Low Voltage Products

Fuse monitor, OFM and OFS

Brochure OFM_OFS20GB 05_08
15CC314001C0201
Fuse monitor, types OFM and OFS

The OFM and OFS fuse monitors provide a facility for an immediate tripping option after a blown fuse. It prevents 2-phase motor loading and unsafe neutral voltages.

- No need for external supply voltage
- Wide voltage range 100V...260VAC and 380V...690VAC
- Full operational ability even with phase unbalance
- EMC-tested (OFM)
- Suitable for monitoring the fuses in capacitor banks

Operates with all standard fuses

The OFM and OFS fuse monitors can be used with fuse links of all types and sizes. Striker-type fuses are not required which reduces overall cost.

Clear blown fuse indication

The red pilot light indicates any fuse blown and the auxiliary contacts give an alarm or a trip signal.

The OFM and OFS fuse monitors have a green LED indicating normal status (a voltage on fuse holders). The green LED turns off and the red LED on, in the case of one or more fuses blown.

The OFM and OFS fuse monitors are automatically reset after the blown fuses have been replaced.

Safe and reliable

Extreme safe operation has been ensured by testing the unit with a 9.8 kV impulse voltage across the blown fuse and with 5 kV/1 min voltage test between the power circuit and auxiliary contacts. The wires on the supply side are double insulated.

Easy to install

For the OS switch fuse, there is a snap-on mounting available on the side of the switch. For OESA switch fuses or OFAX fuse bases, the fuse monitor can be screwmounted with mounting feet.

Mounting options

<table>
<thead>
<tr>
<th>Fuse monitor</th>
<th>Mounting option</th>
<th>Suitable for</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFM</td>
<td>Snap-on</td>
<td>Up to OS 160</td>
</tr>
<tr>
<td>OFS</td>
<td>Screw mounting</td>
<td>From OS 200</td>
</tr>
<tr>
<td>OFS</td>
<td>Snap-on rail</td>
<td>DIN 35</td>
</tr>
</tbody>
</table>

All fuse monitors include accessories for separate mounting on base plate.

Functionality of the fuse monitor

<table>
<thead>
<tr>
<th>Condition</th>
<th>LED Status</th>
<th>Connector Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch fuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>closed</td>
<td>Green OK</td>
<td>Red blown</td>
</tr>
<tr>
<td></td>
<td>on</td>
<td>off</td>
</tr>
<tr>
<td></td>
<td>open</td>
<td>closed</td>
</tr>
<tr>
<td></td>
<td>closed</td>
<td>open</td>
</tr>
<tr>
<td>Switch fuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>open</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td></td>
<td>open</td>
<td>closed</td>
</tr>
<tr>
<td></td>
<td>closed</td>
<td>open</td>
</tr>
</tbody>
</table>
Fuse monitor
Ordering information
Technical data

Ordering information
Fuse monitor, suitable for 1- and 3-phase circuits.

<table>
<thead>
<tr>
<th>Rated Voltage [Vac]</th>
<th>Type</th>
<th>Order number</th>
<th>Weight [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>100...260</td>
<td>OFM260</td>
<td>1SCA022459R8560</td>
<td>0.14</td>
</tr>
<tr>
<td>380...890</td>
<td>OFM690</td>
<td>1SCA022459R8480</td>
<td>0.14</td>
</tr>
<tr>
<td>120...260</td>
<td>OFS260</td>
<td>1SCA022716R0180</td>
<td>0.14</td>
</tr>
<tr>
<td>380...890</td>
<td>OFS690</td>
<td>1SCA022715R9920</td>
<td>0.14</td>
</tr>
</tbody>
</table>

Mounting accessories
Includes 6 pcs crimp terminals. Type OFMZX4 includes also push on terminals for fitting to 2.5 mm or 5 mm Cu-bars.

<table>
<thead>
<tr>
<th>For switch size</th>
<th>Crimp terminal size [mm]</th>
<th>Type</th>
<th>Order number</th>
<th>Weight [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS-switch</td>
<td>2.8 - 0.8</td>
<td>OFMZX2</td>
<td>1SCA022475R9910</td>
<td>0.01</td>
</tr>
<tr>
<td>OESA 400...800</td>
<td>6.3 - 0.8</td>
<td>OFMZX4</td>
<td>1SCA022475R9750</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Mounting frame for OS16...40 Mini
Mounting on the left side of the switch
OSZ4 1SCA022830R0200 0.06

Technical data
Power circuit
Connection wire no:s 1, 3, 5
Connection wire no:s 2, 4, 6
Rated voltage OF 260
Rated voltage OF 690
Voltage tolerance -10%...+10%
Power consumption < 3 VA
Rated frequency 50 / 60 Hz
Measuring impedance > 1000 ohm
Impulse test voltage (1.2 / 50 μs)
- Phase to phase / Supply to load 9.8 kV

Output terminals (Auxiliary contacts)
Terminals
Wire section:
Flexible Cu ≤ 2.5 mm²
Rigid Cu ≤ 2.5 mm²
Rated current Ie
4A / 250Vac / AC1
3A / 250Vac / AC15
2A / 24Vac / DC13
Rated voltage / max. breaking voltage 250 Vac / 440 Vac
Rated breaking capacity 2000 VA
Contact material Cadmium free

Characteristics
Specified ambient air temperature range -25...+55°C
Transport and storage temperature range -40...+70°C
Overvoltage category / Pollution severity III / 3 IEC 60947-1
Dielectric test voltage: 5 kVrms / 1min 50Hz

EMC (OFM):
Emission
Conducted emission
Radiated emission
Harmonic currents emissions
Immunity
Electrostatic discharge (ESD)
RF Radiated field
Electrical fast transient (EFT)
RF Electromagnetic conducted
RF Electromagnetic field (GSM)
Magnetic field immunity
Continuous
Pulse 1.2 / 50 μs
Housing
Self-extinguishing thermoplast with V-0 behavior in accordance with UL 94
Degree of protection:
Weight
IP 20
140 g

ABB
Fuse monitor
Contact functions
Dimension drawings [mm]

Contact functions

Dimension drawings [mm]

Length of the wires 0.8 m
(May be cut to the desired length)

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The operations of the manufacturing plant have been certified.