Recommended maintenance activities for VAMP range

The VAMP protection IEDs and arc flash protection products together with its extension units, communication accessories, arc flash detection sensors and cabling, later called as VAMP IED, require maintenance in order to work according to specification. Keep record of the maintenance actions performed for the system. The maintenance can include, but is not limited the following actions.

1 Preventative maintenance

The VAMP IEDs shall be visually checked when the switchgear is de-energized. During such inspection pay attention to

- possible dirty components
- loose wire connections
- damaged wiring
- indicator lights (see section LED test sequence) and
- other mechanical connections.

Visual inspection shall be made minimum every three (3) years.

2 Periodical testing

The VAMP IED must periodically be tested according to the end-user's safety instructions, national safety instructions or law. Manufacturer recommends functional testing being carried minimum every five (5) years.

It is proposed that the periodic testing is conducted with a secondary injection principle for those protection stages which are used in the IED and its extension units.

In case very severe environmental conditions like corrosive and offshore the secondary testing is recommended to be made every three (3) years.

Follow separate testing manuals for a test protocol.

3 Cleaning of hardware

Special attention must be paid that the IED do not become dirty. In case cleaning is required, wipe out dirt from the units.
4 Arc sensor condition and positioning check

After commissioning, sensor replacement, modification procedure, cleaning and periodical testing always check that the sensor positioning remains as it was originally designed.

5 System status messages

In case IED’s self checking detects unindented system status it will in most of the cases provide alarm concerning this by activating the Service LED and indication status notification on the LCD screen. Should this happen store the possible message and contact your local representative for further guidance.

6 Spare parts

Use entire unit as a spare for the device to be replaced. Always store spare parts in storage areas that meet requirements stated in User’s documentation.

7 Summary of preventive maintenance activities

<table>
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<th>Preventive maintenance activities</th>
<th>Recommended Frequency</th>
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<td>Inspection of connections</td>
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<td>Inspection of cabling</td>
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<td>Inspection of protection settings</td>
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<td>Checking / updating of electrical network settings</td>
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<td>Equipment upgrade</td>
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<td>Software upgrade (digital relays)</td>
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</table>

- Exclusive maintenance conducted by ED equipment manufacturer only
- Advanced maintenance, preferably conducted by ED equipment manufacturer or manufacturer certified partner
- Light maintenance, conducted by ED equipment manufacturer or customer competent technician

Schneider Electric
35 rue Joseph Monier
92506 Rueil-Malmaison
FRANCE
Phone: +33 (0) 1 41 29 70 00
Fax: +33 (0) 1 41 29 71 00
www.schneider-electric/vamp-protection.com

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