

CERTIFICATE OF COMPLIANCE

Certificate Number 20190604-E116386
Report Reference E116386-20020430
Issue Date 2019-June-04

Issued to: SIEMENS AG
LOW VOLTAGE
SIEMENSSTRASSE 10
93055 REGENSBURG GERMANY

This is to certify that representative samples of COMPONENT - PROTECTORS, SUPPLEMENTARY
Component supplementary protectors, Series 5SY4, 5SY6, 5SY7 and 5SY8.

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: UL1077, Supplementary Protectors for Use in Electrical Equipment
CSA C22.2 No 235, Supplementary Protectors

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Series 5SY4, 5SY6, 5SY7 and 5SY8

| RATINGS: | | | | | |
|--------------------------------------|----------------------------|--|--|------------|------------|
| Voltage | 1 pole, 1 pole + N | 277V AC max. | | | |
| | 2-, 3-, 4 pole, 3 pole + N | 480V AC max. | | | |
| | 1, 2, 3 and 4 pole devices | 60V DC max. | | | |
| Characteristics | A, B, C, D | | | | |
| Rated current | | A Char. | B Char. | C Char. | D Char. |
| | 1 pole 1 pole + N | 0.5A-63A | 1A-63A | 0.3A – 63A | 0.3A – 63A |
| | 2 pole | 0.5A-63A | 1A – 63A | 0.3A – 63A | 0.3A – 63A |
| | 3 pole 3 pole + N | 0.5A-63A | 1A – 63A | 0.3A – 63A | 0.3A – 63A |
| | 4 pole | 1A-63A | 1A – 63A | 0.3A – 63A | 0.3A – 63A |
| Series ratings | No | | | | |
| Tripping Class | TC | | 3 at 50°C | | |
| Type Code | OC | | Overcurrent type | | |
| User Group | UG | | A (General Industrial) | | |
| Terminals | FW | | 0 (Suitable for factory wiring only) | | |
| Overload Rating | OL | | 0 (Tested at 1.5 times amp rating for general use) | | |
| Short-circuit current ratings | SC | U (Indicates that the short-circuit test was conducted without series overcurrent protection) | | | |
| | | 2 (Indicates that recalibration and dielectric strength tests were performed as part of short-circuit testing) | | | |
| Enclosure size | 120 x 120 x 55 mm | | | | |
| UL Category Codes | QVNU2, QVNU8 | | | | |



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| Interrupting ratings: | | |
|-----------------------|----------------------|--|
| 5kA | at 277V AC | 1 pole and 1 pole + N |
| 7.5kA | at 240V AC | 1 pole and 1 pole + N |
| 14kA | at 120/240V, 240V AC | 2 pole, 1 pole + N and 1 pole in pairs (series rating) |
| 5kA | at 480V AC | 2, 3, 4 pole and 3 pole + N |
| 3.5kA | 60V DC | 1, 2, 3 and 4 pole devices |

| | | |
|--------------------|----------------|--|
| Wire Range: | AWG 18 - AWG 4 | 0.75 – 25mm ² , solid, multi stranded and flexible wires, only copper wires |
|--------------------|----------------|--|

Torque: 3.5Nm for all wire types and sizes, additional the following ratings were tested.

| Copper Wire | 25mm ² | AWG 4 (21.1mm ²) | 16mm ² | AWG 6 (13.3mm ²) | 10mm ² | AWG 8 (8.4mm ²) | 6mm ² | AWG 10 (5.3mm ²) |
|---------------|-------------------|---------------------------------|-------------------|---------------------------------|-------------------|--------------------------------|------------------|---------------------------------|
| Fine stranded | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm |
| Stranded | - | - | 3.5Nm | - | 3.5Nm | - | - | - |
| Solid | - | - | - | 3.5Nm | 3.5Nm | 2.5Nm | 2.5Nm | 2.5Nm |

| Copper Wire | 4mm ² | AWG 12 (3.3mm ²) | 2.5mm ² | AWG 14 (2.1mm ²) | 1.5mm ² | AWG 16 (1.3mm ²) | 1mm ² | AWG 18 (0.82mm ²) | 0.75mm ² |
|---------------|------------------|---------------------------------|--------------------|---------------------------------|--------------------|---------------------------------|------------------|----------------------------------|---------------------|
| Fine stranded | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm |
| Stranded | - | - | - | - | - | - | - | - | - |
| Solid | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm | 2.5Nm |

Note: One wire for each chamber of the double terminal.



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1. These devices are intended to be rail mounted and should be mounted in an enclosure having adequate strength and thickness in the intended manner and with spacings in accordance with the requirements of the overall equipment.
2. The terminals of the devices should be judged in accordance with the requirements of the end use application. For tightening torque and suitable wire sizes see table above. Terminals were tested in accordance with UL486A-B for Secureness and UL486E for Pullout.
3. Test records should be reviewed, including Short Circuit Tests, when judging the acceptability of these devices in an end use application.
4. These devices are not suitable for branch circuit protection.
5. All short circuit testing was conducted without a series fuse.
- 5A. The Temperature Test was conducted by mounting the protector in an enclosure measuring 120mm by 120mm by 55mm overall. Applications of these protectors in smaller enclosures shall be determined suitable in the end use application.
6. The spacings provided between adjacent terminals on 2 and 3 pole devices is 11.5 mm through air or over surface. These spacings are in accordance with the Standard for Supplementary Protectors UL 1077, Third Edition, Table 21.1, for general industrial use in applications involving potentials of 300 V or less.



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7. For over 300 V applications, the suitability of spacings provided between adjacent terminals on 2 and 3 pole devices of 11.5 mm through air or over surface should be judged in accordance with the spacing requirements of the end use application. The spacings, provided have been evaluated using the Standard for Insulation Coordination Including Creepage and Clearance Distances for Electrical Equipment, UL 840.
The need to limit overvoltages which may be applied to these devices should be evaluated with respect to the spacings provided. The spacings provided are suitable under the requirements of UL 840 when the devices are used in Pollution Degree 4 environments or better.
8. The spacings from live parts of single pole devices to adjacent metal surfaces, and from the outside poles of multipole devices to adjacent metal surfaces shall be evaluated in the end product application.
9. When an auxiliary switch or two auxiliary switches are mounted to a supplementary protector, the protector and the adjacent auxiliary switch may be wired for opposite polarity between the protector pole and the adjacent auxiliary switch, in applications involving up to 480 V AC between the protector pole and the adjacent contact block.
10. These devices have been verified to be "TRIP-FREE".
11. TC3 was tested in a surrounding temperature of 50°C.

These devices are intended for use with Component Supplementary Protector Accessories, manufactured by Siemens AG, described in E116386:
Auxiliary Contact 5ST3.



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