
Technical Information

Lists of Devices Compatible with Communication Portfolios



TI 34P02P21-01E

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Introduction

This Technical Information (TI) document describes Programmable Logic Controller (PLC) devices that can be accessed from FCN/FCJ autonomous controllers when they are connected using a communication portfolio. This TI document covers communication portfolios and PLCs listed in the table below.

Table: Communication Portfolios and PLCs

Model	Application Portfolio	PLC	Reference Chapter
NT8020J	FA-M3 Communication Portfolio	FA-M3	Chapter 1
NT8021J	MELSEC Communication Portfolio	MELSEC	Chapter 2
NT8022J	SYSMAC Communication Portfolio	SYSMAC	Chapter 3

TIP

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- This TI document assumes the reader is familiar with detailed functions of each PLC.
 - For information on detailed functions of each PLC, see the instruction manual of the respective PLC manufacturer.
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Lists of Devices Compatible with Communication Portfolios

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Contents

Introduction.....	i
Copyrights and Trademarks	ii
1. FA-M3 Communication Portfolio.....	1
2. MELSEC Communication Portfolio.....	3
3. SYSMAC Communication Portfolio	7
Revision Information	l

Blank Page

1. FA-M3 Communication Portfolio

The following table lists FA-M3 devices that can be accessed from FCN/FCJ autonomous controllers using an FA-M3 communication portfolio. The portfolio is broken down into two types: Ethernet communication and RS communication (personal computer link). With RS communication, the number of characters for the name of a device that can be specified varies depending on the PC link module.

Table: List of Devices Capable of Communication

Device Name *1			Device Range *2	Read		Write	
				Bit	Word	Bit	Word
Bit Device	Xnnnnnn	Input relay	6 characters/7 characters	✓	✓	×	×
	Ynnnnnn	Output relay	6 characters/7 characters	✓	✓	✓	✓
	Innnnnn	Internal relay	6 characters/7 characters	✓	✓	✓	✓
	Ennnnnn	Extended shared relay	6 characters/7 characters	✓	✓	✓	✓
	Lnnnnnn	Link relay	6 characters/7 characters	✓	✓	✓	✓
	Mnnnnnn	Special relay	6 characters/7 characters	✓	✓	×	×
	Txnnnnn	Timer	6 characters/7 characters	×	×	×	×
Cxnnnnn	Counter	6 characters/7 characters	×	×	×	×	
Word Device	Dnnnnnn	Data register	6 characters/7 characters	×	✓	×	✓
	Rnnnnnn	Shared register	6 characters/7 characters	×	✓	×	✓
	Vnnnnnn	Index register	6 characters/7 characters	×	✓	×	✓
	Bnnnnnn	File register	6 characters/7 characters	×	✓	×	✓
	Wnnnnnn	Link register	6 characters/7 characters	×	✓	×	✓
	Znnnnnn	Special register	6 characters/7 characters	×	✓	×	×

(✓: Accessible ×: Inaccessible)

*1: A device that can be specified and its maximum value depend on the specifications of a CPU module on the destination side of communication.

*2: With a PC link module, the number of characters for the name of a device that can be specified varies depending on the model.

Up to 6 characters can be specified for F3LC11-1N/F3LC11-2N.

Up to 7 characters can be specified for F3LC11-1F/F3LC12-1F.

Up to 7 characters can be specified for Ethernet communication.

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2. MELSEC Communication Portfolio

This chapter describes MELSEC stations and devices that can be accessed from FCN/FCJ autonomous controllers using a MELSEC communication portfolio. Note that some stations may be inaccessible from FCN/FCJ autonomous controllers when MELSECNET is used.

■ Accessible MELSEC stations

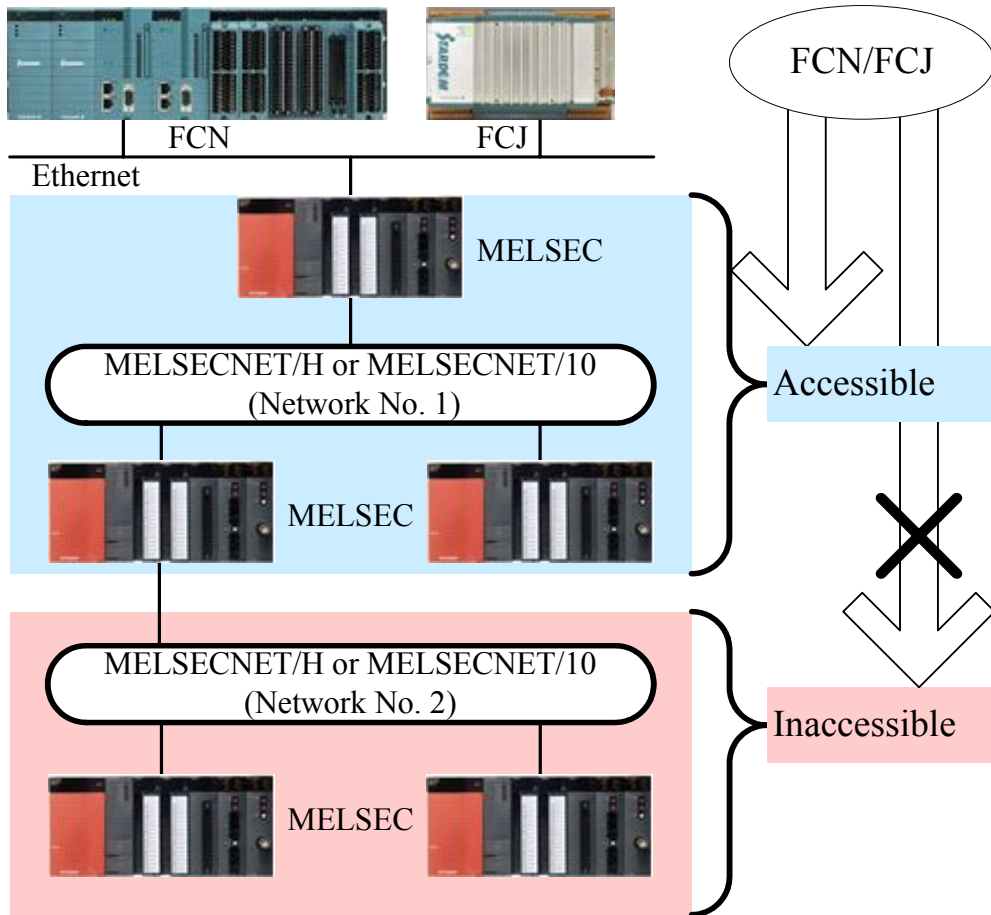


Figure: MELSEC Stations and Devices Accessible from FCN/FCJ

The figure above shows MELSEC stations that can be accessed from FCN/FCJ. FCN/FCJ can access the primary MELSEC station via Ethernet, and then secondary MELSEC stations, which are connected to the primary MELSEC station via MELSECNET/H or MELSECNET/10 (Network No. 1). However, a MELSEC station defined on Network No.1 cannot access MELSEC remote stations attached to MELSECNET/H or MELSECNET/10. FCN/FCJ cannot access MELSEC stations, which are connected to another MELSECNET/H or MELSECNET/10 (Network No. 2), via a MELSEC station on Network No. 1.

TIP

Any model except for Q mode of the Q series requires a ladder program for communication processing on the MELSEC side.

■ List of Accessible Devices.

List of Accessible Devices (A Series)

Device	Device Range	Device Number	A Series CPU						
			A1S A1SH A1SJ A1SJH A1 A1N	A2S A2SH A2 A2N A2C A2CJ A0J2H	A2-S1 A2N-S1	A3 A3N	A2A	A2A-S1	A3A
Data register (D)	D0 to D1023	0000H to 03FFH	✓		✓			✓	
	D1024 to D6143	0400H to 17FFH	—		—			✓	
	D9000 to D9255	2328H to 2427H	✓		✓			✓	
Link register (W)	W0 to W3FF	0000H to 03FFH	✓		✓			✓	
	W400 to WFFF	0400H to 0FFFH	—		—			✓	
File register (R)	R0 to R4095	0000H to 0FFFH	—		✓			✓	
	R4096 to R8191	1000H to 1FFFH	—		—	✓		✓	
Timer	Present value (TN)	T0 to T255	0000H to 00FFH	×		×		×	
		T256 to T2047	0100H to 07FFH	—		—		×	
	Contact (TS)	T0 to T255	0000H to 00FFH	×		×		×	
		T256 to T2047	0100H to 07FFH	—		—		×	
	Coil (TC)	T0 to T255	0000H to 00FFH	×		×		×	
		T256 to T2047	0100H to 07FFH	—		—		×	
Counter	Present value (CN)	C0 to C255	0000H to 00FFH	×		×		×	
		C256 to C1023	0100H to 03FFH	—		—		×	
	Contact (CS)	C0 to C255	0000H to 00FFH	×		×		×	
		C256 to C1023	0100H to 03FFH	—		—		×	
	Coil (CC)	C0 to C255	0000H to 00FFH	×		×		×	
		C256 to C1023	0100H to 03FFH	—		—		×	
Input relay (X)	X0 to X0FF	0000H to 00FFH	✓		✓			✓	
	X100 to X1FF	0100H to 01FFH	—		✓			✓	
	X200 to X3FF	0200H to 03FFH	—	—	✓		—	✓	
	X400 to X7FF	0400H to 07FFH	—		—	✓	—	✓	
Output relay (Y)	Y0 to Y0FF	0000H to 00FFH	✓		✓			✓	
	Y100 to Y1FF	0100H to 01FFH	—		✓			✓	
	Y200 to Y3FF	0200H to 03FFH	—	—	✓		—	✓	
	Y400 to Y7FF	0400H to 07FFH	—		—	✓	—	✓	
Internal relay (M) (including latch relay and step relay)	M0 to M2047	0000H to 07FFH	✓		✓			✓	
	M2048 to M8191	0800H to 1FFFH	—		—			✓	
	M9000 to M9255	2328H to 2427H	✓		✓			✓	
Link relay (B)	B0 to B3FF	0000H to 03FFH	✓		✓			✓	
	B400 to BFFF	0400H to 0FFFH	—		—			✓	
Annunciator (F)	F0 to F255	0000H to 00FFH	✓		✓			✓	
	F256 to F2047	0100H to 07FFH	—		—			✓	

(✓: Accessible ×: Inaccessible —: No device)

Table: List of Accessible Devices (Q Series)

Device	Device Range	Device Number	Q Series CPU			
			Q00J Q00 Q01	Q02 Q02H Q06H	Q12H Q25H	QJ72LP25-25 QJ72LP25G QJ72BR15
Data register (D)	D0 to D6143	0000H to 17FFH	✓			×
	D6144 or greater	1800H or greater	×			
	D9000 to D9255	2328H to 2427H	✓			
Link register (W)	W0 to W7FF	0000H to 07FFH	✓			×
	W800 to WFFF	0800H to 0FFFH	—	✓		
	W1000 or greater	1000H or greater	×			
File register (R)	R0 or greater	0000H or greater	×			
Timer	Present value (TN)	T0 to T511	×			—
		T512 to T2047	—	×		
		T2048 or greater	×			
	Contact (TS)	T0 to T511	×			
		T512 to T2047	—	×		
		T2048 or greater	×			
	Coil (TC)	T0 to T511	×			
		T512 to T2047	—	×		
		T2048 or greater	×			
Counter	Present value (CN)	C0 to C511	×			
		C512 to C1023	—	×		
		C1024 or greater	×			
	Contact (CS)	C0 to C511	×			
		C512 to C1023	—	×		
		C1024 or greater	×			
	Coil (CC)	C0 to C511	×			
		C512 to C1023	—	×		
		C1024 or greater	×			
Input relay (X)	X0 to X7FF	0000H to 07FFH	✓			×
	X800 or greater	0800H or greater	×			—
Output relay (Y)	X0 to X7FF	0000H to 07FFH	✓			×
	X800 or greater	0800H or greater	×			—
Internal relay (M)	M0 to M8191	0000H to 1FFFH	✓			×
	M8192 or greater	2000H or greater	×			—
	M9000 to M9255	2328H to 2427H	✓			
Latch relay			×			
Step relay			Internal relay (M) is accessed even if latch relay (L) or step relay (S) is specified.			
Link relay (B)	B0 to B7FF	0000H to 07FFH	✓			×
	B800 to BFFF	0800H to 0FFFH	—	✓		
	B1000 or greater	1000H or greater	×			
Annunciator (F)	F0 to F1023	0000H to 03FFH	✓			—
	F1024 to F2047	0400H to 07FFH	—	✓		
	F2048 or greater	0800H or greater	×			

(✓: Accessible ×: Inaccessible —: No device)

Table: List of Accessible Devices (AnU and QnA Series)

Device	Device Range	Device Number	AnU Series CPU			QnA Series CPU		
			A2US A2U	A2US-S1 A2USH-S1 A2U-S1	A3U A4U	Q2A Q2AS Q2ASH	Q2A-S1 Q2AS-S1 Q2ASH-S1	Q3A Q4A Q4AR
Data register (D)	D0 to D6143	0000H to 17FFH	✓			✓		
	D6144 to D8191	1800H to 1FFFH	×			×		
	D8192 or greater	2000H or greater	—			×		
	D9000 to D9255	2328H to 2427H	✓			✓		
Link register (W)	W0 to WFFF	0000H to 0FFFH	✓			✓		
	W1000 to W1FFF	1000H to 1FFFH	×			×		
	W2000 or greater	2000H or greater	—			×		
File register (R)	R0 to R8191	0000H to 1FFFH	✓			×		
	R8192 or greater	2000H or greater	—			×		
Timer	Present value (TN)	T0 to T2047	×			×		
		T2048 or greater	—			×		
	Contact (TS)	T0 to T2047	×			×		
		T2048 or greater	—			×		
	Coil (TC)	T0 to T2047	×			×		
		T2048 or greater	—			×		
Counter	Present value (CN)	C0 to C1023	×			×		
		C1024 or greater	—			×		
	Contact (CS)	C0 to C1023	×			×		
		C1024 or greater	—			×		
	Coil (CC)	C0 to C1023	×			×		
		C1024 or greater	—			×		
Input relay (X)	X0 to X1FF	0000H to 01FFH	✓			✓		
	X200 to X3FF	0200H to 03FFH	×	✓		×	✓	
	X400 to X7FF	0400 to 07FFH	×		✓	×		✓
	X800 to X1FF	0800 to 1FFFH	×			×		
	X2000 or greater	2000H or greater	—			×		
Output relay (Y)	Y0 to Y1FF	0000H to 01FFH	✓			✓		
	Y200 to Y3FF	0200H to 03FFH	×	✓		×	✓	
	Y400 to Y7FF	0400 to 07FFH	×		✓	×		✓
	Y800 to Y1FF	0800 to 1FFFH	×			×		
	Y2000 or greater	2000H or greater	—			×		
Internal relay (M)	M0 to M8191	0000H to 1FFFH	Including latch relay (L) and step relay (S)			✓		
	M8192 or greater	2000H or greater	—			×		
	M9000 to M9255	2328H to 2427H	✓			✓		
Latch relay			(Depends on above)			×		
Step relay			(Depends on above)			Internal relay (M) is accessed even if latch relay (L) or step relay (S) is specified.		
Link relay (B)	B0 to BFFF	0000H to 0FFFH	✓			✓		
	B1000 to B1FFF	1000H to 1FFFH	×			×		
	B2000 or greater	2000H or greater	—			×		
Annunciator (F)	F0 to F2047	0000H to 07FFH	✓			✓		
	F2048 or greater	0800H or greater	—			×		

(✓: Accessible ×: Inaccessible —: No device)

3. SYSMAC Communication Portfolio

The following table shows SYSMAC devices that can be accessed from FCN/FCJ autonomous controllers using a SYSMAC communication portfolio.

Table: Readable/Writable Memory Areas (Communication by Batch Reading/Writing)

Name	Specifiable Channel Number *1
CIO (Core I/O) Area I/O Relay Link Relay (LR) Work Relay, etc.	0000 to 9999CH
Work Relay (WR)	×
Holding Relay (HR)	0000 to 9999CH
Auxiliary Relay (AR)	0000 to 9999CH
Temporary Relay (TR)	×
Data Memory (DM)	0000 to 9999CH
Extended Data Memory (EM)	×
Timer (T)	×
Counter (C)	×
Task Flag (TK)	×
Index Registers (IR)	×
Data Registers (DR)	×

*1: The channel number that can be specified varies depending on the specifications of a CPU module on the destination side of communication, however, it cannot exceed the range specified in column *1.

Table: Force Writable Memory Areas (Communication by Forced Set/Reset)

Name	Model			
	C120 (F) and C500 (F)	C200H, C1000H (F) and C2000H	C200HX/HG/H E and C200HS	CS1 and CJ1
CIO Area (except data link relay)	0000 to 0060	0000 to 0252	0000 to 0511	0000 to 6143
Link Relay (LR)	0000 to 0031	0000 to 0063	0000 to 0063	0000 to 0199
Holding Relay (HR)	0000 to 0031	0000 to 0099	0000 to 0099	0000 to 0511
Auxiliary Relay (AR)	—	0000 to 0027	0000 to 0027	—
Work Relay (WR)	—	—	—	0000 to 0511
Timer (T) (for details, see the following table)	0000 to 0127	0000 to 0511	0000 to 0511	0000 to 2047
Counter (C) (for details, see the following table)	0000 to 0127	0000 to 0511	0000 to 0511	0000 to 2047

Table: Details on Force Writable Timer/Counter

Name	Model					
	C120, C500 and C200H	C120F and C500F	C1000H and C2000H	C1000HF	C200HX/HG/HE and C200HS	CS1 and CJ1
Timer (TIM)	✓	✓	✓	✓	✓	✓
High-speed Timer (TIMH)	✓	×	✓	×	✓	✓
Very High-speed Timer (TMHH)	×	×	×	×	×	✓
Accumulative Timer (TTIM)	×	×	×	×	✓	✓
Timer Wait (TIMW)	×	×	✓	×	×	✓
High-speed Timer Wait (TMHW)	×	×	✓	×	×	✓
Timer Start (TMS)	×	✓	×	✓	×	×
Counter (CNT)	✓	✓	✓	✓	✓	✓
Reversible Counter (CNTR)	✓	×	✓	✓	✓	✓
Counter Wait (CNTW)	×	×	✓	×	×	✓

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