

FX-2PIF INTERFACE MODULE USER'S GUIDE

Introduction

The FX-2PIF is an active two port communications module for use with all FX0(S), FX0N, FX, FX2C, FX2N and A series programmable controllers. The PC type selection is made by setting DIP switches. The features of the FX-2PIF include;

- The FX-2PIF allows shared access to the PCs programming port by a data access unit and one other programming or monitoring peripheral. The second peripheral can communicate to the PC on either an RS232 or a RS422 port. The active port is simply selected by a positive hardware switch. If the RS232 port is used the FX-2PIF also acts as a RS232/RS422 converter.
- The FX-2PIF has been designed for use as a test and maintenance tool. The FX-2PIF has a rugged design offering a small overall size and a convenient hanging hook for temporary mounting.

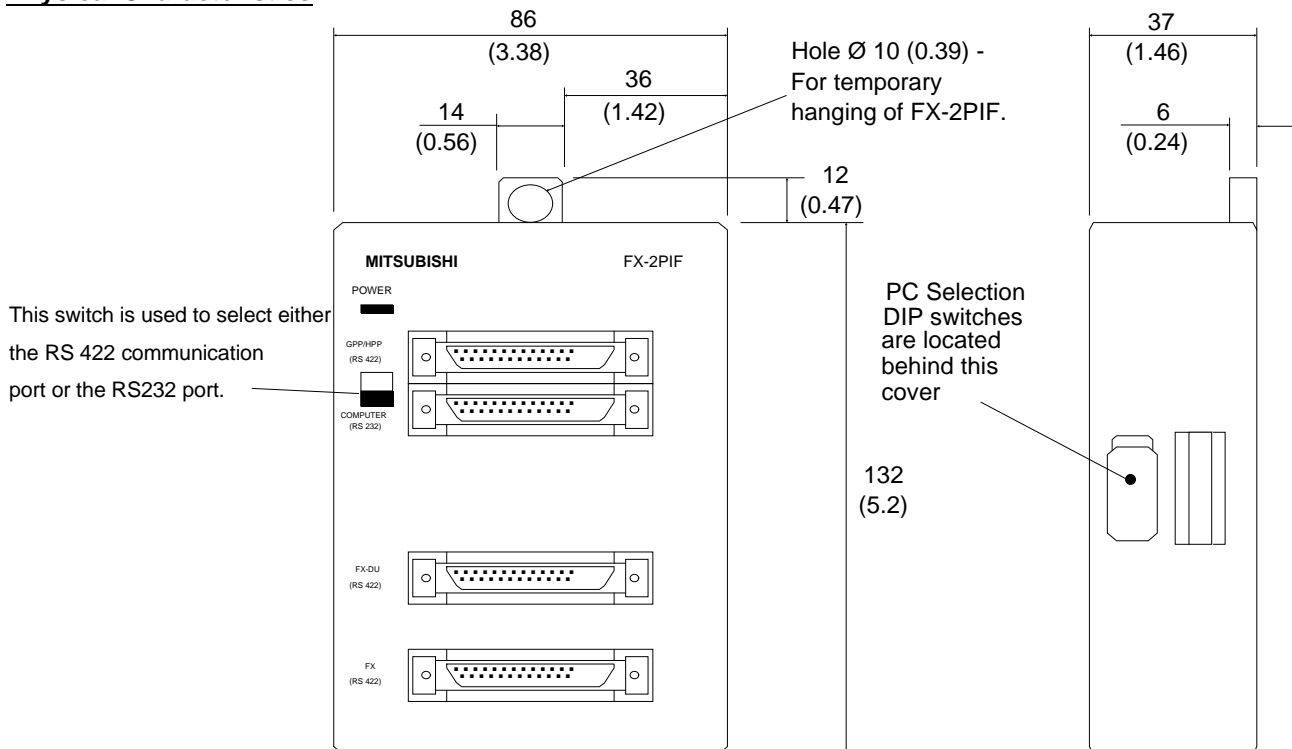
General Specification

Ambient Operating Temperature	0 - 45 °C
Ambient Operating Humidity	35 - 85 % Relative Humidity, no condensation
Noise Immunity	Noise Simulation Test: 1000V square pulse, 1µs pulse width, 30 to 100 HZ frequency sweep
Maximum Dielectric Voltage Withstood	Programmable Controller I/O and power terminals subjected to 500 V AC for 1 minute
Required Operating Environment	No corrosive gases present, minimal dust
External Dimensions	132 × 86 × 37 mm (5.2 × 3.38 × 1.46 inches)
Weight	0.3 Kg (0.66 lbs)
Mounting Facilities Provided	Temporary hanging hook

Electrical Specification

Power	5 V DC, supplied by the programmable controller	
Current Drawn From The 5 V DC supply When Using The Following Items With The FX-2PIF	Computer	310 mA
	FX-20P-E	340 mA
	A6-GPP	180 mA

Physical Characteristics



DIMENSIONS : mm (inches)



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Selection of PC Type

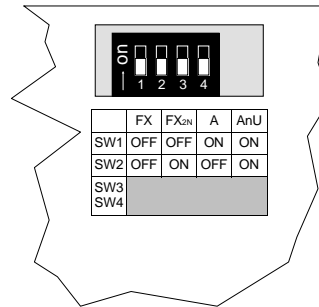
The FX-2PIF can work with all FX series and A series programmable controllers. However, the FX-2PIF must first be configured for use with the desired controller. This is done by setting the DIP switches located behind the removable cover on the side of the unit.

When setting a switch to ON the switch is moved up. When OFF the switch is in the down position.

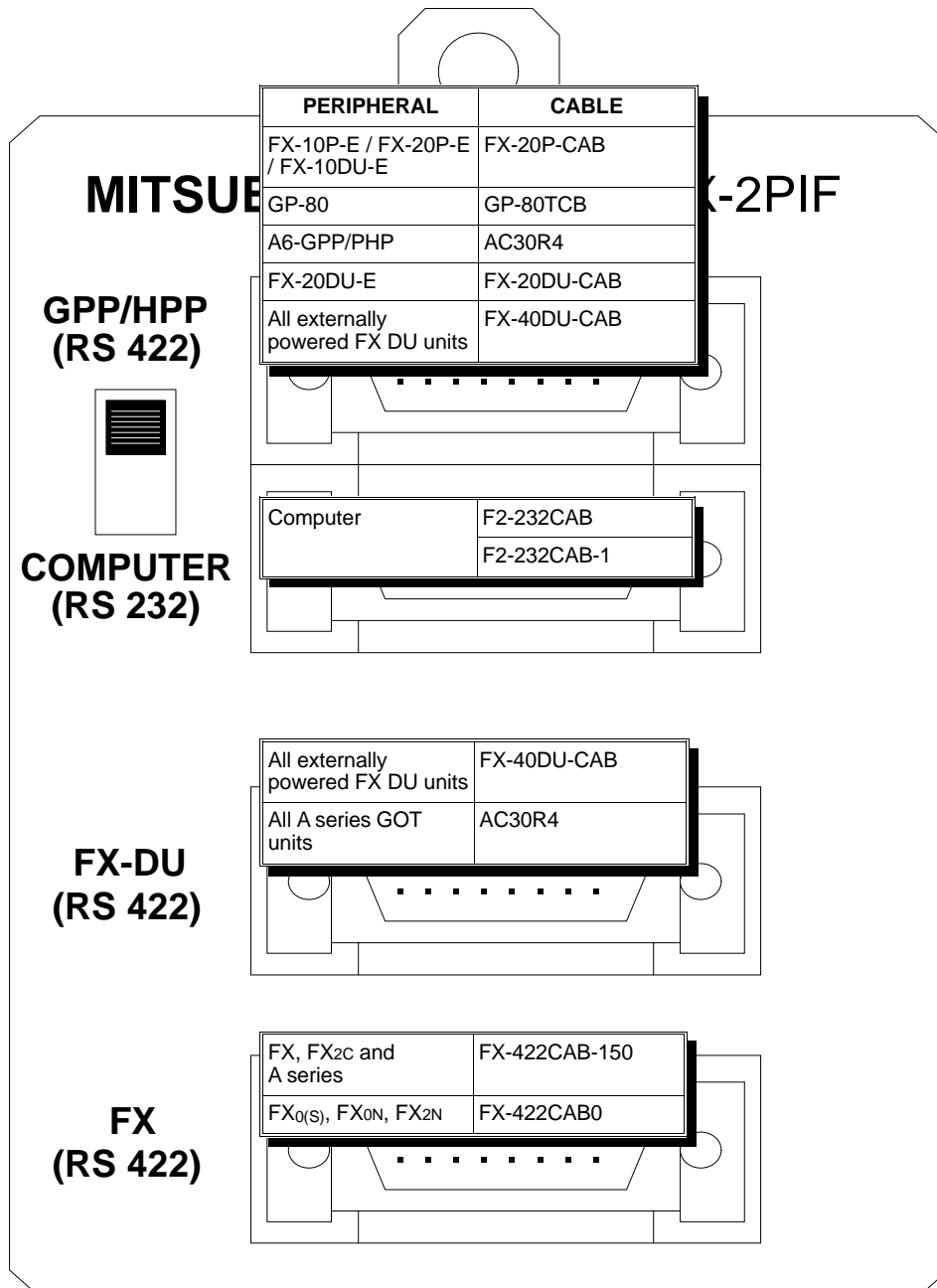
FX = All FX series except FX2N; A = All A series except AnU

Connection Diagram

The Peripherals and cables that can be connected to each port are identified below;



A scrap view showing the PC selection DIP switches



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Caution:- PC Power Supply Overload

When using the FX-2PIF with peripherals that draw power from the PC, care should be taken not to overload the PC. If this happens, the normal operation of part or all of the system will be affected; the worst case being the PC shuts down.

The FX PC can supply 5V DC 290mA, in addition to which is the power required by a programmer (150 mA). Hence, the total available 5V DC supply from an FX PC is 290 + 150 = 440 mA.

Take care to note the supply required by special function blocks as well. If necessary add an extension unit to power the special blocks.

Points For Use Of The FX-2PIF

- 1) For FX_{2N} series either FX or FX_{2N} support is possible but all peripherals must also conform to this setting. When the FX_{2N} setting is used all of the connecting peripherals must fully support FX_{2N}. Otherwise, set the FX-2PIF for use as for FX and ensure that none of the peripherals are set for FX_{2N} support.
- 2) The following combinations of PC and FX-2PIF can be used;

PC SERIES	FX-2PIF ver 2.0	FX-2PIF ver 2.1	FX-2PIF ver 2.2	FX-2PIF ver 3.0
FX ₀ , FX _{0S} , FX _{0N} , FX, FX _{2C}	✓	✓	✓	✓
FX _{2N}	✗	✗	✗	
AnN, AnA, A2C	✓	✓	✓	✓
A1S, A0J2H	✗			
AnU	✗	✗		

- 3) When using the FX-2PIF with an A series PC and an FX-40DU-(TK) the following restrictions are imposed by the FX-2PIF on the quantity of data being monitored. The sum total of active devices at any one time must be equal to or less than 34. The number of devices are calculated using the following tables, summing the total of each section, then summing the complete total, i.e.

Monitoring Contact Statuses;

A SERIES PC	INPUT CONTACT 'X'	STATUS CONTACTS 'Y, M, T and C'
AnN, A2C, A1S, A0J2H	Number of items used X 2 = ①	Number of items used X 1 = ②
AnA	Number of items used X 1 = ①	

Monitoring Actual Data Values

A SERIES PC	DATA DEVICES	
	T, C, D, Z, V - 16 bit	C, D, Z, V - 32 bit
AnN, AnA, A2C, A1S, A0J2H	Number of items used X 2 = ③	Number of items used X 4 = ④

$$\textcircled{1} + \textcircled{2} + \textcircled{3} + \textcircled{4} \leq 34$$

Example:

Situation:	PC = A1S	Contacts	X = 3	Solution	Number of devices allocated:
			C = 4		① 3 X 2 = 6
			M = 1		② 4 X 1 = 4
					③ 1 X 1 = 1
		Data values 16 bit	D = 2		④ 2 X 2 = 4
			V = 1		⑤ 1 X 2 = 2
		Data values 32 bit	D = 4		⑥ 4 X 4 = 16
					⑦ Total devices used (① + ② + ③ + ④)
					33 OK!
					(less than 34)

- 4) When using the FX-2PIF with an A series PC and either a personal computer or an A6-GPP/PHP care should be taken not to monitor more than 103 devices at any one time.
- 5) AnU series programmable controllers can not be used with FX DU units.
- 6) When using the FX-2PIF with an AnU series PC, a GOT and an associated programming tool, the AnU programming mode can be used.

