MELSEC-AnS/QnAS series → MELSEC-Q 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

○: Applicable to MELSEC-Q series large type base units (MELSEC-AnS series size)

Input/ Output	MELSEC-AnS series module before replacement	MELSEC-Q series module after replacement	Q series large base unit applicability	Conversion adapter				
				Model	Shape			No. of input/ output points
					MELSEC-AnS series	MELSEC-Q series	Fixture	
Input	A1SX10	QX10	○	ERNT-ASQTXY10	Terminal block (20 points)	Terminal block (18 points)	Without	16
	A1SX10EU							
Output	A1SY10	QY10	○					
	A1SY10EU							
Input	A1SX40	QX40, QX70	○	ERNT-ASQTX40			Without	
	A1SX40-S2	QX40	○					
	A1SX40-S1	QX40-S1	○					
	A1SX80	QX80	○	ERNT-ASQTX80			Without	
	A1SX80-S1							
	A1SX80-S2							
Output	A1SY22	QY22	○	ERNT-ASQTY22			Without	
	A1SY40	QY40P	○	ERNT-ASQTY40			Without	
	A1SY40P							
	A1SY50	QY50	○	ERNT-ASQTY50			Without	
	A1SY80	QY80	○	ERNT-ASQTY80			Without	

2-slot type

×: Not applicable to MELSEC-Q series large type base units (MELSEC-AnS series size)

Input/ Output	MELSEC-AnS series module before replacement	MELSEC-Q series module after replacement	Q series large base unit applicability	Conversion adapter				
				Model	Shape			No. of input/ output points
					MELSEC-AnS series	MELSEC-Q series	Fixture	
Input	A1SX20	QX28 × 2	×	ERNT-ASQTX20	Terminal block (20 points)	Terminal block (18 points) × 2	Without	16
	A1SX20EU							
Output	A1SY60	QY68A × 2	×	ERNT-ASQTY60			Without	
	A1SY60E	QY68A × 2	×	ERNT-ASQTY60E			Without	

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

Input/Output	MELSEC-AnS series module before replacement			MELSEC-Q series module after replacement			
	Model	Specifications	No. of points	Model	Specifications	No. of points	No. of required modules
Input	A1SX41	12/24VDC, sink type	32	QX41	24VDC, positive common	32	1
				QX41-S2	24VDC, positive common	32	1
				QX71 (12VDC)	5/12VDC, positive/negative common shared type	32	1
	A1SX41-S1	24VDC, sink type	32	QX41-S1	24VDC, positive common	32	1
	A1SX41-S2	24VDC, sink type	32	QX41	24VDC, positive common	32	1
				QX41-S2	24VDC, positive common	32	1
	A1SX71	5/12/24VDC, sink type	32	QX71 (5VDC, 12VDC)	5/12VDC, positive/negative common shared type	32	1
				QX41-S1	24VDC, positive common	32	1
	A1SX81	12/24VDC, sink type	32	QX81	24VDC, negative common	32	1
				QX81-S2	24VDC, negative common	32	1
	A1SX81-S2	24VDC, sink type	32	QX81	24VDC, negative common	32	1
				QX81-S2	24VDC, negative common	32	1
	A1SX42	12/24VDC, sink type	64	QX42	24VDC, positive common	64	1
				QX41-S2	24VDC, positive common	32	2
				QX72 (12VDC)	5/12VDC, positive/negative common shared type	64	1
	A1SX42-S2	24VDC, sink type	64	QX42	24VDC, positive common	64	1
				QX41-S2	24VDC, positive common	32	2
	A1SX42-S1	24VDC, sink type	64	QX42-S1	24VDC, positive common	64	1
	A1SX82-S1	24VDC, sink type	64	QX82-S1	24VDC, negative common	64	1
Output	A1SY41	12/24VDC, sink type	32	QY41P	12/24VDC, sink type	32	1
	A1SY41P	12/24VDC, sink type	32				1
	A1SY81	12/24VDC, source type	32	QY81P	5/12/24VDC, source type	32	1
	A1SY81EP	12/24VDC, source type	32				1
	A1SY71	5/12VDC, sink type	32	QY71	5/12VDC, sink type	32	1
	A1SY42	12/24VDC, sink type	64	QY42P	12/24VDC, sink type	64	1
	A1SY42P						1
	A1SY82	12/24VDC, source type	64	QY82P	12/24VDC, source type	64	1
I/O combined	A1SH42	Input: 12/24VDC, sink type	32	QH42P	Input: 24VDC (12VDC not supported), positive common	32	1
		Output: 12/24VDC, sink type	32		Output: 12/24VDC, sink type	32	
	A1SH42P	Input: 12/24VDC, sink type	32	QH42P	Input: 24VDC (12VDC not supported), positive common	32	1
		Output: 12/24VDC, sink type	32		Output: 12/24VDC, sink type	32	
	A1SH42-S1	Input: 24VDC, sink type	32	QH42P	Input: 24VDC, positive common	32	1
		Output: 12/24VDC, sink type	32		Output: 12/24VDC, sink type	32	
	A1SH42P-S1	Input: 24VDC, sink type	32	QH42P	Input: 24VDC, positive common	32	1
		Output: 12/24VDC, sink type	32		Output: 12/24VDC, sink type	32	

Replacement using a universal conversion adapter ▶P.305

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

Input/Output	MELSEC-AnS series module before replacement		MELSEC-Q series module after replacement			Universal conversion adapter
	Model	No. of points	Model	No. of points	No. of required modules	
Output	A1SY14EU	12	QY10	16	1	Supported
	A1SY18A(EU)	8	QY18A	8	1	*1
	A1SY68A	8	QY68A	8	1	
I/O combined	A1SX48Y58	Input: 8, Output: 8	QX48Y57	Input: 8, Output: 7	1	
Input	A1SX30	16	QX40 (24VDC, positive common)	16	1	
I/O combined	A1SX48Y18	Input: 8, Output: 8	QX40 + QY10	16 + 16	1 + 1	
Output	A1SY28A	8	There is no applicable MELSEC-Q series module.			-
	A1SY28EU					
Dynamic input	A1S42X	16/32/48/64				
Dynamic output	A1S42Y	16/32/48/64				

*1: The existing terminal block can be mounted to the universal conversion adapter as it is.

When there is no applicable module to be replaced Upgrading existing programmable controller systems using the time and wire saving devices ▶P.92

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

○: Applicable to MELSEC-Q series large type base units (MELSEC-AnS series size)
×: Not applicable to MELSEC-Q series large type base units (MELSEC-AnS series size)

Input/ Output	MELSEC-AnS series module before replacement	MELSEC-Q series module after replacement	Q series large base unit applicability	Note	Conversion adapter				
					Model	Shape			No. of channels
						MELSEC-AnS series	MELSEC-Q series	Fixture	
Input	A1S64AD	Q64AD	○	-	ERNT-ASQT64AD	Terminal block (20 points)	Terminal block (18 points)	Without	4
	A1S68AD (voltage input)	Q68ADV	○		ERNT-ASQT68AD			Without	8
	A1S68AD (current input)	Q68ADI	○						
	A1S68AD (voltage/current mixed input)	Q68AD-G	×	*2	ERNT-ASQT68AD-G		Connector (40P)	With	
Output	A1S62DA	Q62DAN	○	-	ERNT-ASQT62DA		Terminal block (18 points)	Without	2
	A1S68DAV	Q68DAVN	○		ERNT-ASQT68DA			Without	8
	A1S68DAI	Q68DAIN	○						
I/O combined	A1S63ADA	Q64AD2DA	×	*2	ERNT-ASQT63ADA			Without	3

*2: Not applicable because the MELSEC-Q series large type blank cover (MELSEC-AnS series size), QG69LS, cannot be attached to the MELSEC-Q series module after replacement.

For high-speed counter modules

1-slot type

○: Applicable to MELSEC-Q series large type base units (MELSEC-AnS series size)

Input/ Output	MELSEC-AnS series module before replacement	MELSEC-Q series module after replacement	Q series large base unit applicability	Conversion adapter				
				Model	Shape			No. of channels
					MELSEC-AnS series	MELSEC-Q series	Fixture	
Input	A1SD61	QD62	○	ERNT-ASQTD61	Terminal block (20 points)	Connector (40P)	With	1
		QD62-H01	○					
		QD62-H02	○					
	A1SD62	QD62	○	ERNT-ASQTD62			With	2
	A1SD62E	QD62E	○					
	A1SD62D	QD62D	○	ERNT-ASQTD62D			With	

For temperature input modules

1-slot type

○: Applicable to MELSEC-Q series large type base units (MELSEC-AnS series size)
×: Not applicable to MELSEC-Q series large type base units (MELSEC-AnS series size)

Input/ Output	MELSEC-AnS series module before replacement	MELSEC-Q series module after replacement	Q series large base unit applicability	Note	Conversion adapter				
					Model	Shape			No. of channels
						MELSEC-AnS series	MELSEC-Q series	Fixture	
Input	A1S68TD	Q68TD-G-H01	○	-	ERNT-ASQT68TD-H01	Terminal block (20 points)	Connector (40P)	With	8
		Q68TD-G-H02	×	*3	ERNT-ASQT68TD-H02			With	
	A1S62RD3(N)	Q64RD	○	-	ERNT-ASQT62RD		Terminal block (18 points)	Without	2
	A1S62RD4(N)								

*3: Not applicable because the MELSEC-Q series large type blank cover (MELSEC-AnS series size), QG69LS, cannot be attached to the MELSEC-Q series module after replacement.

For temperature control modules

1-slot type

○: Applicable to MELSEC-Q series large type base units (MELSEC-AnS series size)

MELSEC-AnS series module before replacement	MELSEC-Q series module after replacement	Q series large base unit applicability	Note	Conversion adapter				
				Model	Shape			No. of channels
					MELSEC-AnS series	MELSEC-Q series	Fixture	
A1S64TCTT-S1	Q64TCTTN	○	-	ERNT-ASQT64TCTT	Terminal block (20 points)	Terminal block (18 points)	Without	4
A1S64TCTRT			*4					
A1S64TCRT-S1	Q64TCRTN	○	-	ERNT-ASQT64TCRT			Without	4
A1S64TCTRT			*5					
A1S62TCTT-S2	Q64TCTTN	○	-	ERNT-ASQT62TCTT			Without	2
A1S64TCTRT			*6					
A1S62TCRT-S2	Q64TCRTN	○	-	ERNT-ASQT62TCRT			Without	2
A1S64TCTRT			*7					

*4: For thermocouple input under standard control
*5: For platinum resistance thermometer input under standard control
*6: For thermocouple input under heating-cooling control
*7: 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

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.

×: Not applicable to MELSEC-Q series large type base units (MELSEC-AnS series size)

MELSEC-AnS series module before replacement	MELSEC-Q series module after replacement	Q series large base unit applicability	Note	Set model	Conversion adapter for temperature control modules					Disconnection detection connector conversion cable	
					Model	Shape		Fixture	No. of channels	Shape	
						MELSEC-AnS series	MELSEC-Q series			MELSEC-AnS series	MELSEC-Q series
A1S64TCTTBW-S1	Q64TCTTBWN	×	*8	ERNT-ASQT64TCTTBW	ERNT-ASQT64TCTT	Terminal block (20 points) ▶	Terminal block (18 points)	Without	4	Connector (8P) ▶	Terminal block (18 points)
A1S64TCTRTBW			*8, *9								
A1S64TCRTBW-S1	Q64TCRTBWN	×	*8	ERNT-ASQT64TCRTBW	ERNT-ASQT64TCRT			Without	4		
A1S64TCTRTBW			*8, *10								
A1S62TCTTBW-S2	Q64TCTTBWN	×	*8	ERNT-ASQT62TCTTBW	ERNT-ASQT62TCTT			Without	2		
A1S64TCTRTBW			*8, *11								
A1S62TCRTBW-S2	Q64TCRTBWN	×	*8	ERNT-ASQT62TCRTBW	ERNT-ASQT62TCRT			Without	2		
A1S64TCTRTBW			*8, *12								

*8: Not applicable because the MELSEC-Q series module after replacement is 2-slot type.
*9: For thermocouple input under standard control
*10: For platinum resistance thermometer input under standard control
*11: For thermocouple input under heating-cooling control
*12: 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-Q series base unit after replacement	Note	Base adapter model	Remarks
Main	A1S38B/A1S38HB/ A1S38HBEU	Q38B	-	ERNT-ASQB38N	To use the Q7BAT-SET, install the base unit with the CPU module being mounted to the base adapter first, and then attach the Q7BAT-SET to the CPU module.
	A1S35B	Q35B		ERNT-ASQB35N	
	A1S33B	Q33B		ERNT-ASQB33N	
	A1S32B	Q33B		ERNT-ASQB32N	
	A1SJCPU	Q00JCPU Q00UJCPU Q35B		ERNT-ASQB00JN	
	A1SJCPU-S3				
	A1SJHCPU				
Extension	A1S68B	Q68B	-	ERNT-ASQB68N	
	A1S65B	Q65B		ERNT-ASQB65N	
	A1S58B	Q68B	*13	ERNT-ASQB58N	
	A1S55B	Q55B	-	ERNT-ASQB55N	
	A1S52B	Q52B		ERNT-ASQB52N	

*13: The power supply module is required after replacement.

Both a main base unit and a QA extension base unit can be installed to the following base adapters.

MELSEC-AnS series base unit before replacement	MELSEC-Q series base unit after replacement		Base adapter model	Remarks
	Main	Extension		
A1S38B/A1S38HB/ A1S38HBEU	Q38B/Q35B/Q33B	QA1S51B	ERNT-ASQB38N-S1	To use the Q7BAT-SET, install the base unit with the CPU module being mounted to the base adapter first, and then attach the Q7BAT-SET to the CPU module.
A1S35B	Q35B/Q33B		ERNT-ASQB35N-S1	
A1S33B	Q33B		ERNT-ASQB33N-S1	

Conversion adapter DIN rail mounting brackets

This bracket is required when installing the MELSEC-Q series base unit onto a DIN rail using a conversion adapter with a fixture or a disconnection detection connector conversion cable for the temperature control module. When a conversion adapter with a fixture or a disconnection detection connector conversion cable for the temperature control module is not used, this bracket is not required.

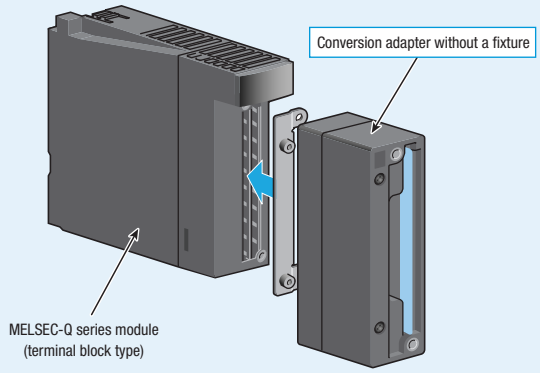
Type	MELSEC-AnS series base unit before replacement	MELSEC-Q series base unit after replacement	Conversion adapter DIN rail mounting bracket	Remarks
Main	A1S38B/A1S38HB/A1S38HBEU	Q38B	ERNT-ASQDIN3868	• A DIN rail adapter manufactured by Mitsubishi Electric (sold separately) is also required. • To use the Q7BAT-SET, mount the CPU module and attach the conversion adapter DIN rail mounting bracket to the base unit first. Then, attach the Q7BAT-SET to the CPU module.
Extension	A1S68B	Q68B		
	A1S58B			
Main	A1S35B	Q35B	ERNT-ASQDIN356500J	
Extension	A1S65B	Q65B		
Main	A1SJCPU	Q00JCPU Q00UJCPU Q35B		
	A1SJCPU-S3			
	A1SJHCPU			
Main	A1S33B	Q33B	ERNT-ASQDIN3355	
	A1S32B			
Extension	A1S55B	Q55B		
	A1S52B	Q52B	ERNT-ASQDIN52	

Types of conversion adaptors

There are two types of conversion adapters: a conversion adapter without a fixture (for terminal block type modules) and a conversion adapter with a fixture (for connector type modules).

When the MELSEC-Q series module after replacement is a terminal block type

Conversion adapter without a fixture

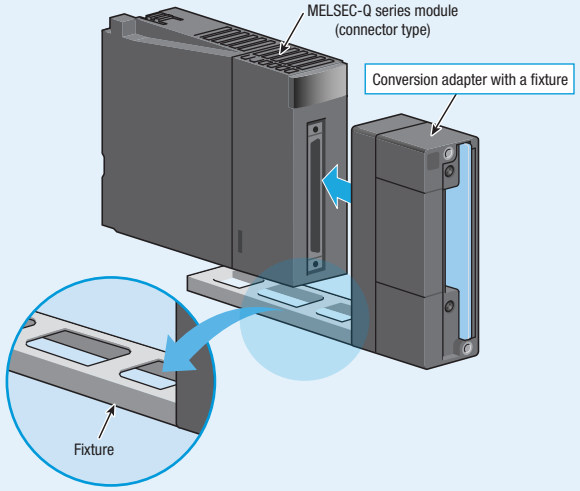


Base adapter ..... Used as necessary

Conversion adapter DIN rail mounting bracket ..... Not required

When the MELSEC-Q series module after replacement is a connector type

Conversion adapter with a fixture

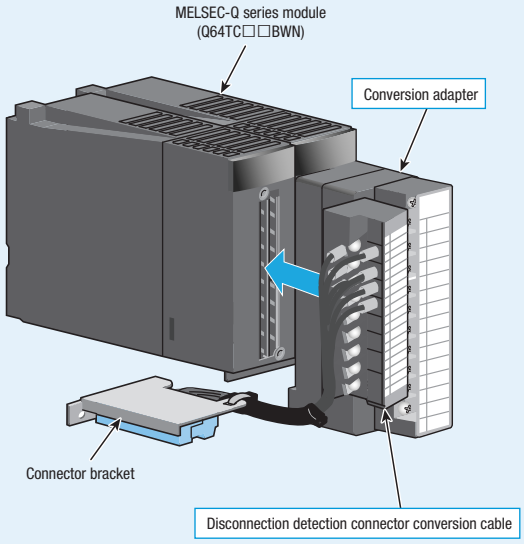


The fixture of a conversion adapter has to be secured to a base adapter (when installed to the panel surface) or a conversion adapter DIN rail mounting bracket (when installed onto a DIN rail).

For temperature control modules with disconnection detection function, the wiring on the left slot side of the MELSEC-Q series module (Q64TC□□BWN) is converted using a disconnection detection connector conversion cable.

Left slot side of the MELSEC-Q series module (Q64TC□□BWN)

Disconnection detection connector conversion cable

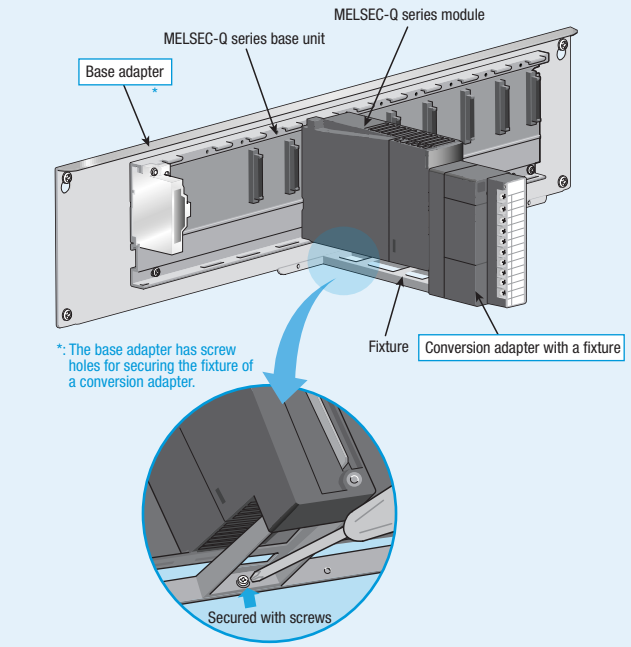


The connector bracket of a disconnection detection connector conversion cable has to be secured to a base adapter (when installed to the panel surface) or a conversion adapter DIN rail mounting bracket (when installed onto a DIN rail).

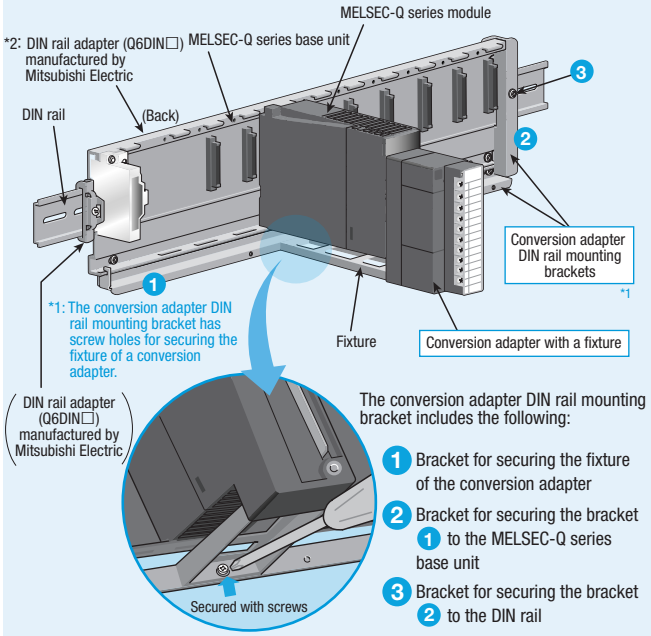
Mounting a conversion adapter with a fixture

To use a conversion adaptor with a fixture, the fixture has to be secured to a base adapter (when installed to the panel surface) or a conversion adapter DIN rail mounting bracket (when installed onto a DIN rail) with screws.

Panel surface installation



DIN rail installation



The conversion adapter DIN rail mounting bracket includes the following:

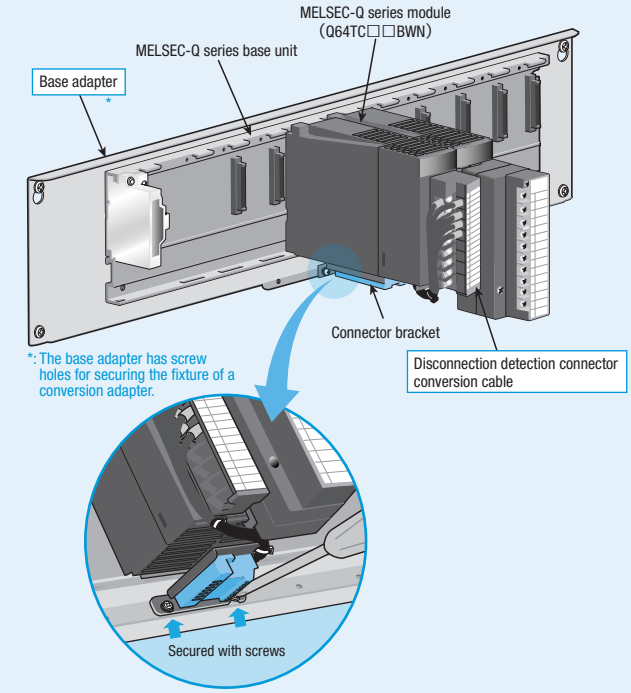
1. Bracket for securing the fixture of the conversion adapter
2. Bracket for securing the bracket 1 to the MELSEC-Q series base unit
3. Bracket for securing the bracket 2 to the DIN rail

*2: A DIN rail adapter (Q6DIN□) manufactured by Mitsubishi Electric (sold separately) is also required.

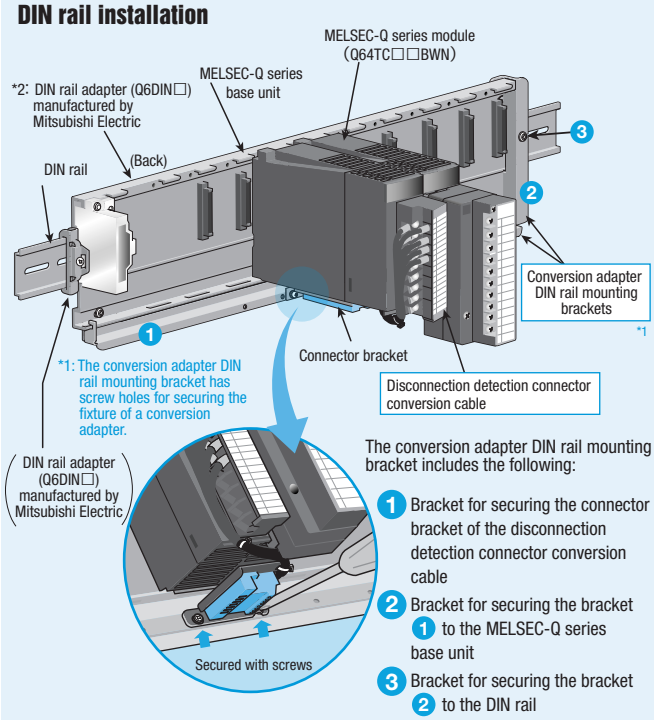
Installing a disconnection detection connector conversion cable

The connector bracket of a disconnection detection connector conversion cable has to be secured to a base adapter (when installed to the panel surface) or a conversion adapter DIN rail mounting bracket (when installed onto a DIN rail) with screws.

Panel surface installation



DIN rail installation



The conversion adapter DIN rail mounting bracket includes the following:

1. Bracket for securing the connector bracket of the disconnection detection connector conversion cable
2. Bracket for securing the bracket 1 to the MELSEC-Q series base unit
3. Bracket for securing the bracket 2 to the DIN rail

*2: A DIN rail adapter (Q6DIN□) manufactured by Mitsubishi Electric (sold separately) is also required.