MINING FLAME-PROOF MOBILE SUBSTATION

BRIEF INTRODUCTION

Varelen Electric Co., Ltd. is a technological innovation-based enterprise with a long history, owning a manufacturing base in Changsha, Hunan province, South China.

We specialize in manufacturing various kinds of transformers and substations for mines/residential facilities/commercial buildings/tunnels/power supply, integrated power-driven devices, reactors and so on.

We have close cooperation with customers in Spain, Germany, Italy, South Africa, Latin America, etc.

With the core brand “Varelen” and the philosophy “Integrates art into product, apply technology to life”, we are moving towards to be an excellent enterprise.

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**Product Overview**

**General:**
- Mining Flame-proof Mobile Substation is designed specifically for environments of methane, moisture gas, coal dust and potentially explosive areas. It is widely used in coal mines, non-ferrous metal mines, tunnel projects, etc.
- The Flame-proof Mobile Substation consists of mainly flame-proof high-voltage switch, flame-proof transformer, and flame-proof low voltage switch. The transformer is bolted to the high and low voltage switches.
- Available options of HV & LV switches:
  - Flame-proof HV vacuum switch + flame-proof LV protection box
  - Flame-proof HV vacuum switch + flame-proof LV feed switch
  - Flame-proof HV load switch + flame-proof LV load switch

**Why Varelen:**
- 20 years experience R&D team, derived from a 40 years history transformer factory in Changsha city of China.
- Various choices for customers based on full range of transformer types
- Customized transformers of special functions are available.
- Varelen is one of the members who drew up the National Standard for Explosion-proof Mobile Substation for mines as well as many other types of mining transformers.

**Main Specifications:**

<table>
<thead>
<tr>
<th>Transformer Type</th>
<th>Three phases, dry type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Rated capacity</td>
<td>Up to 5000 MVA</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>Up to 18.24 kV</td>
</tr>
<tr>
<td>Insulation class</td>
<td>H, C</td>
</tr>
<tr>
<td>Cooling mode</td>
<td>ANAN</td>
</tr>
<tr>
<td>Flame-proof type</td>
<td>Ex/IMb</td>
</tr>
<tr>
<td>Connection code</td>
<td>Yd, Dyn, Yyn etc.</td>
</tr>
<tr>
<td>Executive standard</td>
<td>IEC60079</td>
</tr>
</tbody>
</table>

**Product Features:**
- Multiple protective functions of overload, short circuit, leakage, leakage, over voltage, under voltage and over temperature.
- With RS485 interface for computer communication.
- Excellent flame-proof performance and sufficient mechanical strength.
- Main insulating material is C-class and Nomex paper is adopted, plus the oxygen-free copper winding, which ensures small partial discharge, no load and load loss, and low temperature rise.
- Special anti-loose structure with vertical lifting ability, no internal looseness during transportation, easy to use and maintain.
- Superior silicon lamination for steel core, the lamination joint is processed by oblique cut angle and the latest new technology “seven step” which ensures small no-load loss and current.
- Equipped with rail wheels, strong impact resistance ability, detachable adjustable rail gauge.