AD-03W-FS

High Voltage “Line To Line” VDSL2-Compliant Sealed Station Protector

- DSL-Compliant For Elevated DC Biasing Up To 150 Volts
- Three-Electrode Heavy Duty Gas Discharge Tube Protection
- High “Line to Line” Breakdown
- Gel-Sealed IDC Terminations
- Highly Visible Wire Terminations
- Fully Encapsulated Assembly
- Listed to UL 497

Tii’s Angle Driver® AD-03W-FS is specifically designed to protect tomorrow’s high-speed digital networks, such as Voice Over Digital Subscriber Line (VoDSL) technology, against damage caused by electrical surges.

KEY PRODUCT BENEFITS

- Optimal performance for IPTV video over DSL due to low line to ground capacitance, providing significantly better DSL Insertion Loss than most competitive products.
- Designed for networks with elevated line to line voltage
- The AD-03W-FS consists of a heavy duty three-electrode, high line-to-line breakdown gas tube surge arrester, failshort device and gel-sealed IDC (Insulation Displacement Connection) type connectors for terminating all wires in one completely self-contained unit
- IDC connections require no stripping of the wire insulation for terminating
- Module has two ports for small-gauge (22 – 26 AWG) wire terminations and two ports designed for either 18.5 AWG “T drop” or 19 – 24 AWG copper wire for tip/ring connections, all of which are environmentally sealed
- May be employed in a variety of single and multiple pair assemblies, NID and station protector housings
- Can be used to retrofit/service upgrades of assemblies already installed in the field
- Unique, universal ground tab can be snapped off to allow for multiple mounting arrangements

INDUSTRY STANDARDS

- Fully compatible and exceeds the transmission requirements of Telcordia specification GR’974-CORE for high-speed digital networks
- tii Angle Driver® AD-03W-FS complies with the “no back-up device” section of Telcordia GR-1361-CORE and has been fully tested by Telcordia and exceeds the temperature aging and cycling performed at a modified (increased severity) 150Vdc bias for protectors deployed in DSL applications. The resulting lower capacitance and increased reliability make the protector an excellent choice for Digital Subscriber Line (DSL) applications. It exceeds the transmission requirements for high-speed digital networks
- Surge handling and life capabilities of the Angle Driver® AD-03W-FS exceeds the objectives of Telcordia GR-1361-CORE
- Angle Driver® AD-03W-FS exceeds the requirements of Section 5, “Environmental Requirements, Severe Climatic Conditions” and Section 6.2 “Environmental, Severe Climatic and Flooded Conditions” of Telcordia GR-49-CORE Issue 2, “Generic Requirements for Outdoor Telephone NIDs.”
- Meets Generic Requirements For IDC Cross-Connect & Terminal Blocks of Telcordia TR-NWT-001195
- Meets Environmental Sealing Requirements of Telcordia TR-NWT-000975.
- Listed to UL 497
### SPECIFICATIONS

- **DC Breakdown Voltage @ 2000 V/sec (See Note 1)**
  - Line to Ground = 280 – 420Vdc
  - Line to Line = 425 – 625Vdc

- **Impulse Breakdown voltage @ 100V/μsec**
  - 550V Maximum, 450V Typical

- **Insulation Resistance @100Vdc**
  - 100 Megohms Minimum

- **DC Holdover: 52Vdc @260mA**
  - <150 mS

- **Maximum Single Impulse Discharge Current**
  - 8/20 waveform
  - 20kA
  - 10kA/Side Simultaneously

- **Capacitance**
  - 10 pF Typical

- **Aging, Temperature/Humidity Cycling with Surge**
  - 150 V DC Bias

- **Insertion Loss 0.2 – 30MHz**
  - <0.1dB

- **Return Loss @ 30MHz**
  - >15dB

- **Impulse Life (See Note 2)**
  - 10Amp, 10/1000μsec waveform
  - 1500 Surges Minimum
  - 100Amp, 10/1000μsec waveform
  - 100 Surges Minimum
  - 300Amp, 10/1000μsec waveform
  - 50 Surges Minimum

- **AC Discharge Current (See Note 2)**
  - 10Amp, 1 Second
  - 20 Operations Minimum
  - 1Amp, 1 Second
  - 60 Operations Minimum

*Test Method: IEEE 465.1

**Notes:**
1. For 99% of distribution
2. End of life DC breakdown (lower limit) = 250 V

### ORDERING INFORMATION

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<th>Model No.</th>
<th>Description</th>
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<tr>
<td>AD-03W-FS</td>
<td>Heavy Duty Totel Failsafe® TFS® Gel-Sealed Station Protector With Snap-Off Ground Tab</td>
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