

**Sentinel™ N5-Series Communication Line Protectors:** Some face persistent system problems, despite their use of conventional communication line protectors. Others face performance expectations that allow zero tolerance for downtime. N5-Series communication line protectors are specifically engineered to satisfy these demanding applications, whether analog or digital.

#### **Ultimate assurance of system reliability**

Leading telecommunications companies employ ONEAC Sentinel Series communication line protectors in their installations for good reason. Sentinel protectors provide greater assurance of PBX, Key, and IP Telephony system uptime and lower service costs than conventional protectors.

#### **Eliminates harmful transients**

System lockups, dropped calls, mis-dials, system memory loss, "no trouble found" service calls, service outages, shortened component life — these problems result from high frequency interference. Sentinel Series protectors with ONEAC's patented Frequency Selective Transient Voltage™ (FSTV) technology prevent these fast-edged transients from entering your system, yet allow lower frequency ring voltages and other desired signals to pass through unobstructed.

#### **Balanced fail-safe protection**

AC power crossings and induction problems can create an unsafe condition in either line of a twisted pair — tip or ring. Conventional line protectors address only one or the other. The Sentinel Series provides a complete, balanced fail-safe solution. Their unique design ensures that in the event either side fails, both tip and ring are simultaneously grounded. It's a critical extra margin of safety and protection for your system and your personnel.

#### **Last longer on the job**

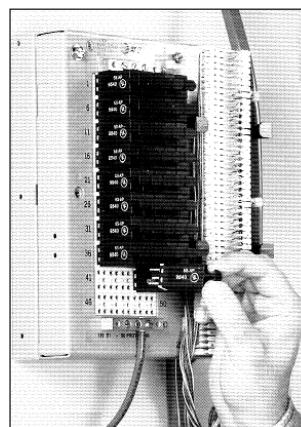
ONEAC communication line protectors feature a more robust design than others so they're better able to withstand current and voltage surges. Which eliminates the cost and downtime of replacement due to nuisance failures.

#### **Proven to reduce service costs**

By removing electrical transients, ONEAC improves system reliability. Look at actual evidence — installers switching over to a protection scheme using Sentinel protectors with ONEAC power conditioners report an over 50% reduction in total trouble calls; 83% fewer service calls due to hardware problems; 70% fewer system resets; and 43% fewer calls in which no trouble was found.



- **Robust/solid state overvoltage protection:** last longer in the field
- **Patented Frequency Selective Transient Voltage technology:** allows exceptionally low let-through performance for optimum protection of electronic systems
- **Balanced fail-safe protection:** provides extra margin of safety
- **Convenient test points:** for faster, easier line testing
- **100 A surge impulse design:** provides longer lasting protection
- **Models available for analog, digital, ADSL, T1 and DSL**
- **Safety approvals:** UL Listed Primary (497), UL Listed Secondary (497A), cUL
- **5-year warranty:** your best assurance of product performance and reliability in the industry.
- **Manufactured under ISO 9001:** assures consistent quality and performance.
- **Free 24-hour technical support**



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*Easily mountable on standard 5-pin bases, the Sentinel N5-Series provides more complete and long-lasting protection than conventional communication line protectors.*

# Sentinel N5-Series Communication Line Protectors: Specifications

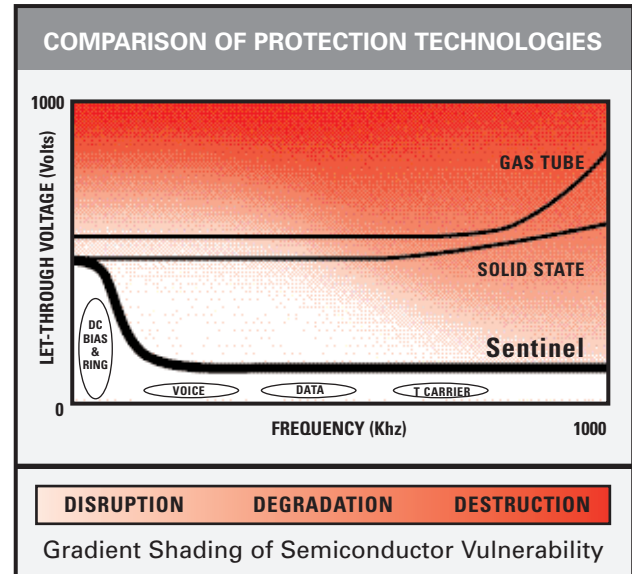
## A variety of applications

For use with 5-pin bases, the Sentinel N5-Series communication line protectors eliminate the possibility of noise generated on outside telephone lines to enter internal communication circuits.

Application	Part No.	Color
<b>Analog:</b> Standard service — trunk lines, analog OPX stations with ring signal	N5-27-GBK	Black
	N5-27-TBK	Black
<b>Digital:</b> ISDN	N5-27-GYW	Yellow
	N5-27-TYW	Yellow
<b>Digital:</b> T1	N5-27-GBE	Blue
	N5-27-GBE	Blue
<b>ADSL:</b> Services with local analog	N5-27-GYW	Yellow
	N5-27-TYW	Yellow
<b>Special:</b> Analog and digital services requiring special identification	N5-27-GRD	Red
	N5-27-TRD	Red

## ONEAC breaks the "Ring Voltage Barrier"

Conventional protectors (gas tube or solid state) are designed to clamp above the operating DC bias and the ring voltage level. The Sentinel's ability to differentiate signals based on frequency permits the desired signals to pass while preventing transients from damaging semiconductor-based electronics.



Part Number	N5-27-Gxx*	N5-27-Txx*
<b>Impulse (limiting voltage) Performance 10/1000µS, 1500V, 100A Impulses:</b>		
Let-through voltage - line to earth (typical/max.)	60 V/100 V	60 V/100 V
Let-through voltage - line to line (typical/max.)	60 V/100 V	60 V/100 V
<b>DC Breakdown Voltage (0-1 kV @ 100 V/s):</b>		
Line to earth (typical/range)	310 V/270-370 V	310 V/270-370 V
Line to line (typical/range)	310 V/270-370 V	310 V/270-370 V
Module Loop Resistance @ 25°C (each leg)	0.3 Ω min, 0.5 Ω max	0.3 Ω min, 0.5 Ω max
Holding Current	≥260 mA	≥260 mA
Response Time	<1 ns	<1 ns
Insulation Resistance	100 MΩ	100 MΩ
Capacitance @ 50VDC, 1 VAC, 10 kHz - 10 MHz		
line to earth	<40 pf	<40 pf
line to line	<40 pf	<40 pf
On State Voltage with 1 Amp RMS	<5 V	<5 V
Overcurrent Protection (Sneak Current) @ 25°	equipped with non-resettable (fail shorting) mechanism and time delay fuse	equipped with non-resettable (fail shorting) mechanism and time delay fuse
Color Code	gold plated pins	tin plated pins
Test Points	yes	yes

\* "xx" denotes placeholder for color (BE - blue, BK - black, RD - red, YW - yellow). See application chart above.

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