## TECHNICAL BULLETIN

[Issue No.] T99-0044

[Title] GL Certificate Approval and Relevant Requirements

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[Relevant Models] MELSEC-Q Series Models\*

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

We are pleased to inform that the MELSEC-Q Series has acquired the type approval certificate on the programmable logic controller from Germanischer Lloyd.

In the Regulations for the Performance of Type Test, Part 1, Edition 2003, some stringent restrictions have been added, such as emissions (electromagnetic interference) of 24dB or less (@3m) in a frequency range from 156 to 165MHz are only permitted.

However, the international organization, Germanischer Lloyd has approved that the MELSEC-Q series conforms to these requirements.



# Germanischer Lloyd

## 1. GL certification

The following explains the acquired GL certification.

Acquired certification

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I	Item	Description		
ĺ	Accreditation organization	Germanischer Lloyd		
	Certificate No.	20 089-04 HH		
	Category	Programmable Logic Controller		
	Test standard	Regulations for the Performance of Type Test, Part 1, Edition 2003		
I	Term of validity	Until September 1, 2009		

#### Certification details

Item	Class	Description	Remarks
Environment C	Temperature: 5 to 55°C	-	
	C	Humidity: 95% or less	-
		Vibration: 0.7G (13.2 to 100Hz)	Refer to 2. Requirements, (1).
EMC	EMC 1	EMC: Any given place on vessel (including bridge and deck)	Refer to 2. Requirements, (2).

The GL-approved MELSEC-Q series must be used under the above environment.

<sup>\*:</sup> Please go to MELFANSweb homepage (http://www.nagoya.melco.co.jp/english) for a list of relevant models.

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## 2. Requirements

When using the MELSEC-Q series in an application requiring GL approval, make sure to observe the following requirements.

#### (1) Base unit installation

For Q3 $\square$ SB, Q3 $\square$ B, Q5 $\square$ B, Q6 $\square$ B, or Q00JCPU:

Attach it to the DIN rail and fix them to the control panel at the four corners with screws.

The DIN rail adapter must be acquired separately.

Base unit	DIN rail adapter
Q38B, Q312B, Q68B, Q612B	Q6DIN1
Q35B, Q65B, Q00JCPU	Q6DIN2
Q32SB, Q33SB, Q35SB, Q33B, Q52B, Q55B, Q63B	Q6DIN3

For QA1S6 B or QA65B, fix it to the control panel directly at the four corners with screws.

## (2) Control panel

- (a) The control panel must be conductive.
- (b) When fixing a top or bottom plate of the control panel with bolts, remove the protective coating from both the plate and bolt surfaces so that they will come into contact.
- (c) When using an inner plate, ensure electric conductivity with the control panel. Remove the coating of the bolt fixing areas of both the inner plate and control panel to ensure conductivity in the largest area as possible.
- (d) Ground the control panel with a thick grounding cable (Cross-sectional area: 2 mm<sup>2</sup> or more).
- (e) In order to suppress the leakage of radio waves, the structure must have minimal openings.

  Attach some EMI gaskets to fill up the clearance between the control panel and its doors. Also, the diameter of the cable hole must be 10cm or less.