

## Databank - Technical Note

# Replacing MR-J3-B with MR-J3-BS (Safety)

### Introduction

**Due to the full compatibility of the MR-J3-BS to the standard MR-J3-B and Fully-closed loop MR-J3-B-RJ006 Mitsubishi Electric will now offer the MR-J3-BS as a replacement for these series and therefore it becomes the standard amplifier.**

### Applicable Hardware

#### ■ Target Models for replacement

- MR-J3-□B, 100W to 7kW
- MR-J3-□B4, 60W to 22kW
- MR-J3-□B-RJ006, 100W to 7kW
- MR-J3-□B4-RJ006, 60W to 22kW

#### ■ Replacement product type

|             | Standard amplifier |             | Fully-Closed Loop amplifier |                   | MR-J3-BSafety |                     |
|-------------|--------------------|-------------|-----------------------------|-------------------|---------------|---------------------|
| <b>200V</b> | 161497             | MR-J3-10B   | 200962                      | MR-J3-10B-RJ006   | --->          | 229316 MR-J3-10BS   |
|             | 161498             | MR-J3-20B   | 200963                      | MR-J3-20B-RJ006   | --->          | 229317 MR-J3-20BS   |
|             | 161499             | MR-J3-40B   | 200964                      | MR-J3-40B-RJ006   | --->          | 229318 MR-J3-40BS   |
|             | 161500             | MR-J3-60B   | 200965                      | MR-J3-60B-RJ006   | --->          | 229319 MR-J3-60BS   |
|             | 161501             | MR-J3-70B   | 200966                      | MR-J3-70B-RJ006   | --->          | 227373 MR-J3-70BS   |
|             | 161502             | MR-J3-100B  | 200967                      | MR-J3-100B-RJ006  | --->          | 227374 MR-J3-100BS  |
|             | 161503             | MR-J3-200BN | 200968                      | MR-J3-200B-RJ006  | --->          | 227485 MR-J3-200BS  |
|             | 161504             | MR-J3-350B  | 200969                      | MR-J3-350B-RJ006  | --->          | 229320 MR-J3-350BS  |
|             | 161505             | MR-J3-500B  | 200970                      | MR-J3-500B-RJ006  | --->          | 229321 MR-J3-500BS  |
|             | 161506             | MR-J3-700B  | 200971                      | MR-J3-700B-RJ006  | --->          | 229322 MR-J3-700BS  |
| <b>400V</b> | 192036             | MR-J3-60B4  | 225995                      | MR-J3-60B4-RJ006  | --->          | 229328 MR-J3-60BS4  |
|             | 192037             | MR-J3-100B4 | 225996                      | MR-J3-100B4-RJ006 | --->          | 229329 MR-J3-100BS4 |
|             | 192038             | MR-J3-200B4 | 225997                      | MR-J3-200B4-RJ006 | --->          | 229330 MR-J3-200BS4 |
|             | 192039             | MR-J3-350B4 | 225998                      | MR-J3-350B4-RJ006 | --->          | 229331 MR-J3-350BS4 |
|             | 192040             | MR-J3-500B4 | 225999                      | MR-J3-500B4-RJ006 | --->          | 229332 MR-J3-500BS4 |
|             | 192041             | MR-J3-700B4 | 226000                      | MR-J3-700B4-RJ006 | --->          | 229333 MR-J3-700BS4 |
|             | 208820             | MR-J3-11KB4 | 200972                      | MR-J3-11KB4-RJ006 | --->          | 229334 MR-J3-11KBS4 |
|             | 208821             | MR-J3-15KB4 | 200973                      | MR-J3-15KB4-RJ006 | --->          | 229335 MR-J3-15KBS4 |
|             | 208822             | MR-J3-22KB4 | 200974                      | MR-J3-22KB4-RJ006 | --->          | 229336 MR-J3-22KBS4 |

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### ■ Comparison table

| Item                                 | MR-J3-B           | MR-J3-B-RJ006                                 | MR-J3-BSafety  |
|--------------------------------------|-------------------|---|--|
| Outline Dimension                    |                   | ← Same as MR-J3-B                             | ← Same as MR-J3-B(-RJ006)  |
| Power Connector                      | CNP1/CNP2/CNP3    | ← Same as MR-J3-B                             | ← Same as MR-J3-B(-RJ006)  |
| I/O Connector                        | CN3               | ← Same as MR-J3-B                             | ← Same as MR-J3-B(-RJ006)  |
| Encoder connector                    | CN2               | ← Same as MR-J3-B                             | ← Same as MR-J3-B(-RJ006)  |
| External Encoder connector           | N/A               | CN2L  | ← Same as MR-J3-B-RJ006  |
| Option connector                     | N/A               | CN7   | ← Same as MR-J3-B-RJ006  |
| STO I/O Signal Connector             | N/A               | N/A   | CN8  |
| Forced stop signal in initial status | Forced stop (EM1) | Forced stop (EM1)                             | Forced stop2 (EM2)   |
| Additional Alarm/Warning             | N/A               | N/A   | Forced stop error (56),<br>STO timing error (63),<br>STO warning (95)                |
| Additional Parameter                 | N/A               | N/A   | Parameter No.PA04<br>Parameter No.PC24<br>Parameter No.PC31                          |
| Controller setting                   | Select MR-J3-B    | Select MR-J3-B-RJ006 Fully-closed loop system | Select MR-J3-B-RJ006 Fully-closed loop system if MR-J3-BSafety could not be selected |

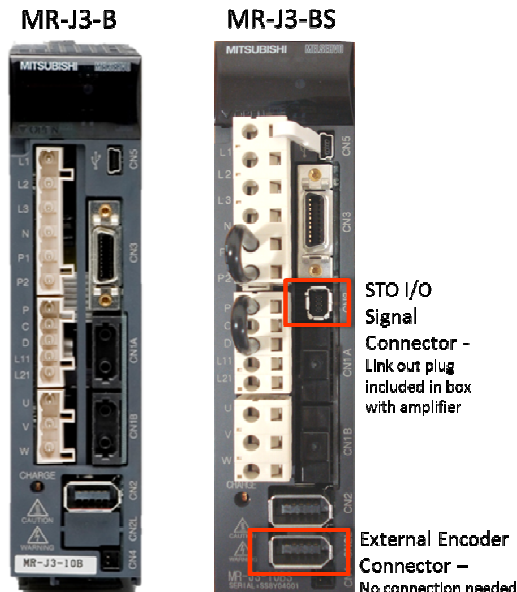
**As can be seen with the above table in all cases the differences between the MR-J3-B, MR-J3-B-RJ006 and the now standard BS version are additional functions only.**

**Therefore the BS amplifier has some extra parameters for the Safety Functions of the amplifier, an extra connector (CN8) for the safety connections and additional Alarms/Warnings for the Safety functions.**

**When the Safety function of the amplifier is not required a link out plug is to be fitted to the CN8 connector. This plug is included in the box with the Amplifier.**

**Because the BS amplifier also has the Fully-Closed Loop function of the RJ006 there is a 2<sup>nd</sup> Encoder Connector. No connection is needed here.**

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### ■ Replacement Procedure

**Due to full compatibility of MR-J3-BSafety to standard MR-J3-B simply remove the old servo amplifier and replace it with MR-J3BS. The Physical Dimensions and external wiring remain the same.**

**Set the station number found under the front cover as normal.**

**Fit the STO I/O Link-out Plug to CN8.**

**All parameters are transferred from the controller to the amplifier on power up.**

**This is the same for all controllers, FX3U-20SSC-H, QD75MH and Motion CPU's.**

- **More information can be found in the MR-J3-BSafety manual (SH(NA)030084-C) which can be downloaded from:**

**[www.Servo.mitsubishielectric.co.uk](http://www.Servo.mitsubishielectric.co.uk)                      or**

Issued by: Mitsubishi Electric Europe B.V. - UK Branch  
Document issue: **Ver A, May 2012**  
Produced by : - Applications  
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