

## Note Concerning the CE Marking

This document does not guarantee that a mechanical system including this product will comply with the following standards. Compliance to EMC directive and LVD directive of the entire mechanical system should be checked by the user / manufacturer. For more details please contact the local Mitsubishi Electric sales site.

Programmable logic controllers are open-type devices that must be installed and used within conductive control boxes. Please use the FX2N Series programmable logic controllers while installed in conductive shielded control boxes. Please secure the control box lid to the control box (for conduction). Installation within a control box greatly affects the safety of the system and aids in shielding noise from the programmable logic controller.

## EMC

The following products have shown compliance through direct testing (of the identified standards below) and design analysis (through the creation of a technical construction file) to the European Directive for Electromagnetic Compatibility (2004/108/EC) when used as directed by the appropriate documentation.

Refer to a manual or related material of each product other than the following.

## Attention

- This product is designed for use in industrial applications.

## Note

- Authorized Representative in the European Community:  
Mitsubishi Electric Europe B.V.  
Gothaer Str. 8, 40880 Ratingen, Germany

Type : Programmable Controller (Open Type Equipment)

Models : MELSEC FX2N series manufactured

from July 1st, 1997	FX2N-☆☆MR-ES/UL	FX2N-☆☆MT-ESS/UL
	Where ☆☆ indicates:16,32,48,64,80,128	
	FX2N-★★ER-ES/UL	FX2N-★★ET-ESS/UL
	Where ★★ indicates:32,48	
	FX2N-16EX-ES/UL	FX2N-16EYR-ES/UL
	FX2N-232-BD	FX2N-485-BD
	FX2N-8AV-BD	FX2N-422-BD
		FX2N-8AV-IF
from April 1st, 1998	FX2N-□□MR-DS	FX2N-□□MT-DSS
	Where □□ indicates:32,48,64,80	
	FX2N-48ER-DS	FX2N-48ET-DSS
from August 1st, 1998	FX2N-ΔΔMR-UA1/UL	Where ΔΔ indicates:16,32,48,64
	FX2N-16MR-DS	FX2N-16MT-DSS
		FX2N-48ER-UA1/UL
from July 1st, 2001	FX2N-ROM-E1	
from August 1st, 2005	FX2N-8ER-ES/UL	FX2N-8EX-ES/UL
	FX2N-8EYR-ES/UL	FX2N-8EYT-ESS/UL
from September 1st, 2010	FX2N-8EYR-S-ES/UL	

Table 1.3: **ENG** ☞ Powered extension units  
**FRE** ☞ Appareils d'extension alimentés en tension  
**GER** ☞ Spannungsversorgte Erweiterungsgeräte  
**ITL** ☞ Apparecchi di ampliamento con alimentazione di tensione  
**ESP** ☞ Unidades de ampliación con alimentación de tensión

MODEL	INPUTS		OUTPUT TYPE			POWER SUPPLY	DIMENSIONS mm (inch)		MASS (WEIGHT) kg (lbs)	
	QTY	TYPE	QTY	RELAY	TRANSISTOR					
FX2N-32	16	24V DC	16	ER-ES/UL	ET-ESS/UL (Source)	100-240V AC +10%, -15%, 50/60Hz	150 (5.91)	90 (3.55)	87 (3.43)	0.65 (1.43)
FX2N-48	24	Sink/Source	24				182 (7.17)			0.85 (1.87)
FX2N-48	24	110V AC	24	ER-UA1/UL	220 (8.67)		1.00 (2.20)			
FX2N-48	24	24V DC Sink/Source	24	ER-DS	ET-DSS (Source)		24V DC +20%, -30%			182 (7.17)

Table 1.4: **ENG** ☞ Extension blocks  
**FRE** ☞ Modules d'extension  
**GER** ☞ Erweiterungsmodule  
**ITL** ☞ Moduli di ampliamento  
**ESP** ☞ Módulos de ampliación

MODEL	INPUTS		OUTPUTS			DIMENSIONS mm (inch)		MASS (WEIGHT) kg (lbs)	
	QTY	TYPE	QTY	DEVICE	TYPE				
FX0N-8EX-UA1/UL FX2N-8EX-UA1/UL	8	110V AC inputs				43 (1.70)	90 (3.55)	87 (3.43)	0.20 (0.44)
FX0N-8EX-ES/UL FX2N-8EX-ES/UL		Sink/Source 24V DC							
FX0N-8ER-ES/UL FX2N-8ER-ES/UL	4	4	Relay						
FX0N-8EYR-ES/UL FX2N-8EYR-ES/UL		8			40 (1.58)				
FX0N-8EYT-ESS/UL FX2N-8EYT-ESS/UL			8	Transistor	Source	43 (1.70)		0.20 (0.44)	
FX0N-16EX-ES/UL	16	Sink/Source 24V DC				70 (2.76)			0.30 (0.66)
FX0N-16EYR-ES/UL									
FX0N-16EYT-ESS/UL			16	Transistor	Source				
FX2N-16EX-ES/UL	16	Sink/Source 24V DC				40 (1.58)			0.30 (0.66)
FX2N-16EYR-ES/UL									
FX2N-16EYT-ESS/UL			16	Transistor	Source				

### 1.5 Configuration

(ENG)

**Configuration**

(ITL)

**Struttura del sistema**

(FRE)

**Configuration du système**

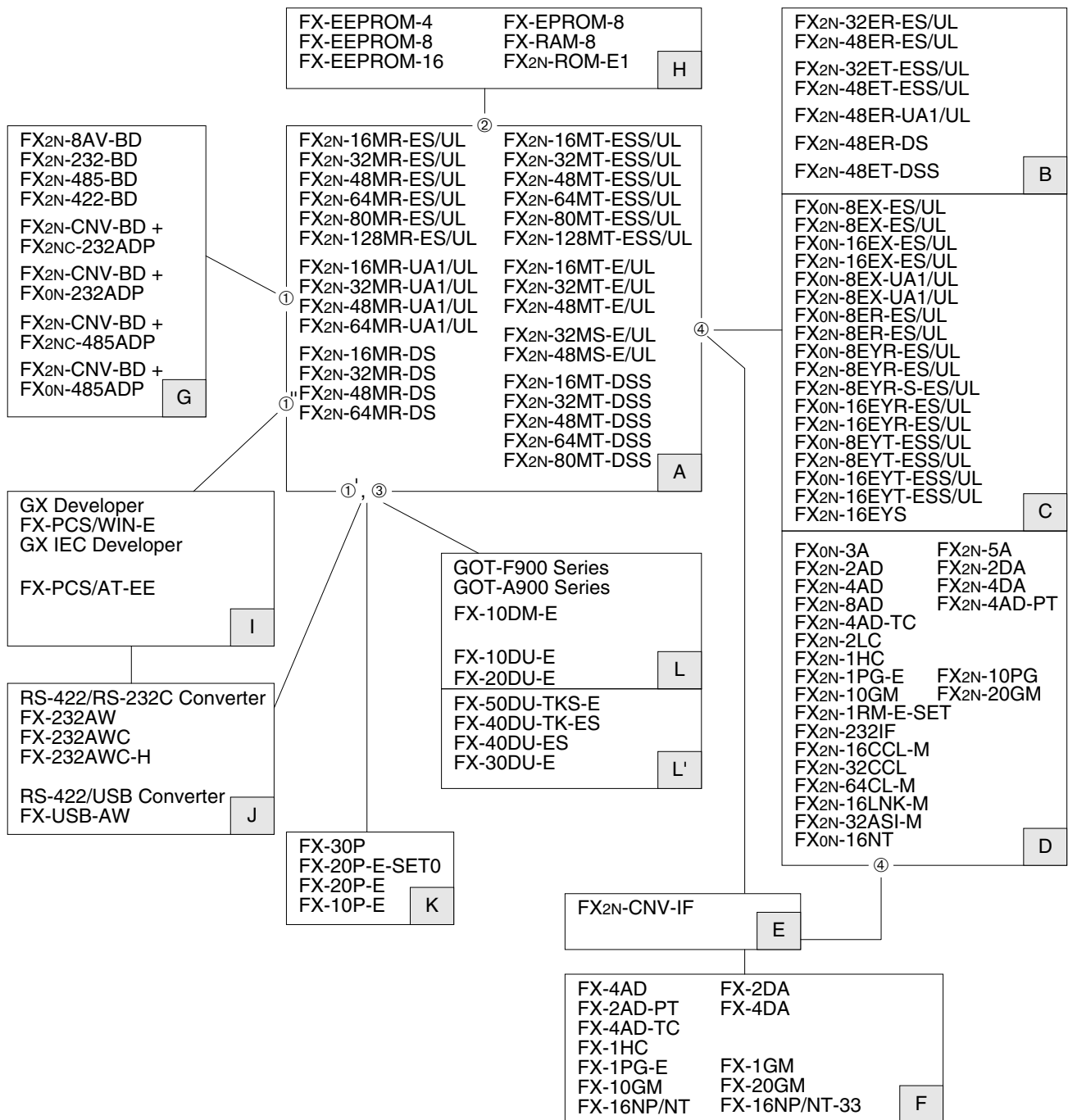
(ESP)

**Configuración del sistema**

(GER)

**Systemaufbau**

Figure 1.6: *ENG* Schematic system  
*FRE* Représentation schématique de la construction du système  
*GER* Schematischer Systemaufbau  
*ITL* Struttura schematica del sistema  
*ESP* Configuración esquemática del sistema



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A
B
C
D
E

Figure 1.7:

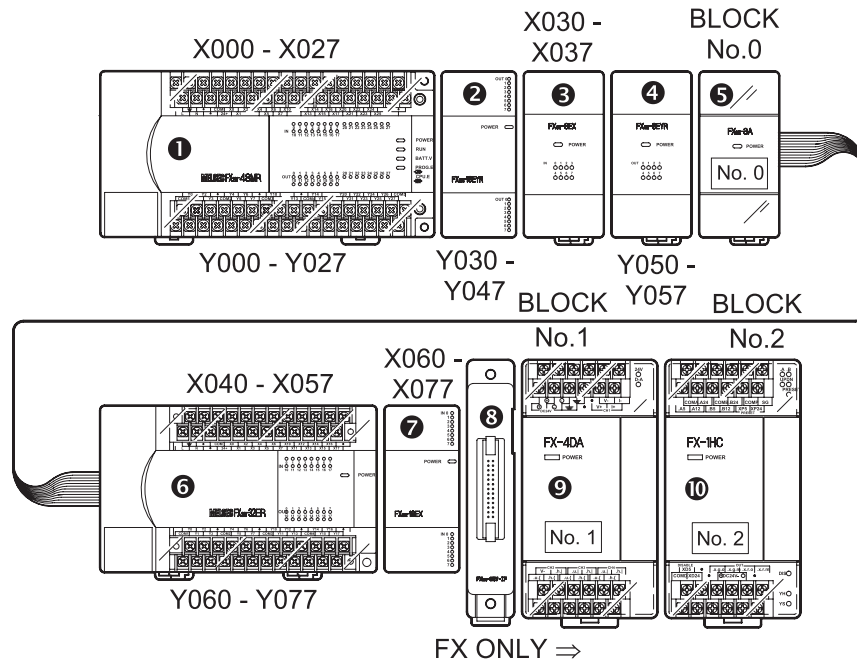


Table 1.18: ENG System Configuration Example    FRE Exemple Configuration du système  
 GER Sondermodule                      ITL Moduli speciali  
 ESP Ejemplo Módulos especiales blocks

UNIT	ADDRESSABLE I/O			24V DC SERVICE SUPPLY			5V DC		POWER AC/DC	
	X	Y	X/Y	SUM I/O	TABLE	SUM	TABLE	SUM		
① FX2N-48MR-ES/UL	24	24	-	X=8 Y = 24 =>	1.13 (48M☆) Axis A = 24 Axis B = 8 =>	+ 185 mA	1.1 =>	+ 290 mA	Table 4.1 35W	
② FX2N-16EYR-ES/UL	-	16	-				-	0 mA		-
③ FX2N-8EX-ES/UL	8	-	-				-	0 mA		-
④ FX2N-8EYR-ES/UL	-	8	-				-	0 mA		-
⑤ FX0N-3A	-	-	8				-	1.4 =>		- 90 mA
↓	↓	↓	↓			+ 95 mA		+ 260 mA		
						<b>+95 mA OK!</b>		<b>+ 260 mA OK!</b>		
⑥ FX2N-32ER-ES/UL	16	16	-	X = 16 Y = 0 =>	1.12 (32E☆) Axis A = 0 Axis B = 16 =>	+ 150 mA	1.3 =>	+ 690 mA	Table 4.1 30W	
⑦ FX2N-16EX-ES/UL	16	-	-				-	0 mA		-
⑧ FX2N-CNV-IF	-	-	-				-	0 mA		-
↓ FX ONLY ↓										
⑨ FX-4DA	-	-	8	-	-	0 mA	1.7 =>	- 30 mA	DC24V 200 mA	
⑩ FX-1HC	-	-	8	-	-	0 mA	1.7 =>	- 70 mA	-	
	64	64	24			+ 150 mA		+590 mA		
	<b>152 (&lt; 256 OK!) +</b>					<b>+ 150 mA OK!</b>		<b>+ 590 mA OK!</b>		