Backup power, UPS, surge and IT power distribution

Surge protection (SPD) products—AEGIS powerline filters

Contents

General Description **34.3-2**
AEGIS Powerline Filters 34.3-2

Layouts and Dimensions **34.3-4**
AEGIS Dimensions 34.3-4

Application Data **34.3-7**
Let-Through Voltages 34.3-7
Specifications 34.3-7

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AEGIS Powerline Filters

AEGIS Solutions

General 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 surge suppressors and filters to prevent downtime and equipment damage due to surges and electrical line noise. One study shows failure to protect sensitive electronic loads costs American manufacturing, commercial and service industries over $39 billion per year in lost time and revenue. Preventing these losses is a major cost-saving opportunity.

Features, Benefits and Functions

AEGIS powerline filters protect against the full spectrum of transient disturbances.

AEGIS filters the entire sine wave and is effective against both frequently occurring low-energy and occasional high-energy transients. High-energy transients can create immediate damage, while low-energy transients cause microprocessor failure over time.

The AEGIS PH Series Protects Critical Loads up to 20 A

The AEGIS PV Series Protects Critical Loads up to 5 A

Catalog Numbering Selection

Table 34.3-1. AEGIS Catalog Numbering System

AG

Product Family/OEM
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** = DIN2 mount (10-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** = 15 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-30ACF
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 Dimensions

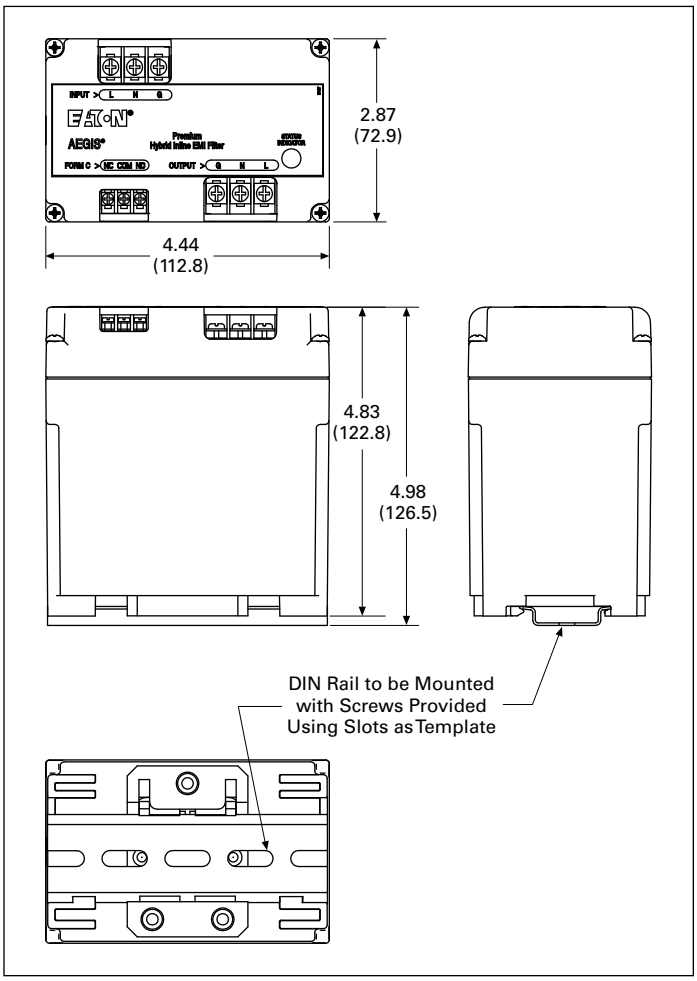

Figure 34.3-1. AGPHxxxxx Dimensions in Inches (mm)

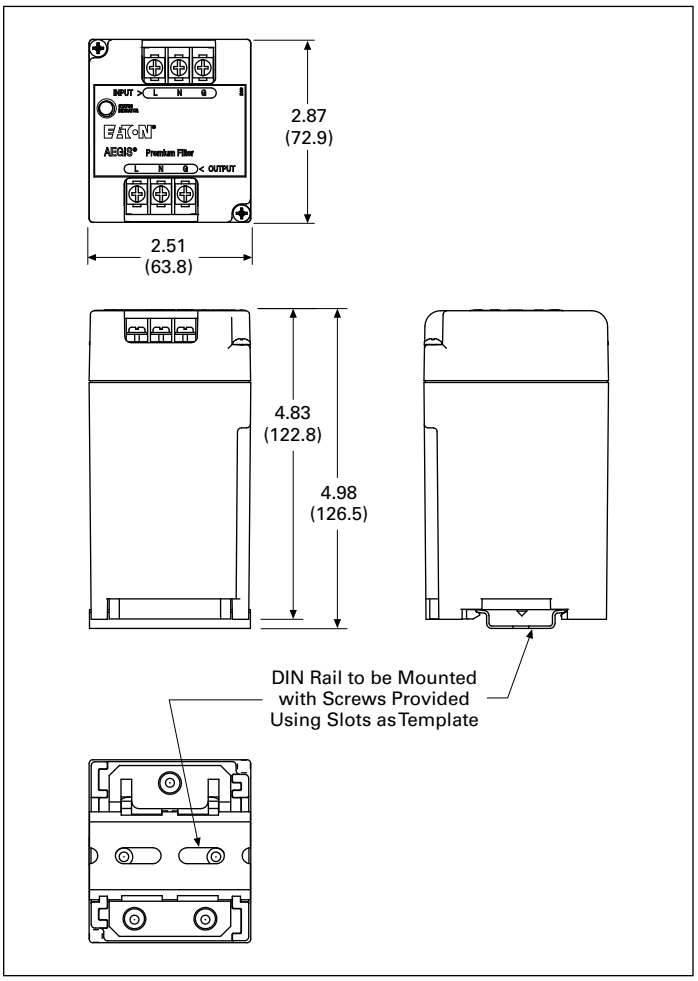

Figure 34.3-2. AGPVxxxxx Dimensions in Inches (mm)

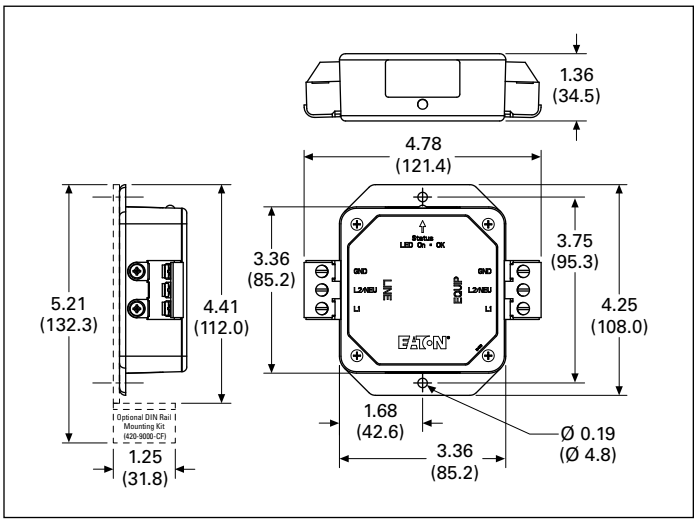

Figure 34.3-3. AGCFxxx10 Dimensions in Inches (mm)

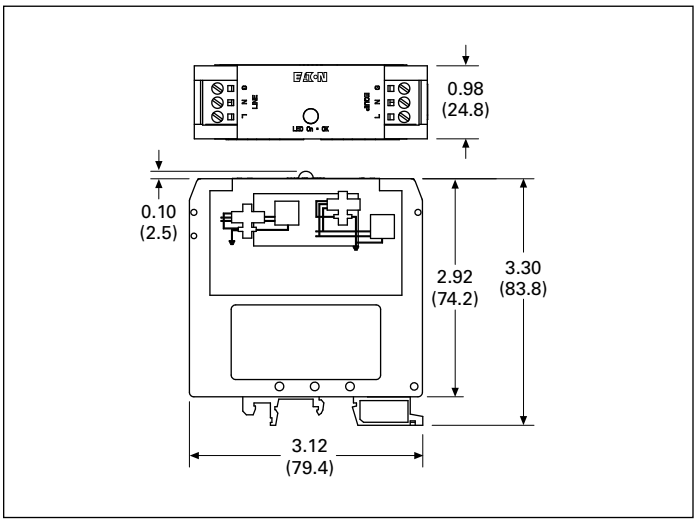

Figure 34.3-5. AGCFxxx10-DIN Dimensions in Inches (mm)

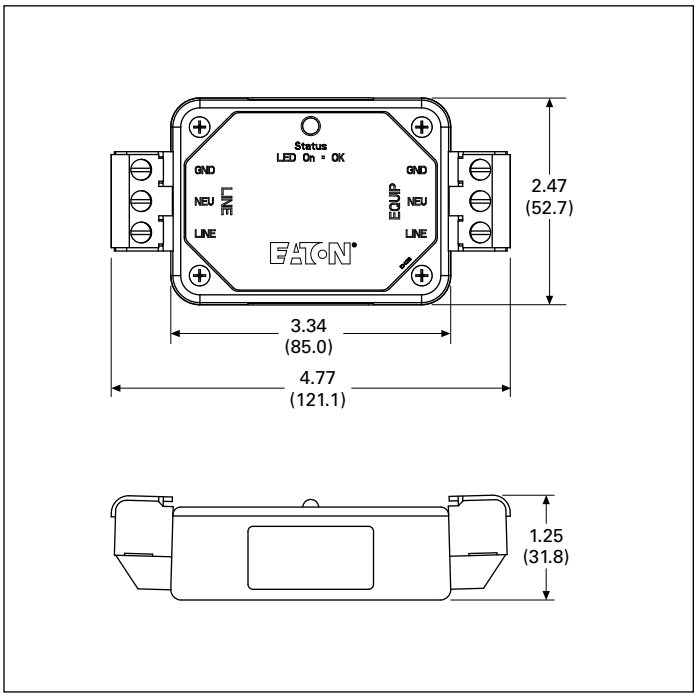

Figure 34.3-4. AGCF12010-CP Dimensions in Inches (mm)

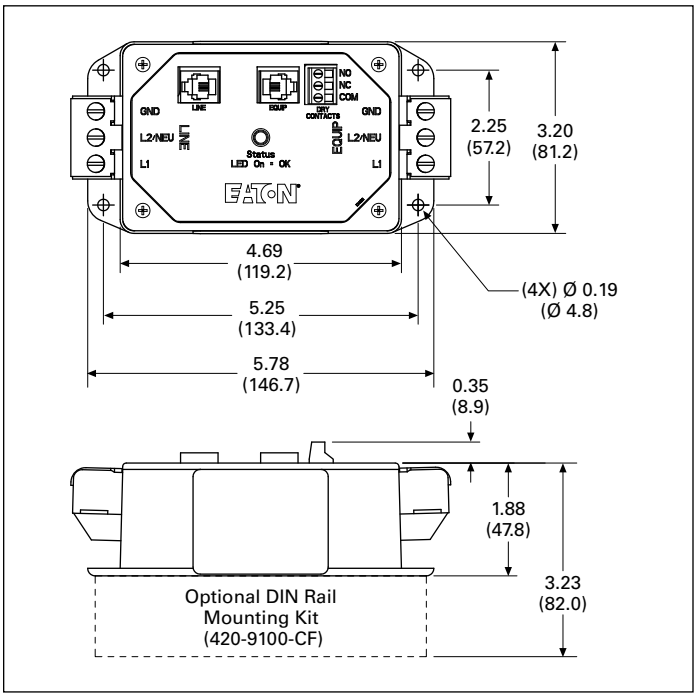

Figure 34.3-6. AGCFxxx30xxx Dimensions in Inches (mm)

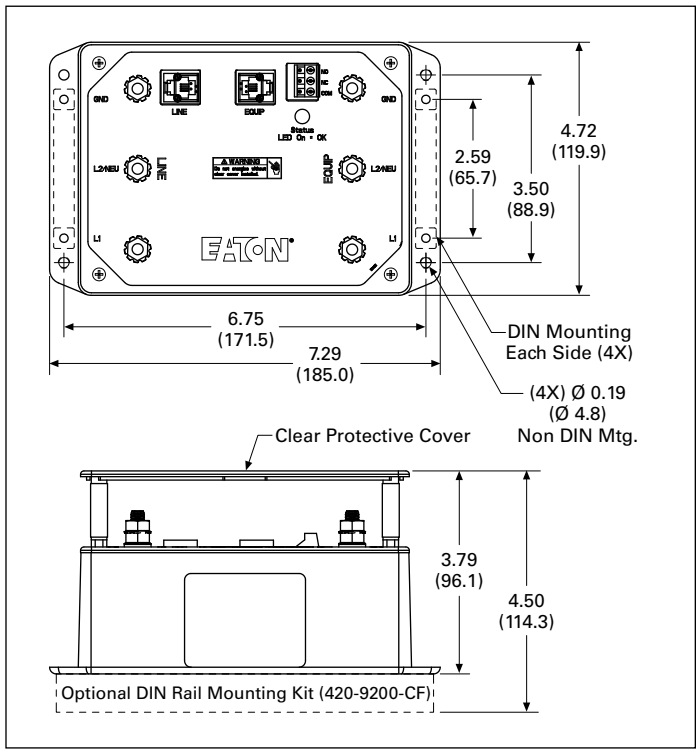

Figure 34.3-7. AGCFxxx60xxx Dimensions in Inches (mm)

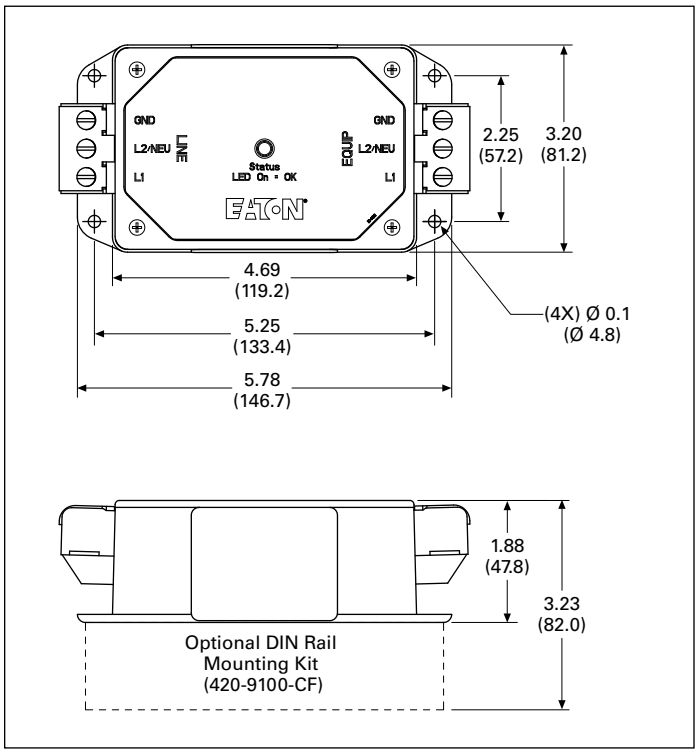

Figure 34.3-8. AGCNxxx30 Dimensions in Inches (mm)

Let-Through Voltages

Table 34.3-2. Let-Through Voltages Based on IEEE Std. C62.62-2010 Testing Waveforms ①

Test Impulse	AEGIS Series							
	AGPH120xx	AGPV120xx	AGCF12010	AGCF12010-DIN	AGCF12010-CP	AGCF12030xxx	AGCF12060xxx	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® 1449-4 VPR)	360 V	370 V	470 V	480 V	460 V	460 V	450 V	460 V

① All tests conducted on 120 Vac units.

Specifications

Table 34.3-3. AEGIS Series Specifications

Rating	AEGIS series			
	PH	PV	CF	CN
Application	Single-phase, two- or three-wire grounded systems	Single-phase, two- or three-wire grounded systems	Single-phase, two- or three-wire grounded systems	Single-phase, two- or three-wire grounded systems
Input voltage range—AC	100–127 Vac, 200–240 Vac	100–127 Vac, 200–240 Vac	100–127 Vac, 200–240 Vac ①	100–127 Vac, 200–230 Vac ①
Input voltage range—DC	N/A	N/A	5–38 Vdc, 24–65 Vdc, 48–149 Vdc, 150–300 Vdc	5–38 Vdc, 24–65 Vdc, 48–149 Vdc, 150–300 Vdc
Amperage	3, 5, 10, 15, and 20 A	1, 3, and 5 A	10, 15, 30, and 60 A	30 A
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Protection modes	L–N, L–G, and N–G	L–N, L–G, and N–G	L–N, L–G, and N–G	L–N, L–G, and N–G
MCOV	150 V and 275 V	150 V and 275 V	150 V and 275 V	150 V and 275 V
Noise attenuation (normal mode)	74 dB at 100 kHz	56 dB at 100 kHz	48 dB at 100 kHz	N/A
Filter bandwidth	10 kHz to 100 MHz	10 kHz to 100 MHz	10 kHz to 100 MHz	N/A
Peak surge current per phase / per mode	60 kA / 30 kA	40 kA / 20 kA	Up to 120 kA / 60 kA	Up to 80 kA / 40 kA
Operating temperature	–40 °F to +122 °F (–40 °C to +50 °C)	–40 °F to +122 °F (–40 °C to +50 °C)	–40 °F to +140 °F (–40 °C to +60 °C)	–40 °F to +140 °F (–40 °C to +60 °C)
Response time	<1 nanosecond	<1 nanosecond	<1 nanosecond	<1 nanosecond
Agency approvals	UL 1449 4th Edition, UL 1283 7th Edition and CSA C22.2 No 269.4-17 and No 8-13	UL 1449 4th Edition, UL 1283 7th Edition and CSA C22.2 No 269.4-17 and No 8-13	xxCF230xx UL 1283 7th Edition, EMI filter	xxCNxxx30 UL 1449, UL 1283 7th Edition, EMI filter
			xxCF120xx UL 1449 4th Edition, UL 1283 7th Edition	xxCN12030 UL 1449 4th Edition
			xxCFxxx10-DIN2 UL 1449 4th Edition, IEC 61000-4.5	xxCFxxx10-DIN2 UL 1449 4th Edition, IEC61000-4.5
UL 1449 Type	Type 2	Type 2	Type 2	Type 2
Warranty ②	15 years	15 years	10 years	10 years
Status indicator	LED	LED	LED	LED
Form C contacts	Yes	No	Yes ①	No
Communication line protection (UL 497A)	No	No	Optional	No
External circuit breaker ③	Eaton P/N: FAZ-C25/1-NA-SP or equiv. 25 A circuit breaker	Eaton P/N: FAZ-C7/1-NA-SP or equiv. 7 A circuit breaker	15 A—Eaton P/N: FAZ-C15/1-NA-SP or equiv. 15 A circuit breaker	Eaton P/N: FAZ-C40/1-NA-SP or equiv. 40 A circuit breaker
			30 A—Eaton P/N: FAZ-C40/1-NA-SP or equiv. 40 A circuit breaker	
			60 A—Eaton P/N: EGC3100FFG or equiv. 100 A circuit breaker	

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 With product registration.
③ External circuit breaker sold separately.
④ Optional on 30 A and 60 A models only.

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