ADVANCED AND EVER ADVANCING **MITSUBISHI ELECTRIC**

MITSUBISHI
PROGRAMMABLE CONTROLLERS

FX1S/FX1N SERIES

INNOVATION OF MICRO PROGRAMMABLE CONTROLLERS

- ■ **Considerably improved basic performance and functions**
- ■ **Buil-in easy positioning function**
- ■ **Improved setting/display function**
- ■ **Improved communication function**
- ■ **Consistent compatibility with host units**
- ■ **Low cost and high performance**

General Features

■ Basic Performance Improved

Comparing the FX1S/FX1N Series to previous models, various improvements can be found including a threefold increase in processing speed, more device points, and an improvement in high-speed counter frequency. Program capacity has been increased as well, enabling substantial function expansion.

■ Simplified Positioning Function Support

FX1S/FX1N Series positioning functions have been improved dramatically by increasing the pulse output frequency and adding new application commands such as "ABS Present Position Read Out," "Variable-speed Pulse Output" and "Positioning," "Hour Meter," "Analog Block," etc.
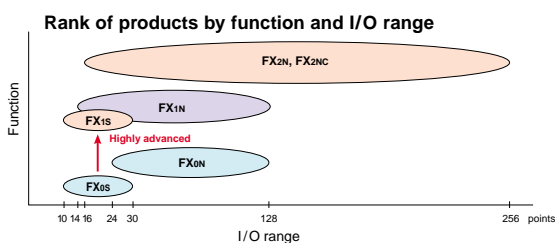
■ Highly Functional Display Modules

Applicable display modules include the add-on type FX1N-5DM with time and error indicators or the panel-type FX1N-10DM with multiple language capability, buzzer and wide-ranging setup functions.

■ Ample Communication Functions

Greater convenience has been actualized for serial communications and exclusive intranet connections. In addition to parallel links, a maximum of 8 units can be installed peer to peer or a maximum of 16 units in a personal computer link.

■ Interconnectivity with Previous Models

Operation compatibility with previous Mitsubishi Electric PLCs makes customer system upgrades easy and cost efficient. A user program is provided that enables application with current peripheral devices.
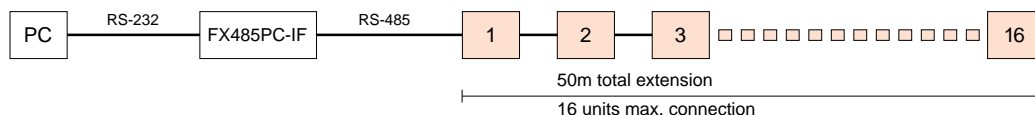

Optional type
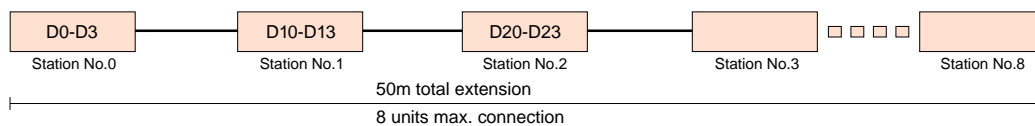
Standard type

Rank of products by function and I/O range

Function

FX2N, FX2NC

FX1N

FX1S

Highly advanced

FX0N

FX0S

10 14 16   24 30   128   256   points

I/O range

ISO 9001

ISO 14001

Specifications

Item	FX1s	FX1N
Built-in program step	2000	8000
Built-in program memory	EEPROM	EEPROM
Memory board	Available (up to 2 K)	Available (up to 8K)
Speed (basic instruction)　　μs	0.55~1.0	0.55~1.0
Speed (application instruction)　μs	2 to several hundred	2 to several hundred
Auxiliary relay	512	1536
State	128	1000
Timer	64	256
Counter	32	235
High-speed counter	1 phase, 6 points, 60kHz / 2 phases, 2 points, 30kHz	1 phase, 6 points, 60kHz / 2 phases, 2 points, 30kHz
Data register	256	8000
Pointer for branch	64	128
File register	1,500 points maximum	1,500 points maximum
Pointer for interrupt	6	6
Basic instruction	29	29
Application and arithmetic operation	Approximately 85	Approximately 85
Function extension board	Available	Available
High-speed pulse output	2 points, 100kHz	2 points, 100kHz
General-purpose I/O	Not available	up to 128
Special block	Not available	Available
Special adapter	Available	Available
Calendar timer	Built-in	Built-in

Networking

■Computer link

```
PC ──RS-232── FX485PC-IF ──RS-485── [1]─[2]─[3] □□□□□□□□□□□□ [16]
                                    └────── 50m total extension ──────┘
                                        16 units max. connection
```

■Peer to peer network

```
[D0-D3]──────[D10-D13]──────[D20-D23]──────[      ] □□□ [      ]
Station No.0   Station No.1   Station No.2   Station No.3   Station No.8
└──────────── 50m total extension ────────────┘
            8 units max. connection
```

Option

Display

■FX1N-5DM: Display module
• Suitable to on-panel display and easy monitor. Because FX1N-5DM can be installed on the add-on basis, it saves the installation space.

■FX-10DM-E: Easy message panel
• Suitable to easy message panel on control panel face.
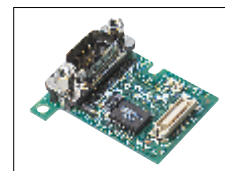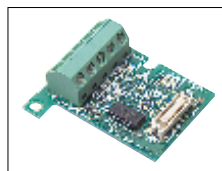
The display module is available in FX1s and FX1N.

The easy message panel is available in all FX models.

Communication

■Optional boards
FX1N-485-BD: Parallel link, Peer to peer network, PC link
FX1N-422-BD: Connection of GOT, connection of peripheral unit
FX1N-232-BD: Personal computer link, connection of general-purpose RS-232 equipment
FX1N-8AV-BD: 8 analog volume points
FX1N-CNV-BD: Connection of existing special adapter

⚠ **Safety Warning**

To ensure proper use of the products listed in this catalog, please be sure to read the instruction manual prior to use.

◆ MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE: MITSUBISHI DENKI BLDG., 2-2-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN