

SEMI-F47 Compliance Requirements for Mitsubishi Programmable Controllers and GOTs

■Date of Issue

June 2019 (Ver. B: January 2025)

■Relevant Models

Power supply modules for MELSEC-A/AnS/QnA/QnAS/Q/L/QS series and MELSEC iQ-R series, and GOT-A900/1000/2000 series

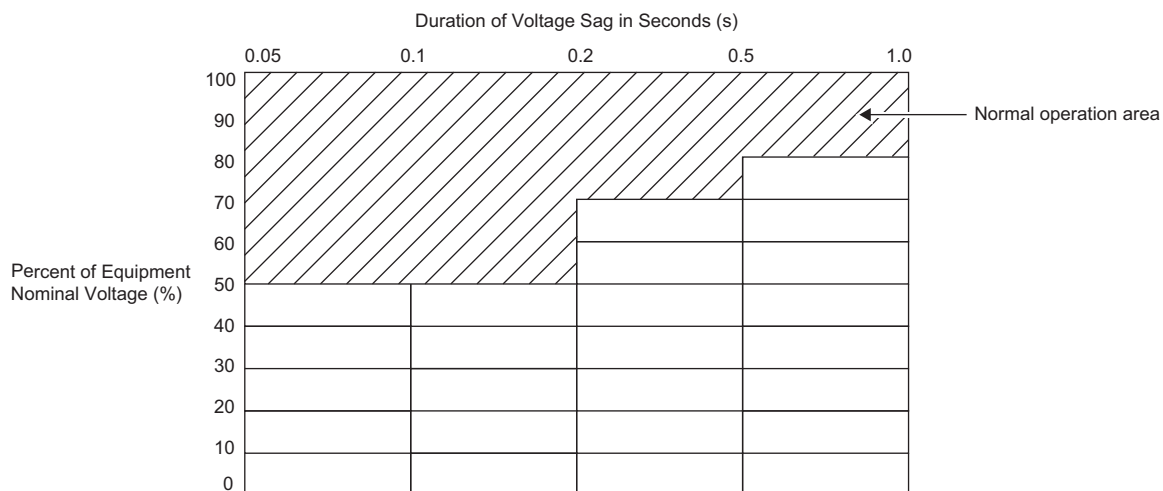
Thank you for your continued support of Mitsubishi Electric programmable controllers and GOTs (Graphic operation terminals).

This bulletin outlines the requirements for the above products to be compliant with the SEMI-F47 standard.

1 SEMI-F47

Semiconductor processing equipment requires high levels of power supply quality, as it is vulnerable to voltage sags, i.e., voltage dip in a semiconductor-manufacturing factory. The SEMI-F47 standard specifies the voltage sag immunity that is needed for semiconductor processing, metrology and automated test equipment.

Voltage sag duration			Voltage sag
Seconds (s)	Cycles at 60Hz	Cycles at 50Hz	Percent (%) of equipment nominal voltage
< 0.05s	3 cycles	< 2.5 cycles	Not specified
0.05 to 0.2s	3 to 12 cycles	2.5 to 10 cycles	50%
0.2 to 0.5s	12 to 30 cycles	10 to 25 cycles	70%
0.5 to 1.0s	30 to 60 cycles	25 to 50 cycles	80%
> 1.0s	> 60 cycles	> 50 cycles	Not specified



SEMI-F47 defines that equipment must be able to continue to operate without interruption during voltage sags shown in the above shaded area (voltage sag immunity).

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2 RELEVANT MODELS

○: Applicable (only for 200VAC input), ×: Not applicable

Product	Model	Applicability
Power supply module for MELSEC-A series and MELSEC-QnA series	A61P, A61PEU, A62P, A62PEU, A65P, A66P, A67P, A68P	×*1
	A61PN, A61RP	×
Power supply module for MELSEC-AnS series and MELSEC-QnAS series	A1S61PN, A1S62PN	○*1
	A0J2HCPU, A1FXCPU, A2CCPU, A2CJCPU-S3, A2CCPUP21, A2CCPUR21, A2CCPUC24, A2CCPUC24-PRF (CPU integrated with power supply and base), A66PC, A2CJ66P, A1SJHCPU (CPU integrated with power supply and base)	×*1
Power supply module for MELSEC-Q series	Q61P, Q61P-D, Q62P, Q64PN, Q64RPN, Q61SP, Q00JCPU (CPU integrated with power supply and base)*1, Q00UJCPU (CPU integrated with power supply and base)	○
	Q61P-A1, Q61P-A2, Q64P	×*1
Power supply module for MELSEC-QS series	QS061P-A1, QS061P-A2	×*1
Power supply module for MELSEC-L series	L61P	○
Power supply module for MELSEC iQ-R series	R61P, R62P, R64P, R61SP, R64RP	○
GOT-A900 series	A985GOT-TBA-V, A985GOT-TBA, A985GOT-TBA-EU, A975GOT-TBA-B, A975GOT-TBA, A975GOT-TBA-EU, A970GOT-TBA-B, A970GOT-TBA, A970GOT-TBA-EU, A970GOT-SBA, A970GOT-SBA-EU, A970GOT-LBA, A970GOT-LBA-EU, A960GOT-EBA, A960GOT-EBA-EU	○*1
GOT1000 series	GT1595-XTBA, GT1585V-STBA, GT1585-SBTA, GT1575V-STBA, GT1575-STBA, GT1575-VTBA, GT1575-VNBA, GT1572-VNBA, GT1565-VTBA, GT1562-VNBA, GT1695M-XTBA, GT1685M-STBA, GT1675M-STBA, GT1675-VNBA, GT1672-VNBA, GT1675M-VTBA, GT1665M-STBA, GT1665M-VTBA, GT1662-VNBA	○*1
GOT2000 series	GT2715-XTBA, GT2712-STBA, GT2712-STWA, GT2710-STBA, GT2710-VTBA, GT2710-VTWA, GT2708-STBA, GT2708-VTBA, GT2510-VTBA, GT2510-VTWA, GT2508-VTBA, GT2508-VTWA	○

*1 Discontinued models

3 COMPLIANCE WITH SEMI-F47

The models shown as "applicable" in "2. RELEVANT MODELS" are compliant with SEMI-F47 only when they are used with an input power of 200VAC.

To use an applicable model with an input power of 100VAC or an inapplicable model and to ensure the compliance with SEMI-F47, configure the programmable controller system using an UPS so that power will be supplied through the UPS. Use an on-line UPS with voltage distortion of 5% or less. The following models are applicable even if they are not on-line UPS.

If no UPS is used in the system, such a model is not compliant with SEMI-F47 because detection of AC failure or a reset may occur during voltage sag, causing an initial start.

Applicable products

■ On-line UPS

- FREQUPS FW-S series (applicable to all power supply modules)
- FREQUPS FW-V series (applicable to all power supply modules)^{*1}

*1 The FREQUPS FW-V series 100V models were finished accepting orders at the end of May 2019.

■ Other than on-line UPS

- FREQUPS FW-A series (applicable to all power supply modules)
- FREQUPS FW-F series (applicable to all power supply modules)^{*1}

*1 Applicable by changing the DIP switch settings of UPS. For details, refer to the user's manual for UPS. MELSEC-Q series and MELSEC iQ-R series can be used together with the FREQUPS-F series with serial number P or later.

REVISIONS

Version	Date of Issue	Revision
A	June 2019	First edition
B	January 2025	Addition of the R61SP to relevant models.