

**TECHNICAL BULLETIN**

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FA-A-0286-A

**Production Discontinuation of Type QD75P/QD75D Positioning Module**

■Date of Issue

September 2019

■Relevant Models

QD75P1, QD75P2, QD75P4, QD75D1, QD75D2, QD75D4

Thank you for your continued support of Mitsubishi Electric programmable controllers, MELSEC-Q series.

Production of the positioning modules of QD75P□ and QD75D□ will be discontinued.

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## 1 MODELS TO BE DISCONTINUED

Product	Model to be discontinued	Alternative model
Type QD75P Positioning Module	QD75P1	QD75P1N
	QD75P2	QD75P2N
	QD75P4	QD75P4N
Type QD75D Positioning Module	QD75D1	QD75D1N
	QD75D2	QD75D2N
	QD75D4	QD75D4N

## 2 SCHEDULE

- Transition to made-to-order: March 1, 2012
- Order acceptance: Until August 10, 2021
- Production discontinuation: September 30, 2021

## 3 REASON FOR DISCONTINUATION

Main parts of the above products are now obsolete, and we will have difficulty to maintain our production system.

## 4 REPAIR SUPPORT

Repair support period: Until September 30, 2028 (for seven years after the discontinuation of production)

## 5 SPECIFICATIONS COMPARISON BETWEEN THE DISCONTINUED AND ALTERNATIVE MODELS

### 5.1 Output System

Product	Specifications	Model to be discontinued	Alternative model
Type QD75P Positioning Module	Open collector output system	QD75P1	QD75P1N
		QD75P2	QD75P2N
		QD75P4	QD75P4N
Type QD75D Positioning Module	Differential driver output system	QD75D1	QD75D1N
		QD75D2	QD75D2N
		QD75D4	QD75D4N

### Specifications comparison

○: Compatible, △: Check required

Item	QD75P□/QD75D□	QD75P□N/QD75D□N	Compatibility	Precautions for replacement
Max. output pulse	1M pulse/s (QD75D□)	4M pulse/s (QD75D□N)	○	—
Speed command	1 to 1000000 pulse/s	1 to 4000000 pulse/s	○	—
Starting time	1-axis linear control	6ms	○	Note that specifications are improved to shorten the starting time for positioning. Check that it does not cause any problems in the system.
	1-axis speed control	6ms		
	2-axis linear interpolation control (Composite speed)	7ms		
	2-axis linear interpolation control (Reference axis speed)	7ms		
	2-axis circular interpolation control	7ms		
	2-axis speed control	6ms		
	3-axis linear interpolation control (Composite speed)	7ms		
	3-axis linear interpolation control (Reference axis speed)	7ms		
	3-axis speed control	6ms		
	4-axis linear interpolation control	7ms		
	4-axis speed control	7ms		
Monitor data refreshing cycle	Current feed value	1.8ms	○	Note that specifications are improved to shorten the data update cycle. Check that it does not cause any problems in the system.
	Other axis monitors (except external I/O signals)	56.8ms		
Manual pulse generator 1 pulse input magnification	1 to 100	1 to 1000	○	—

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Item		QD75P□/QD75D□	QD75P□N/QD75D□N	Compatibility	Precautions for replacement
ON voltage/current of external input	External command signal	17.5VDC or higher/3.5mA or higher	19VDC or higher/2.7mA or higher	△	The specifications for external input are different. Check the specifications of external equipment to connect with the model.
OFF voltage/current of external input	External command signal	7VDC or lower/1.7mA or lower	7VDC or lower/0.8mA or lower	△	
Input resistance of external input	Zero signal (5VDC)	Approx. 300Ω	Approx. 620Ω	△	The input resistance of external input is different. Check the specifications of external equipment to connect with the model.
	Manual pulse generator A/B phase	Approx. 1.5kΩ	Approx. 1.1kΩ	△	
	External command signal	Approx. 4.3kΩ	Approx. 7.7kΩ	△	
Internal current consumption (5VDC)		QD75P1: 0.40A QD75P2: 0.46A QD75P4: 0.58A QD75D1: 0.52A QD75D2: 0.56A QD75D4: 0.82A	QD75P1N: 0.29A QD75P2N: 0.30A QD75P4N: 0.36A QD75D1N: 0.43A QD75D2N: 0.45A QD75D4N: 0.66A	○	—
External dimensions	Height (H)	98mm		○	—
	Width (W)	27.4mm			
	Depth (D)	90mm			
Weight		QD75P1: 0.15kg QD75P2: 0.15kg QD75P4: 0.16kg QD75D1: 0.15kg QD75D2: 0.15kg QD75D4: 0.16kg	QD75P1N: 0.14kg QD75P2N: 0.14kg QD75P4N: 0.16kg QD75D1N: 0.15kg QD75D2N: 0.15kg QD75D4N: 0.16kg	○	—

\*1 In the following conditions, the starting time extends. The following times will be added to the starting time.

- S-curve acceleration/deceleration is selected: 0.5ms
- Other axis is in operation: 1.5ms
- During continuous positioning control: 0.2ms
- During continuous path control: 1.0ms

\*2 In the following conditions, the starting time extends. The following times will be added to the starting time.

- S-curve acceleration/deceleration is selected: 0.1ms
- Other axis is in operation: 0.5ms
- During continuous positioning control: 0.3ms
- During continuous path control: 0.3ms


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### Functional comparison

The QD75P□N/QD75D□N is upgraded from the QD75P□/QD75D□. Therefore, all functions of the QD75P□/QD75D□ can be applied to the QD75P□N/QD75D□N.


For details, refer to the following.

 Type QD75P/QD75D Positioning Module User's manual

### I/O signals

There is no differences in I/O signals between the QD75P□N/QD75D□N and the QD75P□/QD75D□.


For details, refer to the following.

 Type QD75P/QD75D Positioning Module User's manual

### Buffer memory

There is no differences in buffer memory items between the QD75P□N/QD75D□N and the QD75P□/QD75D□. Note that some parameters have differences in settable range.

For details, refer to the following.

 Type QD75P/QD75D Positioning Module User's manual

## 6 PRECAUTIONS FOR REPLACEMENT

### 6.1 Precautions on the Use of Sequence Programs

The QD75P□N/QD75D□N is upgraded from the QD75P□/QD75D□. Therefore, the recognized sequence programs for the QD75P□/QD75D□ can be applied to the QD75P□N/QD75D□N. Note that specifications such as time takes for startup and data update cycle are improved. When applying a sequence program to the QD75P□N/QD75D□N, modify the sequence program if necessary, checking the processing timing.

### 6.2 Precautions on the Use of GX Works2

GX Works2 of the version 1.64S or later can be used. Update the version of GX Works2 to 1.64S or later.

### 6.3 Transferring the Set Data of the QD75P/QD75D Using GX Works2

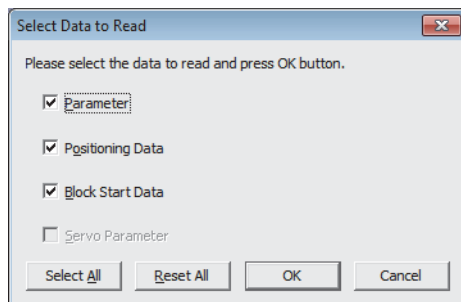
When GX Works2 is used, the set data of the QD75P/QD75D can be transferred to the QD75P□N/QD75D□N in the following procedure.

#### Saving the set data of the QD75P□/QD75D□ from [Save the Positioning Module Data...]

1. In the project view, select the QD75P□/QD75D□ from where the set data is transferred.
2. Go to [Project] ⇒ [Intelligent Function Module] ⇒ [Save the Positioning Module Data...].
3. Input the file name, and save the set data.

#### Reading the set data to the QD75P□N/QD75D□N from [Read from the Positioning Module Data...]

1. In the project view, select the QD75P□N/QD75D□N to where the saved data is transferred.
2. Go to [Project] ⇒ [Intelligent Function Module] ⇒ [Read from the Positioning Module Data...].
3. Select the name of the file saved in the above step, and open it. The following window opens.



4. Select the data to read and click "OK". The set data is read to the QD75P□N/QD75D□N.

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## 6.4 Precautions on the Use of GX Configurator-QP

To use the QD75P□N/QD75D□N with GX Configurator-QP, select the QD75P□/QD75D□ in "Select module type". The QD75P□N/QD75D□N can be used in the same manner as the QD75P□/QD75D□.

Note that a speed exceeding 1000000 pulse/s cannot be set in the following items when "Pulse" is set in "[Pr.1] Unit setting". To set a value outside a setting range in GX Configurator-QP, set it through a sequence program or GX Works2.

Setting item	Setting range in GX Configurator-QP	Setting range in sequence programs and GX Works2
[Pr.7] Bias speed at start	0 to 1000000 (pulse/s)	0 to 4000000 (pulse/s)
[Pr.8] Speed limit value	<ul style="list-style-type: none"> <li>• 1 to 200000 (pulse/s) for QD75P□N</li> <li>• 1 to 1000000 (pulse/s) for QD75D□N</li> </ul>	1 to 4000000 (pulse/s)
[Pr.31] JOG speed limit value		
[Pr.46] OPR speed	1 to 1000000 (pulse/s)	
[Pr.47] Creep speed		
[Da.8] Command speed		

## REVISIONS

Version	Date of Issue	Revision
A	September 2019	First edition