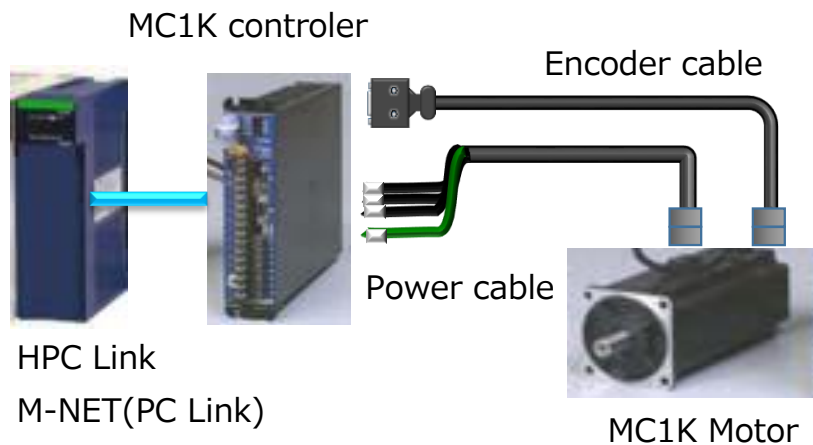


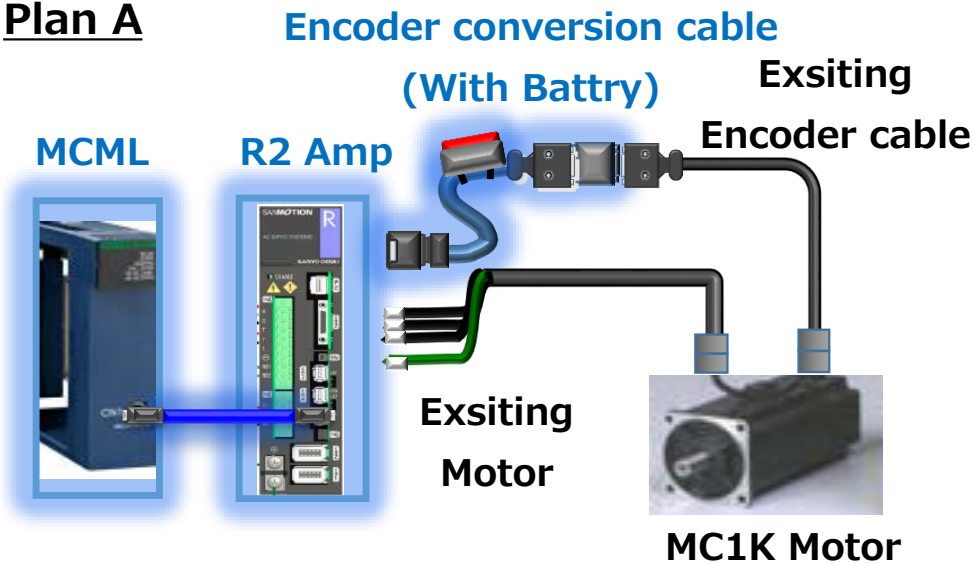
MC1K → MCML Replacement Petan

BEFORE

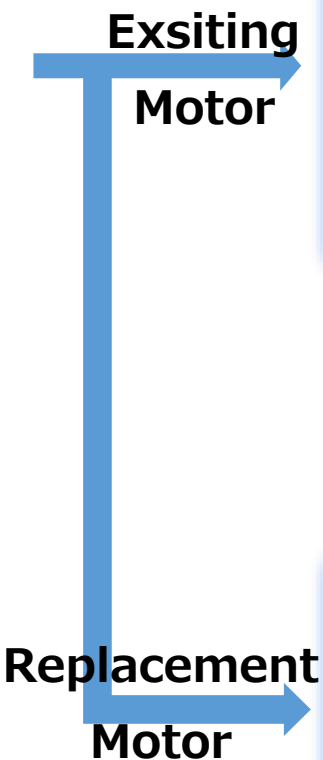
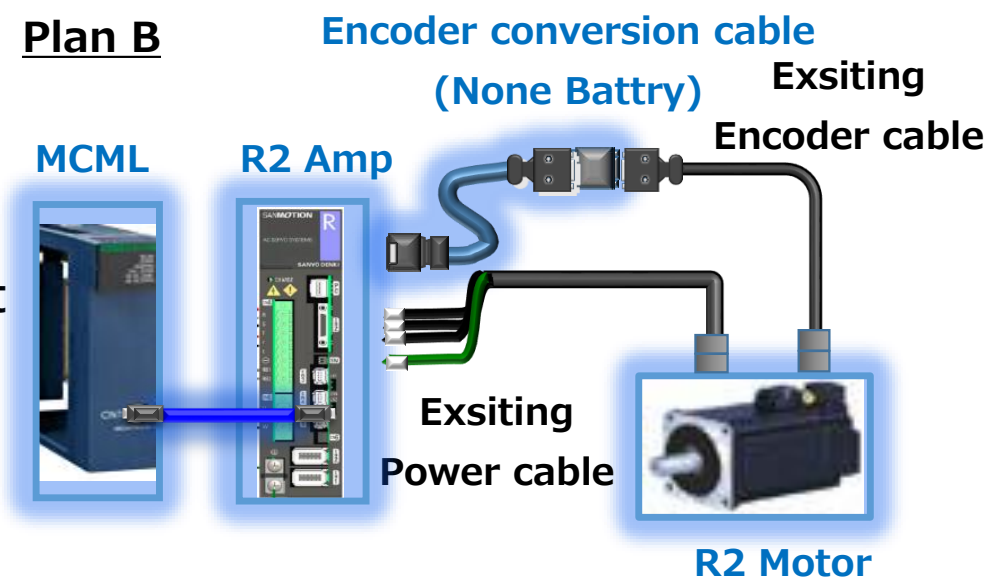


AFTER

Plan A

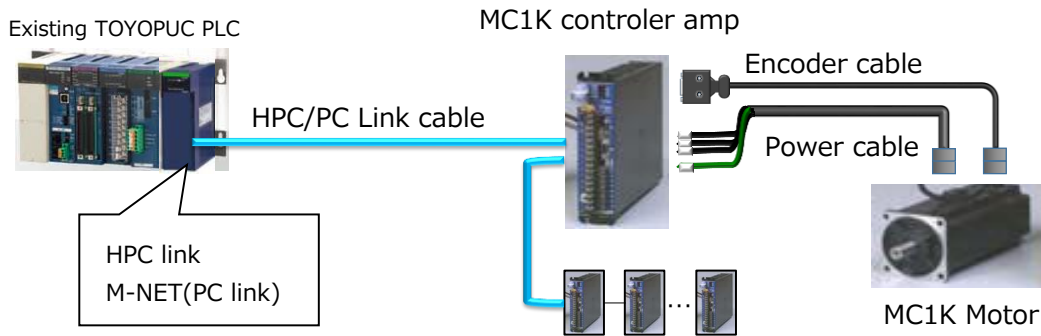


Plan B

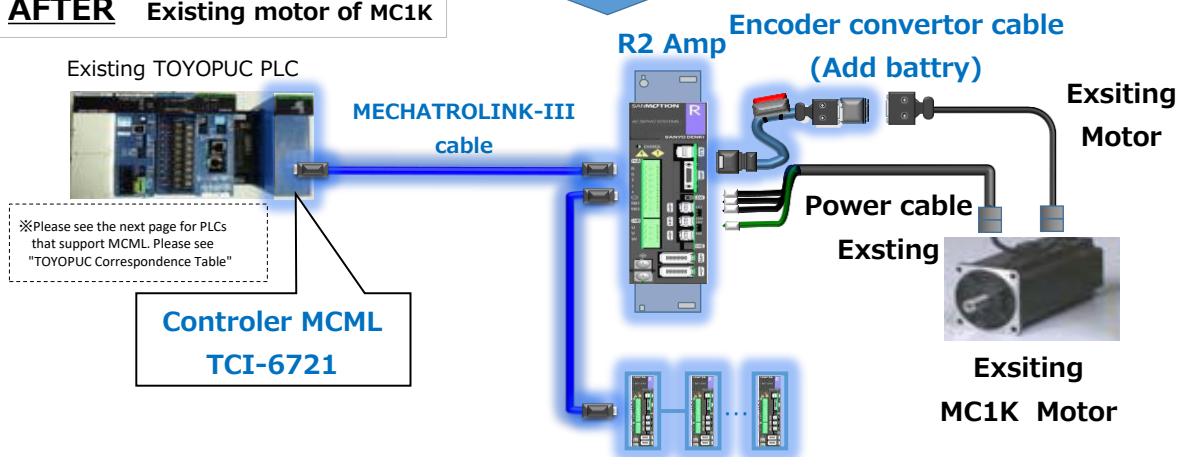


Recipe of Motion Replacement PlanA : Existing Morot of MC1K

BEFORE



AFTER Existing motor of MC1K

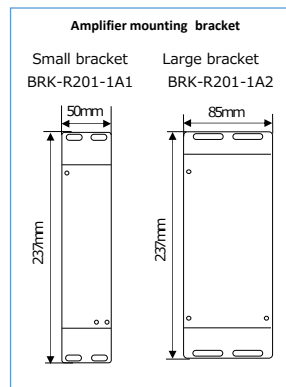


Replacement confirmation table

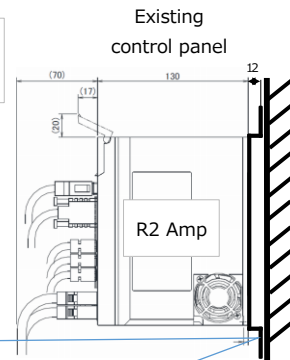
Existing Motor	Compatible amplifier	Amp-Mounting compatibility
AP-2M005****	RS2A01A3MA5J00	Small bracket
AP-2M010****		
AP-2M020****		
AP-2M030****	RS2A03A3MA5J00	Small bracket
AP-2M040****	RS2A05A3MA5J00	Large bracket
AP-2M050****		
AP-2M075****		
AP-2M100****		
AP-1M075****		
AP-1M100****	RS2A03A3MA5J00	Small bracket
AP-3M048****		
AP-3M066****		
AP-3M120****	RS2A05A3MA5J00	Large bracket
AP-3M160****		
AP-3M250****		
AP-3M360****	RS2A10A3MA5J00	○
AP-3M450****	RS2A15A3MA5J00	○
AP-5M150****	RS2A05A3MA5J00	Large bracket
AP-5M200****	RS2A10A3MA5J00	○
AP-5M350****	RS2A15A3MA5J00	○
AP-5M450****		
AP-5M550****		
AP-5M700****		
AP-5M750****	RS2A30A3MA5J00	○
AP-5M11K****		
AP-5M15K****		

For the **** at the end of the motor model,
Please see "MC1K Motor Specifications" on the nextpage.

※Use the mounting bracket to reuse
the old amplifier mounting screw hole.



※The amplifier mounting bracket is for rear mounting.
Please consult us if you are mounting front.



* Please refer to the TOYOPUC MCML Instruction Manual (T-768E,T-765E)
,R2 Series Servo System (T-780E) for final equipment selection.

* Please register your name, company name and e-mail address when using the instruction manual.

After that, we will send the password for downloading the instruction manual to the registered e-mail address.

T-768E <https://toyoda.jtekt.co.jp/e/authdata.php?path=Mc/Torisetu/t-768e.pdf>

T-765E <https://toyoda.jtekt.co.jp/e/authdata.php?path=Mc/Torisetu/t-765e.pdf>

T-780E <https://toyoda.jtekt.co.jp/e/authdata.php?path=Mc/Torisetu/t-780e.pdf>

TOYOPUC Correspondence table	Recommendation : PC3JX, PC3JX-D, PC10G Available : PC3J, PC3JL, PC3JD, PC3JG(-P)																																																																														
Replacement table for Motor	Uses existing MC1K motor																																																																														
Replacement table for Amplifier	<table><tr><th rowspan="2">Select Motor</th><th rowspan="2">Compatible amplifier</th><th colspan="3">Measurement</th><th rowspan="2">Mounting compatibility of amplifier</th></tr><tr><th>W</th><th>H</th><th>D</th></tr><tr><td>AP-2M005****</td><td rowspan="3">RS2A01A3MA5J00 (Capacity 15A)</td><td rowspan="3">40</td><td rowspan="3">160</td><td rowspan="3">130</td><td rowspan="3">△ *1</td></tr><tr><td>AP-2M010****</td></tr><tr><td>AP-2M020****</td></tr><tr><td>AP-2M030****</td><td rowspan="3">RS2A03A3MA5J00 (Capacity 30A)</td><td rowspan="3">50</td><td rowspan="3">160</td><td rowspan="3">130</td><td rowspan="3">△ *1</td></tr><tr><td>AP-3M048****</td></tr><tr><td>AP-2M040****</td></tr><tr><td>AP-2M050****</td><td rowspan="8">RS2A05A3MA5J00 (Capacity 50A)</td><td rowspan="8">85</td><td rowspan="8">160</td><td rowspan="8">130</td><td rowspan="8">△ *1, *2</td></tr><tr><td>AP-2M075****</td></tr><tr><td>AP-2M100****</td></tr><tr><td>AP-1M075****</td></tr><tr><td>AP-1M100****</td></tr><tr><td>AP-3M066****</td></tr><tr><td>AP-3M120****</td></tr><tr><td>AP-3M160****</td></tr><tr><td>AP-5M150****</td><td rowspan="3">RS2A10A3MA5J00 (Capacity 100A)</td><td rowspan="3">100</td><td rowspan="3">235</td><td rowspan="3">220</td><td rowspan="3">○</td></tr><tr><td>AP-3M250****</td></tr><tr><td>AP-3M360****</td></tr><tr><td>AP-5M200****</td><td rowspan="3">RS2A15A3MA5J00 (Capacity 150A)</td><td rowspan="3">120</td><td rowspan="3">235</td><td rowspan="3">220</td><td rowspan="3">○</td></tr><tr><td>AP-5M350****</td></tr><tr><td>AP-5M450****</td></tr><tr><td>AP-5M550****</td><td rowspan="3">RS2A30A3MA5J00 (Capacity 300A)</td><td rowspan="3">220</td><td rowspan="3">250</td><td rowspan="3">220</td><td rowspan="3">○</td></tr><tr><td>AP-5M700****</td></tr><tr><td>AP-5M750****</td></tr><tr><td>AP-5M11K****</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>AP-5M15K****</td><td></td><td></td><td></td><td></td><td></td></tr></table>					Select Motor	Compatible amplifier	Measurement			Mounting compatibility of amplifier	W	H	D	AP-2M005****	RS2A01A3MA5J00 (Capacity 15A)	40	160	130	△ *1	AP-2M010****	AP-2M020****	AP-2M030****	RS2A03A3MA5J00 (Capacity 30A)	50	160	130	△ *1	AP-3M048****	AP-2M040****	AP-2M050****	RS2A05A3MA5J00 (Capacity 50A)	85	160	130	△ *1, *2	AP-2M075****	AP-2M100****	AP-1M075****	AP-1M100****	AP-3M066****	AP-3M120****	AP-3M160****	AP-5M150****	RS2A10A3MA5J00 (Capacity 100A)	100	235	220	○	AP-3M250****	AP-3M360****	AP-5M200****	RS2A15A3MA5J00 (Capacity 150A)	120	235	220	○	AP-5M350****	AP-5M450****	AP-5M550****	RS2A30A3MA5J00 (Capacity 300A)	220	250	220	○	AP-5M700****	AP-5M750****	AP-5M11K****						AP-5M15K****					
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MC1K-U300V	None	RS2A30A3MA5J00	None	○	-																																																																										
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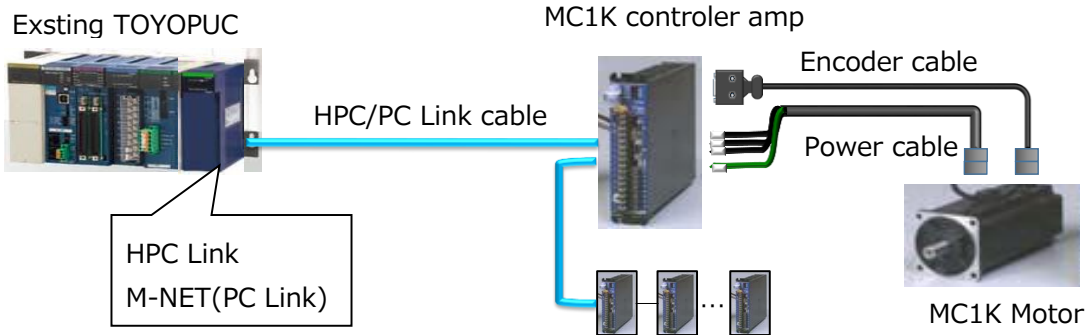
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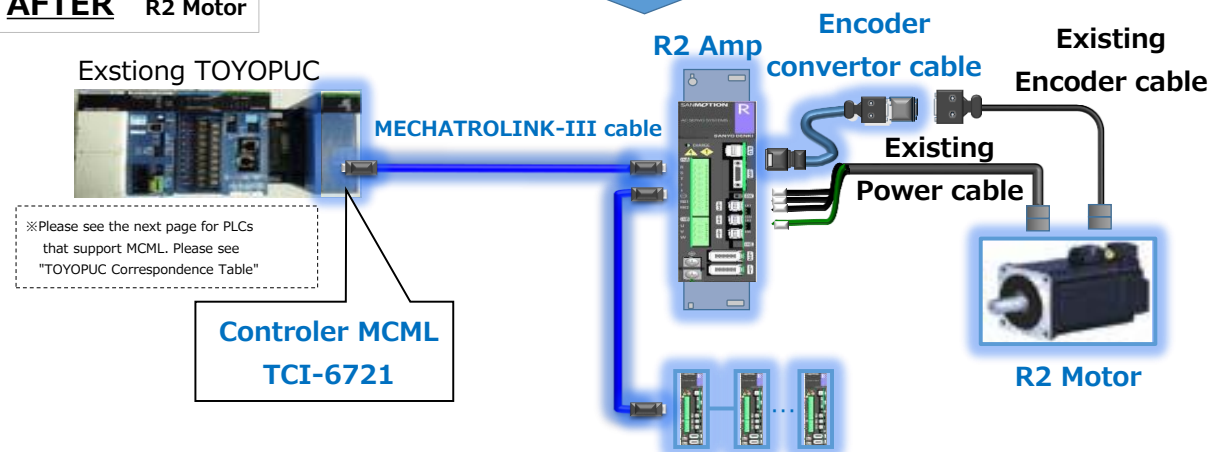
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Recipe of Motion Replacement PlanB : Replacement to R2 Motor

BEFORE



AFTER R2 Motor



Replacement confirmation table

BEFORE	AFTER		
Motor	R2 Motor	Amplifier	Amp Mounting compatibility
AP-2M005****	R2AA06010F□RM□	RS2A01A3MA5J00	Small bracket
AP-2M010****			
AP-2M020****			
AP-2M030****	R2AA06040F□RM□	RS2A03A3MA5J00	Small bracket
AP-2M040****	R2AAB8075F□RM□	RS2A05A3MA5J00	Large bracket
AP-2M050****			
AP-2M075****			
AP-2M100****	R2AAB8100F□RM□	RS2A03A3MA5J00	Small bracket
AP-1M075****	R2AAB8075F□RM□		
AP-1M100****	R2AAB8100F□RM□		
AP-3M048****	R2AA13050H□R94M	RS2A10A3MA5J00	○
AP-3M066****	R2AA13120L□R94M	RS2A05A3MA5J00	Large bracket
AP-3M120****	R2AA13180H□R94M	RS2A10A3MA5J00	○
AP-3M160****	R2AA18350L□R94M	RS2A10A3MA5J00	○
AP-3M250****	R2AA18350D□R94M	RS2A15A3MA5J00	○
AP-3M360****	R2AA18450H□R94M	RS2A05A3MA5J00	Large bracket
AP-5M150****	R2AA18550R□R94M	RS2A10A3MA5J00	○
AP-5M200****	R2AA18350D□R94M	RS2A15A3MA5J00	○
AP-5M350****	R2AA18450H□R94M	RS2A15A3MA5J00	○
AP-5M450****	R2AA18550R□R94M	RS2A15A3MA5J00	○
AP-5M550****	R2AA22700S□R94M	RS2A30A3MA5J00	○
AP-5M700****	R2AA18750H□R94M	RS2A30A3MA5J00	○
AP-5M750****	R2AA2211KB□R94M		
AP-5M11K****	R2AA2215KB□R94M		

For the **** at the end of the motor model,
Please see "MC1K Motor Specifications" on the page 3.

For the □ at the motor model,
Please see "R2 Motor Specifications" on the page 6.

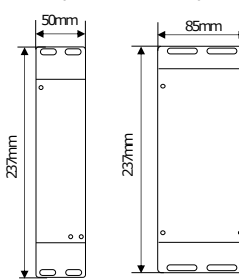
※Use the mounting bracket to reuse the old amplifier mounting screw

Existing control panel

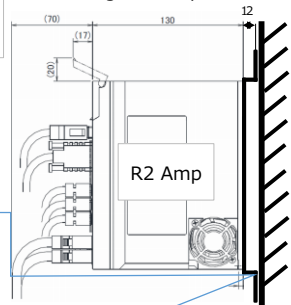
Amplifier mounting bracket

Small bracket BRK-R201-1A1

Large bracket BRK-R201-1A2



※The amplifier mounting bracket is for rear mounting.
Please consult us if you are mounting front.



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TOYOPUC Correspondence table		Recommendation : PC3JX, PC3JX-D, PC10G Available : PC3J, PC3JL, PC3JD, PC3JG(-P)						
Replacement table for Motor	M o t o r c a p a c i t y		Motor Type				Compatibility	Remarks column
		XXC1 (XXCDP)	B1C1 (B1CDP)	XXCT	BTCT			
		AP-2M005	R2AA06010FXRMW	R2AA06010FCRMW	R2AA06010FXRMVE	R2AA06010FBRMVE	×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-2M010					×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-2M020	R2AA06020FXRMW	R2AA06020FCRMW	R2AA06020FXRMVE	R2AA06020FBRMVE	×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-2M030	R2AA06040FXRMW	R2AA06040FCRMW	R2AA06040FXRMVE	R2AA06040FBRMVE	×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-2M040	R2AAB8075FXRMW	R2AAB8075FCRMW	R2AAB8075FXRMVE	R2AAB8075FBRMVE	○	
		AP-2M050					○	
		AP-2M075					○	
		AP-1M075					○	
		AP-2M100	R2AAB8100FXRMW	R2AAB8100FCRMW	R2AAB8100FXRMVE	R2AAB8100FBRMVE	○	
		AP-1M100					○	
		AP-3M048	R2AA13050HXR94M	R2AA13050HCR94M	R2AA13050HXR94M	R2AA13050HBR94M	×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-3M066	R2AA13120LXR94M	R2AA13120LCR94M	R2AA13120LXR94M	R2AA13120LBR94M	×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-3M120					×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-3M160	R2AA13180HXR94M	R2AA13180HCR94M	R2AA13180HXR94M	R2AA13180HBR94M	×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-5M150					○	
		AP-3M250	R2AA18350LXR94M	R2AA18350LCR94M	R2AA18350LXR94M	R2AA18350LBR94M	×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-3M360					×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-5M200					○	
		AP-5M350					R2AA18350DXR94M	R2AA18350DCR94M
		AP-3M450	R2AA18450HXR94M	R2AA18450HCR94M	R2AA18450HXR94M	R2AA18450HBR94M	×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-5M450					○	
		AP-5M550	R2AA18550R94M	R2AA18550RCR94M	R2AA18550R94M	R2AA18550RBR94M	×	The mounting is not compatible. Consider the coupling and mounting method.
		AP-5M700	R2AA22700SXR94M	R2AA22700SCR94M	R2AA22700SXR94M	R2AA22700SBR94M	○	
		AP-5M750	R2AA18750HXR94M	R2AA18750HCR94M	R2AA18750HXR94M	R2AA18750HBR94M	○	
		AP-5M11K	R2AA2211KBR94M	R2AA2211KBCR94M	R2AA2211KBR94M	R2AA2211KBBR94M	○	
AP-5M15K	R2AA2215KBR94M	R2AA2215KBCR94M	R2AA2215KBR94M	R2AA2215KBBR94M	○			
Replacement table for Amplifire		Select Motor	Compatible amplifier	Measurement			Mounting compatibility of amplifier	
		W	H	D				
		R2AA06010F□RM□	RS2A01A3MA5J00 (Capacity 15A)	40	160	130	△ *1	
		R2AA06020F□RM□						
		R2AA06040F□RM□	RS2A03A3MA5J00 (Capacity 30A)	50	160	130	△ *1	
		R2AA13050H□R94M						
		R2AA13120H□R94M	RS2A05A3MA5J00 (Capacity 50A)	85	160	130	△ *1、*2	
		R2AA13180H□R94M						
		R2AAB8075F□RM□						
		R2AAB8100F□RM□						
		R2AA18350L□R94M	RS2A10A3MA5J00 (Capacity 100A)	100	235	220	○	
		R2AA18350D□R94M	RS2A15A3MA5J00 (Capacity 150A)	120	235	220	○	
		R2AA18450H□R94M						
		R2AA18550R□R94M						
		R2AA22700S□R94M						
		R2AA18750H□R94M	RS2A30A3MA5J00 (Capacity 300A)	220	250	220	○	
R2AA2211KB□R94M								
R2AA2215KB□R94M								
For the □ at the motor model, Please see "MC1K Motor Specifications" on the next page.								
program Parameter Diverson		TOYOPUC	Program(Ladder)	Change required				
			Parameter	Change required				
		MCML	Setting data	Change required				
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Regenerative resistance Diversion	• When using only the built-in regenerative resistor <table><tr><th colspan="2">MC1K</th><th colspan="2">R2 Amplifier</th><th rowspan="2">built-in compatibility of amplifier</th><th rowspan="2">Remarks column</th></tr><tr><th>Type</th><th>Maximum acceptable power (W)</th><th>Type</th><th>Maximum acceptable power (W)</th></tr><tr><td>MC1K-U015V</td><td>5W</td><td>RS2A01A3MA5J00</td><td>5W</td><td>○</td><td></td></tr><tr><td>MC1K-U015V</td><td>5W</td><td>RS2A03A3MA5J00</td><td>5W</td><td>○</td><td></td></tr><tr><td>MC1K-U030V</td><td>5W</td><td>RS2A05A3MA5J00</td><td>20W</td><td>○</td><td></td></tr><tr><td>MC1K-U050V</td><td>30W</td><td>RS2A05A3MA5J00</td><td>20W</td><td>×</td><td>Connect one REGIST-220W20B</td></tr><tr><td>MC1K-U100V</td><td>60W</td><td>RS2A10A3MA5J00</td><td>90W</td><td>○</td><td></td></tr><tr><td>MC1K-U150V</td><td>90W</td><td>RS2A15A3MA5J00</td><td>120W</td><td>○</td><td></td></tr><tr><td>MC1K-U300V</td><td>—</td><td>RS2A30A3MA5J00</td><td>—</td><td>—</td><td></td></tr></table>	MC1K		R2 Amplifier		built-in compatibility of amplifier	Remarks column	Type	Maximum acceptable power (W)	Type	Maximum acceptable power (W)	MC1K-U015V	5W	RS2A01A3MA5J00	5W	○		MC1K-U015V	5W	RS2A03A3MA5J00	5W	○		MC1K-U030V	5W	RS2A05A3MA5J00	20W	○		MC1K-U050V	30W	RS2A05A3MA5J00	20W	×	Connect one REGIST-220W20B	MC1K-U100V	60W	RS2A10A3MA5J00	90W	○		MC1K-U150V	90W	RS2A15A3MA5J00	120W	○		MC1K-U300V	—	RS2A30A3MA5J00	—	—																						
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R2 Motor Specification	R2 Series Voltage AA...200V motor Flange dimensions 06.....60mm B8.....86mm 13.....130mm 18.....180mm 22.....220mm Maximum rotational velocity S...1,000min⁻¹ B...2,000min⁻¹ R...2,500min⁻¹ L...3,000 / 4,000min⁻¹ H...3,500min⁻¹ D...4,500 / 5,000min⁻¹ F...6,000min⁻¹ Holding Brake X...No brake B...With brake (90V) C...With brake (24V) Rated output 010...100W 100...1.0kW 550...5.5kW 020...200W 120...1.2kW 700...7.0kW 040...400W 180...1.8kW 750...7.5kW 050...500W 350...3.5kW 11K...11kW 075...750W 450...4.5kW 15K...15kW Additional specification identification M...CE mark + UL supported E...CE mark supported E8...CE mark supported (400W) Absent...No standard JTEKT Specification identification MW...Flange dimensions 86mm or less MV...Flange dimensions 86mm or less (CE application) 94...Flange dimensions 130mm or less Encoder type R...Battery-less absolute encoder (HA035) <table><tr><td>Resolution within 1 rotation</td><td>Resolution within multiple rotation</td></tr><tr><td>131012 (17bit)</td><td>65536 (16bit)</td></tr></table>	Resolution within 1 rotation	Resolution within multiple rotation	131012 (17bit)	65536 (16bit)
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Peripheral Equipment Tools		
PCwin (V17.8R01~)	TJA-2031	Software for PLC
Motion Tool (V2.30R01~)	TJA-6882	Software for MCML
MCML Data Converter	Free software	Convert MC1K parameter to MCML

* MOWin5 cannot be used.

* Motion Tool is connected via TOYOPUC, so a TOYOPUC connection cable is required.

* Motion Tool must be installed to use MCML

* Please refer to the TOYOPUC MCML Instruction Manual (T-768E,T-765E), R2 Series Servo System (T-780E) for final equipment selection.

* Please register your name, company name and e-mail address when using the instruction manual. After that, we will send the password for downloading the instruction manual to the registered e-mail address.

T-768E <https://toyoda.iitekt.co.jp/e/authdata.php?path=Mc/Torisetu/t-768e.pdf>

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