Technical Data

Original Instructions

Surge Protector and Filter Specifications

Bulletin Numbers 4983-DC, 4983-DD, 4983-DH, 4983-DS, 4983-PF

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Updated the Bulletin Numbers in the illustration from 4983-DCxxx-03 to 4983-DCxxx-10 and 4983-DCxxx-05 to 4983-DCxxx-20.	14

DIN Rail Heavy Duty AC Surge Protectors, 4983-DH

Bulletin 4983-DH is a heavy-duty surge protector. This SPD combines a high-energy varistor (MOV) network with a gas discharge tube to increase performance in protection level, life duration, and suppression of leakage current. The Bulletin 4983-DH product is connected in parallel.

Features

- Highest energy absorption capability of all Bulletin 4893 products
- Robust design avoids unnecessary replacement
- DIN Rail mounted Type 2
- Visual status indicator (on unit)
- Remote status indicator

Product Selection

- N = Neutral
- L/N = Line/neutral
- N/G = Neutral/ground

AC Network	Connection Mode	No. of Poles and Devices Needed	Max Continuous Operating Voltage (MCOV) (U_c) [V AC]	Lightning Current 10/350 µs (I_{imp}) [kA]	Max Discharge Current 8/20 µs (I_{max}) [kA]	Nominal Discharge Current 8/20 µs (I_n) [kA]	Protection Level (U_p) [kV]	Measured Limited Voltage [V_{pk}]	Appropriate Fusing(1) [A Max.]	Cat. No.
120	L/G or N/G	1	150	25	70	20	1.0	1580	250	4983-DH120-25
	L/G, N/G	2								
120/208	L1/G, L2/G, L3/G, N/G	4								
230/400	L/G or N/G	1	330	25	70	20	1.5	1850	250	4983-DH300-25
	L/G, N/G	2								
	L1/G, L2/G, L3/G, N/G	3								
	L1/G, L2/G, L3/G, N/G	4								
277V/480 Y	L1/G, L2/G, L3/G, N/G	4								
230/400 Y	L/G or N/G	1	330	50	70	20	1.5	1580	500	4983-DH300-50
	L/G, N/G	2								
	L1/G, L2/G, L3/G or N/G	3								
	L1/G, L2/G, L3/G, N/G	4								
277/480 Y	L1/G, L2/G, L3/G, N/G	4								

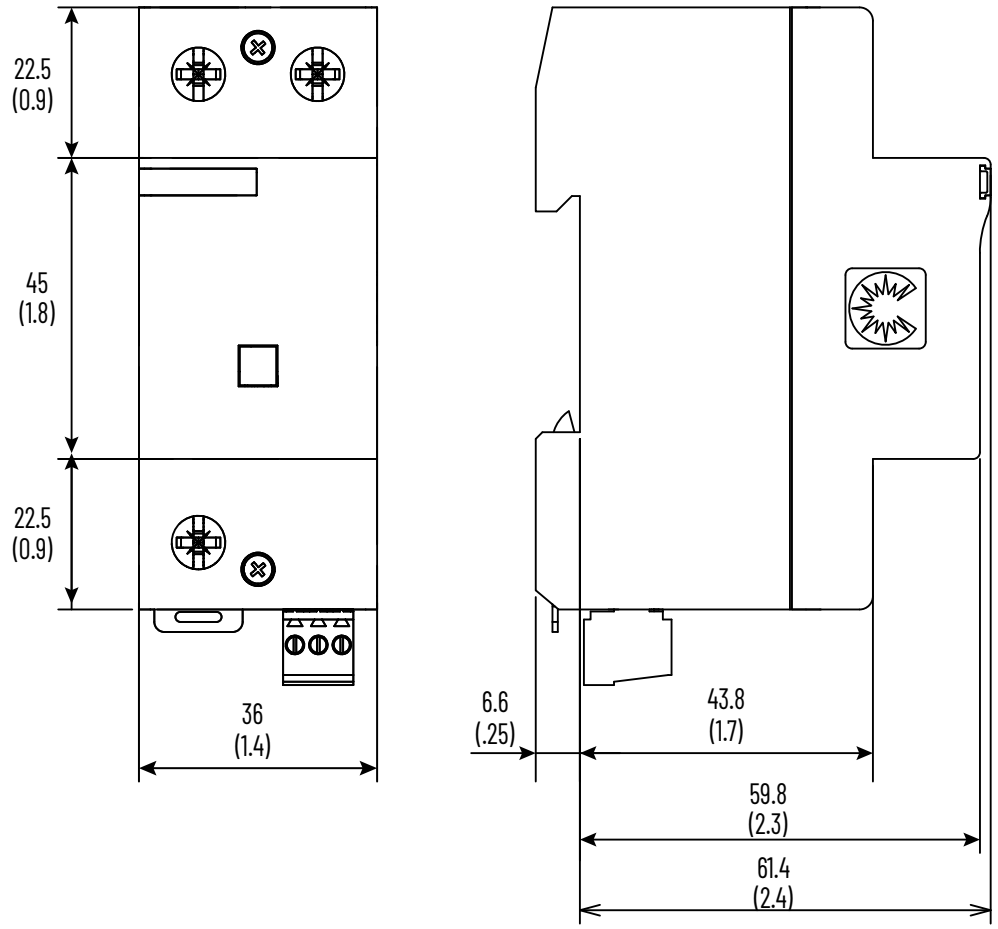
(1) Fuses required to protect the surge protector in case of short-circuit failure. They must be installed in series with each pole of the surge protector.

Specifications

Attribute	Value
Connection/Mounting Type	Parallel/DIN Rail mount
Standards Compliance	UL 1449, CSA 22.2, No.8, IEC 61643-1, EN 61643-11
Certifications	cURus recognized, CE marked, CSA
Conductor Material	Cu, solid or stranded
Conductor Range	#9...3 AWG (6...35 mm^2)
Strip Length	0.6 in. (16 mm)
Tightening Torque	3.5...4 N•m (31...35.4 lb•in)
No. of Conductors/Terminal	1
Operating Temperature	-40...+80 °C (-40...176 °F)

Approximate Dimensions

Dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.



DIN Rail AC Power Surge Protective Device, 4983-DS

Bulletin 4983-DS offers a number of options to meet your basic surge protection needs. The Bulletin 4983-DS products are connected in parallel and use an MOV to clamp high-voltage surges. The Bulletin 4983-DS devices are primarily used in the main electrical panel for the protection of 1- and 3-phase systems.

Features

- Compact modular design
- Robust design avoids unnecessary replacement
- DIN Rail mounted, Type 2
- Replacement (pluggable) module
- Visual status indicator (on unit)
- Remote status indicator

Product Selection

- N = Neutral
- L/N = Line/neutral
- N/G = Neutral/ground

AC Network	Connection Mode	No. of Poles	Max Continuous Operating Voltage (MCOV) (U_c) [V AC]	Max Discharge Current 8/20 µs (I_{max}) [kA]	Nominal Discharge Current 8/20 µs (I_n) [kA]	Protection Level (U_p) [kV]	UL 1449 Voltage Protection Rating (VPR) [V]	Appropriate Fuse[1] [A] Max.	Cat. No. Base and Module	Cat. No. Replacement Module Only	Cat. No. Replacement Module Only Gas Discharge Tube
120	L/G or N/G	1	150	40	20	0.9	700	125	4983-DS120-401	4983-DS120-40	–
	L/G, N/G	2							4983-DS120-402		
120/208Y	L1/G, L2/G, L3/G	3							4983-DS120-403		
	L1/G, L2/G, L3/G, N/G	4							4983-DS120-404		
230/400	L/G or N/G	1	275			1.25	1000		4983-DS230-401	4983-DS230-40	–
	L/G, N/G	2							4983-DS230-402		
	L1/G, L2/G, L3/G	3							4983-DS230-403		
277	L/G or N/G	1	420			1.8	1500		4983-DS277-401	4983-DS277-40	–
277/480Y	L1/G, L2/G, L3/G	3							4983-DS277-403		
	L1/G, L2/G, L3/G, N/G	4							4983-DS277-404		
480D	L1/G, L2/G, L3/G	3	550			1.8	1800		4983-DS480-403	4983-DS480-40	–
230/400	L/G, N/G	2	275	40	20	1.25	1000	125	4983-DS230-401G	4983-DS230-40	4983-DS230-40G
	L1/G, L2/G, L3/G, N/G	4					1000		4983-DS230-403G		

AC Network	Connection Mode	No. of Poles	Max Continuous Operating Voltage (MCOV) (U_c) [V AC]	Max Discharge Current 8/20 µs (I_{max}) [kA]	Nominal Discharge Current 8/20 µs (I_n) [kA]	Protection Level (U_p) [kV]	UL 1449 Voltage Protection Rating (VPR) [V]	Appropriate Fuse[1] [A] Max.	Cat. No. Base and Module	Cat. No. Replacement Module Only	Cat. No. Replacement Module Only Gas Discharge Tube
120	L/G or N/G	1	150	80	20	0.9	700	125	4983-DS120-801	4983-DS120-80	–
	L/G, N/G	2							4983-DS120-802		
120/208Y	L1/G, L2/G, L3/G	3							4983-DS120-803		
230/400	L/G or N/G	1	275			1.25	1000		4983-DS230-801	4983-DS230-80	–
	L/G, N/G	2							4983-DS230-802		
	L1/G, L2/G, L3/G	3							4983-DS230-803		
277	L/G or N/G	1	420			1.8	1500		4983-DS277-801	4983-DS277-80	–
277/480Y	L1/G, L2/G, L3/G	3							4983-DS277-803		
	L1/G, L2/G, L3/G, N/G	4							4983-DS277-804		
480D	L1/G, L2/G, L3/G	4	680				2500		4983-DS277-804		
600D	L1/G, L2/G, L3/G	4	690						4983-DS600-804	4983-DS600-80	–

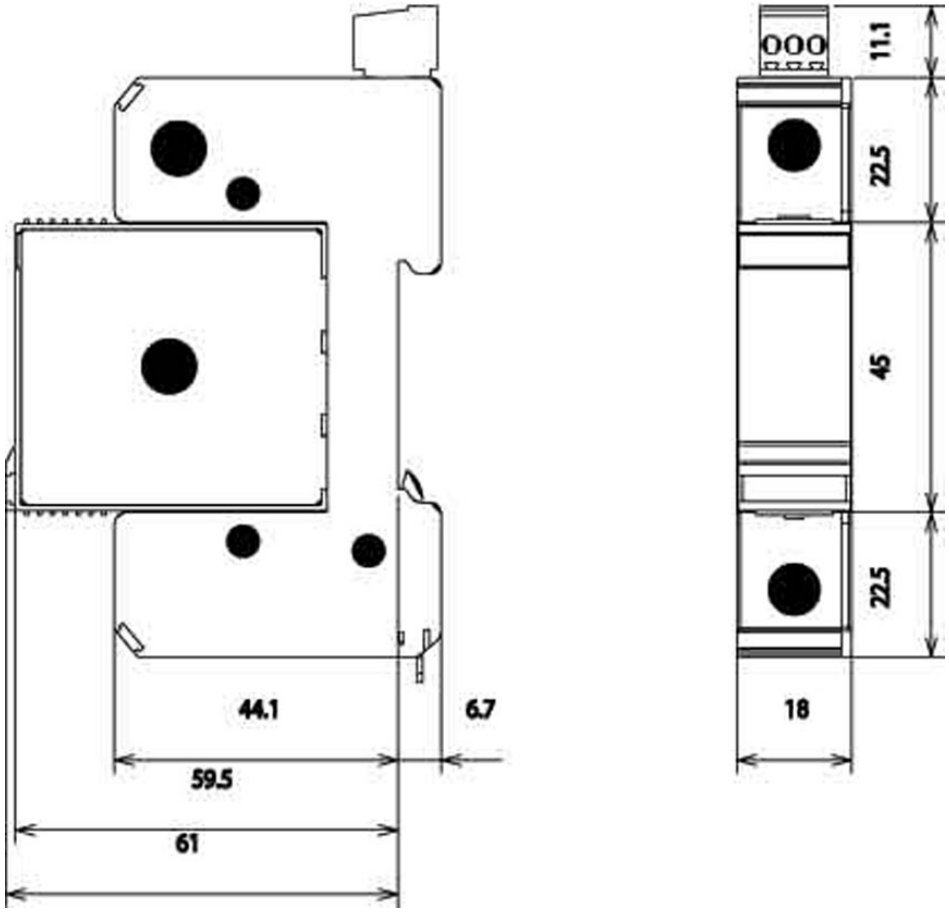
(1) Fuses required to protect the surge protector in case of short-circuit failure. They must be installed in series with each pole of the surge protector.

Specifications

Connection/Mounting Type	Parallel/DIN Rail mount
Standards Compliance	UL 1449, CSA 22.2, No.8, IEC 61643-1, EN 61643-11
Certifications	cURus recognized, CSA, CE marked
Conductor Material	Cu, solid or stranded
Conductor Range	#10…4 AWG (4…28 mm^2)
Strip Length	0.4 in. (10 mm)
Tightening Torque	17.8…22.1 lb•in. (2.0…2.5 N•m)
No. of Conductors/Terminal	1
Operating Temperature	-40…+80 °C (-40…176 °F)

Approximate Dimensions

Dimensions are shown in millimeters. Dimensions are not intended for manufacturing purposes.



DIN Rail Dataline Surge Protective Device, 4983-DD

Bulletin 4983-DD surge protective devices are designed to protect industrial communication networks. This device uses a combination of 3-electrode gas discharge tubes and fast-clamping diodes. Typical applications include industrial processing equipment, transmission systems, I/O cards, probes, actuators, and displays.

Features

- Compact, modular design
- Cost-effective to protect individual loads

Product Selection

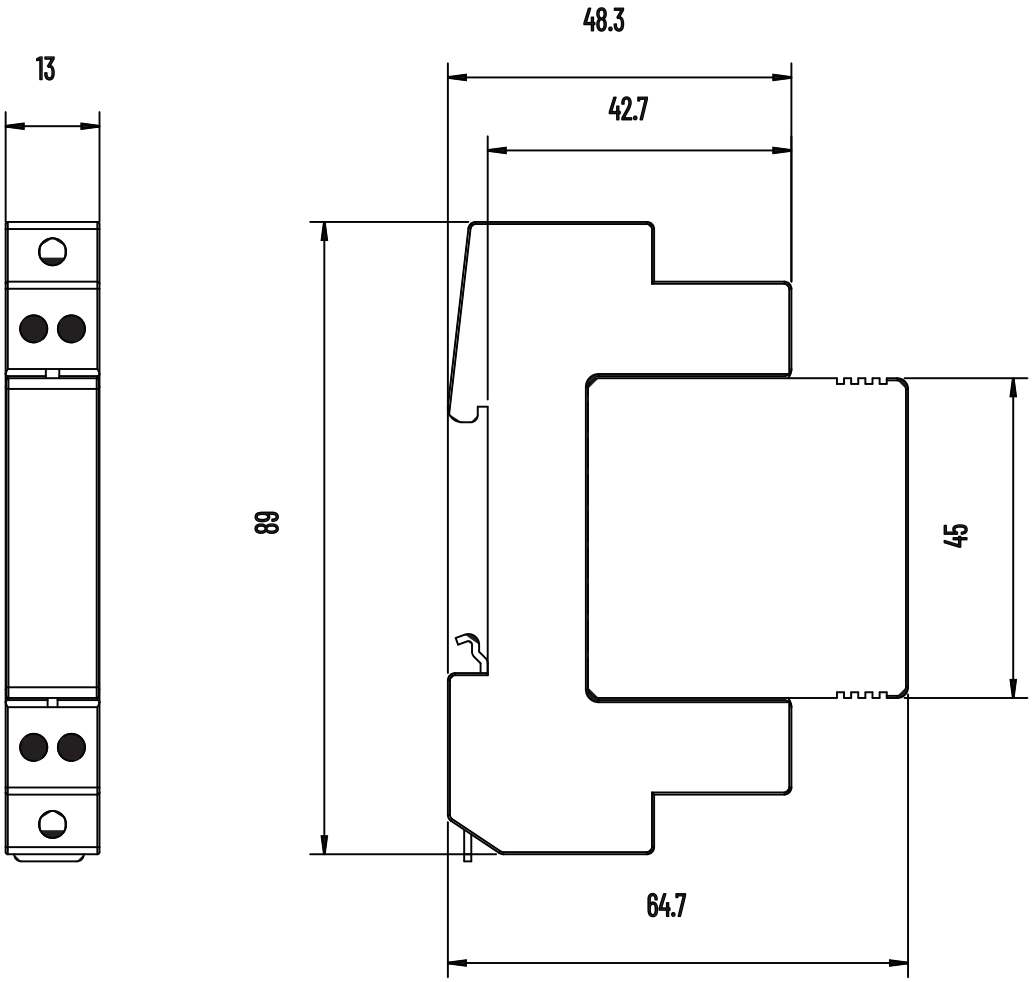
AC Network	Max. Continuous Operating Voltage (MCOV) [V DC]	Nominal Discharge Current 8/20 µs (I_n) [kA]	Max. Discharge Current 8/20 µs (I_{max}) [kA]	Protection Level (U_p)	Nominal Line Voltage [V]	Line Type	Cat. No.
4...20 mA Loop type	28	5	20	40V	24V	1 pair with shield	4983-DD24
RS232 type	15	5	20	30V	12V	1 pair with shield	4983-DD12
High-speed transmission (LAN) RS485 type, RS422 type	8	5	20	25V	6V	1 pair with shield	4983-DD06

Specifications

Connection/Mounting Type	Series/DIN Rail mount
Standards Compliance	UL 497B, IEC 61643-21
Certifications	CE marked, UL listed
Conductor Material	Cu, solid or stranded
Conductor Range	#21...16 AWG (0.4...1.5 mm^2)
Strip Length	0.2 in. (5 mm)
Tightening Torque	4.4 lb•in. (0.5 N•m)
No. of Conductors/Terminal	1
Operating Temperature	-40...+80 °C (-40...176 °F)

Approximate Dimensions

Dimensions are shown in millimeters. Dimensions are not intended for manufacturing purposes.



Panel Mount Filter 4983-PF

Bulletin 4983-PF is a panel (flange) mount filter product. The main function of the Bulletin 4983-PF filter is noise protection; it monitors and cleans the wave of high frequency noise disturbances that can cause premature aging.

Features

- Features Islatrol filter technology
- LED power indication
- Panel (flange) mount

Product Selection

Operating Voltage [V AC]	Max. Continuous Operating Voltage	Line Frequency [Hz]	Ampacity [A]	Cat. No.
120	150V rms @ 120	47...63	2.5	4983-PF120-02
			5.0	4983-PF120-05
			15	4983-PF120-15
			30	4983-PF120-30
240	275V rms @ 240		2.5	4983-PF240-02
			5.0	4983-PF240-05
			15	4983-PF240-15
			30	4983-PF240-30

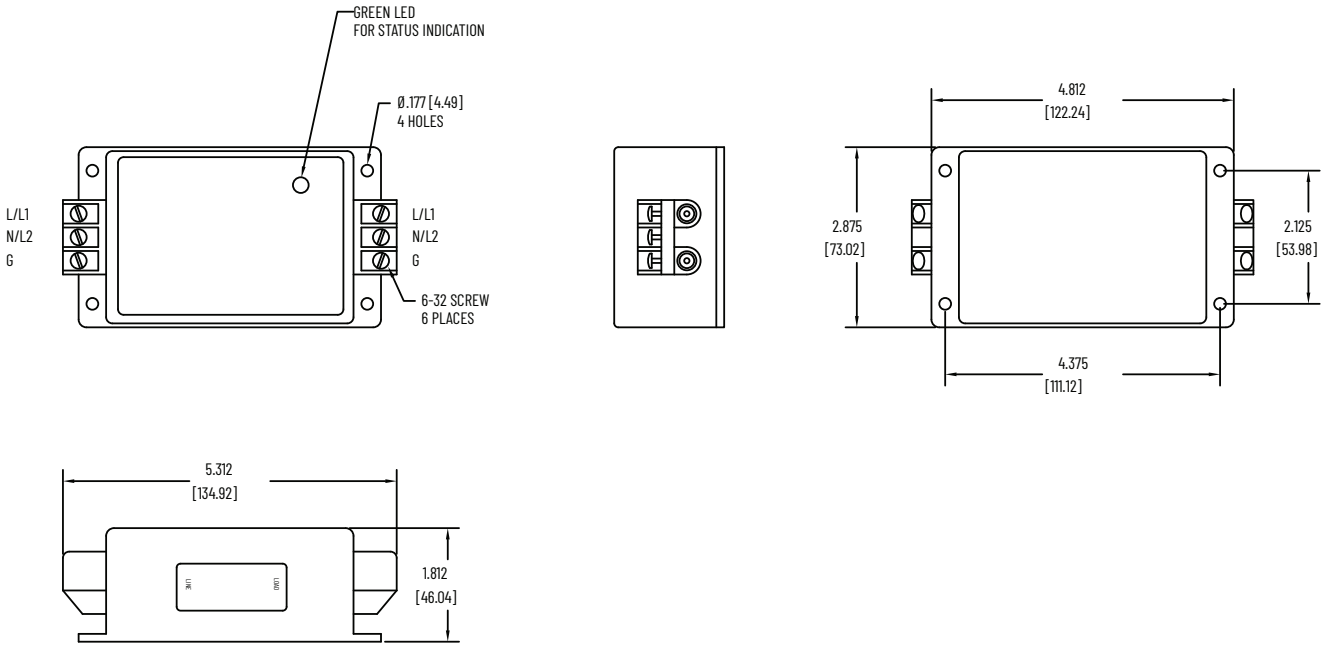
Specifications

Connection/Mounting Type	Series/Panel (Flange) mount
Enclosure	Grey, high-impact plastic, 94V-0, product label
Approximate Weight	2.5 A — 1.5 lb 5.0 A — 1.5 lb 15 A — 4 lb 30 A — 6.5 lb
Modes of Protection	Line — Neutral Line — Line Line — PE Neutral — PE
Certifications	UR recognized component, CE Marked
Typical Cat. A Ringwave Rating	< 10V peak
Typical Cat. B Ringwave Rating	< 50V peak
Status Indication	Single green LED for power indication
Response Time	Normal mode: < 0.5 ns Common Mode: < 5 ns
Operating Temperature	-40...+60 °C derate linearly to 60% @ +70 °C
Fusing	Appropriate external fusing is required
Frequency Response (Forward - Reverse) 100 kHz...50 MHz	Normal Mode — 90 dB min. Common Mode — 60 dB min. 3 kHz cut-off frequency
Peak Surge Current Capability (8 x 20 μs) All Mode Unit Line to Neutral Line to Ground Neutral to Ground	 15 kA 15 kA 15 kA

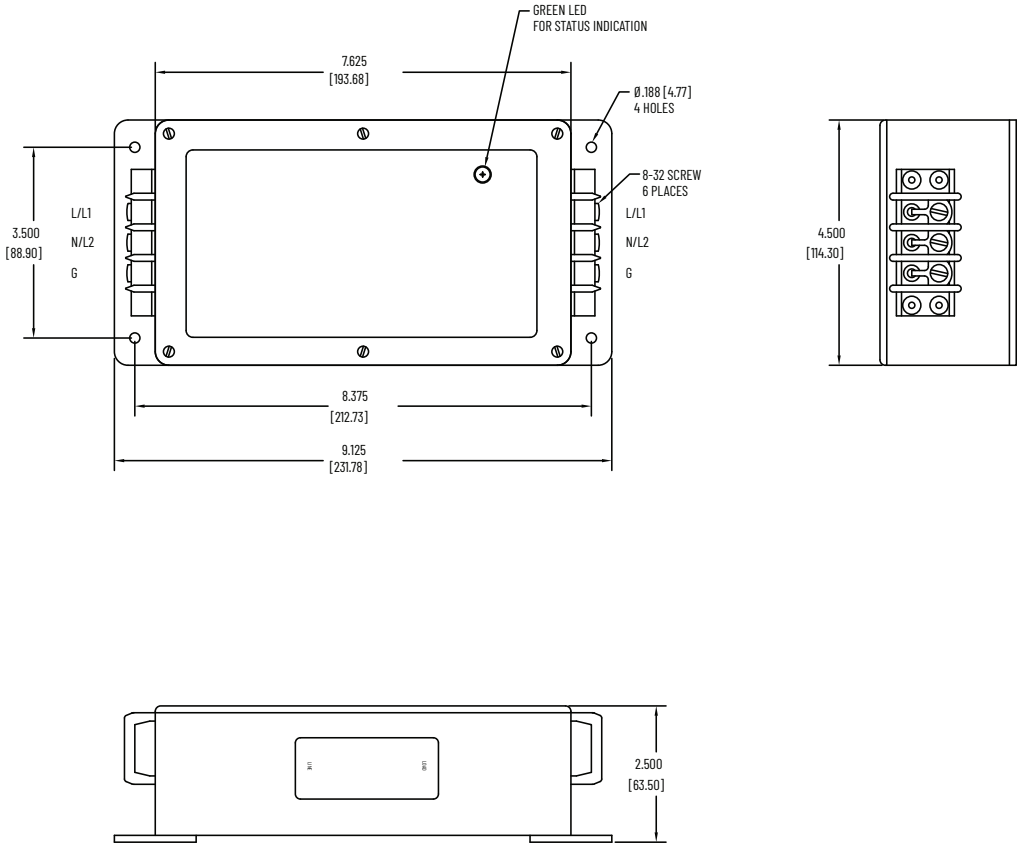
Approximate Dimensions

Dimensions are shown in millimeters. Dimensions are not intended for manufacturing purposes.

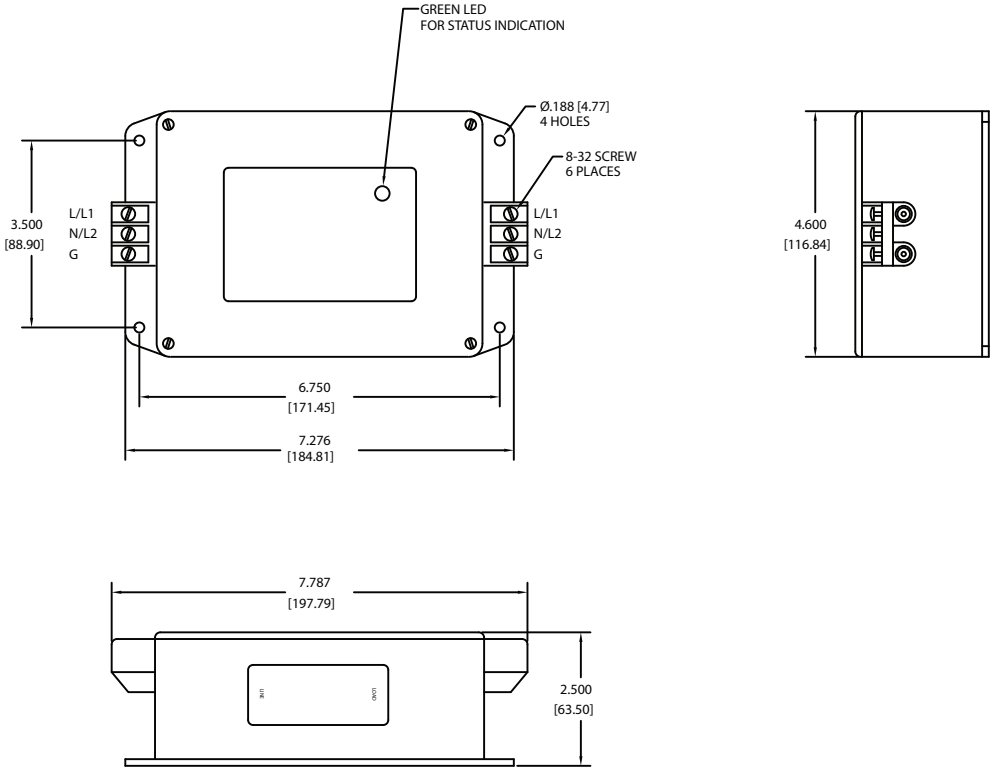
Cat. Nos. 4983-PF120-02, -PF120-05, -PF240-02



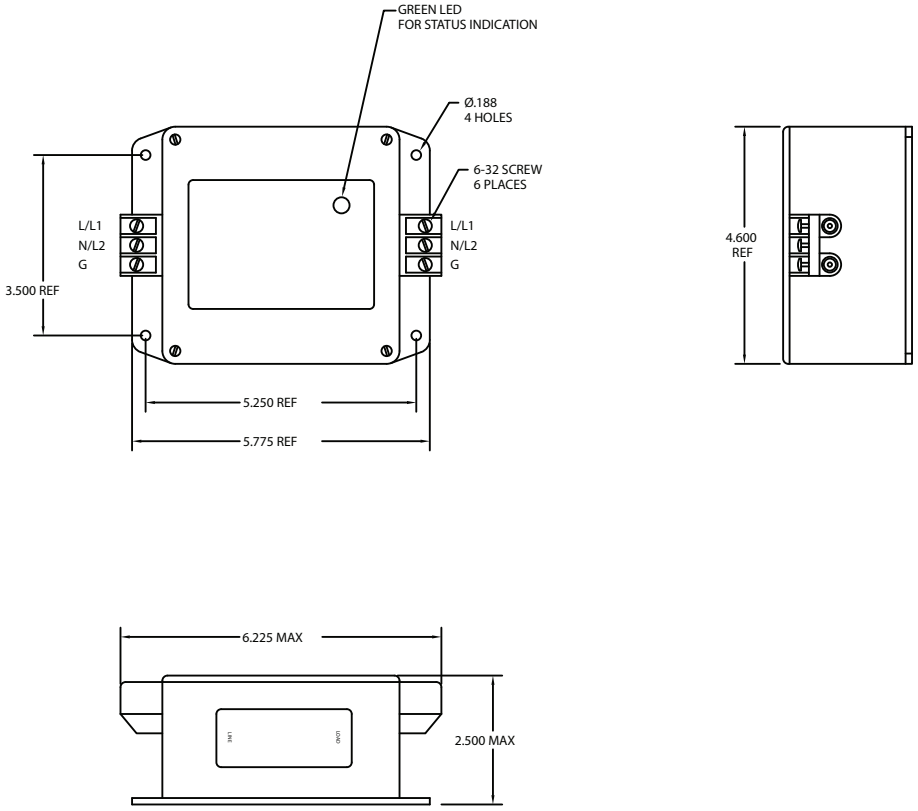
Cat. Nos. 4983-PF120-30, -PF240-15, -PF240-30



Cat. Nos. 4983-PF120-15



Cat. No. 4983-PF240-05



DIN Rail Combination Filter and Surge Protective Device 4983-DC

Bulletin 4983-DC is the combination of a filter and a surge protective device. The Bulletin 4983-DC product meets both UL 1449 and UL 1283. This product allows transient and noise protection in one small package.

Features

- Small combination (filter and SPD) package size
- Features Isatrol technology
- All-mode transient protection with exceptional Line to Neutral value of 25 kA
- LED power indication
- Form C contact for remote status indication
- DIN Rail mountable

Product Selection

AC Network	Connection Mode	Frequency [Hz]	Max. Continuous Operating Voltage (MCOV) (Uc) [V AC]	Maximum Discharge Current 8/20 µs (I_{max}) [kA]			Nominal Discharge Current 8/20 µs (I_n) [kA]	UL1449 Voltage Protection Rating (VPR) [V AC]				Ampacity [A]	Cat. No.
				L/G	L/N	N/G		L/G	L/N	N/G	L-L		
120V AC	L/G, L/N, N/G	47...63	150	10	25	10	3	600	400	600	-	3.0	4983-DC120-03
												5.0	4983-DC120-05
												10	4983-DC120-10
												20	4983-DC120-20
240V AC			320					1200	-	-	800	3.0	4983-DC240-03
												5.0	4983-DC240-05
												10	4983-DC240-10
												20	4983-DC240-20

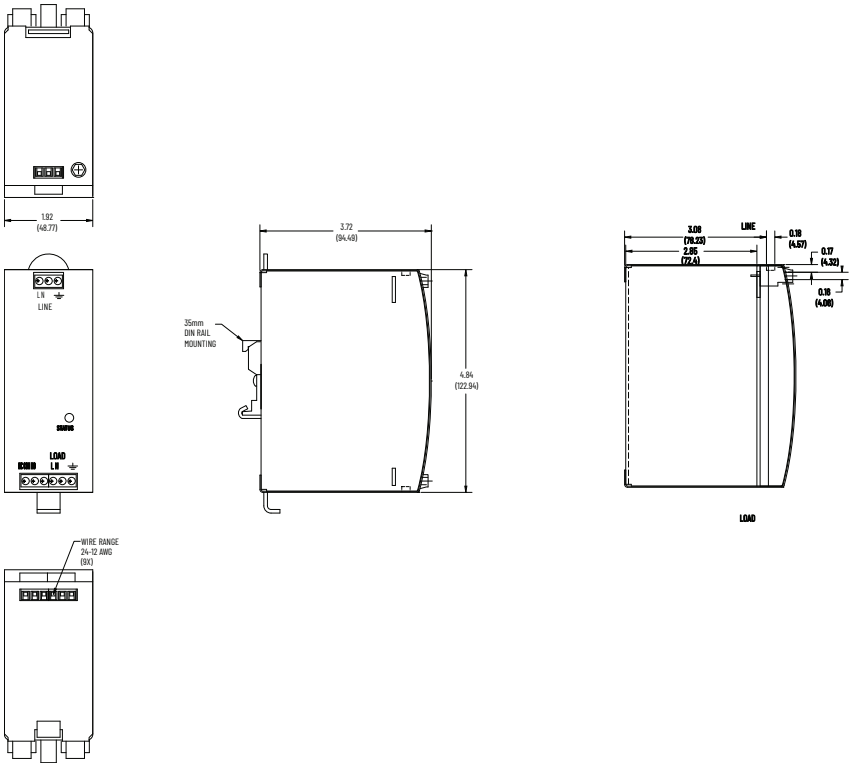
Specifications

Connection/Mounting Type	Series/DIN Rail mount
Enclosure	Metal, DIN Rail mount, product label
Approximate Weight	3 A — 1 lb 5 A — 1 lb 10 A — 1.5 lbs 20 A — 1.5 lbs
Modes of Protection	Line — Neutral Line — Line Line — PE Neutral — PE
Certifications	UR Recognized, CSA, CE Marked
Typical Cat. A Ringwave Rating	< 60V peak
Typical Cat. B Ringwave Rating	< 100V peak
Status Indication	Single green LED indicating MOV integrity Single form C contact (10 A @ 250V AC, 5 A @ 100V DC)
Response Time	Normal mode: < 0.5 ns Common Mode: < 5 ns
Operating Temperature	-40...+60 °C derate linearly to 60% @ +70 °C
Fusing	Appropriate external fusing is required
Frequency Response 100 kHz...50 MHz	Normal Mode (100 kHz...50 MHz) — 90 dB min. Common Mode (5...50MHz) — 60 dB min. 50 kHz cut-off frequency

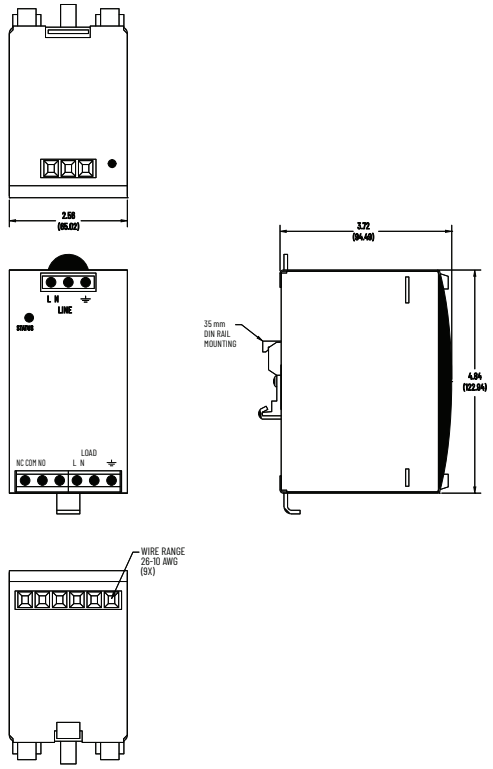
Approximate Dimensions

Dimensions are shown in inches (millimeters). Dimensions are not intended for manufacturing purposes.

Cat. Nos. 4983-DCxxx-03, -DCxxx-05



Cat. Nos. 4983-DCxxx-10, -DCxxx-20



Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications.	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at rok.auto/literature.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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