

Data Sheet

DC power surge protector DS2x0-xxDC series

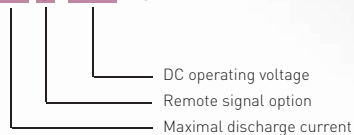
**I_{max}
20-40 kA**



DS230-48DC

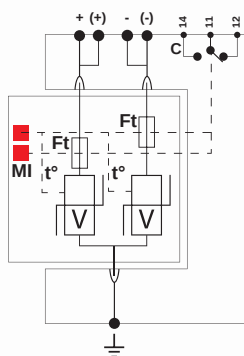
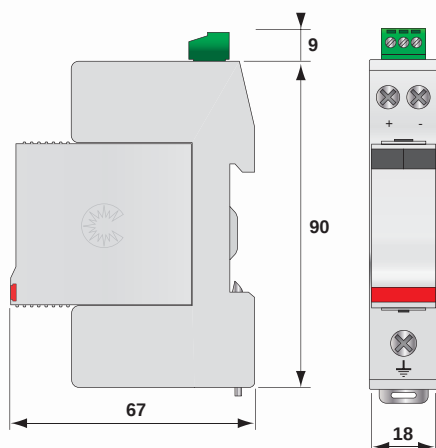
- From 12 to 350 Vdc
- Very low Up protection level
- Compact design
- I_{max}: 20 to 40 kA
- Pluggable module
- Remote signaling (option)

DS2xx S-xxxDC



Dimensions and Diagram

(en mm)



C: Remote signalling contact
V: Varistor
Ft: Thermal fuse
t°: Thermal disconnection system



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DC power surge protector

DS2x0-xxDC series

Characteristics

CITEL part number		DS220-12DC	DS220-24DC	DS230-48DC	DS240-75DC	DS240-95DC	DS240-110DC	DS240-130DC	DS240-220DC	DS240-280DC	DS240-350DC
Nomiale DC voltage	Un	12 Vdc	24 Vdc	48 Vdc	75 Vdc	95 Vdc	110 Vdc	130 Vdc	220 Vdc	280 Vdc	350 Vdc
Max. DC operating voltage	Uc	24 Vdc	38 Vdc	65 Vdc	100 Vdc	125 Vdc	150 Vdc	180 Vdc	275 Vdc	350 Vdc	460 Vdc
Max. AC operting voltage	Uc	20 Vac	30 Vac	50 Vac	75 Vac	95 Vac	115 Vac	150 Vac	210 Vac	275 Vac	350 Vac
Nominal discharge current	In	10 kA	10 kA	15 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Maximal discharge current	Imax	20 kA	20 kA	30 kA	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA
Protection level @ In	Up	250 V	250 V	300 V	390 V	450 V	500 V	620 V	900 V	1200 V	1400 V
Residual voltage @ 3kA		195 V	195 V	230 V	280 V	310 V	370 V	510 V	690 V	920 V	1000 V
Associated disconnection devices											
Thermal disconnectors		internal	internal	internal	internal	internal	internal	internal	internal	internal	internal
Fuses (if necessary)		20A gG	20A gG	20A gG	50A gG	50A gG	50A gG	50A gG	50A gG	50A gG	50A gG
Mechanical characteristics											
Dimensions		see diagram									
Wiring to network		by screw terminals 1,5-10mm² (active wires) and 2,5-25mm² (ground)									
Disconnection indicator		2 mechanical indicators									
Replacement module		pluggable module DSM2x0-xxDC									
Remote signalling		option [DS2x0S-xxDC] - output on changeover contact									
Mounting		symmetrical rail									
Operating temperature		-40/+85°C									
Protection class		IP 20									
Housing material		thermoplastic UL94-V0									
Standards compliance											
International	IEC 61643-11	Low voltage SPD - Test Class II									
Europe	EN 61643-11	Low voltage SPD - Test Class II									
USA - Canada	UL1449 3rd Edition	Type 4, Type 2 Location									
Part number											
		390101	390501	390401	310601	310301	310701	310801	310201	310501	310901



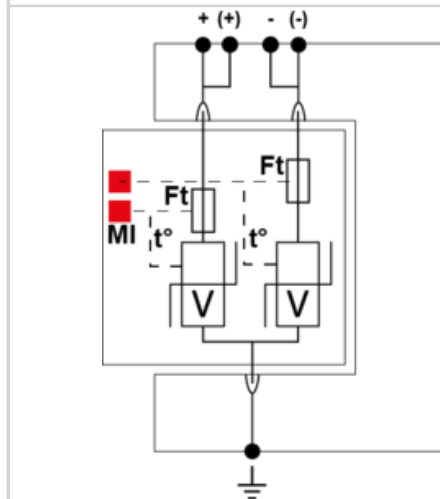
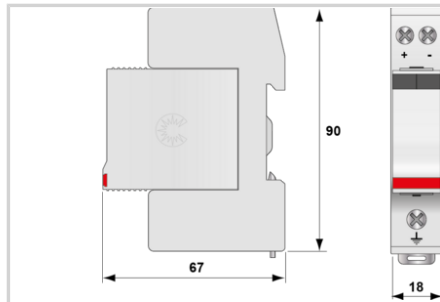
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DS240-75DC



- DC or PV power surge protector
- 75 Vdc
- Compact design
- I_{max} : 40 kA
- Pluggable module
- Remote signaling (option)
- Very low Up protection level



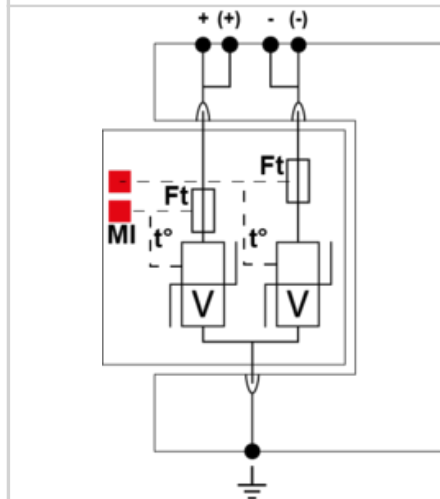
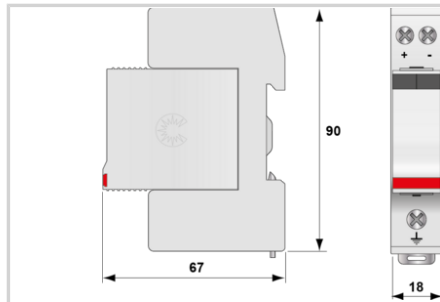
V: High-energy varistor
Ft: Thermal fuse
t*: Thermal disconnection system
MI: Disconnection indicator

Electrical Characteristics		
SPD type		2
Network		DC or PV network 75Vdc
Nominal DC voltage	Un-dc	75 Vdc
Nominal PV voltage	Uocsc	75 Vdc
Max. AC operating voltage	Uc	75 Vac
Max. PV operating voltage	Ucpv	100 Vdc
Max. DC operating voltage	Uc	100 Vdc
Max. load current	IL	20 A
Residual Current Leakage current to Ground	Ipe	< 0.1 mA
PV Permanent Operating current Current consumption at Ucpv	Icpv	< 0.1 mA
Follow current	If	None
Nominal discharge current 15 x 8/20 μs impulses	In	20 kA
Max. discharge current max. withstand @ 8/20 μs by pole	I _{max}	40 kA
Total Maximum discharge current max. total withstand @ 8/20 μs	I _{max} Total	80 kA
Current withstand short circuit PV	Iscpv	1000 A
Connection mode(s)		+/-/PE
Protection mode(s)		Common mode/Differential mode
Protection level +/-PE (-/PE) @ In (8/20μs)	Up	390 V
Mechanical Characteristics		
Technology		MOV
SPD configuration		2-poles
Connection to Network		By screw terminals: 1.5-10mm ² (actives wires) and 2.5-25mm ² (ground)
Format		Plug-in modular box
Mounting		Symmetrical rail 35 mm (EN 60715)
Housing material		Thermoplastic UL94 V-0
Operating temperature	Tu	-40/+85°C
Protection rating		IP20
Failsafe mode		Disconnection from DC network
Disconnection indicator		2 mechanical indicators
Spare module(s)		DSM240-75DC
Remote signaling of disconnection		Option DS240S-75DC : output on changeover contact
Dimensions		See diagram
Disconnectors		
Thermal disconnector		Internal
Fuses		Fuses type gG - 20A
Standards		
Standards compliance		IEC 61643-11 / EN 61643-11 / UL1449 ed.5
Certification		UL
Part number		
310601		

DS240-95DC



- DC or PV power surge protector
- 95 Vdc
- Compact design
- I_{max}: 40 kA
- Pluggable module
- Remote signaling (option)
- Very low Up protection level



V: High-energy varistor
Ft: Thermal fuse
t*: Thermal disconnection system
MI: Disconnection indicator

Electrical Characteristics

SPD type		2
Network		DC or PV network 95Vdc
Nominal DC voltage	Un-dc	95 Vdc
Nominal PV voltage	Uocstc	95 Vdc
Max. AC operating voltage	Uc	95 Vac
Max. PV operating voltage	Ucpv	125 Vdc
Max. DC operating voltage	Uc	125 Vdc
Max. load current	IL	20 A
Residual Current Leakage current to Ground	Ipe	< 0.1 mA
PV Permanent Operating current Current consumption at Ucpv	Icpv	< 0.1 mA
Follow current	If	None
Nominal discharge current 15 x 8/20 μs impulses	In	20 kA
Max. discharge current max. withstand @ 8/20 μs by pole	I _{max}	40 kA
Total Maximum discharge current max. total withstand @ 8/20 μs	I _{max} Total	80 kA
Current withstand short circuit PV	Iscpv	1000 A
Connection mode(s)		+/-/PE
Protection mode(s)		Common mode/Differential mode
Protection level +/-PE (-/PE)@ In (8/20μs)	Up	450 V

Mechanical Characteristics

Technology		MOV
SPD configuration		2-poles
Connection to Network		By screw terminals: 1.5-10mm² (actives wires) and 2.5-25mm² (ground)
Format		Plug-in modular box
Mounting		Symmetrical rail 35 mm (EN 60715)
Housing material		Thermoplastic UL94 V-0
Operating temperature	Tu	-40/+85°C
Protection rating		IP20
Failsafe mode		Disconnection from DC network
Disconnection indicator		2 mechanical indicators
Spare module(s)		DSM240-95DC
Remote signaling of disconnection		Option DS240S-95DC : output on changeover contact
Dimensions		See diagram
Weight		0.112 kg

Disconnectors

Thermal disconnector	Internal
Fuses	Fuses type gG - 20A

Standards

Standards compliance	IEC 61643-11 / EN 61643-11 / UL1449 ed.5
Certification	UL Recognized

Part number

310301

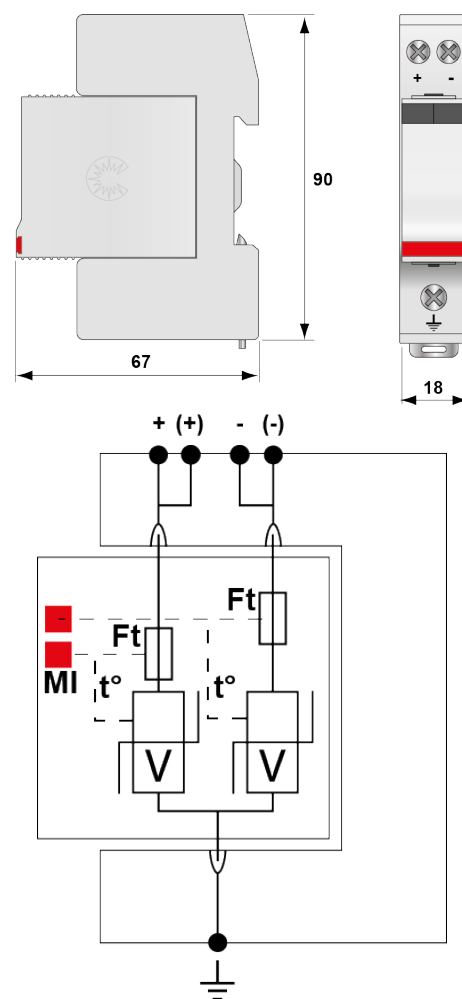


DS240-110DC



- DC or PV power surge protector
- 110 Vdc
- Compact design
- I_{max}: 40 kA
- Pluggable module
- Remote signaling (option)
- Very low U_p protection level

Electrical Characteristics		
SPD type <i>following IEC test</i>		2
Network		DC or PV network 110Vdc
Nominal DC voltage	<i>Un-dc</i>	110 Vdc
Nominal PV voltage	<i>Uocstc</i>	110 Vdc
Max. AC operating voltage L-N	<i>Uc</i>	115 Vac
Max. PV operating voltage	<i>Ucpv</i>	150 Vdc
Max. DC operating voltage	<i>Uc</i>	150 Vdc
Max. load current	<i>IL</i>	20 A
Residual Current <i>Leakage current to Ground</i>	<i>Ipe</i>	< 0.1 mA
Operating current <i>Continuous current at Uc</i>	<i>Ic</i>	< 0.1 mA
PV Permanent Operating current <i>Current consumption at Ucpv</i>	<i>Icpv</i>	< 0.1 mA
Follow current	<i>If</i>	None
Nominal discharge current <i>15 x 8/20 μs impulses</i>	<i>In</i>	20 kA
Max. discharge current <i>max. withstand @ 8/20 μs by pole</i>	<i>I_{max}</i>	40 kA
Total Maximal discharge current <i>max. total withstand @ 8/20 μs</i>	<i>I_{max} Total</i>	80 kA
Current withstand short circuit PV	<i>Iscpv</i>	1000 A
Connection mode(s)		+/-/PE
Protection mode(s)		Common mode
Protection level <i>@ In (8/20μs)</i>	<i>Up</i>	500 V
Protection level L/PE <i>@ In (8/20μs)</i>	<i>Up L/PE</i>	500 V
Residual Voltage at 3 kA <i>@ 8/20μs</i>	<i>Up-3kA</i>	370 V
Internal short circuit protection		No
Internal Thermal protection		YES



V: High-energy varistor
Ft: Thermal fuse
t°: Thermal disconnection system
MI: Disconnection indicator



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DC power surge protector - 110 Vdc

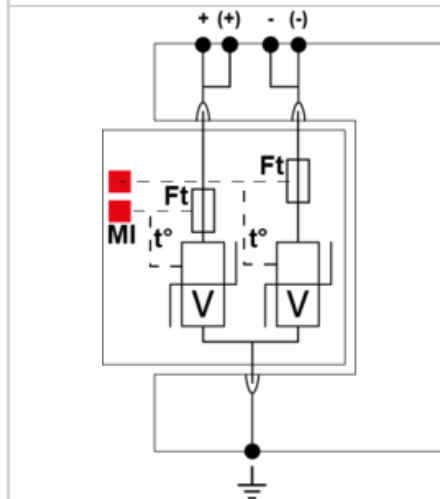
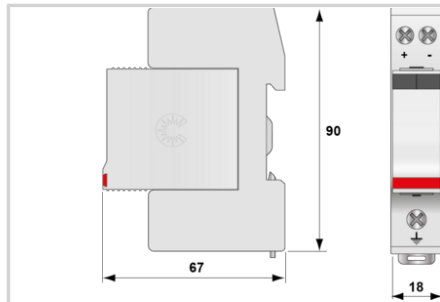
AC POWER

Mechanical Characteristics		
Technology		MOV
SPD configuration		2 poles
Connection to Network		By screw terminals: 1.5-10mm ² (actives wires) and 2.5-25mm ² (ground)
Format		Plug-in modular box
Mounting		Symmetrical rail 35 mm (EN60715)
Housing material		Thermoplastic UL94-V0
Operating temperature		-40/+85°C
Protection rating		IP20
Failsafe behavior		disconnection from DC line
Disconnection indicator		2 mechanical indicators
Spare module(s)		DSM240-110DC
Remote signaling of disconnection		Option DS240S-110DC : output on changeover contact
Dimensions		See diagram
Disconnectors		
Thermal disconnector		internal
Fuses		Fuses type gG - 50 A
Standards		
Standards compliance		IEC 61643-11 / EN 61643-11 / UL1449 ed.4
Certification		EAC
Part Number		310701

DS240-130DC



- DC or PV power surge protector
- 130 Vdc
- Compact design
- I_{max}: 40 kA
- Pluggable module
- Remote signaling (option)
- Very low Up protection level



V: High-energy varistor
Ft: Thermal fuse
t*: Thermal disconnection system
MI: Disconnection indicator

Electrical Characteristics

SPD type	2
Network	DC or PV network 130Vdc
Nominal DC voltage	Un-dc 130 Vdc
Nominal PV voltage	Uocstc 130 Vdc
Max. AC operating voltage	Uc 150 Vac
Max. PV operating voltage	Ucpv 180 Vdc
Max. DC operating voltage	Uc 180 Vdc
Max. load current	IL 20 A
Residual Current Leakage current to Ground	Ipe < 0.1 mA
PV Permanent Operating current Current consumption at Ucpv	Icpv < 0.1 mA
Follow current	If None
Nominal discharge current 15 x 8/20 μs impulses	In 20 kA
Max. discharge current max. withstand @ 8/20 μs by pole	I _{max} 40 kA
Total Maximum discharge current max. total withstand @ 8 /20 μs	I _{max} Total 80 kA
Current withstand short circuit PV	Iscpv 1000 A
Connection mode(s)	+/-/PE
Protection mode(s)	Common mode/Differential mode
Protection level +/-PE (-/PE)@ In (8/20μs)	Up 620 V

Mechanical Characteristics

Technology	MOV
SPD configuration	2-poles
Connection to Network	By screw terminals: 1.5-10mm ² (actives wires) and 2.5-25mm ² (ground)
Format	Plug-in modular box
Mounting	Symmetrical rail 35 mm (EN 60715)
Housing material	Thermoplastic UL94 V-0
Operating temperature	Tu -40/+85°C
Protection rating	IP20
Failsafe mode	Disconnection from DC network
Disconnection indicator	2 mechanical indicators
Spare module(s)	DSM240-130DC
Remote signaling of disconnection	Option DS240S-130DC : output on changeover contact
Dimensions	See diagram
Weight	0.119 kg

Disconnectors

Thermal disconnector	Internal
Fuses	Fuses type gG - 20A

Standards

Standards compliance	IEC 61643-11 / EN 61643-11 / UL1449 ed.5
Certification	UL

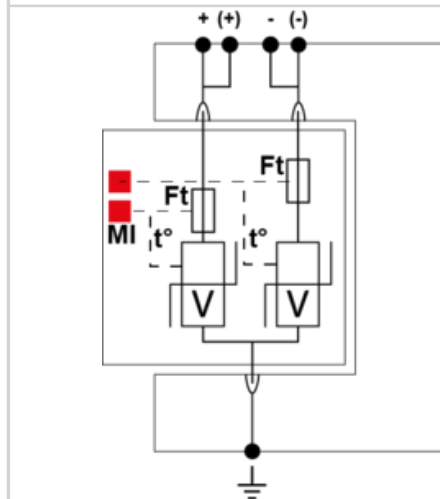
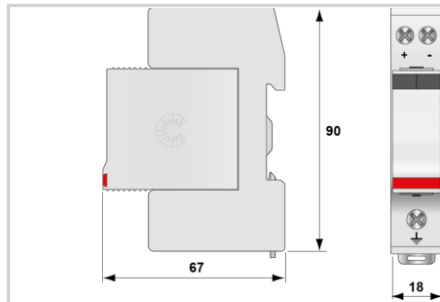
Part number

310801

DS240-220DC



- DC or PV power surge protector
- 220 Vdc
- Compact design
- I_{max}: 40 kA
- Pluggable module
- Remote signaling (option)
- Very low Up protection level



V: High-energy varistor
Ft: Thermal fuse
t*: Thermal disconnection system
MI: Disconnection indicator

Electrical Characteristics

SPD type	2
Network	DC or PV network 220Vdc
Nominal DC voltage	Un-dc 220 Vdc
Nominal PV voltage	Uocstc 220 Vdc
Max. AC operating voltage	Uc 210 Vac
Max. PV operating voltage	Ucpv 275 Vdc
Max. DC operating voltage	Uc 275 Vdc
Max. load current	IL 20 A
Residual Current Leakage current to Ground	Ipe < 0.1 mA
PV Permanent Operating current Current consumption at Ucpv	Icpv < 0.1 mA
Follow current	If None
Nominal discharge current 15 x 8/20 μs impulses	In 20 kA
Max. discharge current max. withstand @ 8/20 μs by pole	I _{max} 40 kA
Total Maximum discharge current max. total withstand @ 8 /20 μs	I _{max} Total 80 kA
Current withstand short circuit PV	Iscpv 1000 A
Connection mode(s)	+/-/PE
Protection mode(s)	Common mode/Differential mode
Protection level +/-PE (-/PE)@ In (8/20μs)	Up 900 V

Mechanical Characteristics

Technology	MOV
SPD configuration	2-poles
Connection to Network	By screw terminals: 1.5-10mm ² (actives wires) and 2.5-25mm ² (ground)
Format	Plug-in modular box
Mounting	Symmetrical rail 35 mm (EN 60715)
Housing material	Thermoplastic UL94 V-0
Operating temperature	Tu -40/+85°C
Protection rating	IP20
Failsafe mode	Disconnection from DC network
Disconnection indicator	2 mechanical indicators
Spare module(s)	DSM240-220DC
Remote signaling of disconnection	Option DS240S-220DC : output on changeover contact
Dimensions	See diagram
Weight	0.123 kg

Disconnectors

Thermal disconnector	Internal
Fuses	Fuses type gG - 20A

Standards

Standards compliance	IEC 61643-11 / EN 61643-11 / UL1449 ed.5
Certification	UL Recognized

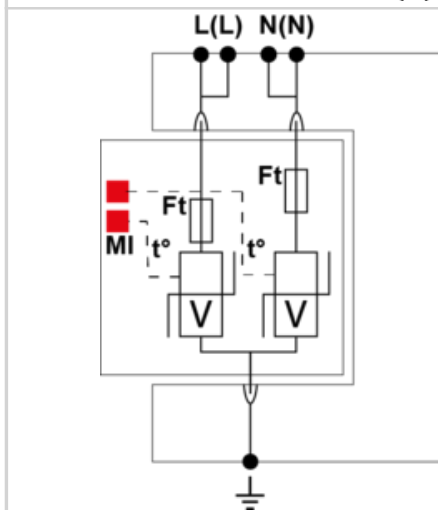
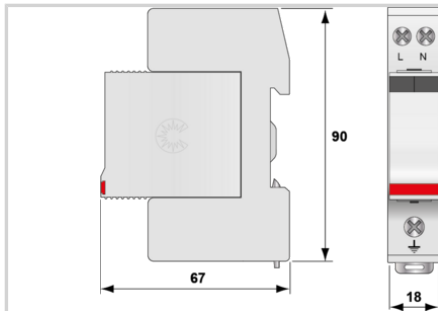
Part number

310201

DS240-280



- Compact single-phase Type 2 surge protector
- I_n : 20 kA
- I_{max} : 40 kA
- Common mode
- Pluggable module
- Remote signaling option
- EN 61643-11, IEC 61643-11 compliance
- UL1449 ed.5



V: High-energy varistor
Ft: Thermal fuse
t°: Thermal disconnection system
MI: Disconnection indicator

Electrical Characteristics

SPD type	2
Network	230 V single-phase
AC system	TN
Nominal line voltage	U_n 230 Vac
Max. AC operating voltage	U_c 280 Vac
Max. load current if series connection	I_L 20 A
Temporary Over Voltage (TOV) Characteristics - 5 sec. Without disconnection	U_T 335 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn Without disconnection or with safety disconnection	U_T 440 Vac disconnection
Residual Current Leakage current to Ground	I_{pe} < 0.5 mA
Follow current	I_f None
Nominal discharge current 15 x 8/20 μ s impulses	I_n 20 kA
Max. discharge current max. withstand @ 8/20 μ s by pole	I_{max} 40 kA
Total Maximum discharge current max. total withstand @ 8/20 μ s	I_{max} Total 80 kA
Connection mode(s)	L/PE and N/PE
Protection mode(s)	Common mode/Differential mode
Residual voltage at 5 kA @ 5 kA (8/20 μ s)	U_{p-5kA} 0.9 kV
Protection level CM/DM @ I_n (8/20 μ s)	$U_{p-mc/md}$ 1.3 kV
Admissible short-circuit current	I_{scrr} 10 000 A

Mechanical Characteristics

Technology	MOV
SPD configuration	Single phase
Connection to Network	By screw terminals: 1.5-10mm ² (L/N) or 2.5-25mm ² (PE)
Format	Plug-in modular box
Mounting	Symmetrical rail 35 mm (EN 60715)
Housing material	Thermoplastic UL94 V-0
Operating temperature	T_u -40/+85°C
Protection rating	IP20
Failsafe mode	Disconnection from AC network
Disconnection indicator	2 mechanical indicators
Spare module(s)	DSM240-280
Remote signaling of disconnection	Option DS240S-280 : output on changeover contact
Dimensions	See diagram
Weight	0.125 kg

Disconnectors

Thermal disconnector	Internal
Installation ground fault breaker	Type 'S' or delayed
Fuses	50 A min. - 125 A max. - Fuses Type gG

Standards

Standards compliance	IEC 61643-11 / EN 61643-11 / UL1449 ed.5
Certification	UL Recognized

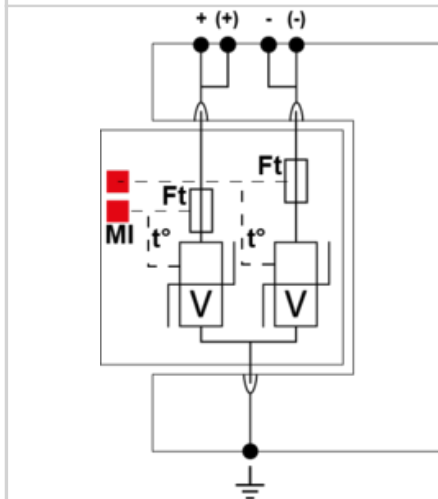
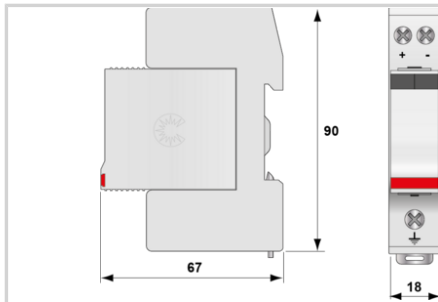
Part number

311101

DS240-350DC



- DC or PV power surge protector
- 350 Vdc
- Compact design
- I_{max}: 40 kA
- Pluggable module
- Remote signaling (option)
- Very low Up protection level



V: High-energy varistor
Ft: Thermal fuse
t*: Thermal disconnection system
MI: Disconnection indicator

Electrical Characteristics

SPD type	2
Network	DC or PV network 350Vdc
Nominal DC voltage	Un-dc 350 Vdc
Nominal PV voltage	Uocstc 350 Vdc
Max. AC operating voltage	Uc 350 Vac
Max. PV operating voltage	Ucpv 460 Vdc
Max. DC operating voltage	Uc 460 Vdc
Max. load current	IL 20 A
Residual Current Leakage current to Ground	Ipe < 0.1 mA
PV Permanent Operating current Current consumption at Ucpv	Icpv < 0.1 mA
Follow current	If None
Nominal discharge current 15 x 8/20 μs impulses	In 20 kA
Max. discharge current max. withstand @ 8/20 μs by pole	I _{max} 40 kA
Total Maximum discharge current max. total withstand @ 8/20 μs	I _{max} Total 80 kA
Current withstand short circuit PV	Iscpv 1000 A
Connection mode(s)	+/-/PE
Protection mode(s)	Common mode/Differential mode
Protection level +/-PE (-/PE)@ In (8/20μs)	Up 1400 V

Mechanical Characteristics

Technology	MOV
SPD configuration	2-poles
Connection to Network	By screw terminals: 1.5-10mm ² (actives wires) and 2.5-25mm ² (ground)
Format	Plug-in modular box
Mounting	Symmetrical rail 35 mm (EN 60715)
Housing material	Thermoplastic UL94 V-0
Operating temperature	Tu -40/+85°C
Protection rating	IP20
Failsafe mode	Disconnection from DC network
Disconnection indicator	2 mechanical indicators
Spare module(s)	DSM240-350DC
Remote signaling of disconnection	Option DS240S-350DC : output on changeover contact
Dimensions	See diagram
Weight	0.14 kg

Disconnectors

Thermal disconnector	Internal
Fuses	Fuses type gG - 20A

Standards

Standards compliance	IEC 61643-11 / EN 61643-11 / UL1449 ed.5
Certification	UL Recognized

Part number

310901

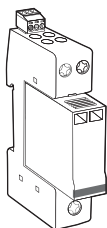


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N111201b

INSTALLATION INSTRUCTIONS - NOTICE D'INSTALLATION
NOTICIA DE INSTALACIÓN - INSTALLATIONSHINWEISE
ISTRUZIONI PER L'INSTALLAZIONE
INSTRUÇÕES DE INSTALAÇÃO - MONTÁŽNÍ NÁVOD
РУКОВОДСТВО ПО МОНТАЖУ - 安装指导书

DC surge protector - Parafoudre DC
Überspannungsschutz für DC - DC contra sobretensiones
Protezione DC - Proteção DC - Svodiče přepětí pro DC
Устройство защиты от импульсных перенапряжений для сетей DC - 直流浪涌保护器



DS2x0(S)-xxx DC

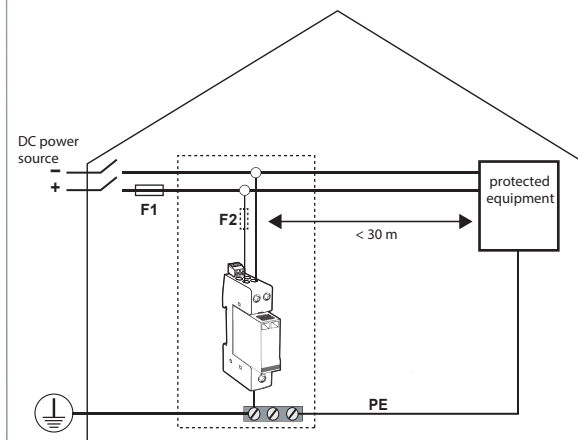
Technical Data

		P/N						
		DS220(S)-12DC	DS220(S)-24DC	DS230(S)-48DC	DS240(S)-75DC	DS240(S)-95DC	DS240(S)-110DC	DS240(S)-130DC
		DS240(S)-220DC	DS240(S)-280DC	DS240(S)-350DC				
DC Network								
12 Vdc	Un	●						
24 Vdc	Un		●					
48 Vdc	Un			●				
75 Vdc	Un				●			
95 Vdc	Un					●		
110 Vdc	Un						●	
130 Vdc	Un							●
220 Vdc	Un							
280 Vdc	Un							●
350 Vdc	Un							●

Remote signal option: "S": e.g. DS220S-12DC

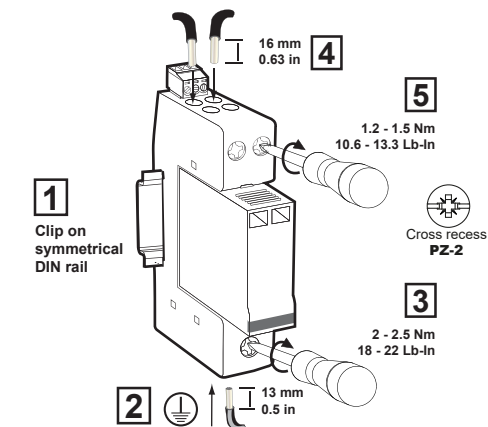
Table 1

Installation



Installation

min-max Ø		
1.5 - 16 mm ²	15 - 5 AWG	
1.5 - 10 mm ²	15 - 7 AWG	



min-max Ø		
2.5 - 35 mm ²	13 - 2 AWG	
2.5 - 25 mm ²	13 - 4 AWG	

Wiring

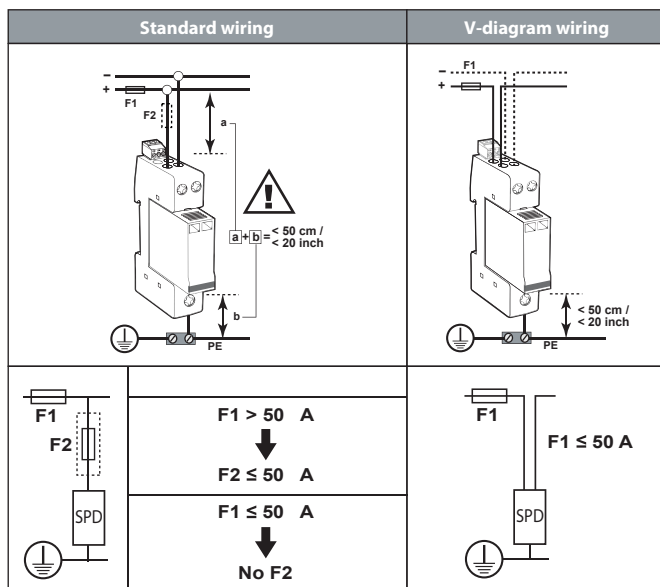


Table 2

Remote contact wiring

1.5 mm²
16 AWG max

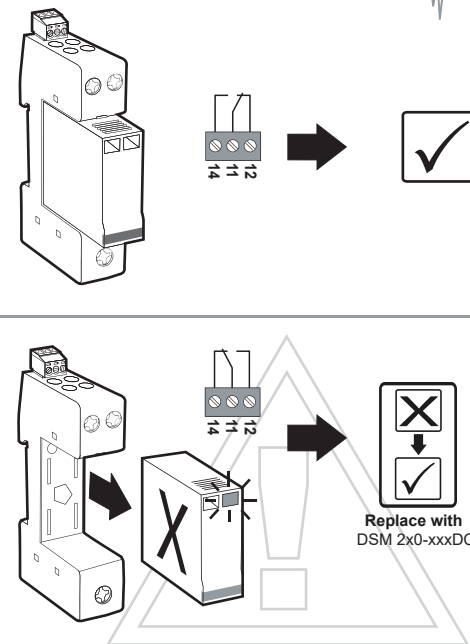
2.1 Lb-In
0.5 Nm max.
250 Vac / 0.5 A max.
30 Vdc / 3 A max.

Remote signal for disconnection information

11-12 Closed = SPD OK
11-14 Open = SPD OK
11-12 Open = SPD disconnect
11-14 Closed = SPD disconnect

Table 3

Maintenance





2, rue Troyon 92316
Sèvres CEDEX France



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ATTENTION !

GB

- Installation must be performed only by electrically skilled operator.
- National electrical installation rules must be followed.
- The unit must be used only as surge protector and according the conditions described in this document.
- Surge protectors must be selected in relation with an dedicated AC network (see Table 1)
- Dedicated fuses must be installed in the surge protector branch (see Table 2 column 1).
- In case of red indicator, the surge protector must be replaced.

This document could be modified without notice.
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ATENCION !

ES

- Solo un operador eléctrico capacitado puede realizar la instalación.
- Las reglas generales nacionales de instalación eléctrica deben ser respetadas.
- El producto solo tiene un uso de protección contra sobretensiones transitorias y debe ser utilizado en las condiciones mencionadas en este documento.
- Las protecciones contra sobretensiones transitorias se usan en relación con una red de baja tensión determinada (ver tabla 1).
- Fusibles dedicados deben ser instalados aguas arriba de la protección, en la conexión en paralelo (ver tabla 2).
- Se debe sustituir la protección cuando el indicador esta puesto en rojo.

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Información actualizada en el sitio web.



ВНИМАНИЕ !

RU

- монтаж и подключение изделия должны производиться только специалистами-электриками.
- необходимо учитывать требования местных норм и стандартов.
- изделие может использоваться только для защиты от импульсных перенапряжений в соответствии с настоящей инструкцией.
- параметры сети должны соответствовать характеристикам изделия (см. таблицу 1).
- обязательна установка токовых предохранителей соответствующего номинала (таблица 2, колонка 1*).
- при обнаружении индикатора состояния красного цвета изделие должно быть заменено.

В документ могут вноситься изменения.
Актуальную информацию смотрите на нашей
WEB-странице.



ATTENTION !

FR

- L'installation ne doit être effectuée que par un opérateur électricien dûment qualifié.
- Les règles générales d'installation électrique nationales doivent être respectées.
- Le produit est uniquement destiné à un usage parafoudre et doit être utilisé dans les conditions décrites dans ce document.
- Les parafoudres sont utilisés en fonction d'un réseau BT déterminé (voir table 1)
- Des fusibles dédiés doivent être installés dans les branches du parafoudre (voir table 2 Colonne 2).
- En cas d'indicateur passant au rouge, le parafoudre doit être remplacé.

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Informations à jour sur site web.



ATTENZIONE !

IT

- L'installazione deve essere fatta solamente da elettricisti qualificati.
- Devono essere rispettate le regolamentazioni nazionali e locali riguardanti l'installazione di apparati elettrici.
- L'unità deve essere usata solo come protezione da sovratensioni e secondo le condizioni descritte in questo documento.
- Le protezioni da sovratensione devono essere scelte in funzione della corrente alternata di rete (vedere la tabella 1).
- Fusibili dedicati devono essere installati nel ramo protetto da sovratensione (vedere la tabella 2).
- Nel caso in cui si accenda l'indicatore rosso, l'unità di protezione da sovratensione deve essere sostituita.

Questo documento può essere modificato senza preavviso.
Informazioni attualizzate disponibili sul sito web.



VAROVÁNÍ !

CZ

- Montáž a připojení svodiče přepětí smí provádět pouze pracovník s příslušnou elektrotechnickou kvalifikací.
- Je zapotřebí dodržovat zásady bezpečnosti práce i platné národní elektrotechnické předpisy.
- Svodič přepětí se smí používat pouze v souladu se svými technickými parametry a podle těchto montážních pokynů.
- Svodiče přepětí je zapotřebí zvolit a používat tak, aby odpovídaly napájecí síti (viz tabulka 1).
- Potřeba instalace pojistek pro předjistiění před svodiče a jejich volba - viz tabulka 2, sloupec 1.
- Pokud ukazatel správné funkce má ČERVENOU barvu, pak svodič/modul je VADNÝ a musí být vyměněn.

Změny v tomto dokumentu jsou možné bez předchozího upozornění.
Aktuální informace najdete na naší webové stránce.



WARNING !

DE

- Die Montage und der Anschluss des Gerätes dürfen nur durch eine Elektrofachkraft durchgeführt werden.
- Nationale Installations Vorschriften sind zu beachten.
- Das Gerät ist nur im Rahmen dieser Installationshilfe und seiner technischen Daten zu verwenden.
- Die Ableiter sind nach der Niederspannungs-netzform auszuwählen (siehe Tabelle 1).
- Die Vorsicherungen sind nach der Tabelle 2 zu selektieren und zu installieren (Spalte 1).
- Ist die Anzeige im Sichtfenster auf ROT umgeschaltet, so ist das Modul DEFECT und muss ausgetauscht werden.

Änderungen am Dokument ohne Ankündigung möglich.
Aktuelle Informationen finden Sie auf unserer Webseite.



AVISO !

PT

- A instalação deve ser feita por um electricista habilitado.
- Devem ser seguidas todas as regras de segurança indicadas pelo operador eléctrico.
- Esta protecção deve ser utilizada apenas como protecção contra sobretensões e de acordo com as condições mencionadas neste documento.
- A protecção deve ser escolhida de acordo com a rede eléctrica AC (ver quadro 1).
- Devem ser instalados fúsisveis de protecção a montante da protecção (ver quadro 2).
- Caso o indicador vermelho esteja activo, dever-se-á substituir a protecção.

Este documento pode ser modificado sem aviso prévio.
Informação atualizada no website.



安全須知!

中文

- 产品安装只能由具备专业资质的人员实施;
- 请遵守国家电气安装相关规范;
- 本产品仅作为浪涌保护器且在本文件所规定的条件下使用;
- 请根据不同的电源网络制式选用浪涌保护器, 参见 Table 1;
- 请在浪涌保护器前端安装规定的熔断器, 参见 Table 2;
- 当状态指示变为红色时, 须及时更换浪涌保护器;

本文件的修改无需另行通知。
更新文件请登陆公司网站。



INSTRUKCJA OBSŁUGI !

PL

- Montaż ograniczników przepięć powinien być wykonany tylko przez wykwalifikowanego elektroinstalatora zgodnie z obowiązującymi przepisami krajowymi.
- Ogranicznik przepięć powinien być używany tylko zgodnie z wymaganiami opisanymi w niniejszej instrukcji.
- Ogranicznik przepięć powinien być zainstalowany w instalacji AC zgodnie z jej parametrami podanymi w Tabeli 1.
- Zabezpieczenia topikowe powinny być dobrane i zainstalowane w obwodach ogranicznika zgodnie z zasadami podanymi w Tabeli 2.
- W przypadku kiedy w okienku kontrolnym pojawi się kolor czerwony to moduł powinien zostać wymieniony na nowy.

Ten dokument może zostać zmodyfikowany bez wcześniejszego powiadomienia.
Zaktualizowane informacje znajdują się na stronie internetowej.



LET OP !

NL

- Alleen een geschoolde elektromonteur mag de installatie uitvoeren.
- De installatie moet plaatsvinden conform de regelgeving voor elektrische installaties van het betreffende land.
- De eenheid mag alleen worden gebruikt als een overspanningsbeveiliging en alleen conform de voorwaarden die zijn beschreven in dit document.
- De overspanningsbeveiliging moeten worden geselecteerd in samenhang met een eigen AC-netwerk (zie tabel 1).
- Er moeten eigen zekeringen worden geïnstalleerd in de overspanningsbeveiligingstak (zie tabel 2, kolom 1).
- Wanneer het lampje rood brandt, moet de overspanningsbeveiliging worden vervangen.

Dit document kan zonder voorafgaande kennisgeving worden gewijzigd. Actuele informatie vindt u op de website.



ADVASEL !

DK

- Installationen skal udføres af en elektriker.
- Nationale regler for elektrisk installation skal følges.
- Enheden må kun anvendes som overspændingsbeskytter og i henhold til de betingelser, der er beskrevet i dette dokument.
- Overspændingsbeskyttere skal vælges i henhold til et dedikeret vekselstrømsnet (se skema 1).
- Der skal installeres passende sikringer i overspændingsbeskytterdelen (se skema 2 kolonne 1).
- Hvis kontrollampen lyser rødt, skal overspændingsbeskytteren udskiftes.

Dokumentet kan ændres uden varsel.
Opdaterede informationer findes på vores webside.



NAVODILA ZA UPORABO !

SI

- Montažo prenapetostnih odvodnikov mora izvršiti za to usposobljena oseba.
- Prenapetostni odvodniki morajo biti vgrajeni v skladu z nacionalnimi standardi in ob upoštevanju zaščitnih ukrepov.
- Izdelek se lahko uporablja le kot prenapetostni odvodnik pod pogoji uporabe navedenimi v tem dokumentu.
- Prenapetostni odvodnik mora biti izbran glede na lastnosti uporabljenega AC omrežja.
- Uporabljen mora biti v kombinaciji z ustrezno predvarovalko.
- V primeru pojava rdečega indikatorja, mora biti odvodnik zamenjan.

Ta dokument se lahko spremeni brez predhodnega obvestila.
Posodobljene informacije so na spletni strani.



NÁVOD NA INŠTALÁCIU !

SK

- Montáž prepäťových spínačov by mala vykonávať len kvalifikovaná osoba v súlade s platnými národnými predpismi.
- Zvodič prepätia by sa mal používať iba v súlade s požiadavkami opísanými v tomto dokumente.
- Prepäťové ochrany musia byť zvolené podľa charakteristiky použitej AC siete (pozri tabuľku 1)
- Zvláštne poistky by sa mali vyberať a inštalovať v obvodoch v súlade s pravidlami uvedenými v tabuľke 2 stĺpec 1.
- V prípade červeného indikátora musí byť zvodič vymenený.

Tento dokument je možné upraviť bez upozornenia.
Aktualizované informácie sú na webových stránkach.



OBS !

SE

- Installationen bör endast utföras av en person med lämpliga kunskaper i elinstallationer.
- Lokala regler för elinstallationer måste följas.
- Enheten bör endast användas som överspänningssskydd och i enlighet med villkoren som beskrivs i det här dokumentet.
- Överspänningssskydd måste väljas i relation till ett särskilt avsett elnät (se tabell 1).
- Särskilt avsedda säkringar måste installeras i grenen för överspänningssskyddet (se tabell 2, kolumn 1).
- Om indikatorn visar rött, måste överspänningssskyddet bytas ut.

Informationen i det här dokumentet kan ändras utan föregående meddelande.
Uppdaterad information finns på webbplatsen.