

## Mitsubishi PLCs — continued

### Communications Boards



The FX2N base units have the flexibility to be enhanced with additional communication boards. These are added directly to the base unit itself. The available units are:

#### FX2N-232-BD

This board provides RS232 communication with an suitable RS232 device, i.e. personal computers, printers, bar code readers and modems.

#### FX2N-422-BD

The FX2N-422-BD is essentially a second programming port for the FX2N base unit. It is also possible to interface any of the Mitsubishi range of HMI's through this port, this would then make it possible to have two HMI units connected to a single PLC as a standard solution.

#### FX2N-485-BD

This is the RS485 board unit to attach the FX2N base unit on to a 1:N data collection network, or as a node on a multi-drop network (N:N)

#### FX2N-CNV-BD

This converter board allows the FX2N to use the FX0N range of ADP communication adapters, i.e. FX0N-232ADP, FARNELL stock no.774-534. Using the FX0N communication adapters provides optoisolated communications options as well as the ability to communicate over long distances.

Note: Only one BD board may be fitted to each FX2N PLC at any one time. Application boards; FX2N-232-BD, FX2N-422-BD, FX2N-484-BD, FX2N-CNV-BD, FX2N-8AV-BD.

INC223

Mfrs. List No.	Order Code	Price Each			
		1+	2+	5+	10+
FX2N-232-BD	725-8306				
FX2N-42-BD	725-8318				
FX2N-485-BD	725-8320				
FX2N-CNV-BD	725-8288				

### Windows Programming Package.

Windows based programming for the FX PLC Family **MITSUBISHI**  
FX0, FX0S, FX0N, FX, FXN2 (FX-PCS/WIN-E)

The latest in a successful range of PC based programming tools, FX-PCS/WIN offers the user the ease and benefit of the Windows operating system along with 3 powerful PLC programming editors, documentation, monitoring and testing facilities, FX-PCS/WIN also offers the ability to import print files product for the DOS MEDOC programming package.

INC208

Mfrs. list No.	Order Code	Price Each			
		1+	2+	5+	10+
FX-PCS/WIN-E	725-8410				

### Cable



- Used for multi-drop connection to a master computer or data transfer with FX2N units
- All cables 1m in length

INC231

Description	Mfrs. List No.	Order Code	Price Each			
			1+	2+	5+	10+
RS232 Comms	FX-232-CAB-1	725-8367				
RS422 Comms	FX-422CAB	725-8379				
RS485 Comms	FX-422CAB0	725-8380				
RS232-422 Converter	FX-232AWC	725-8392				

## Siemens PLCs

### Simatic S7-200 Micro PLC



The 2nd generation S7-200 offers small but powerful CPUs with flexible I/O that can be tailored to suit simple or complex automation tasks, giving the best optimised and lowest-cost solutions. Easy-to-use, Windows based software unlocks the powerful, in-built computing and communications features. The enhanced expansion modules allow more flexible solutions which, coupled with the upgraded software, mean changing from other solutions is easier than ever.

All models feature:

- High speed — 0.37µs per instruction
- 2 x 20kHz pulse outputs
- 1 x RS485 communications interface
- In-built power supply
- PID instructions

Specifications:

Supply voltage	85-264Vac, 47/63Hz or 20.4-28.8Vdc
Supply for sensors	24Vdc, 180mA(221 & 222 CPU) or 280mA(224 CPU)
Inputs	24Vdc, 7mA opto-isolated (sink/source configurable)
Relay outputs	Volt free 2A; 5-30Vdc or 5-250Vac
Transistor outputs	24Vdc, 0.75A

INC257

### S7-221 CPUs

- 10 I/O — non expandable (6 in, 4 out)
- 2 Kbytes programming memory
- 4 x 20kHz high speed counter
- Real time clock option
- 24V d.c. input

INC261

Supply	Output	Mfrs. List No.	Order Code	Price Each		
				1+	5+	10+
24V d.c.	24V d.c.	6ES7 211-1AA20 0XB0	313-9750			
120/230V a.c.	Relay	6ES7 212-0BA20 0XB0	313-9761			

### S7-222 CPUs

- 14 I/O — expandable (8 in, 6 out)
- 2 Kbytes programming memory
- 4 x 20kHz high speed counter
- Real time clock option
- 24V d.c. input

INC267

Supply	Output	Mfrs. List No.	Order Code	Price Each		
				1+	5+	10+
24V d.c.	24V d.c.	6ES7 212-1AB20-0XB0	313-9773			
120/230V a.c.	Relay	6ES7 212-1BB20-0XB0	313-9785			

### S7-222 CPUs

- 24 I/O — expandable (14 in, 10 out)
- 28 Kbytes programming memory
- 6 x 20kHz high speed counter
- In-built real time clock
- 24V d.c. input

INC268

Supply	Output	Mfrs. List No.	Order Code	Price Each		
				1+	5+	10+
24V d.c.	24V d.c.	6ES7 214-1AB20-0XB0	313-9797			
120/230V a.c.	Relay	6ES7 214-1BB20-0XB0	313-9803			

### Digital Expansion Modules

These are used to increase the capacity of the S7-200 CPUs. A maximum of 2 modules can be used with the S7-222, up to 78 I/O. A maximum of 7 modules can be used with the S7-224, up to 128 I/O. Connection is via ribbon cable (supplied).

Specifications:

Inputs	24Vdc rated, sink/source, opto-isolated
Relay Outputs	Volt free 2A; 5-30 Vdc or 5-250Vac
Transistor Outputs	20.4-28.8 Vdc, 0.75A

INC262

Input	Output	Mfrs. List No.	Order Code	Price Each		
				1+	5+	10+
4	4 transistor	6ES7 223-1BF20-0XA0	328-9941			
4	4 relay	6ES7 223-1HF20-0XA0	328-9953			
8	-	6ES7 221-1BF20-0XA0	313-9815			
-	8 transistor	6ES7 222-1BF20-0XA0	313-9827			
-	8 relay	6ES7 222-1HF20-0XA0	313-9839			
8	8 transistor	6ES7 223-1BH21-0XA0	313-9840			
8	8 relay	6ES7 223-1PH21-0XA0	313-9852			
16	16 transistor	6ES7 223-1BL21-0XA0	328-9965			
16	16 relay	6ES7 223-1PL21-0XA0	328-9977			

### Analogue Expansion Modules

- Provide analogue capability for the 222 and 224 CPUs
- Inputs are selectable via dip switches, variable outputs by connection
- Inputs — 12 bit resolution
- Outputs — 12 bit resolution (voltage), 11 bit resolution (current)

Module Type

Module Type	Configurations
4 Input	unipolar - 0 to 5V, 0 to 10V or 0 to 20mA bipolar +/- 2.5V or +/- 5V +/- 10V, 0 to 20mA
2 Output	Inputs: Unipolar - 0 to 50mV, 0 to 100mV, 0 to 500mV, 0 to 1V, 0 to 5V, 0 to 10V, 0 to 20mA
4 Input / 1 Output	Bipolar +/- 25mV, +/- 50mV, +/- 100mV, +/- 250mV, +/- 500mV, +/- 1V, +/- 2.5V, +/- 5V Outputs: +/- 10V, 0 to 20mA

INC260

Input	Output	Mfrs. List No.	Order Code	Price Each		
				1+	5+	10+
4	-	6ES7 231-0HC20-0XA0	315-4348			
-	2	6ES7 232-0HB20-0XA0	328-9990			
4	1	6ES7 235-0HD20-0XA0	315-4350			