

## MITSUBISHI Programmable Controller MELSEC-F FX3UC (D, DS, DSS) SERIES PROGRAMMABLE CONTROLLERS



This manual describes the part names, dimensions, mounting, cabling and specifications for the product. This manual is extracted from FXsuC (D.SD,SS) Sieres User's Manual - Hardware Edition. Refer to FX3UC Series User's Manual - Hardware Edition details. Before use, read this manual and manuals of relevant products fully to acquire proficiency in the handling and operating the product. Make sure to learn all the product information, safety information, and precautions. And, store this manual in asafe place so that it can be taken out and read whenever necessary. Always forward it to the end user. Registration

Registration Registration The company name and the product name to be described in this manual are the registered trademarks or trademarks of each

company. Effective May 2024 Specifications are subject to change without notice. © 2013 Mitsubishi Electric Corporation company

Safety Precaution (Read these precautions before use.) If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired. This manual classifies the safety precautions into two categories: 

WARNING Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury. CAUTION Indicates that incorrect handling may caus hazardous conditions, resulting in medium of slight personal injury or physical damage.

Depending on the circumstances, procedures indicated by

CAUTION may also cause severe injury. It is important to follow all precautions for personal safety.

STARTUP AND MAINTENANCE PRECAUTIONS

Do not touch any terminal while the PLC's power is on. Doing so may cause electric shock or malfunctions. Before cleaning or retightening terminals, cut off all phas the power supply externally. Failure to do so may cause electric shock.

 Before modifying or disrupting the program in operation or running the PLC, carefully read through this manual and the associated manuals and ensure the safety of the operation. An operation error may damage the machinery or cause accidents. Do not change the program in the PLC from two or more peripheral equipment devices at the same time. (i.e. from a programming tool and a GOT) Dring so may cause destruction or mailunction of the PLC program. User's Manual - Hardware Edition. Use the battery correctly. Do not share, disassemble, heat, put in fire, short-circuit, connect neversely, weld, swallow or burn the battery, or apply excessive forces (vibration, impact, drop, etc.) to the battery. Do not store or use the battery A high temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery thigh temperatures or Do not store or use the battery temperatures or Do not store or use the battery temperatures or Do not store or use the battery temperature the store the store theorem or the store temperature to the store temperature temperatures or Do not store or use the battery, make sur **PRECAUTIONS** The PLC is a precision instrument. During transportation, aw impacts larger than those specified in Section 2.1 by us dedicated possingling bases and shock-absorbing palettes. Failure to do so may cause failures in the PLC. After transportation, verify operation of the PLC and check damage of the mounting part, etc. When transporting lithium batteries, follow requir transportation regulated products, refer to FX3UC Ser User's Manual - Hardware Edition.) Associated manuals How to obtain manuals or the necessary product manuals or documents, consult with ur local Mitsubishi Electric representative. yo Associated manuals FX3UC (D, DS, DSS) Series PLC (main unit) comes with this document (hardware manual). document (hardware manual). For a detailed explanation of the FX3UC Series hardware information on instructions for PLC programming and sp extension unit/block, refer to the relevant documents. Manual name Manual No. Description STARTUP AND MAINTENANCE PRECAUTIONS Explains FX3UC Series PLC specification details for I/O, wiring, installation, and maintenance. FX3UC Series User's Manual - Hardware Edition JY997D28701 MODEL CODE: 09R519 MAINTENANCE

A CAUTION

CALTION

CALTI Describes PLC programming for basic/ applied instructions STL/ SFC programming and devices. FX3S/FX3G/FX3GC FX3U/FX3UC Serie JY997D16601 MODEL CODE: 09R517 Programming Manua - Basic & Applied Instruction Edition MELSEC-Q/L/F Programming methods, specifications, functions etc. required to create structured programs. SH-080782 MODEL CODE 13JW06 Structured Programming Manua (Fundamentals) FXCPU Structured Programming Manua [Device & Common JY997D26001 MODEL CODE 09R925 Devices, parameters, etc. provided in structured projects of GX Works2. FXCPU Structure Programming Mar [Basic & Applied Instruction] JY997D34701 MODEL CODE 09R926 equence instructions rovided in structured rojects of GX Works2. FXCPU Structure Programming Man [Application Functions] JY997D34801 MODEL CODE 09R927 Application functions provided in structured projects of GX Works2. Explains N:N link, parallel ink, computer link, no protocol communication y RS instructions/FX2N-232IF. FX Series User's Manual - Data Communication Edition Please contact a certified electronic waste disposal company f the environmentally safe recycling and disposal of your device. When disposing of batteries, separate them from other was according to local regulations. JY997D16901 MODEL CODE 09R715 Describes specifications for analog control and programming methods for FX3s/FX3G/FX3GC/FX3U/ FX3UC Series PLC. FX3S/FX3G/FX3G FX3U/FX3UC Seri User's Manual - Analog Control Edition TRANSPORTATION AND STORAGE PRECAUTIONS JY997D16701 MODEL CODE: 09R619 **∆**CAUTION

JY997D50501G

STARTUP AND MAINTENANCE PRECAUTIONS

1

2

TRANSPORTATION

ND STORAGE RECAUTIONS

Explains the specifications for positioning control of FX3s/FX3G/FX3GC/FX3U/ FX3UC Series and programming procedures

JY997D16801 MODEL CODE: 09R620

 Before transporting the PLC, turn on the power to the PLC t check that the BAT LED is off, and check the battery life.
 If the PLC is transported with the BAT LED on or the battery exhausted, the battery-backed data may be unstable during transportation. FX3S/FX3G/FX3GC/ FX3U/FX3UC Series User's Manual - Positioning Control Edition

	Certific	ation of UL, cUL	standards
avoid using	power sup		series special adapter, ex 2NC series input/output ex ds are as follows:
ck for juired Series	UL, cUL fi Models:	le number: E95239 MELSEC FX3U(c) ser FX3UC-+ * MT/D Where +* indicates: FX3U-c16MR/D-T FX3U-c16MR/D-FMB FX3U-c16MR/D-FMB FX3U-c4ADP FX3U-c4AD-P FX3U-c4AD-P FX3U-c4AD-F FX3U-c4AD-F FX3U-c4AD-F FX3U-c4AD-F FX3U-c4AD-F FX3U-c4AD-F FX3U-c4AD-F FX3U-c4AD-F FX3U-c4B-FS/V	FX3UC-* *MT/DSS 16, 32, 64, 96 FX3UC-16MR/DS-T FX3U-485ADP(-MB) FX3U-ENET-ADP FX3U-4DA-ADP FX3U-4AD-PT-ADP
un .	Models:	MELSEC FX2NC serie FX2NC-16EX(-DS)	FX2NC-32EX(-DS) FX2NC-32EYT(-DSS)
e and special ies etails	Models:	MELSEC FX2N series FX2N-8ER-ES/UL FX2N-8EYR-ES/UL FX2N-8EYT-ESS/UL FX2N-8EYT-ESS/UL FX2N-16EX-ES/UL FX2N-16EYT-ESS/UL	FX2N-8EX-ES/UL FX2N-8EYR-S-ES/UL FX2N-8EX-UA1/UL FX2N-16EYR-ES/UL

Compliance with EC directive (CE Marking)

This product complies with EC directive, however, this document does not guarantee that a mechanical system including this product will comply with EC directive. 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

Caution for Compliance with EC directive

Please use the FXUC (D, DS, DS) Series programmable controllers while installed in conductive shielded control panels under a general industrial environment.
 Programmable controllers are open-type devices that must be installed and used within conductive control panels. Please secure the control panel is to the control panel (for conduction), installation within a control panel grady affects the safety of the system and aids in shielding noise from the programmable controller.
 For the control panel, safet by noduct having sufficient stength, fre protectiveness and shielding property to an installation environment.
 24 U/D C of the opener survey must be supplied from the circuit

24 V DC of the power supply must be supplied from the circuit double/reinforced insulated from the main power supply (MAINS). Caution for compliance with the LVD directive (EN61010-2-201:2013) (\*1)

Caucion No Comparison to the treb of bulketing (ENS1010-2201:2013) (\*1)
• To an external connection port other than AC power supply terminal and AC inpu/output terminal, connect the circuit separated from a dangerous voltage by a double/reinforced insulation.
Between the commons having the adjacent realy output terminals, if an external power supply is higher than 120 V AC, the insulation is basic. Therefore, when using 120 V AC or higher external power supply and 30 V DC/AC or lower external power supply between the adjacent commons, do not handle 30 V DC/ AC or lower external power supply as a touchable part, (When handling 30 V DC/AC or lower external power supply as a touchable part, add a basic insulation.)

 For crimp terminals to be used for the wiring applied with 30 VAC or higher, use the products with insulating sleeves.
 Cutoff device such as a breaker or a circuit protector should be installed in accordance with the following precautions.
 Use EN0947-1 or EN60947-3 standards.
 Place the cutoff device so that it can be operated easily.
 Specify that the cutoff device is for this equipment. \_\_\_\_ extension extension

3

(\*1) For the time of compliance with the LVD directive (EN61010-2-201:2013), refer to FX3UC Series User's Manual - Hardware Edition.

1. Outline

1.1 Part names

Part names

- <u>-</u>

Green Pow O Green Run O Red BAT O Red ERR O

mory cassette dummy cover

 DIN rail mounting hooks

 POW LED
 On while power is on the PLC.

 RUN LED
 On while the PLC is running.

[5] BAT LED Lights when the battery voltage drops

[6] FX2NC/FX3UC Extension block connecting hooks 
 [7]
 Input LED

 [8]
 Output LED

 [9]
 Input connector (-T indicates terminal block type)

[10] Output connector (-T indicates terminal block type)

[16] 
 <sup>(A)</sup> is a mark that instructs to use the cable with an appropriate temperature rating (80°C or more) for wiring.

 ERR LED
 Flashing when a program error occurs.

 Lights when a CPU error occurs.

 [11] Peripheral device connecting connector (RS-422)

 [12] RUN/STOP switch

 [13] FX2NC/FX3UC Extension block connecting connector cover

[2] Special adapter connecting hooks

[3] Special adapter connector cover

[14] Power connector for main unit

[15] Battery cover Nameplate printing

[4] DIN rail mounting hooks

Name

- [5] Display LED

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No. [1] Memor

Under side

2-2012.013), refer to FX3UC Series User's Manual - Hardware Battion. **Caution for Analog Products in use** The very bacanetic products in use in the term of the term of the very bacanetic products in the very bacanetic products in the very bacanetic products in the very bacanetic product product in the very bacanetic product product in the very bacanetic product in the very bacanetic product in the very bacanetic product produc

## Incorporated Items

Verify that the following product and items are included in the package.
Included Items Main units

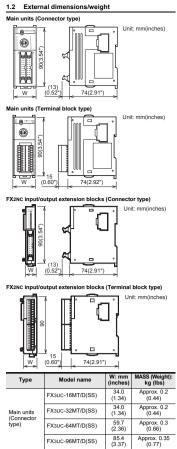
	Product	1 unit
FX3UC-DDMT/D	FX2NC-100MPCB [1 m (3' 3"), three wire]	1 cable
FX3UC-16MR/D-T	FX2NC-100BPCB [1 m (3' 3"), two wire]	1 cable
	Manuals [Japanese/English]	1 manual
	Product	1 unit
FX3UC-16MR/D-T FX3UC-□□MT/DSS FX3UC-16MR/DS-T	FX2NC-100MPCB [1 m (3' 3"), three wire]	1 cable
	Manuals [Japanese/English]	1 manual
Input/output extension	sion blocks	
	Product	1 unit
	FX2NC-10BPCB1 [0.1 m (3.93"), double-ended]	1 cable
FX2NC-16EX-T-DS FX2NC-DEYT FX2NC-DEYT-DSS	Product	1 unit

4

Main units (Terminal block type)

FX3UC-16MR/D(S)-T

34.0 Approx. 0.25 (1.34) (0.55)



Туре	Model name	W: mm (inches)	MASS (Weight): kg (Ibs)
	FX2NC-16EX(-DS)	14.6 (0.57)	Approx. 0.15 (0.33)
Input/output extension blocks	FX2NC-32EX(-DS)	26.2 (1.03)	Approx. 0.2 (0.44)
(Connector type)	FX2NC-16EYT(-DSS)	14.6 (0.57)	Approx. 0.15 (0.33)
	FX2NC-32EYT(-DSS)	26.2 (1.03)	Approx. 0.2 (0.44)
Input/output extension	FX2NC-16EX-T(-DS)	20.2 (0.57)	Approx. 0.15 (0.33)
blocks (Terminal block type)	FX2NC-16EYR-T(-DS)	24.2 (0.95)	Approx. 0.2 (0.44)

→ For more details, refer to the FX3UC Series User's Manual Hardware Edition

Make sure to cut off all phases of the power supply externa before attempting installation or wiring work. Failure to do so may cause electric shock or damage to t

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screws. Install the product on a flat surface. If the mounting surface is rough, undue force will be applied the PC board, thereby causing nonconformities. When drilling screw holes or wiring, make sure that cutting and wiring debris do not enter the ventilation slits. Failure to do so may cause fire, equipment failures o

malfunctions. Be sure to remove the dust proof sheet from the PLC's ventilation port when installation work is completed. Failure to do so may cause fire, equipment failures or malfunctions.

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Pailure to do so may cause electric shock.							
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9		10		11		12	

<ul> <li>Notes</li> <li>Simultaneously turn on and off the power supplies of the main unit and extension devices.</li> <li>Even if the power supply causes an instantaneous power failure for ms or less, the PLC can continue to operate.</li> <li>If a long-time power failure or an abnormal voltage drop occurs, the PLC astop, and output its turned off. When the power supply is restored, it will automatically restart (when the RUN input is on).</li> <li>Make sure to cut off all phases of the power supply externally before attempting installation or winny move.</li> <li>Failure to do so may cause electric shock or damage to the product.</li> <li>The temperature rating of the cable should be 80°C or more.</li> <li>WIRING PRECAUTIONS CAUTION</li> <li>Connect the DC power supply wring to the dedicated terminals described in this manual. If an AC power supply is connected to a DC input/objut terminal to the product.</li> <li>Connect the DC power supply wring to the dedicated terminals described in this manual. If an AC power supply is connected to a DC input/objut terminal to the product.</li> <li>Do not wire vacant terminals externally. Doing so may damage the product.</li> <li>Deriver datas D grounding (grounding resistance: 100 Ω or less) to the grounding terminal on the main unit. Do not use common grounding with heavy electrical systems (refer to section 3.2).</li> <li>When draining acrew holes or wiring, make sure cutting or wire defines do not enter the ventilation sits. Failure to do so may cause electric shock, equipment failures, or maintuctions.</li> <li>Make sure to property wire to the terminal block (European type) in accordance with the following precutions, relative to a conservice whole do not write grant size of the cable end should follow the dimensions described in the manual.</li> <li>Tightenip torque should follow the granesities or maintuctions.</li> <li>Make sure to property wire to and make sure that there are no loose wires.</li></ul>	<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>	<section-header><section-header><text><text><text><text><complex-block><section-header><section-header><section-header></section-header></section-header></section-header></complex-block></text></text></text></text></section-header></section-header>	Item         Input specification (24 V DC)           FX3UC-CICIMT/D FX3UC-CIMR/DC FX3UC-CIMR/DC)T FX3UC-CIMR/DC)ST FX3UC-CIEX-T         Sink           Input form         FX3UC-CICIMT/DS FX3UC-CIEX-TOSS FX3UC-CIEX-TOSS         Sink/Source           Input signal voltage         24 V DC, Voltage fluctuation range +20% -15%, Rpple voltage (pp) 5% or less         Sink/Source           Input signal voltage         24 V DC, Voltage fluctuation range +20% -15%, Rpple voltage (pp) 5% or less         Sink/Source           X000 to X005         3 8 kΩ         X000 to X005         3 8 kΩ           Input signal current         X000 to X005         6 m/24 V DC           X000 to X005         5 mA/24 V DC         X000 to X005         3.5 mA or more           X000 to X005         3.5 mA or more         X000 to X005         3.5 mA or more           X000 to X005         3.5 mA or more         X000 to X005         3.5 mA or more           Input signal time         Approx.10 ms (*2)         No-voltage contact mastor         No-voltage contact mastor           Input signal form (thput sensor form)         FX3UC-CICIMT/D FX3UC-CICIEX-T         No-voltage contact mastor         No-voltage contact input mastor         Sink input modeclorer transistor           Input circuit insulation         Photocoupler insulation         Sink input the oelector transistor         Sinvine input the oelector transistor <t< th=""><th><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></th><th><ul> <li><b>1.</b> Examples of sink input wiring (FXsuc-CDMT/DSS, FXsuc-r6MR/DS-T)</li> <li>Breaker, Circuit protector, Fuse, etc.</li> <li><b>1.</b> FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-20MT/DSS</li> <li>FXSUC-20MT/DSS</li> <li>FXSUC-20MT/DSS</li> <li>FXSUC-20MT/DSS</li> <li>In FXSUC-64MT/DSS or FXSUC-60MT/DSS units, the COM0, COM1 and COM2 terminals respectively.</li> <li><b>1.</b> Examples of source input wiring (FXSUC-DDMT/DSS, FXSUC-60MT/DSS</li> <li><b>1.</b> Examples of source input wiring (FXSUC-DDMT/DSS, FXSUC-60MT/DSS</li> <li><b>1.</b> Examples of source input wiring (FXSUC-DDMT/DSS, FXSUC-60MT/DSS, fXSUC-60MT/D</li></ul></th><th>3.1. Output specifications and example of external wining         → For more details, refer to the FX3uC Series User's Manual.         3.4.1. Transistor output specifications         3.4.1       Transistor output specifications         Number of output points       FX3uC-16MT/D(SS)       8 points         FX3uC-36MT/D(SS)       16 points         FX3uC-36MT/D(SS)       32 points         FX3uC-36MT/D(SS)       32 points         FX3uC-36MT/D(SS)       32 points         FX3uC-36MT/D(SS)       32 points         FX3uC-30MT/D(SS)       32 points         FX3uC-30MT/       Sink         Output connecting type       connector         Vistor-00EVT       Source         FX3uC-30MT/       Sink         Name       Y000 to       0.3 A/point         Resist       minits       Y000 to       0.3 A/point         Main       Y000 to       0.1 A/point       total load current       1 of resistance         Induct       Main       Y000 to       2.4 Wipoint (24 V DC)       100 points is 0.8 A/V         Advector-000000       C2 Wipoint       Make sure that the       points is 0.8 A/V       100 points is 0.8 A/V         External power supply       5-30V DC       FX2WC-000V       2.4 Wipoint (24 V DC)</th><th>(*2) When using an instruction related to pulse train output of positioning, make sure to set the load current to 10 to 100 mA (s24 V bC). (*3) The transistor OFF time is longer under lighter loads. The main stapper v. 0.3 ms. When response performance is required under light loads, provide a dummy resistor to increase the load current. <b>3.4.2 Handling of transistor output circuit</b> <b>Dupt terminal</b> The main under light loads, provide a dummy resistor to increase the load current. <b>3.4.2 Handling of transistor output circuit</b> <b>Dupt terminal</b> The main under light loads, provide a dummy resistor to increase the load current. <b>3.4.2 Handling of transistor output circuit</b> <b>Dupt terminal</b> The main under light loads, provide a dummy resistor to increase the load current. Two COM + or +V.∆ terminals outside the PLC so that the load applied to each COM + or +V.∆ terminal is smaller. Where ∆ indicates: 10 a 12 <b>Dupt current</b> The Ovide for transistor output wing the current of the output transistor is approx. 1.5 V. Whet indicates: 10 a 12 <b>Dupt current</b> The Ovide for transistor output wing <b>5.3.0:</b> <u>COM tor transistor output wing</u> <b>5.4.1 Example of transistor output wing</b> <b>5.4.1 Example of transistor output wing</b> <b>5.4.1 Current Unit Unit Unit Unit Unit Unit Unit Un</b></th></t<>	<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>	<ul> <li><b>1.</b> Examples of sink input wiring (FXsuc-CDMT/DSS, FXsuc-r6MR/DS-T)</li> <li>Breaker, Circuit protector, Fuse, etc.</li> <li><b>1.</b> FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-10MT/DSS</li> <li>FXSUC-20MT/DSS</li> <li>FXSUC-20MT/DSS</li> <li>FXSUC-20MT/DSS</li> <li>FXSUC-20MT/DSS</li> <li>In FXSUC-64MT/DSS or FXSUC-60MT/DSS units, the COM0, COM1 and COM2 terminals respectively.</li> <li><b>1.</b> Examples of source input wiring (FXSUC-DDMT/DSS, FXSUC-60MT/DSS</li> <li><b>1.</b> Examples of source input wiring (FXSUC-DDMT/DSS, FXSUC-60MT/DSS</li> <li><b>1.</b> Examples of source input wiring (FXSUC-DDMT/DSS, FXSUC-60MT/DSS, fXSUC-60MT/D</li></ul>	3.1. 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(*3) The transistor OFF time is longer under lighter loads. The main stapper v. 0.3 ms. When response performance is required under light loads, provide a dummy resistor to increase the load current. <b>3.4.2 Handling of transistor output circuit</b> <b>Dupt terminal</b> The main under light loads, provide a dummy resistor to increase the load current. <b>3.4.2 Handling of transistor output circuit</b> <b>Dupt terminal</b> The main under light loads, provide a dummy resistor to increase the load current. <b>3.4.2 Handling of transistor output circuit</b> <b>Dupt terminal</b> The main under light loads, provide a dummy resistor to increase the load current. Two COM + or +V.∆ terminals outside the PLC so that the load applied to each COM + or +V.∆ terminal is smaller. Where ∆ indicates: 10 a 12 <b>Dupt current</b> The Ovide for transistor output wing the current of the output transistor is approx. 1.5 V. Whet indicates: 10 a 12 <b>Dupt current</b> The Ovide for transistor output wing <b>5.3.0:</b> <u>COM tor transistor output wing</u> <b>5.4.1 Example of transistor output wing</b> <b>5.4.1 Example of transistor output wing</b> <b>5.4.1 Current Unit Unit Unit Unit Unit Unit Unit Un</b>
3.4.4 Relay output specifications         → For more details, refer to the FX3UC Series User's Manual-Hardware Edition.         Item Output specification (Relay)         Number of output to points	3.5 Cautions in input and output wiring           Notes           • The derating curve below shows the simultaneous ON ratio of available PLC inputs or outputs with respect to the ambient temperature. Use the PLC within the simultaneous input or	Input connecting     FX2wC-□EX(r_DS) FX2wC-16MR/D(S)-T FX2wC-16MR/D(S)-T FX2wC-16EX-T(-DS)     connector       14       3.5.3     Cautions on relay output wiring       → For more details, refer to FX3wC Series User's Manual - Hardware Edition.       1)     Protection circuit for load short-circuit A short-circuit at a load connected to an output terminal could	open collector transistor output on the connected device and the input current of the main body is 20 mA or more.         4. Terminal Layout         4.1 Main units	1.1.2       FXauc-CDIMT/DSS         The I/O wring is different in the FXauc-CDIMT/D. Refer to Sections         3.3 and 3.4 for the details.         FXauc-16MT/DSS         FXauc-20MT/DSS         IN         OUT	<ul> <li>(*1) The grounding resistance should be 100 Ω or less.</li> <li>(*2) In FX3UC-64MT/DSS or FX3UC-96MT/DSS units, the COM0, COM1 and COM2 terminals are not connected internally. Wire the COM0, COM1 and COM2 terminals respectively.</li> </ul> 4.2 FX2nc input/output extension blocks 4.2.1 FX2nc-□EX(-DS) FX2nc-16EX FX2nc-32EX TX2nc-16EX FX2nc-32EX TX2nc-16EX IN IN IN IN	Compared by the set of the s	
Number of output points         FX2NC-16EYR-T(-DS)         16 points           Output connecting type         Terminal block         30 / DC or less or 240 / AC or less           External power supply         20 / AC or less when the unit does not comply with CE, UL or out_L standards)         30 / DC or less or 240 / AC or less           Max.         Resistance load         2 / A for list, and a	output ON ratio range shown in the figure. When extension units/ simultaneous ON ratio Supply voltage: 24 V D When only the main unit sused (without applicable 40 °C 45 °C 55 °C Ambient temperature 40 °C 45 °C 55 °C 40 °C 45 °C 45 °C 40 °C 45 °C	cause burnout at the output element or the PC board. To prevent this, a protection fuse should be included at the output. Protection circuit of contact when inductive load is used An internal protection circuits for the relays is not provided for the relay output circuit. It is recommended to use inductive loads with built-in protection circuits. When using loads without built-in protection circuits. Insert an external contact protection circuit, etc. to reduce noise and externd the product life. a) DC circuit Connect a diode in parallel with the load. Use a diode (for commutation) having the following <u>Forward current</u> Load current or more b) AC circuit B. AC circuit Connect the surge absorber (combined CR components such as a surge killer and spark killer, etc.) parallel to the load. Select the radev oflage of the surge absorber such Select the stade voltage of the surge absorber such the Select program and an external interlock. 1 Common mode Use output contacts of the PLC in the common mode.	A1.1       FXuc-CIDMT/D         The VO wing is different in the FXuc-CIDMT/DSS. Refer to Sectors 33 and 3.4 for the details.         FXue-46MT/D       FXue-25MT/D $\overline{X3}$ $\overline{Y3}$ $\overline{Y3}$ $\overline{Y3}$ $\overline{Y3}$ $\overline{Y3}$ $\overline{Y3}$ $\overline{Y3}$ $\overline{Y3}$	Notch         V0         V1         V2         V2	$ \begin{array}{c} \begin{array}{c} \hline x \\ y \\ y \\ \hline x \\ x \\$	Image: sparse set of the symplectic	This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual. <b>Warraty</b>
Output terminal: Main units, FXR:(c input/output extension blocks have 4 or 8 relay output points per common. Two COM+ terminals contacted to each other inside the FXR- to come two COM+ terminals outputs. Connect two COM+ terminals is smaller. Where * indicates:1 or 2 <b>3.4.6 Example of relay output wiring</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3UC-16MR/</b> <b>FX3</b>	3.5.2 Cautions on transistor output wiring       → For more details, refer to FXUS Carles User's Manual Nardware Edition.       1     Protection circuit for load short-circuits       A short-circuit at a load connected to an output terminal could cause burnout at the output element or the PC board. To prevent use a load power supply capacity that is two times or more the total rated capacity of the fuses connected to the load circuit.       2) Contact protection incuit for inductive loads       When an inductive load is connected to denote add (for commutation) in parallel with the load as eccessary. The didde (for commutation) must comply with the following specificators.       Nerverse voltage     5 to 10 times of the load voltage       Forward current     Load current or more       10 Interlock     Loads such as contactors for normal and reverse rotations, that must not be turned on simultaneously should have an interlock in the PLC program and an external interlock.		X5         X15         Y15         X25         X35         Y26         Y36           X6         X16         Y6         Y26         X35         Y26         Y36           Z7         X17         Y7         Y17         Y27         Y27         Y27         Y27           Coll Coll         Coll <td>IN         OUT           X41         X51           X42         X52           Y43         Y43           X43         X51           X44         X54           Y43         Y43           X44         X54           Y43         Y43           X44         X54           X45         X54           X46         X56           X46         Y56           X46         Y56           X47         Y47           X47         Y47           X47         X57           X48         X56           X47         X57           X5         X5           X5         X5           X5         X5           X6         Y5           X6         Y5           X6         Y7</td> <td>VY         V7         V7&lt;</td> <td>• Regulation (EJ 2023) (542) requires the following when marketing or exporting batteries and/or devices with built-in batteries to EU member states.           • To print the symbol on batteries, if can not, on their manual and their packaging.           • To explain the symbol on batteries, if can not, on their manual and their packaging.           • To explain the symbol is printed beneath the symbol (1) shown overleaf, this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration. This will be indicated as follows:           • Hig mecruy(0.002%)           • Cd: cadmium((0.002%)           • Dr. Cd: cadmium((0.002%)           • Dr. Sories name/ FX3UC Series main unt           FX3U-S2BL         Lithium Manganese Dioxide Battery           Batteries to be built in modules (spare parts and optional parts)           • Product name         Battery type           • FX3U-S2BL         Lithium Manganese</td> <td><ul> <li>Regardless of the grists warranty term, Mitsubishi shall not be liable for compensation to:</li> <li>1) Damages caused by any cause found not to be the responsibility of Mitsubishi.</li> <li>2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi.</li> <li>2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.</li> <li>3) or not, compensation for accidents, and compensation for damages to product so ther than Mitsubishi products.</li> <li>4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks:</li> <li>This product has been manufactured as a general-purpose part for general industries, and has not been designed or nuproses related to be incorporated in a device or system used in organser prover, electric power, aeropace, medicine or passenger movement vehicles, consult with Mitsubishi Electric.</li> <li>This product has been mindectured udware major accidents or losses out can be system.</li> <li>Defore using the product for special purposes such rundectabes to power, electric power, aeropace, medicine or passenger movement vehicles, consult with Mitsubishi Electric.</li> <li>This product has been mindectured uder strict quality control. However when installing the product there major accidents or losses could cour if the product fails, install appropriate backup or failsafe functions in the system.</li> <li>MISLOBESH ELECENCE CORPORATIONENT</li> <li>MEXD OFFICE : TOKYOS BUILDING, 2-7-3 MARUNOUCH,</li> </ul></td>	IN         OUT           X41         X51           X42         X52           Y43         Y43           X43         X51           X44         X54           Y43         Y43           X44         X54           Y43         Y43           X44         X54           X45         X54           X46         X56           X46         Y56           X46         Y56           X47         Y47           X47         Y47           X47         X57           X48         X56           X47         X57           X5         X5           X5         X5           X5         X5           X6         Y5           X6         Y5           X6         Y7	VY         V7         V7<	• Regulation (EJ 2023) (542) requires the following when marketing or exporting batteries and/or devices with built-in batteries to EU member states.           • To print the symbol on batteries, if can not, on their manual and their packaging.           • To explain the symbol on batteries, if can not, on their manual and their packaging.           • To explain the symbol is printed beneath the symbol (1) shown overleaf, this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration. 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