
  (only for FR-2057HTA, FR-2057iT and FR-2057TW)

Introduction

The FR-2057TA/2057TW/2057iT/iTA 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/FR-2057iTA 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	FR-2057iTA
Isolation					
Intra-module Isolation	3750 Vrms				
EMS Protection					
EFT (IEC 61000-4-4)	Yes				
ESD (IEC 61000-4-2)	Yes				
Surge (IEC 61000-4-5)	Yes				
LED Indicators					
Status	Power, Communication Run, Communication Error, Terminal Resistor, Digital Output				
FRnet					
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 for FR-2057TA 1 Mbps for FR-2057HTA		250 kbps and 1 Mbps (Default) DIP Switch Settings		
Transfer Distance	Max. 400 m for FR-2057TA Max. 100 m for FR-2057HTA		Max. 400 m for speed 250 kbps Max. 100m for speed 1Mbps (Default)		
Cyclic Time	2.88 ms for FR-2057TA 0.72 ms for FR-2057HTA		2.88 ms for speed 250 kbps 0.72 ms for speed 1 Mbps (Default)		
Power					
Reverse Polarity Protection	Yes				
Input Range	+10 ~ +30 VDC (Non-isolation)			+10 ~ +30 VDC (Isolation)	
Consumption	2.4 W Max.				
Mechanical					
Casing	Plastic				
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				

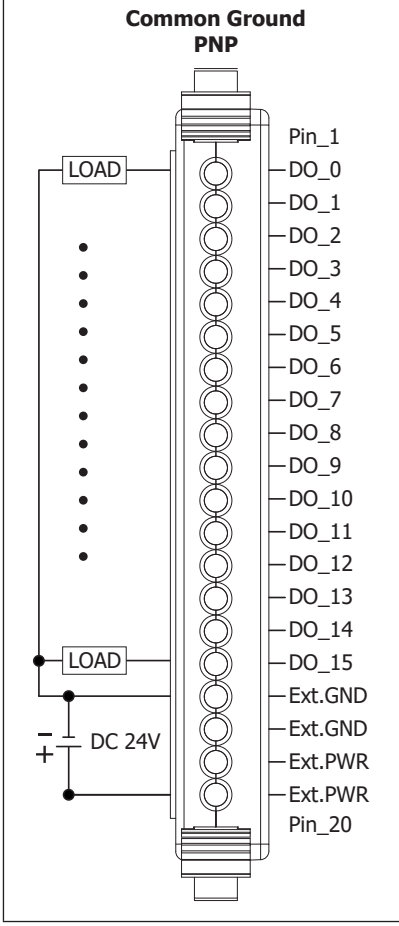
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I/O Specifications

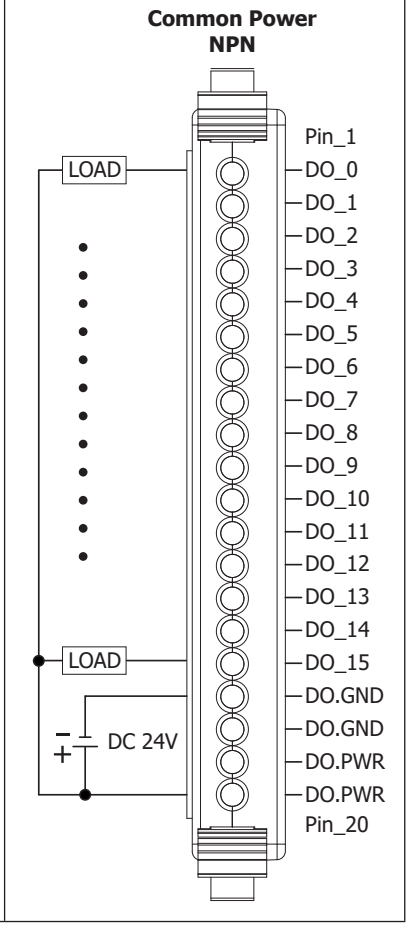
Models	FR-2057TA	FR-2057HTA	FR-2057TW	FR-2057iTA	FR-2057iT
Digital Output					
Channels	16				
Type	Open-Collector				
Sink/Source (NPN/PNP)	Source (PNP)		Sink (NPN)	Source (PNP)	Sink (NPN)
Load Voltage	30 VDC Max.				+5 VDC ~ +30 VDC Max.
Max. Load Current	100 mA Max.		250 mA Max.	100 mA Max.	
Isolation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

Pin Assignments and Wire Connections

FR-2057TA/FR-2057HTA/FR-2057iTA

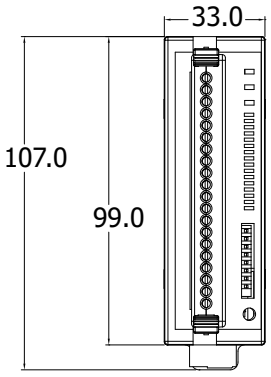


FR-2057TW/FR-2057iT

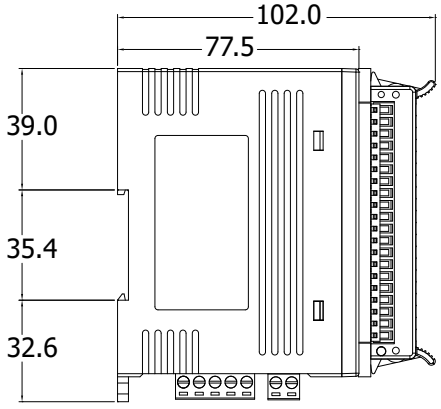


Dimensions (Units: mm)

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



Front View



Left View

Ordering Information

FR-2057TA CR	FRnet I/O Module with 16-channel Isolated DO (Source, PNP, 30VDC) (250 kbps, Max. 400m) (RoHS)
FR-2057HTA CR	High-speed FRnet I/O Module with 16-channel Isolated DO (Source, PNP, 30VDC) (1 Mbps, Max. 100m) (RoHS)
FR-2057TW CR	FRnet I/O Module with 16-channel Isolated High Current DO (Sink, NPN, 30VDC, 250mA, Max) (RoHS)
FR-2057iT CR	FRnet I/O Module with 16-channel Isolated DO (Sink, NPN, 5~30VDC) and Isolated Communication Line (RoHS)
FR-2057iTA CR	FRnet I/O Module with 16-channel Isolated DO (Source, PNP, 30VDC) (250 kbps, Max. 400m) and Isolated Communication Line (RoHS)

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