

## Änderung zum thermischen Motorschutz bei Frequenzumrichtern

Mit Wirkung vom 09. Mai 2013 wurden die Sicherheitsanforderungen der Norm „Power Conversion Equipment“ geändert. Davon sind auch Siemens-Frequenzumrichter betroffen.

Es liegt generell in der Verantwortung des Kunden, die Sicherheitsanforderungen zum Motorschutz bei „Power Conversion Equipment“ zu erfüllen.

Kunden, die eine Motortemperatúrauswertung mittels Motortemperatursensor realisieren, sind von dieser Produktinformation nicht betroffen.

Kunden, die eine integrierte software-basierte Motortemperatúrauswertung verwenden, sind von dieser Produktinformation betroffen.

## Folgende Produkte erfüllen die neue Anforderung zum thermischen Motorschutz:

### MICROMASTER

- MICROMASTER 420 ab V1.3 Bestell-Nr. 6SE6420...
- MICROMASTER 430 ab V2.2 Bestell-Nr. 6SE6430...
- MICROMASTER 440 ab V2.2 Bestell-Nr. 6SE6440...

### SIMATIC ET200

- SIMATIC ET200pro FC ab V3.15
- SIMATIC ET200pro FC-2 ab V4.7

### SINAMICS G110

- SINAMICS G110 ab V1.2 Bestell-Nr. 6SL3211...
- SINAMICS G110D ab V3.6 Bestell-Nr. 6SL3511...

### SINAMICS G120

- SINAMICS G120 CU230P-2 ab V4.6
- SINAMICS G120 CU240E-2 ab V4.6
- SINAMICS G120 CU240B-2 ab V4.6
- SINAMICS G120C ab V4.6
- SINAMICS G120 CU240D-2 ab V4.6
- SINAMICS G120 CU250DD-2 ab V4.6

### SINAMICS S120

- SINAMICS S120 ab V4.6

### SINUMERIK

- SINUMERIK 840Dsl V4.7
- SINUMERIK 828D V4.7

### SIMOTION

- SIMOTION V4,4



**In die folgenden Produkte ist der thermische Motorschutz nicht integriert:****SINUMERIK**

- SINUMERIK 840Dsl V1.3, V1.4, V1.4, V2.3, V2.4, V2.5, V2.6, V2.7, V4.4, V4.5
- SINUMERIK 828D V2.6, V2.7, V4.3, V4.4, V4.5

**SIMOTION**

- SIMOTION V4,1, V4.2, V4.3

**SINAMICS S120**

- SINAMICS S120 CU320-2 V2.1 HFx Bestell-Nr. 6SL3054-0CB0x-1AA0
- SINAMICS S120 CU320-2 V2.2 HFx Bestell-Nr. 6SL3054-0CC0x-1AA0
- SINAMICS S120 CU320-2 V2.3 HFx Bestell-Nr. 6SL3054-0CD0x-1AA0
- SINAMICS S120 CU320-2 V2.4 SP1 HFx Bestell-Nr. 6SL3054-0CE0x-1AA0
- SINAMICS S120 CU320-2 V2.5 SP1 HFx Bestell-Nr. 6SL3054-0CF0x-1AA0
- SINAMICS S120 CU320-2 V2.6 SP2 HFx Bestell-Nr. 6SL3054-0CG0x-1AA0
- SINAMICS S120 CU320-2 V4.3 HFx Bestell-Nr. 6SL3054-0ED0x-1BA0
- SINAMICS S120 CU320-2 V4.3 SP2 HFx Bestell-Nr. 6SL3054-0TA0x-1BA0
- SINAMICS S120 CU320-2 V4.4 HFx Bestell-Nr. 6SL3054-0EE0x-1BA0
- SINAMICS S120 CU320-2 V4.5 HFx Bestell-Nr. 6SL3054-0EF0x-1BA0

**MICROMASTER**

- MICROMASTER 3 Bestell-Nr. 6SE32...
- MICROMASTER 410 Bestell-Nr. 6SE6410...
- MICROMASTER 411 Bestell-Nr. 6SE6411...
- MICROMASTER 436 Bestell-Nr. 6SE6436...
- MICROMASTER MMI / CM2 Bestell-Nr. 6SE96...

**SIMOVERT**

- SIMOVERT Masterdrives Bestell-Nr. 6SE7...

**SIMODRIVE**

- SIMODRIVE Bestell-Nr. 6SN11...
- SIMODRIVE POSMO Bestell-Nr. 6SN2... / 6SN2...

**SINAMICS S110**

- SINAMICS S110 MMC Card S110 V4.1 HFx Bestell-Nr. 6SL3054-4EB00-0AA0
- SINAMICS S110 MMC Card S110 V4.3 SP1 HFx Bestell-Nr. 6SL3054-4ED00-0AA0
- SINAMICS S110 MMC Card S110 V4.4 HFx Bestell-Nr. 6SL3054-4EE00-0AA0

**SIMATIC ET200**

- SINAMICS ET200S (ICU 24(F))

**SINAMICS G120**

- SINAMICS G120 (CU240E, CU240S, G120D)
- SINAMICS G120 CU230P-2 BT / HVAC V4.4 Bestell-Nr. 6SL3243-6BB30-1HA2
- SINAMICS G120 CU230P-2 CAN V4.4 Bestell-Nr. 6SL3243-0BB30-1CA2
- SINAMICS G120 CU230P-2 DP V4.4 Bestell-Nr. 6SL3243-0BB30-1PA2

Um die neuen UL-Anforderung (entsprechend NEC, article 430.126(A)(2) and UL508C rev. Nov. 2010) zu erfüllen, empfehlen wir eine der folgenden Möglichkeiten:

- Verwenden Sie Produkte mit einer software-basierten Motortemperaturauswertung (siehe Seite 1).
- Installieren Sie ein Siemens-Überlastrelais der Serie 3RU motorseitig am Frequenzumrichter, um den Motorschutz zu gewährleisten. Siehe auch:  
<http://www.automation.siemens.com/mcms/industrial-controls/de/schutzgeraete/ueberlastrelais/Seiten/default.aspx>
- Verwenden Sie Motoren mit eingebautem Temperatursensor (KTY/PTC) und aktivieren die Auswertung der Motortemperatur über diesen Sensor.

## **Change regarding thermal motor protection for frequency converters**

The safety requirements specified in the "Power Conversion Equipment" standard were changed as of May 9, 2013. This also affects Siemens frequency converters.

Responsibility for meeting motor protection safety requirements as given in the "Power Conversion Equipment" standard always lies with the customer.

Customers who use motor temperature sensors to evaluate motor temperatures are not affected by this product information.

Customers who use an integrated, software-based feature to evaluate motor temperatures are affected by this product information.

## **The following products meet the new thermal motor protection requirements:**

### **MICROMASTER**

- MICROMASTER 420 from V1.3 Order no. 6SE6420...
- MICROMASTER 430 from V2.2 Order no. 6SE6430...
- MICROMASTER 440 from V2.2 Order no. 6SE6440...

### **SIMATIC ET200**

- SIMATIC ET200pro FC from V3.15
- SIMATIC ET200pro FC-2 from V4.7

### **SINAMICS G110**

- SINAMICS G110 from V1.2 Order no. 6SL3211...
- SINAMICS G110D from V3.6 Order no. 6SL3511...

### **SINAMICS G120**

- SINAMICS G120 CU230P-2 from V4.6
- SINAMICS G120 CU240E-2 from V4.6
- SINAMICS G120 CU240B-2 from V4.6
- SINAMICS G120C from V4.6
- SINAMICS G120 CU240D-2 from V4.6
- SINAMICS G120 CU250DD-2 from V4.6

### **SINAMICS S120**

- SINAMICS S120 from V4.6

### **SINUMERIK**

- SINUMERIK 840D sl V4.7
- SINUMERIK 828D V4.7

### **SIMOTION**

- SIMOTION V4,4



The following products **do not** have integrated thermal motor protection:

**SINUMERIK**

|                   |  |
|-------------------|--|
| SINUMERIK 840D sl | V1.3, V1.4, V1.4, V2.3, V2.4, V2.5, V2.6, V2.7, V4.4, V4.5 |
| SINUMERIK 828D    | V2.6, V2.7, V4.3, V4.4, V4.5                               |

**SIMOTION**

|          |                  |
|----------|------------------|
| SIMOTION | V4.1, V4.2, V4.3 |
|----------|------------------|

**SINAMICS S120**

|                       |              |                              |
|-----------------------|--------------|------------------------------|
| SINAMICS S120 CU320-2 | V2.1 HFx     | Order no. 6SL3054-0CB0x-1AA0 |
| SINAMICS S120 CU320-2 | V2.2 HFx     | Order no. 6SL3054-0CC0x-1AA0 |
| SINAMICS S120 CU320-2 | V2.3 HFx     | Order no. 6SL3054-0CD0x-1AA0 |
| SINAMICS S120 CU320-2 | V2.4 SP1 HFx | Order no. 6SL3054-0CE0x-1AA0 |
| SINAMICS S120 CU320-2 | V2.5 SP1 HFx | Order no. 6SL3054-0CF0x-1AA0 |
| SINAMICS S120 CU320-2 | V2.6 SP2 HFx | Order no. 6SL3054-0CG0x-1AA0 |
| SINAMICS S120 CU320-2 | V4.3 HFx     | Order no. 6SL3054-0ED0x-1BA0 |
| SINAMICS S120 CU320-2 | V4.3 SP2 HFx | Order no. 6SL3054-0TA0x-1BA0 |
| SINAMICS S120 CU320-2 | V4.4 HFx     | Order no. 6SL3054-0EE0x-1BA0 |
| SINAMICS S120 CU320-2 | V4.5 HFx     | Order no. 6SL3054-0EF0x-1BA0 |

**MICROMASTER**

- MICROMASTER 3 Order no. 6SE32...
- MICROMASTER 410 Order no. 6SE6410...
- MICROMASTER 411 Order no. 6SE6411...
- MICROMASTER 436 Order no. 6SE6436...
- MICROMASTER MMI / CM2 Order no. 6SE96...

**SIMOVERT**

- SIMOVERT Masterdrives Order no. 6SE7...

**SIMODRIVE**

- SIMODRIVE Order no. 6SN11...
- SIMODRIVE POSMO Order no. 6SN2... / 6SN2...

**SINAMICS S110**

- SINAMICS S110 MMC Card S110 V4.1 HFx Order no. 6SL3054-4EB00-0AA0
- SINAMICS S110 MMC Card S110 V4.3 SP1 HFx Order no. 6SL3054-4ED00-0AA0
- SINAMICS S110 MMC Card S110 V4.4 HFx Order no. 6SL3054-4EE00-0AA0

**SIMATIC ET200**

- SINAMICS ET200S (ICU 24(F))

**SINAMICS G120**

- SINAMICS G120 (CU240E, CU240S, G120D)
- SINAMICS G120 CU230P-2 BT / HVAC V4.4 Order No. 6SL3243-6BB30-1HA2
- SINAMICS G120 CU230P-2 CAN V4.4 Order no. 6SL3243-0BB30-1CA2
- SINAMICS G120 CU230P-2 DP V4.4 Order no. 6SL3243-0BB30-1PA2

In order to meet the new UL requirements (in accordance with NEC, article 430.126(A)(2) and UL508C rev. Nov. 2010), we recommend one of the following options:

- Use products with a software-based motor temperature evaluation function (see page 1).
- Install a 3RU series overload relay from Siemens on the motor side of the frequency converter to ensure motor protection. See also: <http://www.automation.siemens.com/mcms/industrial-controls/en/protection-equipment/overload-relays/Pages/default.aspx>
- Use motors with an embedded temperature sensor (KTY/PTC) and activate motor temperature evaluation via this sensor.