

Convergent Series™ Modular Rackmount Communication Line Protectors: Some face persistent communications and network system performance problems when operating without in-building voice & data line protection or when using conventional technology. Others face performance expectations that demand zero tolerance for downtime. ONEAC communication line protectors are specifically engineered to satisfy these rigorous applications in converged voice/data applications.

Ultimate assurance of system reliability

Leading telecommunication and networking companies employ ONEAC line protectors in their installations for good reason; because they provide greater assurance of network, Voice over Internet Protocol (VoIP) and PBX uptime with a lower service cost than conventional protectors. Events such as system lockups, transmission errors, "no-trouble-found" service calls, shortened component life — all are problems that can result from surge voltages on networking and communications equipment.

Voice and data converging

Gateways that support VoIP applications are the central focus for a wide variety of communications services. T1 facilities connect to the public switched network, providing ISDN PRI or channelized DS1 services. Analog FXO connect outlying locations, that are easier to reach, via analog loops. FXS connect analog stations, providing fax, modem, and voice access. Ethernet and Power over Ethernet (PoE) connections link other gateways, routers, and intranetwork components, or they provide access to WANs and LANs throughout the enterprise.

Wherever copper lines are used, lightning and other transient power sources can gain access and disrupt the enterprise. With the mixture of communications services available today, protection solutions must be tailored to the transmission parameters of the individual links – low-voltage protection for Ethernet and PoE lines and high-voltage protection for T1 and exchange lines.

The ONEAC solution

ONEAC protects all copper paths by which electrical disturbances can enter a system. Providing protection for analog, digital and high-speed data lines from the back room of a convenience store to a large corporate data center. ONEAC's Convergent Series Modular Rackmount Protectors provide the best protection by achieving maximum uptime without inhibiting communication channel performance.

The ONEAC difference

ONEAC Convergent Series protectors for data and telecommunications applications employ StarBalanced™ protection to overcome the limitation of conventionally balanced protectors. In addition, ONEAC's Convergent Series protectors use patented "switched filter technology" that provides transient let-through voltages below the DC breakdown voltage of the protector, in combination with low loss and fast reaction time.

From simple analog protectors with an RJ11 interface to T1 protectors with an RJ48C interface, each is designed for easy installation and no maintenance. The modular rackmount design, for both rack and flat surface mounting, is rugged and built to last – suitable for virtually all environments, from the warehouse to the data center.



*Convergent Series
Modular Communications Line Protectors
mounted in 16-port Rackmount Base*

- **The perfect solution for VoIP and PoE applications:** protecting key data and converged voice/data applications and services.
- **Simple installation:** convenient ground connection and flexible rackmount design make installation a snap.
- **Flexibility to change as your needs change:** modular communication line protector design allows you to mix and match up to 16 protectors per rack.
- **Wide variety of protection:** analog and digital protectors for a wide variety of applications including simple one and two line for telephone, credit card authorization and fax lines as well as DS1/T1, DS0/64 Kbps, ISDN (BRT) & PRI)SL (xDSL), RS232/RS485/RS422. and 10/100BaseT Ethernet and PoE protectors.
- **Robust/solid state overvoltage protection:** lasts longer in the field.
- **High amperage surge impulse design:** provides longer lasting protection.
- **Lower let-through voltage:** extends equipment life.
- **Rugged 1U low-profile design:** saves valuable rack space.
- **Designed & manufactured under ISO 9001:** assures consistent quality and performance
- **FCC, UL and cUL listed:** UL/cUL primary 497; secondary 497A; isolated loop 497B
- **5-year warranty:** your best assurance of product performance and reliability in the industry.
- **Free 24-hour technical support**

Convergent Series Communications Line Protectors: Specifications

Proven to reduce service costs

By removing electrical transients, ONEAC improves system reliability for microprocessor-based products. Look at the evidence — installers of large communications systems using both ONEAC transmission line protectors and ONEAC AC power conditioning report a reduction of 83% in total trouble calls due to hardware problems and 43% fewer calls in which no trouble was found.

Rackmount Base Unit Specifications

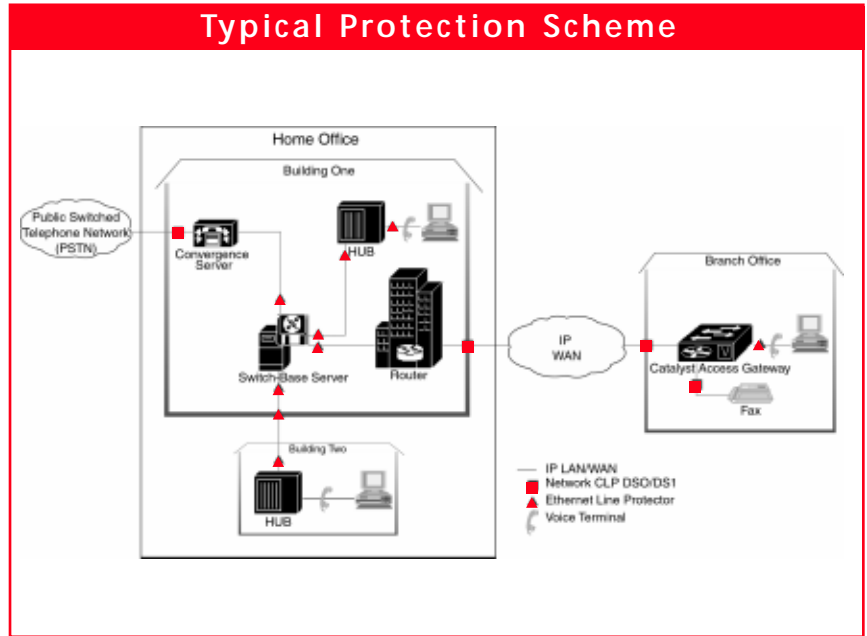
ONEAC part number: RM-16*
of protector ports: 16
Max dimensions (in.): 1.72 (H) x 17.18 (W) x 4.15 (D)
Max dimensions (cm.): 4.5 (H) x 43.6 (W) x 10.5 (D)
Net weight in lbs. (kgs.): 3.27 (1.5)

Surface Mount Base Unit Specifications

ONEAC part number: RM-5**
of protector ports: 5
Max dimensions (in.): 1.72 (H) x 5.95 (W) x 4.15 (D)
Max dimensions (cm.): 4.5 (H) x 15.1 (W) x 10.5 (D)
Net weight in lbs. (kgs.): 1.38 (.63)

ONEAC part number: RM-10**
of protector ports: 10
Max dimensions (in.): 1.72 (H) x 10.95 (W) x 4.15 (D)
Max dimensions (cm.): 4.5 (H) x 27.81 (W) x 10.5 (D)
Net weight in lbs. (kgs.): 2.21 (1.0)

* Fits in standard 19" rack using brackets included.
 ** Surface mount only.



Part Number	RM-AP11 RM-AP14	RM-AD11 RM-AD14	RM-DC11 RM-DC14	RM-DP11/14 RM-DP48C/48S	RM-ELP100	RM-PELP100	RM-DA30
Color Code	Black	Yellow	Blue	Yellow (DP48 Blue)	White	White	White
Application	Analog POTS	POTS, ADSL	xDSL w/out Analog POTS	Digital Stations, DS0/DS1	10/100 Mbps Ethernet	10/100/1000 Mbps Power over Ethernet (PoE)	RS232/422/485
Impulse Voltage Performance @ 10/1000µs, 1.5 kV, 100A							
Let-through voltage-line to line, (typ./max.)	75 V / 100 V	180 V/230 V	100 V / 150 V	50 V / 75 V	45 V / 55 V	45 V / 55 V	32 V / 55 V
Let-through voltage-line to earth, (typ./max.)	310 V / 350 V	310 V / 350V	310 V / 350 V	78 V / 95 V	460 V / 540 V	100 V / 150 V	32 V / 55 V
DC Breakdown Voltage 0-1 kV @ 100 V/sec							
Let-through voltage-line to line, (typ./range)	310 V / 270-350 V	310 V / 270-350 V	310 V / 270-350 V	78 V / 60-95 V	10.5 V / 9-13 V	10.5 V / 9-13 V	32 V / 25-40 V
Let-through voltage-line to earth, (typ./range)	310 V / 270-350 V	310 V / 270-350 V	310 V / 270-350 V	78 V / 60-95 V	460 V / 400-540 V	90 V / 74-101 V	32 V / 25-40 V
Module Loop Resistance @ 25°C each leg (min./max.)	12 Ω / 18 Ω	3 Ω / 6 Ω	3 Ω / 6 Ω	3 Ω / 6 Ω	.3 Ω	.3 Ω	.3 Ω
Holding Current	>150 mA	>150 mA	>150 mA	>150 mA	NA	NA	>150 mA
Response Time	<1 ns	<1 ns	<1 ns	<1 ns	<5 ns	<5 ns	<1 ns
Insulation Resistance	>7.5 MΩ	>100 MΩ	>100 MΩ	>7.5 MΩ	>750 kΩ	>750 kΩ	>100 MΩ
Capacitance @ 50 VDC, 1VAC, 10 khz - 1 MHz (line to line/line to earth)	<150pf / <75pf	<150pf / <75pf	<150pf / <75pf	<150pf / <75pf	@ 0 VDC <75pf / <75pf	@ 0 VDC <75pf / <75pf	@ 0 VDC <50pf / <50pf
On-State Voltage @ 1 Amp	<5 V	<5 V	<5 V	<5 V	NA	NA	<5 V
Overcurrent Protection @ 25°C							
Self-resetting (PTC)	300 mA	300 mA	300 mA	300 mA	NA	NA	NA
Non-resetting (fuse)	1.1 A	1.1 A	1.1 A	1.1 A	NA	NA	NA
Regulatory							
UL Primary/Secondary/Isolated loop	497 / 497A	497 / 497A	497 / 497A	497 / 497A	497B	497B	497B
FCC	PT 68	PT 68	PT 68	PT 68	NA	NA	NA
Maximum Dimensions in Inches (cm) - (H)	1.3 (3.3)	1.3 (3.3)	1.3 (3.3)	1.3 (3.3)	1.3 (3.3)	1.3 (3.3)	1.3 (3.3)
Maximum Dimensions in Inches (cm) - (W)	0.75 (2)	0.75 (2)	0.75 (2)	0.75 (2)	0.75 (2)	0.75 (2)	0.75 (2)
Maximum Dimensions in Inches (cm) - (D)	4.0 (10)	4.0 (10)	4.0 (10)	4.0 (10)	4.0 (10)	4.0 (10)	4.0 (10)
Net/Ship Weight	3.5 oz. (99.23 grams)	3.5 oz. (99.23 grams)	3.5 oz. (99.23 grams)	3.5 oz. (99.23 grams)	3.5 oz. (99.23 grams)	3.5 oz. (99.23 grams)	3.5 oz. (99.23 grams)

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(800) 327 8801 OPT. 2 in USA AND CANADA

+44 (0) 2380 610311 in UK AND EUROPE

27944 N. Bradley Road, Libertyville, IL 60048 Phone 847 816-6000 FAX 847 680-5124

George Curl Way, Southampton, Hampshire SO18 2RY, UK FAX +44 0 2380 612039