

**OnLine® 10-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. 10-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 OnLine communication line protectors in their installations for good reason: because OnLine protectors provide greater assurance of PBX and Key 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 all result from high frequency interference. ONEAC OnLine protectors prevent these fast-edged transients from entering your system, yet allow lower frequency ring voltages and signals to pass through unobstructed.

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

ONEAC communication line protectors feature more robust design than others so they're better able to withstand current and voltage surges. They also include self-resetting sneak current protection — which eliminates the cost and downtime of replacement due to 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 OnLine protectors with ONEAC power conditioners report an over 50% reduction in total service 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 SwitchedFilter™ filtering:** allows exceptionally low let-through performance for optimum protection of electronic systems
- **Self-resetting sneak current protection:** eliminates overcurrent problems without creating unnecessary fuse replacements
- **100 A surge impulse design:** provides longer lasting protection
- **Convenient test points:** for faster, easier line testing
- **Models available for analog, digital and ADSL lines**
- **Safety Listings:** UL, cUL, US Listed Secondary (497A)
- **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**

# OnLine 10-Series Communication Line Protector: Specifications

## For analog, digital and ADSL

Installed between the demarcation point and point of use, OnLine 10-Series communication line protectors eliminate the possibility for noise generated on outside telephone lines to enter systems.

## Single and 10 line models

10-Series protectors offer you the flexibility of a ten line unit to protect 10 lines simultaneously, or single line protectors that allow you to protect a variety of lines mixed on a single mounting bracket.



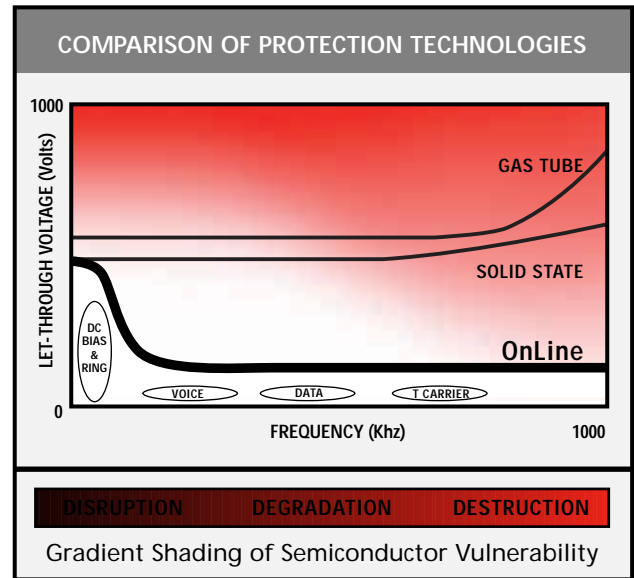
ONEAC OnLine 10-Series (10 line and 1 line) protectors are designed to fit easily into Krone LSA-PLUS™ connection strips on the frame.

Application	# Lines	Part No.
<b>Analog:</b> Standard Service — trunk lines, analog OPX stations with ring signal	10 1*	10-APU, 10-AP-200 10AP-1U, 10AP-1
<b>Digital:</b> ISDN, digital PBX without ringing	10 1*	10-DPU, 10-DP 10DP-1U, 10DP-1
<b>ADSL:</b> Services with local analog service	1*	10AD-1E

\* Single line protectors require Ground Bar (10 position) part number - 350-139 or Ground Bar (8 position) part number - 350-140

## 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 OnLine's ability to differentiate signals based on frequency permits the desired signals to pass while preventing transients from damaging semiconductor-based electronics.



Part Number (10 Line) (1 Line)	10-AP-200 10AP-1	10-DP 10DP-1	10AD-1E	10-APU 10AP-1U	10-DPU 10DP-1U
<b>Impulse (limiting voltage) Performance 10/1000µS, 1500V, 100A Impulses:</b>					
Let-through voltage - line to earth (typical/max.)	240 V/300 V	78 V/95 V	510 V/560 V	320 V/370V	78 V/95 V
Let-through voltage - line to line (typical/max.)	100 V/200 V	70 V/105 V	150 V/200 V	150 V/250 V	70 V/105 V
<b>DC Breakdown Voltage (0-1 kV @ 100 V/s):</b>					
Line to earth (typical/range)	240 V/190-300 V	78 V/60-95 V	510 V/420-560 V	320 V/270-370 V	78 V/60-95 V
Line to line (typical/range)	480 V/380-600 V	155 V/120-190 V	300V/240-320 V	640 V/540-740 V	155 V/120-190 V
Module Loop Resistance @ 25°C (each leg)	12 Ω min, 18 Ω max	3 Ω min, 6 Ω max	3 Ω min, 6 Ω max	12 Ω min, 18 Ω max	3 Ω min, 6 Ω max
Holding Current	≥150 mA	≥150 mA	≥150 mA	≥150 mA	≥150 mA
Response Time	<1 ns	<1 ns	<1 ns	<1 ns	<1 ns
Insulation Resistance	>100 MΩ	>100 MΩ	>100 MΩ	>100 MΩ	>100 MΩ
Capacitance @ 50VDC, 1 VAC, 10 kHz - 10 MHz					
line to earth	<200 pf	<200 pf	<100 pf	<200 pf	<200 pf
line to line	<200 pf	<200 pf	<180 pf	<200 pf	<200 pf
On State Voltage with 1 Amp RMS	<5 V	<5 V	<5 V	<5 V	<5 V
Overcurrent Protection (Sneak Current) @ 25° C					
Self resetting (ceramic PTC technology)	300 mA*	300 mA	300 mA	300 mA	300 mA
Non-resetting (time delay fuse)	2 A	2 A	—	1 A	1 A
Color Code (10 line)	White	Yellow	NA	White	Yellow
(1 line)	Black	Yellow	Blue	Black	Yellow
Safety	NA	NA	NA	UL, cUL, US listed secondary (497A)	

\* Not applicable to 10AP-1.

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