New Direct Replacement Retrofit
Emax E1.2 moving portion in Novomax G30 fixed part

With just very few modifications and limited costs, the Conversion Kits are the perfect solution for improving low voltage switchgear. The replacement Kits allow increased safety as well as guaranteeing service continuity, and avoid the need for costly spare parts thereby bringing down maintenance costs.

ABB SACE Division, a leader in low voltage protection circuit-breaker design and production, has always paid special attention to customer satisfaction, supporting the client at all times during the life of the product (Life Cycle Management), from selection to after-sales service, thanks to its highly qualified internal structure. In the field of low voltage circuit-breakers, the Service of ABB SACE Division – L.V. Circuit-breakers ensures operating continuity between the previous series of its apparatus and those currently in production, by making its replacement kits available to its customers, which have been specially studied to preserve the existing switchgear and reduce downtimes to a minimum. The kits allow the latest generation circuit-breakers to be mounted in replacement of the circuit-breakers of old concept which are no longer able to satisfy plant requirements for protection of the electric lines and those for safety of people.

Conversion Kit
The Kits allow the new apparatus to be adapted to the dimensional characteristics of the existing compartments, replacing all the obsolete models with latest generation products. All the replacement kits are supplied complete with assembly instructions and electric interconnection diagrams. With this solution, there is no need to manage any dismantling operation of the existing fixed parts of the Novomax G30 breakers.

Advantages
The use of the replacement kit provides notable advantages:
- Reduced investments compared to those required for installing brand-new switchgear;
- Reduced installation times and the possibility of spreading plant downtime over time, therefore increasing the guarantee of service continuity;
- Reduction in maintenance and repair costs;
- Safeguarding of investments in existing structures;
- Total possibility of interconnection with existing distribution systems;
- Immediate, simple and safe replacement;
- No structural modifications;
- Adaptations for auxiliary circuits;
- Greater plant control with the new electronic protections.

From Circuit-Breaker to Power Manager
SACE Emax 2 improves the efficiency of electrical plants, creating the new standard of:
- Control: optimization of power flow
- Connectivity: integration into systems
- Performance: satisfaction of requirements in the right size
- Ease of use: creation of efficiency and simplicity.

Ekip Dip
Ekip Touch
Ekip Hi-Touch with Ekip Measuring Pro
Novomax G30 - Emax E1.2 Conversion Kit

The old Novomax G30 series of circuit-breakers can be replaced with the latest Emax 2 E1.2 series by using the new type of Conversion Kits. The circuit-breaker provided is Emax E1.2 in the FIXED version with rear horizontal terminals, fitted with the SACE Ekip Dip LSI release. In any case, different types of releases can be supplied, according to the customer’s specific requests.

The kit is made up of a special moving part to be inserted in the existing fixed part. There is no need for any dismantling operation of the existing fixed part. The only operation required is installation on the fixed part of a device which ensures locking on racking out, and a segregation which guarantees IP20 protection with the door open.

The Emax E1.2 circuit-breaker can also be supplied with the same accessories present on the old Novomax G30 circuit-breaker. The kit is always completed with sliding contacts for power supply of accessories.

Electrical and Mechanical accessories mounted in Novomax G30 that can be replaced with the corresponding one of New Emax E1.2:
- YO (shunt opening release)
- YC (shunt closing release)
- YU (undervoltage release)
- D (electrovaltional Delay for YU - into the switchboard to replace the pneumatic one on G30)
- M (motor for charging spings)
- AUX Spring charged (S33M)
- AUX CB tripped - S51
- Qx (Open/Close AUX contacts)
- Key lock in open position
- Padlock in open position
- Mechanical operation counter
- IP54 door protection.

<table>
<thead>
<tr>
<th>Old trip unit to be replaced</th>
<th>New Trip Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>Ekip Dip LII, or Higher versions</td>
</tr>
<tr>
<td>Ks</td>
<td>Ekip Dip LSI or Higher versions</td>
</tr>
<tr>
<td>Ksi</td>
<td>Ekip Dip LSI or Higher versions</td>
</tr>
<tr>
<td>KM</td>
<td>Ekip High Touch with L off rating plug (*)</td>
</tr>
<tr>
<td>KMs</td>
<td>Ekip High Touch with L off rating plug (*)</td>
</tr>
<tr>
<td>KMi</td>
<td>Ekip High Touch with L off rating plug (*)</td>
</tr>
<tr>
<td>KE</td>
<td>Ekip Touch with L off rating plug, or Higher versions</td>
</tr>
<tr>
<td>KEs</td>
<td>Ekip Touch with L off rating plug, or Higher versions</td>
</tr>
</tbody>
</table>

Tripping times and curves to be checked according installation
(*) M protection requires Double S protection.

For further information contact:
ABB SACE
A division of ABB S.p.A.
L.V. Breakers
Via Pescaria, 5
24123 Bergamo - Italy
Phone: +39 035 395.111
Fax: +39 035 396.306-433
www.abb.com

The data and illustrations are not binding. We reserve the right to make changes in the course of technical development of the product. Copyright 2013 ABB. All rights reserved.