

Online® HW Series Communication Line Protector: Some face persistent system problems, despite their use of conventional communication line protectors. Others face performance expectations that allow zero tolerance for downtime. HW Series communication line protectors are specifically engineered to satisfy these demanding voice and data applications, whether for analog, digital or ISDN service.

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

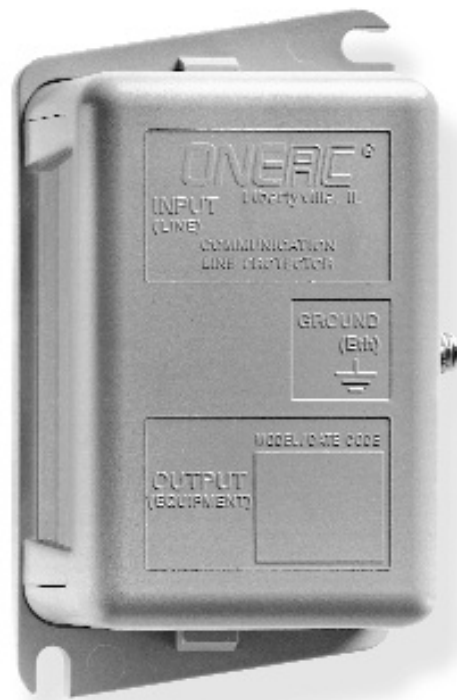
ONEAC communication line protectors feature more robust design than others so they're better able to withstand current and voltage surges. They also feature self-resetting sneak current protection — that eliminates the cost and downtime of replacement due to nuisance failures.

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 OnLine 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.

Flexible terminations

Available for 1 pair, 2 pair, 3 pair, or 4 pair applications, these protectors permit connections to either a screw terminal type connector or a 110 type connector. Hardwired protectors are ideal for locations without modular terminations.



- **Robust/solid state overvoltage protection:** last longer in the field
- **Patented SwitchedFilter™ technology:** 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
- **Simple installation:** convenient ground connection and wall mounting make installation a snap
- **Models available for analog, digital or ISDN service**
- **Safety approvals:** UL listed primary (497), UL listed Secondary (497A), and cUL
- **5-year warranty:** the best assurance of product quality and performance in the industry.
- **Manufactured under ISO 9001:** assures consistent quality and performance.
- **Free 24-hour technical support**

OnLine HW Series Communication Line Protector: Specifications

For analog or digital service

Installed between the demarcation point and point of use, HW Series communication line protectors eliminate the possibility for noise generated on outside telephone lines to enter systems through CSU/DSU connections, modems or faxes.

Application	Part No.	Pairs Protected
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Analog: Standard Service — trunk lines, analog OPX stations with ring signal

2 position, 2 wire, 1 Pair	ST-AP-01	(1,2)
4 position, 4 wire, 2 Pair	ST-AP-02	(1,2; 3,4)
8 position, 8 wire, 4 Pair	ST-AP	(1,2; 3,4; 5,6; 7,8)
	110-AP	(1,2; 3,4; 5,6; 7,8)

Digital: T1 lines and DSL lines without POTS

2 position, 2 wire, 1 Pair	ST-DC-01	(1,2)
4 position, 4 wire, 2 Pair	ST-DC-02	(1,2; 3,4)
8 position, 8 wire, 4 Pair	ST-DC	(1,2; 3,4; 5,6; 7,8)

Digital: ISDN, digital OPX stations without ring signal

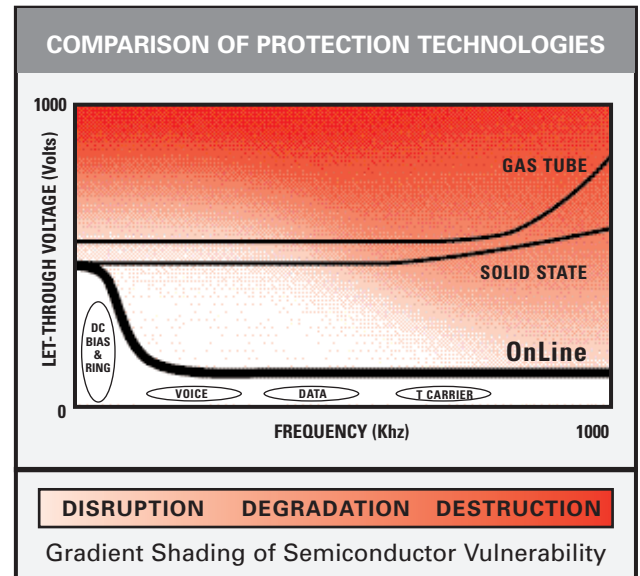
2 position, 2 wire, 1 Pair	ST-DP-01	(1,2)
4 position, 4 wire, 2 Pair	ST-DP-02	(1,2; 3,4)
8 position, 8 wire, 4 Pair	ST-DP	(1,2; 3,4; 5,6; 7,8)
	110-DP	(1,2; 3,4; 5,6; 7,8)

Terminals



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	ST-AP* 110-AP	ST-DC*	ST-DP* 110-DP
Impulse Voltage Performance 10/1000µS, 1500V, 100A Impulses:			
Let-through voltage - line to earth (typical/max.)	320 V/370 V	320 V/370 V	78 V/95 V
Let-through voltage - line to line (typical/max.)	150 V/250 V	150 V/195 V	70 V/105 V
DC Breakdown Voltage (0-1 kV @ 100 V/s):			
Line to earth (typical/range)	320 V/270-370 V	320 V/270-370 V	78 V/60-95 V
Line to line (typical/range)	640 V/540-740 V	320 V/270-370 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
Holding Current	≥150 mA	≥150 mA	≥150 mA
Response Time	<1 ns	<1 ns	<1 ns
Insulation Resistance @ 50 VDC	>100 MΩ	>100 MΩ	>100 MΩ
Capacitance @ 50 VDC, 1 VAC, 10 kHz - 10 MHz			
Line to earth	<200 pf	<200 pf	<200 pf
Line to line	<200 pf	<200 pf	<200 pf
On State Voltage with 1 Amp RMS	<5 V	<5 V	<5 V
Overcurrent Protection (Sneak Current) @ 25° C			
Self resetting (ceramic PTC technology)	300 mA	300 mA	300 mA
Non-resetting (time delay fuse)	1 A	1 A	1 A

* ST in part number indicates screw terminal type protectors. Specifications apply to 1 pair, 2 pair, and 4 pair models.

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