

NOJA POWER®

Empower the world.



GMK

GROUND MOUNT KIOSK

Innovation in
Integration

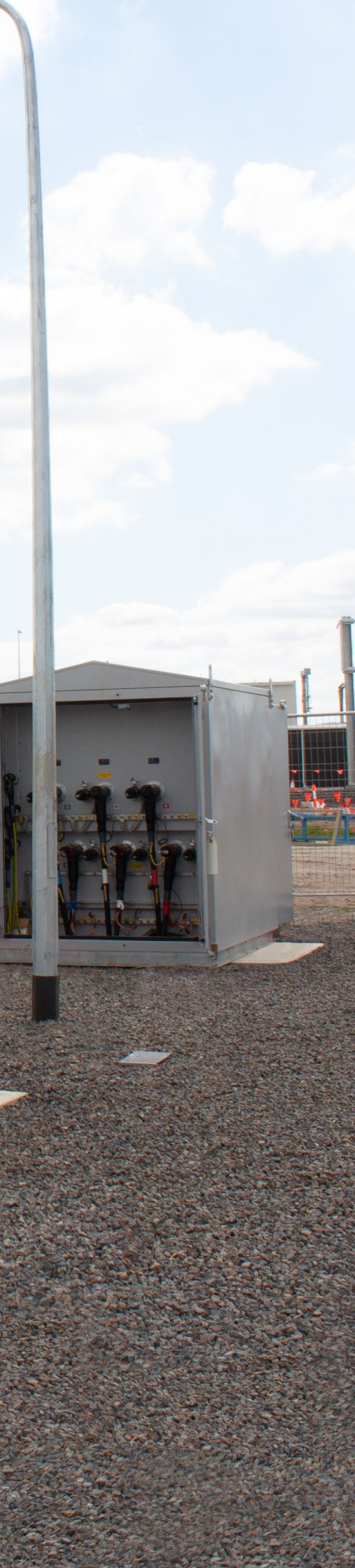
PRODUCT GUIDE
15kV/27kV/38kV MODELS

Innovation in Integration

G M K

GROUND MOUNT KIOSK





A Comprehensive Switchgear System for Protection and Control of Underground Cables and Networks

KEY BENEFITS

- » Highly Customisable
- » Fully Integrated Primary and Secondary Systems
 - › Circuit Breaker
 - › Protection
 - › Automation
 - › SCADA RTU including IEC 61850
- » Fully factory assembled and tested.
- » Greatly reduce commissioning costs

STANDARD APPLICATIONS

- » Distributed Generation
- » Renewable Connection
- » Private MV Infrastructure Connection
- » Rail Supply
- » Underground Cable Network Protection



Distributed, Renewable and Private MV Connections Solved

Protection of private infrastructure and connection of generation to the distribution grid are major challenges for engineers today. Auxiliary controls, automation and operations procedures can rapidly add complexity to connection projects, but there is a product which brings all the essentials in the ultimate integrated package.

Enter the NOJA Power GMK, a single, turn-key product providing the distribution connection essentials contained in a kiosk. Built on the proven NOJA Power OSM Recloser architecture, the standard GMK addresses any protection and automation requirements.

By incorporating all systems into a single kiosk, installation and commissioning is greatly simplified as the GMK is delivered to site pre-tested – simply connect your cables.

Flexibility is the key with the GMK, offering an extensive list of options to solve complexity of connection projects. Common additions to the core system include:

- » Metering Instrumentation to integrate Revenue Metering
- » Interlocked Internal Earth Switch for earthing of Load Side Cables
- » Differential protection current transformers
- » Fibre Optic connections for remote control and automation

Minimise commissioning and design costs with the standardized NOJA Power GMK Platform.

The NOJA Power GMK - the ultimate integrated turn-key product for connecting private electricity infrastructure.



COMPACT UNDERGROUND CABLE PROTECTION

GMK-1000

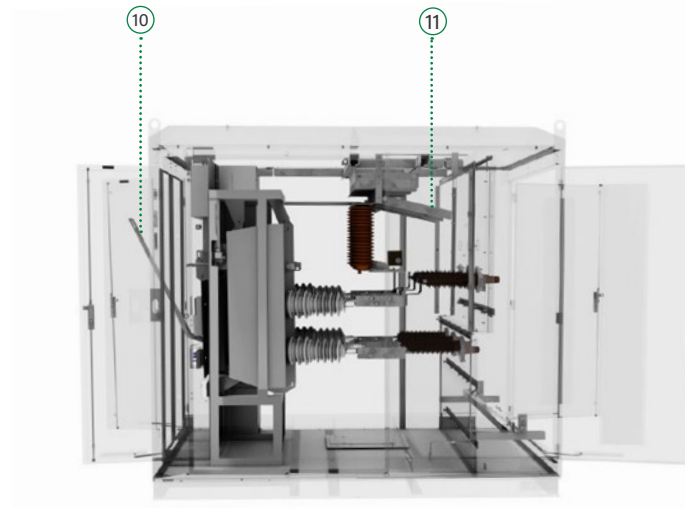
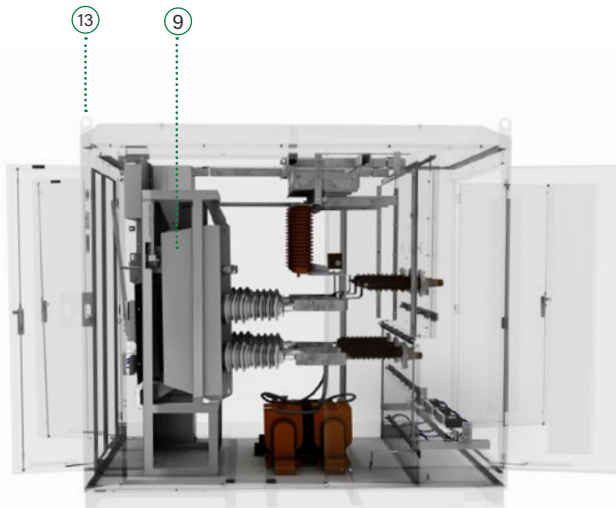
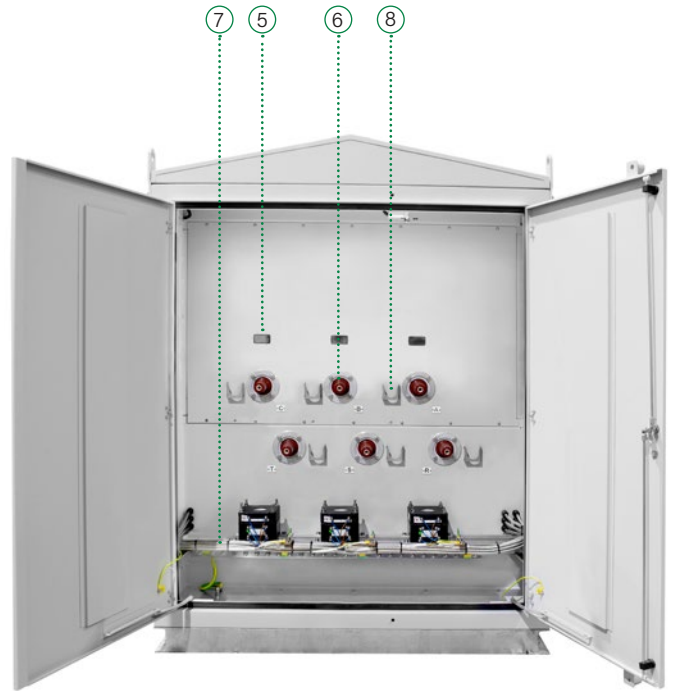
The Compact GMK 1000 Series offers a protection solution for underground cables using Solid Dielectric Insulation and Vacuum Interruption, with zero SF6 gas. A comprehensive suite of protection functionality is equipped as standard, delivered by the NOJA Power RC-10, RC-15 or RC-20 control system built into the arrangement. Factory tested, the compact GMK provides simple commissioning ensuring correct operation between Primary and Secondary systems with minimal wiring on site.



HIGHLY CUSTOMISABLE

GMK-2000

The 2000 Series GMK is a modular switchgear platform, building on the core architecture of a NOJA Power OSM Recloser system with RC control for Ground Mount Applications. Custom options include Revenue Metering, Differential Protection, Interlocked Earth Switch or Power Quality Metering.

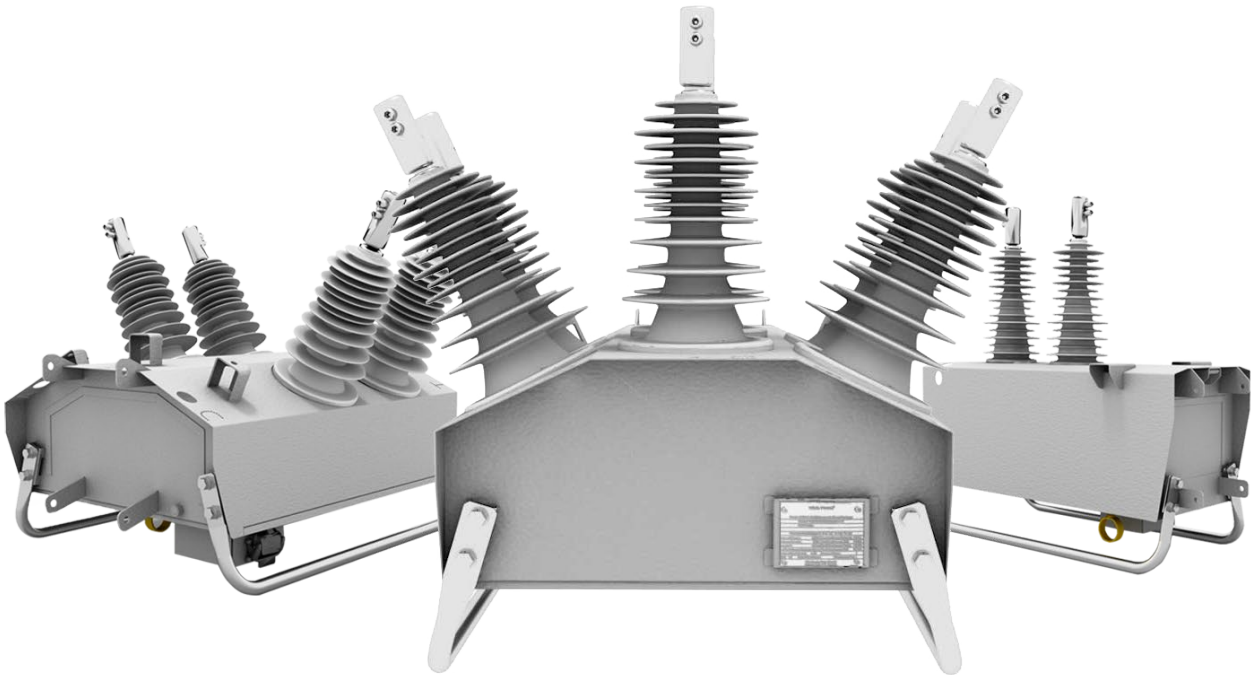


GMK-2000 COMPONENTS

- | | | |
|--|--|--|
| 1. OSM Status Viewing Window | 6. EN 50181 Interface Type C Bushing | 11. Earth Switch |
| 2. Earth Switch-OSM Mechanical Interlock | 7. Earth Bar | 12. Voltage Transformer (Optional Items) |
| 3. Control Cubicle Compartment | 8. Earthing/Parking Saddles | 13. Detachable Lifting Points |
| 4. Optional Gear Tray | 9. Automatic Circuit Recloser | |
| 5. Earth Switch Status Viewing Window | 10. Earth Switch Handle (Optional Items) | |







POWERED BY THE NOJA POWER
OSM RECLOSER – THE WORLD'S SAFEST

OSM Recloser

At the core of the NOJA Power GMK is the world's safest and most advanced Auto-Reclosing Circuit Breaker, the NOJA Power OSM Recloser. Leading Vacuum Interruption with Solid Dielectric Insulation technology enables exceptional electrical performance, with zero SF6 gas. Class defining sensors provide unprecedented Protection and Automation capability, with the highest precision SEF protection ever available in a Recloser.

Maintenance Free operation and advanced communications capabilities sets the OSM Recloser with RC Series control as the premiere integrated

solution for connection of distributed generation. Synchro-check, Auto-Synchroniser and Voltage Sensing on both sides of the Circuit Breaker enable automation, interlocking and grid synchronisation with the standard product – no options necessary.

Placing the OSM Recloser in a Ground Mount Kiosks brings the unrivalled feature set to the realm of underground cables, providing remarkable flexibility in auxiliary systems to solve even the most demanding distributed generation connection scenarios.



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DANGER
HIGH VOLTAGE

NOJA POWER®

WARNING

PART NUMBER	GMK15-16-1310 ¹ GMK15-16-2310 ¹	GMK27-12-1310 ¹ GMK 27-12-2310 ¹	GMK38-12-2300 ^{3,1}	GMK38-16-2300 ^{3,1}
Current Sensing	3 x Current Transformers	3 x Current Transformers	3 x Current Transformers	3 x Current Transformers
Voltage Sensing	6 x Voltage Screens	6 x Voltage Screens	6 x Voltage Screens	6 x Voltage Screens
Control Type	RC-10	RC-10	RC-10	RC-10
Rated Maximum Voltage	15.5kV	27kV	38kV	38kV
Rated Continuous Current	630A	630A	630A	630A
Fault Make Capacity RMS	16kA	12.5kA	12.5kA	16kA
Fault make capacity Peak (50Hz)	40kA	31.5kA	31.5kA	40kA
Fault make capacity Peak (60Hz)	42kA	32.5kA	32.5kA	42kA
Fault Break Capacity	16kA	12.5kA	12.5kA	16kA
Mechanical / Full Load Operations	30,000	30,000	30,000	30,000
Fault Break Capacity Operations	70	140	100	140
Short Time Current Withstand	16kA/3 secs	16kA/3 secs	12.5kA/3 secs	16kA/3 secs
Mainly Active Breaking Capacity	630A	630A	630A	630A
Cable Charging Current	25A	25A	40A	40A
Line Charging Current	5A	5A	5A	5A
Impulse Withstand Phase to Earth & Phase to Phase	110kV	150kV	150kV	150kV
Impulse Across the Interrupter	110kV	150kV	170kV	170kV
Power Frequency Withstand Phase to Earth (Dry)	50kV	60kV	70kV	70kV
Power Frequency Across the Interrupter	50kV	60kV	70kV	70kV
Ambient Temperature	-40°C to +55°C	-40°C to +55°C	-40°C to +55°C	-40°C to +55°C
Humidity	0-100%	0-100%	0-100%	0-100%
Altitude ²	3000m	3000m	3000m	3000m
Kiosk Mass - GMK 1000	480kg	480kg		1800kg ⁴
Kiosk Mass - GMK 2000			1800kg ⁴	1800kg ⁴

1. A Switchgear model with matched CTs to provide 0.2A SEF sensitivity is available.

2. Altitudes above 1000m should be corrected in accordance with ANSI C37.60-2012.

3. 38kV variant is only available in 2000 series and above.

4. GMK 2000 Mass calculated on base product, without custom additional options.

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