MELSEC-AnS/QnAS series → MELSEC iQ-R series

Model list

Conversion adapters

For the specifications of conversion adapters and modules before and after replacement, refer to user's manuals. (User's manuals can be downloaded from our website.)
Also, check that the modules satisfy the specifications of the devices currently connected.

For input/output modules

1-slot type

Input/ Output	MELSEC-AnS series module before replacement	MELSEC iQ-R series module after replacement	Note	Conversion adapter			
				Model	Shape		No. of input/ output points
					MELSEC-AnS series	MELSEC iQ-R series	
Input	A1SX10	RX10	*1	ERNT-ASQTXY10	Terminal block (20 points) ▶	Terminal block (18 points)	16
	A1SX10EU						
Output	A1SY10	RY10R2	*1, *2				
	A1SY10EU						
Input	A1SX30	RX40C7, RX70C4	*1, *3	ERNT-ASQTX40			
	A1SX40		*1				
	A1SX80						
	A1SI61		*1, *4				
	A1SX40-S1	RX40C7	*1				
	A1SX40-S2						
	A1SX80-S1						
	A1SX80-S2						
Output	A1SY22	RY20S6	*1, *2	ERNT-ASQTY22			
	A1SY40	RY40NT5P		ERNT-ASQTY40			
	A1SY40P						
	A1SY50	RY40NT5P		ERNT-ASQTY50			
	A1SY80	RY40PT5P		ERNT-ASQTY80			
Input	A1SX81	RX41C4, RX41C6HS, RX71C4	*5	ERNT-ASLCXY81	D-Sub connector (37P) ▶	Connector (40P)	32
	A1SX81-S2	RX41C4, RX41C6HS					
Output	A1SY81	RY41PT1P					
	A1SY81EP						

*1: A conversion adapter for replacing the MELSEC-AnS series with the MELSEC-Q series is used.
*2: Since the number of points per common changes, check the common terminal connection of the module before replacement.
*3: When a rated input voltage of 12 or 24VAC is used, the voltage needs to be changed to 5, 12, or 24VDC.
*4: Interrupt operation setting must be set in module parameters using GX Works3 (an engineering tool manufactured by Mitsubishi Electric).
*5: A conversion adapter for replacing the MELSEC-AnS series with the MELSEC-L series is used.

2-slot type (Not applicable to extended temperature range base units (R310B-HT, R610B-HT))

Input/ Output	MELSEC-AnS series module before replacement	MELSEC iQ-R series module after replacement	Note	Conversion adapter			
				Model	Shape		No. of input/ output points
					MELSEC-AnS series	MELSEC iQ-R series	
Input	A1SX20 A1SX20EU	RX28 × 2	-	ERNT-2AR20X	Terminal block (20 points) ▶	Terminal block (18 points) × 2	16

Modules that can use the existing wiring as it is even after replacement (Conversion adapter not required)

Input/ Output	MELSEC-AnS series			MELSEC iQ-R series			
	Model	Specifications	No. of points	Model	Specifications	No. of points	No. of required modules
Input	A1SX41	12/24VDC, sink type	32	RX41C4 (24VDC)	24VDC, positive/negative common shared type	32	1
				RX71C4 (12VDC)	5/12VDC, positive/negative common shared type	32	1
	A1SX41-S1	24VDC, sink type	32	RX41C4	24VDC, positive/negative common shared type	32	1
	A1SX41-S2	24VDC, sink type	32	RX41C4	24VDC, positive/negative common shared type	32	1
	A1SX71	5/12/24VDC, sink/source type	32	RX41C4	24VDC, positive/negative common shared type	32	1
				RX71C4	5/12VDC, positive/negative common shared type	32	1
	A1SX42	12/24VDC, sink type	64	RX42C4	24VDC, positive/negative common shared type	64	1
				RX72C4	5/12VDC, positive/negative common shared type	64	1
	A1SX42-S1	24VDC, sink type	64	RX42C4	24VDC, positive/negative common shared type	64	1
	A1SX42-S2	24VDC, sink type	64	RX42C4	24VDC, positive/negative common shared type	64	1
	A1SX82-S1	24VDC, sink/source type	64	RX42C4	24VDC, positive/negative common shared type	64	1
Output	A1SY41	12/24VDC, sink type	32	RY41NT2P	12/24VDC, sink type	32	1
	A1SY41P	12/24VDC, sink type	32	RY41NT2P	12/24VDC, sink type	32	1
	A1SY71	5/12VDC, sink type	32	RY41NT2P (12VDC)	12/24VDC, sink type (5VDC not supported)	32	1
	A1SY42	12/24VDC, sink type	64	RY42NT2P	12/24VDC, sink type	64	1
	A1SY42P	12/24VDC, sink type	64	RY42NT2P	12/24VDC, sink type	64	1
	A1SY82	12/24VDC, source type	64	RY42PT1P	12/24VDC, source type	64	1
I/O combined	A1SH42 A1SH42P	Input: 12/24VDC, sink type	Input: 32	RH42C4NT2P (when input is 24VDC)	Input: 24VDC, sink type (12VDC not supported)	Input: 32	1
		Output: 12/24VDC, sink type	Output: 32		Output: 12/24VDC, sink type	Output: 32	
	A1SH42-S1 A1SH42P-S1	Input: 24VDC, sink type	Input: 32	RH42C4NT2P	Input: 24VDC, sink type	Input: 32	1
		Output: 12/24VDC, sink type	Output: 32		Output: 12/24VDC, sink type	Output: 32	

Replacement using a universal conversion adapter ▶P.282

Input/output modules in the table below do not support the use of a conversion adapter. However, these modules can be replaced using a universal conversion adapter even though rewiring is required.

Input/ Output	MELSEC-AnS series before replacement			MELSEC iQ-R series after replacement				Note	Universal conversion adapter
	Model	Specifications	No. of points	Model	Specifications	No. of points	No. of required modules		
Output	A1SY14EU	240VAC/24VDC, 2A/point, contact	12	RY10R2	240VAC/24VDC, 2A/point, contact	16	1	-	Supported
	A1SY18A A1SY18AEU	240VAC/24VDC, 2A/point, independent contact	8	RY18R2A	240VAC/24VDC, 2A/point, independent contact	8	1		
	A1SY28EU	100 to 240VAC, triac	8	There is no applicable MELSEC iQ-R series module.					-
	A1SY60	24VDC, 2A/point, sink type	16	RY10R2	240VAC/24VDC, 2A/point, contact	16	1	*6	Supported
	A1SY60E	5/12/24VDC, 2A/point, source type	16	RY10R2	240VAC/24VDC, 2A/point, contact	16	1		
	A1SY68A	5/12/24/48VDC, 2A/point, sink/source type, all points independent	8	RY18R2A	240VAC/24VDC, 2A/point, independent contact	8	1		
	A1SY28A	100 to 240VAC, triac, all points independent	8	There is no applicable MELSEC iQ-R series module.				-	-
I/O combined	A1SX48Y18	Input: 24VDC, sink type	Input: 8	RX40C7	24VDC, positive/negative common shared type	16	1	-	Supported
		Output: 240VAC/24VDC, contact	Output: 8	RY10R2	240VAC/24VDC, 2A/point, contact	16	1		
	A1SX48Y58	Input: 24VDC, sink type	Input: 8	RX40C7	24VDC, positive/negative common shared type	16	1		
		Output: 12/24VDC, sink type	Output: 8	RY40NT5P	12/24VDC, sink type	16	1		
	A1SJ-56DT	Input: 24VDC, sink type	32	RX40C7	24VDC, positive/negative common shared type	16	2	-	-
		Output: 24VDC, sink type	24	RY40NT5P	12/24VDC, sink type	16	2		
	A1SJ-56DR	Input: 24VDC, sink type	32	RX40C7	24VDC, positive/negative common shared type	16	2		
		Output: 240VAC/24VDC, contact	24	RY10R2	240VAC/24VDC, contact	16	2		
Dynamic input	A1S42X	12/24VDC	16/32/ 48/64	There is no applicable MELSEC iQ-R series module.				-	-
Dynamic output	A1S42Y	12/24VDC	16/32/ 48/64						

*6: The output type changes from transistor output to contact output.

When there is no applicable module to be replaced Upgrading existing programmable controller systems using the time and wire saving devices ▶P.86

Refer to the later section. The section describes how to replace modules that have no applicable module in the programmable controller series after replacement or modules that do not support the use of a conversion adapter.

(Example) The existing module uses 200VAC. But, the model list for the programmable controller series after replacement does not have a module that uses 200VAC.
In such a case, the module can be replaced by using our digital signal converter (terminal module) (200VAC input type).

For analog modules

1-slot type

Input/ Output	MELSEC-AnS series module before replacement	MELSEC iQ-R series module after replacement	Note	Conversion adapter			
				Model	Shape		No. of channels
					MELSEC-AnS series	MELSEC iQ-R series	
Input	A1S64AD	R60AD4	*7	ERNT-ASQT64AD	Terminal block (20 points) ▶	Terminal block (18 points)	4
	A1S68AD (voltage input)	R60ADV8	*8, *10	ERNT-ASQT68AD			8
	A1S68AD (current input)	R60ADI8	*8, *9, *10				
	A1S68AD (voltage/current mixed input)	R60AD8-G	-	ERNT-2AR68AG		Connector (40P)	
Output	A1S62DA	R60DA4	*7, *10	ERNT-ASQT62DA		Terminal block (18 points)	2
	A1S68DAV	R60DAV8	*10	ERNT-ASQT68DA			8
	A1S68DAI	R60DAI8					

*7: CH3 and CH4 of the R60DA4 cannot be used. (They are not connected inside a conversion adapter.)
*8: For the R60ADV8 and the R60ADI8, voltage input and current input cannot be used together in a single module.
*9: A minus current cannot be input.
*10: A conversion adapter for replacing the MELSEC-AnS series with the MELSEC-Q series is used.

For high-speed counter modules

1-slot type

Input/ Output	MELSEC-AnS series module before replacement	MELSEC iQ-R series module after replacement	Note	Conversion adapter			
				Model	Shape		No. of channels
					MELSEC-AnS series	MELSEC iQ-R series	
Input	A1SD61	RD62P2	*11, *12	ERNT-ASLTD61	Terminal block (20 points) ▶	Connector (40P)	1
	A1SD62	RD62P2	*12	ERNT-ASLTD62			2
	A1SD62E	RD62P2E					
	A1SD62D	RD62D2	-	ERNT-2AR62DD			

*11: The RD62P2 does not have the limit switch output function of the A1SD61. Use the coincidence output function of the RD62P2 instead. Note that the specifications differ, such as having a fewer number of settings.
*12: A conversion adapter for replacing the MELSEC-AnS series with the MELSEC-L series is used.

For temperature input modules

1-slot type

Input/ Output	MELSEC-AnS series module before replacement	MELSEC iQ-R series module after replacement	Note	Conversion adapter			
				Model	Shape		No. of channels
					MELSEC-AnS series	MELSEC iQ-R series	
Input	A1S68TD	R60TD8-G	-	ERNT-2AR68TD	Terminal block (20 points) ▶	Connector (40P)	8
	A1S62RD3(N)	R60RD8-G	-	ERNT-2AR62RD			2

For temperature control modules

1-slot type

MELSEC-AnS series module before replacement	MELSEC iQ-R series module after replacement	Note	Conversion adapter			
			Model	Shape		No. of channels
				MELSEC-AnS series	MELSEC iQ-R series	
A1S64TCTT-S1	R60TCTRT2TT2	-	ERNT-2AR64TT	Terminal block (20 points) ▶	Terminal block (18 points)	4
A1S64TCTRT		*13				
A1S64TCRT-S1	R60TCRT4	-	ERNT-2AR64TR			4
A1S64TCTRT		*14				
A1S62TCTT-S2	R60TCTRT2TT2	-	ERNT-2AR62TT			2
A1S64TCTRT		*15				
A1S62TCRT-S2	R60TCRT4	-	ERNT-2AR62TR			2
A1S64TCTRT		*16				

*13: For thermocouple input under standard control
*14: For platinum resistance thermometer input under standard control
*15: For thermocouple input under heating-cooling control
*16: For platinum resistance thermometer input under heating-cooling control

For temperature control modules with disconnection detection function

1-slot type + Disconnection detection connector conversion cable (Not applicable to extended temperature range base units (R310B-HT, R610B-HT))

This is a set product of a conversion adapter for the temperature control module (1-slot type) and a disconnection detection connector conversion cable. Use the model for the set product to order.

MELSEC-AnS series module before replacement	MELSEC iQ-R series module after replacement	Note	Set model	Conversion adapter for temperature control modules				Disconnection detection connector conversion cable	
				Model	Shape		No. of channels	Shape	
					MELSEC-AnS series	MELSEC iQ-R series		MELSEC-AnS series	MELSEC iQ-R series
A1S64TCTTBW-S1	R60TCTRT2TT2BW	-	ERNT-2AR64TT1BW	ERNT-2AR64TT	Terminal block (20 points) ▶	Terminal block (18 points)	4	Connector (8P) ▶	Terminal block (18 points)
A1S64TCTRTBW		*17							
A1S64TCRTBW-S1	R60TCRT4BW	-	ERNT-2AR64TR1BW	ERNT-2AR64TR			4		
A1S64TCTRTBW		*18							
A1S62TCTTBW-S2	R60TCTRT2TT2BW	-	ERNT-2AR62TT1BW	ERNT-2AR62TT			2		
A1S64TCTRTBW		*19							
A1S62TCRTBW-S2	R60TCRT4BW	-	ERNT-2AR62TR1BW	ERNT-2AR62TR			2		
A1S64TCTRTBW		*20							

*17: For thermocouple input under standard control
*18: For platinum resistance thermometer input under standard control
*19: For thermocouple input under heating-cooling control
*20: For platinum resistance thermometer input under heating-cooling control

Note) Intelligent function modules other than the above (such as positioning modules, information system modules, and distribution modules) do not support the use of a conversion adapter. Therefore, rewiring is required.

Base adapters

Type	MELSEC-AnS series base unit before replacement	MELSEC iQ-R series base unit after replacement	Note	Base adapter model	Remarks
Main	A1S38B A1S38HB A1S38HBEU	R38B	*21	ERNT-ASQB38N	To use the Q7BAT-SET, install the base unit with the CPU module being mounted to the base adapter first. Then, attach the Q7BAT-SET to the CPU module.
		R310B-HT	*23	None	
	A1S35B	R35B	*21	ERNT-ASQB35N	
	A1S33B	R33B	*21	ERNT-ASQB33N	
	A1S32B	R33B	*21	ERNT-ASQB32N	
	A1SJCPU A1SJCPU-S3 A1SJHCPU	R35B	*21	ERNT-ASQB00JN	
Extension	A1S68B	R68B	*21	ERNT-ASQB68N	
		R610B-HT	*24	None	
	A1S65B	R65B	*21	ERNT-ASQB65N	
	A1S58B	R68B	*21, *22	ERNT-ASQB58N	
	A1S55B	R65B	-	None	
	A1S52B	R65B	-		

*21: A base adapter for replacing the MELSEC-AnS series with the MELSEC-Q series is used.
*22: There is no extension base unit (type requiring no power supply module) in the MELSEC iQ-R series. For this reason, only extension base units (type requiring a power supply module) are listed as replacement target modules.
*23: The width increases by 9mm (430mm → 439mm).
*24: The width increases by 19mm (420mm → 439mm).