



CERTIFICATE NUMBER

07-YO230030-3-PDA

DATE

19 March 2012

ABS TECHNICAL OFFICE

Yokohama Engineering Services

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of
MITSUBISHI ELECTRIC CORP. - HIMEJI CITY

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

PRODUCT: **Programmable Logic Controller**

MODEL: **FX3U Series**

This Product Design Assessment (PDA) Certificate 07-YO230030-3-PDA, dated 19/Mar/2012 remains valid until 19/Mar/2017 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING


Yukiteru Naguchi

Engineer

AB258(01/10)

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned manufacturing process without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rule 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

MITSUBISHI ELECTRIC CORP.

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MA Certificate No.: 09-KO1639945

PRODUCT: Programmable Logic Controller

MODEL: FX3U Series

Intended Service:

Programmable control / monitoring system for ACC, ACCU and ABCU class vessels

Description:

See attached sheets

Ratings:

24VDC, 100V - 240V AC 50/60Hz;

Operating ambient temperature: 0 - 55 degree C;

Operating ambience is to be free from corrosive or flammable gas and excessive conductive dusts.

Service Restriction:

Unit Certification is not required for Mitsubishi Electric Corp. Himeji Works as the original supplier. However, unit certification is required by the user to customize this equipment where this equipment is used for Category II or III services in 4-9-6/Table 1.

Comments:

(1) See ABS Report KO791291 dated 29 January 2007 and KO2018459 dated 26 July 2011 for proto-type testing.

(2) This equipment has been reviewed as Category III services in 4-9-6/Table 1 and 4-9-6/Table 2 as applicable.

Notes / Drawings / Documentation:

This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

MITSUBISHI ELECTRIC CORP.

Term of Validity:

This Product Design Assessment (PDA) Certificate 07-YO230030-3-PDA, dated 19/Mar/2012 remains valid until 19/Mar/2017 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

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STANDARDS

ABS Rules:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. The Rules applicable to this assessment are: 2012 Steel Vessels Rules 1-1-4/7.7, 1-1-Appendix 3, 4-9-6, 4-9-6 Appendix 1 and 4-9-7

National:

NA

International:

NA

Government Authority:

NA

EUMED:

NA

Others:

NA

Product Design Assessment (PDA) Certificate Attachment for Component Details

PDA Certificate No: 07-YO230030-3-PDA
Entry Date: 19 March 2012
Expire Date: 19 March 2017
Company: Mitsubishi Electric Corporation
Factory or Works: Himeji Works
Product/Equipment: Programmable Logic Controller
Model: FX3U Series

APPARATUS	MODEL NO.	Input Points	Output Points	Power Supply Voltage	Input Signal	Output Type
Base Units	FX3U-16MR/ES	8	8	100VAC to 240VAC, 50/60Hz	24VDC Sink/Source Configurable	Relay output
	FX3U-32MR/ES	16	16			
	FX3U-48MR/ES	24	24			
	FX3U-64MR/ES	32	32			
	FX3U-80MR/ES	40	40			
	FX3U-128MR/ES	64	64			
	FX3U-16MT/ES	8	8			Transistor output (Sink type)
	FX3U-32MT/ES	16	16			
	FX3U-48MT/ES	24	24			
	FX3U-64MT/ES	32	32			
	FX3U-80MT/ES	40	40			
	FX3U-128MT/ES	64	64			
	FX3U-16MT/ESS	8	8			Transistor output (Source type)
	FX3U-32MT/ESS	16	16			
	FX3U-48MT/ESS	24	24			
	FX3U-64MT/ESS	32	32			
	FX3U-80MT/ESS	40	40			
	FX3U-128MT/ESS	64	64			
	FX3U-16MR/DS	8	8	24VDC		Relay output
	FX3U-32MR/DS	16	16			
	FX3U-48MR/DS	24	24			
	FX3U-64MR/DS	32	32			
	FX3U-80MR/DS	40	40			
	FX3U-16MT/DS	8	8			Transistor output (Sink type)
	FX3U-32MT/DS	16	16			
	FX3U-48MT/DS	24	24			
	FX3U-64MT/DS	32	32			
	FX3U-80MT/DS	40	40			
	FX3U-16MT/DSS	8	8			Transistor output (Source type)
	FX3U-32MT/DSS	16	16			
	FX3U-48MT/DSS	24	24			
	FX3U-64MT/DSS	32	32			
	FX3U-80MT/DSS	40	40			
Special Adapter	FX3U-232ADP	-	-	(from base/ Extension Unit)	-	-
	FX3U-485ADP	-	-		-	-
	FX3U-4AD-ADP	4 (Analog)	-		Analog	-
	FX3U-4DA-ADP	-	4 (Analog)		-	Analog
	FX3U-4AD-PT-ADP	4 (Analog)	-		Analog	-
	FX3U-4AD-TC-ADP	4 (Analog)	-		Analog	-
	FX3U-4HSX-ADP	4	-		Differential	-
	FX3U-2HSY-ADP	-	2		-	Differential

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Factory or Works: Himeji Works
Product/Equipment: Programmable Logic Controller
Model: FX3U Series

APPARATUS	MODEL NO.	Input Points	Output Points	Power Supply Voltage	Input Signal	Output Type	
Special Adapter	FX3U-232ADP-MB	-	-	(from base/ Extension Unit)	-	-	
	FX3U-232ADP-MBH	-	-		-	-	
	FX3U-485ADP-MB	-	-		-	-	
	FX3U-485ADP-MBH	-	-		-	-	
Special Function Block	*FX3U-ENET	-	-	24VDC (External supply)	-	-	
	*FX3U-64DP-M	-	-	24VDC (Internal supply from base unit)	-	-	
	*FX3U-32DP	-	-		-	-	
Function Board	FX3U-USB-BD	-	-	(from base/ Extension Unit)	-	-	
	FX3U-232-BD	-	-		-	-	
	FX3U-485-BD	-	-		-	-	
	FX3U-422-BD	-	-		-	-	
	FX3U-CNV-BD	-	-		-	-	
Memory Cassette	FX3U-FLROM-16	-	-		-	-	
	FX3U-FLROM-64	-	-		-	-	
	FX3U-FLROM-64L	-	-		-	-	
Display Module	FX3U-7DM	-	-			-	-
Communication Block	FX3U-CAN	CANopen Network			24VDC (Internal supply from base unit)	-	-
	FX3U-J1939	J1939 Network		-		-	

*: Applicable to General Power Distribution Zones only.