

USP-123™ Series Universal Station Protector

CORNING

Features and Benefits

TandAction™ Hybrid Station Protector or stand-alone gas tube

Accommodates ADSL/VDSL or CAT 5 applications

Compatible with standard NIDs and variety of wire sizes

Suitable for variety of installations

Heavy duty three-element gas tube protection

Extended service life and reduced maintenance

User friendly design

Simplifies and speeds installation

Standards

Approval and Listings

C-UL-US Listed, UL 497 compliant

RDUP (RUS) Listed

Meets Telcordia GR-1361 (gas tube version)

Meets Telcordia GR-974 CORE and GR-975 CORE (gas tube and hybrid versions)

CAT 5 compliant - ATIS-0600016.2008

The USP-123™ series universal station protector (USP) is designed to provide superior surge protection in any customer premises application. The USP-123 is designed to handle the increasing demands of high-bandwidth applications such as ADSL/VDSL. Using the latest in environmentally-sealed insulation displacement connection (IDC) technology, the USP-123 is available in two versions:

— The TandAction™ Hybrid Station Protector combines a heavy duty three-element gas tube (no backup air gap) with metal oxide varistor technology (MOV), providing the fastest response to voltage surges.

— A stand-alone, heavy duty three-element gas tube (no backup air gap) provides standard category 5 compliance.

Each protector contains a fail-safe mechanism that shorts the line to ground in the event of a power cross. Customer service interruptions from premature short circuits and low resistances caused by backup air gap failures are completely eliminated.

The robust wire guide easily directs standard 22-24 AWG wiring to each tip and ring channel assuring straight through insertion and a solid connection. The wire guide can simply be removed for terminating larger gauge wires up to 18.5 AWG (F-drop). Highly visible, gel-sealed test contacts allow easy testing and troubleshooting using standard test clips.



USP 123 Universal Station Protector
| Photo PIM0158

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Specifications

Shipping Information

	Dimensions (HxWxD)	Shipping Weight	Quantity
Shipping Package (per carton)	34.29 cm x 5.41 cm x 4.44 cm (13.5 in x 2.13 in x 1.75 in)	2.2 kg (1.0 lb)	10 units

	Dimensions (HxWxD)	Shipping Weight	Quantity
Shipping Package (per master carton)	35.89 cm x 25.1 cm x 13.03 cm (14.13 in x 9.88 in x 5.13 in)	4.5 kg (10.0 lb)	100 units

Corning Standard Recommended Procedure: SRP 202-328

Electrical Characteristics - Gas Tube

DC Operating Voltage (Line Ground)	$\pm 300 \text{ V}$ to $\pm 500 \text{ V}$ at $< 2000 \text{ V/s}$
Impulse Operating Voltage (Line-Ground)	$< \pm 600 \text{ V}$ at $100 \text{ V}/\mu\text{s}$ (550 V typical)
Impulse Operating Voltage (Line-Ground)	$< \pm 700 \text{ V}$ at $1000 \text{ V}/\mu\text{s}$ (650 V typical)
Insulation Resistance (IR)	$> 100 \text{ M}\Omega$ at $\pm 50 \text{ V DC}$
Capacitance	3 pF typical at 1 V_{rms} (1 MHz) 0 VDC bias, 1 pF typical line to line
Impulse Reset/DC Holdover	Extinguishes within 150 ms at: 52.5 V DC limited to 260 mA
Impulse Reset/DC Holdover	Extinguishes within 150 ms at: 135 V DC limited to 200 mA
Service Life — Lightning	1500 Operations at $\pm 10 \text{ A}$, 10/1000 uS, 100 Operations at $\pm 100 \text{ A}$, 10/1000 uS
Service Life — Lightning	50 Operations at $\pm 300 \text{ A}$, 10/1000 uS, 5 Operations at $\pm 2000 \text{ A}$, 10/250 uS
Service Life — AC 60 Hz	5 Operations at $10 \text{ A}_{\text{rms}}$, 1 s, 60 Operations at 1 A_{rms} , 1 s, 1 Operation at $0.5 \text{ A}_{\text{rms}}$, 30 s
End-of-Life — Lightning	3000 Operations at $\pm 10 \text{ A}$, 10/1000 uS, 300 Operations at $\pm 100 \text{ A}$, 10/1000 uS, 100 Operations at $\pm 300 \text{ A}$, 10/1000 uS
End-of-Life — Lightning	25 Operations at $\pm 2000 \text{ A}$, 10/250 uS, 2 Operations at $\pm 5000 \text{ A}$, 20/100 uS, 1 Operation at $\pm 20 \text{ kA}$, 8/20 uS
End-of-Life — AC 60 Hz	20 Operations at $10 \text{ A}_{\text{rms}}$, 1 s, 1 Operation at $120 \text{ A}_{\text{rms}}$, 0.1 s

Electrical Characteristics - Hybrid

DC Operating Voltage (Line Ground)	$\pm 300 \text{ V}$ to $\pm 500 \text{ V}$ at $< 2000 \text{ V/s}$
Impulse Operating Voltage (Line-Ground)	$< \pm 500 \text{ V}$ at $100 \text{ V}/\mu\text{s}$ (450 V typical)

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Electrical Characteristics - Hybrid

Impulse Operating Voltage (Line-Ground)	< ± 600 V at 1000 V/μs (550 V typical)
Insulation Resistance (IR)	> 100 MΩ at ± 50 V DC
Capacitance	28 pF typical at 1 V _{rms} (1 MHz) 0 VDC bias, 14 pF typical line to line
Impulse Reset/DC Holdover	Extinguishes within 150 ms at: 52.5 V DC limited to 260 mA
Impulse Reset/DC Holdover	Extinguishes within 150 ms at: 135 V DC limited to 200 mA
Service Life — Lightning	1500 Operations at ± 10 A, 10/1000 uS, 100 Operations at ± 100 A, 10/1000 uS
Service Life — Lightning	50 Operations at ± 300 A, 10/1000 uS, 5 Operations at ± 2000 A, 10/250 uS
Service Life — AC 60 Hz	5 Operations at 10 A _{rms} , 1 s, 60 Operations at 1 A _{rms} , 1 s, 1 Operation at 0.5 A _{rms} , 30 s
End-of-Life — Lightning	3000 Operations at ± 10 A, 10/1000 uS, 300 Operations at ± 100 A, 10/1000 uS, 100 Operations at ± 300 A, 10/1000 uS
End-of-Life — Lightning	25 Operations at ± 2000 A, 10/250 uS, 2 Operations at ± 5000 A, 20/100 uS, 1 Operation at ± 20 kA, 8/20 uS
End-of-Life — AC 60 Hz	20 Operations at 10 A _{rms} , 1 s, 1 Operation at 120 A _{rms} , 0.1 s

Ordering Information

Product Dimensions

Part Number	Dimensions (HxWxD)	Weight
USP-123-1	3.96 cm x 3.96 cm x 1.78 cm (1.56 in x 1.56 in x 0.745 in)	0.05 kg (0.1 lb)
USP-123-3	3.96 cm x 3.96 cm x 1.78 cm (1.56 in x 1.56 in x 0.745 in)	0.05 kg (0.1 lb)

Part Number	Description	Units per Delivery
USP-123-1	Universal Station Protector (USP) with stand-alone, 3-element gas tube station protector	100/1
USP-123-3	Universal Station Protector (USP) with TandAction™ Hybrid Station Protector	100/1

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