Mitsubishi General-Purpose Programmable Controller

Renewal Tool

Conversion Adapter

Models:

JCI3.
RNT-ASQTXY10
RNT-ASQTX40
RNT-ASQTX80
RNT-ASQTY22
RNT-ASQTY40
RNT-ASQTY50
RNT-ASQTY80

User's Manual



50CM-D180020-E (1412)

● SAFETY INSTRUCTIONS ●

(Always read these precautions prior to use.)

Before attempting to use the Conversion Adapter (or the Products), read all instructions contained in this manual carefully to ensure safe and correct operation. manual carefully to ensure safe and correct operation. The safety instructions appearing in this manual are limited to those that apply to the Products. For safety instructions to be heeded in regard to your programmable controller system as a whole, refer to the user's manual supplied with the MELSEC-Q Series CPU module you use. In this manual, the safety precautions are ranked as "Warning" and "Caution."

Indicates an immediately hazardous situation which, if not properly dealt with, will result in death or serious injury.
Indicates a hazardous situation which, if not properly deal with, will result in moderate or mild injury, or property damage alone.

Even a safety instruction marked with "A Caution" could have serious consequences under certain conditions. All the safety instructions, regardless of their classification of criticality, carry important points to be noted. Observe them without fail.

Save this manual for reference when needed while at the same time ensuring that it is always passed on to

[Precautions:	Prior to use]	

•	When making a switch from the MELSEC-AnS Series to the MELSEC-Q Series, be sure to consult user's manual supplied with individual module under the MELSEC-Q Series to confirm differences in various aspects including performance and function between the two series.
[Ins	tallation Precautions

- Use the Conversion Adapter in the environmental conditions that are specified in the general specification. If the Products are used in any environment beyond the bounds of the general specification, electric shock, fire, malfunction, or damage to or degradation of the Products with the products with the products with the products with the product set of t result.
- Do not touch live uninsulated part directly. Contact will cause malfunction or failure in the system. Easten the Conversion Adapter and the Fittings securely with retaining a retained in the system. Fasten the Conversion Adapter and the Fittings securely with retaining screws, and tighten the screws by applying torque within specified limits. Loose screws can lead to the dropping of the converter adapter or fittings, possibly causing breakage thereof. Excessive tightness of the screws can lead to breakage of the screws, converter adapter, fittings, or MELSEC-Q Series Module, possibly causing the dropping, shorting, and malfunction thereof. Always check for correct match between MELSEC-Q Series and the Conversion Adapter. Incorrect match can equive domage to the MELSEC O Series medule.

Always click to context match between MELSEC-Q series and the Conversion Adapter. Incontext match can cause damage to the MELSEC-Q series module. When installing the converter adapter, take care not to get your hand snagged on the fittings or the like. Injury may result. When installing or removing the MELSEC-Q series Module complete with a converter adapter, be sure to hold it with both hands. Dropping may lead to breakage. [Wiring Precautions]

Before attempting to install the Unit or carry out the necessary wiring, make certain that the externa power supply, used in the system, is shut off on all three phases. Failure to do so may result in electric shock or damage to the product.

When energizing the Products or putting them into operation after the completion of installation or wiring work, always have a cover placed over the terminal block for the MELSEC-AnS Series components. Without the cover placed in position, electric shock can result. A-1

Carry out wiring for the Conversion Adapter correctly after checking the specification and termina arrangement for the module used. Connecting a power supply with a different voltage rating of the connecting a power supply with a different voltage rating of the connecting and the second secon

- anangement of the induce used. Connecting a power supply with a dimeterit voltage rating of incorrect winning may cause a fire or failure. Tighten the MELSEC-AnS Series terminal attaching screws and terminal screw secirely by applying torque within the specified limits. Loose screws will cause short circuit, fire or malfunction. Excessive tightening will damage the screws or the Conversion Adapter which in turn will cause Excessive tightening will damage the screws or the Conversion Adapter which in turn will cause dropping of parts, short circuit or malfunction.
- Use care to prevent foreign materials including cuttings and wiring debris from entering the Conversion Adapter or the MELSEC-Q Series module. These will be cause for fire, failure or

[Startup and Maintenance Precautions]

Do not touch live terminals. There is a danger of electric shock or malfunction. Shut off the external power supply for the system in all phases before cleaning or retightening the terminal screws. Failure to do so may result in electric shock or cause the MELSEC-Q Serier module to fail or malfunction. Loose screws can lead to dropping, shorting, and malfunction Excessive jughtness of the screws can lead to breakage of the screws, converter adapter, fittings Excessive tightness of the screws can lead to breakage of the screws, converter adapter, fittin or MELSEC-Q Series Module, possibly causing the dropping, shorting, and malfunction thereof

Do not modify the Conversion Adapter or take it apart. Doing so will cause failure, malfunction Do not moonly the conversion Adapter or take it apart, complete the adapter or give a strong impact to the Conversion Adapter comes in a resin case. Do not drop the Adapter or give a strong impact to it. This will cause damage to the Adapter.

[Disposal Precautions]

When you dispose of the Products, handle them as industrial waster

EMC AND LOW VOLTAGE DIRECTIVES

Compliance to the EMC Directive, which is one of the EU Directives, has been a legal obligation for the products sold in European countries since 1996 as well as the Low Voltage Directive since 1997. Manufacturers who recognize their products are compliant to the EMC and Low Voltage Directives are required to declare that print a "CE mark" on their products.

Authorized representative in Europe

Authorized representative in Europe is shown below. Name: Mitsubishi Electric Europe BV Address: Gothaer Strasse 8, 40880 Ratingen, Germany

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1. General Description

This manual provides information about the Conversion Adapter (ERNT-ASQTXY10/-ASQTX40/ -ASQTX80/-ASQTY22/-ASQTY40/-ASQTY50/-ASQTY80) available as Renewal Tools for the Mitsubishi

General-Purpose Programmable Controller. The Conversion Adapter is a product for effecting conversion to transcend difference in pin assignment between the MELSEC-AnS Series and the MELSEC-Q Series. Before attempting to make a switch from MELSEC-AnS Series to MELSEC-Q Series in your installation,

consult the user's manual supplied with individual module under the latter series to learn about how they differ in various aspects including performance and function

Upon unpacking your Adapters, check to see that the following items are included in their shipping carton.

Item name	Quantity
Adapter	1
Fittings	1
Fittings attaching screws (M3.5 x 6)	2
Terminal block cover	1

2. General Specifications

Item	Specifications					
Operating ambient temperature	0	0 to 55°C(Maximum surrounding air temperature 55°C)				
Storage ambient temperature			-25 to	75°C		
Operating ambient humidity Storage ambient	-	5 to 95%RH, non-condensing				
humidity						
			Frequency	Constant acceleration	Half amplitude	Sweep count
	Compliant with JIS B 3502 and IEC 61131-2	Under intermittent vibration	5 to 8.4Hz	-	3.5mm	10 times each in
Vibration resistance			8.4 to 150Hz	9.8m/s ²	-	X, Y, Z directions
		Under	5 to 8.4Hz	-	1.75mm	_
		vibration	8.4 to 150Hz	4.9m/s ²	-	
Shock resistance	Compliant with JIS B 3502 and IEC 61131-2 (147 m/s ² , 3 times each in 3 directions X, Y, Z)					
Operating atmosphere	No corrosive gases					
Operating altitude *1	0 to 2000m					
Installation location	Inside a control panel					
Overvoltage category *2	II or less					
Pollution degree *3	2					

- This indicates the section of the power supply to which the equipment is assumed the public electrical power distribution network and the machinery within premises Category II applies to equipment for which electrical power is supplied from fixed facilities. *3 : This index indicates the degree to which conductive material is generated in terms of the environment in
- which the equipment is used. Pollution level 2 is when only non-conductive pollution occurs. A temporary conductivity caused by condensing must be expected occasionally.
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3. Product Specifications

For detail specifications which do not appear in the specification comparison charts contained herein, see the user's manual supplied with the MELSEC-Q Series module you use. Those parts of the specification that differ between the MELSEC-AnS Series and the MELSEC-Q Series are where a switch from the first series to the second is subjected to specification-related restrictions. Check the specification of the devices to be connected for more details.

Conversion Adapter model name	MELSEC-AnS Series	Number of points	MELSEC-Q Series	Mass of Conversion Adapter (g)	
	A1SX10	16	0710		
	A1SX10EU	16	QX10	75	
ERNI-ASQ1X110	A1SY10	40	10	01/10	75
	A1SY10EU	01	QYIU		

(a) In the case of ~~ A1SX10/A1SX10EU \rightarrow QX10 ~



Model MOX40 A40X40EU		
Spedification	QK10	
Number of input points 16 16	16	
Insulation method Photocoupler insulation Photocoupler insulation	Photocoupler insulation	
Rated input current 100 - 120VAC 50/60Hz 100 - 120VAC 50/60Hz	100 - 120VAC (+10/-15%) 50/60Hz (±3Hz)	
Rated input voltage About 6mA (100VAC, 60Hz) About 7mA (120VAC, 60Hz)	About 8mA (100VAC, 60Hz) About 7mA (100VAC, 50Hz)	
In-rush current 200mA maximum, within 1ms (132VAC) 200mA maximum, within 1ms (132VAC) 200mA	A maximum, within 1ms (132VAC)	
ON voltage/ON current More than 80VAC/more than 5mA More than 80VAC/more than 5mA More	re than 80VAC/more than 5mA	
OFF voltage/OFF current Less than 30VAC/less than 1.4mA Less than 30VAC/less than 1.4mA Les	is than 30VAC/less than 1.7mA	
Input impedance About 18kΩ (60Hz) About 18kΩ (60Hz) About 21kΩ (50Hz) About 21kΩ (50Hz)	About 12kΩ (60Hz) About 15kΩ (50Hz)	
Response OFF→ON Less than 20ms Less than 20ms	Less than 15ms	
time ON→OFF Less than 35ms Less than 35ms	Less than 20ms	
Internal power consumption 50mA (TYP, ON at all points) 50mA (TYP, ON at all points) 5	50mA (TYP, ON at all points)	
"Common" method 16 points/common 16 points/common	16 points/common	
External connection method 20-point terminal block 20-point terminal block	18-point terminal block	

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(b) In the case of ~~ A1SY10/A1SY10EU \rightarrow QY10 ~



POINT

Because the switch concerned causes the number of points per common to change from 8 (two circuits) to 16, an alteration to the wiring is required if the terminal numbers TB9 and TB18 on the MELSEC-AnS-side terminal block have been used in separation from each other.

22 External power supply connected to the terminal numbers TB19 and TB20 on the MELSEC-AnS-sid minal block becomes unnecessary

<Specification Comparison Chart>

Model		110/10	1400/40511	QY10	
Specification		AISTIU	AISTIDED		
Number of output	points	16	16	16	
Insulation method		Photocoupler insulation	Photocoupler insulation	Relay insulation	
Dated areas daga		240VAC/2A (COSΦ=1)	240VAC/2A (COSΦ=1)	240VAC/2A (COSΦ=1)	
Rateu open-dose		24VDC/2A (resistive load)	24 VDC/2A (resistive load)	24VDC/2A (resistive load)	
volage/current		(8A/common)	(8A/common)	(8A/common)	
Minimum open-close load		5VDC 1mA	5VDC 1mA	5VDC 1mA	
Maximum open-close voltage		264VAC 125VDC	132VAC 125VDC	264VAC 125VDC	
Deenenee time	DFF→ON	Less than 10ms	Less than 10ms	Less than 10ms	
Response unie	ON→OFF	Less than 12ms	Less than 12ms	Less than 12ms	
Surge killer		Not provided	Not provided	Not provided	
Fuse		Not provided	Not provided	Not provided	
Internal power consumption		120mA (TYP, ON at all points)	120mA (TYP, ON at all points)	430mA (TYP, ON at all points)	
"Common" method		8 points/common	8 points/common	16 points/common	
External connection	on method	20-point terminal block	20-point terminal block	18-point terminal block	

Conversion Adapter model name	MELSEC-AnS Series	Number of points	MELSEC-Q Series	Mass of 0 Adap	Conversion oter (g)
ERNT-ASQTX40	A1SX40 A1SX40-S2 A1SX40-S1	16	QX40, QX70 QX40 QX40-S1	-	75
A1SX40 A1SX40-SI A1SX40-SI terminal block terminal	Terminal Significant 0 TB12 XXX 0 TB23 XXX 0 TB33 XXX 0 TB34 XXX 0 TB35 XXX 0 TB35 XXX 0 TB36 XXX 0 TB37 XXX 0 TB310 XXX 0 TB312 XXX 0 TB312 XXX 0 TB312 XXX 0 TB312 XXX 0 TB314 XXX 0 TB315 XXX 0 TB315 XXX 0 TB317 XXX 0 TB315 XXX 0 TB319 Opp 1839 Opp TB319 0 TB319 Opp	Internal circu a 0 1 1 2 2 2 3 3 4 4 5 5 6 6 7 4 4 5 5 6 6 7 8 8 8 8 8 9 4 4 5 5 6 7 7 8 8 8 8 8 8 8 9 9 4 4 9 9 7 8 8 9 9 8 8 9 9 8 8 9 9 8 8 9 9 9 8 9		inal Signal bar name 1 X00 2 X01 3 X02 4 X03 5 X04 6 X05 7 X06 8 X07 9 X08 10 X09 11 X0A 12 X0B 13 X0C 14 X0D 15 X0E 16 X0F 17 COM 18 Open	QX40 QX70 DX40-S1 terminal block TB TB TB TB TB TB TB TB TB TB TB TB TB
POINT					

If your system is set to run on a rated input voltage of 12VDC when you make a switch from A1SX40 to QX40, it must be reset to run on 24VDC. If your system is set to run on a rated input voltage of 24VDC when you make a switch from A1SX40 to QX70, it must be reset to run on a r2VDC.

<module specificat<="" th=""><th>ion Comparison Cha</th><th>art></th><th></th><th></th><th></th></module>	ion Comparison Cha	art>			
Model	A1SX40	A1SX40-S2	QX40	QX70 (Posi	tive/Negative
Specification	(Sink type)	(Sink type)	(Positive common type)	common shared type)	
Number of input points	16	16	16		16
Insulation method	Photocoupler insulation	Photocoupler insulation	Photocoupler insulation	Photocoup	ler insulation
Rated input voltage	12VDC/24VDC	24VDC	24VDC(+20/-15%,ripple rate within 5%)	5VDC	12VDC
Rated input current	About 3mA/about 7mA	about 7mA	about 4mA	about 1.2mA	about 3.3mA
	More than 8VDC	More than 14VDC	More than 19VDC	More that	in 3.5VDC
ON voltage/ON current	/more than 2mA	/more than 3.5mA	/more than 3mA	/more t	han 1mA
	Less than 4VDC	Less than 6.5VDC	Less than 11VDC	Less th	an 1VDC
OFF voltage/OFF current	/less than 1mA	/less than 1.7mA	/less than 1.7mA	/less that	an 0.1mA
Input resistance	About 3.3kΩ	About 3.3kΩ	About 5.6kΩ	Abou	t 3.3kΩ
OFF→ON	Less than 10ms	Less than 10ms	Less than 1/5/10/20/70ms	Less than 1/	5/10/20/70ms
Response time ON→OFF	Less than 10ms	Less than 10ms	Less than 1/5/10/20/70ms	Less than 1/	5/10/20/70ms
Internal power consumption	50mA (TYP, ON at all points)	50mA (TYP, ON at all points)	50mA (TYP, ON at all points)	55mA (TYP, 0	ON at all points)
"Common" method	16 points/common	16 points/common	16 points/common	16 points/common	
External connection method	20-point terminal block	20-point terminal block	18-point terminal block	18-point te	rminal block
Madal	A1SX40-S2	QX40-S1			
Cassification	(Sink type)	(Positive common type)			
Number of input points	16	16			
Insulation method	Photocoupler insulation	Photocoupler insulation			
Rated input voltage	24VDC	(+20/-15%, ripple rate within			
Rated input current	About 7mA	about 6mA			
	More than 14VDC	More than 19VDC			
ON voltage/ON current	/more than 4mA	/more than 4mA			
	Less than 6.5VDC	Less than 11VDC			
OFF voltage/OFF current	/less than 1.7mA	/less than 1.7mA			
Input resistance	About 3.3kΩ	About 3.9kΩ			
Perponentime OFF→ON	Less than 0.1ms	Less than 0.1/0.2/0.4/0.6/1ms	-		
ON→OFF	Less than 0.2ms	Less than 0.1/0.2/0.4/0.6/1ms			
Internal power consumption	50mA (TYP, ON at all points)	60mA (TYP, ON at all points)]		
"Common" method	16 points/common	16 points/common	1		

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Conversion Adapter	MELSEC-AnS	Number of	MELSEC-Q	Mass of Conversion
model name	Series	points	Series	Adapter (g)
	A1SX80			
ERNT-ASQTX80	A1SX80-S1	16	QX80	75
	A1SX80-S2			



POINT

Use the Adapter to run on the source input. (The Adapter cannot be used to run on a sink input.)

If your system is set to run on a rated input voltage of 12VDC when you make a switch from A1SX80 to QX80, it must be reset to run on 24VDC.

<Module Specification Comparison Chart>

Model		A1SX80 (Sink/Source type)	A1SX80-S1 (Sink/Source type)	A1SX80-S2 (Sink/Source type)	QX80 (Negative Common type)
Number of input points		16	16	16	16
Insulation method		Photocoupler insulation	Photocoupler insulation	Photocoupler insulation	Photocoupler insulation
Rated input voltage		12VDC/24VDC	24VDC	24VDC	24VDC (+20/-15%, ripple rate within 5%)
Rated input current		About 3mA/about 7mA	about 7mA	about 7mA	about 4mA
ON voltage/ON current		More than 8VDC	More than 17VDC	More than 13VDC	More than 19VDC
		/more than 2mA	/more than 5mA	/more than 3.5mA	/more than 3mA
055 H 1055 I		Less than 4VDC	Less than 5VDC	Less than 6VDC	Less than 11VDC
OFF voltage/OFF current	nt	/less than 1mA	/less than 1.7mA	/less than 1.7mA	/less than 1.7mA
Input resistance		About 3.3kΩ	About 3.3kΩ	About 3.3kΩ	About 5.6kΩ
Response OFF→C	DN	Less than 10ms	Less than 0.4ms	Less than 10ms	Less than 1/5/10/20/70ms
time ON→OI	FF	Less than 10ms	Less than 0.5ms	Less than 10ms	Less than 1/5/10/20/70ms
Internal power consumption		50mA	50mA	50mA	50mA
		(TYP, ON at all points)	(TYP, ON at all points)	(TYP, ON at all points)	(TYP, ON at all points)
"Common" method		16 points/common	16 points/common	16 points/common	16 points/common
External connection me	thod	20-point terminal block	20-point terminal block	20-point terminal block	18-point terminal block





POINT

Because the switch concerned causes the number of points per common to change from 8 (two circuits) to 16, an alteration to the wiring is required if the terminal numbers TB9 and TB19 on the MELSEC-AnS-side terminal block have been used in separation from each other.

External power supply connected to the terminal numbers TB10 and TB20 on the MELSEC-AnS-side terminal block becomes unnecessary.

<Module Specification Comparison Chart>

Model	1101/00	0,000		
Specification	A1SY22	QY22		
Number of output points	16	16		
Insulation method	Photocoupler insulation	Photocoupler insulation		
Rated load voltage	100/240VAC	100-240VAC (+10-15%)		
Maximum load current	0.6A/point	0.6A/point		
Waximum load current	2.4A/common	4.8A/common		
	24VAC 100mA	24VAC 100mA		
Minimum load voltage/current	100VAC 10mA	100VAC 25mA		
-	240VAC 20mA	240VAC 25mA		
Manianum in such successf	Less than 20A - 10ms,	Lass #bas 00.0 and such		
Maximum In-rush current	less than 8A - 100ms	Less than 20A - one cycle		
eak current at power off	1.5mA (at 120V/60Hz)	1.5mA (at 120V/60Hz)		
Leak current at power-on	3mA (at 240V/60Hz)	Less than 3mA (at 240V/60Hz)		
Maximum valtage drep	Less than 1.5VAC (0.1-0.6A)			
waximum voltage urop	Less than 1.8VAC (50-100mA)	Less than 1.5VAC		
at power-on	Less than 2VAC (10-50mA)			
OFF→ON	Less than 1ms	Less than 1ms		
Response time ON→OFF	Less than 0.5Hz+1ms	Less than 1ms+0.5 cycles		
Surge killer	CR absorber	CR absorber		
		Not provided		
Fuse	5A (one/common), non-replaceable	(It is recommended that a fuse be installed		
		on the external wiring.)		
Internal power consumption	270mA (TYP, ON at all points)	250mA (TYP, ON at all points)		
"Common" method	8 points/common	16 points/common		
External connection method	20 point terminal block	18-point terminal block		

Conversion Adapter model name	MELSEC-AnS Series	Number of points	MELSEC-Q Series	Mass of Conversion Adapter (g)	
	A1SY40	10	01//05		
ERNI-ASQ1Y40	A1SY40P	16	QY40P	/5	

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POINT

Because the switch concerned causes the number of points per common to change from 8 (two circuits) to 16, an alteration to the wiring is required if the terminal numbers TB9 and TB19, and TB10 and TB20, on the MELSEC-AnS-side terminal block have been used in separation from each other.

<Module Specification Comparison Chart>

Model A1SY40		A1SY40P	QY40P	
Specification		(Sink type)	(Sink type)	(Sink type)
Number of output	ut points	16	16	16
Insulation metho	d	Photocoupler insulation	Photocoupler insulation	Photocoupler insulation
Rated load volta	ge	12/24VDC	12/24VDC	12-24VDC
Maximum load c	urrent	0.1A/point	0.1A/point	0.1A/point
Maximum load c	anen	0.8A/common	0.8A/common	1.6A/common
Maximum in-rus	h current	Less than 0.4A - 10ms	Less than 0.7A - 10ms	Less than 0.7A - 10ms
Leak current at p	oower-off	Less than 0.1A	Less than 0.1A	Less than 0.1A
Maximum voltage drop		1.0VDC(TYP) 0.1A	0.1VDC(TYP) 0.1A	0.1VDC(TYP) 0.1A
at power-on		2.5VDC(MAX) 0.1A	0.2VDC(MAX) 0.1A	0.2VDC(MAX) 0.1A
	OFF→ON	Less than 2ms	Less than 1ms	Less than 1ms
Response time		Less than 2ms (resistive load)	Less than 1ms	Less than 1ms
			(rated load and resistive load)	(rated load and resistive load)
Surge killer		Zener diode	Zener diode	Zener diode
Fuse		1.6A (one/common), non-replaceable	Not provided	Not provided
Internal power co	onsumption	270mA (TYP, ON at all points)	79mA (TYP, ON at all points)	65mA (TYP, ON at all points)
Protective function		Not provided	Provided (overheat protection	Provided (overload protection
		Not provided	and short-circuit protection)	and overheat protection)
"Common" meth	lod	8 points/common	8 points/common	16 points/common
External connec	tion method	20-point terminal block	20-point terminal block	18-point terminal block

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Conversion Adapter	MELSEC-AnS	Number of	MELSEC-Q	Mass of Conversion
model name	Series	points	Series	Adapter (g)
ERNT-ASQTY50	A1SY50	16	QY50	



POINT

Because the switch concerned causes the number of points per common to change from 8 (two circuits) to 16, an alteration to the wiring is required if the terminal numbers TB9 and TB19, and TB10 and TB20, on the MELSEC-AnS-side terminal block have been used in separation from each other.

<Module Specification Comparison Chart>

	Model	A1SY50	QY50		
Specification		(Sink type)	(Sink type)		
Number of outpu	t points	16	16		
Insulation metho	d	Photocoupler insulation	Photocoupler insulation		
Rated load voltage	ge	12/24VDC	12-24VDC		
Maximum load current		0.5A/point 2A/common	0.5A/point 4A/common		
Maximum in-rush current		Less than 4A - 10ms	Less than 4A - 10ms		
Leak current at power-off		Less than 0.1A	Less than 0.1A		
Maximum voltage drop		0.9VDC(TYP) 0.5A	0.2VDC(TYP) 0.5A		
at power-on		1.5VDC(MAX) 0.5A	0.3VDC(MAX) 0.5A		
	OFF→ON	Less than 2ms	Less than 1ms		
Response time ON→OFF		Less than 2ms (resistive load)	Less than 1ms (rated load and resistive load)		
Surge killer		Zener diode	Zener diode		
Fuse		Provided	6.7A (non-replaceable)		
Internal power co	onsumption	120mA (TYP, ON at all points)	80mA (TYP, ON at all points)		
"Common" metho	bd	8 points/common	16 points/common		
E ())					

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Conversion Adapter	MELSEC-AnS	Number of	MELSEC-Q		Mass c	of Conversion
model name	Series	points	Series		Adapter (g)	
ERNT-ASQTY80	A1SY80	16	QY80			75
A1SY80 terminal block [11] 118 T83 118 T83 118 T85 118	Terminal number Sig number L TB1 YO L TB2 YO L TB3 YO L TB5 YO L TB5 YO L TB6 YO L TB6 YO L TB7 YO L TB10 YB1 L TB13 YO L TB14 YO L TB13 YO L TB14 YO L TB18 YO L TB18 YO L TB12 YO		it dagram of ERNT-AS	aTY80 immer TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB11 TB13 TB14 TB15 TB14 TB15 TB16 TB17 TB18	Signal name Y00 Y01 Y02 Y04 Y05 Y06 Y07 Y07 Y08 Y07 Y08 Y07 Y08 Y09 Y00 Y00 Y00 Y00 Y00 Y00 Y00 Y00 Y00	QY80 terminal block TB2 F53 TB5 F55 TB5 F55 TB5 F55 TB5 F55 TB5 F55 TB57 F55 F55 F55 F55 F55 F55 F55 F57 F57 F

POINT

Because the switch concerned causes the number of points per common to change from 8 (two circuits) to 16, an alteration to the wiring is required if the terminal numbers TB9 and TB19, and TB10 and TB20, on the MELSEC-AnS-side terminal block have been used in separation from each other.

<Module Specification Comparison Chart>

Model		A1SY80	QY80		
Specification		(Source type)	(Source type)		
Number of outpu	t points	16	16		
Insulation methor	b	Photocoupler insulation	Photocoupler insulation		
Rated load voltage	je	12/24VDC	12-24VDC		
Maximum load o	irront	0.8A/point	0.5A/point		
Maximum load o	in ent	3.2A/common	4A/common		
Maximum in-rush current		Less than 8A - 10ms	Less than 4A - 10ms		
Leak current at power-off		Less than 0.1A	Less than 0.1A		
Maximum voltage drop		1 EV/DC/MAX) 0 84	0.2VDC(TYP) 0.5A		
at power-on		1.5VDC(WAX) U.OA	0.3VDC(MAX) 0.5A		
	OFF→ON	Less than 2ms	Less than 1 ms		
Response time		Loop then 2mg (registive lood)	Less than 1 ms		
		Less than 2ms (resistive load)	(rated load and resistive load)		
Surge killer		Zener diode	Zener diode		
Fuse		5A (one/common), non-replaceable	6.7A (one/common), non-replaceable		
Internal power co	onsumption	120mA (TYP, ON at all points)	80mA (TYP, ON at all points)		
"Common" metho	bd	8 points/common	16 points/common		
External connect	ion method	20-point terminal block	18-point terminal block		

4. Mounting and Installation

4.1 Handling Instructions

- Handling instructions
 Before attempting to install the Unit or carry out the necessary wiring, make certain that the external power supply, used in the system, is shut off on all three phases. Failure to do so may result in electric shock or damage to the product.
 Do not modify the Conversion Adapter or take it apart. Doing so will cause failure, malfunction, personal injury or fire
- - (3) Do not modify use conversion reacts and information of the conversion Adapter directly. Contact will cause malfunction or
 (4) Do not touch the energized part of the Conversion Adapter directly. Contact will cause malfunction or
 - (4) Do not touch the energized part of the Conversion Adapter directly. Contact will cause malfunction or failure in the system.
 (5) Fasten the Conversion Adapter and the Fittings securely with retaining screws, and tighten the screws y applying torque within specified imits. Loose screws can lead to the dropping of the converter adapter, or fittings, possibly causing breakage thereof. Excessive tightness of the screws can lead to the adapter and the screws, converter adapter, fittings, or MELSEC-Q Series Module, possibly causing the dropping, shorting, and malfunction thereof.

 - (6) Use care to prevent foreign materials including cuttings and wiring debris from entering the Conversion Adapter or the MELSEC-Q Series module. These will be cause for fire, failure or malfunction.
 (7) Do not drop the Conversion Adapter and Fittings, and avoid giving a strong impact to them. Otherwise, here the util service of the conversion of the series of the
 - (r) be that deput the contraction has been and by an a bed gring a strong impact to them, but must, breakage will result.
 (8) If the existing system is installed on a DIN rail, the Base Adaptor is not necessary. The MELSEC-Q Series Base Module you use can be mounted onto the DIN rail. 4.2 Instructions for Use



For detail information, see the user's manual furnished with the MELSEC-Q Series CPU module you use 10

5. Part Names and Installation Procedure



5.1 Installation Procedure

- [1] Secure the MELSEC-Q Series Base Module to the Base Adapter with the supplied attaching screws (M4 x 10), (Secure it in four places.)
- [2] Mount a compatible module under the MELSEC-Q Series onto the MELSEC-Q Series Base Module
- [3] Secure the mounting bracket to a compatible module under the MELSEC-Q Series with retaining screws (M3.5 x 6). (Secure it in two places, top and bottom.)
- [4] Mount the Conversion Adapter onto the mounting bracket and secure it with the Conversion Adapter attaching screws (M3 x 25). (Secure it in two places, top and bottom.)

Precaution

Before tightening the installation screws, check that the Conversion Adapter has been securely stalled on the MELSEC-Q Series module. Tightening the screws in floating-off state or tilting state will damage the Conversion Adapter installation screws and the mounting bracket.

- [5] Secure the Base Adapter to the panel with the supplied attaching screws (M5 x 12). (Secure it in four places.)
- [6] Secure the MELSEC-AnS Series terminal block to the Conversion Adapter with the supplied attaching screws (M4).
- [7] Remove the terminal block cover from the MELSEC-AnS Series terminal block and fit the terminal block cover supplied with the Conversion Adapter in place.

5.2 Tightening Torque

Tighten the module attaching screws by applying torque listed in the table blow. Application of improper tightening torque will cause dropping, short-circuit, failure, or malfunction

Component attached with screw	Range of tightening torque
Base Adapter attaching screw (M5)	2.75 to 3.63N·m
Q Series module attaching screw (M4)	1.39 to 1.89N·m
Mounting bracket securing screw (M3.5)	0.68 to 0.92N·m
Conversion Adaptor attaching screw (M3)	0.43 to 0.57N·m
MELSEC-AnS Series terminal block attaching screw (M4)	0.78 to 1.18N·m

6. Dimensional Outline Drawing











Product Warranty Details

Please confirm the following product warranty details prior to product use

Gratis Warranty Terms and Gratis Warranty Range

If any fault or defect (hereinafter referred to as "Failure") attributable to Mitsubishi Electric Engineering Company Limited (hereinafter referred to as "MEE") should be our within the gratis warranty period, MEE shall repair the product free of charge via the distributor from whom you made your purchase.

Gratis Warranty Period

The gratis warranty period of this product shall be one (1) year from the date of purchase or delivery to

The grains warranty period of uns product share be one (1) year norm the date of parchase of derivery to the designated place. Note that after manufacture and shipment from MEE, the maximum distribution period shall be six (6) months, and the gratis warranty period der manufacturing shall be limited to eighteen (18) months. In addition, the gratis warranty period for repaired products shall not exceed the gratis warranty period established prior to repair

Gratis Warranty Range

The gratis warranty range shall be limited to normal use based on the usage conditions, methods and environment, etc., defined by the terms and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.

Warranty Period after Discontinuation of Production

- MEE shall offer product repair services (fee applied) for seven (7) years after production of the product has been (1) discontinued. Discontinuation of production shall be reported via distributors. (2) Product supply (including spare parts) is not possible after production has been discontinued.

Exclusion of Opportunity Loss and Secondary Loss from Warranty Liability

Regardless of the gratis warranty period. MEE shall not be liable for compensation for damages arising from causes not Regardless of the grants warrantly period, mee small not be hadre for compensation for damages arising from causes not attributable to MEE, opportunity losses or lost profits incurred by the user due to Failures of MEE products, damages or secondary damages arising from special circumstances, whether foreseen or unforeseen by MEE, compensation for accidents, compensation for damages to products other than MEE products, or compensation for other work carried out by the user

Changes in Product Specifications

The specifications given in the catalogs, manuals and technical documents are subject to change without notice.

This document is a new publication, effective December 2014. Specifications are subject to change without notice