MITSUBISHI **ELECTRIC** General-Purpose AC Servo MELSERVO-J4 MR-J4 Servo amplifier

MODEI
MR-J4-10 to MR-J4-22K
MR-J4-60 ⁻ 4 to MR-J4-22K_4
MR-J4-10 1 to MR-J4-40 1
MR-J4W2-22B to MR-J4W2-1010B
MR-J4W3-222B, MR-J4W3-444B
MR-J4-03A6, MR-J4W2-0303B6
Instructions and Cautions for Safe Use of AC Servos

Instructio	is and Cautions for Sale Use of AC Servos	S
Country/Region	Sales office	Tel/Fax
USA	Mitsubishi Electric Automation, Inc. 500 Corporate Woods Parkway, Vernon Hills, IL 60061, U.S.A.	Tel : +1-847-478-2100 Fax: +1-847-478-2253
Germany	Mitsubishi Electric Europe B.V. German Branch Mitsubishi-Electric-Platz 1, 40882 Ratingen, Germany	Tel : +49-2102-486-0 Fax: +49-2102-486-1120
China	Mitsubishi Electric Automation (China) Ltd. Mitsubishi Electric Automation Center, No.1386 Hongqiao Road, Shanghai, China	Tel : +86-21-2322-3030 Fax: +86-21-2322-3000
Korea	Mitsubishi Electric Automation Korea Co., Ltd. 7E-9E Gangsen Hangang Xi-tower A. 401, Yangcheon-ro, Gangsen-Gu, Seoul 07528, Korea	Tel : +82-2-3660-9510 Fax: +82-2-3664-8372/8335

2.3 Correct use Use the MR-J4 servo amplifiers within specifications. Refer to each instruction manual for specifications such as voltage, temperature, etc. Mitsubishi Electric Co. accepts no claims for liability if the equipment is used in any other way or if modifications are made to the device, even in the context of mounting and installation.

WARNING It takes 15 minutes maximum for capacitor discharging. Do not touch the unit and ter immediately after power off.

2.3.1 Peripheral device and power wiring
 The followings are selected based on IEC/EN 61800-5-1, UL 508C, and CSA C22.2 No. 14.
 (1) Power Wiring doca timing and ciming tool)
 The following table shows the stranded wire sizes [AWG] and the crimp terminal symbols rated at 75 °C/60 °C.

	75 °C	/60 °C stranded	d wire [AWG]	(Note 2)		Servo ampl	ended crimp te ifier-side crimp minals	Manu
Servo amplifier (Note 7)	L1/L2/L3	L11/L21	P+/C	U/V/W/ (Note 3)	Symbol	Crimp terminal (Note 2)	Applicable tool	facture
MR-J4-03A6/ MR-J4W2-0303B6	19/- (Note 5)		/	19/- (Note 6)	a b (Note 1)	FVD5.5-4 8-4NS	YNT-1210S YHT-8S	
MR-J4-10_(1)/MR-J4-20_(1)/ MR-J4-40_(1)/MR-J4-60_(4)/ MR-J4-70_/MR-J4-100_(4)/ MR-J4-200_(4) (T)/ MR-J4-350_4	14/14	14/14	14/14	14/14	c d e f	FVD2-4 FVD14-6 FVD5.5-6 FVD22-6	YNT-1614 YF-1 YNT-1210S YF-1	JIST
MR-J4-200_(S) MR-J4-350_	12/12			12/12	g h	FVD38-6 R60-8	YF-1 YF-1	JST (J.S.1 Mfg. C
MR-J4-500_ (Note 1) MR-J4-700_ (Note 1) MR-J4-11K_ (Note 1) MR-J4-15K_ (Note 1) MR-J4-22K_ (Note 1) MR-J4-500_4 (Note 1)	10: a/10: a 8: b/8: b 6: d/4: f 4: f/3: f 1: h/-: - 14: c/14: c	14: c/14: c	14: c/14: c 12: a/12: a 12: e/12: e 10: e/10: e 10: i/10: i 14: c/14: c	10: b/10: b 8: b/8: b 4: f/4: f 3: g/2: g 1: j/-: - 12: a/10: a	i j k n n	FVD5.5-8 CB70-S8 FVD2-6 FVD8-6 FVD14-8 FVD22-8	YNT-1210S YF-1 YNT-1614 YF-1 YF-1 YF-1	Ľtd.)
MR-J4-700_4 (Note 1) MR-J4-11K_4 (Note 1) MR-J4-15K_4 (Note 1) MR-J4-22K_4 (Note 1) MR-J4W - B	12: a/12: a 10: e/10: e 8: l/8: l 6: m/4: m 14/14 (Note 4)	14/14	14: k/14: k 12: e/12: e 12: l/12: i 14/14	10: a/10: a 8: l/8: l 6: d/4: d 6: n/4: n 14/14	2.	Some crimp terr depending on th	ng part with an insu ninals may not be r e size. Make sure t nes or equivalent o	mounted to use the

values in the table are sizes based on rated output of the servo amplifiers. Use the crimo terminal c for the PE terminal of the servo amplifier

- Use the crimp terminal c for the PE terminal of the servo amplifier. This value is of 24/0PW/F for MR-J4-03A6 and MR-J4W2-0303B6. This value is of U/V/W/E for MR-J4-03A6 and MR-J4W2-0303B6. "(S)" means 1-phase 200 V A Cover input and "(T)" means 3-phase 200 V AC power input in the table.

AC power input in the table. (2) Selection example of MCCB and fuse Use T class fuses or molded-case circuit breaker (UL 489 Listed MCCB) as the following table. The T class fuses and molded-case circuit breakers in the table are selected examples based on rated I/O of the servo amplifiers. When you select a smaller capacity servo motor to connect it to the servo amplifier, you can also use smaller capacity T class fuses or molded-case circuit breaker than ones in the table. For selecting ones other than Class T fuses and molded-case circuit breakers below and selecting a Type E Combination motor controller, refer to each servo amplifier instruction manual.

Servo amplifier (100 V class)	Molded-case circuit breaker (120 V AC)	Fuse (300 V)
MR-J4-10_1/MR-J4-20_1/MR-J4-40_1	NV50-SVFU-15A (50 A frame 15 A)	20 A
Servo amplifier (200 V class) (Note)	Molded-case circuit breaker (240 V AC)	Fuse (300 V)
MR-J4-10_/MR-J4-20_/MR-J4-40_/MR-J4-60_ (T)/MR-J4-70_ (T)/MR-J4W2-22B (T) NF50-SVFU-5A (50 A frame 5 A)	10 A
MR-J4-60_(S)/MR-J4-70_(S)/MR-J4-100_(T)/MR-J4W2-22B(S)/ MR-J4W2-44B(T)/MR-J4W2-77B(T)/MR-J4W3-222B/MR-J4W3-444B(T)	NF50-SVFU-10A (50 A frame 10 A)	15 A
MR-J4-100_(S)/MR-J4-200_(T)/MR-J4W2-44B(S)/MR-J4W2-1010B	NF50-SVFU-15A (50 A frame 15 A)	30 A
MR-J4-200_(S)/MR-J4-350_/MR-J4W2-77B (S)/MR-J4W3-444B (S)	NF50-SVFU-20A (50 A frame 20 A)	40 A
MR-J4-500_	NF50-SVFU-30A (50 A frame 30 A)	60 A
MR-J4-700	NF50-SVFU-40A (50 A frame 40 A)	80 A
MR-J4-11K_	NF100-CVFU-60A (100 A frame 60 A)	125 A
MR-J4-15K_	NF100-CVFU-80A (100 A frame 80 A)	150 A
MR-J4-22K_	NF225-CWU-125A (225 A frame 125 A)	300 A
lote. "(S)" means 1-phase 200 V AC power input and "(T)" means 3-phase 200 V A	C power input in the table.	
Servo amplifier (400 V class)	Molded-case circuit breaker (480 V AC)	Fuse (600 V)
MR-J4-60 4/MR-J4-100 4	NF100-HRU-5A (100 A frame 5 A)	10 A
MR-J4-200_4	NF100-HRU-10A (100 A frame 10 Å)	15 A
MR-J4-350_4	NF100-HRU-10A (100 A frame 10 A)	20 A
MR-J4-500_4	NF100-HRU-15A (100 A frame 15 A)	30 A
MR-J4-700_4	NF100-HRU-20A (100 A frame 20 A)	40 A
MR-J4-11K_4	NF100-HRU-30A (100 A frame 30 A)	60 A
MR-J4-15K_4	NF100-HRU-40A (100 A frame 40 A)	80 A
MR-J4-22K 4	NF100-HRU-60A (100 A frame 60 A)	125 A

(3) Power supply This servo amplifier can be supplied from star-connected supply with grounded neutral point of overvoltage category III (overvoltage category II for 1-phase servo amplifiers, MR-34-03A6, and MR-34W2-0303B6) set forth in IEC/EN 60664-1. For the interface power supply, use an external 24 V DC power supply with reinforced insulation and the supplementation of the supplementation of the supplementation. IEC/EN 00/064-1. Foil title interface power suppr), use an super-on I/O terminals. In case of MR-J4-03A6 and MR-J4W2-0303B6, use DC power supplies of reinforced insulation type to main circuit, control circuit, and UL listed (recognized) 48 V DC/24 V DC power supplies which can generate more than 1,2 A/2,4 A per axis.

1.2 A/2.4 A per axis.
(4) Grounding
To prevent an electric shock, always connect the protective earth (PE) terminal (marked ⊕) of the servo amplifier to the protective earth (PE) of the cabinet. Do not connect two grounding cables to the same protective
This product can cause a DC current in the protective earthing conductor. To protect direct/indirect contact using earding Heading to the cabinet beaker (CD), only an RCD of type B can be used for the power supply side of the

an earth-leakage current preaker (ncb), only an ncb or type b can be accent as a present equipment. The MR-V4-700, 4 is high protective earthing conductor current equipment, the minimum size of the protective earthing conductor must comply with the local safety regulations. 2.3.2 EU compliance The MR-V4 servo amplifiers are designed to comply with the following directions to meet requirements for mounting, using, and periodic technical inspections: Machinery directive (2006/42/EC), EMC directive (2014/30/EU), and Low-voltage directive (2014/35/EU).

using, and periodic technical inspections: Machinery directive (2006/42/EC), EMC directive (2014/30/EU), and Low-voltage directive (2014/35/EU).
 (1) EMC requirement
 MR-J4 servo amplifiers comply with category C3 in accordance with EN 61800-3. As for I/O wires (max. length 10 m. However, 3 m for STO cable for CN8) and encoder cables (max. length 50 m), use shielded wires and ground the shields. Install an EMC filter and surge protector on the primary side for input and output of 20.0 v class and for outputs of shin Electric H79000-LVI serves. CoSEL FTB series
 EMC filter: Sohin Electric H79000-LVI series. Tresponder CTX series, COSEL FTB series
 Surge protector: Okaya Electric Industries RSPD series
 Line noise filter. Mitsubishi Electric H79000-LVI series. To Suod El the risk of crossfage for installation and use, including recommended mitigation devices. To avoid the risk of crossfage to signal cables, the installation and use, including recommended mitigation devices. To avoid the risk of crossfage to other sugnal: cables, the installation instructions shall either recommend that the power interface cable be segrated from signal cables, the installation instructions shall either recommend that the power interface cable be segrated from signal cables. The installation of conformity (DoC)
 (2) For Declaration of Conformity (DoC)
 Heredy, MITSUBISH LELCTRIC EUROPE B.V., declares that the servo amplifiers are in compliance with the necessary requirements and standards (2006/42/EC, 2014/30/EU and 2014/35/EU). For the copy of Declaration of Conformity, contact alse office.
 2.3.3 USA/Canada compliance
 This servo amplifier is table softice.
 2.3.3 USA/Canada compliance with UL 508C and CSA C22.2 No. 14.
 (1) Installation
 The cabinet size is 150% of each MR-J4 servo amplifier's volume. Also, design the cabinet so that the ambient temperature in the cabinet is

- Category shown in table in section 0.1. The set to aniphile needs to be installed at 0 below to polation tegree 2. For consection, use copper wires: Short-circuit current rating (SCCR) Suitable For Use On A Circuit Capable Of Delivering Not More Than 100 kA ms Symmetrical Amperes, 500 Volts Maximum (Not More Than 5 kA ms Symmetrical Amperes, 48 Volts Maximum for MR-14-03A6 and MR-14W2-003B6). For SCCR when using a Type E Combination motor controller, refer to each servo amplifier instruction Overload protection characteristics
 The MR-J4 servo amplifiers have solid-state servo motor overload protection. (It is set on the basis (full load

- The MR-J4 servo amplifiers have solid-state servo motor overload protection. (It is set on the basis (full load current of the servo amplifier.)
 Over-temperature protection for motor
 Motor Over temperature sensing is not provided by the drive. Integral thermal protection(s) is not provided by the drive.
 Branch circuit protection
 Branch circuit protection
 Drived States, branch circuit protection must be provided, in accordance with the National For installation in United States.
- Electrical Code and any applicable local codes. For installation in Canada, branch circuit protection must be provided, in accordance with the Canada Electrical Code and any applicable provincial codes.

Code and any applicable provincial codes. 2.3.4 South Korea compliance and applicable provincial codes. This product comples with the Radio Wave Law (KC mark). Please note the following to use the product. 이 기기는 업무용 (A급) 전자파적합기기로서 팬매자 또는 시용자는 이 점을 주의하시기 바라며, 가정의의 지역에서 사용하는 것을 목적으로 합니다. (The product is for business use (Class A) and meets the electromagnetic compatibility requirements. The seller and the user must note the above point, and use the product in a place except for home.) In addition, use an EMC filter, surge protector, ferrite core, and line noise filter on the primary side for inputs. Use a ferrite core and line noise filter for outputs. Use a distance greater than 30 m between the product and third party sensitive radio communications for an MR-14-22K_(4).

2.4 General cautions for safety protection and protective measures Observe the following items to ensure proper use of the MR-J4 servo amplifiers.

- (1) For safety components and installing systems, only qualified personnel and professional engineers should perform.
 (2) When mounting, installing, and using the MR-J4 servo amplifier, always observe standards and directives applicable in the country.
 (3) The item about noises of the test notices in the manuals should be observed.

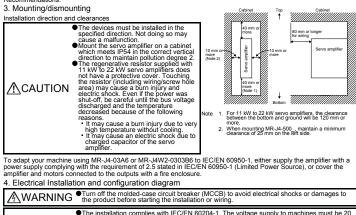
- 2.5 Residual risk.
 (2) Besidue that all safety related switches, relays, sensors, etc., meet the required safety standards.
 (2) Perform all risk assessments and safety level certification to the machine or the system as a whole.
 (3) If the upper and lower power module in the servo amplifier are shorted and damaged simultaneously, the servo motor may make a half revolution at a maximum.

Only qualified personnel are authorized to install, start-up, repair or service the machines in which these components are installed. Only trained engineers should install and operate the equipment. (ISO 13849-1 Table F.1 No. 5)

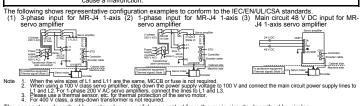
F.1 No. 5) Separate the wiring for safety observation function from other signal wirings. (ISO 13849-1 Table F.1 No. 1) Protect the cables with appropriate ways (routing them in a cabinet, using a cable guard, etc.). Keep the required clearance/creepage distance depending on voltage you use.

2.6 Disposal

2.6 Disposal of unusable or irreparable devices should always occur in accordance with the applicable country-specific waste disposal regulations. (Example: European Waste 16 02 14)
2.7 Lithium battery transportation
To transport lithium batteries, take actions to comply with the instructions and regulations such as the United Nations (UN), the International Civil Aviation Organization (ICAO), and the International Maritime Organization (IMO).
The batteries (IMR-BATGVISET, MR-BATGVISET-A, MR-BATGVI, and MR-BATGVISL) are assembled batteries from two batteries (ithium metal battery CR17335A) which are not subject to the dangerous goods (Class 9) of the UN Recommendations.



CAUTION
 The installation complies with IEC/EN 60204-1. The voltage supply to machines must be 20
ms or more of tolerance against instantaneous power failure as specified in IEC/EN 60204-1
connecting a servo motor for different axis to U, V, W, or CN2_ of the servo amplifier may
cause a malfunction.



The connector described by rectangles are safely separated from the main circuits described by circles.
 The connected motors will be limited as follows.
 (1) HG/HF/HC/HA series servo motors (Mg: Mitsubishi Electric)
 (2) Using a servo motor complied with IEC 60034-1 and Mitsubishi Electric encoder (OBA, OSA)

5. Signals

5. Signais				
5.1 Signal	5.2 I/O de	vice		
The following shows MR-J4-10B signals as a typical		Input device		
example. For other servo amplifiers, refer to each servo amplifier instruction manual.	Symbol	Device	Connector	Pin No.
ampliner instruction manual.	EM2	Forced stop 2	CN3	20
STO I/O signal	STOCOM	Common terminal for input signals STO1/STO2	CN8	3
	STO1	STO1 state input	CN8	4
	STO2	STO2 state input		5
		Output device		
4 3 STO1 STOCOM MO1 5 MO2 15	Symbol	Device	Connector	Pin No.
6 DICOM 16 ALM 10FB1 5T02	TOFCOM	Common terminal for monitor output signal in STO state	CN8	8
	TOFB1	Monitor output signal in STO1 state	CIN6	6
TOFCOM TOFB2	TOFB2	Monitor output signal in STO2 state		7
		Power supply		
	Symbol	Device	Connector	Pin No.
	DICOM	Digital I/F power supply input		5, 10
	DOCOM	Digital I/F common	CN3	3
	SD	Shield		Plate
Maintenance and service	-			-

WARNING •To avoid an electric shock, only qualified personnel should attempt inspections. For repair and parts replacement, contact your local sales office. 6.1 Inspection items It is recommended that the following points periodically be checked. (1) Check for loose terminal block screws. Retighten any loose screws. (Except for MR-J4-03A6 and MR-J4W2-(1) Check for loose terminal block screws. Retighten any loose screws. (Except for MR-J4-03A6 and MR-J4W2-

Servo amplifier	Fightening torque [1411]							
	L1 L2 L3 N- P3 P4 P+ C	D L11 L21 U	V W PE					
MR-J4-10_(1)/MR-J4-20_(1)/MR-J4-40_(1)/ MR-J4-60_(4)/ MR-J4-70_/ MR-J4-100_(4)/MR-J4-200_(4)/MR-J4-350_(4)			1.2					
MR-J4-500_	1.2	0.8	1.2					
MR-J4-700_(4)/MR-J4-500_4	1.2	0.8	1.2					
MR-J4-11K_(4)/MR-J4-15K_(4)	3.0	1.2	3.0					
MR-J4-22K_(4)	6.0	1.2	6.0					
MR-J4WB			1.2					
(a) a second sec								

(2) Servo motor bearings, brake section, etc. for unusual noise.
 (2) Servo motor bearings, brake section, etc. for unusual noise.
 (3) Check the cables and the like for scratches or cracks. Perform periodic inspection according to operating conditions.
 (4) Check that the concertors are securely connected to the servo motor.
 (5) Check that the connectors are securely connected to the servo motor.
 (6) Check that the connectors are securely connected to the servo motor.
 (7) Check that the connectors are securely connected to the servo motor.
 (7) Check that the connectors are securely connectors.
 (7) Check the servo motor shaft and coupling for connection.
 (8) Check the servo motor shaft and coupling for connection.
 (9) Make sure that the emergency stop circuit operates properly such that an operation can be stopped immediately and a power is shut off by the emergency stop switch.
 (2) Parts having service life
 Service life of the following parts is listed below. However, the service life varies depending on operation and environment. If any fault is found in the parts, they must be replaced immediately regardless of their service life. For parts replacement, please contact your local sales office.
 [2] Parts have
 [2] Parts mare

Part name	Life guideline					
Smoothing capacitor	(Note 3) 10 years					
Relay	Number of power-on, forced stop and controller forced stop times: 100,000 times Number of on and off for STO: 1,000,000 times					
Cooling fan	10,000 hours to 30,000 hours (2 years to 3 years)					
(Note 1) Battery backup time	Approximately 20,000 hours (equipment power supply: off, ambient temperature: 20 °C)					
(Note 2) Battery life	5 years from date of manufacture					
 The characteristic of smoothing capacitor is d temperature and operating conditions. The ca environment (40 °C surrounding air temperatu 2000 m). Transportation and storage 	up time, refer to each instruction månual. e condition. The batter life is 5 years from the production date regardless of the connection steriorated due to irigele currente, etc. The life of the capacitor greatly depende on ambient pacitor will be the dot if is life in 10 years of continuous operation in normal air-conditioned re or less for use at the maximum 1000 m above sea level, 30 °C or less for over 1000 m to					
 Stacking in excess Do not hold the from 	Lcts correctly according to their mass. of the limited number of product packages is not allowed. it cover to transport the servo amplifier. Otherwise, it may drop. ation on transportation and handling of the battery, refer to the servo pragual					

∕∆CA	 amplifie Install t with the 	fold the front cover to transport the servo amplifier. Otherwise, it may drop. alide information on transportation and handling of the battery, refer to the servo r instruction manual. e product in a load-bearing place of servo amplifier and servo motor in accordance instruction manual. ut excessive load on the machine.
When you k	eep or use it, please fi	Ifill the following environment.
	Item	Environment
	Operation [°C	0 to 55 Class 3K3 (IEC/EN 60721-3-3)
Ambient temperature	Transportation (Note) [°C	
	Storage (Note) [°C	
Ambient humidity	Operation, transportation, storage	5 %RH t0 50 %RH
	Test condition	10 Hz to 57 Hz with constant amplitude of 0.075 mm 57 Hz to 150 Hz with constant acceleration of 9.8 m/s ² to IEC/EN 61800-5-1 (Test Fc of IEC 60068-2-6)
Vibration resistance	Operation	5.9 m/s ²
realatance	Transportation (Note)	Class 2M3 (IEC/EN 60721-3-2)

Class 1M2 (IEC/EN 60721-3-2 lution dec 29), Terminal block IP00 IP20 (IEC/EN 60)

(1) ¹Persons who took a proper training of related work of electrical equipment or persons who can avoid risk based or past experience.
 (2) Persons who have read and familiarized himself/herself with this installation guide and operating manuals for the protective devices (e.g. light curtain) connected to the safety control system.
 2.2 Applications of the devices
 WR-44 serve amplifiers comply with the following standards.
 IEC/EN 61800-5.1 IEC/EN 61800-3. IEC/EN 60204-1
 ISO/EN ISO 13849-1 Category 3 PL e. IEC/EN 61601 SIL CL 3. IEC/EN 61800-5-2 (STO) (Except for MR-J4-03A6 and MR-J4472-0303B6. Refer to section 8.1 for compatible models.)
 MR-J4 serve amplifiers can be used with the MR-D30 functional safety unit, MR-J3-D05 safety logic unit, or safety PLCs. (except for MR-J4-03A6 and MR-J4W2-0303B6)

MITSUBISHI ELECTRIC CORPORATION HEAD OFFICE: TOKYO BLDG MARUNOUCHI TOKYO 100-8310

This guide uses recycled paper

IB(NA)0300175ENG-S(1610)MEE Printed in Japan Specifications are subject to change without notice.

Copyright©2012 Mitsubishi Electric Corporation All Rights Reserved.

Contents of the package

Unpack the product and check the rating plate to see if the servo motor is as you ordered.	
Contents	
Servo amplifier	
MELSERVO-J4 Series Instructions and Cautions for Safe Use of AC Servos (This guide)	
Rating plate	
The following shows an example of rating plate for explanation of each item.	



ELECTRE SHOCK CONTINUES OF BE AFFORT AND AFFORT AND DISPLAYED OWNER TO BE ANYTHING AND AFFORT AND AFFORT DECODE ELECTRALE. A PART TO DEPEND AND AFFORT AND A ANYTH APPENDIX TO THE TO AFFORT AND AFFORT AND A MARKET ASSOCIATION AND AFFORT AND AND AFFORT Number of axes Symbol Number of axes

MELSERVO-J4 relevant manuals
 This installation guide explains how to mount MR-J4 servo amplifiers. You can also check it with our website for free. http://www.misubsible/circ.com/fa/

http://www.mistubishielectric.com/ta/ If you have any questions about the operation or programming of the equipment described in this guide, contact your local sales office. In addition, when you mount a protective device, specific technical skills which are not detailed in the guide will be

In addition, when you mount a protective device, specific technical skills which are not detailed in the globe will be required. 1.2 Purpose of this guide This installation guide explains the safe operation of MR-J4 servo amplifiers for engineers of machinery manufacturers and machine operators. This installation guide does not explain how to operate machines in which safe servo system is, or will be integrated. For detailed information of the products, refer to each servo amplifier instruction manual. 1.3 Terms related to safety 1.3.1 TEC 61800-5-2 Sto function STO function (Refer to IEC 61800-5-2:2007 4.2.2.2 STO.) The MR-J4 servo amplifier have the STO function. The STO function Rubus down energy to servo moving torque. This function electronically cuts off power supply in the servo amplifier. In addition, MR-J4-03A6 and MR-J4W2-0303B6 don't support this function. 2. About safety This charter explains safety of users and machine operators. Please read the chapter carefully before mounting the

This chapter explains safety of users and machine operators. Please read the chapter carefully before mounting the equipment. In this installation guide, the specific warnings and cautions levels are classified as follows.

WARNING	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
	Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight injury to personnel or may cause physical damage.

- Professional engineer
 Only professional engineers should mount MR-J4 servo amplifiers. Here, professional engineers should meet all the conditions below.
 Persons who took a proper training of related work of electrical equipment or persons who can avoid risk based on paet experience.

Warning plate The following shows an example of warning plate. K_{max} Model The following describes what each block of a model name indicates. Not all combinations of the symbols are available. MR - JAR - 2AR - 2ARLandware special specification Blank, Jn, Sn, or Uh (n = 00 to 999) Hardware special specification Blank or 2 to 5 digit alphanumer (PL ED BY, BU 2017, cm)

CECHNAGEMENT DES CONDENSATEUR EET DE 15 MINUTES.					1			j j	RJ, ED, PX, RU, RZ, etc.)
有數电的风险、电波新电后、请不要整理模块和接线、 电容效电常要15分钟。				W2	2		11	Power	supply
※特点な場所要には方付。 ・必要の売れあり、電源調所自由にエットや場子部を触れないこと。				W3	3	1 1		Symbo	Power supply
1075月放電時間 15分	Rated output	_				_		None	3-phase or 1-phase 200 V AC to 240 V AC
RUNNYS COMIECT PROTECTIVE EARTH (PE) FOR PROTECTION AGAINST.	Symbol Rated output (k)	64	Symbol		id output			1	1-phase 100 V AC to 120 V AC
TOLLOUPS BRANCHER LA TERRE PELAU CONDUCTEUR DE PROTECTION					B-axis	C-axis		14	3-phase 380 V AC to 480 V AC 48 V DC/24 V DC
★ カア防止触电、消务必須行得計接地(PE)、 器電防止の為、保護アールPEIの接領を必ず行うこと。	10 0.1	-11	0303	0.03	0.03	\sim		6	
	20 0.2	-11	22	0.2	0.2	\sim	-	- Corres	
DON'T TOUCH HEATERN. A 15 BAS TOUCHEZ LE COSEPUTE IS THERMOLE	40 0.4	-11	44	0.4	0.4	\geq		Symbo	
静脉片语有高速。	60 0.6 70 0.75	-11	77	0.75	0.75	\geq			General-purpose interface
設務201に触らないこと、真温の恐れあり。	70 0.75	-11	222	0.2	0.2	0.2		B	SSCNET III/H
ONLY 8 TYPE RCD BALLOWED.	200 2	-11	444	0.2	0.2	0.2		GF	CC-Link IE Field Network
▲ SOLENENT DESCRICTEUR DE TYPE B RCD ALTONGE. 只有B类型的(漂电保护器)RCD 成允许。	350 3.5	-1	444	0.4	0.4	0.4			
	500 5	-							
REFER TO MANUAL INFORT INSTALLING OR SERVICING.	20 2	-							
MERCICE CONSULTER LE INVUEL CATALISATION ANNET METALIATION DU MANTEMADE.	11K 11	-							
在安装及焼护前、清参考手供、 有付と保守サービスの前に、マニュアルを参照すること。	15K 15								
·相対とはササービスの目に、イニスノルを伊朗すること。	22K 22								

1. About the manuals

		nplifier N	/IR-J4-10_/MR-J4-20_/ /IR-J4-40_/MR-J4-60_/ MR-J4-70_/	MF	R-J4-35	50_/			M	R-J4-60_4/			
	Item		MR-J4-10 / MIR-J4-460 / MR-J4-40 / MR-J4-60 / MR-J4-100 / MR-J4-100 / MR-J4-22B/ MR-J4W2-22B/ MR-J4W2-24B/ MR-J4W2-24B/ MR-J4W3-222B/ MR-J4W3-244B	MR-J MR-J MR MR MR MR	 J4-50 J4-70 4W2-1 J4-11 J4-15 J4-22 	00_/ 00_/ 1010B/ 1K_/ 5K_/ 2K_	MR-	14-10_1 14-20_1 J4-40_1		R-J4-60_4/ -J4-100_4/ -J4-200_4/ -J4-350_4/ -J4-500_4/ -J4-11K_4/ -J4-11K_4/ R-J4-22K_4		/R-J4-03 -J4W2-0	
	Main circuit (voltage)	(line 2	3-phase or 1-phase 200 V AC to 240 V AC, 50 Hz/60 Hz (Note 2)	20 24 50 Hz/6	3-phas 0 V AC 40 V A 50 Hz (ie C to (C, (Note 2	1-1 100 120 2) 50 H	ohase V AC to I V AC, Iz/60 Hz	o 38 4 z 50	3-phase I0 V AC to 80 V AC, I Hz/60 Hz		48 V DC 24 V D	or C
pply	Control circu voltage)	iit (line	1-phase 200 V AC to (Not				1-I 100 120 50 H	ohase V AC to V AC, V AC, Iz/60 Hz	o 38 4 z 50	1-phase 10 V AC to 80 V AC, 1 Hz/60 Hz		24 V D	с
ontrol me					Sine-	-wave	PWM control	. curren	_, 500 mA; N I mA; MR-J4- nt control met	R-J4B_, 30 GF_, 300 r hod	00 mA; nA)		
C/EN 618 ean time	ervation function 800-5-2 (Note to dangerous	3) failure	EN	ISO 138 EN 62	49-1 c 2061 S MTTFC	categor SIL CL d ≥ 100	y 3 PL e, IE0 3, and EN 6 0 [years] (31-	C 61508 1800-5- 4a)	8 SIL 3, 2		/ /		/
a system erage pr	ss of fault mor or subsystem obability of da	1			DC :	= Medi	ium, 97.6 [% 4 × 10 ^{.9} [1/h]				/ /	/ /	/
	e performance		Ę	3 ms or le		T _M = 2	0 [years] ut off → ene	rgy shu	t off)				
otective of nort-circui CCR)	e category class it current rating		1-c 3-p a, constitute a branch c	ohase 10 ohase 20	I (IE	EC/EN 10	2 (IEC/EN / AC: II (IEC / AC: III (IEC 61800-5-1) 0 kA	/EN 600 C/EN 60	664-1), 1664-1)	of 5 kA min	(IEC 5	C/EN 600 III /EN 618 KA (Not	00-5- ie 1)
2. F 3. S	abinet. for MR-J4R Servo amplifier nanufactured i	J, 283 V D s manufac n China co	C to 340 V DC are also tured in June 2015 or l omply with SIL 3 require ole process drawin	o suppor ater com ements fi				nts. Hov producti	wever, MR-J4 ion.	A_/MR-J4			
			MR-J4-03A6	amplifie			W 30		ble dimension H 100	ns [mm] D 90	_	Mass 0.2	[kg]
Front	Side		MR-J4-10_(1)/MR-J MR-J4-40_(1)/MR-J MR-J4-70 /MR-J4-7	4-60_(N) (Note lote)	e)	40 (5 40 (5 60		168 168 168	135 (15 170 (15 185		0.8 (1)
W	D		MR-J4-200_(4) MR-J4-350_	100_			90		168 168	195 195		2.1	3
-	P.	-	MR-J4-500_ MR-J4-700_				105		250 300	200 200		4.0	2
			MR-J4-11K_(4)/MR MR-J4-22K_(4)		_(4)		220 260 60		400 400 168	260 260		13.4	2
			MR-J4-60_4/MR-J4 MR-J4-350_4 MR-J4-500_4	-100_4			105		250 250	200		1.7 3.6 4.3	5
			MR-J4-700_4 MR-J4W2-0303B6				172		300 168	200	_	6.5	5
			MR-J4W2-22B/MR- MR-J4W2-77B/MR-	J4W2-10	010B		60 85		168 168	195 195		1.4 2.3	3
			MR-J4W3-222B/MR Note. The value in th			shows	85 the value of	MR-J4	168 GF	195		2.3	3
• <mark> </mark> 41	+li€		Servo amplifier					riable d	limensions [r				Scr
0 d1		MR-J4-03	A6	~ /	a /	a1	b 90 ± 0.5	с 5	d	d1	е 4	e1 4	f M
	-	MR-J4-10 MR-J4-40 MR-J4-70	_(1)/MR-J4-20_(1)/ _(1)/MR-J4-60_ _/MR-J4-100_	1	6 2	6 12	156 ± 0.5 156 ± 0.5	6 6	42±0.3	\geq	\geq	\geq	M
φ.	- Q	MR-J4-20 MR-J4-50	0_(4)/MR-J4-350_ 0_	(6 6	45 6	156 ± 0.5 235 ± 0.5	6 7.5	78 ± 0.3 93 ± 0.5	93 ± 0.5	//	\mathbb{N}	M
	-114	MR-J4-70 MR-J4-11	K (4)/MR-J4-15K (4)	1	2	6 12	285 ± 0.5 380 ± 0.5	7.5	160 ± 0.5 196 ± 0.5	160 ± 0.5 196 ± 0.5	\mathbb{N}		M
	ſ	MR-J4-22 MR-J4-60 MR-J4-35	_4/MR-J4-100_4		2	12 12 6	376 ± 0.5 156 ± 0.5 235 ± 0.5	12 6 7.5	236 ± 0.5 42 ± 0.3 93 ± 0.5	236 ± 0.5			M1 M
		MR-J4-50 MR-J4-70	0_4 0_4		6	6	235 ± 0.5 285 ± 0.5	7.5 7.5	118 ± 0.5 160 ± 0.5	118 ± 0.5 160 ± 0.5	\mathbb{N}	\sim	M
	ľ	MR-J4W2	-0303B6								\sim	<u> </u>	M
		MR-J4W2	-22B/MR-J4W2-44B	(6 6	156 ± 0.5 156 ± 0.5	6			\geq		
	k list for u	MR-J4W2 MR-J4W3 JSer do	-228/MR-J4W2-44B -778/MR-J4W2-10108 -2228/MR-J4W3-444B cumentation MR-J4 installa	ation ch	6 6 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6 6 6 MITSUB LECTR	156 ± 0.5 156 ± 0.5 156 ± 0.5 ISHI IC manufact	6 6 6 urer/ir		nufacturer	/install		Mt Mt
he folle esponsi laintain 1. Is 2. Is 3. De 4. Ar	owing item ible for cher and keep t it based on directive/st oes the proi re electric s	MR-J4W2 MR-J4W3 JSET do s must cking the this chec h directive andard of tection in hock pro	22B/MR-J4W2-44B 22B/MR-J4W3-444B cumentation MR-J4 installa be satisfied by th standards in the i xklist with related d e/standard applied contained in Decla nstrument conform	ation ch ne initi- tems. ocume I to the ration c to the (protect	al tes mach of Cor catego	6 6 6 ELECTR ist for st op f mac hine? nform gory r class)	156 ± 0.5 156 ± 0.5 156 ± 0.5 156 ± 0.5 ISHI IC manufact eration at thines to u hity (DoC)? effective?	e 6 6 urer/ir least ise this	73±0.3 nstaller t. The ma s for perior Yes [], I Yes [], I Yes [], I	dic inspect No[] No[] No[] No[] No[]		er mu	M
he folle esponsi laintain 1. Is 2. Is 3. Do 4. Ar 5. Is Checkin	ck list for u owing item ible for cher and keep t it based on directive/st oes the proi e electric s the STO fu g the items	MR-J4W2 MR-J4W3 JSER dO s must cking the this chec h directiv andard c tection ir hock pro inction cl will not l	229/MR-JW2-445 Cumentation MR-J4 install be satisfied by th standard applied e/standard applied e/standard applied contained in Decla strument conform hecked (test of all be instead of the fi	ation ch ne initiatems. locume to the (protect the shu	al tes mach of Cor categ tive cut-off	6 6 6 ist for st op f mac hine? nform gory r class) wiring	156 ± 0.5 $according to the second se$	6 6 6 i least ise this	73±0.3 hstaller t. The ma s for perior Yes [], I Yes [], I Yes [], I Yes [], I Yes [], I	dic inspect No [] No [] No [] No [] No []	ion.		M
he folle esponsi laintain 1. Is 2. Is 3. De 4. Ar 5. Is heckin Warrar Warrar Warrar Warrar Warrar Warrar	k list for u owing item bible for chea it based or directive/st oes the pro- the STO fu g the items hty] ranty perioc will repair ar uptra and state item on-site re- y ou purchan on on-site re-	MR-J4W2 MR-J4W3 JISER do s must cking the this chect adrective andard of tection in hock pro- inction cl will not l and col- ny failure during wa ssed the F pair work	229/MR-JW2-445 Cumentation MR-J4 install be satisfied by th standard applied e/standard applied e/standard applied contained in Decla strument conform hecked (test of all be instead of the fi	ation ch he initiatems. ocume to the ration of to the chreshurst test	6 6 6 6 6 6 6 6 6 6 6 6 6 6	6 6 6 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	156 ± 0.5 156 ±	6 6 6 8 9 9 0 urrer/ir 1 least 1 se this 2 9 0 urrer 2 0 urrer 2 0 urrer 2 9 0 urrer/ir 1 9 0 urrer/ir 1 9 0 urrer/ir 1 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A equipmer A equipmer tactual A equipmer A equipme	dic inspect No [] No [] No [] No [] Drofession: thereinaft sible throug cost of disp not respon	al engi	neers.	st b
he folllus ssponsi laintain 1. Is 2. Is 3. D 4. Au 5. Is 1. heckin War War War War War War War War War War	owing item bible for chee and keep i it based or directive/st oes the proi oes the proi oes the proi the STO fur g the items ty] ranty perioco will repair arisen n you purchan ty will repair arisen n you purchan the sto fur you purchan the sto fu	MR-J4W2 MR-J4W3 Jser do s must cking the this chec o directive and ard o tection in hock pro- inction cl will not l d and cov ny failure during was land cov ny failure during was for trial nu anty for P (18) mon cannot ex	2220MR-JW2-440 2220MR-JW2-4100 2222MR-JW3-444 cumentation MR-J4 instalic be satisfied by th standards in the i cklist with related d e/standard applied contained in Decla strument conform tective measures hecked (test of all be instead of the fi werage or defect hereinsfit or defect or our servic or defect thereinsfit or nequest by cust in that may be requir roduct is twelve (12)	ation chrain and a state of the shutter of the shut	the state of	6 6 6 6 7 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	156 ± 0.5 156 ±	our F/A c insp c insp c court f/r c h we charge countri- spaired or deliv- nes fir: ny rep	73±0.3 installer t. The mass s for perior Yes [], 1 Yes [], 1 A equipment are respon- the actual exponential of the list st (Warram air work.	dic inspect No [] No [er refer h the d patching ssible for Warra	neers. red to istributo g our en or any designa nty per	as t or fro ogine on-s
he follus laintain 1. Is 2. Is 3. Du 4. Ar 5. Is heckin We v "Proc whild for a readj readj readj or a readj or a readj or a readj or a readj or a serv for this serv or a for this serv for this serv for this serv or a for a for a for this serv or a for	owing item bible for cheeved it based or directivels of the second over the prore set he prore the STO furget over the STO furget over the STO furget ty] and the second ty] and the second ty] and the second ty] and the second ty] are requesting the comparison the second the	MR-J4W3 ISER do s must acking the this chece tection in hock pro- tection in hock pro- during war- and and coo- will not l and coo- will not l and coo- y failure during war- sed the fail of the failure trial nu anty for P anty for P anty approve trial nu anty approve trial nu trial nu	222/MR-JW2-440 222/MR-JW2-4100 222/MR-JW2-4100 222/MR-JW3-444 cumentation MR-J4 install be satisfied by th satisfied by th skilst with related d e/standard applied isklist with related d e/standard applied contained in Decla strument conform tective measures hecked (test of all be instead of the fir verage or defect hereianth verage or defect nor service verage or defect nor us servic n request by cust in that may be requir roduct is twelve (12) roduct an initial failure ur request and the a strument and the normal service the sondy when the cos is not an even the that are set forth i	ation ch e initia tems. ocume to the to the the shu rst test e provide the shu rst test e provide the shu rst test diagno diagno cutal diagno cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cutal cu	red tot due to to open r a def s after facturrant sis by post will	6 6 6 6 6 7 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	156 ± 0.5 156 ± 0.5	a c insp c insp c insp c ansp c ansp	73±0.3 Installer L. The mass s for period Yes [], 1	dic inspect lo [] lo [] l	ion. al engi er refer h the d vatching ssible fo Warra rried ou if we an	neers. istributo g our en or any designa nty per at by us re respo the term	as t b as t b or frongine on-s ated or c onsit
he follil seponsis 2. Is 3. Di- 4. Ari Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar Warar War	owing item bible for cheen bible for cheen bible for cheen oes the protocol or cheen the STO fur the STO fur the S	MR-J4W3 JISET dO S must taking the taking taking and directive and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and and	222/MR-JW2-440 222/MR-JW2-4100 222/MR-JW2-4100 222/MR-JW2-4100 222/MR-JW2-4100 222/MR-JW2-4100 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW2-410 222/MR-JW	ation of the shift of the shift of the shift of the shift terms. In the shift terms, the shift of the shift terms the shift of the shif	red tot due tr opper s after s	6 6 7 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9	156 ± 0.5 156 ± 0.5	a cinsp courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir courrer/ir cou	73±0.3 istaller t. The mass s for perion Yes [], 1 Yes [],	dic inspect No [] No [ion. al engi er refer h the d vatching sible fr warra urhadwing warra warra warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warad warad warrad warrad warad warad wara	red to istribute g our en or any . designa nty per t by us re respo vare or s a safety e in the i	as to as to ngine on-s ated or consit on s a a or consit of two of two of two of two of two of two of two of two of two
he foll- besponsis 2. Is 3. Du 2. Is 3. Du 2. Is 3. Du 2. Is 5. Is 5. Is 6. Warra 7. Warva 7.	k list for L owing item ible for cheat and keep t it based or directive/st oes the proi directive/st oes the proi the STO fur g the items the STO fur g the store the store the store the store the store the store	MR-34W3 ISEC 400 S must cking the cking	222/MR-JW2-46 222/MR-JW2-4100 222/MR-JW2-4100 222/MR-JW2-410 Cumentation MR-J4 install be satisfied by th estandards in the i kilist with related of e/standard applied e/standard applied e/standa	er refer charge er refer charge er refer charge er refer di manu giginal wa er st lest er st lest er ver di manu giginal wa etulal comer in er de after er somer in er de after er de afte	red to due to du	6 6 6 6 7 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	156 ± 0.5 156 ± 0.5	a cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cinsp cin	T3±0.3 Installer The mass s for perior Yes [], 1 Yes [], 1	dic inspect No [] No [] N	ion. al engi er refer h the d vatching sible fr warra e with and the warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warrad warad warad warrad warrad warad warad wara	red to istributo g our ere or any v designanty per it by us re respr the terr e cautio vare or s a safety in the i maintain of volta	as t b as t b st b st b as t b or from gine on-s ated or c onsit as a to or c onsit as a to or c onsit as a or c onsit as a or c onsit as a or from on-s as a or c onsit as a or c onsit a or c onsit o or c onsit o o or c o o o o o o o o o o o o o o o o o o o
he follissponsi laintaina 1. Is 2. Is 3. D Varrar We v "Procession" (i) 4. Au Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter Warter W	owing item bible for cheese bible for cheese bible for cheese bible for cheese bible for cheese oese the prore est the STO furget oese the prore set the STO furget of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set o	MR-J4W3 ISEC 400 S must taking the taking the andard tection is andard tection	2220MR-JW2-440 2220MR-JW2-4100 2222MR-JW2-440 Cumentation MR-J4 instalit be satisfied by th standards in the i skilst with related d e/standard applied standards in the i skilst with related d e/standard applied tective measures hecked (test of all be instead of the fi more the standards in the i or defect hereinsfilt arranty period at no. on request by cust in that may be required the from the date or caceed beyond the or duct an initial failure range and the samold duct an initial failure regarde as avoidable, we and has any function regarded as avoidable, we are not responsible we are to responsible to the stop of production carety unforceseable case. We are not responsible we are not responsible of production for and the stop of production for a production for and the stop of production for the stop of production for and the stop	er refer charge er refer charge er refer charge er refer charge er refer charge er refer daften i o the se proviu ginal we diagno and diagno set will b to month- i an, smo or the set will b to set w	A matching and the second	6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	156 ± 0.5 156 ± 0.5	a cinsp cinspared cinspared cour F/cinspared cinspared courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting courting co	73±0.3 Installer The mass s for perior Yes [], 1 Yes [], 1	dic inspect No [] No [] N	ion. al engi er refer h the d vatching sible fr variation if we ar warra tried ou warra tried ou tried ou warra tried ou warra tried ou tried ou	neers. red to istribute of our era designa inty per designa re respo e cautio vare or s a safety a safety of volta nt of the	as t b as t b or frongine on-s ated on site on site ated a ge, a Proc
he follissponsi taintain 1. Is 2. Is 3. D. 4. AT 5. Is 5. Is 5. Is 6. Warn 7.	kk list for L owing item bible for chere bible for chere bible for chere til based or directive prore reserved for the prore will repair and update for the prore reserved for the prore will repair and update for the prore reserved for the prore reserved for the pro- reserved for the pro- served for the pro- per for the pro- served for the pro	MR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W3 INR-J4W	2220MR-JW2-440 2220MR-JW2-4100 2222MR-JW2-440 Cumentation MR-J4 install be satisfied by th standards in the i klist with related d e/standard applied strument conform to contained in Decla strument conform to contained in Decla strument conform to contained in Decla strument conform to instead of the fi be instead of the fi be instead of the fi to request by cust in that may be required round to rour servic the from the date of cxceed beyond the ori duct an initial failure roduct is welve (12) arranty, be repair (02) duct an initial failure range as a voltable, s and has any function request statery. I mathe carts chattery. I and factors such as any function regarded as avoidable, we are not responsible we are not responsible we are not responsible we are not responsible we are not responsible of production for eau we (including its span intries overseas countries of depending on each F.	er refer charge er refer charge er refer charge er refer charge er refer charge er refer charge er provi the shu find manu- iginal wi diagno and charge er provi find er refer charge er provi diagno er er er er er er er er er er er er er	red to the safter of Con- catego and the safter of the saf	6 6 6 7 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	156 ± 0.5 156 ± 0.5	a c insp c insp	73±0.3 Installer The mass s for perior Yes [], 1 Yes [], 1	dic inspect No [] No [ion. al engi er refer h the d autching ssible for warra rried ou warra warra rried ou warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra warra wara warra warra warra wara warra warra warra warra warra	neers. red to siribut g our energination red signation red si	as to as to or fro gine on-s ted l iod f or oc on sit ated a ge, a Prod
he follisesponsi taintain 1. Is 2. Is 3. Du 4. AT Warrar Warrar Warrar The type you u visit for al for al for for ti for al for for ti for al for for ti for al for for ti for for for for for for for for for for	kk list for L owing item ble for cheese ble for cheese or cheese the pror- it based or directive(a) for cheese or the STO fu g the items or the STO fu g the items the STO fu g the items the store of the store or elefter or ustranty period will repair and your period will repair and your period will repair and your period will repair and your directive of the store of the store or eighteen on on-site rep ustrant and term of warrar or eighteen on on-site rep ustrant and term of warrar or eighteen on on-site rep ustrant and term of warrar or eighteen on on-site rep ustrant and term of warrar or eighteen in on-site rep is company he cause of the failure causes or of the store or a during the is failure causes or a during the is failure causes to store of on your comp on of warrant may accept ouncement o for sen of the tailur on of warrant may accept ouncement on of los arrafiles of the hages causes as in opportunic cause of the store of on your comp of the store of the store of the store of the store regional FA (a peak of the store of the store of the store of the store of the store of the store of the store of the store of the store of the store of the store of the store of the store of the store	MR-J4W3 INR-J4W3 ISEC 400 S must s must s must s must is more and into a must into a mu	2220MR-JW2-440 2220MR-JW2-4100 E222DMR-JW2-4100 E222DMR-JW2-4100 E222DMR-JW2-410 MR-J4 installi be satisfied by th estandards in the i standards in the i standards in the i standards in the i standards reading and extrament conform tective measures or defect hereinaft ready and the standard ready and the standard ready and the standard ready and the standard ready and the standard arranty period at no or defect hereinaft ranty period at no or defect hereinaft ready and the standard ready and the standard ready and the standard ready and the standard arranty the repair concession of the standards that may be requir request and the standard arranty the repairs that are set forth i arranty the repairs cause found not to b regarded as avoidable he stop of production or the stop of produ	ation of chee initia teams of the country of the country of the country to the country of the country of the country of the country to the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the co	A method in the second s	6 6 8 8 8 8 8 8 8 8 8 8 8 8 8	156 ± 0.5 156 ± 0.5	c insp c	73±0.3 staller t. The mass s for periov Yes []. I Yes []. I	dic inspect No [] No [] N	ion. al engi er refer h the d hatching sible fr place i warra rried ou Warra rried ou warra e with and the custom re duly ctuation shipme is disc rms anc	neers. red to istribute g our err or any - designa, thy per the terr r erespr the terr r erespr the terr a safety e in the i maintain of volta: ontinue d condit	M M M M M M M M M M M M M M M M M M M

In addition, applications which may be substantially influential to human lives or properties for such as airlines, me treatments, railway service, incineration and fuel systems, man-operated material handling equipment, entertain machines, safety machines, etc. are not recommended, and we assume no responsibility for any failure caused by th applications when used. applications when used. We will review the acceptability of the abovementioned applications, if you agree not to require a specific quality for a specific anniferation. Please contract us for consultation.