MITSUBISHI ELECTRIC

No. HIME-T-P-0129

Databank-**Technical Bulletin**

Notice of production discontinuation of the FX1S/FX1N/FX1NC series PLC main unit and certain FX2N/FX2NC series expansion products

Thanks to the loyal support of our customers the MELSEC-F series of PLCs has been and continues to be very successful. At this time, we would like to announce that the production of the FX1S/FX1N/FX1NC series PLC main unit and certain FX2N/FX2NC series expansion products will be ending in the upcoming future.

This document will explain the terms of the discontinuation of production as well as give recommendations for substitute products.

Recommendations for substitute products are based upon specifications such as the number of inputs/outputs, program memory, and input/output type. Select substitute products based on the requirements of the individual system in question, which may differ from the product recommended here.

Additionally, evaluate the selection of substitute products based on the functions available, where certain products may fit individual systems better than others.

Consult with your local Mitsubishi Electric representative for further details on substitute products.

Table of Contents

1. Models for which production will be discontinued

Product	Order acceptance	Production discontinuation	Repair acceptance
FX1S/FX1N/FX1NC main units, optional products	Until December, 2015 END	Until December, 2015 END	Until December, 2022 END
FX1S/FX1N/FX2N expansion boards			
FX2NC special adapters			
FX2N special function blocks			
FX0N special function blocks			

2. Reasons for Discontinuing Production

It is difficult to obtain some parts, and difficult to maintain the production system.

3. Repair acceptance

To smooth the transition process, there will be a repair period of 7 years from discontinuation of production (plan is for December, 2022 END). However, this date is subject to change based upon the availability of replacement parts.

4. Attached data

- Reference Data 1: List of products for which production will be discontinued with recommended substitute products and list of products for which production will be continued.

- Reference Data 2: Points regarding substitution of products
    1. Exterior dimensions
    2. Sink/source terminal wiring
    3. European terminal block cable size
    4. Device comparison

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Reference Data 1: List of products for which production will be discontinued with recommended substitutes, as well as a list of products for which production will not be discontinued.

[Cautions on Selection]

The following table lists product based upon the number of inputs and outputs as well as the output type. For the recommended substitute products confirm all specifications with the applicable product manuals.

- It may be necessary to change the programs and wiring depending on the used instructions and special expansion product type.
- It may be necessary to change the whole system when either the main unit or expansion product is replaced with a substitute product.

1. Products for which production will be discontinued, as well as recommended substite models.

(1) FX1S series Main unit

Discontinued Products		Recommended Substitute Model		Discontinued Products		Recommended Substitute Model	
Model Code	Model Name	Model Code	Model Name	Model Code	Model Name	Model Code	Model Name
09M401	FX1S-10MR	09H026	FX3S-10MR/ES	09M421	FX1S-20MR-ES/UL	09H028	FX3S-20MR/ES
09M402	FX1S-10MT	09H030	FX3S-10MT/ES	09M422	FX1S-20MT-ESS/UL	09H036	FX3S-20MT/ESS
09M403	FX1S-14MR	09H027	FX3S-14MR/ES	09M423	FX1S-30MR-ES/UL	09H029	FX3S-30MR/ES
09M404	FX1S-14MT	09H031	FX3S-14MT/ES	09M424	FX1S-30MT-ESS/UL	09H037	FX3S-30MT/ESS
09M405	FX1S-20MR	09H028	FX3S-20MR/ES	09M425	FX1S-10MR-DS	09H056	FX3S-10MR/DS
09M406	FX1S-20MT	09H032	FX3S-20MT/ES	09M426	FX1S-10MT-DSS	09H064	FX3S-10MT/DSS
09M407	FX1S-30MR	09H029	FX3S-30MR/ES	09M427	FX1S-14MR-DS	09H057	FX3S-14MR/DS
09M408	FX1S-30MT	09H033	FX3S-30MT/ES	09M428	FX1S-14MT-DSS	09H065	FX3S-14MT/DSS
09M409	FX1S-10MR-D	09H056	FX3S-10MR/DS	09M429	FX1S-20MR-DS	09H058	FX3S-20MR/DS
09M410	FX1S-10MT-D	09H060	FX3S-10MT/DS	09M430	FX1S-20MT-DSS	09H066	FX3S-20MT/DSS
09M411	FX1S-14MR-D	09H057	FX3S-14MR/DS	09M431	FX1S-30MR-DS	09H059	FX3S-30MR/DS
09M412	FX1S-14MT-D	09H061	FX3S-14MT/DS	09M432	FX1S-30MT-DSS	09H067	FX3S-30MT/DSS
09M413	FX1S-20MR-D	09H058	FX3S-20MR/DS	09M470	FX1S-10MR-001	09H075	FX3SA-10MR-CM
09M414	FX1S-20MT-D	09H062	FX3S-20MT/DS	09M471	FX1S-14MR-001	09H076	FX3SA-14MR-CM
09M415	FX1S-30MR-D	09H059	FX3S-30MR/DS	09M472	FX1S-20MR-001	09H077	FX3SA-20MR-CM
09M416	FX1S-30MT-D	09H063	FX3S-30MT/DS	09M473	FX1S-30MR-001	09H078	FX3SA-30MR-CM
09M417	FX1S-10MR-ES/UL	09H026	FX3S-10MR/ES	09M493	FX1S-10MT-001	09H079	FX3SA-10MT-CM
09M418	FX1S-10MT-ESS/UL	09H034	FX3S-10MT/ESS	09M494	FX1S-14MT-001	09H080	FX3SA-14MT-CM
09M419	FX1S-14MR-ES/UL	09H027	FX3S-14MR/ES	09M495	FX1S-20MT-001	09H081	FX3SA-20MT-CM
09M420	FX1S-14MT-ESS/UL	09H035	FX3S-14MT/ESS	09M496	FX1S-30MT-001	09H082	FX3SA-30MT-CM

(2) FX1N series Main unit

Discontinued Products		Recommended Substitute Model		Discontinued Products		Recommended Substitute Model	
Model Code	Model Name	Model Code	Model Name	Model Code	Model Name	Model Code	Model Name
09M435	FX1N-24MR	09T271/09T275	FX3G-24MR/ES(-A)	09M451	FX1N-40MR-ES/UL	09T272/09T276	FX3G-40MR/ES(-A)
09M436	FX1N-24MT	09T263/09T267	FX3G-24MT/ES(-A)	09M452	FX1N-40MT-ESS/UL	09T280	FX3G-40MT/ESS
09M437	FX1N-40MR	09T272/09T276	FX3G-40MR/ES(-A)	09M453	FX1N-60MR-ES/UL	09T273/09T277	FX3G-60MR/ES(-A)
09M438	FX1N-40MT	09T264/09T268	FX3G-40MT/ES(-A)	09M454	FX1N-60MT-ESS/UL	09T281	FX3G-60MT/ESS
09M439	FX1N-60MR	09T273/09T277	FX3G-60MR/ES(-A)	09M455	FX1N-14MR-DS	09T286	FX3G-14MR/DS *
09M440	FX1N-60MT	09T265/09T269	FX3G-60MT/ES(-A)	09M456	FX1N-14MT-DSS	09T290	FX3G-14MT/DSS *
09M441	FX1N-24MR-D	09T287	FX3G-24MR/DS *	09M457	FX1N-24MR-DS	09T287	FX3G-24MR/DS *
09M442	FX1N-24MT-D	09T283	FX3G-24MT/DS *	09M458	FX1N-24MT-DSS	09T291	FX3G-24MT/DSS *
09M443	FX1N-40MR-D	09T288	FX3G-40MR/DS *	09M459	FX1N-40MR-DS	09T288	FX3G-40MR/DS *
09M444	FX1N-40MT-D	09T284	FX3G-40MT/DS *	09M460	FX1N-40MT-DSS	09T292	FX3G-40MT/DSS *
09M445	FX1N-60MR-D	09T289	FX3G-60MR/DS *	09M461	FX1N-60MR-DS	09T289	FX3G-60MR/DS *
09M446	FX1N-60MT-D	09T285	FX3G-60MT/DS *	09M462	FX1N-60MT-DSS	09T293	FX3G-60MT/DSS *
09M447	FX1N-14MR-ES/UL	09T270/09T274	FX3G-14MR/ES(-A)	09M474	FX1N-14MR-001	09T270/09T274	FX3G-14MR/ES(-A)
09M448	FX1N-14MT-ESS/UL	09T278	FX3G-14MT/ESS	09M475	FX1N-24MR-001	09T003	FX3GA-24MR-CM
09M449	FX1N-24MR-ES/UL	09T271/09T275	FX3G-24MR/ES(-A)	09M476	FX1N-40MR-001	09T004	FX3GA-40MR-CM
				09M477	FX1N-60MR-001	09T005	FX3GA-60MR-CM
09M450	FX1N-24MT-ESS/UL	09T279	FX3G-24MT/ESS	09M497	FX1N-24MT-001	09T006	FX3GA-24MT-CM
				09M498	FX1N-40MT-001	09T007	FX3GA-40MT-CM
				09M499	FX1N-60MT-001	09T008	FX3GA-60MT-CM
				09M701	FX1N-14MT-001	09T262/09T266	FX3G-14MT/ES(-A)

∗ : The supply voltage is 12 to 24 V DC in the DC power type FX1N series main unit, but is 24 V DC in the DC power type FX3G series main unit (substitute product).

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(3) FX1NC series Main unit

Discontinued Products		Recommended Substitute Model	
Model Code	Model Name	Model Code	Model Name
09M484	FX1NC-16MT	09T001	FX3GC-32MT/D
09M485	FX1NC-32MT		

(4) Expansion board, memory cassette and display module common between the FX1S series and the FX1N series

Discontinued Products		Recommended Substitute Model	
Model Code	Model Name	Model Code	Model Name
09M467	FX1N-CNV-BD	09H369	FX3S-CNV-ADP*1
		09T343	FX3G-CNV-ADP*2
09M480	FX1N-4EX-BD	09T371	FX3G-4EX-BD
09M481	FX1N-2EYT-BD	09T372	FX3G-2EYT-BD
09M482	FX1N-2AD-BD	09T346	FX3G-2AD-BD
09M483	FX1N-1DA-BD	09T347	FX3G-1DA-BD
09M466	FX1N-8AV-BD	09T348	FX3G-8AV-BD

Discontinued Products		Recommended Substitute Model	
Model Code	Model Name	Model Code	Model Name
09M465	FX1N-232-BD	09T342	FX3G-232-BD
09M463	FX1N-422-BD	09T340	FX3G-422-BD
09M464	FX1N-485-BD	09T341	FX3G-485-BD
09M468	FX1N-EEPROM-8L	09T344	FX3G-EEPROM-32L
09M469	FX1N-5DM	09H373	FX3S-5DM*1
		09T345	FX3G-5DM*2

∗1: Connectable to the FX3S series
∗2: Connectable to the FX3G series

(5) FX2N series Expansion Boards

Discontinued Products		Recommended Substitute Model	
Model Code	Model Name	Model Code	Model Name
09M101	FX2N-CNV-BD	09S307	FX3U-CNV-BD
09M102	FX2N-8AV-BD	09S361	FX3U-8AV-BD
09M103	FX2N-232-BD	09S304	FX3U-232-BD
09M104	FX2N-485-BD	09S305	FX3U-485-BD
09M105	FX2N-422-BD	09S306	FX3U-422-BD

(6) FX2NC series Special Adapters

Discontinued Products		Recommended Substitute Model	
Model Code	Model Name	Model Code	Model Name
09M181	FX2NC-232ADP	09S308	FX3U-232ADP-MB
09M182	FX2NC-485ADP	09S309	FX3U-485ADP-MB
09M196	FX2NC-ENET-ADP	09S362	FX3U-ENET-ADP

(7) FX2N/FX0N series special function block

Discontinued Products		Recommended Substitute Model	
Model Code	Model Name	Model Code	Model Name
09M115	FX2N-1PG	09S366	FX3U-1PG
09M121	FX2N-1PG-E	09S366	FX3U-1PG
09M155	FX2N-20PSU	No recommended substitute	
09M113	FX2N-4AD	09S326	FX3U-4AD
09M114	FX2N-4DA	09S327	FX3U-4DA
09M186	FX2NC-4AD	09S313	FX3UC-4AD
09M185	FX2NC-4DA	09S311	FX3U-4DA-ADP
09M118	FX2N-4AD-PT	09S334	FX3U-4AD-PTW-ADP
09M119	FX2N-4AD-TC	09S315	FX3U-4AD-TC-ADP
09K264	FX0N-3A	09S350	FX3U-3A-ADP
09K621	FX0N-32NT-DP	09S328	FX3U-32DP

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2. Products that will continue to be produced
(1) Products connectable to either the FX3G/FX3GC series or FX3U/FX3UC series

Model Code	Model Name	Model Code	Model Name	Model Code	Model Name	Model Code	Model Name
09M036	FX2N-32ER	09K631	FX0N-30EC	09K675	FX-I/O-CON2	09M219	FX2N-32ER-ES/UL
09M037	FX2N-32ES	09K261	FX0N-65EC	09K676	FX-I/O-CON2-S	09M220	FX2N-32ET-ESS/UL
09M038	FX2N-32ET	09M094	FX2NC-64ET	09K677	FX-I/O-CON2-SA	09M221	FX2N-48ER-ES/UL
09M046	FX2N-48ER	09M060	FX2NC-16EX	09K909	FX2C-I/O-CON	09M222	FX2N-48ET-ESS/UL
09M048	FX2N-48ET	09M062	FX2NC-32EX	09K910	FX2C-I/O-CON-S	09M241	FX2N-48ER-DS
09M054	FX2N-48ER-D	09M072	FX2NC-16EX-T	09K911	FX2C-I/O-CON-SA	09M242	FX2N-48ET-DSS
09M055	FX2N-48ET-D	09M061	FX2NC-16EYT	09K878	FX-16E-150CAB	09M089	FX2N-8ER-ES/UL
09M070	FX2N-48ER-UA1/UL	09M073	FX2NC-16EYR-T	09K847	FX-16E-300CAB	09M088	FX2N-8EX-ES/UL
09M084	FX2N-8ER	09M063	FX2NC-32EYT	09K879	FX-16E-500CAB	09M226	FX2N-16EX-ES/UL
09M082	FX2N-8EX	09M126	FX2NC-CNV-IF	09K903	FX-16E-150CAB-R	09M090	FX2N-8EYR-ES/UL
09M083	FX2N-8EX-UA1/UL	09M130	FX2NC-100MPCB	09K904	FX-16E-300CAB-R	09M091	FX2N-8EYT-ESS/UL
09M041	FX2N-16EX	09M131	FX2NC-100BPCB	09K905	FX-16E-500CAB-R	09M223	FX2N-16EYR-ES/UL
09M049	FX2N-16EX-C	09M132	FX2NC-10BPCB1	09K902	FX-16E-500CAB-S	09M225	FX2N-16EYT-ESS/UL
09M050	FX2N-16EXL-C	09K244	FX-16E-TB	09K668	FX-32E-150CAB	09M256	FX2NC-16EX-DS
09M085	FX2N-8EYR	09K267	FX-32E-TB	09K669	FX-32E-300CAB	09M261	FX2NC-16EX-T-DS
09M086	FX2N-8EYT	09K245	FX-16EYR-TB	09K670	FX-32E-500CAB	09M258	FX2NC-32EX-DS
09M087	FX2N-8EYT-H	09K246	FX-16EYS-TB	09K880	FX-A32E-150CAB	09M257	FX2NC-16EYT-DSS
09M098	FX2N-8EYR-S-ES/UL	09K247	FX-16EYT-TB	09K881	FX-A32E-300CAB	09M259	FX2NC-32EYT-DSS
09M042	FX2N-16EYR	09K266	FX-16EX-A1-TB	09K882	FX-A32E-500CAB	09M262	FX2NC-16EYR-T-DS
09M044	FX2N-16EYT	09K330	FX2C-16SW-C			09K296	FX-16E-TB/UL
09M051	FX2N-16EYT-C	09K331	FX2C-16SW-TB			09K290	FX-16EYR-ES-TB/UL
09M043	FX2N-16EYS					09K291	FX-16EYS-ES-TB/UL
09M187	FX2N-64CL-M					09K293	FX-16EYT-ES-TB/UL
09M110	FX2N-CNV-BC					09K292	FX-16EYT-ESS-TB/UL
09M136	FX2N-32CCL					09K297	FX-32E-TB/UL

(2) Battery

Model Code	Model Name
09M706	FX1N-BAT

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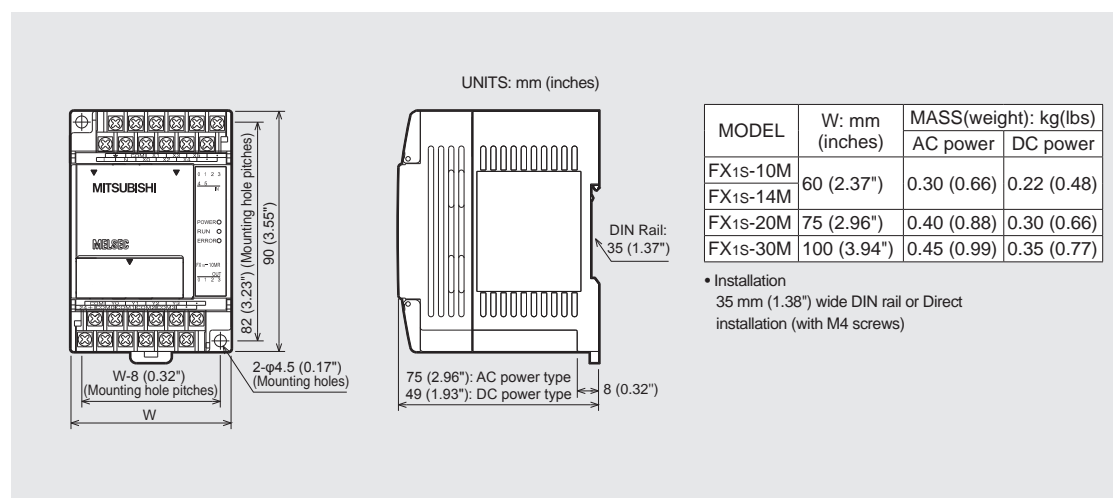# *Databank*-**Technical Bulletin**

Reference Data 2: Points regarding substitution of products

This section pertains to hardware related aspects when switching from the FX1S, FX1N, FX1NC series to the FX3 series.
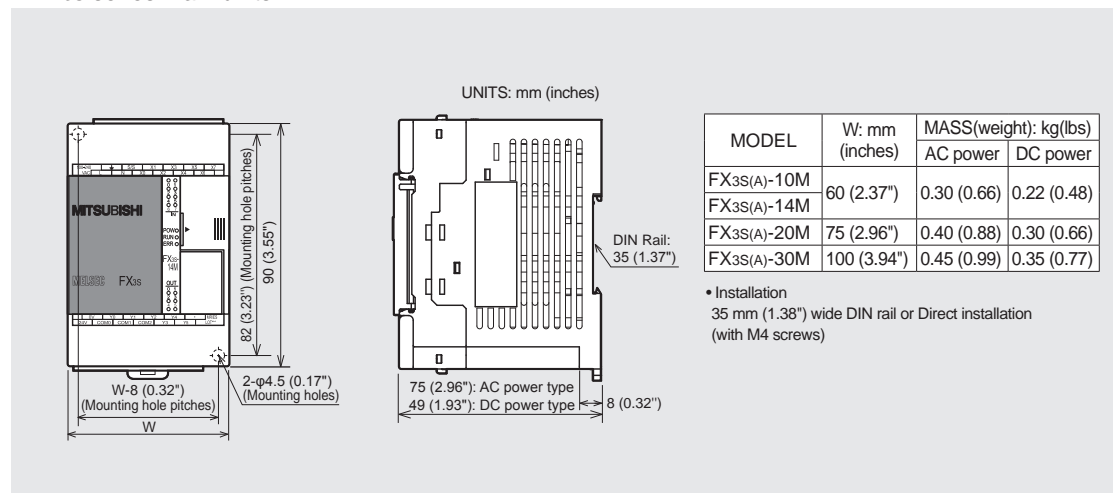
1. Exterior Dimensions
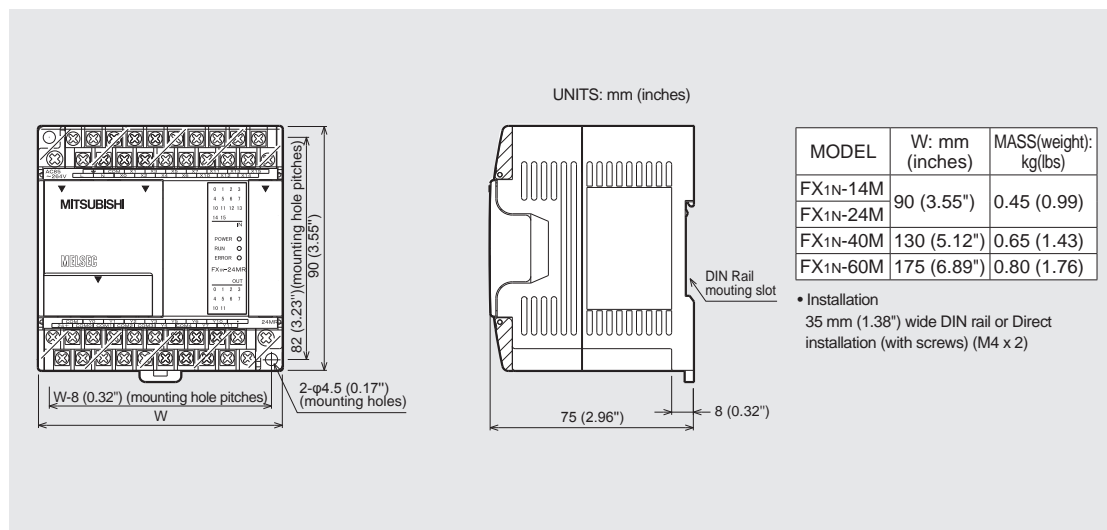Differences: None

■ FX1S series main units

UNITS: mm (inches)

MODEL	W: mm (inches)	MASS(weight): kg(lbs)	
		AC power	DC power
FX1S-10M	60 (2.37")	0.30 (0.66)	0.22 (0.48)
FX1S-14M			
FX1S-20M	75 (2.96")	0.40 (0.88)	0.30 (0.66)
FX1S-30M	100 (3.94")	0.45 (0.99)	0.35 (0.77)

• Installation
  35 mm (1.38") wide DIN rail or Direct
  installation (with M4 screws)

DIN Rail: 35 (1.37")

■ FX3S series main units

UNITS: mm (inches)

MODEL	W: mm (inches)	MASS(weight): kg(lbs)	
		AC power	DC power
FX3S(A)-10M	60 (2.37")	0.30 (0.66)	0.22 (0.48)
FX3S(A)-14M			
FX3S(A)-20M	75 (2.96")	0.40 (0.88)	0.30 (0.66)
FX3S(A)-30M	100 (3.94")	0.45 (0.99)	0.35 (0.77)

• Installation
  35 mm (1.38") wide DIN rail or Direct installation
  (with M4 screws)

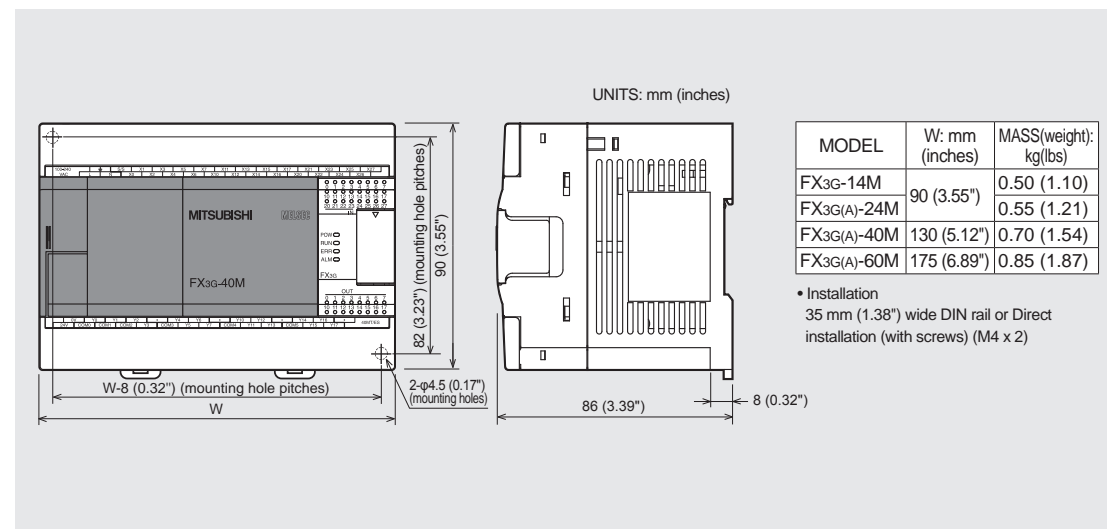DIN Rail: 35 (1.37")

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Differences: The depth of the FX3G series is larger by 11 mm compared with the FX1N series.

■ FX1N series main units

UNITS: mm (inches)
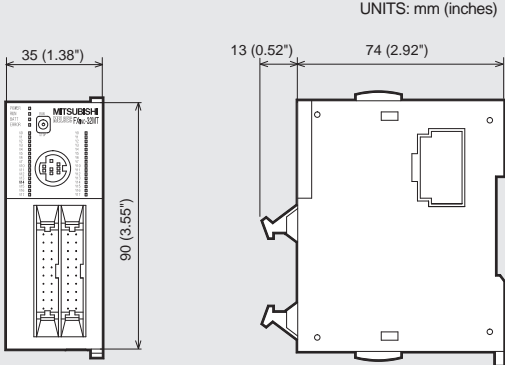
MODEL	W: mm (inches)	MASS(weight): kg(lbs)
FX1N-14M	90 (3.55")	0.45 (0.99)
FX1N-24M		
FX1N-40M	130 (5.12")	0.65 (1.43)
FX1N-60M	175 (6.89")	0.80 (1.76)

• Installation
35 mm (1.38") wide DIN rail or Direct installation (with screws) (M4 x 2)

DIN Rail mouting slot

75 (2.96") 8 (0.32")

90 (3.55") (mounting hole pitches)
82 (3.23") (3.55")
2-φ4.5 (0.17") (mounting holes)
W-8 (0.32") (mounting hole pitches)
W

■ FX3G series main units

UNITS: mm (inches)

MODEL	W: mm (inches)	MASS(weight): kg(lbs)
FX3G-14M	90 (3.55")	0.50 (1.10)
FX3G(A)-24M		0.55 (1.21)
FX3G(A)-40M	130 (5.12")	0.70 (1.54)
FX3G(A)-60M	175 (6.89")	0.85 (1.87)

• Installation
35 mm (1.38") wide DIN rail or Direct installation (with screws) (M4 x 2)

86 (3.39") 8 (0.32")

90 (3.55") (mounting hole pitches)
82 (3.23") (3.55")
2-φ4.5 (0.17") (mounting holes)
W-8 (0.32") (mounting hole pitches)
W

FX3G-40M

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Differences: The width is differs 1mm

■ FX1NC series main units

UNITS: mm (inches)

35 (1.38")

13 (0.52") 74 (2.92")

90 (3.55")
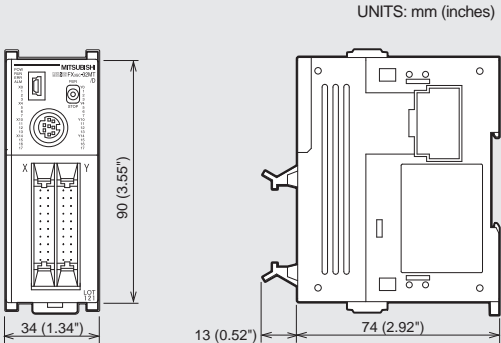
MODEL	MASS(weight): kg(lbs)
FX1NC-16MT	0.2 (0.44)
FX1NC-32MT	

• Installation: DIN rail of 35 mm (1.38") in width only
• Accessories:
  FX2NC-100MPCB power supply cable
  (1 m (3'33")),
  FX2NC-100BPCB power supply cable
  (1 m (3'33")),
  Manual supplied with product

■ FX3GC series main units

UNITS: mm (inches)

90 (3.55")

34 (1.34")

13 (0.52") 74 (2.92")

MODEL	MASS(weight): kg(lbs)
FX3GC-32MT	0.2 (0.44)

• Installation: DIN rail of 35 mm (1.38") in width only
• Accessories:
  (1) FX3GC-32MT/D
    FX2NC-100MPCB power supply cable
    (1 m (3'33")),
    FX2NC-100BPCB power supply cable
    (1 m (3'33")),
    Manual supplied with product
  (2) FX3GC-32MT/DSS
    FX2NC-100MPCB power supply cable
   (1 m (3'33")),
    Manual supplied with product

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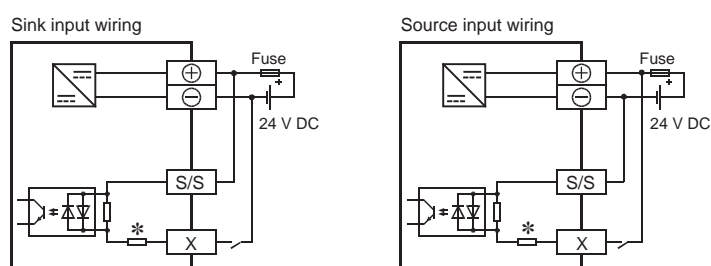
2. Sink/source terminal wiring

The inputs of the FX3 series require that appropriate sink/source wiring be carried out for applicable situations.
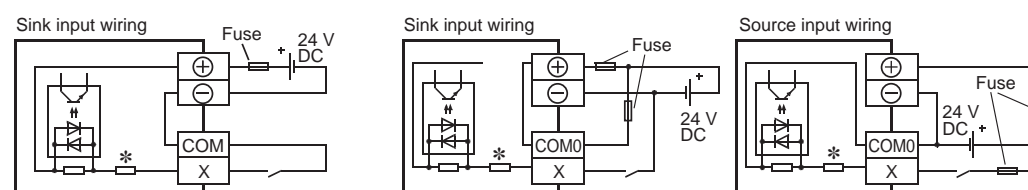
[FX3S, FX3G]

● AC power supply type
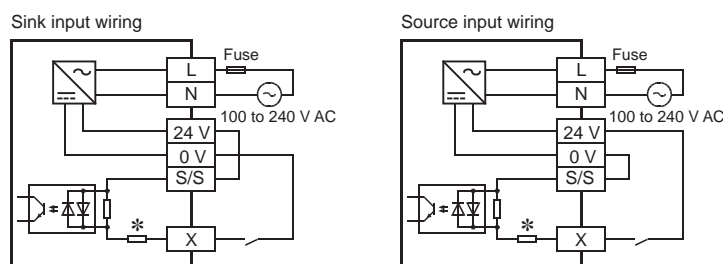
● DC power supply type

[FX3GC-32MT/D]　　　　[FX3GC-32MT/DSS]

∗: Input impedance

3. European terminal block cable size

Differences: The size of the connector of the RS-485 communication cable shown below is different between the FX2N or FX1S, FX1N series product and the FX3 series product.

	Wire size when inserting 1 cable	Wire size when inserting 2 cables	Wire ferrule with sleeve(wire size)	Tightening torque	Insulation sheath∗ thickness
FX3U-485-BD	AWG22 to AWG20	AWG22	Applicable (AWG22 to AWG20)	0.22 to 0.25 N·m	9 mm
FX3G-485-BD					
FX3U-485ADP(-MB)					
FX2N-485-BD	AWG26 to AWG16		Not applicable	0.5 to 0.6N·m	6 mm
FX1N-485-BD					
FX2NC-485ADP	AWG26 to AWG16	AWG26 to AWG20	Not applicable	0.4 to 0.5N·m	8 mm

∗: The insulation sheath thickness dimension applies when wiring is connected using terminals. For further information regarding the differences between products, refer to the FX User's Manual: Data Communication Edition.

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4. Device comparison

(☐ indicates there is a difference between the FX1S series and FX3S series)

Device			FX1S series		FX3S series	
Type		Use	Number	Total	Number	Total
M	Auxiliary relay	General	M0 to M383	384	M0 to M383	384
		EEPROM keep	M384 to M511	128	M384 to M511	128
		General	None	None	M512 to M1535	1,024
		Special	M8000 to M8255	256	M8000 to M8511	512
S	State	Initial	S0 to S9	10	S0 to S9	10
		EEPROM keep	S10 to S127	118	S10 to S127	118
		General	None	None	S128 to S255	128
T	Timer	100 ms	T0 to T62	63	T0 to T62	63
		10 ms	T32 to T62 when special M coil M8028 is driven ON.	31	T32 to T62 when special M coil M8028 is driven ON.	31
		1 ms	T63	1	T63 to T127	65
		1 ms retentive	None	None	T128 to T131	4
		100 ms retentive	None	None	T132 to T137	6
		Potentiometer	VR1: D8030, VR2: D8031	2	VR1: D8030, VR2: D8031 not supported in the FX3S-30M☐/E☐-2AD PLC	2
C	Counter	General (16 bits)	C0 to C15	16	C0 to C15	16
		EEPROM keep (16 bits)	C16 to C31	16	C16 to C31	16
		General type Bi-directional counter (32 bits)	None	None	C200 to C234	35
	High-Speed Counter	1-phase 1-counting input Bi-directional (32 bits) (EEPROM keep)	C235, C236 60 kHz × 2 points C237 to C245 10 kHz × 4 points		C235, C236, C241 60 kHz × 2 points C237 to C245 10 kHz × 4 points	
		1-phase 2-counting input Bi-directional (32 bits) EEPROM keep	C246 60 kHz × 1 point C247 to C250 10 kHz × 2 points		C246 60 kHz × 1 point C247 to C250 10 kHz × 2 points	
		2-phase 2-counting input Bi-directional (32 bits) EEPROM keep	C251 30 kHz × 1 point C252 to C255 5 kHz × 2 points		C251 30 kHz × 1 point C252 to C255 5 kHz × 2 points	
D	Data register	General	D0 to D127	128	D0 to D127	128
		EEPROM keep	D128 to D255	128	D128 to D255	128
		General	None	None	D256 to D2999	2,744
		File Registers	D1000 to D2499	1,500	D1000 to D2999	2,000
		Special registers	D8000 to D8255	256	D8000 to D8511	512
		Index Registers	V0 to V7, Z0 to Z7	16	V0 to V7, Z0 to Z7	16
P	Pointer	For use with CALL	P0 to P63	64	P0 to P255	256
		Input Interrupts	I0☐ to I5☐☐	6	I0☐☐ to I5☐☐	6
		Timer Interrupts	None	None	I6☐☐ to I8☐☐	3
N	Nest levels	For use with MC and MCR	N0 to N7	8	N0 to N7	8
E	Constants	Decimal K	16 bits: -32,768 to +32,767		32 bits: -2,147,483,648 to +2,147,483,647	
		Hexadecimal H	16 bits: 0000 to FFFF		32 bits: 00000000 to FFFFFFFF	
		Real number(E)	None		-1.0×2^{128} to -1.0×2^{-126}, 0, 1.0×2^{-126} to 1.0×2^{128} Both decimal point expression and exponent expression can be used.	

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(▢ indicates there is a difference between the FX1N, FX1NC series and FX3G, FX3GC series)

Device			FX1N, FX1NC series		FX3G, FX3GC series	
	Type	Use	Number	Total	Number	Total
M	Auxiliary relay	General	M0 to M383	384	M0 to M383	384
		EEPROM keep	M384 to M511	128	M384 to M1535	1,152
		Backed up by capacitor	M512 to M1535	1,024	None	None
		General (Can be set to latch when the optional battery is used.)	None	None	M1536 to M7679	6,144
		Special	M8000 to M8255	256	M8000 to M8511	512
S	State	Initial	S0 to S9	10	S0 to S9	10
		EEPROM keep	S10 to S127	118	S10 to S999	990
		Backed up by capacitor	S128 to S999	872	None	None
		General (Can be set to latch when the optional battery is used.)	None	None	S1000 to S4095	3,096
T	Timer	100 ms	T0 toT199	200	T0 to T191	192
		100 ms (for subroutine or interrupt routine)	None	None	T192 to T199	8
		10 ms	T200 to T245	46	T200 to T245	46
		1 ms retentive	T246 to T249 [Backed up by capacitor]	4	T246 to T249 [EEPROM keep]	4
		100 ms retentive	T250 to T255 [Backed up by capacitor]	6	T250 to T255 [EEPROM keep]	6
		1 ms	None	None	T256 to T319	64
		Potentiometer	VR1: D8030, VR2: D8031	2	VR1: D8030, VR2: D8031	2
C	Counter	General (16 bits)	C0 to C15	16	C0 to C15	16
		EEPROM keep (16 bits)	C16 to C31	16	C16 to C199	184
		Backed up by capacitor (16 bits)	C32 to C199	168	None	None
		General (32 bits)	C200 to C219	20	C200 to C219	20
		32 bits bi-directional counter	C220 to C234 [Backed up by capacitor]	15	C220 to C234 [EEPROM keep]	15
	High-Speed Counter	1-phase 1-counting input Bi-directional (32 bits)	C235, C236 60 kHz × 2 points C237 to C245 10 kHz × 4 points		C235, C236, C238, C239, C241 60 kHz × 4 points C237, C240, C242 to C245 10 kHz × 2 points	
		1-phase 2-counting input Bi-directional (32 bits)	C246 60 kHz × 1 points C247 to C250 10 kHz × 2 points		C246, C248 (OP) 60 kHz × 2 points C247 to C250 10 kHz × 2 points	
		2-phase 2-counting input Bi-directional (32 bits)	C251 30 kHz × 1 points C252 to C255 5 kHz × 2 points		C251, C253 (OP) 30 kHz × 2 points C252 to C255, C254 (OP)	
D	Data register	General	D0 to D127	128	D0 to D127	128
		EEPROM keep	D128 to D255	128	D128 to D1099	972
		Backed up by capacitor	D256 to D7999	7,744	None	None
		General (Can be set to latch when the optional battery is used.)	None	None	D1100 to D7999	6,900
		File Registers	D1000 to D7999	7,000	D1000 to D7999	7,000
		Special registers	D8000 to D8255	256	D8000 to D8511	512
		Index Registers	V0 to V7, Z0 to Z7	16	V0 to V7, Z0 to Z7	16
P	Pointer	For use with CALL	P0 to P127	128	P0 to P2047	2,048
		Input Interrupts	I0▢▢ to I5▢▢	6	I0▢▢ to I5▢▢	6
		Timer Interrupts	None	None	I6▢▢ to I8▢▢	3
E	Constant	Real number(E)	None		-1.0×2^{128} to -1.0×2^{-126}, 0, 1.0×2^{-126} to 1.0×2^{128} Both decimal point expression and exponent expression can be used.	

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Revised History

Date	Revision	Description
Oct. 2014	A	First Edition

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