

TECHNICAL BULLETIN

[Issue No.] FA-A-0115-B

[Page] 1/4

[Title] News on the replacement models for MELSEC-Q series positioning modules

[Date of Issue] September 2011 (Ver. B: January 2012)

[Relevant Models] QD75P1, QD75P2, QD75P4, QD75D1, QD75D2, QD75D4

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

About MELSEC-Q series positioning modules, replacement models are released. These models are composed of parts supplied stably. For those customers using existing positioning modules, please replace the modules with these new models.

1. Introduction to the replacement model

Product name	Existing model name	Replacement model name
Positioning module	QD75P1	QD75P1N
	QD75P2	QD75P2N
	QD75P4	QD75P4N
	QD75D1	QD75D1N
	QD75D2	QD75D2N
	QD75D4	QD75D4N

TECHNICAL BULLETIN

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[Page] 2/4

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2. Specification comparison of the existing model and replacement model*1

Item		QD75P□/QD75D□	QD75P□N/QD75D□N
Max. output pulse		1Mpulse/s (QD75D□)	4Mpulse/s (QD75D□N)
Speed command (pulse unit)		1 to 1000000pulse/s	1 to 4000000pulse/s
Starting time (1-axis linear control)		Trapezoidal acceleration/deceleration: 6ms S-curve acceleration/deceleration: 6.5ms	Trapezoidal acceleration/deceleration: 1.5ms S-curve acceleration/deceleration: 1.6ms
Monitor data refreshing cycle	Current feed value	1.8ms	0.9ms
	Other axis monitors (except external I/O signals)	56.8ms	0.9ms
Manual pulse generator 1 pulse input magnification		1 to 100	1 to 1000
ON voltage/current of external input	External command signal	17.5VDC or more/3.5mA or more	19VDC or more/2.7mA or more
OFF voltage/current of external input	External command signal	7VDC or less/1.7mA or less	7VDC or less/0.8mA or less
Input resistance of external input	Zero signal (5VDC)	Approx. 300Ω	Approx. 620Ω
	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
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
Conformity standards	Ship standard	Conformed	September 2012 (expected)
	UL standard	Conformed	Products whose serial number (first five digits) is "13101" or later conform to the standard.
	KCC standard	Conformed	Products whose serial number (first five digits) is "13101" or later conform to the standard.

*1 Specification differences do not affect replacement.

TECHNICAL BULLETIN

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[Page] 3/4

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3. Precautions for replacement

(1) Precaution on the use of sequence programs

The QD75P□N/QD75D□N is upgraded from the QD75P□/QD75D□. Therefore, the sequence programs used for the QD75P□/QD75D□ can be applied to the QD75P□N/QD75D□N. Note that specifications such as time takes for start-up 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.

(2) Precaution on the use of GX Works2

GX Works2 of the version 1.64S or later can be used. If the version is earlier than 1.64S, upgrade it.

(3) Transferring the set data of the QD75P□/QD75D□ using GX Works2

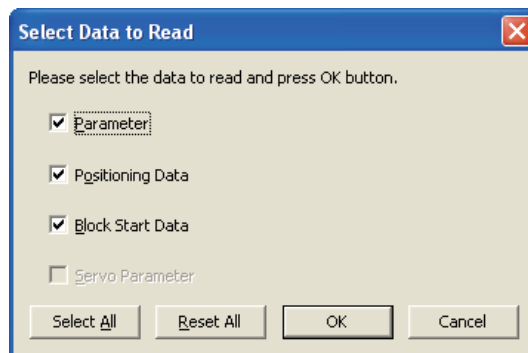
When GX Works2 is used, the set data of the QD75P□/QD75D□ can be transferred to the QD75P□N/QD75D□N in the following procedure.

(a) 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.

(b) 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 step (a), and open it. The following window opens.



- 4) Check the data to read and click . The set data is read to the QD75P□N/QD75D□N.

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[Page] 4/4

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(4) Precaution 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 1000000pulse/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 of the version 1.64S or later.

Setting item	Setting range in GX Configurator-QP	Setting range in GX Works2 and sequence programs
[Pr.7] Bias speed at start	0 to 1000000(pulse/s)	0 to 4000000(pulse/s)
[Pr.8] Speed limit value	[QD75P□N] 1 to 200000(pulse/s)	1 to 4000000(pulse/s)
[Pr.31] JOG speed limit value	[QD75D□N] 1 to 1000000(pulse/s)	
[Pr.46] OPR speed	1 to 1000000(pulse/s)	
[Pr.47] Creep speed		
[Da.8] Command speed		

REVISIONS

Version	Print Date	Revision
-	September 2011	First edition
A	September 2011	The expected date to conform to the UL standard was corrected as in the table "2. Specification comparison of the existing model and replacement model".
B	January 2012	The description of QD75P□N/QD75D□N's conformity to standards was corrected as in the table "2. Specification comparison of the existing model and replacement model".