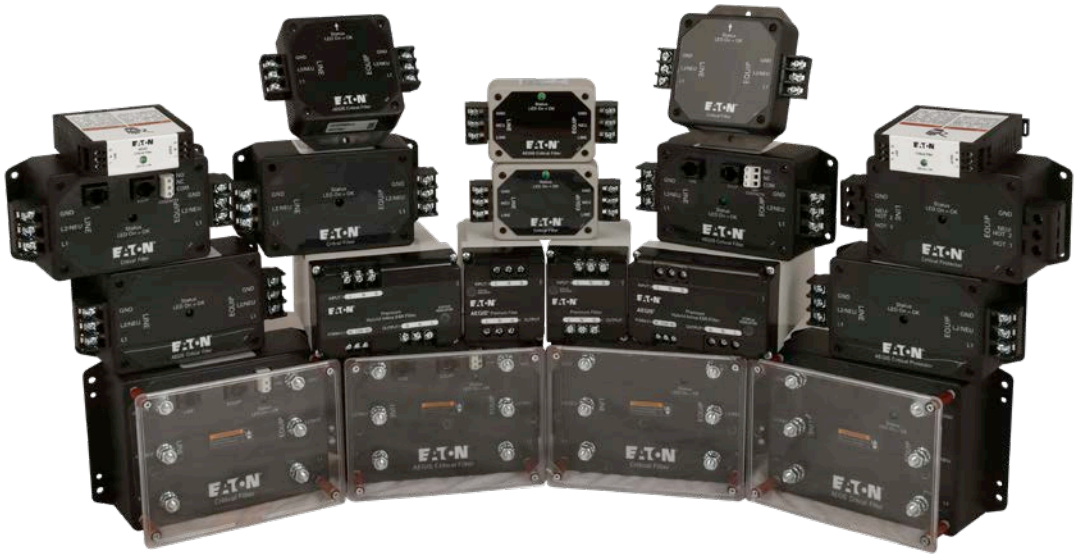
Electronic equipment protection for reliable operations



There is an increasing need (or requirement) of surge protection and line filtering in today's distribution systems.

Studies have shown that the failure to protect sensitive electronic loads cost the American manufacturing, commercial and services industries more than $39 billion per year in lost time and revenue. This underscores the need for facility-wide surge protection applied at all stages of the electrical distribution system, from the electrical service entrance down to critical single-phase loads.

With a broad-range of devices, the Eaton AEGIS™ series is helping original equipment manufacturers (OEMs) adopt best-in-class surge and line protection solutions that meet specific requirements in global commercial and industrial applications to support reliable operation and reduced maintenance costs due to damaged electrical equipment.

Powering Business Worldwide

AEGIS delivers a higher level of system protection

Surge suppressors are like a "pressure relief valve" on the electrical system. Although effective at handling high-energy disturbances, internal components will not activate until the disturbance reaches a designated clamping voltage.

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.

By providing surge protection and filtering, AEGIS protective devices can suppress the noise and transients prevalent throughout the power distribution system to help ensure critical equipment is always operating in peak condition in applications including:

- Instrumentation
- Water treatment facilities
- Pulp and paper operations
- HVAC systems
- Petrochemical and refinery installations
- Food processing
- Textiles
- Automotive assembly
- Manufacturing operations
- Medical and lab testing equipment
- PLC control systems

No matter where transients originate, application of AEGIS series units on critical control panels and other microprocessor dependent devices will help ensure that equipment is protected with the safest and most reliable surge and line protective devices available. Units are available in common single-phase voltages, and in a variety of surge current capacity ratings and levels of line filtration. Mounting and remote indication options are also available.

Standards and certifications

UL® 1449 4th Edition is the latest and most significant set of safety tests a surge protection device (SPD) manufacturer must pass before a product can be used to protect devices connected to the power distribution system. UL 1283 7th Edition is the standard for electromagnetic interference (EMI) filters connected to 600 V or lower circuits.

Customers needing a line filter incorporating both surge protection and EMI filtering should look for devices that are UL 1449 4th Edition-certified and complementary listed to UL 1283 7th Edition. These types of line filters employ surge suppression circuitry and filtering to prevent downtime and equipment damage due to transients and electrical line noise. Eaton AEGIS series devices are among the first in the industry to meet these standards, which became mandatory in April 2014.

Features

- 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
- RoHS compliant

The breadth of Eaton's 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.

Configurations

Eaton AEGIS series devices are available in a wide range of features and ratings for a variety of applications.

Catalog numbering system

AG _____ _____ _____ _____

Product family
AG

Protection/filtering	Voltage	Amperage	Options
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 **240** = 240 Vac	**10** = 10 A	**DIN2** = DIN mount (1-inch wide) **CP** = Compact ①
	024 = 24 Vdc **048** = 48 Vdc	**10** = 10 A	**DIN** = DIN mount (2.5-inch wide)
	230 = 230 Vac	**15** = 10 A	Optional DIN mount kit DINRAILKIT-30ACF
	120 = 120 Vac **230** = 230 Vac	**30** = 30 A	**RJ** = Telcom protection and Form C status contacts Optional DIN mount kit DINRAILKIT-30ACF
		60 = 60 A ②	**RJ** = Telcom protection and Form C status contacts Optional DIN mount kit DINRAILKIT-60ACF
CN = Critical protection without filtering	**120** = 120 Vac **230** = 230 Vac **024** = 24 Vdc **048** = 48 Vdc	**30** = 30 A	

① Only available in the 10 A, 120 Vac CF version.

② Only available in the 120 Vac version.

AEGIS summary

Specifications	PH	PV	CF	CN
Voltage	120/240 Vac	120/240 Vac	120/240 Vac ① 24/48 Vdc	120/230 Vac ① 24/48 Vdc
Current range	3–20 A	1–5 A	10–60 A	30 A
DIN mounting	Yes	Yes	Yes ②	No
UL 1283 7th Edition and UL 1449 4th Edition	Yes	Yes	Yes ③	Yes ③
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 and 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 ④	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 ⑤	No
Standard warranty / registered warranty (years)	10/15	10/15	5/10	5/10
Communication line protection (UL 497A)	No	No	Yes ⑤	No

① Voltage rating of 240 Vac applies to CF24010-DIN2 unit only. Voltage rating of 230 Vac applies to 15 and 30 A units.

② Standard on 10 A, optional on 15 A, 30 A and 60 A with DIN mounting kit.

③ Vac models only.

④ Ratings shown for 120 Vac models; other voltages listed in Technical Data.

⑤ Optional on 30 A and 60 A models only.

AEGIS PH and PV specifications

	PH 120 Vac	PH 240 Vac	PV 120 Vac	PV 240 Vac
Specification	**3, 5, 10, 15, 20 A**	**3, 5, 10, 15, 20 A**	**1, 3, 5 A**	**1, 3, 5 A**
DIN mounting	Yes	Yes	Yes	Yes
UL 1283 7th Edition and UL 1449 4th Edition	Yes	Yes	Yes	Yes
RoHS compliant	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

CF specifications

	CF 24 Vdc		CF 48 Vdc		CF 120 Vac				CF 230 Vac		CF 240 Vac
Specifications	**10 A**	**10 A**	**10 A**	**10 A**	**10 A**	**10 A**	**30 A**	**60 A**	**15 A**	**30 A**	**10 A**
DIN mounting	Yes	No	Yes	No	Yes	No	Yes ①	Yes ①	No	Yes ①	Yes
UL 1283 7th Edition and UL 1449 4th Edition	—	—	—	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RoHS compliant	—	—	—	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Filtering	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
L–G, L–N and N–G protection modes	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	24/8	56/24	30/10
UL nominal discharge current (I_n)	N/A	N/A	N/A	N/A	3 kA	5 kA	5 kA	5 kA	N/A	N/A	3 kA
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	N/A	N/A	900/800/900
MCOV	30	30	50	50	150	150	150	150	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
Alarm contacts	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
Communication line protection (UL 497A)	No	No	No	No	No	No	Yes ①	Yes ①	No	Yes ①	No

① Optional.

AEGIS CN specifications

	24 Vdc	48 Vdc	120 Vac	230 Vac
Specifications	**30 A**	**30 A**	**30 A**	**30 A**
DIN mounting	No	No	No	No
UL 1283 7th Edition and UL 1449 4th Edition	—	—	Yes	Yes
RoHS compliant	—	—	Yes	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

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Printed in USA
Publication No. PA158002EN / Z21479
September 2018

Powering Business Worldwide