Production Discontinuation of the Q170ENC Serial ABS Synchronous Encoder

Thank you for your continued patronage of the Mitsubishi Electric AC servo system.
The Q170ENC serial ABS synchronous encoder has been on market for a long time. However, we will discontinue the production as scheduled below.

1. Schedule

Transition to made-to-order production: December 31, 2020
Order acceptance: Until May 31, 2021
Production discontinuation: June 30, 2021

2. Reasons for Discontinuation

We have difficulty in obtaining some components for the relevant model. Thus, we presume that the production of the model will not be continued smoothly.

3. Repair Acceptance

Repair acceptance: Until June 30, 2028 (for seven years after the production discontinuation)

4. Model to Be Discontinued

Q170ENC serial ABS synchronous encoder

5. Replacement Model

Table 1. Replacement model

Model to be discontinued		Successor model	
Product name	Model	Product name	Model
Serial ABS synchronous encoder	Q170ENC	Serial ABS synchronous encoder	Q171ENC-W8

Date of issue	September 2020 (Revision: December 2021)	Title	Production Discontinuation of the Q170ENC Serial ABS Synchronous Encoder	Mitsubishi Electric Corp., Nagoya Works 1-14, Yada-minami 5-chome, Higashi-ku, Nagoya 461-8670 Tel.: +81 (52) 721-2111 Main line

6. Notes on Replacement

(1) The installation size of the Q171ENC-W8 is the same as that of the Q170ENC.

(2) The current consumption will be increased from 0.20 A to 0.25 A.
The start friction torque will be increased from 0.02 N•m to 0.04 N•m.

Table 2. Performance comparison

Item	Q170ENC	Q171ENC-W8
Model	Q170ENC	Q171ENC-W8
Encoder resolution	262,144 pulses/rev	4,194,304 pulses/rev
IP rating	IP65 (excluding the shaft-through portion)	IP67 (excluding the shaft-through portion)
Permitted axial load	Radial load: 19.6 N max.	Same as the Q170ENC
	Thrust load: 9.8 N max.	Same as the Q170ENC
Permitted speed	3600 r/min	Same as the Q170ENC
Current consumption	0.20 A	0.25 A
Transmission distance	50 m max.	Same as the Q170ENC
Start friction torque	0.02 N•m (when at 20 °C)	0.04 N•m (when at 20 °C)

(3) The Motion controllers Q17nHCPU(-T) and Q17nCPUN(-T), which have been discontinued since September 2018, cannot be used with the Q171ENC-W8. Please replace the Motion controllers with the successor models.

Table 3. Motion controllers and whether they support serial ABS synchronous encoders

Motion controller	Q170ENC	Q171ENC-W8	Precautions for replacement
Q17nDSCPU	○ Supported	○ Supported	Tasks associated with the replacement are not required. (User-created programs and parameters do not need to be modified.)
Q17nDCPU(-S1)	○ Supported	○ Partially supported (Note)	
Q17nHCPU(-T)	○ Supported	× Not supported	To use the Q171ENC-W8, upgrade the entire system (replacing with the QnDSCPU/RnMTCPU + MR-J4-B).
Q17nCPUN(-T)	○ Supported	× Not supported	

Note. The Q17nDCPU(-S1) with any of the following operating systems cannot be connected to the Q171ENC-W8:

- ○SW8DNC-SV13Q□ or SW8DNC-SV22Q□ version R or earlier
- Operating systems other than SW8DNC-SV13Q□ or SW8DNC-SV22Q□

If this is the case, contact your local sales office when replacing the Q170ENC with the Q171ENC-W8.

(4) After an encoder has been replaced, if a battery cable disconnection warning or hardware error occurs at the first power-on, supply power to the encoder for one minute or more. Then, restart the Motion controller to remove the error.

Revision

Version	Date of issue	Revision
A	December 2021	Note has been added to Table 3.