

AEGIS Solutions



Contents

<i>Description</i>	<i>Page</i>
Introduction	V3-T2-2
Product Overview	V3-T2-5
SPD Series for Integration into Electrical Distribution Equipment	V3-T2-7
SPD Series for Mounting External to Electrical Distribution Equipment	V3-T2-11
SPD MAX Series Surge Protection	V3-T2-16
SPC Surge Protective Device	V3-T2-20
CVX050/100	V3-T2-24
SP1 Surge Protective Device	V3-T2-27
SP2 Surge Protective Device	V3-T2-29
AEGIS Powerline Filters	
Features, Benefits and Functions	V3-T2-32
Standards and Certifications	V3-T2-33
Catalog Number Selection	V3-T2-33
Technical Data and Specifications	V3-T2-34
Sag Ride-Through (SRT2)	V3-T2-36
Electronic Voltage Regulator (EVR)	V3-T2-40
Power-Sure 800	V3-T2-42
Power-Suppress 100	V3-T2-46

AEGIS Powerline Filters

Product Description

Eaton AEGIS™ Series line filters and surge protectors are specifically designed to protect sensitive electronics from hazards that exist within a facility. The AEGIS Series hybrid filter reacts instantly to changes in voltage regardless of phase angle or polarity. In comparison to other line filters, this technology provides a higher level of suppression, reliability and life expectancy.

Application Description

By providing surge protection and line filtering, AEGIS devices can suppress the noise and transients prevalent throughout the power distribution system to support reliable operations in applications including:

- Instrumentation
- Water treatment facilities
- Pulp and paper operations
- Refrigeration and heating plants
- Petrochemical and refinery
- Food processing
- Textiles
- Automotive assembly
- Manufacturing operations

No matter where transients originate, the application of AEGIS Series devices will help protect sensitive electronic equipment including:

- Programmable logic controllers (PLCs)
- Scanning devices
- Automatic teller machines (ATMs)
- Cash registers
- Alarm systems
- Microprocessor-controlled
- OEM products
- Robotics
- CAD/CAM systems
- Control equipment
- Medical electronics and devices

AEGIS Series devices are available in a variety of common voltages and configurations.

Why Should Sensitive Electronic Loads be Protected?

PLC manufacturers and service technicians recommend the use of power line filters and surge suppressors to prevent downtime and equipment damage due to surges and electrical line noise. Studies have shown that failure to protect sensitive electronic loads costs American manufacturing and commercial and service industries over \$39 billion per year in lost time and revenue. Preventing these losses is a major cost-saving opportunity.

2.1

SPD, Power Conditioning, PF Capacitors and Harmonic Filters

Surge Protection and Power Conditioning

2

Features, Benefits and Functions

- Compact design with multiple mounting options
- Meets new UL safety standards for surge and filtering protection
- AC models available with up to 80 kA surge current capacity ratings
- DIN rail mounting available on most models
- Contains no replaceable parts or items that require periodic maintenance
- Alarm contact available
- Five- to ten-year warranty standard dependent on model; warranty extended an additional five years if registered

The breadth of the AEGIS Series' features, options and configurations ensures that the correct unit is available for all critical electrical applications, including control panels, security systems, measurement systems, lab equipment and other point-of-use applications.



The AEGIS PH Series Protects Critical Loads up to 20 A



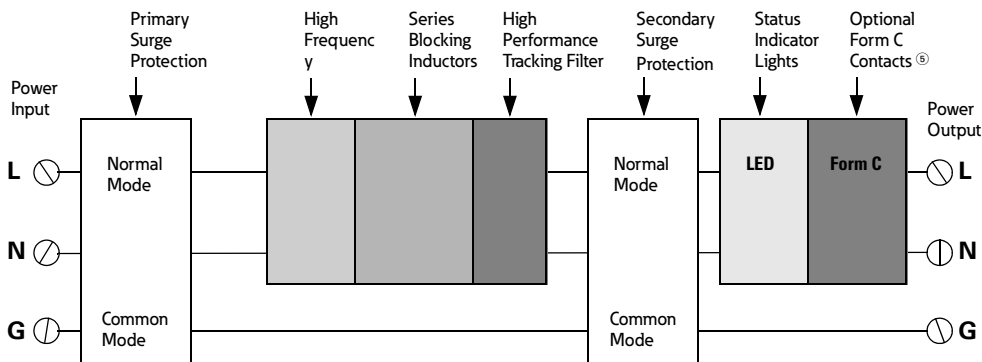
The AEGIS PV Series Protects Critical Loads up to 5 A

AEGIS Summary

Specifications	PH	PV	CF	CN
Voltage	120/240 Vac	120/240 Vac	120/240 Vac 24/48 Vdc	120/240 Vac 24/48 Vdc
Current range	3–20 A	1–5 A	10–60 A	30 A
DIN mounting	Yes	Yes	Yes ^①	No
UL 1283 5th Edition & UL 1449 3rd Edition	Yes	Yes	Yes ^②	Yes ^②
Filtering	Yes	Yes	Yes	No
EMI/RFI filtering attenuation at 100 kHz	75 dB	50 dB	40 dB	N/A
L to G, L to N & N to G protection modes	Yes	Yes	Yes	Yes
Peak kA per phase / mode	60/30	40/20	80/40	80/40
UL nominal discharge current (I _n)	5 kA	5 kA	5 kA	5 kA
UL voltage protection rating (VPR) L–G / L–N ^③	330/400	330/400	500/500	500/500
Short-circuit current rating (SCCR)	5 kA	5 kA	10 kA	10 kA
Alarm contacts	Yes	No	Yes ^④	No
Standard warranty / registered warranty (years)	10/15	10/15	5/10	5/10
Communication line protection (UL 497A)	No	No	Yes ^④	No

AEGIS PH and PV Series Hybrid Powerline Filters

Three-Wire Design has Normal and Common Mode Protection (L-N, L-G, N-G)



Notes

- ① Optional on 10 A and 30 A models only.
- ② 120 Vac models only.
- ③ Ratings shown for 120 Vac models, other voltages listed in Technical Data.
- ④ Optional on 30 A and 60 A models only.
- ⑤ Available on the PH Series only.



AEGIS Products

Standards and Certifications

- UL 1449 Fourth Edition
- UL 1283 Fifth Edition
- Built in an ISO® 9001 facility
- Designed and tested in accordance with:
 - IEEE® C62.41.1
 - IEEE C62.41.2
 - IEEE C62.43-2005
 - IEEE C62.45-2002
 - IEEE C62.48-2005
 - IEEE C62.62-2010

Catalog Number Selection

AEGIS

AG

Product Family/OEM	Protection/Filtering	Voltage	Amperage	Options
AG	PH = Premium protection with hybrid filtering	120 = 120 Vac 240 = 240 Vac	03 = 3 A 05 = 5 A 10 = 10 A 15 = 15 A 20 = 20 A	
	PV = Premium protection with filtering	120 = 120 Vac 240 = 240 Vac	01 = 1 A 03 = 3 A 05 = 5 A	
	CF = Critical protection with filtering	120 = 120 Vac 230 = 230 Vac 240 = 240 Vac 024 = 024 Vdc 048 = 048 Vdc	10 = 10 A 15 = 15 A 30 = 30 A 60 = 60 A	DIN = DIN mount ^① DIN2 = DIN2 mount ^② CP = Compact ^③ RJ = Telcom protection and Form C status contacts ^④
	CN = Critical protection without filtering	120 = 120 Vac 230 = 230 Vac 024 = 024 Vdc 048 = 048 Vdc	30 = 30 A	

Notes

- ① Not available for 10 A, 230 V or 240 V versions.
- ② Only available for 10 A, 120 V or 240 V CF version.
- ③ Only available for 10 A, 120 V CF version.
- ④ Only available for 30 A and 60 A CF version.

2.1

SPD, Power Conditioning, PF Capacitors and Harmonic Filters

Surge Protection and Power Conditioning

Technical Data and Specifications

2

AEGIS PH and PV

Specifications	PH 120 Vac 3, 5, 10, 15, 20 A	PH 240 Vac 3, 5, 10, 15, 20 A	PV 120 Vac 1, 3, 5 A	PV 240 Vac 1, 3, 5 A
DIN mounting	Yes	Yes	Yes	Yes
UL 1283 5th Edition and UL 1449 3rd Edition	Yes	Yes	Yes	Yes
Filtering	Yes	Yes	Yes	Yes
EMI/RFI filtering attenuation at 100 kHz	75 dB	75 dB	50 dB	50 dB
L-G, L-N and N-G protection modes	Yes	Yes	Yes	Yes
Peak kA per phase/mode	60/30	60/30	40/20	40/20
UL nominal discharge current (I _n)	5 kA	5 kA	5 kA	5 kA
UL voltage protection rating (VPR) L-G / L-N / N-G	330/400/330	600/700/600	330/400/330	600/700/600
MCOV	150	275	150	275
Short-circuit current rating (SCCR)	5 kA	5 kA	5 kA	5 kA
Alarm contacts	Yes	Yes	No	No
Standard warranty / registered warranty (years)	10/15	10/15	10/15	10/15
Communication line protection (UL 497A)	No	No	No	No

AEGIS CF

Specifications	CF 24 Vdc		CF 48 Vdc		CF 120 Vac			CF 240 Vac				
	10 A	10 A	10 A	10 A	10 A	30 A	60 A	10 A	30 A	60 A		
DIN mounting	Yes	No	Yes	No	Yes	No	Yes ^①	Yes ^①	Yes	No	No	Yes ^①
UL 1283 5th Edition and UL 1449 3rd Edition	—	—	—	—	Yes	Yes	Yes	Yes	Yes	—	—	—
UL 1283 4th Edition	—	—	—	—	—	—	—	—	—	Yes	Yes	Yes
Filtering	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EMI/RFI filtering attenuation at 100 kHz	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB
L-G, L-N and N-G protection modes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Peak kA per phase/mode	6/2	6/2	20/6	20/6	30/10	40/20	80/40	80/40	30/10	24/8	56/24	56/24
UL nominal discharge current (I _n)	N/A	N/A	N/A	N/A	3 kA	5 kA	5 kA	5 kA	3 kA	N/A	N/A	N/A
UL voltage protection rating (VPR) L-G / L-N / N-G	N/A	N/A	N/A	N/A	500/500/500	500/500/500	500/500/500	500/500/500	900/800/900	N/A	N/A	N/A
MCOV	30	30	50	50	150	150	150	150	275	275	275	275
Short-circuit current rating (SCCR)	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA
Alarm contacts	No	No	No	No	No	No	No	No	No	No	No	No
Standard warranty / registered warranty (years)	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10
Communication line protection (UL 497A)	No	No	No	No	No	No	Yes ^①	Yes ^①	No	No	Yes ^①	Yes ^①

Note

① Optional.

AEGIS CN

Specifications	24 Vdc 30 A	48 Vdc 30 A	120 Vac 30 A	240 Vac 30 A
DIN mounting	No	No	No	No
UL 1283 5th Edition and UL 1449 3rd Edition	—	—	Yes	—
UL 1283 4th Edition	—	—	—	Yes
Filtering	No	No	No	No
EMI/RFI filtering attenuation at 100 kHz	N/A	N/A	N/A	N/A
L–G, L–N and N–G protection modes	Yes	Yes	Yes	Yes
Peak kA per phase/mode	20/6	46/20	80/40	56/24
UL nominal discharge current (I _n)	N/A	N/A	5 kA	N/A
UL voltage protection rating (VPR) L–G / L–N / N–G	N/A	N/A	500/500/500	N/A
MCOV	30	50	150	275
Short-circuit current rating (SCCR)	10 kA	10 kA	10 kA	10 kA
Alarm contacts	No	No	No	No
Standard warranty / registered warranty (years)	5/10	5/10	5/10	5/10
Communication line protection (UL 497A)	No	No	No	No

2

Maximum EMI/RFI Attenuation—MIL-STD-220

Model	10 kHz	100 kHz	1 MHz	10 MHz	100 MHz	Maximum Attenuation Frequency
AGPH120AG	30 dB	74 dB	76 dB	37 dB	36 dB	101 dB at 0.5 MHz
AGPV120AG	27 dB	56 dB	55 dB	36 dB	28 dB	66 dB at 0.085 MHz
AGCF12010-CP	16 dB	35 dB	62 dB	40 dB	50 dB	68 dB at 1.25 MHz
AGCF12010-DIN	16 dB	35 dB	56 dB	29 dB	51 dB	66 dB at 0.7 MHz
AGCF12010	17 dB	35 dB	64 dB	33 dB	51 dB	64 dB at 1.0 MHz
AGCF12030	24 dB	44 dB	58 dB	42 dB	53 dB	67 dB at 0.6 MHz
AGCF12060	20 dB	48 dB	53 dB	29 dB	46 dB	69 dB at 0.4 MHz

Let-Through Voltages Based on IEEE Std. C62.62-2010 Testing Waveforms ①

Test Impulse	AEGIS Series							
	AGPH120AG	AGPV120AG	AGCF12010	AGCF12010-DIN	AGCF12010-CP	AGCF12030AGx	AGCF12060AGx	AGCN12030
IEEE Category A 100 kHz ring wave 6000 V, 200 A	25 V	30 V	150 V	300 V	300 V	150 V	90 V	400 V
IEEE Category B 100 kHz ring wave 6000 V, 500 A	35 V	40 V	330 V	400 V	400 V	330 V	230 V	500 V
IEEE Category B combination wave 6000 V, 3000 A (UL 1449-3 VPR)	360 V	370 V	470 V	480 V	460 V	460 V	450 V	460 V

Note

① All tests conducted on 120 Vac units.