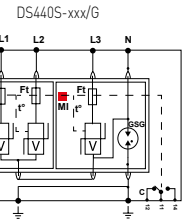
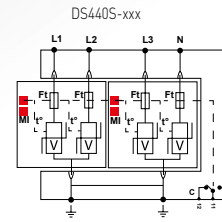
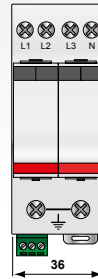
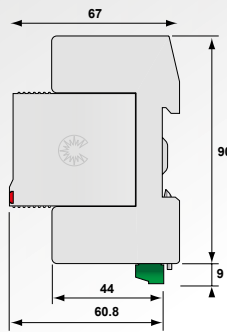


3-phase Type 2 Surge Protector DS440 series

**Imax
40 kA**



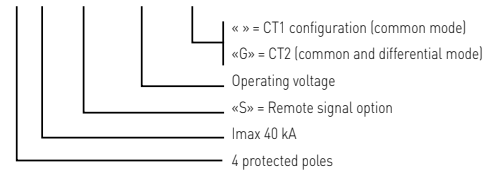
DS440-400



V : High energy varistor
GSG : Specific GDT
Ft : Thermal fuse
C : Remote signaling contact
t° : Thermal disconnection system
MI : Disconnection indicator

- Compact 3-phase Type 2
- In : 20 kA
- Imax : 40 kA
- Common/Differential mode
- Pluggable module
- Remote signaling contact (option)
- Complies with EN 61643-11, IEC 61643-11 and UL1449 ed.4

DS440 S-xxx/G



Characteristics

CITEL Model	DS440-400	DS440-230	DS440-230/G	DS440-120	DS440-120/G
Description	Compact 3-phase+N Type 2 surge protector - 230/400 V - Pluggable			Compact 3-phase+N Type 2 surge protector - 120/208 V - Pluggable	
Network	230/400 V 3-phase	230/400 V 3-phase	230/400 V 3-phase	120/208 V 3-phase	120/208 V 3-phase
Connection mode	L/PE and N/PE	L/PE and N/PE	L/N and N/PE	L/PE and N/PE	L/N and N/PE
AC system	IT	TN	TT-TN	TN	TT-TN
Max. AC operating voltage	Uc 440 Vac	255 Vac	255 Vac	150 Vac	150 Vac
Temporary Over Voltage (TOV) Characteristics - 5 sec.	UT 580 Vac withstand	335 Vac withstand	335 Vac withstand	180 Vac withstand	180 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn	UT 770 Vac disconnection	440 Vac disconnection	440 Vac disconnection	230 Vac disconnection	230 Vac disconnection
Temporary Over Voltage N/PE (TOV HT)	UT -	-	1200 V/300A/200 ms withstand	-	1200 V/300A/200 ms withstand
Residual current - Leakage current at Uc	Ipe < 1 mA	< 1 mA	None	< 1 mA	None
Follow current	If None	None	None	None	None
Nominal discharge current - 15 x 8/20 µs impulses	In 20 kA	20 kA	20 kA	20 kA	20 kA
Max. discharge current - max. withstand @ 8/20 µs by pole	Imax 40 kA	40 kA	40 kA	40 kA	40 kA
Protection level CM/DM* @In (8/20µs) and @ 6kV (1.2/50µs)	Up 1.8 kV	1.25 kV	1.5/1.25 kV	0.9 kV	1.5/0.9 kV
Admissible short-circuit current	Iscrr 10000 A	10000 A	10000 A	10000 A	10000 A
Associated disconnectors					
Thermal disconnector	internal				
Fuses	Fuses Type gG - 50 A**				
Installation ground fault breaker	Type "S" or delayed				
Mechanical characteristics					
Dimensions	see diagram				
Connection to Network	by screw terminals: 1.5-10mm ² (L/N) or 2.5-25mm ² (PE)				
Disconnection indicator	4 mechanical indicators	4 mechanical indicators	3 mechanical indicators	4 mechanical indicators	3 mechanical indicators
Remote signaling of disconnection	Option DS440S-400 : output on changeover contact	Option DS440S-230 : output on changeover contact	Option DS440S-230/G : output on changeover contact	Option DS440S-120 : output on changeover contact	Option DS440S-120/G : output on changeover contact
Spare unit	DSM440-400	DSM440-230	DSM440-230/G and DSM440-230/GPE	DSM440-120	DSM440-120/G and DSM440-120/GPE
Mounting	Symmetrical rail 35 mm (EN60715)				
Operating temperature	-40/+85°C				
Protection rating	IP20				
Housing material	Thermoplastic UL94-V0				
Standards compliance	IEC 61643-11 / EN 61643-11 / UL1449 ed.4				
Certification	EAC				
Part number	311402	311702	311722	311602	311622

*Note: CM = Common mode (L/PE or N/PE)/ DM = Differential mode (L/N)

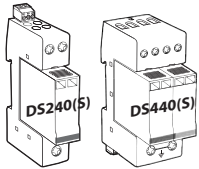
**Note: Rating in compliance with NF C15-100 art. 534.1.5.3. An order to increase service continuity, higher rating can be used. For further information, please consult product instructions.

N110203d



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

AC surge protector - Parafoudre Basse Tension
 Protectiones Baja Tension
 Überspannungsschutz für Niederspannungsnetze
 Scaricatori da sovratensioni per rete di energia
 Protetor de Surto CA. - Svodiče přepětí pro AC
 Устройство защиты от импульсных перенапряжений, AC - 低压浪涌保护器



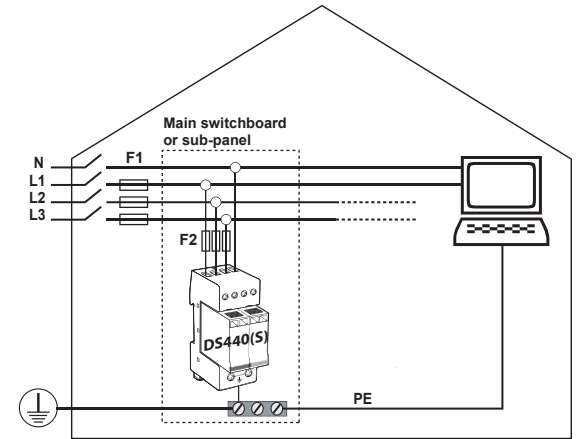
DS240 / DS440 Series

Technical Data

2000 m max. 6500 ft max. -40/+85°C max. -40/+185°F max. IP20 indoor use only	P/N																					
	DS240(S)-120	DS240(S)-120/G	DS240(S)-230	DS240(S)-230/G	DS240(S)-280	DS240(S)-280/G	DS240(S)-320	DS240(S)-320/G	DS240(S)-385	DS240(S)-385/G	DS240(S)-400	DS240(S)-400/G	DS440(S)-120	DS440(S)-120/G	DS440(S)-230	DS440(S)-230/G	DS440(S)-280	DS440(S)-280/G	DS440(S)-320	DS440(S)-320/G	DS440(S)-400	
AC Network																						
120 Vac L+N		●	●																			
120/208 Vac 3L+N													●	●								
230 Vac L+N				●	●	●	●	●	●	●	IT	●										
400 Vac 3L																						IT
230/400 Vac 3L+N															●	●	●	●	●	●		
Characteristics																						
I_{PE}*		< 1 mA / (= 0 mA for G version)																				
I_{SCCR}*		10 kA																				
I_{max}*		40 kA																				
*values per pole Remote signal option: S: e.g DS240S-230/G																						

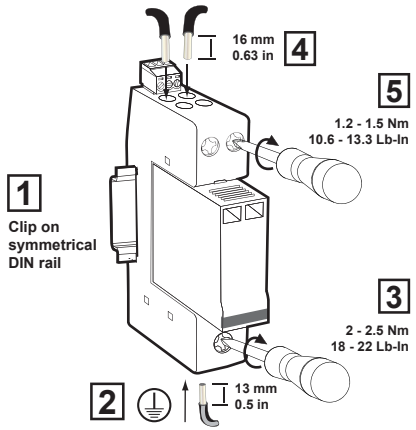
Table 1

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

Standard wiring

V-diagram wiring

Remote contact wiring

Fuses Type gG

F1 > 50 A
↓
F2 = 50 A

F1 ≤ 50 A

①* F2 ≤ F1	②* No F2
---------------	-------------

Remote signal for disconnection information

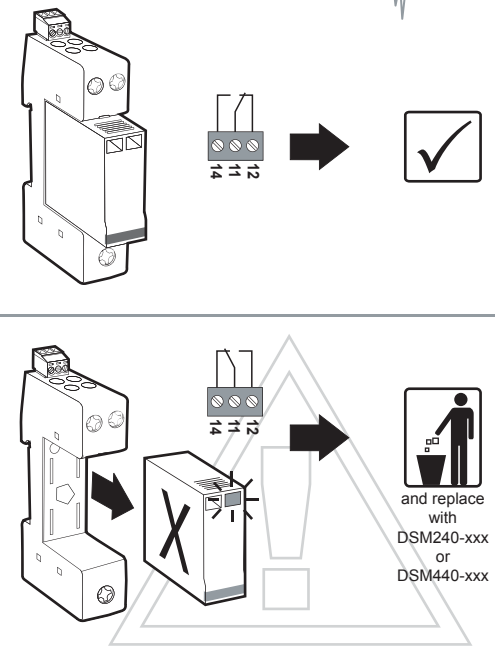
11-12 Closed = SPD OK
 11-14 Open = SPD OK
 11-12 Open = SPD disconnect
 11-14 Closed = SPD disconnect

* depending on national rules : Solution ① or ②

Table 2

Table 3

Maintenance





CITEL

SAFETY INSTRUCTIONS
 CONSIGNES DE SECURITE
 SICHERHEITSHINWEISE
 ADVERTENCIA DE SEGURIDAD
 AVVERTENZE IMPORTANTI
 AVISOS IMPORTANTES
 МЕРЫ БЕЗОПАСНОСТИ
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 安全須知



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www.citel.in

2, rue Troyon 92316 Sèvres CEDEX France



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.



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.



ВНИМАНИЕ!

RUS

- 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.



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.



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.



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 předjištění 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.



WARNING !

D

- 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 Niederspannungsnetzform 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.



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 fúsiveis de protecção a montante da protecção (ver quadro 2).
- Caso o indicador vermelho esteja activo, dever-se-á substituir a protecção.



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；