SGSP 40

User Manual: PC Case IP20 1000V Device Arrester Protective Device for Photovoltaic System (4P)

Brand: Generic | **Model:** SGSP 40 (Generic478o2ktxis-13)

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Generic SGSP 40 DC Protector. This device is designed to provide robust surge protection for photovoltaic systems, ensuring the safety and longevity of your electrical circuits.

The SGSP 40 is a high-performance DC protector featuring built-in overcurrent, overheating, temperature control, and short-circuit protection. Its modular design allows for easy installation on standard 35mm rails. With an IP20 rating, it offers low leakage current, quick response times, and low residual voltage. A visible window provides clear indication of the device's operational status.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating this device. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Installation must be performed by qualified personnel only.
- Ensure all power is disconnected before installation or maintenance.
- Do not operate the device if it appears damaged.
- This device is designed for photovoltaic DC systems. Do not use it for AC systems or other applications.
- The shell is made of fireproof and flame retardant PC material, but avoid exposing the device to extreme temperatures or direct flames.
- Always adhere to local electrical codes and regulations.

3. PRODUCT OVERVIEW

The Generic SGSP 40 DC Protector is a robust surge protective device (SPD) designed for photovoltaic applications. It features a modular construction for ease of integration into existing systems.

Key Features:

- **PC Material Construction:** The outer shell is crafted from fireproof and high flame retardant PC material, ensuring durability and safety.

- **Easy Installation:** Designed for 35mm standard rail mounting, facilitating straightforward setup and replacement.
- **High Performance:** Boasts an IP20 rating, low leakage current, rapid response time, and low residual voltage (Up ≤ 3.8KV).
- **Visible Status Window:** Equipped with a clear viewing window that indicates the operational status of the protector, making it easy to monitor.
- **Comprehensive Circuit Protection:** Includes built-in overcurrent, overheating, temperature control, and short-circuit protection for reliable operation.

Components:

The device consists of multiple modules, each with a visible status indicator. The main unit provides connection terminals for the photovoltaic system.

Figure 3.1: Front view of the SGSP 40 DC Protector, displaying the four protective modules, input/output terminals (L, N), and the green status indicators. Each module is labeled with its specifications.

Figure 3.2: Angled view of the SGSP 40 DC Protector, illustrating its compact modular design and the standard 35mm rail mounting mechanism on the base.

4. SETUP AND INSTALLATION

The SGSP 40 DC Protector is designed for easy installation on a 35mm standard DIN rail. Follow these steps for proper setup:

1. **Preparation:** Ensure the photovoltaic system is completely de-energized and isolated from all power sources before beginning installation. Verify that the installation environment is dry and free from conductive dust.

2. **Mounting:** Securely attach the SGSP 40 device onto a standard 35mm DIN rail within your electrical enclosure. Ensure it clicks firmly into place.

3. **Wiring:** Connect the DC input and output cables to the appropriate terminals on the protector. Pay close attention to polarity (L and N terminals). Ensure all connections are tight and secure to prevent loose contacts and potential arcing.

4. **Grounding:** Connect the grounding terminal of the protector to a reliable earth ground. Proper grounding is critical for effective surge protection.

5. **Verification:** After wiring, double-check all connections for correctness and tightness. Ensure no bare wires are exposed.

6. **Re-energize:** Once installation is complete and verified, you may re-energize the photovoltaic

system.

Figure 4.1: Detailed view of the SGSP 40's terminals and the integrated DIN rail mounting clip, demonstrating its readiness for installation.

5. OPERATING INSTRUCTIONS

The SGSP 40 DC Protector operates automatically to safeguard your photovoltaic system from voltage surges. There are no user-adjustable settings.

Status Indication:

The device features a visible window on each module that indicates its operational status:

- **Green Window:** Indicates that the protector is functioning normally and providing active surge protection.
- **Red Window:** Indicates that the protector has activated due to a surge event and requires replacement.

Regularly check the status windows to ensure continuous protection for your system.
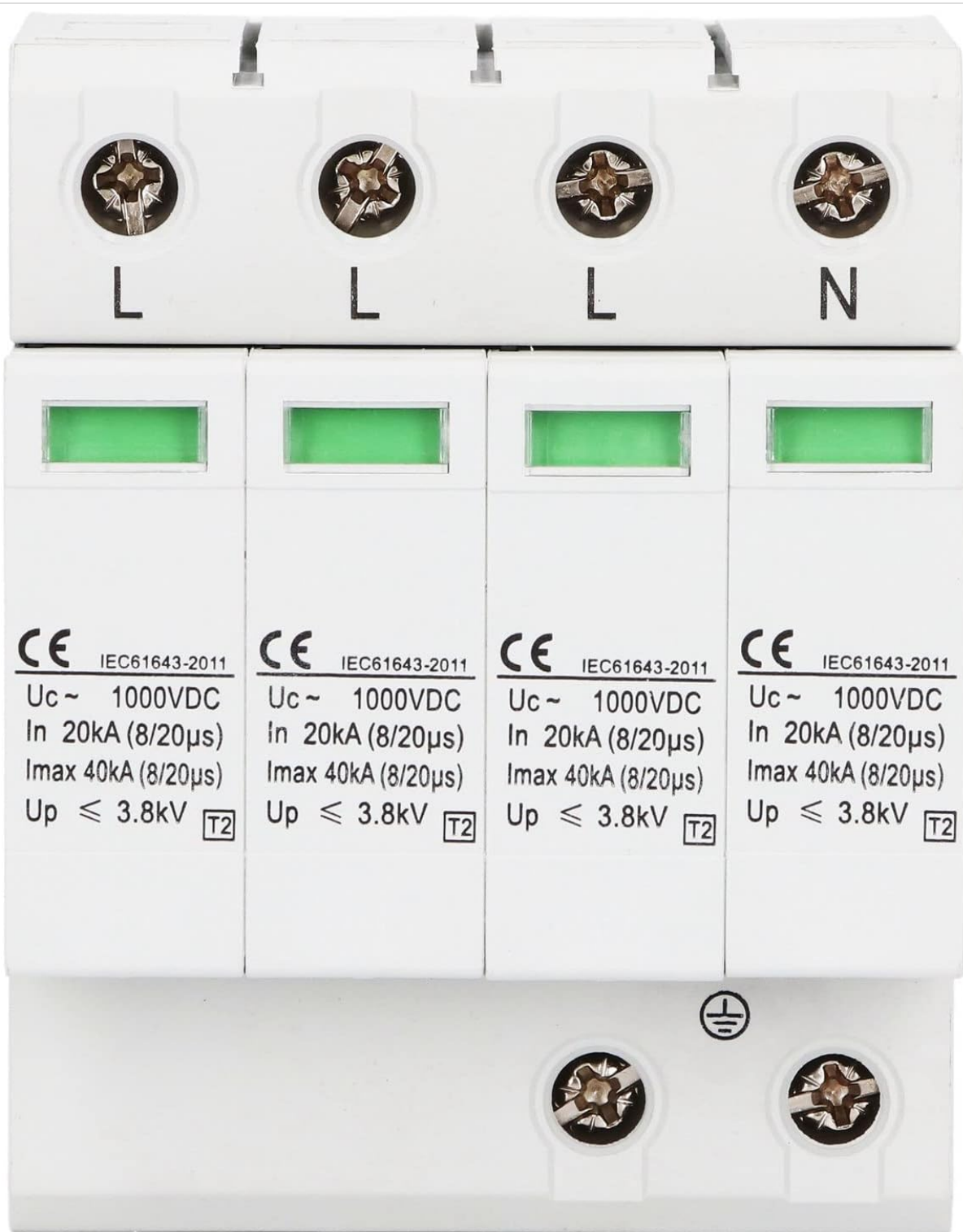
Figure 5.1: Close-up of the SGSP 40 modules, clearly showing the green status indicators, which signify normal operation and active protection.

6. MAINTENANCE

The SGSP 40 DC Protector requires minimal maintenance. However, periodic checks are recommended to ensure optimal performance and safety.

- **Visual Inspection:** Periodically inspect the device for any signs of physical damage, discoloration, or loose connections.
- **Status Check:** Regularly observe the visible status windows. If any window turns red, the corresponding module has activated and needs replacement.
- **Cleaning:** If necessary, gently clean the exterior of the device with a dry, soft cloth. Do not use liquid

cleaners or solvents.

- **Professional Check:** It is advisable to have a qualified electrician inspect your photovoltaic system, including the surge protector, annually.

7. TROUBLESHOOTING

The SGSP 40 DC Protector is designed for reliable operation. Most issues relate to the status indicator.

Issue: Status Window is Red

Cause: The protector has successfully diverted a surge event, indicating that it has performed its function and is now at the end of its operational life for that module.

Solution:

1. Immediately disconnect power to the photovoltaic system.
2. Carefully remove the affected module(s) from the main unit.
3. Replace the module(s) with new, identical SGSP 40 replacement modules.
4. Ensure the new modules are securely installed and all connections are tight.
5. Re-energize the system and verify that the new module's status window is green.

If you experience any other issues or are unsure about the device's status, contact a qualified electrician or the manufacturer's support.

8. SPECIFICATIONS

Detailed technical specifications for the Generic SGSP 40 DC Protector:

Parameter	Value
Model	SGSP 40
Nominal DC Voltage (Uc)	1000VDC
Nominal Discharge Current (In)	20KA (8/20µs)
Maximum Discharge Current (Imax)	40KA (8/20µs)
Voltage Protection Level (Up)	≤ 3.8KV
Shell Material	Fireproof and high flame retardant PC
Installation	35mm standard rail
Protection Grade	IP20
Package Dimensions	3.94 x 2.76 x 2.76 inches
Item Weight	15.2 ounces
ASIN	B0CH7DR58F
Item Model Number	Generic478o2ktxis-13
Manufacturer	Generic
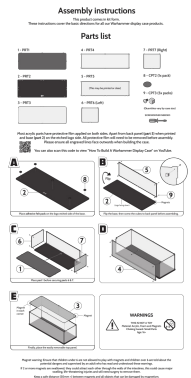
9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact the manufacturer directly. Keep your purchase receipt as proof of purchase.
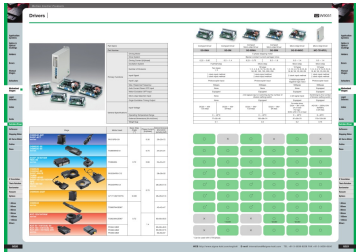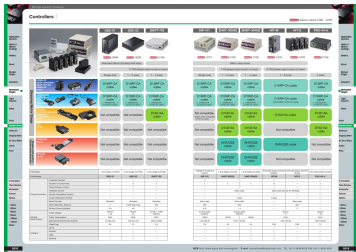
Manufacturer: Generic

## Related Documents - SGSP 40

	[Wicked Brick Warhammer Display Case Assembly Instructions](#) Step-by-step guide to assembling your Wicked Brick Warhammer display case. Includes parts list, detailed instructions, and important safety warnings for hobbyists.
	[DeepCool MATREXX 40 Micro-ATX Case Installation Guide](#) Detailed installation guide for the DeepCool MATREXX 40 Micro-ATX computer case, covering features, specifications, accessory contents, and step-by-step assembly instructions.
	[Cooler Master Pi Case 40 Assembly and Mounting Guide for Raspberry Pi 4](#) Comprehensive guide for assembling and mounting the Cooler Master Pi Case 40 for Raspberry Pi 4, including VESA and wall mounting instructions.
	[Hydra Kool KFM-GL Series Refrigerated Display Case Instruction Manual](#) Comprehensive instruction manual for the Hydra Kool KFM-GL series refrigerated display cases, detailing safety guidelines, installation, operation, maintenance, troubleshooting, and technical specifications for models KFM-GL-40, KFM-GL-60, and KFM-GL-80-S.
	[Tesla Powerwall 3 Technical Specifications and Compliance](#) Detailed technical, environmental, and mechanical specifications for the Tesla Powerwall 3 energy storage system, including compliance information and model configurations.

Infiniti FX35/FX45 Driveline/Axle Transfer System Service Manual

Comprehensive service manual detailing the Driveline/Axle Transfer System for Infiniti FX35 and FX45 models, covering troubleshooting, repair procedures, and specifications.

Documents - SGSP 40 – SGSP 40

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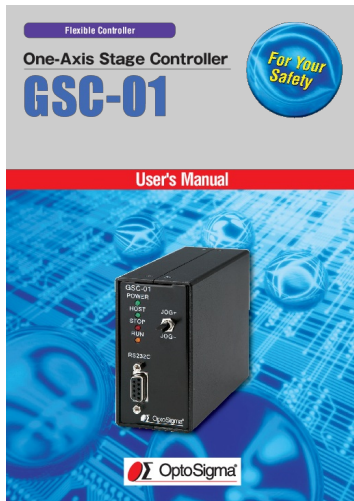
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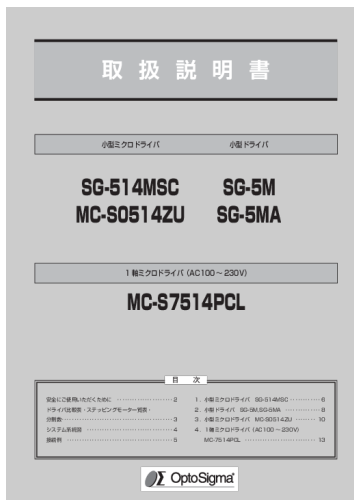
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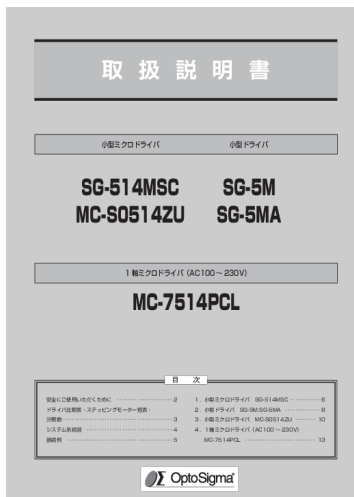
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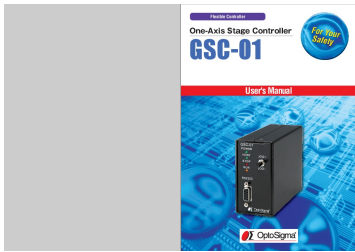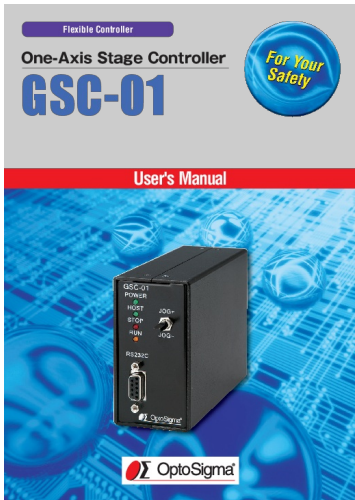lang:en score:23 filesize: 2.44 M page_count: 32 document date: 2018-02-16

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