



EN 61643-11



PSE



HH05020-10001A



ISO 9001:2000



ISO 14001:2004

PRIME SOLUTION



Total Solution of Lightning Protection & Power Quality

CONTENTS

SPD Line-up - - - - -	03
Normal Type R-series - - - - -	06, 36
Normal Type SG-series - - - - -	08, 38
Normal Type SGF-series - - - - -	10, 40
Normal Type SB+-series - - - - -	12, 42
Solar energy & ESS Type DI-series - - - - -	14, 24
Surge counter Type RC-series - - - - -	16, 44
Surge counter Type SGC-series - - - - -	18, 46
Surge counter Type SGCF-series - - - - -	20, 48
Surge counter Type SBC+-series - - - - -	22, 50
Compact-size Type Economic H-series - - - - -	52
Direct-connection type - - - - -	26
Din-rail Mounting Type PS-series - - - - -	28, 30, 32, 54, 56, 58, 60
Din-rail Mounting Type PSV-series - - - - -	62
Intelligent SPDs for SmartGrid Type CI-series - - - - -	34
Multi tap Type - - - - -	64
SPD Disconnecter- - - - -	65
SurgeBox for Coaxial Line - - - - -	68
SurgeBox for CCTV Line - - - - -	69
SurgeBox for Coaxial Line counter Type - - - - -	70
SurgeBox for DC/Phone/Data Line - - - - -	71
SurgeBox for DC/Phone/Data Line counter Type - - - - -	73
SurgeBox for RJ45 Line- - - - -	74
SurgeBox for Serial Port - - - - -	75



Normal-type

Class I

- SB320Y-160SGⓈ	30	380/220V 4W+G L-N limp 12.5kA/Mode, N-PE limp 50kA/Mode
- SB320Y-320SGⓈ	30	380/220V 4W+G L-N limp 25kA/Mode, N-PE limp 100kA/Mode
- SB385Y-120RⓈ	30	380/220V 4W+G limp 6.5kA/Mode, I _{max} 120kA/Mode
- SB385Y-160RⓈ	30	380/220V 4W+G limp 12.5kA/Mode, I _{max} 200kA/Mode
- SB+PS1-13S3P/50GⓈ	30	380/220V 4W+G L-N limp 12.5kA/Mode, N-PE limp 50kA/Mode
- SB+PS1-25S3P/100GⓈ	30	380/220V 4W+G L-N limp 25kA/Mode, N-PE limp 100kA/Mode
- SB480DI-160SG	30	480V 3W+G L-PE limp 12.5kA/Mode
- SB480DI-320SG	30	480V 3W+G L-PE limp 25kA/Mode
- SB650DI-160SG	30	650V 3W+G L-PE limp 12.5kA/Mode
- SB650DI-320SG	30	650V 3W+G L-PE limp 25kA/Mode

Class II

- SB320Y-040SGⓈ	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
- SB385Y-040RⓈ	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
- SB385Y-080RⓈ	30	380/220V 4W+G In 40kA/Mode, I _{max} 80kA/Mode
- SB+PS2-40S3P/40GⓈ	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode

Surge Count-type SPDs

Class I

- SB320Y-160SGCⓈ	30	380/220V 4W+G L-N limp 12.5kA/Mode, N-PE limp 50kA/Mode
- SB320Y-320SGCⓈ	30	380/220V 4W+G L-N limp 25kA/Mode, N-PE limp 100kA/Mode
- SB385Y-120RCⓈ	30	380/220V 4W+G limp 6.5kA/Mode, I _{max} 120kA/Mode
- SB385Y-160RCⓈ	30	380/220V 4W+G limp 12.5kA/Mode, I _{max} 200kA/Mode
- SBC+PS1-13S3P/50GⓈ	30	380/220V 4W+G L-N limp 12.5kA/Mode, N-PE limp 50kA/Mode
- SBC+PS1-25S3P/100GⓈ	30	380/220V 4W+G L-N limp 25kA/Mode, N-PE limp 100kA/Mode

Class II

- SB320Y-040SGCⓈ	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
- SB385Y-040RCⓈ	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
- SB385Y-080RCⓈ	30	380/220V 4W+G In 40kA/Mode, I _{max} 80kA/Mode
- SBC+PS2-40S3P/40GⓈ	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode

SLPMS SPDs

Class I

- SBCL+PS1-13S3P/50GⓈ	30	380/220V 4W+G L-N limp 12.5kA/Mode, N-PE limp 50kA/Mode
- SBCL+PS1-25S3P/100GⓈ	30	380/220V 4W+G L-N limp 25kA/Mode, N-PE limp 100kA/Mode

Class II

- SBCL+PS2-40S3P/40GⓈ	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
-----------------------	----	--

Compact-size Economic SPDs

- SB220V-020HE	30	100V~380V 4W+G I _{max} 20kA/Mode
- SB440Y-040HE	30	100V~380V 4W+G I _{max} 40kA/Mode
- SB440Y-080HE	30	100V~380V 4W+G I _{max} 80kA/Mode

Direct-connection type

- PS2-40S3P/40GⓈ-DM	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
- PS2-40S3P/40GⓈ-DP	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
- PS2-40/320 4P-DM	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
- PS2-40/320 4P-DP	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode

Din-rail Mounting SPDs

Class I

- PS1-13S3P/50G	30	380/220V 4W+G L-N limp 12.5kA/Mode, N-PE 50kA/Mode
- PS1-25S3P/100G	30	380/220V 4W+G L-N limp 25kA/Mode, N-PE 100kA/Mode
- PS1-120S4P	30	380/220V 4W+G L-PE limp 6.5kA, I _{max} 120kA/Mode

Class II

- PS2-40S3P/40G	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
- PS2-40/320 4P	30	380/220V 4W+G In 20kA/Mode, I _{max} 40kA/Mode
- PS2-80S4P	30	380/220V 4W+G In 40kA/Mode, I _{max} 80kA/Mode



Power Line SPD's Line-Up

Single - Phase

Nomal-type



Class I

-SB320-160SGⓈ	10	220V 2W+G L-N Iimp 12.5kA/Mode, N-PE Iimp 50kA/Mode
-SB320-320SGⓈ	10	220V 2W+G L-N Iimp 25kA/Mode, N-PE Iimp 50kA/Mode
-SB385-160RⓈ	10	220V 2W+G Iimp 12.5kA/Mode, I _{max} 200kA/Mode
-SB+PS1-13S/50GⓈ	10	220V 2W+G L-N Iimp 12.5kA/Mode, N-PE Iimp 50kA/Mode
-SB+PS1-25S/50GⓈ	10	220V 2W+G L-N Iimp 25kA/Mode, N-PE Iimp 50kA/Mode

Class II

-SB320-040SGⓈ	10	220V 2W+G In 20kA/Mode, I _{max} 40kA/Mode
-SB320-160SGⓈ	10	220V 2W+G In 40kA/Mode, I _{max} 80kA/Mode
-SB385-040RⓈ	10	220V 2W+G In 20kA/Mode, I _{max} 40kA/Mode
-SB385-080RⓈ	10	220V 2W+G In 40kA/Mode, I _{max} 80kA/Mode
-SB+PS2-40S/40GⓈ	10	220V 2W+G In 20kA/Mode, I _{max} 40kA/Mode

Surge Count-type SPDs

Class I

-SB320-160SGCⓈ	10	220V 2W+G L-N Iimp 12.5kA/Mode, N-PE Iimp 50kA/Mode
-SB320-320SGCⓈ	10	220V 2W+G L-N Iimp 25kA/Mode, N-PE Iimp 50kA/Mode
-SB385-160RCⓈ	10	220V 2W+G Iimp 12.5kA/Mode, I _{max} 200kA/Mode
-SBC+PS1-13S/50GⓈ	10	220V 2W+G L-N Iimp 12.5kA/Mode, N-PE Iimp 50kA/Mode
-SBC+PS1-25S/50GⓈ	10	220V 2W+G L-N Iimp 25kA/Mode, N-PE Iimp 50kA/Mode

Class II

-SB320-040SGCⓈ	10	220V 2W+G In 20kA/Mode, I _{max} 40kA/Mode
-SB385-040RCⓈ	10	220V 2W+G In 20kA/Mode, I _{max} 40kA/Mode
-SB385-080RCⓈ	10	220V 2W+G In 40kA/Mode, I _{max} 80kA/Mode
-SBC+PS2-40S/40GⓈ	10	220V 2W+G In 20kA/Mode, I _{max} 40kA/Mode

Compact-size Economic Products

-SB110-020HE	10	100V~240V 2W+G 20kA/Mode, 40kA/Phase
--------------	----	--------------------------------------

Din-rail Mounting SPDs

Class I

-PS1-13S/50G	10	220V 2W+G L-N Iimp 12.5kA/Mode, N-PE Iimp 50kA/Mode
-PS1-25S/50G	10	220V 2W+G L-N Iimp 25kA/Mode, N-PE Iimp 50kA/Mode
-PS1-120S2P	10	220V 2W+G L-PE Iimp 6.5kA, I _{max} 120kA/Mode

Class II

-PS2-40S/40G	10	220V 2W+G In 20kA/Mode, I _{max} 40kA/Mode
-PS2-40/320 2P	10	220V 2W+G In 20kA/Mode, I _{max} 40kA/Mode
-PS2-80S2P	10	220V 2W+G In 40kA/Mode, I _{max} 80kA/Mode

Multi tap-type

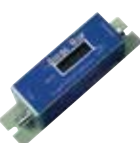
-SB220-4M26	10	220V 2W+G 15A 26kA/Mode, 52kA/Phase
-------------	----	-------------------------------------

Din-rail Mounting Photovoltaic SPDs

for 3 Pole Y Configurations

-PSV1200-V-CD-S	1200Vdc In 20kA/Mode, I _{max} 50kA/Mode
-PSV1500-V-CD-S	1500Vdc In 20kA/Mode, I _{max} 50kA/Mode

Communication and Signal Line SPD's Line-up



Coaxial Lines

Normal

- SBCX-BNR 10kA/Line
- SBCX-BNR20 20kA/Line
- SBCX-BNF 5kA/Line (C2 10kV/5kA, D1 Iimp, 2.5kA)

Counter

- SBCX-BNC 10kA/Line
- SBCX-BNC20 20kA/Line

CCTV Lines

- SB220+RJ45 I_{max} 20kA/mode + RJ45(4kV/2kA)



DC/Phone/Data Lines

Normal

- SB33D-1P 10kA/Mode
- SB33D-1P20 20kA/Mode
- SB33D-2P 10kA/Mode
- SB33D-2P20 20kA/Mode
- SB220D-1P20 20kA/Mode
- SB68DE 10kA/Itotal 10kA/Mode (C2 10kV/5kA, D1 Iimp 2kA)
- SB220DP-H 10kA/Itotal 10kA/Mode (C2 10kV/5kA, D1 Iimp 2kA)

Counter

- SB33D-1PC 10kA/Mode
- SB33D-1PC20 20kA/Mode
- SB220D-1PC20 20kA/Mode
- SB68DEC 10kA/Itotal 10kA/Mode



RJ45 Lines

- SB68D-RJ45 4KV/2kA ~10Mz
- SB68D-RJ45-H 4KV/2kA ~100Mz



Serial Port

- SB15D-25DB 3kA/Line
- SB15D-9DB 3kA/Line
- SB30D-25DB 3kA/Line
- SB30D-9DB 3kA/Line



Normal Mode Protection

R-Series

SurgeBox™ for Tri-phase AC Lines



KS No.12-1641

SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

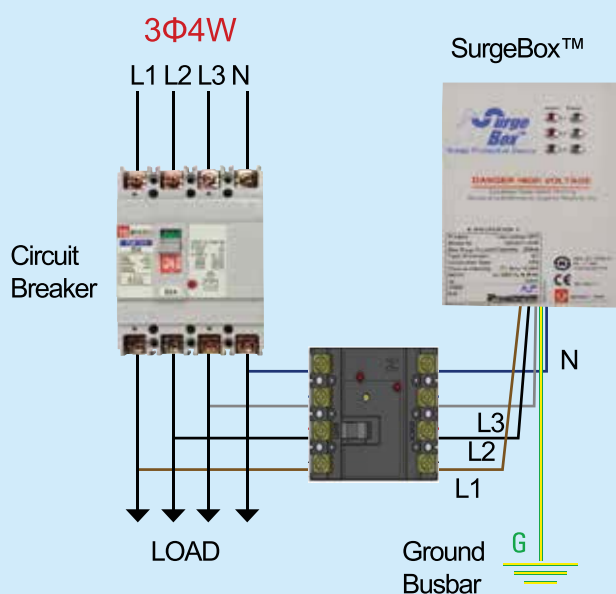
Model No. (모델명)	SB385Y-040R	SB385Y-080R	SB385Y-120R	SB385Y-160R
Rated system voltage 적용회로전압	380/220V 3P4W+G			
Frequency 회로 주파수	50 / 60 Hz			
Class 등 급	Class II		Class I	
MCOV Uc 최대연속사용전압	385 Vac			
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-		6.5kA	12.5kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	40kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	80kA	120kA	200kA
Voltage Protection Level U_p 전압보호레벨	2.5 kV	3.0 kV	2.0 kV	2.0 kV
Degree of Protection of enclosure IP 수납보호도	IP 20			
Protection mode 보호모드	L – N / N – PE			
Design Topology 설계형태	Voltage Limiting			
Types of Earthing system 접지방식	TN			
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)			
Option functions 옵션	-			
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting			
Wire size for Connections 연결 전선	L, N : 6 mm ² PE : 10 mm ²		L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	112x166.5x80 mm	130x194x80 mm	160x230x88 mm	150x250x80 mm
Product weight 제품 무게	1.6 kg	2.32 kg	2.8 kg	3.74 kg
Internal Disconnector 내부 분리기	Thermal Runaway Multi-Fusing Protection			
External Disconnector 외부 분리기	TPS – 2S20B	TPS – 1S125B		

Normal Mode Protection

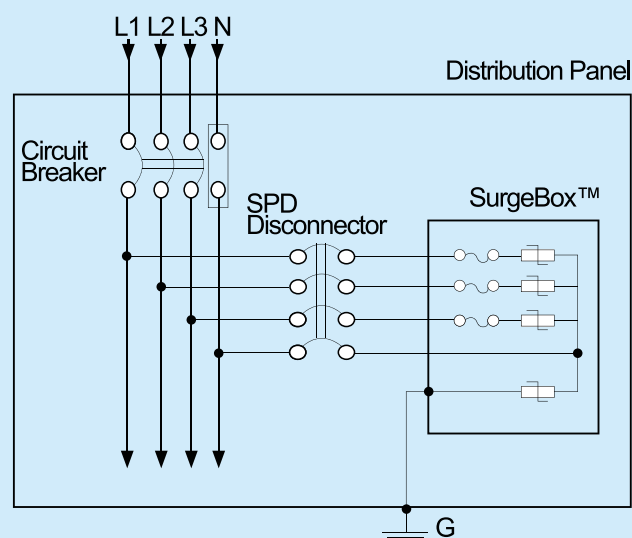
R-Series

SurgeBox™ for Tri-phase AC Lines

INSTALLATION



CIRCUIT DIAGRAM



DIMENSION

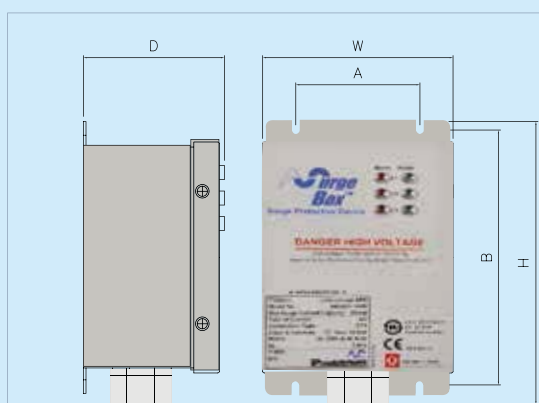


Fig.1

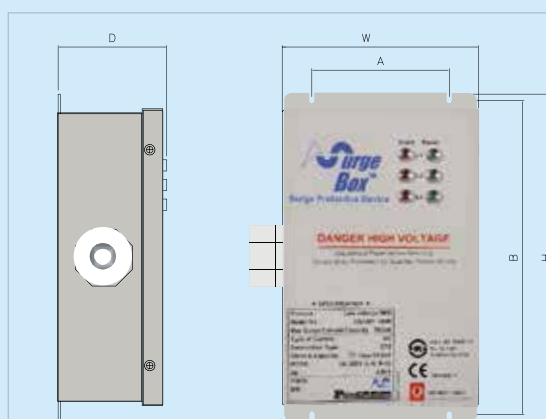


Fig.2

mm

Model	W	A	B	H	D	Note
SB385Y-040R	112	73	150	166.5	80	Fig. 1
SB385Y-080R	130	90	180	194	80	Fig. 1
SB385Y-120R	160	100	210	230	88	Fig. 1
SB385Y-160R	150	105	240	250	80	Fig. 2

Normal Mode Protection

SG-Series

SurgeBox™ for Tri-phase AC Lines



KS No.12-1641

SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB320Y-040SG	SB320Y-160SG	SB320Y-320SG
Rated system voltage 적용회로전압	380/220V 3P4W+G		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 100kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.8 kV L – PE : 2.0 kV
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	50kA
Degree of Protection of enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L – PE / L – N / N – PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)		
Option functions 옵션	Remote contact		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	125x165x79 mm	161.5x250x79 mm	
Product weight 제품 무게	1.25 kg	2.8 kg	3.18 kg
Internal Disconnector 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnector 외부 분리기	TPS – 2S20B	TPS – 1S125B	TPS – 1S250B

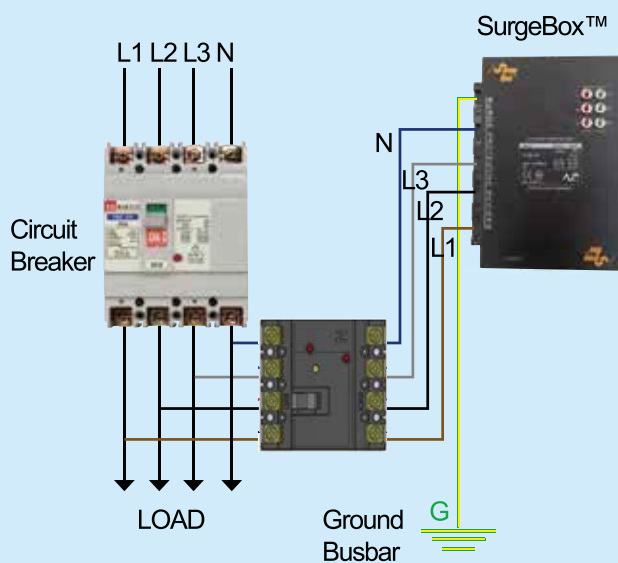
Normal Mode Protection

SG-Series

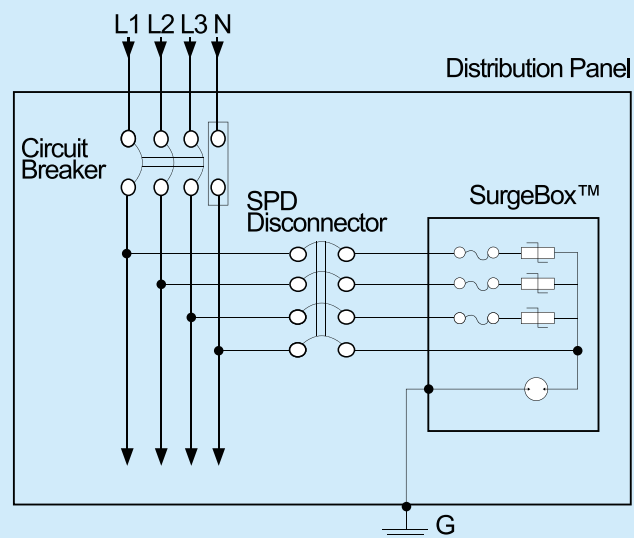
SurgeBox™ for Tri-phase AC Lines

(Y-connection, 4wire+Gnd)

INSTALLATION



CIRCUIT DIAGRAM



DIMENSION

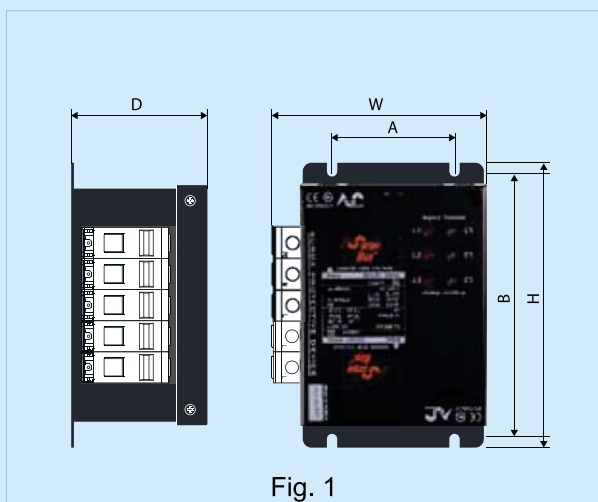


Fig. 1

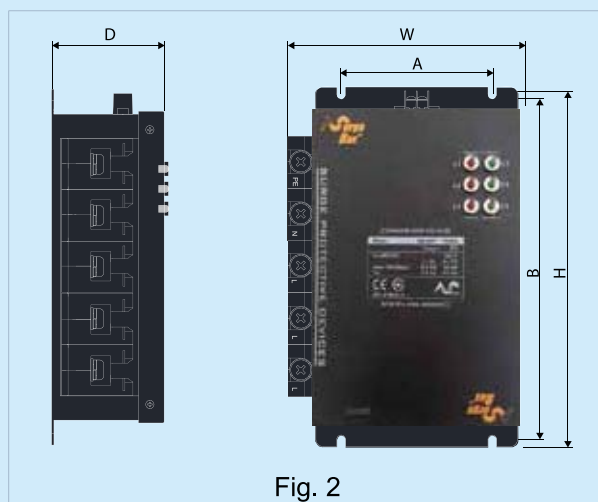


Fig. 2

mm

Model	W	A	B	H	D	Note
SB320Y-040SG	125	71	155	165	79	Fig. 1
SB320Y-160SG	161.5	105	240	250	79	Fig. 2
SB320Y-320SG	161.5	105	240	250	79	Fig. 2

교체예고표시

Normal Mode Protection

SGF-Series

SurgeBox™ for Tri-phase AC Lines



KS No.12-1641

SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

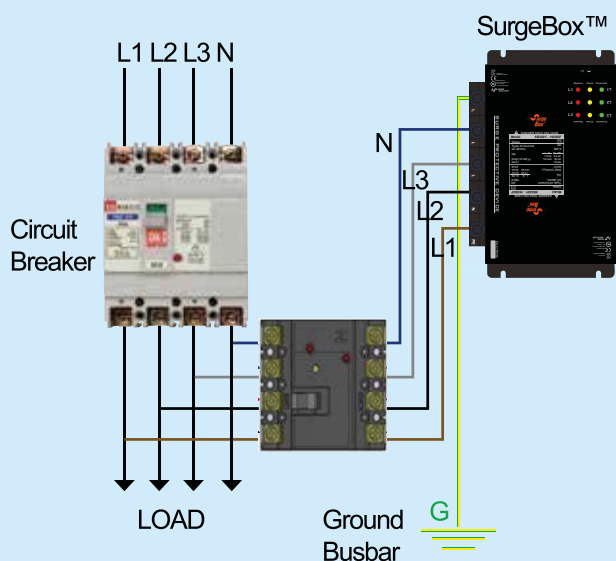
Model No. (모델명)	SB320Y-040SGF	SB320Y-160SGF	SB320Y-320SGF
Rated system voltage 적용회로전압	380/220V 3P4W+G		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA/mode N – PE : 50kA/mode	L – N : 25kA/mode N – PE : 100kA/mode
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA/Mode	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA/Mode	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.8 kV L – PE : 2.0 kV
Short-circuit Current Rating I_{SCCR} 단락전류	5 kA	25 kA	50 kA
Degree of Protection of Enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L - PE / L – N / N - PE		
Design Topology 설계형태	Combination		
Types of Grounding System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green (Protected) / Yellow (Check) / Red (Replace)		
Option functions 옵션	Remote Contact		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wire Size for Connections 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L – N : 10 mm ² N – PE : 16 mm ²	
Dimensions (WxHxD) 크기	125x165x79 mm	161.5x250x79 mm	
Product weight 제품 무게	1.25 kg	2.8 kg	3.18 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20B	TPS – 1S125B	TPS – 1S250B

SGF-Series

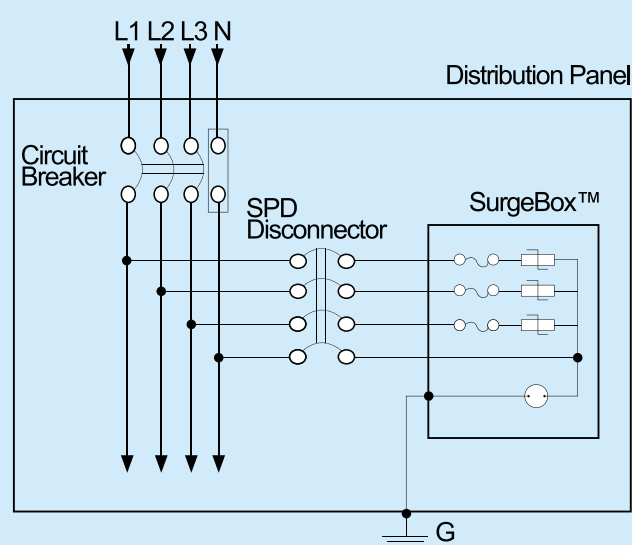
SurgeBox™ for Tri-phase AC Lines

(Y-connection, 4wire+Gnd)

INSTALLATION



CIRCUIT DIAGRAM



DIMENSION

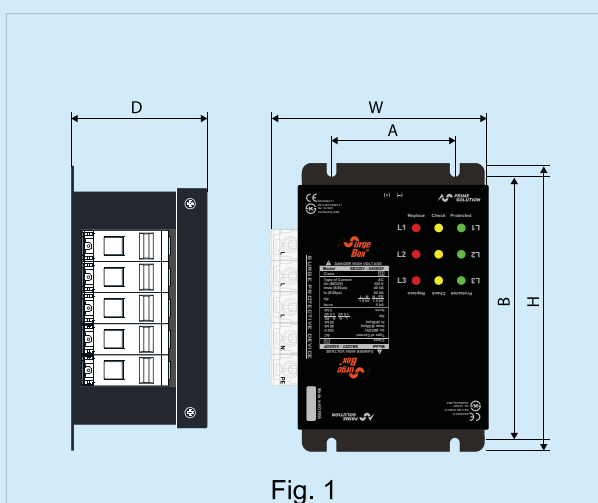


Fig. 1

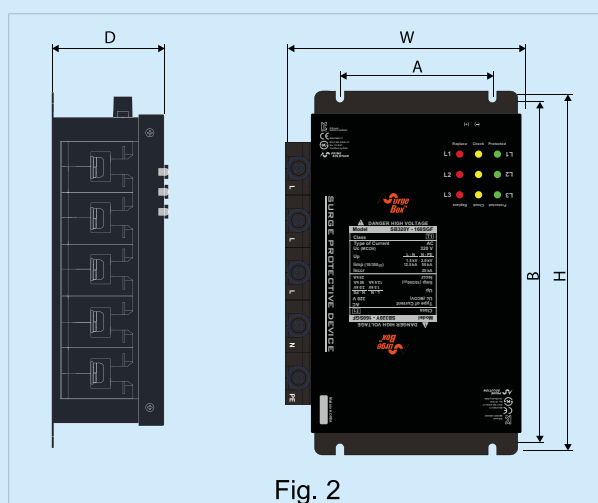


Fig. 2

mm

Model	W	A	B	H	D	Note
SB320Y-040SGF	125	71	155	165	79	Fig. 1
SB320Y-160SGF	161.5	105	240	250	79	Fig. 2
SB320Y-320SGF	161.5	105	240	250	79	Fig. 2

Normal Mode Protection

SB⁺-Series

SurgeBoxTM for Tri-phase AC Lines



KS No.12-1641

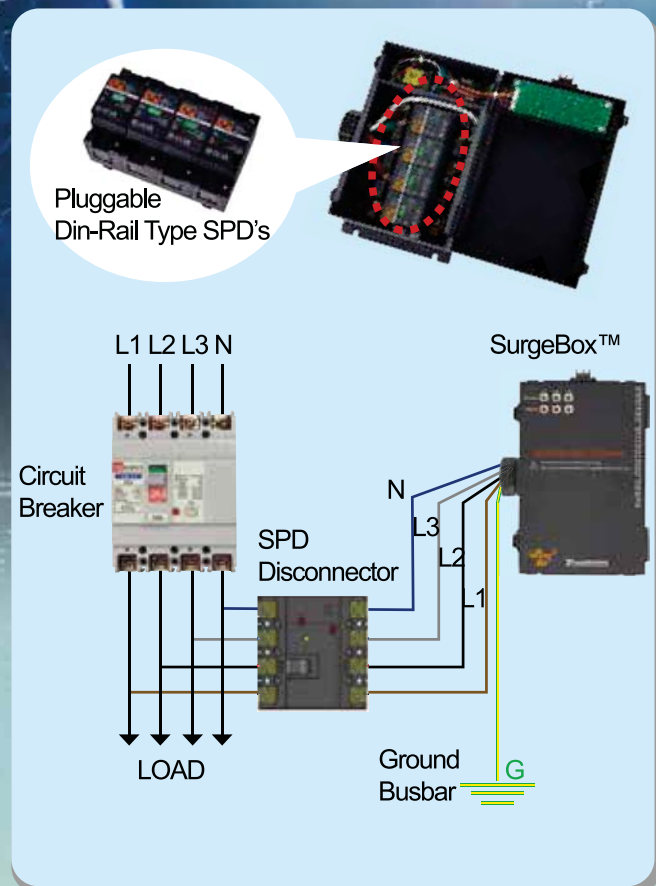
SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

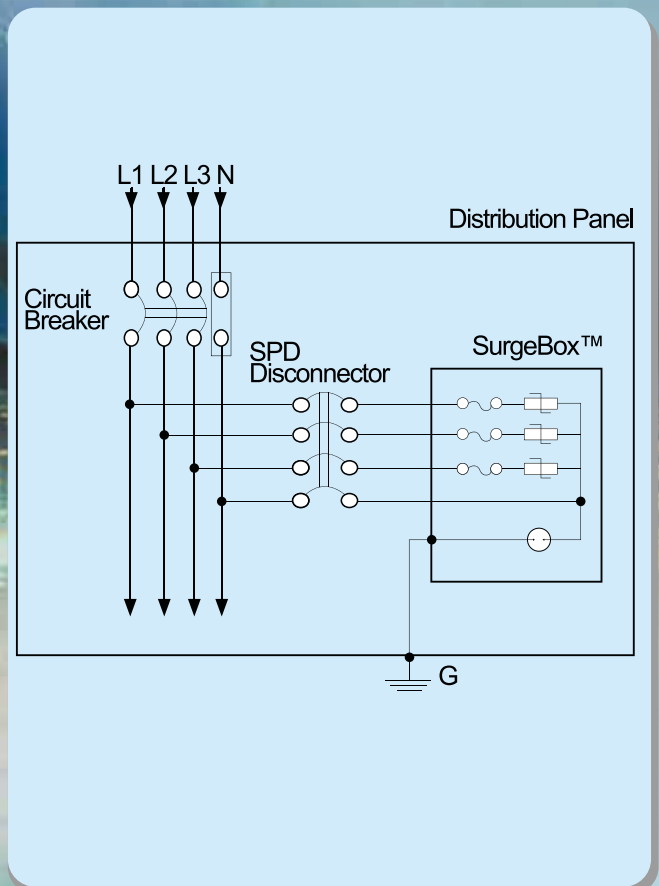
Model No. (모델명)	SB+PS2-40S3P/40G	SB+PS1-13S3P/50G	SB+PS1-25S3P/100G
Rated system voltage 적용회로전압	380/220V 3P4W+G		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 100kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.8 kV	L – N : 1.2 kV L – PE : 1.5 kV	L – N : 1.3 kV L – PE : 2.0 kV
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	50kA
Degree of Protection of enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L-N / L-PE / N-PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)		
Option functions 옵션	Remote contact		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	125x160x80 mm	170x250x91 mm	
Product weight 제품 무게	1.25 kg	3.6 kg	3.9 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20B	TPS – 1S125B	TPS – 1S250B

Normal Mode Protection SB⁺-Series for Tri-Phase AC Lines

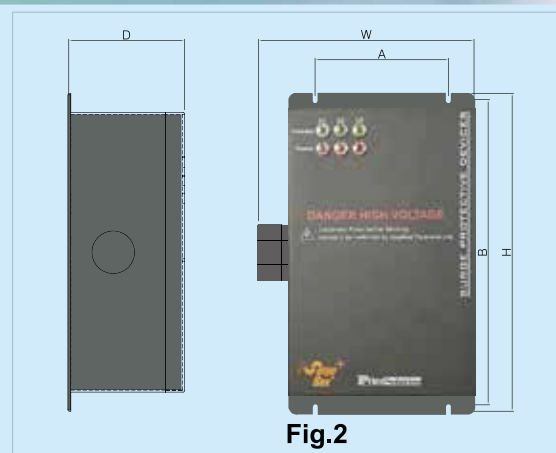
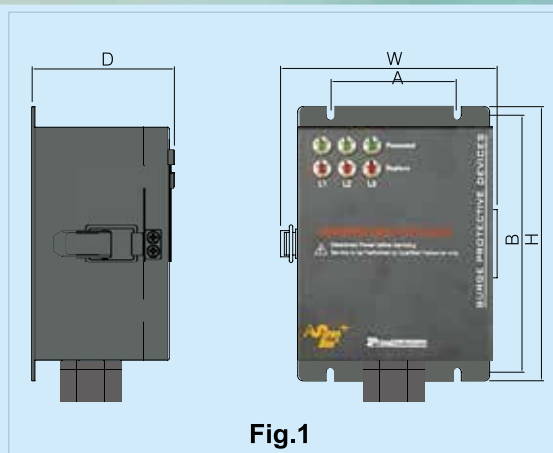
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	A	B	H	D	Note
SB+PS2-40S3P/40G	125	73	150	160	80	Fig. 1
SB+PS1-13S3P/50G	170	105	240	250	91	Fig. 2
SB+PS1-25S3P/100G	170	105	240	250	91	Fig. 2

신재생 전용(태양광, 풍력, ESS)

Normal Mode Protection

DI-Series

SurgeBox™ for Tri-phase AC Lines



(Δ-connection, 3wire+Gnd)

SPECIFICATION

IEC61643-11
Compliant with LV
Directive 72/73 FEC

Model No.	SB480DI-160SG	SB480DI-320SG	SB650DI-160SG	SB650DI-320SG
Rated system voltage 적용회로전압	480V 3P3W+G		650V 3P3W+G	
Frequency 회로 주파수	50 / 60 Hz			
Class 등 급	Class I			
MCOV Uc 최대연속사용전압	L-PE : 550 Vac L-L : 640 Vac		L-PE : 690 Vac L-L : 840 Vac	
Impulse Discharge Current I_{imp} (10/350 μ S) 임펄스 전류	L – PE : 12.5kA	L – PE : 25kA	L – PE : 12.5kA	L – PE : 25kA
Voltage Protection Level U_p 전압보호레벨	L-PE : 2.2kV	L-PE : 2.5kV	L-PE : 2.2kV	L-PE : 2.5kV
Short-circuit Current Rating I_{SCCR} 단락전류	200kA	200kA	200kA	200kA
Degree of Protection of enclosure IP 수납보호도	IP 20			
Protection mode 보호모드	L-PE			
Design Topology 설계형태	Combination			
Types of Earthing System 접지방식	TN/TT/IT			
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)			
Option functions 옵션	Remote contact			
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting			
Wiring Size 연결 전선	L : 10 mm ² PE : 16 mm ²			
Dimensions (WxHxD) 크기	160x286x80 mm		208x292x80 mm	
Product weight 제품 무게	3.41 kg	3.82 kg	4.41 kg	4.82 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection			
External Disconnecter 외부 분리기	TPS – 1S125B	TPS – 1S250B	-	-

신재생 전용(태양광, 풍력, ESS)

Normal Mode Protection

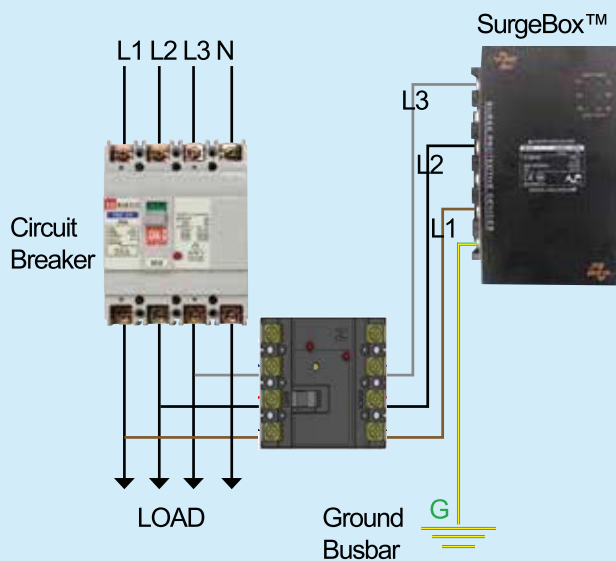
DI-Series

SurgeBox™

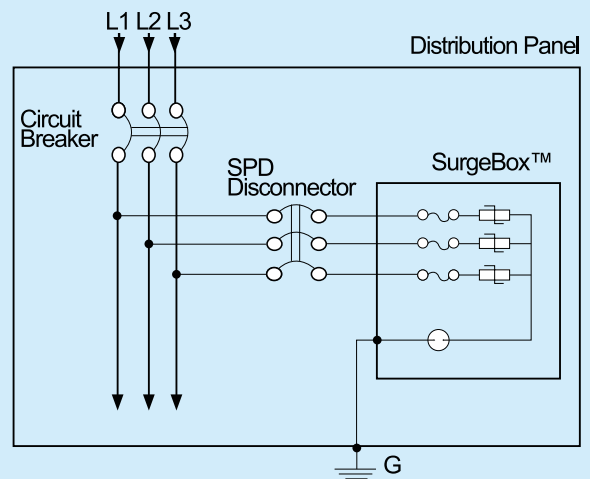
for Tri-phase AC Lines

(Δ -connection, 3wire+Gnd)

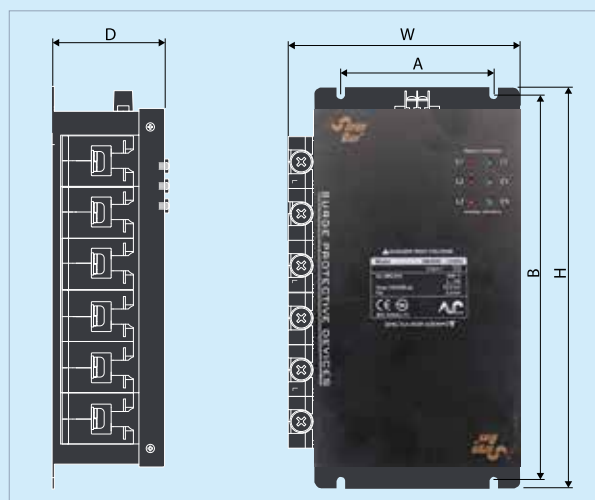
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	A	B	H	D
SB480DI-160SG	160	105	276	286	80
SB480DI-320SG	160	105	276	286	80
SB650DI-160SG	208	151	282	292	80
SB650DI-320SG	208	151	282	292	80

Surge Count-type SPDs

RC-Series

SurgeBox™ for Tri-phase AC Lines



KS No.12-1641

SPECIFICATION

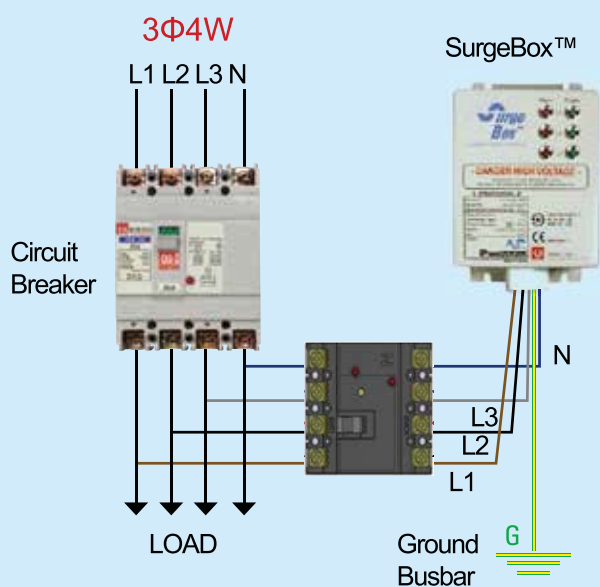
KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB385Y-040RC	SB385Y-080RC	SB385Y-120RC	SB385Y-160RC
Rated system voltage 적용회로전압	380/220V 3P4W+G			
Frequency 회로 주파수	50 / 60 Hz			
Class 등 급	Class II		Class I	
MCOV Uc 최대연속사용전압	385 Vac			
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-		6.5kA	12.5kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	40kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	80kA	120kA	200kA
Voltage Protection Level U_p 전압보호레벨	2.5 kV	3.0 kV	2.0 kV	2.0 kV
Degree of Protection of enclosure IP 수납보호도	IP 20			
Protection mode 보호모드	L – N / N – PE			
Design Topology 설계형태	Voltage Limiting			
Types of Earthing System 접지방식	TN			
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)			
Option functions 옵션	Remote Contact Surge Counter (4-Digit Display) ModBus RS485			
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting			
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²		L , N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	112x160x95 mm	130x190x95 mm	160x230x88 mm	150x250x95 mm
Product weight 제품 무게	1.82 kg	2.54 kg	3.02 kg	3.96 kg
Internal Disconnector 내부 분리기	Thermal Runaway Multi-Fusing Protection			
External Disconnector 외부 분리기	TPS – 2S20B	TPS – 1S125B		

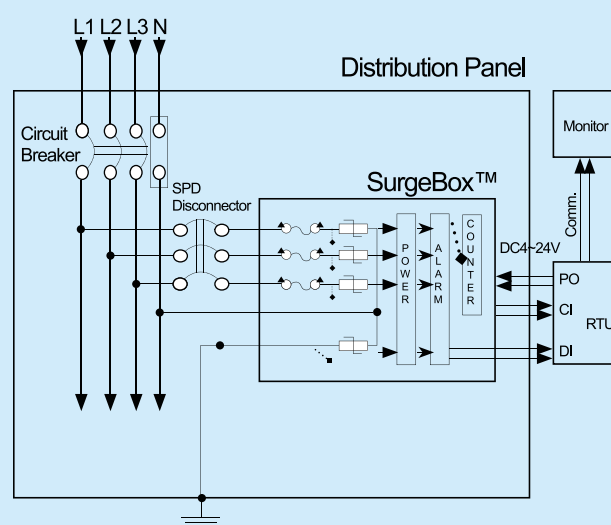
RC-Series

SurgeBoxTM for Tri-phase AC Lines

INSTALLATION



CIRCUIT DIAGRAM



DIMENSION

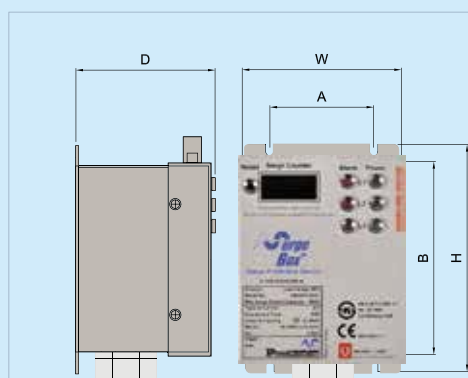


Fig.1

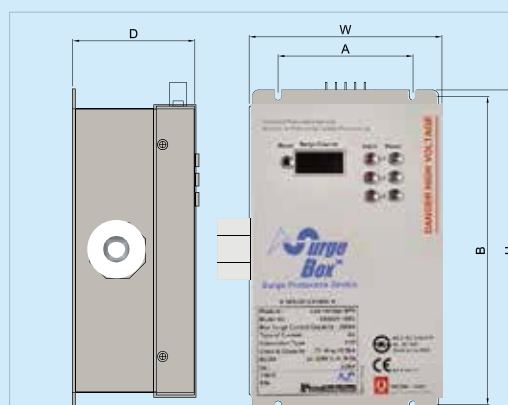


Fig.2

Dimension : mm

Model	W	A	B	H	D	Note
SB385Y-040RC	112	73	150	160	95	Fig. 1
SB320Y-080RC	130	90	180	190	95	Fig. 1
SB385Y-120RC	160	100	210	230	88	Fig. 1
SB320Y-160RC	150	105	240	250	95	Fig. 2

Surge Count-type SPDs

SGC-Series

SurgeBox™ for Tri-phase AC Lines



KS No.12-1641

SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

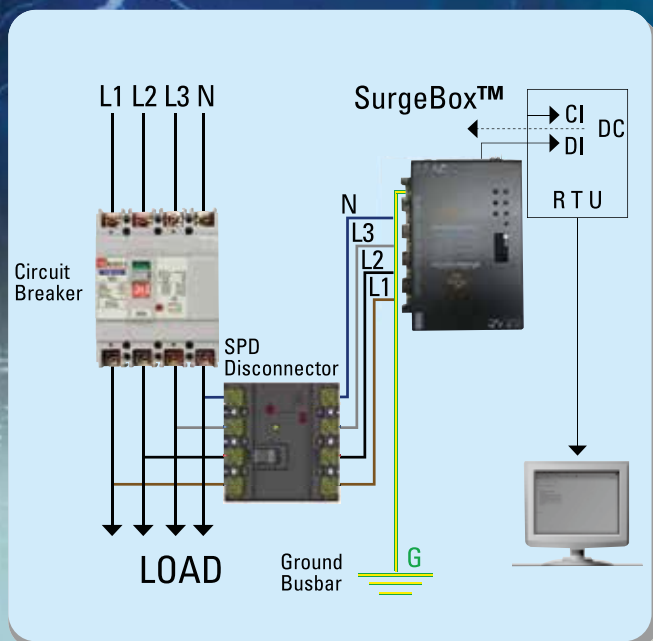
Model No. (모델명)	SB320Y-040SGC	SB320Y-160SGC	SB320Y-320SGC
Rated system voltage 적용회로전압	380/220V 3P4W+G		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 100kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.8 kV L – PE : 2.0 kV
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	50kA
Degree of Protection of enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L – PE / L – N / N – PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)		
Option functions 옵션	Remote Contact Surge Counter (4-Digit Display) ModBus RS485		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	125x165x79 mm	162x250x79 mm	
Product weight 제품 무게	1.36 kg	3.02kg	3.4kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20B	TPS – 1S125B	TPS – 1S250B

Surge Count-type SPDs

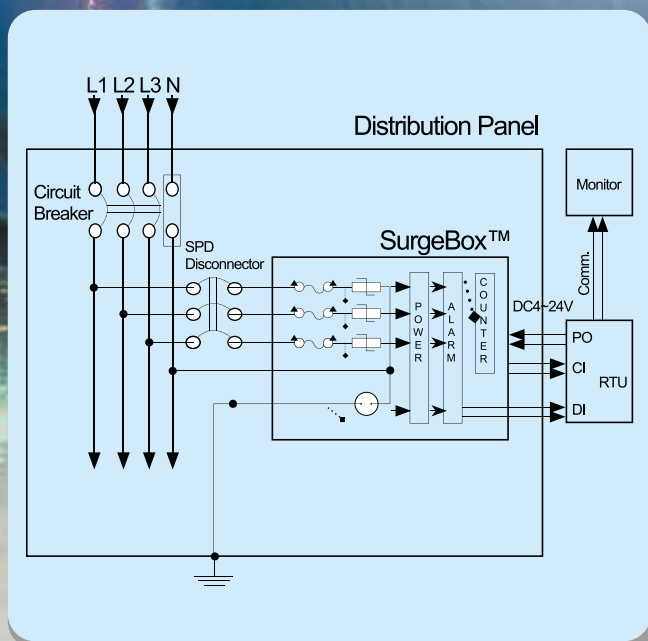
SGC-Series

SurgeBox™ for Tri-phase AC Lines

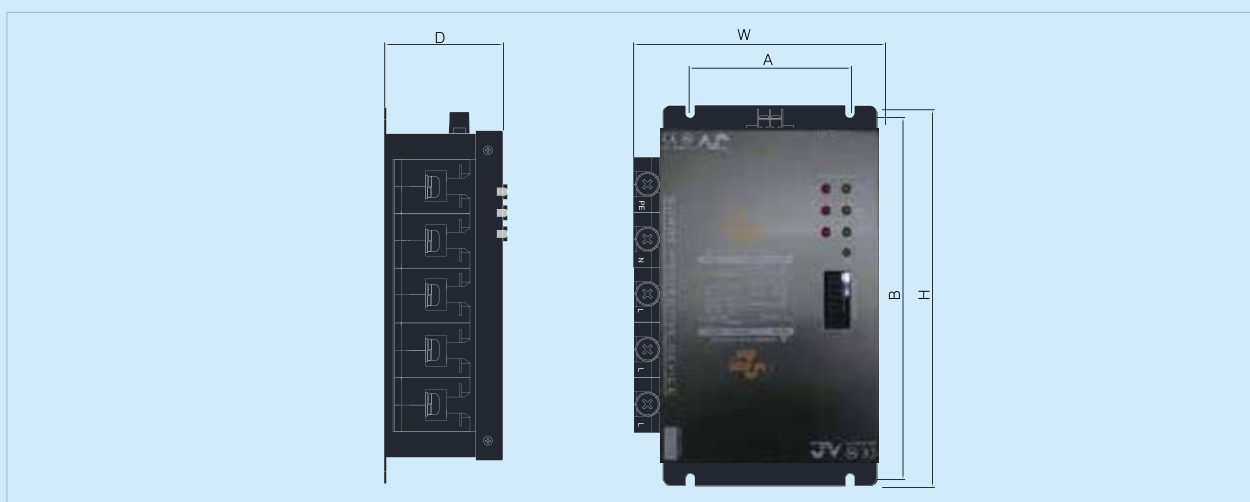
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	A	B	H	D
SB320Y-040SGC	125	71	155	165	79
SB320Y-160SGC	162	105	240	250	79
SB320Y-320SGC	162	105	240	250	79

교체예고표시

Surge Count-type SPDs

SGCF-Series

SurgeBox™ for Tri-phase AC Lines



KS No.12-1641

SPECIFICATION

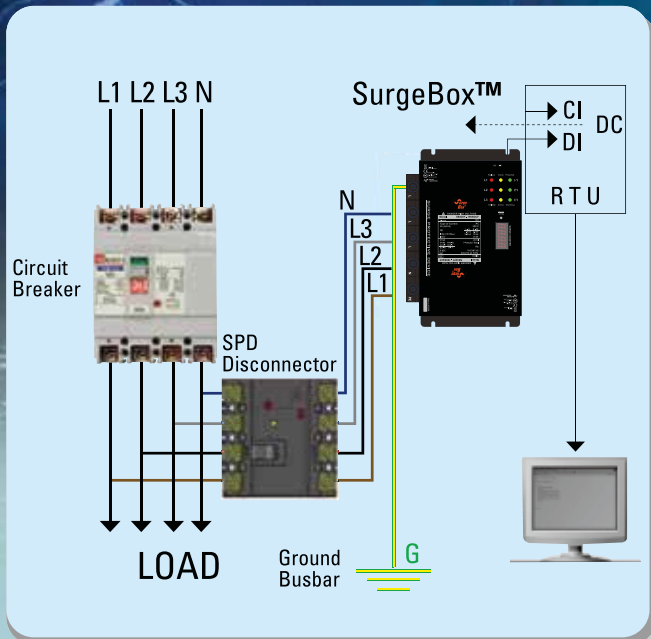
KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB320Y-040SGCF	SB320Y-160SGCF	SB320Y-320SGCF
Rated system voltage 적용회로전압	380/220V 3P4W+G		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 100kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.8 kV L – PE : 2.0 kV
Short-circuit Current Rating I_{SCCR} 단락전류	5 kA	25 kA	50 kA
Degree of Protection of Enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L - PE / L – N / N - PE		
Design Topology 설계형태	Combination		
Types of Grounding System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green (Protected) / Yellow (Check) / Red (Replace)		
Option functions 옵션	Remote Contact Surge Counter (4-Digit Display) ModBus RS485		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wire Size for Connections 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L – N : 10 mm ² N – PE : 16 mm ²	
Dimensions (WxHxD) 크기	125x165x79 mm	161.5x250x79 mm	
Product weight 제품 무게	1.36 kg	3.02 kg	3.4 kg
Internal Disconnector 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnector 외부 분리기	TPS – 2S20B	TPS – 1S125B	TPS – 1S250B

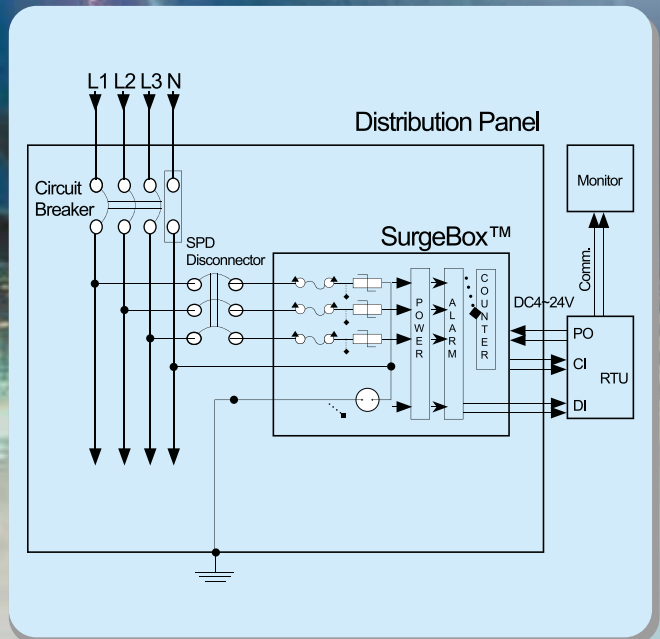
SGCF-Series

SurgeBox™ for Tri-phase AC Lines

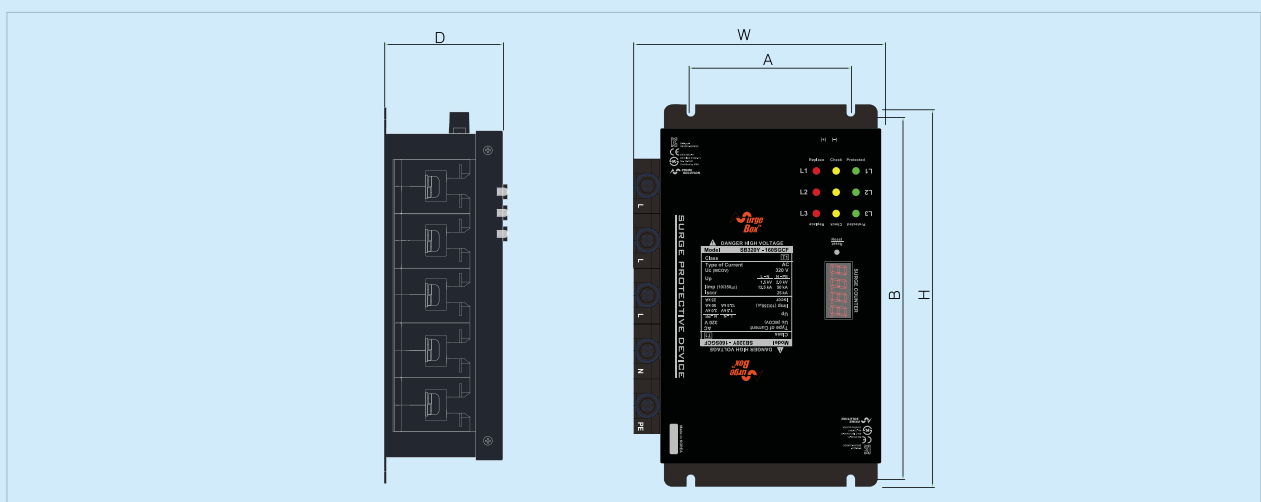
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	A	B	H	D
SB320Y-040SGCF	125	71	155	165	79
SB320Y-160SGCF	162	105	240	250	79
SB320Y-320SGCF	162	105	240	250	79

Surge Count-type SPDs

SBC⁺-Series

SurgeBoxTM for Tri-phase AC Lines

KS No.12-1641

SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

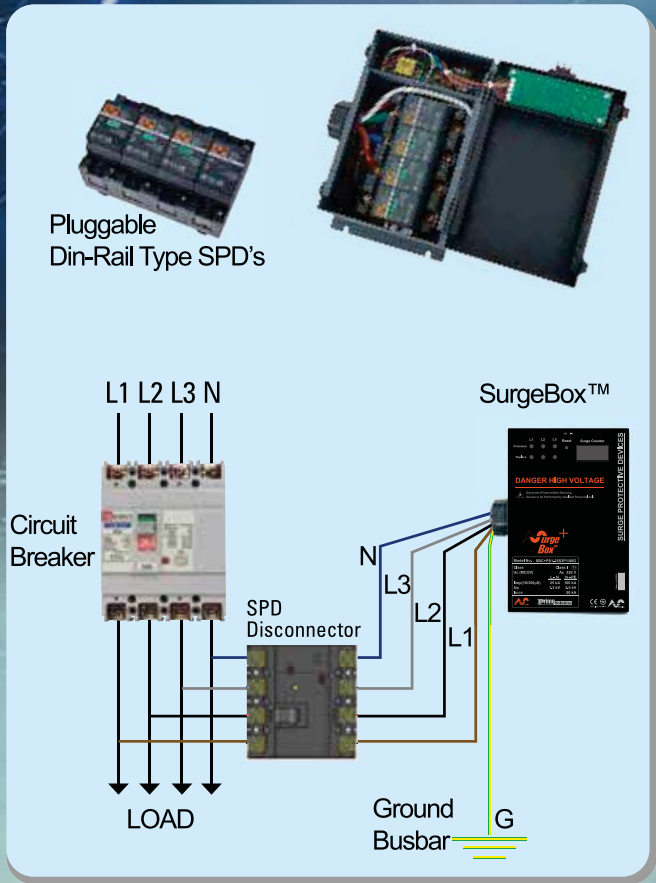
Model No. (모델명)	SBC+PS2-40S3P/40G	SBC+PS1-13S3P/50G	SBC+PS1-25S3P/100G
Rated system voltage 적용회로전압	380/220V 3P4W+G		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 100kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.2 kV L – PE : 1.5 kV	L – N : 1.3 kV L – PE : 2.0 kV
Short-circuit Current Rating I _{SCCR} 단락전류	5kA	25kA	50kA
Degree of Protection of enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L-N / L-PE / N-PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)		
Option functions 옵션	Remote Contact Surge Counter (4-Digit Display) ModBus RS485		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	157.8x180x80 mm	170x250x91 mm	
Product weight 제품 무게	1.47 kg	3.82kg	4.12kg
Internal Disconnector 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnector 외부 분리기	TPS – 2S20B	TPS – 1S125B	TPS – 1S250B

Surge Count-type SPDs

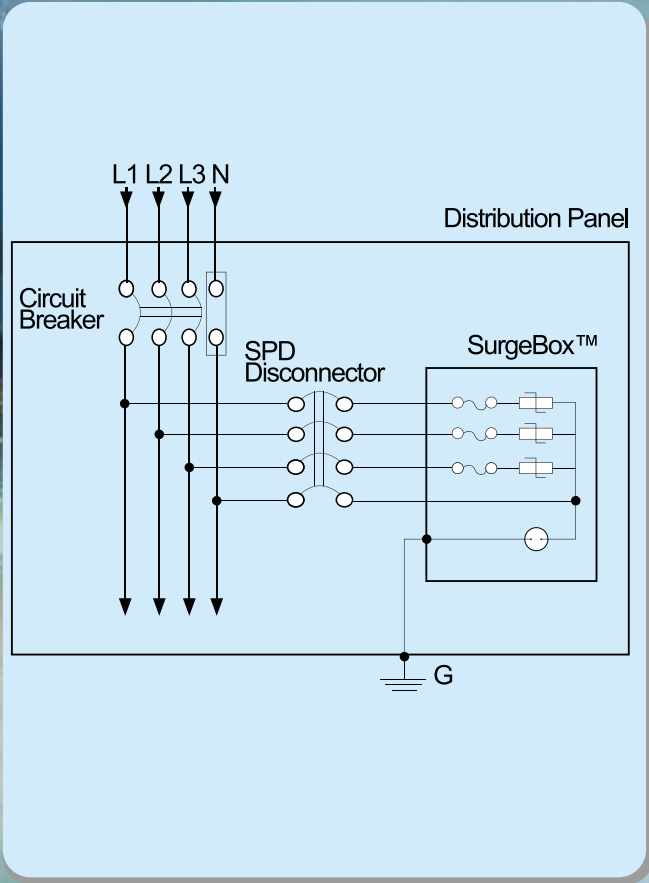
SBC⁺-Series

SurgeBoxTM for Tri-phase AC Lines

INSTALLATION



CIRCUIT DIAGRAM



DIMENSION

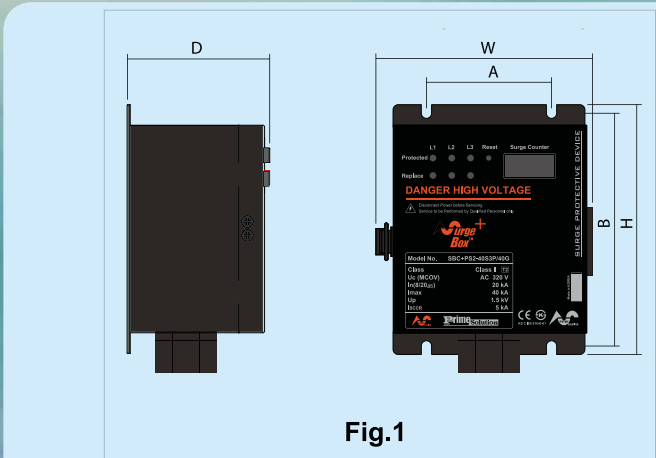


Fig.1

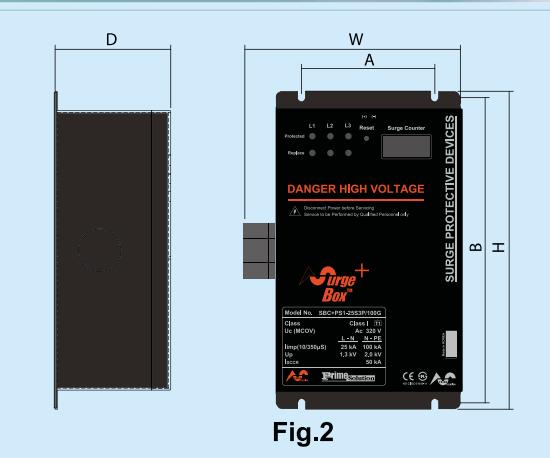


Fig.2

mm

Model	W	A	B	H	D	Note
SBC+PS2-40S3P/40G	157.8	73	170	180	80	Fig. 1
SBC+PS1-13S3P/50G	170	105	240	250	91	Fig. 2
SBC+PS1-25S3P/100G	170	105	240	250	91	Fig. 2

신재생 전용(태양광, 풍력, ESS)

Surge Count-type SPDs

DI counter-Series

SurgeBox™ for Tri-phase AC Lines



(Δ-connection, 3wire+Gnd)

SPECIFICATION

IEC61643-11
Compliant with LV
Directive 72/73 FEC

Model No.	SB480DI-160SGC	SB480DI-320SGC	SB650DI-160SGC	SB650DI-320SGC
Rated system voltage 적용회로전압	480V 3P3W+G		650V 3P3W+G	
Frequency 회로 주파수	50 / 60 Hz			
Class 등 급	Class I			
MCOV Uc 최대연속사용전압	L-PE : 550 Vac L-L : 640 Vac		L-PE : 690 Vac L-L : 840 Vac	
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	L – PE : 12.5kA	L – PE : 25kA	L – PE : 12.5kA	L – PE : 25kA
Voltage Protection Level U_p 전압보호레벨	L-PE : 2.2kV	L-PE : 2.5kV	L-PE : 2.2kV	L-PE : 2.5kV
Short-circuit Current Rating I_{SCCR} 단락전류	200kA	200kA	200kA	200kA
Degree of Protection of enclosure IP 수납보호도	IP 20			
Protection mode 보호모드	L-PE			
Design Topology 설계형태	Combination			
Types of Earthing System 접지방식	TN/TT/IT			
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)			
Option functions 옵션	Remote Contact Surge Counter (4-Digit Display) ModBus RS485			
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting			
Wiring Size 연결 전선	L : 10 mm ² PE : 16 mm ²			
Dimensions (WxHxD) 크기	160x286x80 mm		208x292x80 mm	
Product weight 제품 무게	3.41 kg	3.82 kg	4.41 kg	4.82 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection			
External Disconnecter 외부 분리기	TPS – 1S125B	TPS – 1S250B	-	-

신재생 전용(태양광, 풍력, ESS)

Normal Mode Protection

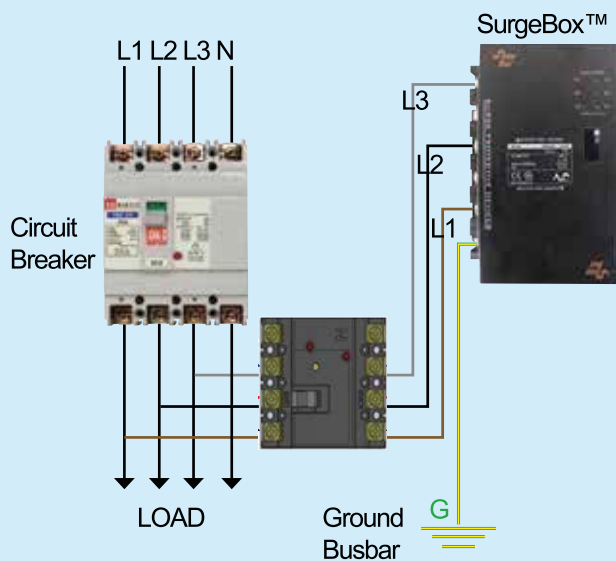
DI counter-Series

SurgeBox™

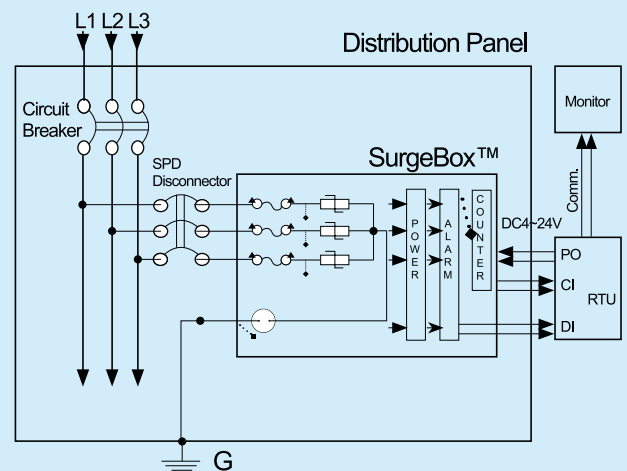
for Tri-phase AC Lines

(Δ -connection, 3wire+Gnd)

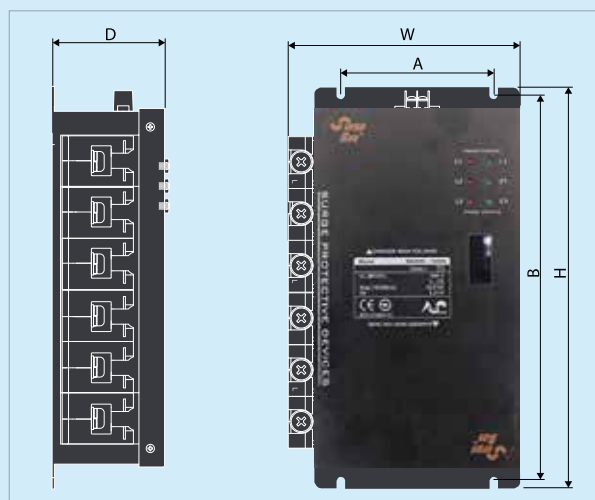
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	A	B	H	D
SB480DI-160SGC	160	105	276	286	80
SB480DI-320SGC	160	105	276	286	80
SB650DI-160SGC	208	151	282	292	80
SB650DI-300SGC	208	151	282	292	80

Direct-connect type SPDs

PS2-Series

Surge Protective Device



SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

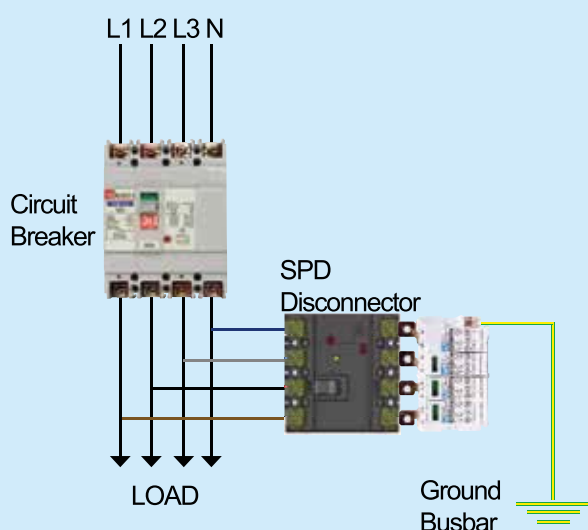
Model No. (모델명)	PS2-40S3P/40G-DM/DP	PS2-40/320 4P-DM/DP
Certification 인증	KS/CE/CB	CE
Rated system voltage 적용회로전압	380/220V 3P4W+G	
Frequency 회로 주파수	50 / 60 Hz	
Class 등급	Class II	
MCOV Uc 최대연속사용전압	320 Vac	
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	
Voltage Protection Level U_p 전압보호레벨	1.5kV	
Short-circuit Current Rating I_{SCCR} 단락전류	5 kA	
Degree of Protection IP 보호등급	IP 20	
Protection mode 보호모드	L – N / N – PE	
Design Topology 설계형태	Combination	
Types of Grounding System 접지방식	TN / TT / IT	
Diagnostics 상태 표시	Green (Protected) / Red (Replace)	
Option functions 옵션	Remote Contact	
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting	
Wire Size for Connections 연결 전선	Bus bar type	
Dimensions (WxHxD) 크기	27 page 'DIMENSION'	
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection	
External Disconnecter 외부 분리기	DM : MCCB / DP : TPS-2S20B	

Direct-connect type SPDs

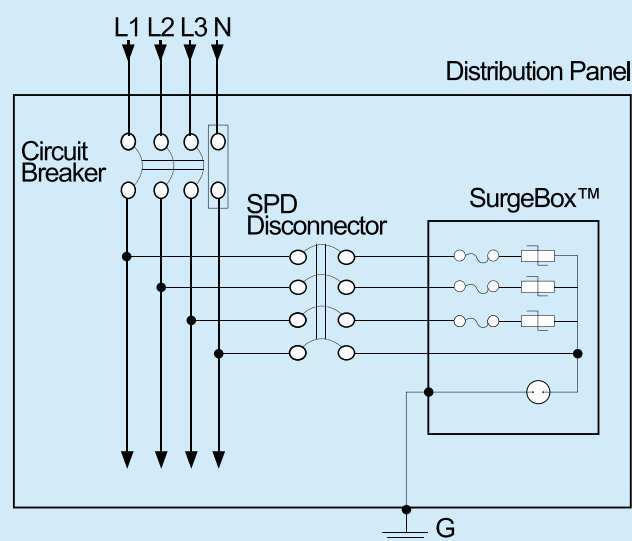
PS2-Series

Surge Protective Device

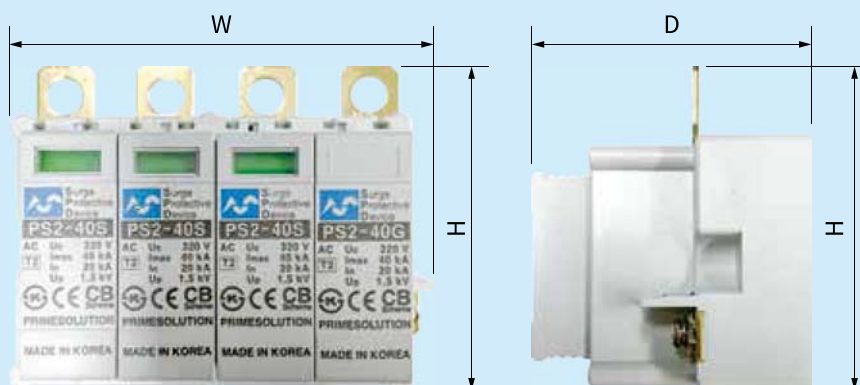
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	H	D
PS2-40S3P/40G-DM	100	73.5	64.7
PS2-40/320 4P-DM	100	73.5	64.7
PS2-40S3P/40G-DP	100	72	64.7
PS2-40/320 4P-DP	100	72	64.7

Din-rail Mounting SPDs

PS-Series

for Tri-phase AC Lines



SPECIFICATION

 KS C IEC61643-11:2012
 Compliant with LV
 Directive 72/73 FEC

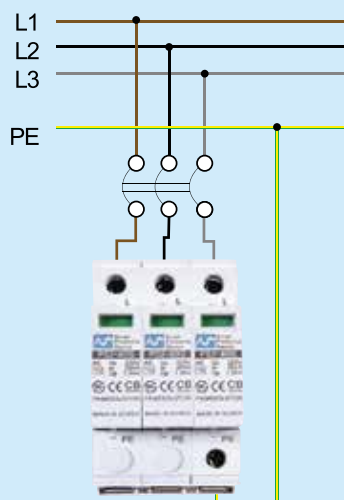
Model No. (모델명)	PS2-40S3P/40G	PS1-13S3P/50G	PS1-25S3P/100G
Rated system voltage 적용회로전압	380/220V 3P4W+G		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 100kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.2 kV L – PE : 1.5 kV	L – N : 1.3 kV L – PE : 2.0 kV
Short-circuit Current Rating I_{SCCR} 단락전류	5 kA	25 kA	50 kA
Degree of Protection of enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L – N / N – PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green (Protected) / Red (Replace)		
Option functions 옵션	Remote contact		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	$\geq 4 \text{ mm}^2$	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	72x90x66.5 mm	144x90x67 mm	
Product weight 제품 무게	0.5 kg	1.0kg	1.3kg
Internal Disconnector 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnector 외부 분리기	TPS – 2S20B	TPS – 1S125B	TPS – 1S250B

Din-rail Mounting SPDs

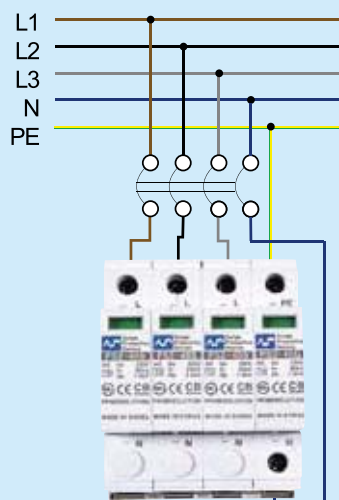
PS-Series

for Tri-phase AC Lines

INSTALLATION & CIRCUIT DIAGRAM

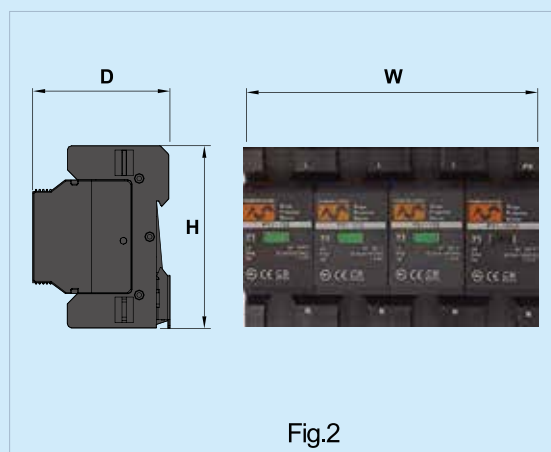
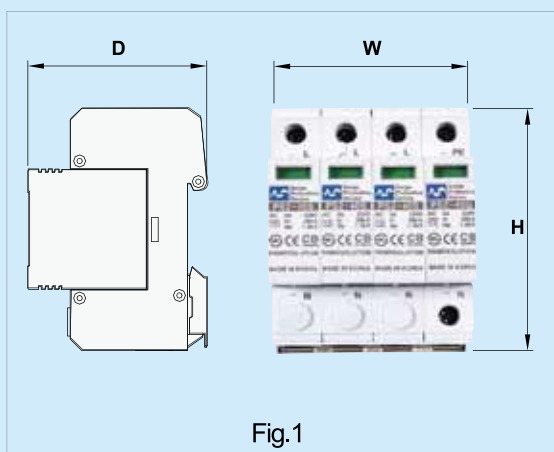


PS2-40S3P
PS1-13S3P
PS1-25S3P



PS2-40S3P/40G
PS1-13S3P/50G
PS1-25S3P/100G

DIMENSION



mm

Model	W	H	D	Note
PS2-40S3P/40G	72	90	66.5	Fig. 1
PS1-13S3P/50G	144	90	67	Fig. 2
PS1-25S3P/100G	144	90	67	Fig. 2

Din-rail Mounting SPDs

PS-Series

for Tri-phase AC Lines



SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

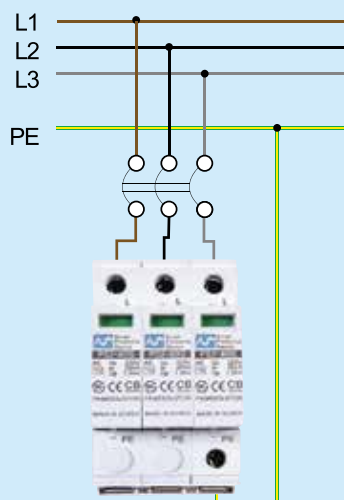
Model No. (모델명)	PS2-40S4P	PS2- 80S4P	PS1-120S4P
Rated system voltage 적용회로전압	380/220V 3P4W+G		
Frequency 회로 주파수	50 / 60 Hz		
Class 등급	Class II		Class I
MCOV Uc 최대연속사용전압	320 Vac	385 Vac	
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	-	6.5kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	40kA	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	80kA	120kA
Voltage Protection Level U_p 전압보호레벨	1.5kV	L – N : 1.8kV L – PE : 3.0kV	L – N : 1.5 kV L – PE : 2.5 kV
Degree of Protection IP 보호등급	IP 20		
Protection mode 보호모드	L – N / N – PE / L – PE		
Design Topology 설계형태	Voltage Limiting		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green (Protected) / Red (Replace)		
Option functions 옵션	Remote contact		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²		L, N : 10 mm ² PE : 16 mm ²
Dimensions (WxHxD) 크기	72x90x66.5 mm	144x90x67 mm	
Product weight 제품 무게	0.5 kg	1.0kg	1.0kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20B	TPS – 1S125B	

Din-rail Mounting SPDs

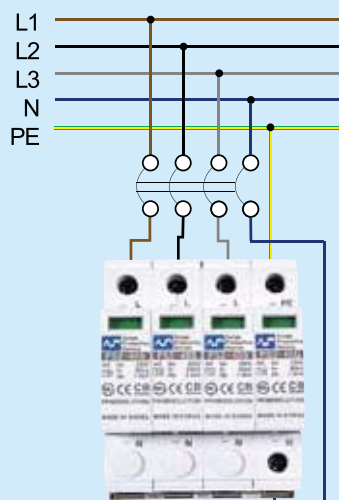
PS-Series

for Tri-phase AC Lines

INSTALLATION & CIRCUIT DIAGRAM

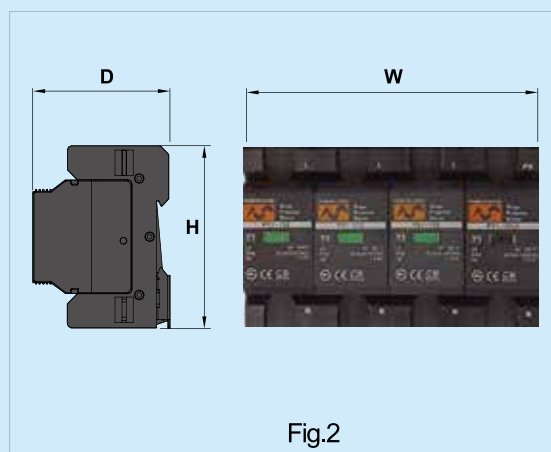
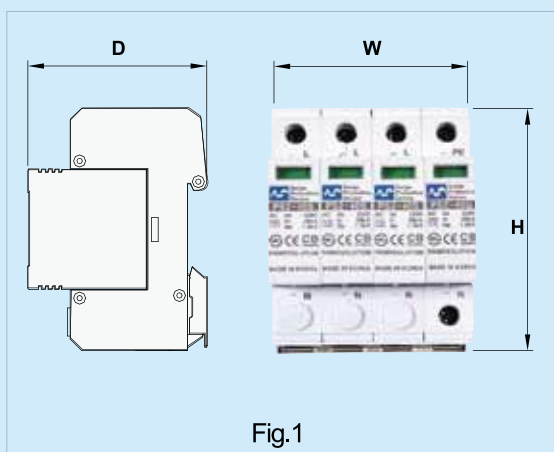


PS2-40S3P
PS2-80S3P
PS1-120S3P



PS2-40S4P
PS2-80S4P
PS1-120S4P

DIMENSION



mm

Model	W	H	D	Note
PS2-40S4P	72	90	66.5	Fig. 1
PS1-80S4P	144	90	67	Fig. 2
PS1-120S4P	144	90	67	Fig. 2

Din-rail Mounting SPDs

PS-Series

for Tri-phase AC Lines



SPECIFICATION

IEC61643-11
Compliant with LV
Directive 72/73 FEC

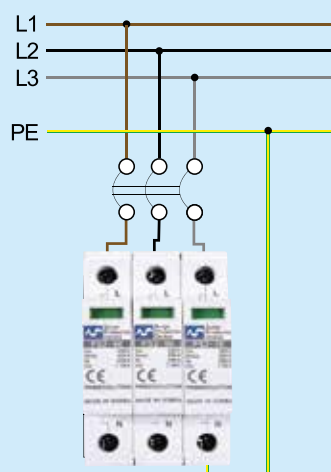
Model No. (모델명)	PS2-40/320 4P
Rated system voltage 적용회로전압	380/220V 3P4W+G
Frequency 회로 주파수	50 / 60 Hz
Class 등급	Class II
MCOV U _c 최대연속사용전압	320 Vac
Impulse Discharge Current I _{imp} (10/350μs) 임펄스 전류	-
Nominal Discharge Current I _n (8/20μs) 공칭방전전류	20kA
Maximum Discharge Current I _{max} (8/20μs) 최대방전전류	40kA
Voltage Protection Level U _p 전압보호레벨	1.5 kV
Degree of Protection of enclosure IP 수납보호도	IP 20
Protection mode 보호모드	L – N / N – PE
Design Topology 설계형태	Voltage Limiting
Types of Earthing System 접지방식	TN/TT/IT
Diagnostics 상태 표시	Green (Protected) / Red (Replace)
Option functions 옵션	Remote contact
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting
Wiring Size 연결 전선	≥ 4 mm ²
Dimensions (WxHxD) 크기	72x90x66.5 mm
Product weight 제품 무게	0.5 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection
External Disconnecter 외부 분리기	TPS – 2S20B

Din-rail Mounting SPDs

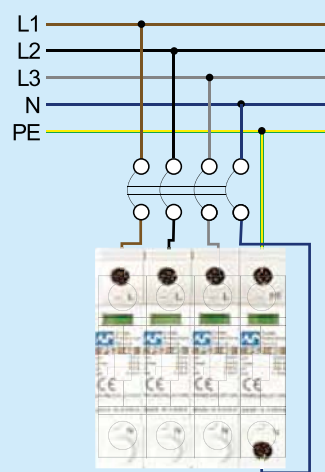
PS-Series

for Tri-phase AC Lines

INSTALLATION & CIRCUIT DIAGRAM



PS2-40/320 3P



PS2-40/320 4P

DIMENSION

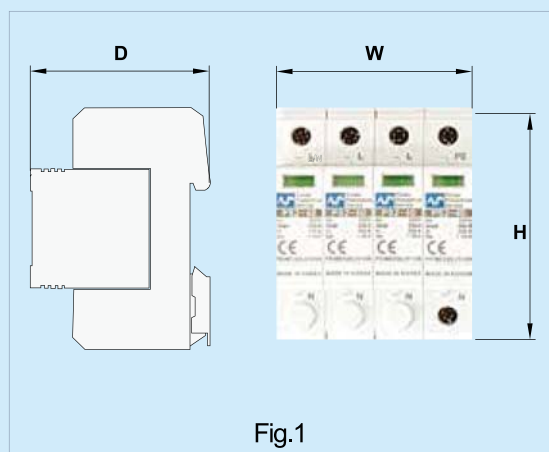


Fig.1

mm

Model	W	H	D	Note
PS2-40/320 4P	72	90	66.5	Fig. 1



Smart Lightning Protection Management System SPDs

CI-Series

SurgeBox™ for Tri-phase AC Lines

SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

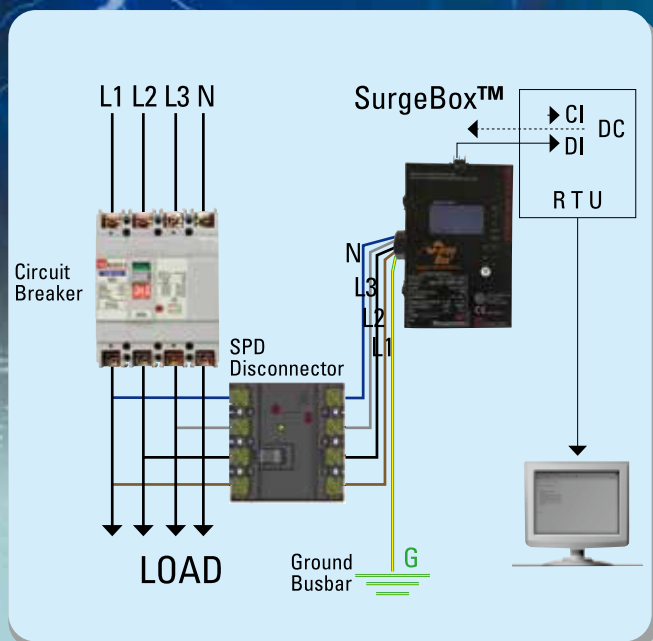
Model No. (모델명)	SBCI+PS2-40S3P/40G	SBCI+PS1-13S3P/50G	SBCI+PS1-25S3P/100G
Rated system voltage 적용회로전압	380/220V 3P4W+G		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 100kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	1.5kV	L-N : 1.2kV N-PE : 1.8kV	L-N : 1.3kV N-PE : 2.0kV
Degree of Protection of enclosure IP 수납보호도	IP 20		
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	50kA
Protection mode 보호모드	L – N / N – PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green (Protected) / Yellow (Check) / Red (Replace)		
Option functions 옵션	Remote contact Dual monitor of surge counter (Local 4-Digit Display & Remote signal) ModBus RS485 data(surge Counting & Error Signal) communication with host Monitoring (Voltage, Leakage current) Built-in Ethernet		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	140x210x95 mm	167x250x105 mm	
Internal Disconnector 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnector 외부 분리기	TPS-2S20B	TPS – 1S125B	TPS – 1S250B

Smart Lightning Protection Management System SPDs

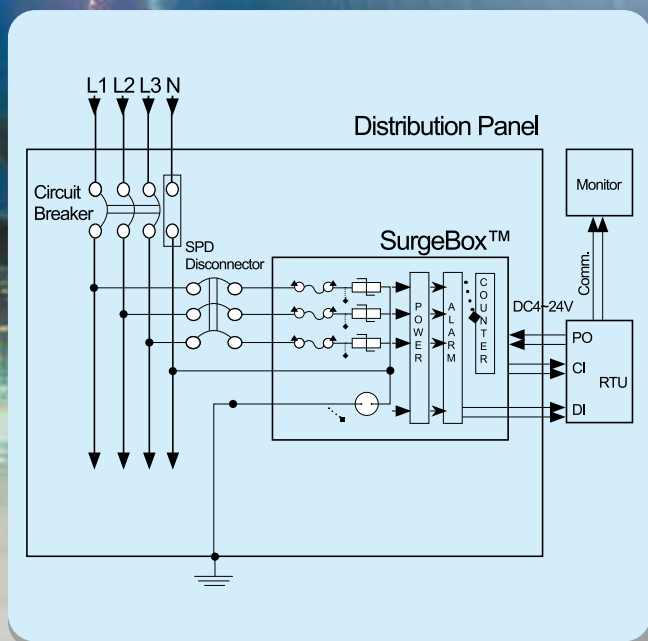
CI-Series

SurgeBox™ for Tri-phase AC Lines

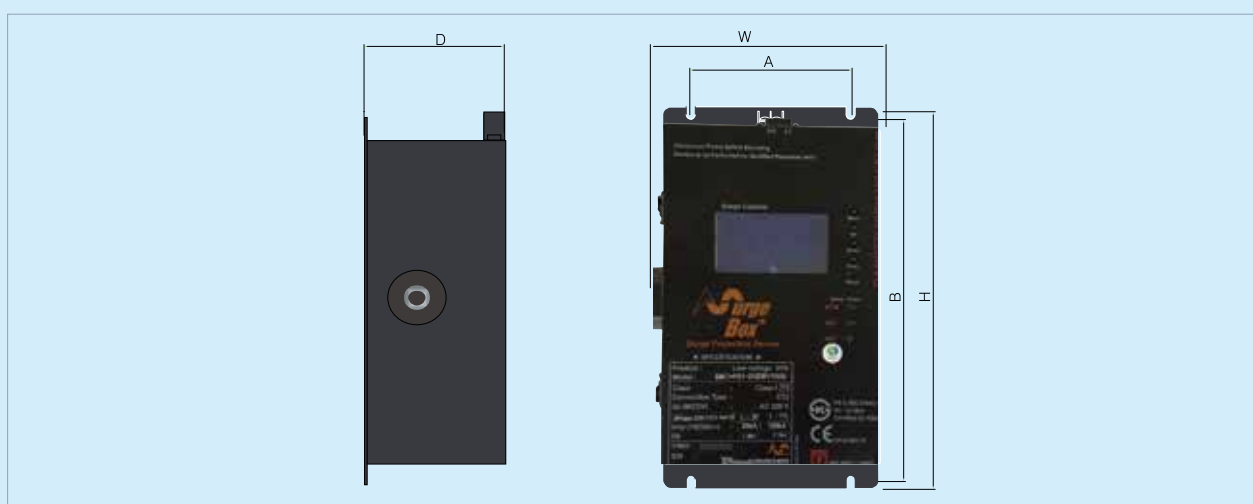
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	A	B	H	D
SBCI+PS2-40S3P/40G	140	73	200	210	95
SBCI+PS1-13S3P/50G	167	105	240	250	105
SBCI+PS1-25S3P/100G	167	105	240	250	105

Normal Mode Protection

R-Series

SurgeBox™

for Single-phase AC Lines



KS No.12-1641

SPECIFICATION

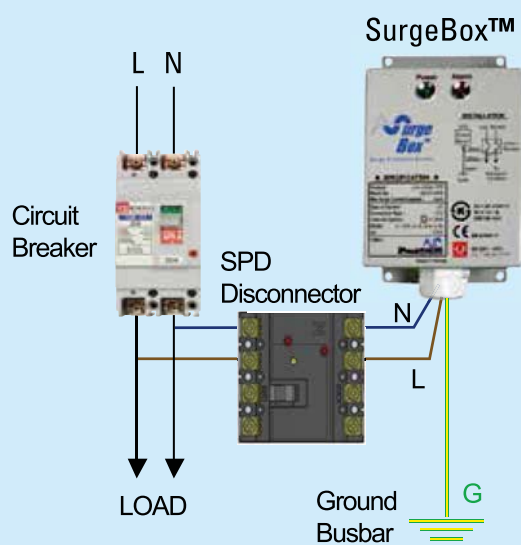
KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB385-040R	SB385-080R	SB385-120R	SB385-160R
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd			
Frequency 회로 주파수	50 / 60 Hz			
Class 등 급	Class II		Class I	
MCOV Uc 최대연속사용전압	385 Vac			
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-		6.5kA	12.5kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	40kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	80kA	120kA	200kA
Voltage Protection Level U_p 전압보호레벨	2.5 kV	3.0 kV	2.0 kV	2.0 kV
Degree of Protection of enclosure IP 수납보호도	IP 20			
Protection mode 보호모드	L – N / N – PE			
Design Topology 설계형태	Voltage Limiting			
Types of Earthing System 접지방식	TN			
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)			
Option functions 옵션	-			
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting			
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²		L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	68x110x80 mm	95x137x80 mm	160x230x85 mm	168x200x80 mm
Product weight 제품 무게	1.31 kg	1.42 kg	1.65 kg	1.88 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection			
External Disconnecter 외부 분리기	TPS – 2S20C	TPS – 1S125B		

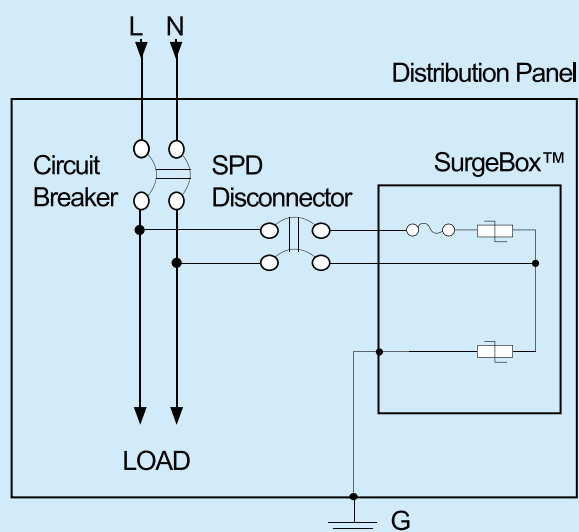
Normal Mode Protection

R-Series SurgeBox™ for Single-phase AC Lines

INSTALLATION



CIRCUIT DIAGRAM



DIMENSION

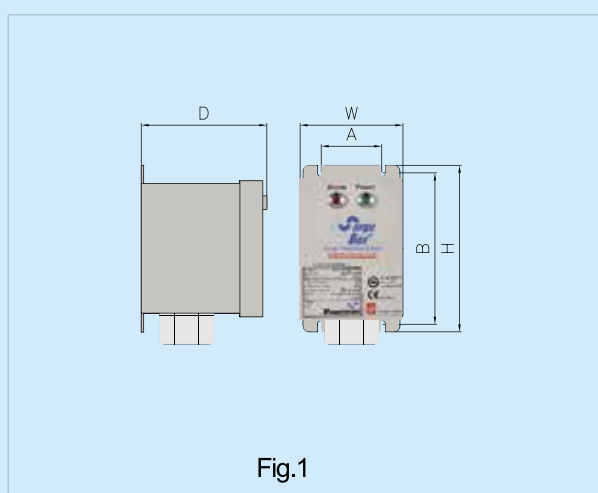


Fig.1

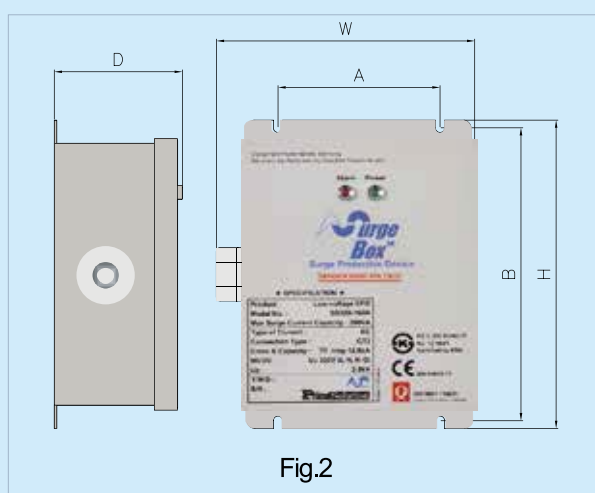


Fig.2

mm

Model	W	A	B	H	D	Note
SB385-040R	68	40	100	110	80	Fig. 1
SB385-080R	95	70	127	137	80	Fig. 1
SB385-120R	160	100	210	230	85	Fig. 1
SB385-160R	168	105	190	200	80	Fig. 2

Normal Mode Protection

SG-Series

SurgeBox™

for Single-phase AC Lines



KS No.12-1641

SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB320-040SG	SB320-160SG	SB320-320SG
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 50kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.8 kV L – PE : 1.5 kV
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	25kA
Degree of Protection of enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L – PE / L – N / N – PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)		
Option functions 옵션	Remote contact		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	74x116x80 mm	127x165x80 mm	
Product weight 제품 무게	1,26 kg	2.28kg	2.42kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20C	TPS – 1S125B	TPS-1S250B

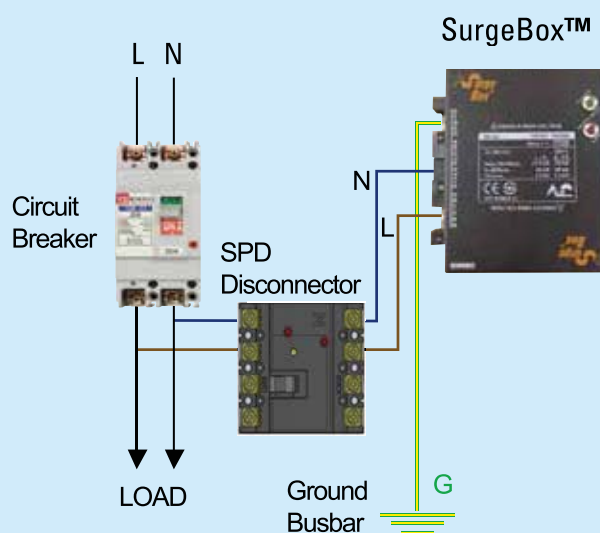
Normal Mode Protection

SG-Series

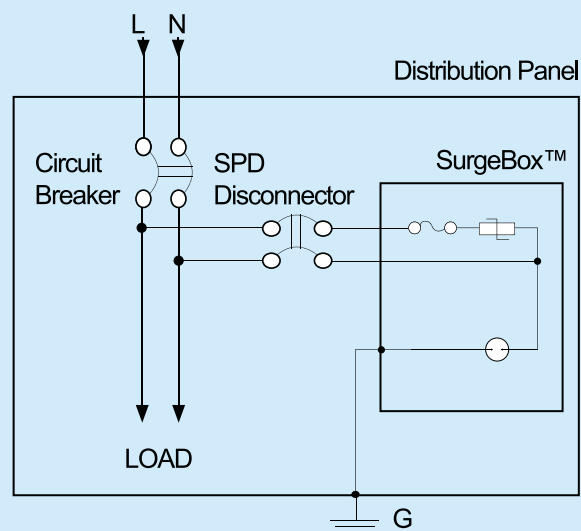
SurgeBox™

for Single-phase AC Lines

INSTALLATION



CIRCUIT DIAGRAM



DIMENSION

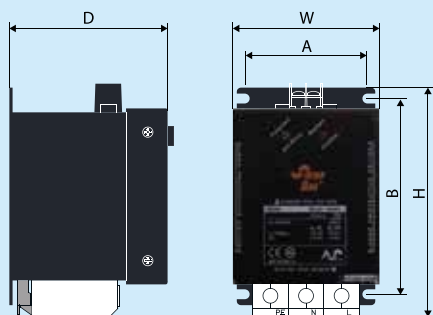


Fig. 1

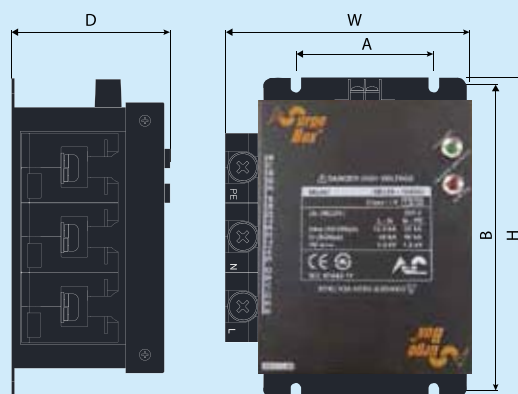


Fig. 2

mm

Model	W	A	B	H	D	Note
SB320-040SG	74	62	99	116	80	Fig. 1
SB320-160SG	127	71	155	165	80	Fig. 2
SB320-320SG	127	71	155	165	80	Fig. 2

교체예고표시

Normal Mode Protection

SGF-Series

SurgeBox™

for Single-phase AC Lines



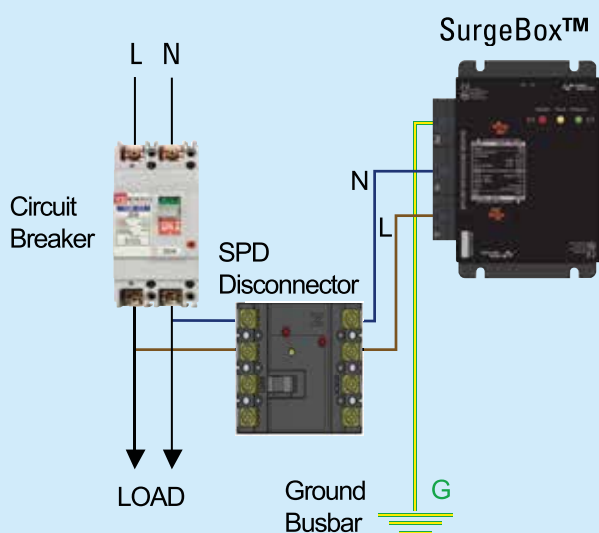
KS No.12-1641

SPECIFICATION

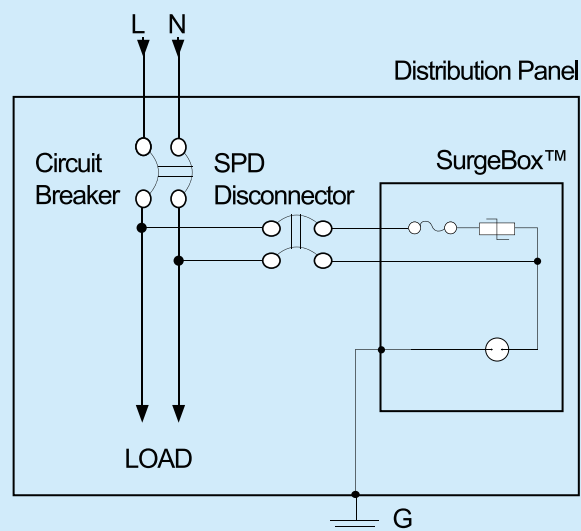
KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB320-040SGF	SB320-160SGF	SB320-320SGF
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L-N : 12.5kA N-PE : 50kA	L-N: 25kA N-PE : 50kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.8 kV L – PE : 1.5 kV
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	25kA
Degree of Protection of Enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L – PE / L – N / N - PE		
Design Topology 설계형태	Combination		
Types of Grounding System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green (Protected) / Yellow (Check) / Red (Replace)		
Option functions 옵션	Remote Contact		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wire Size for Connections 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	127x165x79 mm		
Product weight 제품 무게	1.26 kg	2.28 kg	2.42 kg
Internal Disconnector 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnector 외부 분리기	TPS – 2S20B	TPS – 1S125B	TPS – 1S250B

INSTALLATION



CIRCUIT DIAGRAM



DIMENSION

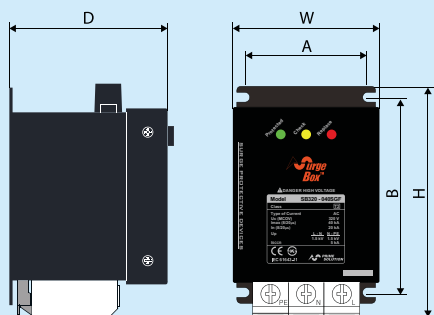


Fig. 1

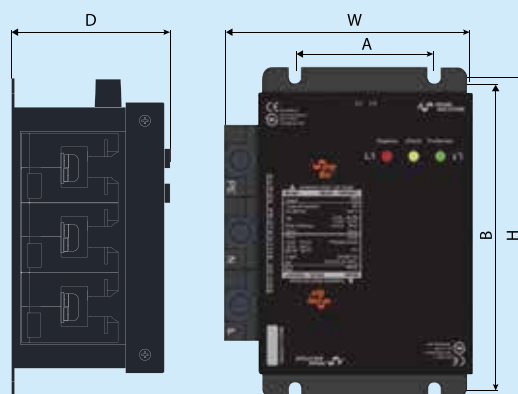


Fig. 2

mm

Model	W	A	B	H	D	Note
SB320-040SGF	74	62	99	116	80	Fig. 1
SB320-160SGF	127	71	155	165	80	Fig. 2
SB320-320SGF	127	71	155	165	80	Fig. 2

Normal Mode Protection

SB+ -Series

SurgeBox™ for Single-phase AC Lines



KS No.12-1641

SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB+PS2-40S/40G	SB+PS1-13S/50G	SB+PS1-25S/50G
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ S) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 50kA
Nominal Discharge Current I_n (8/20 μ S) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ S) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.8 kV	L – N : 1.2 kV L – PE : 1.5 kV	L – N : 1.3 kV L – PE : 1.5kV
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	25kA
Degree of Protection of enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L-N / L-PE / N-PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)		
Option functions 옵션	Remote contact		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	126.3x160x83 mm	162.5x200x91 mm	
Product weight 제품 무게	1.26 kg	2.64kg	2.79kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20C	TPS – 1S125B	TPS-1S250B

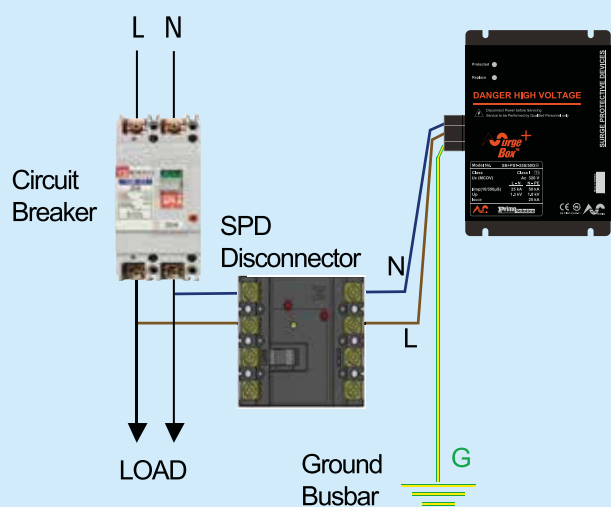
Normal Mode Protection

SB+ -Series

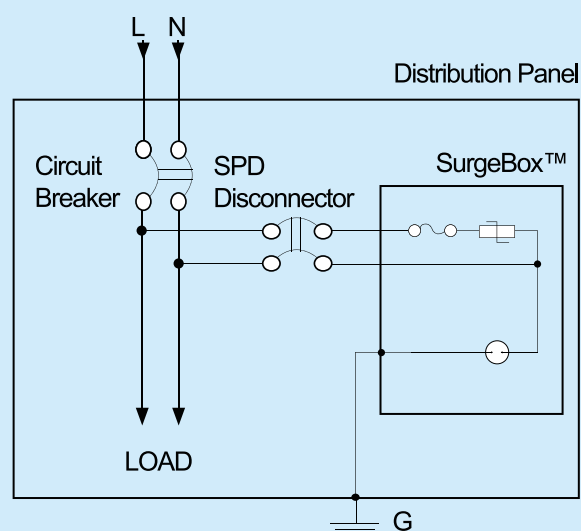
SurgeBox™ for Single-phase AC Lines

INSTALLATION

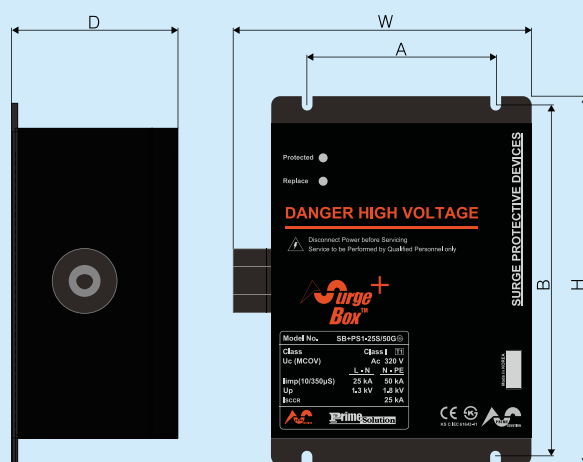
Pluggable
Din-Rail Type SPD's



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	A	B	H	D
SB+PS2-40S/40G	126.3	73	150	160	83
SB+PS1-13S/50G	162.5	105	190	200	91
SB+PS1-25S/50G	162.5	105	190	200	91

Surge Count-type SPDs

RC-Series

SurgeBox™ for Single-phase AC Lines



KS No.12-1641

SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

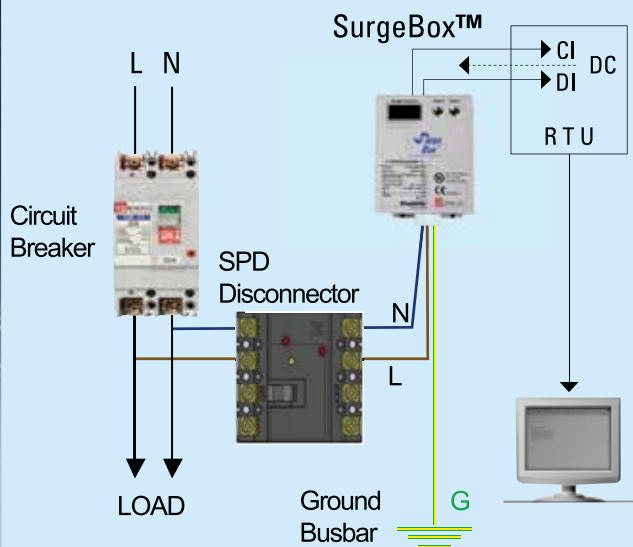
Model No. (모델명)	SB385-040RC	SB385-080RC	SB385-120RC	SB385-160RC
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd			
Frequency 회로 주파수	50 / 60 Hz			
Class 등급	Class II		Class I	
MCOV Uc 최대연속사용전압	385 Vac			
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-		6.5kA	12.5kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	40kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	80kA	120kA	200kA
Voltage Protection Level U_p 전압보호레벨	2.5 kV	3.0 kV	2.0 kV	2.0 kV
Degree of Protection of enclosure IP 수납보호도	IP 20			
Protection mode 보호모드	L – N / N – PE			
Design Topology 설계형태	Voltage Limiting			
Types of Earthing System 접지방식	TN			
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)			
Option functions 옵션	Remote Contact Surge Counter (4-Digit Display) ModBus RS485			
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting			
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²		L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	95x146x95 mm		160x172.5x80 mm	167.4x200x95 mm
Product weight 제품 무게	1.41 kg	1.52 kg	1.75 kg	1.98 kg
Internal Disconnector 내부 분리기	Thermal Runaway Multi-Fusing Protection			
External Disconnector 외부 분리기	TPS – 2S20C	TPS – 1S125B		

Surge Count-type SPDs

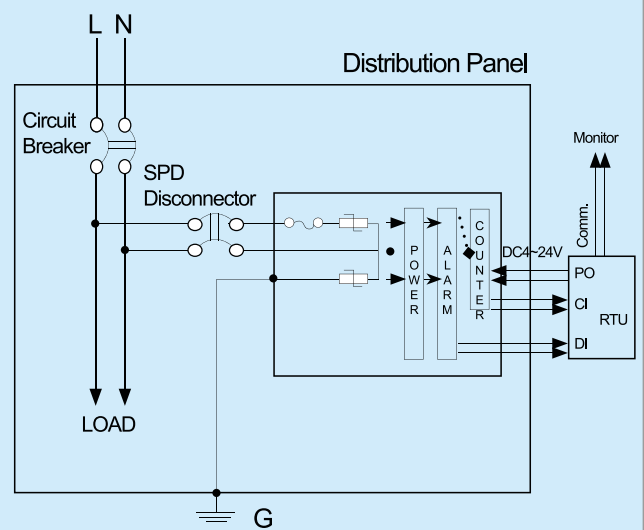
RC-Series

SurgeBox™ for Single-phase AC Lines

INSTALLATION



CIRCUIT DIAGRAM



DIMENSION

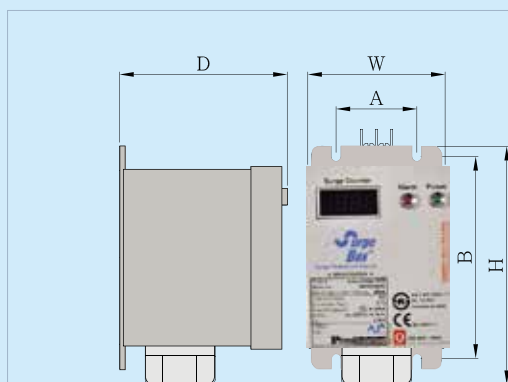


Fig.1

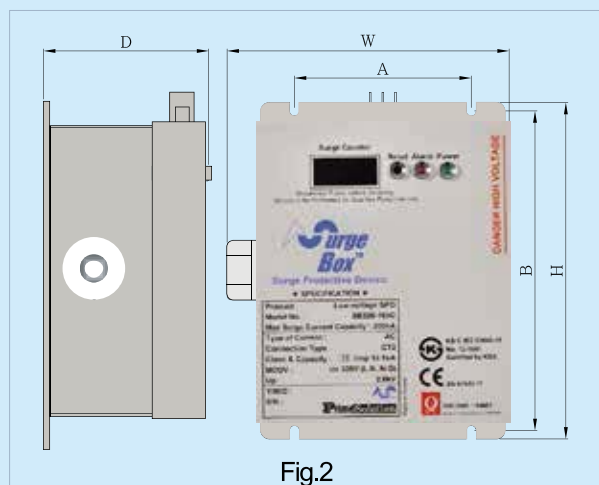


Fig.2

mm

Model	W	A	B	H	D	Note
SB385-040RC	95	70	127	146	95	Fig. 1
SB385-080RC	95	70	127	146	95	Fig. 1
SB385-120RC	160	90	154	172.5	80	Fig. 1
SB385-160RC	167.4	105	190	200	95	Fig. 2

Surge Count-type SPDs

SGC-Series

SurgeBox™ for Single-phase AC Lines

KS No.12-1641



SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

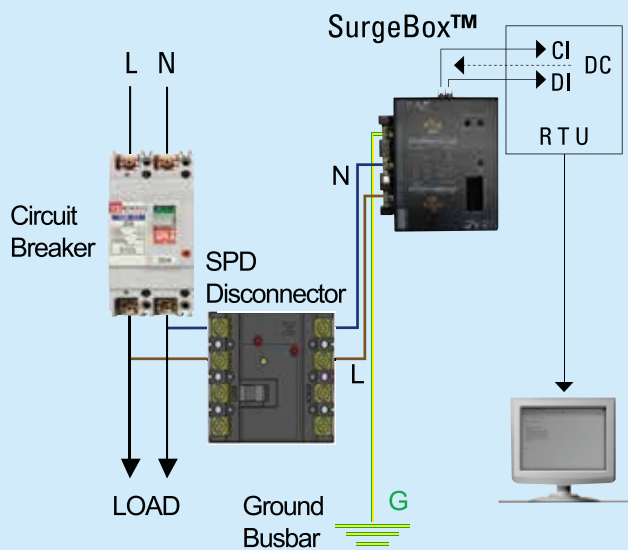
Model No. (모델명)	SB320-040SGC	SB320-160SGC	SB320-320SGC
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 50kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.8 kV L – PE : 2.0 kV
Degree of Protection of enclosure IP 수납보호도	IP 20		
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	25kA
Protection mode 보호모드	L – PE / L – N / N – PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)		
Option functions 옵션	Remote Contact Surge Counter (4-Digit Display) ModBus RS485		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	124x165x79 mm	126.5x165x79 mm	
Product weight 제품 무게	1.36 kg	2.38kg	2.52kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20C	TPS – 1S125B	TPS-1S250B

Surge Count-type SPDs

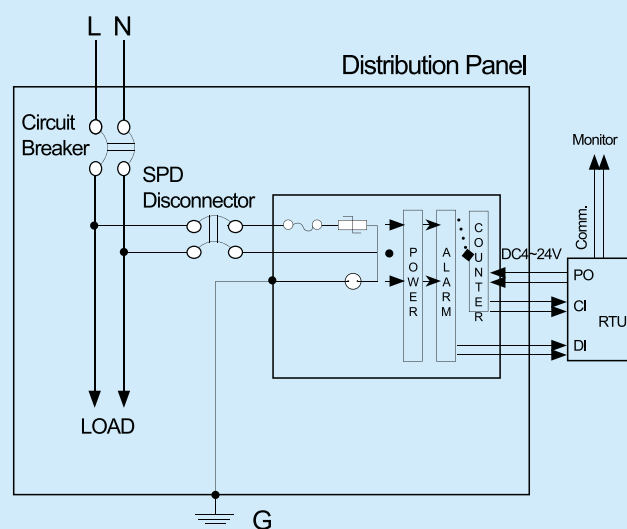
SGC-Series

SurgeBox™ for Single-phase AC Lines

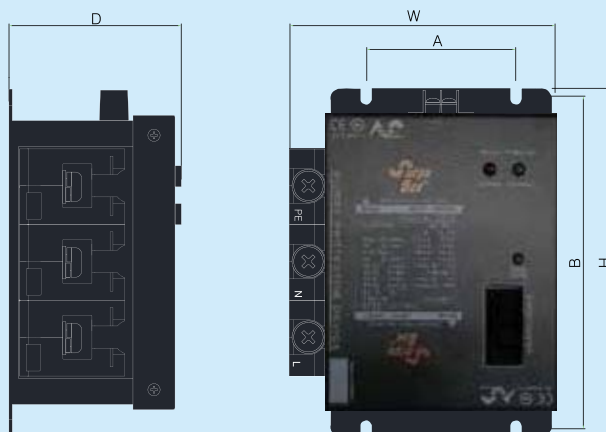
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	A	B	H	D
SB320-040SGC	124	71	155	165	79
SB320-160SGC	126.5	71	155	165	79
SB320-320SGC	126.5	71	155	165	79

교체예고표시

Surge Count-type SPDs

SGCF-Series

SurgeBox™ for Single-phase AC Lines

KS No.12-1641



SPECIFICATION

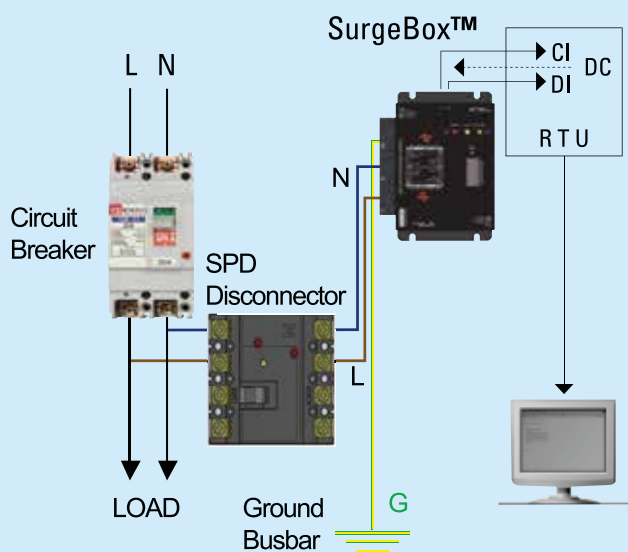
KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB320-040SGCF	SB320-160SGCF	SB320-320SGCF
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current <i>I_{imp}</i> (10/350 μ s) 임펄스 전류	-	L-N : 12.5kA N-PE : 50kA	L-N: 25kA N-PE : 50kA
Nominal Discharge Current <i>I_n</i> (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current <i>I_{max}</i> (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level <i>U_p</i> 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.8 kV L – PE : 2.0 kV
Short-circuit Current Rating <i>I_{SCCR}</i> 단락전류	5kA	25kA	25kA
Degree of Protection of Enclosure IP 수납보호도	IP 20		
Protection mode 보호모드	L – PE / L – N / N - PE		
Design Topology 설계형태	Combination		
Types of Grounding System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green (Protected) / Yellow (Check) / Red (Replace)		
Option functions 옵션	Remote Contact Surge Counter (4-Digit Display) ModBus RS485		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wire Size for Connections 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	125x165x79 mm		
Product weight 제품 무게	1.36 kg	2.38 kg	2.52 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20C	TPS – 1S125B	TPS – 1S250B

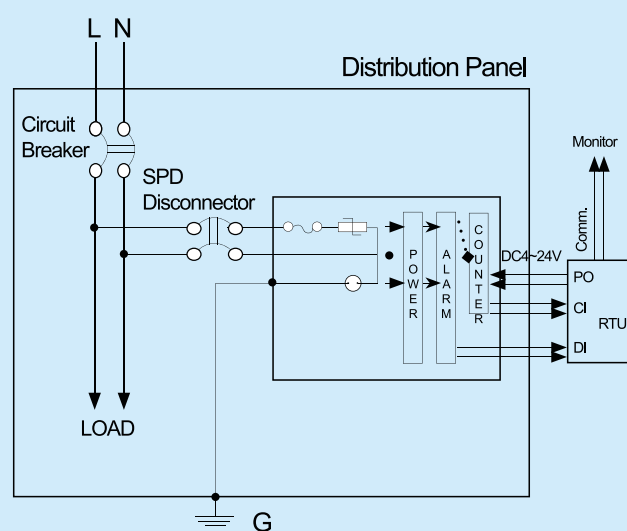
SGCF-Series

SurgeBox™ for Single-phase AC Lines

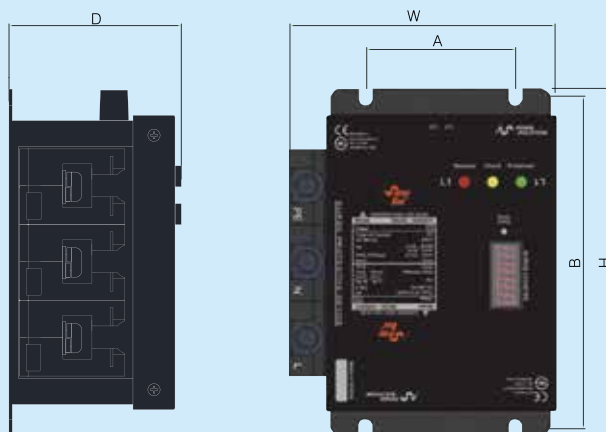
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



mm

Model	W	A	B	H	D
SB320-040SGCF	124	71	155	165	79
SB320-160SGCF	126.5	71	155	165	79
SB320-320SGCF	126.5	71	155	165	79

Surge Count-type SPDs

SBC⁺-Series

SurgeBox™ for Single-phase AC Lines



SPECIFICATION

 KS C IEC61643-11:2012
 Compliant with LV
 Directive 72/73 FEC

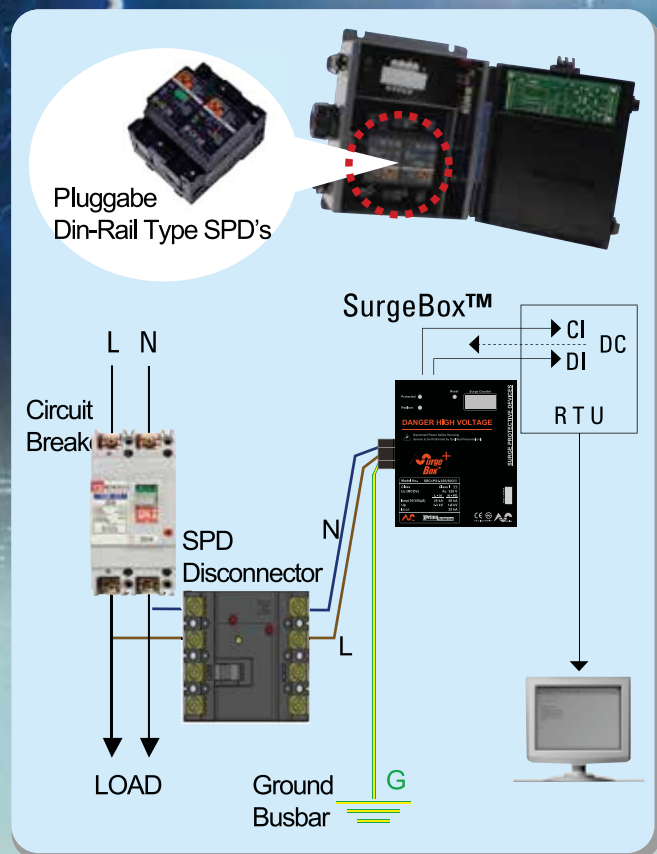
Model No.	SBC+PS2-40S/40G	SBC+PS1-13S/50G	SBC+PS1-25S/50G
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd		
Frequency 회로 주파수	50 / 60 Hz		
Class 등 급	Class II	Class I	
MCOV Uc 최대연속사용전압	320 Vac		
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 50kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.2 kV L – PE : 1.5 kV	L – N : 1.3 kV L – PE : 2.0 kV
Degree of Protection of enclosure IP 수납보호도	IP 20		
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	25kA
Protection mode 보호모드	L-N / L-PE / N-PE		
Design Topology 설계형태	Combination		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green LEDs (Protected) / Red LEDs (Replace)		
Option functions 옵션	Remote Contact Surge Counter (4-Digit Display) ModBus RS485		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²	L, N : 10 mm ² PE : 16 mm ²	
Dimensions (WxHxD) 크기	157.8x180x80 mm	162.5x200x91 mm	
Product weight 제품 무게	1.36 kg	2.74kg	2.89kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20C	TPS – 1S125B	TPS – 1S250B

Surge Count-type SPDs

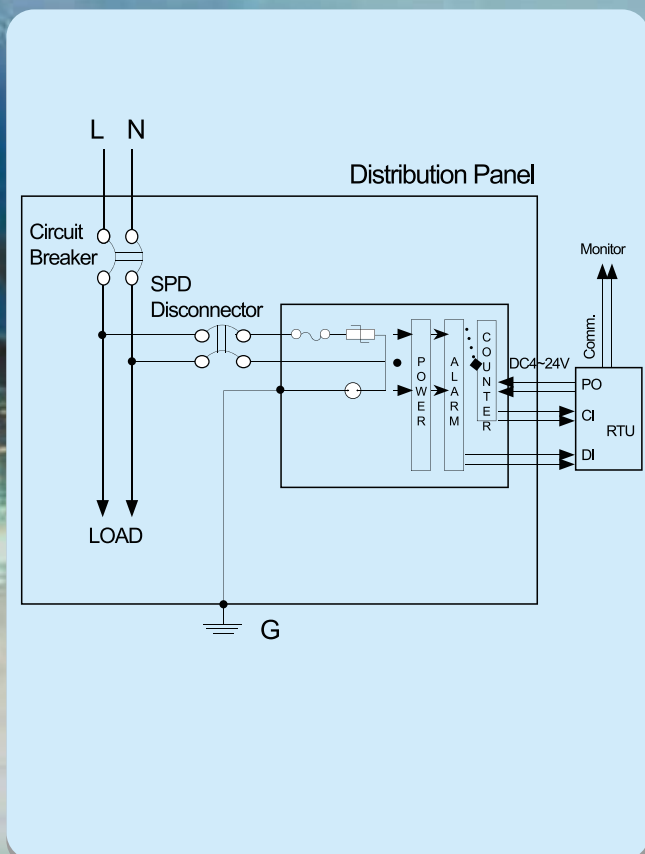
SBC⁺-Series

SurgeBox™ for Single-phase AC Lines

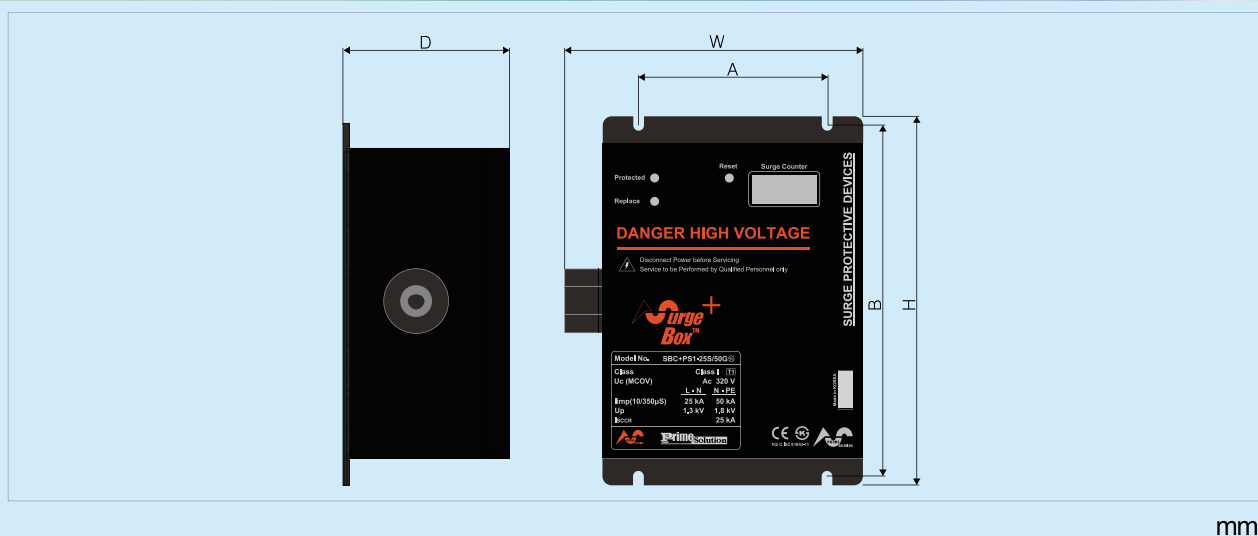
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



Model	W	A	B	H	D
SBC+PS2-40S/40G	157.8	73	170	180	80
SBC+PS1-13S/50G	162.5	105	190	200	91
SBC+PS1-25S/50G	162.5	105	190	200	91

Compact-sized Economic Products

H-Series

SurgeBox™ for Single-phase AC Lines



SPECIFICATION

IEC61643-11
Compliant with LV
Directive 72/73 FEC

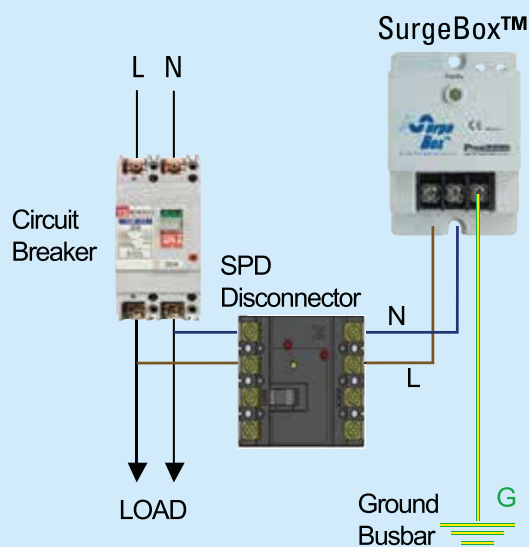
Model No. (모델명)	SB110-020HE
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd
Frequency 회로 주파수	50 / 60 Hz
Class 등급	Class III
MCOV Uc 최대연속사용전압	275 Vac
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	20kA
Voltage Protection Level U_p 전압보호레벨	1.5 kV
Degree of Protection of enclosure IP 수납보호도	IP 20
Protection mode 보호모드	L – N / N – PE
Design Topology 설계형태	Voltage Limiting
Types of Earthing System 접지방식	TN/TT/IT
Diagnostics 상태 표시	Green LEDs On (Protected) / Green LEDs Off (Replace)
Option functions 옵션	-
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting
Wiring Size 연결 전선	$\geq 4 \text{ mm}^2$
Dimensions (WxHxD) 크기	60x87x45 mm
Product weight 제품 무게	0.28 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection
External Disconnecter 외부 분리기	TPS – 2S20C

Compact-sized Economic Products

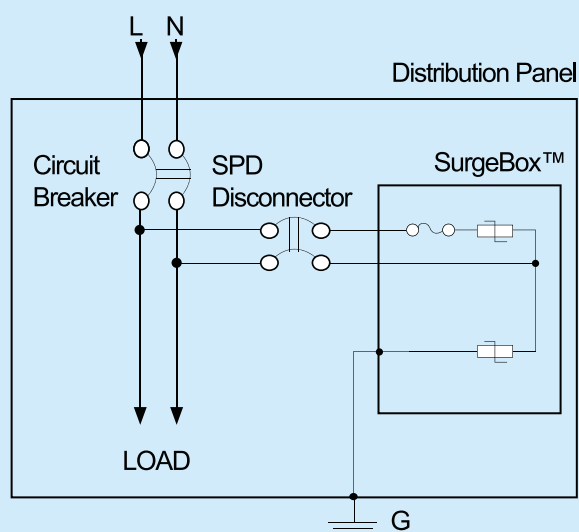
H-Series

SurgeBox™ for Single-phase AC Lines

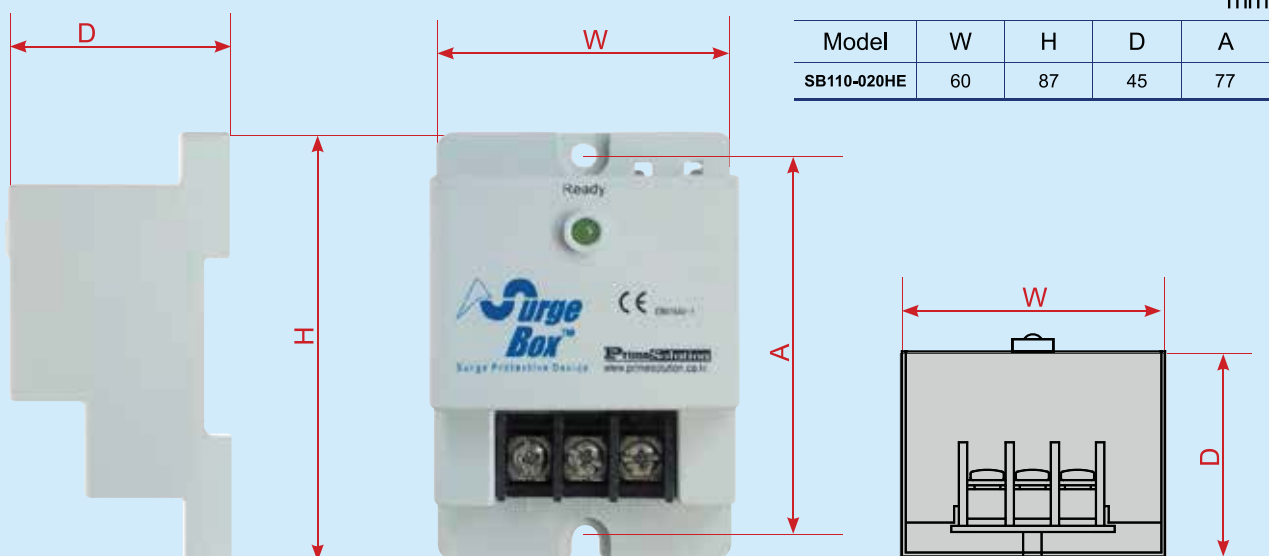
INSTALLATION



CIRCUIT DIAGRAM



DIMENSION



Din-rail Mounting SPDs

PS-Series

for Single-Phase AC Lines



SPECIFICATION

KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

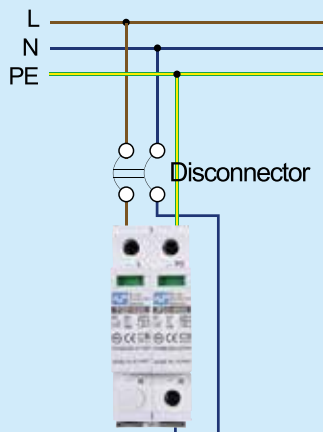
Model No. (모델명)	PS2-40S/40G	PS1-13S/25G	PS1-13S/50G	PS1-25S/50G
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd			
Frequency 회로 주파수	50 / 60 Hz			
Class 등 급	Class II	Class I		
MCOV Uc 최대연속사용전압	320 Vac			
Impulse Discharge Current I_{imp} (10/350 μ s) 임펄스 전류	-	L – N : 12.5kA N – PE : 25kA	L – N : 12.5kA N – PE : 50kA	L – N : 25kA N – PE : 50kA
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	-	-	-
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	40kA	-	-	-
Voltage Protection Level U_p 전압보호레벨	L – N : 1.5 kV L – PE : 1.5 kV	L – N : 1.2 kV L – PE : 1.5 kV	L – N : 1.2 kV L – PE : 1.5 kV	L – N : 1.3 kV L – PE : 1.5 kV
Short-circuit Current Rating I_{SCCR} 단락전류	5kA	25kA	25kA	25kA
Degree of Protection of enclosure IP 수납보호도	IP 20			
Protection mode 보호모드	L – N / N – PE			
Design Topology 설계형태	Combination			
Types of Earthing System 접지방식	TN/TT/IT			
Diagnostics 상태 표시	Green (Protected) / Red (Replace)			
Option functions 옵션	Remote contact			
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting			
Wiring Size 연결 전선	$\geq 4\text{ mm}^2$	L, N : 10 mm ² PE : 16 mm ²		
Dimensions (WxHxD) 크기	36x90x66.5 mm	72x90x67 mm		
Product weight 제품 무게	0.25 kg	0.9 kg		
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection			
External Disconnecter 외부 분리기	TPS – 2S20C	TPS – 1S125B		TPS-1S250B

Din-rail Mounting SPDs

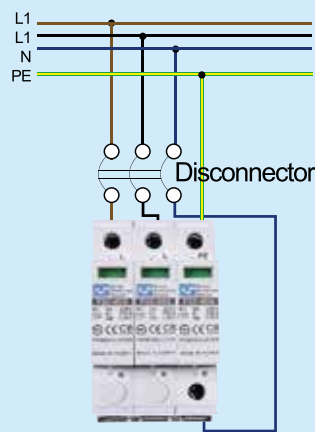
PS-Series

for Single-Phase AC Lines

INSTALLATION

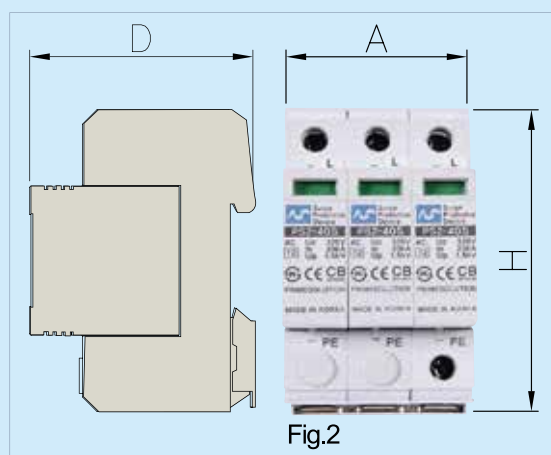
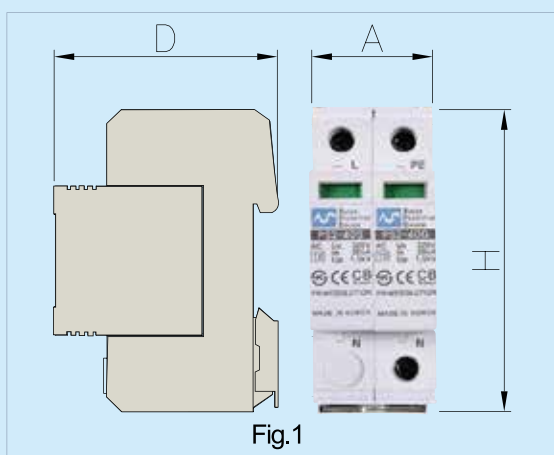


PS2-40S/40G
PS1-13S/25G
PS1-25S/50G



PS2-40S2P/40G
PS1-13S2P/25G
PS1-25S2P/50G

DIMENSION



mm

Model	W	H	D	Note
PS2-40S/40G	36	90	66.5	Fig. 1
PS1-13S/25G	72	90	67	Fig. 1
PS1-13S/50G	72	90	67	Fig. 1
PS1-25S/50G	72	90	67	Fig. 1

Din-rail Mounting SPDs

PS-Series

for Single-Phase AC Lines



SPECIFICATION

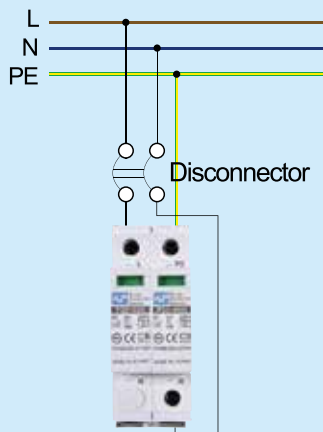
KS C IEC61643-11:2012
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	PS2-40S2P	PS2-80S2P	PS1-120S2P
Rated system voltage 적용회로전압	Single-Phase 220 V 2W+Gnd		
Frequency 회로 주파수	50 / 60 Hz		
Class 등급	Class II		Class I
MCOV U _c 최대연속사용전압	320 Vac	385 Vac	
Impulse Discharge Current I _{imp} (10/350μs) 임펄스 전류	-	-	6.5kA
Nominal Discharge Current I _n (8/20μs) 공칭방전전류	20kA	40kA	-
Maximum Discharge Current I _{max} (8/20μs) 최대방전전류	40kA	80kA	120kA
Voltage Protection Level U _p 전압보호레벨	1.5 kV	L-N : 1.8 kV L-PE : 3.0 kV	L-N : 1.5 kV L-PE : 2.5 kV
Degree of Protection IP 보호등급	IP 20		
Protection mode 보호모드	L – N / N – PE / L – PE		
Design Topology 설계형태	Voltage Limiting		
Types of Earthing System 접지방식	TN/TT/IT		
Diagnostics 상태 표시	Green (Protected) / Red (Replace)		
Option functions 옵션	Remote contact		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wiring Size 연결 전선	L, N : 6 mm ² PE : 10 mm ²		L, N : 6 mm ² PE : 16 mm ²
Dimensions (WxHxD) 크기	36x90x66.5 mm	72x90x67 mm	
Product weight 제품 무게	0.25 kg	0.6 kg	0.6 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection		
External Disconnecter 외부 분리기	TPS – 2S20 B	TPS – 1S125 B	

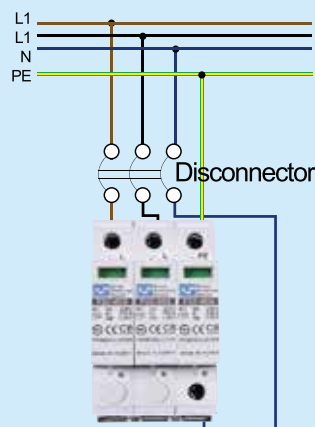
PS-Series

for Single-Phase AC Lines

INSTALLATION



PS2-40S2P
PS2-80S2P
PS1-120S2P



PS2-40S3P
PS2-80S3P
PS1-120S3P

DIMENSION

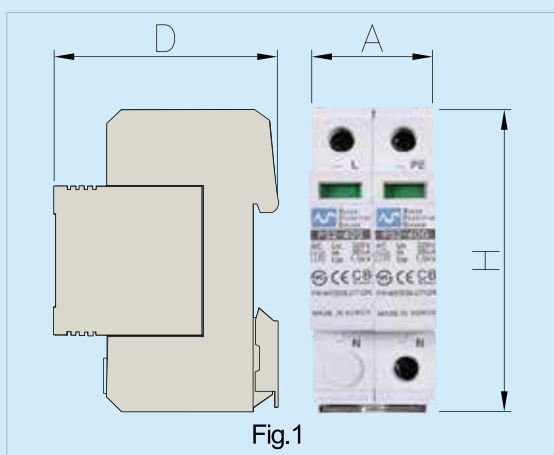


Fig. 1

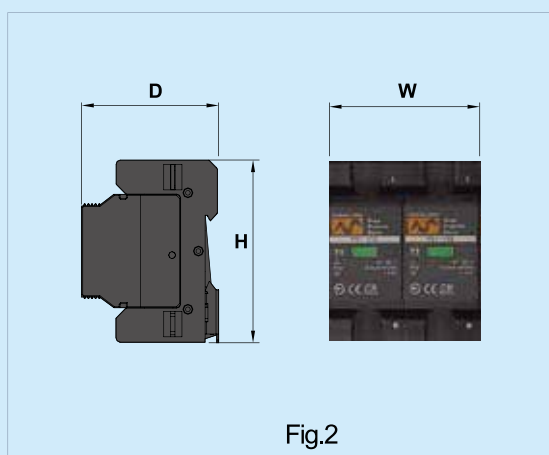


Fig. 2

mm

Model	W	H	D	Note
PS2-40S2P	36	90	66.5	Fig. 1
PS2-80S2P	72	90	67	Fig. 1
PS1-120S2P	72	90	67	Fig. 1

Din-rail Mounting SPDs

PS-Series

for Single-Phase AC Lines



SPECIFICATION

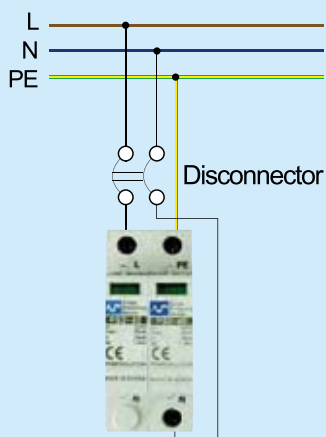
IEC61643-11
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	PS2-40/320 2P
Rated system voltage 적용회로전압	Single-Phase 220V 2W+Gnd
Frequency 회로 주파수	50 / 60 Hz
Class 등급	Class II
MCOV U _c 최대연속사용전압	320 Vac
Impulse Discharge Current I _{imp} (10/350 μ s) 임펄스 전류	-
Nominal Discharge Current I _n (8/20 μ s) 공칭방전전류	20kA
Maximum Discharge Current I _{max} (8/20 μ s) 최대방전전류	40kA
Voltage Protection Level U _p 전압보호레벨	1.5 kV
Degree of Protection of enclosure IP 수납보호도	IP 20
Protection mode 보호모드	L – N / N – PE
Design Topology 설계형태	Voltage Limiting
Types of Earthing System 접지방식	TN/TT/IT
Diagnostics 상태 표시	Green (Protected) / Red (Replace)
Option functions 옵션	Remote contact
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting
Wiring Size 연결 전선	$\geq 4 \text{ mm}^2$
Dimensions (WxHxD) 크기	36x90x66.5 mm
Product weight 제품 무게	0.25 kg
Internal Disconnecter 내부 분리기	Thermal Runaway Multi-Fusing Protection
External Disconnecter 외부 분리기	TPS – 2S20C

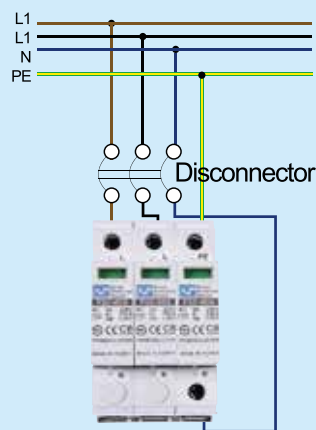
PS-Series

for Single-Phase AC Lines

INSTALLATION

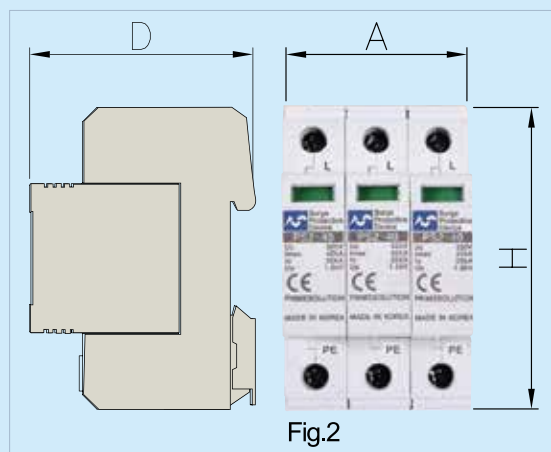
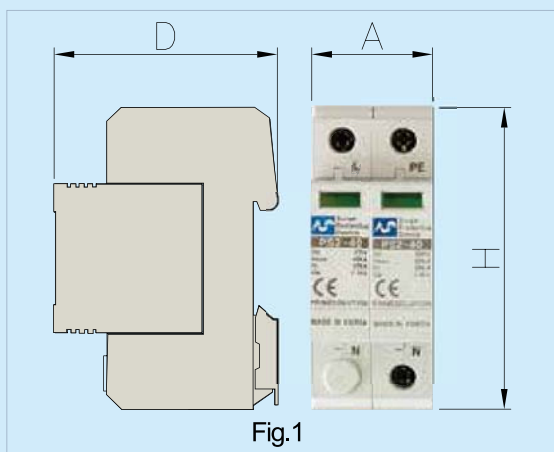


PS2-40/320 2P



PS2-40/320 3P

DIMENSION



mm

Model	W	H	D	Note
PS2-40/320 2P	36	90	66.5	Fig. 1
PS2-40/320 3P	54	90	66.5	Fig. 2

Din-rail Mounting SPDs

PS-Series

for photovoltaic system



SPECIFICATION

IEC61643-11
 CE Compliant with LV
 Directive 72/73 FEC

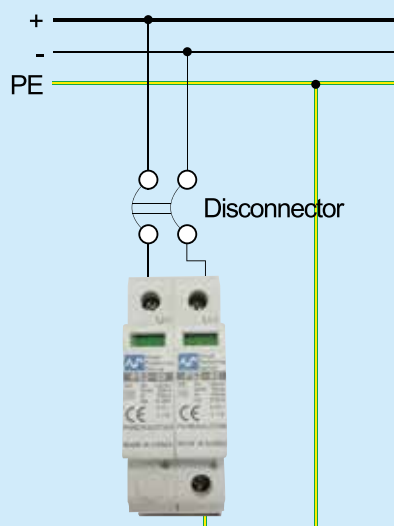
Model No. (모델명)	PS2-40/1000Vdc 2P	PS2-40/1000Vdc 3P	PS2-40/1500Vdc 3P
Class 등급	Class II		
MCOV U_{c-pv} 최대연속사용전압	1000 Vdc		1500 Vdc
Nominal Discharge Current I_n (8/20μs) 공칭방전전류	20kA/Mode		
Maximum Discharge Current I_{max} (8/20μs) 최대방전전류	40kA/Mode		
Voltage Protection Level U_p 전압보호레벨	3.8 kV	4.0 kV	5.2 kV
Degree of Protection of enclosure IP 수납보호도	IP 20		
Design Topology 설계형태	Voltage Limiting		
Replacement 교체 수선	Top Module Pluggable Type		
Diagnostics 상태 표시	Green (Protected) / Red (Replace)		
installation 설치	Din-Rail Mounting		
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting		
Wire Size for Connections 연결 전선	$\geq 4 \text{ mm}^2$ Wire Leads		
Dimensions (WxHxD) 크기	54x90x67 mm		
Product weight 제품 무게	0.38 kg		
Housing 외형소재	Non Flammable Material		

Din-rail Mounting SPDs

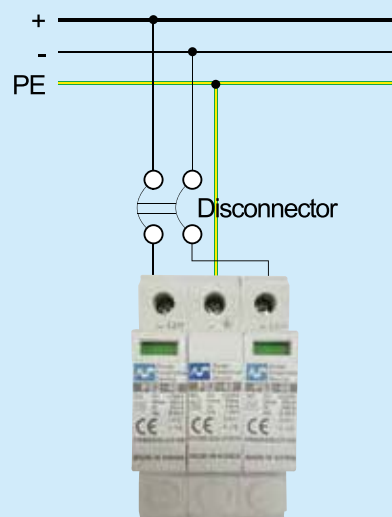
PS-Series

for photovoltaic system

INSTALLATION



PS2-40/1000 2P



PS2-40/1000 3P
PS2-40/1500 3P

DIMENSION

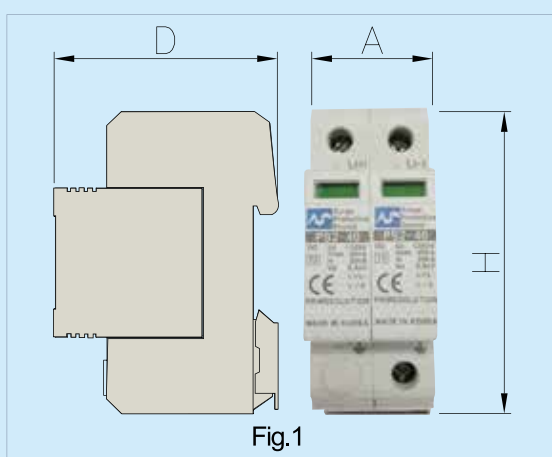


Fig.1

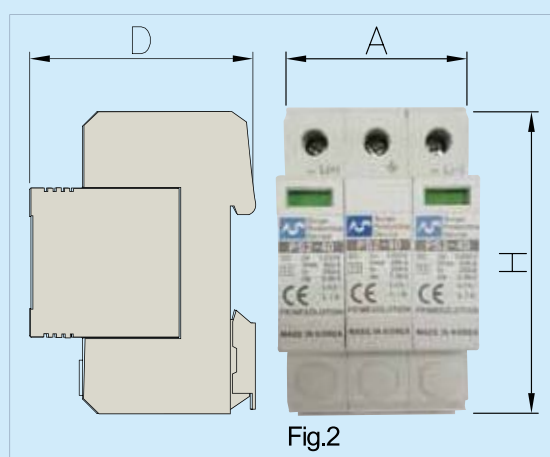


Fig.2

mm

Model	W	H	D	Note
PS2-40/1000 2P	36	90	66.5	Fig. 1
PS2-40/1000 3P	54	90	66.5	Fig. 2
PS2-40/1500 3P	54	90	66.5	Fig. 2

Din-rail Mounting Photovoltaic SPDs

PS-Series

for 3 Pole Y Configurations



SPECIFICATION



PRIMESOLUTION's Type1 CA Surge Protective Devices are designed for PV/ Photovoltaic system dc-side protection against the damaging from surges and spikes caused by lightning and other electrical sources.

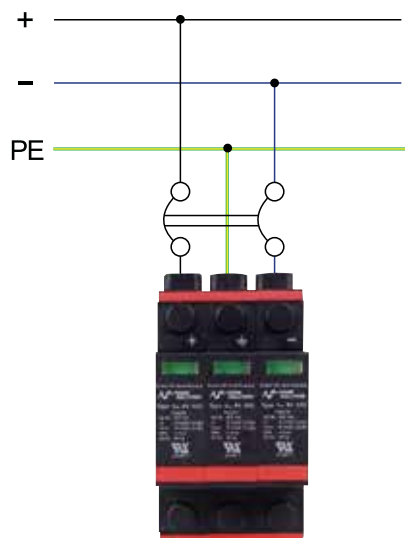
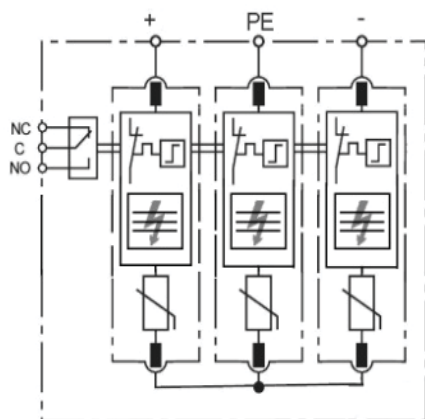
Model No. (모델명)	PSV1200-V-CD-S	PSV1500-V-CD-S
Class 등급	Class II	
Nominal voltage Un 공칭전압	1200 Vdc	1500 Vdc
Max. permitted DC voltage Vpvc 최대 허용 직류 전압	1340 Vdc	1500 Vdc
Nominal Discharge Current I_n (8/20 μ s) 공칭방전전류	20kA	
Maximum Discharge Current I_{max} (8/20 μ s) 최대방전전류	50kA	
Voltage Protection Rating / mode VPR	<1.5 kV	<1.8 kV
Voltage Protection Rating ("+" - PE) VPR	<3.0 kV	<4.0 kV
Degree of Protection of enclosure IP 수납보호도	IP 20	
Short-circuit current rating I_{SCCR} 단락전류	50kA	
Design Topology 설계형태	Voltage Limiting	
Diagnostics 상태 표시	Green (Protected) / Red (Replace)	
Option functions 옵션	Remote alarm signal	
Connection & Mounting Method 연결 및 설치방법	Parallel Connection Type / Wall Mounting	
Wiring Size 연결 전선	$\geq 4 \text{ mm}^2$	
Dimensions (WxHxD) 크기	54x100x65.8 mm	
Product weight 제품 무게	0.5 kg	
External Disconnector 외부 분리기	Non Flammable Material	

Din-rail Mounting SPDs

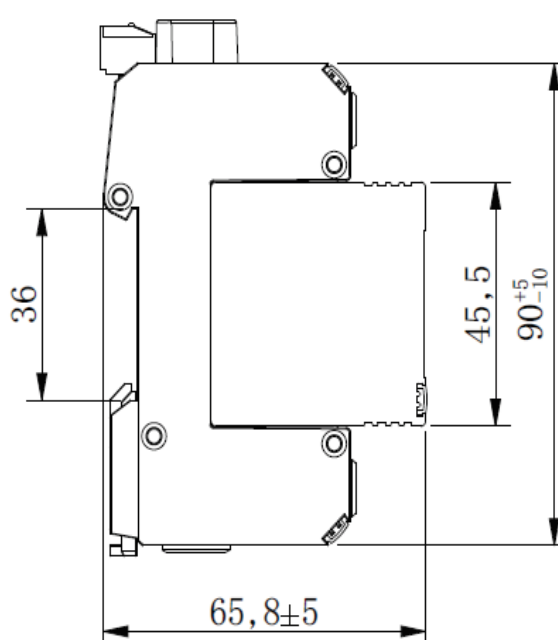
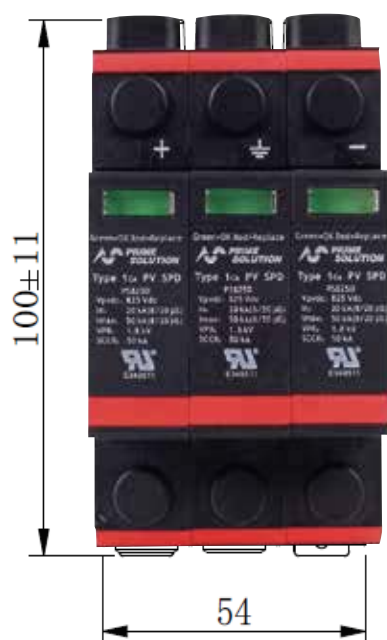
PS-Series

for 3 Pole Y Configurations

BASIC CIRCUIT DIAGRAM



DIMENSION



Unit : mm

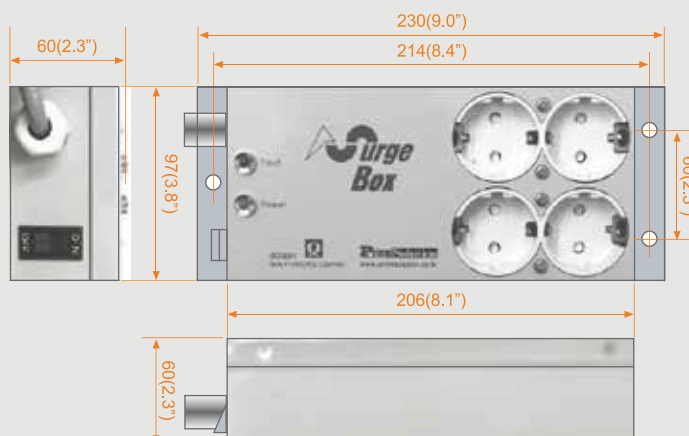
SurgeBox™ for 4-Outlet Multi-type



SPECIFICATION

Model No. (모델명)	SB220-4M26
Rated system voltage 적용회로전압	Single-Phase 220V
Rated Current 적용 전류	AC 15A
Frequency 회로 주파수	50 / 60 Hz
Connection Method 연결방식	4-outlet serial Connection Type
Operating Temperature 동작온도	-40℃ ~ +70℃
Storage Temperature 보관온도	-40℃ ~ +85℃
Max. Operating Altitude 고도	5,000 m
Total Surge Current Capacity 서지용량	26kA
Protection mode 보호모드	L – N, L – PE, N – PE
MCOV U _c MCOV	275 Vac
Suppression Voltage 억제전압	< 800V @ 6kV 3kA (ANSI/IEEE c62.41 cat B3/C1)
Response time 반응시간	< 1 nano-second
EMI/RFI Noise Filter 노이즈 필터	< ~35dB @ 100kHz ~ 100MHz
Diagnostics 상태	Green Status LEDs (POWER) / RED Status LEDs (Fault)
Dimensions (WxHxD) 크기	230x97x60 mm
Product weight 제품무게	1.5 kg
Internal Disconnecter 퓨즈타입	Thermal Runaway Multi-Fusing Protection
Case 케이스	NEMA 12 Meet Steel

DIMENSIONS



Dimension : mm(inch)

SPD Disconnecter

A device for disconnecting SPDs from the power during the significant failure condition of SPDs.

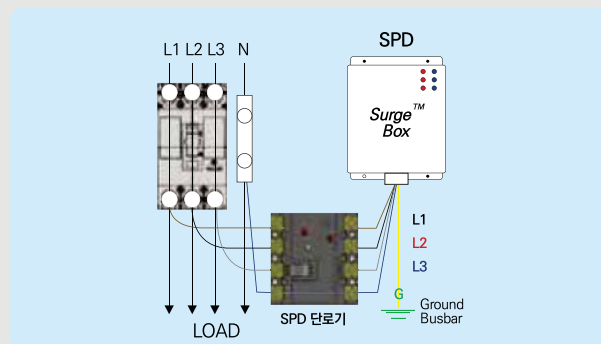
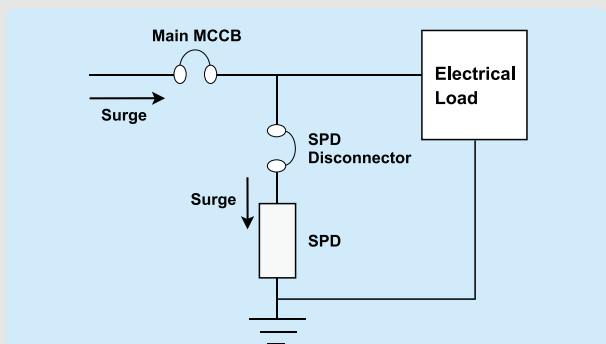
FEATURES

- Patent New Technology Product
- Real time Detecting the Increasing Leakage Current of SPDs
- A High-speed Thermal Runaway Protection of SPDs (<0.03 ms)
- Provide both Slow & Fast Thermalization Protection
- Disconnecting SPDs for Installation Repairing and regular Inspection
- Panel Mount & Din-Rail Mount Available
- Compact Design
- Switching Test Button



SPECIFICATION

Model No. (모델명)			TPS-1S250B
Rated system voltage (Uc) 적용회로전압			~ 600 Vac
Frequency 회로 주파수			50 / 60 Hz
System Wiring 결선방식			3P4W 3P3W 1P3W 1P2W
Rated Breaking Current (I _{SCCR}) 단락전류			50kA
Response Time 응답속도			< 0.03 s
Rated Thermal Current Sensitivity 누설전류감도			≤ 100/200/500 mA
Impulse Current Capacity 임펄스전류 용량	10/350 μ s (Class I)	L	I _{imp} 25kA
		N	I _{imp} 100kA
	8/20 μ s (Class II)	L	-
		N	-
Impulse Voltage 임펄스 전압	1.2/50 μ s		20kV
Dimension 크기			120x175x60 mm
Product Weight 제품무게			1.3 kg



SPD Disconnecter

A device for disconnecting SPDs from the power during the significant failure condition of SPDs.

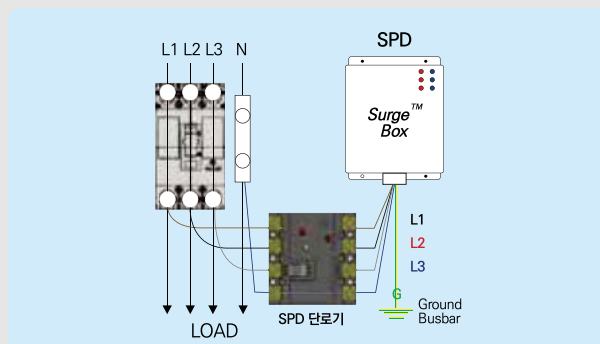
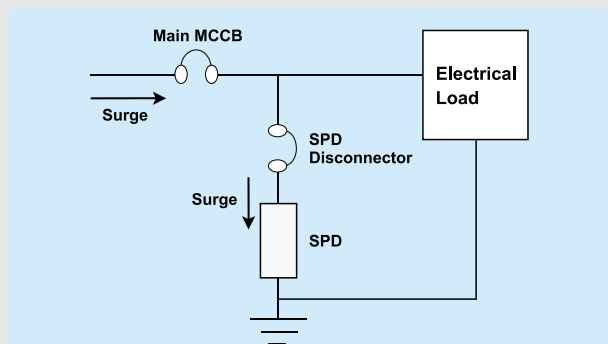
FEATURES

Patent New Technology Product
 Real time Detecting the Increasing Leakage Current of SPDs
 A High-speed Thermal Runaway Protection of SPDs (<0.03 ms)
 Provide both Slow & Fast Thermalization Protection
 Disconnecting SPDs for Installation Repairing and regular Inspection
 Panel Mount & Din-Rail Mount Available
 Compact Design
 Switching Test Button



SPECIFICATION

Model No. (모델명)			TPS-1S125B	TPS-1S125C
Rated system voltage (Uc) 적용회로전압			~ 600 Vac	
Frequency 회로 주파수			50 / 60 Hz	
System Wiring 결선방식			3P4W 3P3W 1P3W	1P2W
Rated Breaking Current (I _{SCCR}) 단락전류			25kA	
Response Time 응답속도			< 0.03 s	
Rated Thermal Current Sensitivity 누설전류감도			≤ 100/200/500 mA	
Impulse Current Capacity 임펄스전류 용량	10/350 μ S (Class I)	L	I _{imp} 12.5kA	
		N	I _{imp} 50kA	
	8/20 μ S (Class II)	L	-	
		N	-	
Impulse Voltage 임펄스 전압	1.2/50 μ S		20kV	
Dimension 크기			100x130x60 mm	100x130x60 mm
Product Weight 제품무게			1.1 kg	



SPD Disconnecter

A device for disconnecting SPDs from the power during the significant failure condition of SPDs.

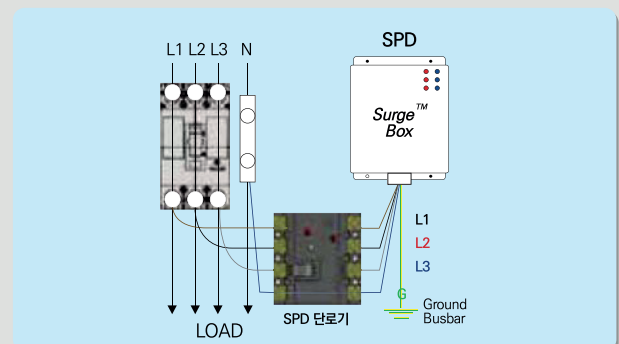
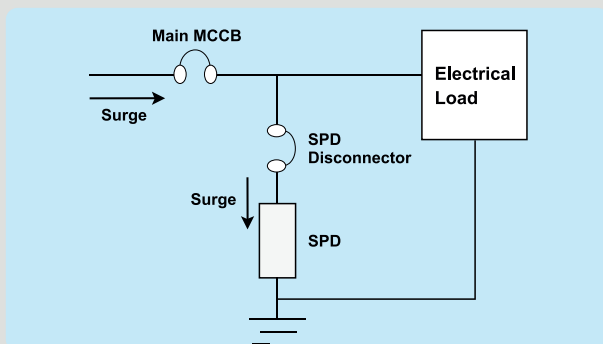
FEATURES

- Patent New Technology Product
- Real time Detecting the Increasing Leakage Current of SPDs
- A High-speed Thermal Runaway Protection of SPDs (<0.03 ms)
- Provide both Slow & Fast Thermalization Protection
- Disconnecting SPDs for Installation Repairing and regular Inspection
- Panel Mount & Din-Rail Mount Available
- Compact Design
- Switching Test Button



SPECIFICATION

Model No. (모델명)			TPS-2S20B	TPS-2S20C
Rated system voltage (Uc) 적용회로전압			~ 600Vac	
Frequency 회로 주파수			50 / 60 Hz	
System Wiring 결선방식			3P4W 3P3W 1P3W	1P2W
Rated Breaking Current (I _{SCCR}) 단락전류			5kA	
Response Time 응답속도			< 0.03 s	
Rated Thermal Current Sensitivity 누설전류감도			100/200/500mA	
Impulse Current Capacity 임펄스전류 용량	10/350 μ s (Class I)	L	I_{imp} 6.5kA	
		N		
	8/20 μ s (Class II)	L	I_n 20kA (I_{max} 40kA)	
		N		
Impulse Voltage 임펄스 전압	1.2/50 μ s		20kV	
Dimension 크기			80x95x60 mm	35x80x60 mm
Product Weight 제품무게			470g	235g



Easy Connection & Disconnection SurgeBox™ for Coaxial Lines



COAXIAL APPLICATION

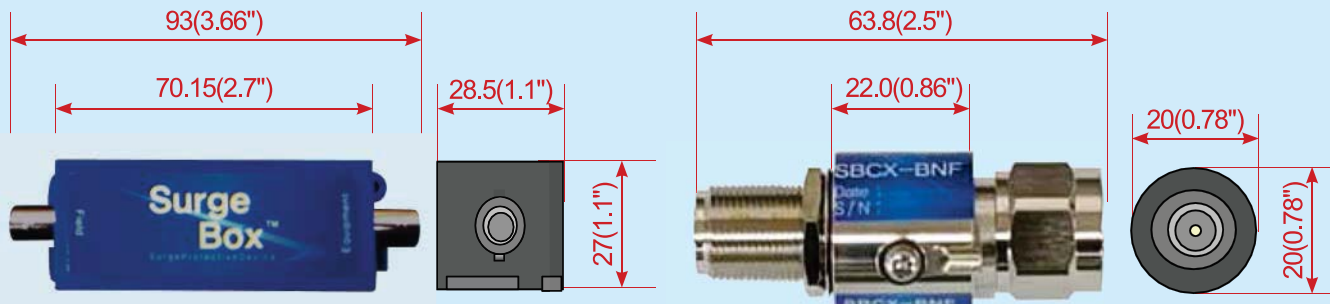
IEC61643-21
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SBCX-BNR	SBCX-BNR20	SBCX-BNF
Connection Method 연결방식	BNC-Type		N-Type
Rated system voltage 적용회로전압	~ 24 Vdc		~ 200 Vdc
Frequency 회로 주파수	~ 2.3 GHz		~ 3 GHz
Impulse C1, C2(1.2/50 μ s, 8/20 μ s), D1(10/350 μ s) 임펄스전류	C2 : 4kV / 2kA		C2 : 10kV / 5kA D1 : 2.5kA
Itotal. Surge Current Capacity 용량	10kA / Line	20kA / Line	10kA / Line
Protection Mode 보호모드	X - C		
MCOV Uc 최대연속사용전압	25.2 Vdc		230 Vdc
Voltage Protection Level U_p 전압보호레벨	X - C $\leq$ 700V		X - C $\leq$ 1000V
Insertion Loss 손실	< 0.3 dB		
Product Weight 제품무게	46 g		120 g

DIMENSION

SBCX-BNR

Dimension : mm(inch)



Dual Connection SPD SurgeBox™ For CCTV Lines

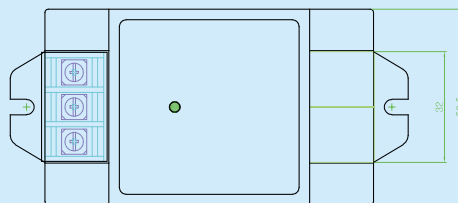


SPCIFICATIONS

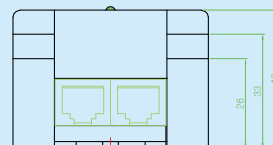
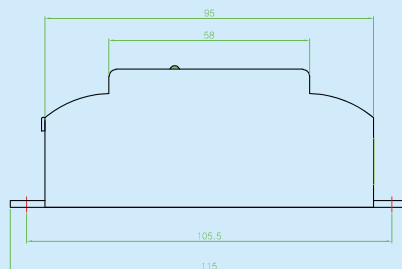
IEC61643-21
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)		SB220+RJ45
Power System Specification 전원 계통 사양	Rated system voltage 적용 회로전압	Single-Phase 220V 2W+G
	Frequency 회로 주파수	50 / 60 Hz
	Class 등급	Class 3
	Uoc 개방회로전압/ 전류	20kV / 10kA
	MCOV Uc 최대연속사용전압	275V
	Voltage Protection Level Up 전압보호레벨	1.5kV
Communications System Specification 통신 계통 사양	Category 시험 범주	C1 (KS C IEC 61643-21)
	Rated system voltage 적용 회로전압	40Vdc
	MCOV Uc 최대연속사용전압	60Vdc
	Uoc 개방회로전압/ 전류	4kV / 2kA
	Voltage Protection Level Up 전압보호레벨	≤ 120V
	Insertion Loss 삽입손실	< 0.3dB
	Connection 연결	RJ45
Common Specifications 공통사항	Dimensions (WxHxD) 크기	115x56.5x40 mm
	External disconnecter 외부분리기	TPS – 2S20C

DIMENSION



Dimension : mm(inch)



Easy Connection & Disconnection

SurgeBox™

for Coaxial Lines

Counter type

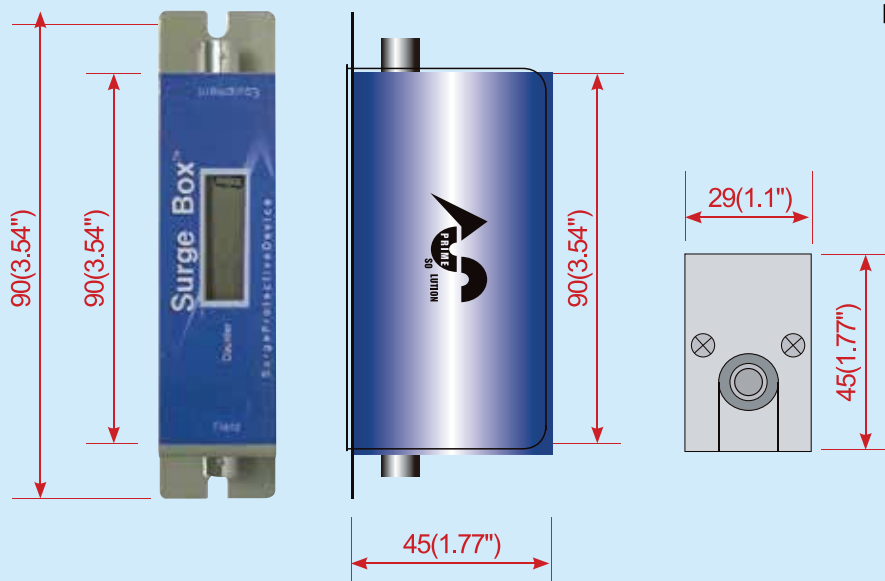


COAXIAL APPLICATION

IEC61643-21
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SBCX-BNC	SBCX-BNC20
Connection Method 연결방식	BNC-Type	
Rated system voltage 적용회로전압	~ 24 Vdc	
Frequency 회로 주파수	~ 1 GHz	
Impulse C1, C2(1.2/50 μ s, 8/20 μ s), D1(10/350 μ s) 임펄스전류	C2 : 4kV / 2kA	
Itotal. Surge Current Capacity 용량	10kA / Line	20kA / Line
Protection Mode 보호모드	X – C (Line to Shield)	
MCOV Uc 최대연속사용전압	25.2 Vdc	
Voltage Protection Level U_p 전압보호레벨	X – C $\leq$ 700V	
Responce Time 반응속도	< 25 nano-seconds	
Insertion Loss 손실	< 0.3 dB	
Product Weight 제품무게	220 g	

DIMENSION



SurgeBox™

for DC/Phone/Data Lines

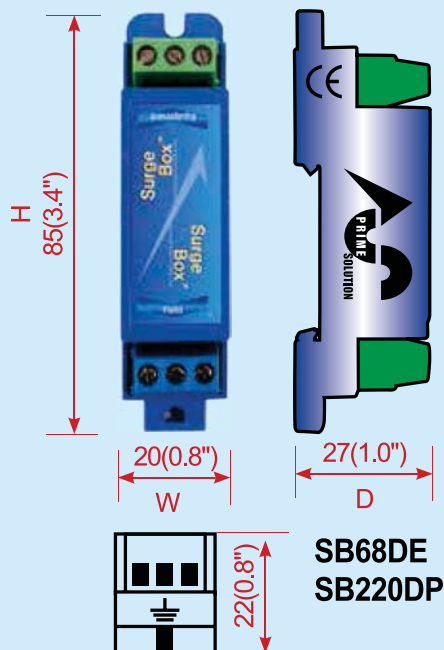


SPCIFICATIONS

IEC61643-21
 CE Compliant with LV
 Directive 72/73 FEC

Model No. (모델명)	SB68DE	SB220DP	SB220DP-H
Connection Method 연결방식	Serial Connection Type (wall mounting & Dain-rail Mounting)		
Rated system voltage 적용회로전압	~ 64Vdc	~ 200Vdc	
Frequency 회로 주파수	~ 10MHz		
Impulse C1, C2(1.2/50 μ s, 8/20 μ s), D1(10/350 μ s) 임펄스전류	C2 : 10kV / 5kA D1 : 2kA		
Total Discharge Current (8/20 μ s) 총 방전전류	10kA / total		
Maximum Allowable Current 최대허용전류	~ 1A		~ 5A
Protection Mode 보호모드	X1 – X2 (Line to Line), X – C (Line to Shield)		
MCOV Uc 최대연속사용전압	64 Vdc	200 Vdc	
Voltage Protection Level U_p 전압보호레벨	X1 – X2 < 80V X1 – C, X2 – C < 60V	X1 – X2 < 200V X1 – C, X2 – C < 200V	
Resonse Time 반응속도	< 25 nano-seconds		
Insertion Loss 손실	< 0.3 dB		
Product Weight 제품무게	32 g		

DIMENSION



Model No.	mm(inch)		
	W	H	D
SB68DE SB220DP	20 (0.8")	85 (3.4")	27 (1.0")

SurgeBox™

for DC/Phone/Data Lines

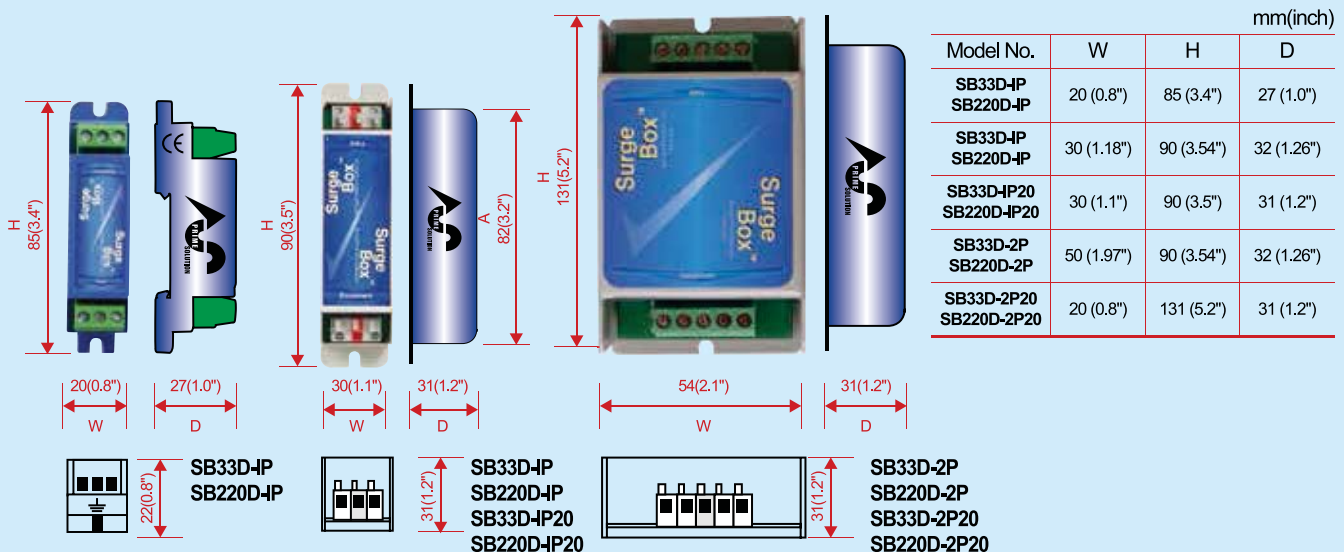


SPCIFICATIONS

IEC61643-21
 CE Compliant with LV
 Directive 72/73 FEC

Model No. (모델명)	SB33D-1P	SB33D-1P20	SB33D-1P25	SB33D-2P	SB33D-2P20	SB220D-1P
Connection Method 연결방식	Serial Connection Type					
Rated system voltage 적용회로전압	~ 24 Vdc					~ 250 Vdc
Frequency 회로 주파수	~ 10 MHz					
Impulse C1, C2(1.2/50 μ s, 8/20 μ s), D1(10/350 μ s) 임펄스전류	C2 : 4kV / 2kA					
Itotal. Surge Current Capacity 용량	10kA	20kA	25kA	10kA	20kA	10kA
Protection Mode 보호모드	X1 – X2 (Line to Line), X – C (Line to Shield)					
MCOV Uc 최대연속사용전압	33 Vdc					277 Vdc
Voltage Protection Level U_p 전압보호레벨	X1 – X2 $\leq$ 120V X1 – C, X2 – C $\leq$ 120V					X1-X2 $\leq$ 600V X1-C, X2-C $\leq$ 600V
Responce Time 반응속도	< 25 nano-seconds					
Insertion Loss 손실	< 0.3 dB					
Product Weight 제품무게	32 g	34 g	34 g	235 g	237 g	32 g

DIMENSION



Line Application

Telephone Lines (SB220D - Series only)

ISDN, ADSL, T1, E1

RS232

Leased Line / 4-20mA

RS422 / 485

24Vdc Lines

SurgeBox™

for DC/Phone/Data Lines

Counter type

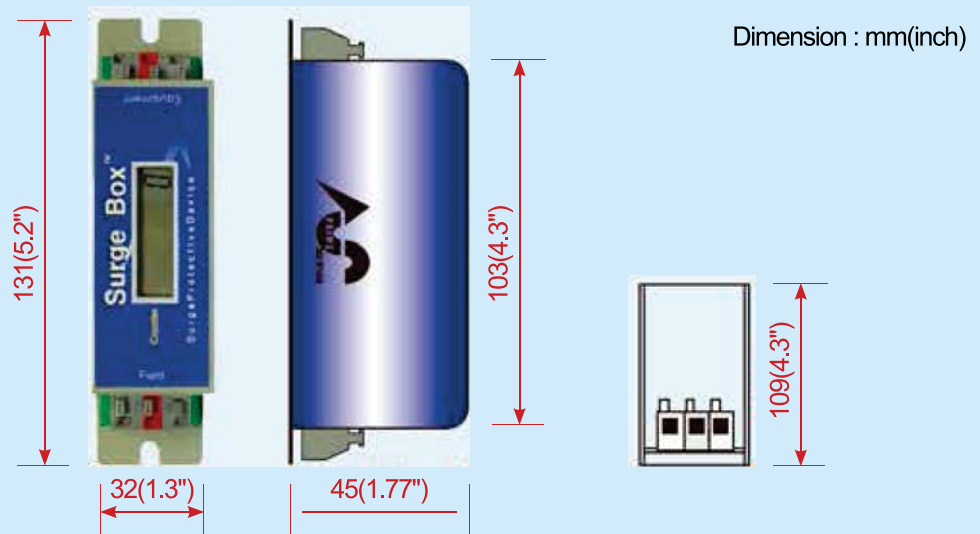


SPCIFICATIONS

IEC61643-21
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB33D-1PC	SB33D-1P20C	SB220D-1PC	SB68DEC
Connection Method 연결방식	Serial Connection Type			
Rated system voltage 적용회로전압	~ 24 Vdc		~ 250 Vdc	~ 64 Vdc
Frequency 회로 주파수	~ 10 MHz			
Impulse C1, C2(1.2/50 μ s, 8/20 μ s), D1(10/350 μ s) 임펄스전류	C2 : 4kV / 2kA			C2 : 10kV / 5kA D1 : 2kA
Itotal. Surge Current Capacity 용량	10kA	20kA	10kA	10kA
Protection Mode 보호모드	X1 – X2 (Line to Shield), X – C (Line to Shield)			
MCOV Uc 최대연속사용전압	33 Vdc		277 Vdc	64 Vdc
Voltage Protection Level U_p 전압보호레벨	X1 – X2 $\leq$ 120V X1 – C, X2 – C $\leq$ 120V		X1 – X2 $\leq$ 600V X1 – C, X2 – C $\leq$ 600V	X1 – X2 < 80V X1, X2 – C < 60V
Resonse Time 반응속도	< 25 nano-seconds			
Insertion Loss 손실	< 0.3 dB			
Product Weight 제품무게	200 g			

DIMENSION



Line Application

Telephone Lines (SB220D - Series only)

ISDN, ADSL, T1, E1

RS232

Leased Line / 4-20mA

RS422 / 485

24Vdc Lines

SurgeBox™

for RJ45 Lines

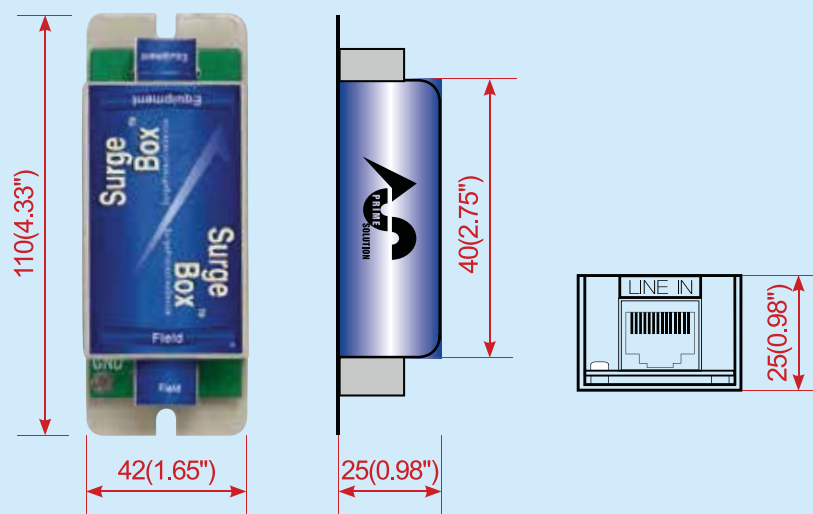


SPCIFICATIONS

IEC61643-21
 Compliant with LV
 Directive 72/73 FEC

Model No. (모델명)	SB68D-RJ45	SB68D-RJ45-H
Connection Method 연결방식	RJ45 Type	
Rated system voltage 적용회로전압	~ 5 Vdc	
Frequency 회로 주파수	~ 10 MHz	~ 100 MHz
Impulse C1, C2(1.2/50 μ s, 8/20 μ s), D1(10/350 μ s) 임펄스전류	C2 : 4kV / 2kA	
Itotal. Surge Current Capacity 용량	2kA / Line	
Protection Mode 보호모드	X1-X2(Line to Line), X-C(Line to Shield)	
MCOV Uc 최대연속사용전압	5.2 Vdc	
Voltage Protection Level U_p 전압보호레벨	120V	
Responce Time 반응속도	< 25 nano-seconds	
Insertion Loss 손실	< 0.3 dB	
Product Weight 제품무게	155 g	

DIMENSION



Line Application

ADSL / VDSL BroadBand

ISDN, T1, E1

Easy Connection & Disconnection

SurgeBox™

for Serial Port

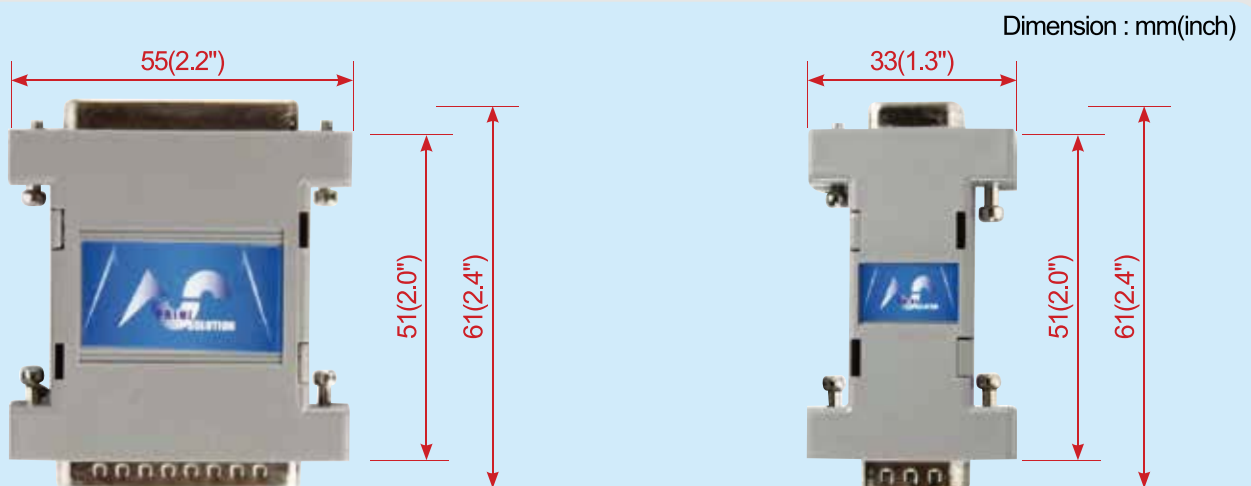


SPCIFICATIONS

IEC61643-21
Compliant with LV
Directive 72/73 FEC

Model No. (모델명)	SB15D-9DB	SB15D-25DB	SB30D-9DB	SB30D-25DB
Line Application 통신방식	RS422 / RS485		RS232	
Connection Method 연결방식	DB9 M/FM	DB25 M/FM	DB9 M/FM	DB25 M/FM
Operating Temperature 동작온도	-40 °C ~ +70 °C			
Storage Temperature 보관온도	-40 °C ~ +70 °C			
Itotal. Surge Current Capacity 용량	3kA / Line			
Protection Mode 보호모드	Line to Ground			
Voltage Protection Level U_p 전압보호레벨	15V		30V	
Product Weight 제품무게	30 g	55 g	33 g	55 g

DIMENSION



Line Application

25pin Serial Port

(SB15D-25DB / SB30D-25DB)

9pin Serial Port

(SB15D-9DB / SB30D-9DB)

인증서

Certifications



사업자 등록증



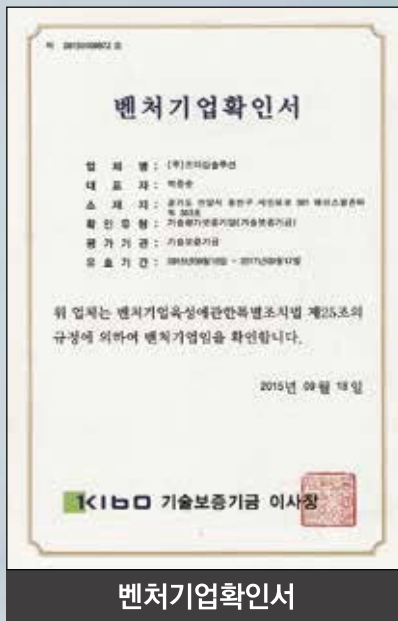
공장등록 증명서



ISO 9001 인증서



ISO 14001 인증서



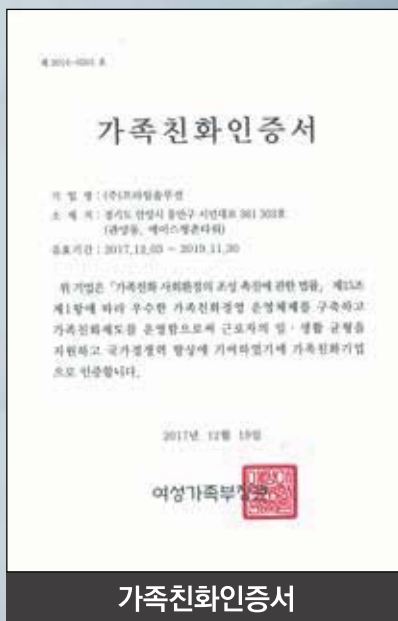
벤처기업확인서



경영혁신형 중소기업 확인서



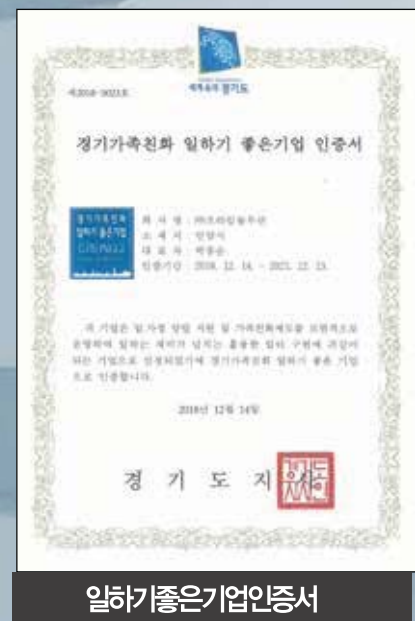
기술혁신형 중소기업 확인서



가족친화인증서



유망중소기업인증서



일하기좋은기업인증서



MAIN CUSTOMERS

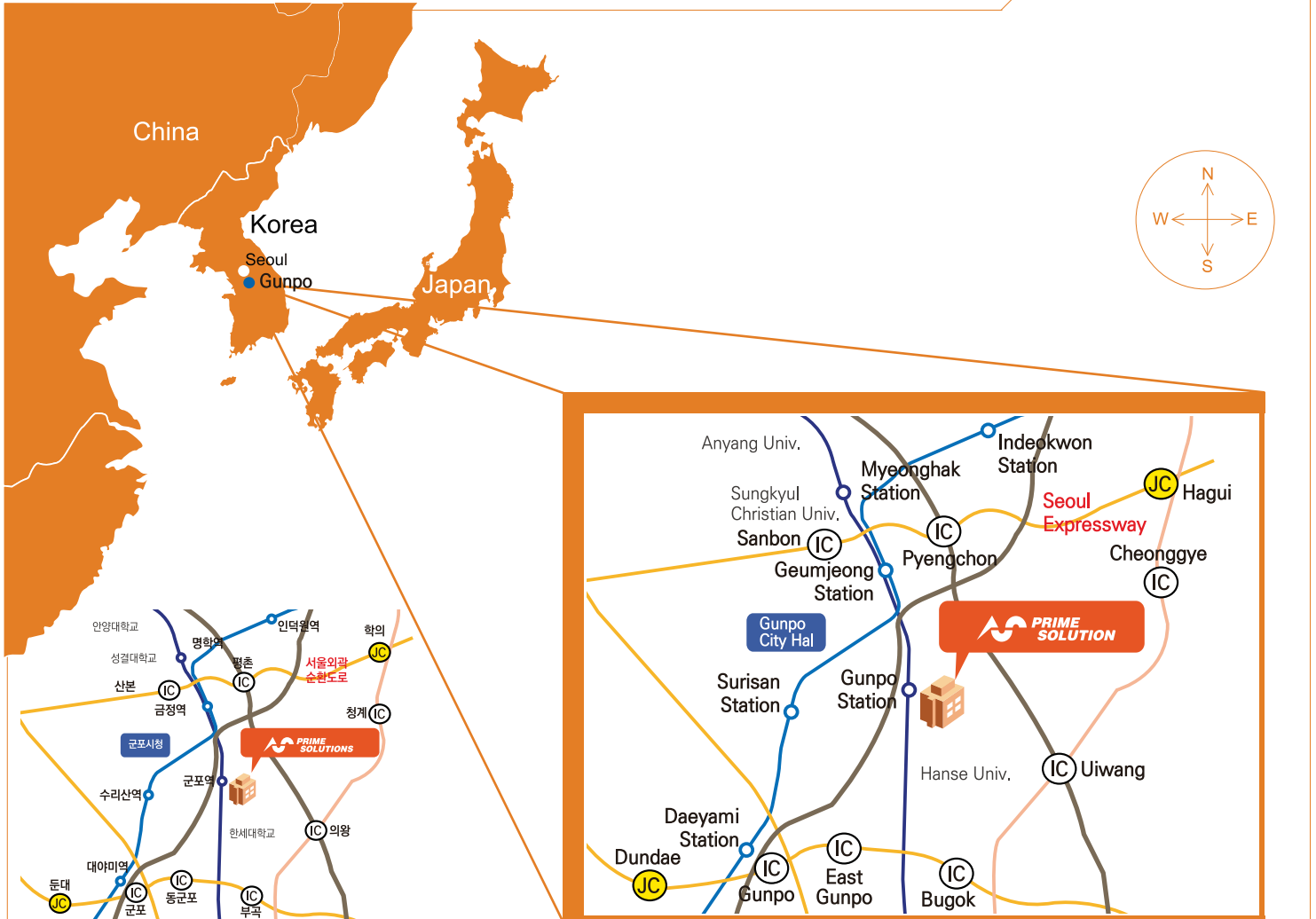
Schindler



HYUNDAI ELEVATOR



Total Solution of Lightning Protection & Power Quality



Total Solution of Surge Protection and Grounding System
Global Company **PRIME SOLUTIONS**



EN 61643-1

PSE

HH05020-10001A

ISO 9001:2000

ISO 14001:2004



39, Dangjeong-ro 27beon-gil, Gunpo-si, Gyeonggi-do, Republic of Korea
Tel. 82-31-464-1051 Fax. 82-31-464-1061 <http://www.primesolution.co.kr>