



DAC1-13VG-10

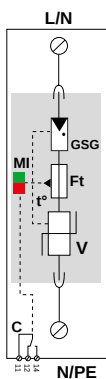
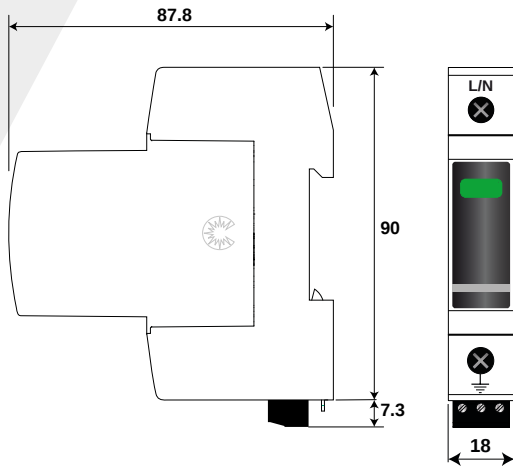
DAC1-13VG SERIES

- VG Technology
- In: 20 kA
- limp: 12.5 kA
- No leakage current
- Pluggable module for each phase
- Remote signaling (option)
- Optimized to TOV
- EN 61643-11, IEC 61643-11 certified
- UL1449 ed.4 compliance



Characteristics

CITEL Model		DAC1-13VG-10-320	DAC1-13VG-10-275	DAC1-13VG-10-150
Description		Type 1+2+3 AC surge protector - 1-pole - pluggable		
Max. AC operating voltage	Uc	320 Vac	275 Vac	150 Vac
Temporary Over Voltage (TOV) characteristic - 5 sec.	UT	335 Vac withstand	335 Vac withstand	180 Vac withstand
Temporary Over Voltage (TOV) characteristic - 120 mn	UT	440 Vac withstand	440 Vac withstand	230 Vac withstand
Residual current - <i>Leakage current at Uc</i>	Ipe	None	None	None
Follow current	If	None	None	None
Nominal discharge current <i>15 x 8/20 μs impulses</i>	In	20 kA	20 kA	20 kA
Max. discharge current <i>max. withstand @ 8/20 μs by pole</i>	Imax	50 kA	50 kA	50 kA
Impulse current by pole <i>max. withstand 10/350μs</i>	limp	12.5 kA	12.5 kA	12.5 kA
Specific energy by pole	W/R	40 kJ/ohm	40 kJ/ohm	40 kJ/ohm
Withstand on Combination waveform <i>Class III test</i>	Uoc	6 kV	6 kV	6 kV
Protection level <i>@ In (8/20μs) and 6 kV (1.2/50μs)</i>	Up	1.5 kV	1.5 kV	1.5 kV
Residual Voltage <i>@ 5 kA (8/20μs)</i>	Up-5kA	0.9 kV	0.7 kV	0.4 kV
Admissible short-circuit current	Iscsr	50 000 A	50 000 A	50 000 A
Associated disconnectors				
Thermal disconnector		Internal		
Fuses		125 A min. - 315 A max. - gG type / or CITEL SFD-13		
Existing upstream ground fault breaker (if any)		Type «S» or delayed		
Mechanical characteristics				
Dimensions		see diagram - 1 TE (DIN43880)		
Connection to Network		By screw terminals: 2.5-25 mm² (35mm² rigid)		
Failsafe Mode		Disconnection from AC network		
Disconnection indicator		1 mechanical indicator Green/Red		
Remote signaling of disconnection output on changeover contact		option DAC1-13VGS-10-320	option DAC1-13VGS-10-275	option DAC1-13VGS-10-150
Max. voltage/current for remote signaling		250 V/0.5 A (AC) / 30 V/3 A (DC)		
Wiring for remote signaling		1.5 mm² max.		
Mounting		Symmetrical rail 35 mm (EN60715)		
Operating temperature		-40/+85°C		
Protection rating		IP20		
Housing material		Thermoplastic UL94-V0		
Spare unit		MDAC1-13VG-320	MDAC1-13VG-275	MDAC1-13VG-150
Standards				
Certification		KEMA /EAC		
Compliance		IEC 61643-11 / EN 61643-11 / UL1449 ed.4		
Part number				
		821730311	821730211	821730111



V: High energy varistor
GSG: Specific gas Tube
MI: Disconnection indicator
Ft: Thermal fuse
t°: Thermal disconnection system
C: Contact for remote signal

TYPE 1 + 2 + 3 AC MULTIPOLAR SURGE PROTECTOR

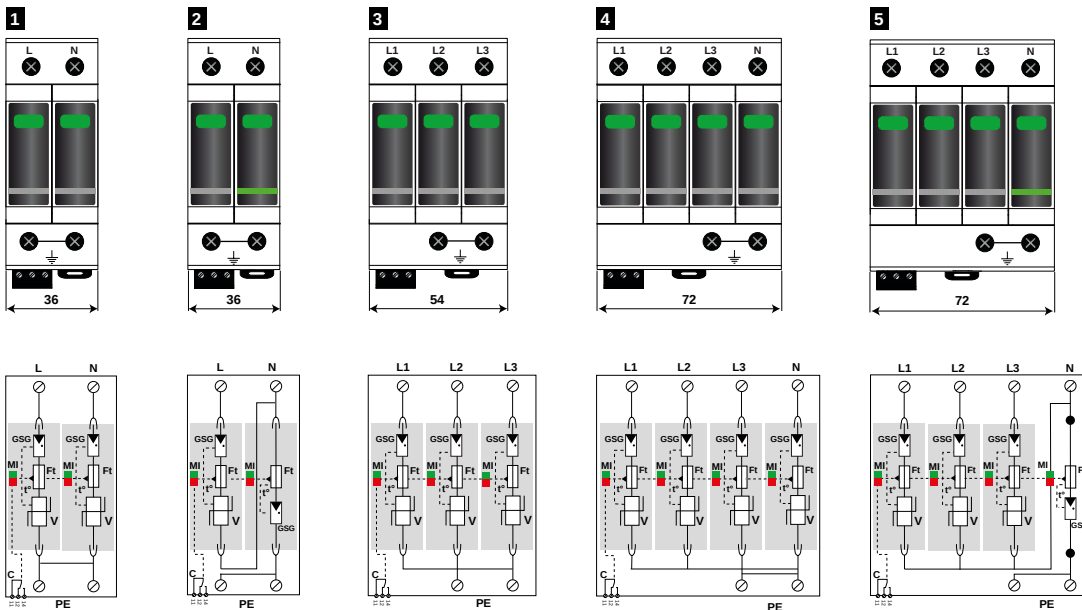
DAC1-13VG-11, DAC1-13VG-20, DAC1-13VG-30,
DAC1-13VG-31, DAC1-13VG-40



DAC1-13VG-31

DAC1-13VGS-xx-xxx

Maximum operating voltage
Configuration: 10 (single-pole 1+0), 11 (1+1), 20 (2+0),
30 (3+0), 40 (4+0), 31 (3+1)
«S» = Remote signal option
VG Technology
Iimp: 12.5 kA



V: High energy varistor
GSG: Specific gas Tube
MI: Disconnection indicator
Ft: Thermal fuse
t°: Thermal disconnection system
C: Contact for remote signal

Model	P/N	Network	AC system	Protection Mode	I _{total}	U _p L/PE	U _p L/N	U _p N/PE	Dimension DIN43880	Diagram
DAC1-13VG-31-320	821730334	230/400 V 3-Phase+N	TT-TNS System (3+1)	L/N and N/PE	50 kA	-	1.5 kV	1.5 kV	4 TE	5
DAC1-13VG-31-275	821730234	230/400 V 3-Phase+N	TT-TNS System (3+1)	L/N and N/PE	50 kA	-	1.5 kV	1.5 kV	4 TE	
DAC1-13VG-31-150	821730134	120/208 V 3-Phase+N	TT-TNS System (3+1)	L/N and N/PE	50 kA	-	1.5 kV	1.5 kV	4 TE	
DAC1-13VG-40-320	821730314	230/400 V 3-Phase+N	TNS System (4+0)	L/PE and N/PE	50 kA	1.5 kV	-	1.5 kV	4 TE	4
DAC1-13VG-40-275	821730214	230/400 V 3-Phase+N	TNS System (4+0)	L/PE and N/PE	50 kA	1.5 kV	-	1.5 kV	4 TE	
DAC1-13VG-40-150	821730114	120/208 V 3-Phase+N	TNS System (4+0)	L/PE and N/PE	50 kA	1.5 kV	-	1.5 kV	4 TE	
DAC1-13VG-30-320	821730313	230/400 V 3-Phase	TNC System (3+0)	L/PE	37.5 kA	1.5 kV	-	-	3 TE	3
DAC1-13VG-30-275	821730213	230/400 V 3-Phase	TNC System (3+0)	L/PE	37.5 kA	1.5 kV	-	-	3 TE	
DAC1-13VG-30-150	821730113	120/208 V 3-Phase	TNC System (3+0)	L/PE	37.5 kA	1.5 kV	-	-	3 TE	
DAC1-13VG-11-320	821730332	230 V single phase	TT-TN System (1+1)	L/N and N/PE	25 kA	-	1.5 kV	1.5 kV	2 TE	2
DAC1-13VG-11-275	821730232	230 V single phase	TT-TN System (1+1)	L/N and N/PE	25 kA	-	1.5 kV	1.5 kV	2 TE	
DAC1-13VG-11-150	821730132	120 V single phase	TT-TN System (1+1)	L/N and N/PE	25 kA	-	1.5 kV	1.5 kV	2 TE	
DAC1-13VG-20-320	821730312	230 V single phase	TN System (2+0)	L/PE and N/PE	25 kA	1.5 kV	-	1.5 kV	2 TE	1
DAC1-13VG-20-275	821730212	230 V single phase	TN System (2+0)	L/PE and N/PE	25 kA	1.5 kV	-	1.5 kV	2 TE	
DAC1-13VG-20-150	821730112	120 V single phase	TN System (2+0)	L/PE and N/PE	25 kA	1.5 kV	-	1.5 kV	2 TE	

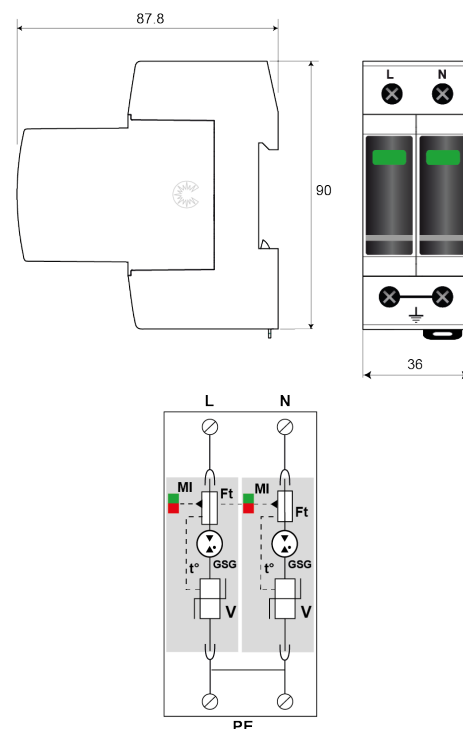


DAC1-13VG-20-275

- Type 1 + 2 + 3 AC surge protector
- VG Technology
- I_n : 20 kA
- I_{imp} : 12,5 kA on 10/350 μ s impulse
- No leakage current
- Pluggable module for each phase
- Remote signaling (option)
- Optimized to TOV
- EN 61643-11, IEC 61643-11 and UL1449 ed.4 compliance



Electrical Characteristics		
SPD type		1+2+3
Network		230 V single-phase
AC system		TN
Max. AC operating voltage L-N	U_c	275 Vac
Temporary Over Voltage (TOV) Characteristics - 5 sec. <i>Without disconnection</i>	U_T	335 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn <i>Without disconnection or with safety disconnection</i>	U_T	440 Vac withstand
Residual Current <i>Leakage current to Ground</i>	I_{pe}	None
Follow current	I_f	None
Nominal discharge current <i>15 x 8/20 μs impulses</i>	I_n	20 kA
Max. discharge current <i>max. withstand @ 8/20 μs by pole</i>	I_{max}	50 kA
Total Maximal discharge current <i>max. total withstand @ 8/20 μs</i>	I_{max} <i>Total</i>	100 kA
Impulse current by pole <i>max. withstand 10/350μs by pole</i>	I_{imp}	12.5 kA
Total lightning current <i>max. total withstand @ 10/350μs</i>	I_{total}	25 kA
Withstand on Combination waveform IEC 61643-11 <i>Class III test: 1.2/50μs - 8/20μs</i>	U_{oc}	6 kV
Specific energy by pole <i>max. withstand 10/350 μs</i>	W/R	40 kJ/ohm
Protection mode(s)		L/PE and N/PE
Protection level N/PE <i>@ I_n (8/20μs)</i>	U_p N/PE	1.5 kV
Protection level L/PE <i>@ I_n (8/20μs)</i>	U_p L/PE	1.5 kV
Protection level N/PE at 5 kA <i>@ 5 kA (8/20μs)</i>	U_p -5kA	0.7 kV
Residual voltage L/PE at 5 kA <i>@ 5 kA (8/20μs)</i>	U_p -5kA	0.7 kV
Admissible short-circuit current	I_{sccr}	50 000 A



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



CITEL

Type 1+2+3 AC surge protector - Single phase

AC POWER

Mechanical Characteristics		
Technology		VG
SPD configuration		Single phase
Connection to Network		By screw terminals: 2.5-25 mm ² (35 mm ² rigid)
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 mode		Disconnection from AC network
Disconnection indicator		1 mechanical indicator by pole - Red/Green
Spare module(s)		MDAC1-13VG-275
Remote signaling of disconnection		option DAC1-13VGS-20-275: output on changeover contact
Wiring for remote signaling		1.5 mm ² max.
Maw. Voltage/Current for remote signaling		250 V / 0.5 A (AC) / 30 V / 3 A (DC)
Dimensions		See diagram - 2TE (EN43880)
Disconnectors		
Thermal disconnector		Internal
Installation ground fault breaker		Type 'S' or delayed
Fuses		125 A min. - 315 A max. - Fuses Type gG
Standards		
Standards compliance		IEC 61643-11 / EN 61643-11 / UL1449 4ed.
Certification		IEC 61463-11 / EN 61643-11
Part Number		821730212



DAC1-13VG-31-275

- Type 1 + 2 + 3 AC surge protector
- VG Technology
- In : 20 kA
- Iimp : 12,5 kA on 10/350µs impulse
- No leakage current
- Pluggable module for each phase
- Remote signaling (option)
- Optimized to TOV
- EN 61643-11, IEC 61643-11 and UL1449 ed.3 compliance



Electrical Characteristics		
SPD type		1+2+3
Network		230/400 V 3-phase+N
AC system		TT-TNS
Max. AC operating voltage L-N	U_c	275 Vac
Temporary Over Voltage (TOV) Characteristics - 5 sec. <i>Without disconnection</i>	U_T	335 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn <i>Without disconnection or with safety disconnection</i>	U_T	440 Vac withstand
Temporary Over Voltage N/PE (TOV HT) <i>Without disconnection or with safety disconnection</i>	U_T	1200 V/300A/200 ms withstand
Residual Current <i>Leakage current to Ground</i>	I_{pe}	None
Follow current	I_f	None
Nominal discharge current <i>15 x 8/20 µs impulses</i>	I_n	20 kA
Max. discharge current <i>max. withstand @ 8/20 µs by pole</i>	I_{max}	50 kA
Total Maximal discharge current <i>max. total withstand @ 8/20 µs</i>	I_{max} <i>Total</i>	100 kA
Impulse current by pole <i>max. withstand 10/350µs by pole</i>	I_{imp}	12.5 kA
Total lightning current <i>max. total withstand @ 10/350µs</i>	I_{total}	50 kA
Withstand on Combination waveform IEC 61643-11 <i>Class III test: 1.2/50µs - 8/20µs</i>	U_{oc}	6 kV
Specific energy by pole <i>max. withstand 10/350 µs</i>	W/R	40 kJ/ohm
Protection mode(s)		L/N and N/PE
Protection level L/N <i>@ In (8/20µs)</i>	U_p L/N	1.5 kV
Protection level N/PE <i>@ In (8/20µs)</i>	U_p N/PE	1.5 kV
Residual voltage L/N at 5 kA <i>@ 5 kA (8/20µs)</i>	U_p -5kA	0.7 kV
Protection level N/PE at 5 kA <i>@ 5 kA (8/20µs)</i>	U_p -5kA	0.7 kV
Admissible short-circuit current	$I_{sc cr}$	50 000 A

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



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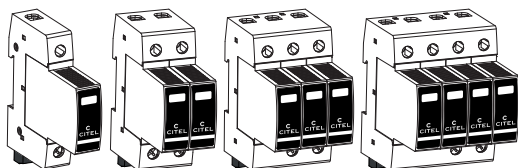
Mechanical Characteristics		
Technology		VG
SPD configuration		3-phase+N
Connection to Network		By screw terminals: 2.5-25 mm ² (35 mm ² rigid)
Format		Plug-in modular box
Mounting		Symmetrical rail 35 mm (EN60715)
Housing material		Thermoplastic UL94-V0
Operating temperature		-40/+85°C
Protection rating		IP20
Failsafe mode		Disconnection from AC network
Disconnection indicator		1 mechanical indicator by pole - Red/Green
Spare module(s)		MDAC1-13VG-275 + MDAC1-50G-xxx
Remote signaling of disconnection		option DAC1-13VGS-31-275 : output on changeover contact
Wiring for remote signaling		1.5 mm ² max.
Maw. Voltage/Current for remote signaling		250 V / 0.5 A (AC) / 30 V / 3 A (DC)
Dimensions		See diagram - 4TE (EN43880)
Weight		0.451 kg
Disconnectors		
Thermal disconnector		Internal
Installation ground fault breaker		Type 'S' or delayed
Fuses		125 A min. - 315 A max. - Fuses Type gG
Standards		
Standards compliance		IEC 61643-11 / EN 61643-11 / UL1449 4ed.
Certification		IEC 61463-11 / EN 61643-11
Part Number		821730234

N181803



INSTALLATION INSTRUCTIONS - NOTICE D'INSTALLATION
 NOTICIA DE INSTALACIÓN - INSTALLATIONSHINWEISE
 ISTRUZIONI PER L'INSTALLAZIONE
 INSTRUCOES DE INSTALCAO - 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



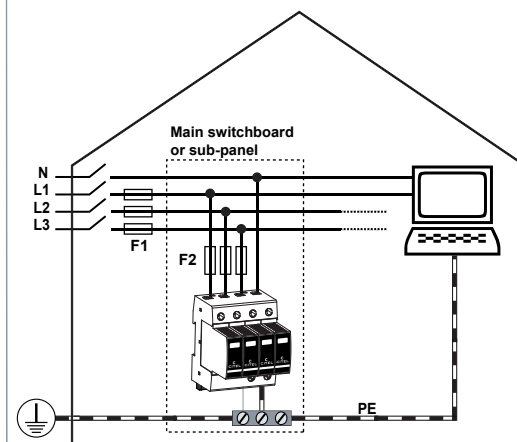
DAC1-13VG range

Technical Data

2000 m max. 6500 ft max. -40/+85°C max. -40/+185°F max. IP20 indoor use only Humidity range 5% - 95%	P/N															
	DAC1-13VG(S)-10-150	DAC1-13VG(S)-20-150	DAC1-13VG(S)-11-150	DAC1-13VG(S)-30-150	DAC1-13VG(S)-40-150	DAC1-13VG(S)-31-150	DAC1-13VG(S)-10-275	DAC1-13VG(S)-20-275	DAC1-13VG(S)-11-275	DAC1-13VG(S)-30-275	DAC1-13VG(S)-40-275	DAC1-13VG(S)-31-275	DAC1-13VG(S)-10-320	DAC1-13VG(S)-20-320	DAC1-13VG(S)-11-320	DAC1-13VG(S)-30-320
AC Network																
120 Vac L+N	2	●														
208 Vac 3L	3		●													
120/208 Vac 3L+N	4			●	●											
230 Vac L+N						2	●				2	●				
400 Vac 3L													3			
230/400 Vac 3L+N						3				●	4					●
Characteristics																
IPE	None															
ISCCR	50 kA															

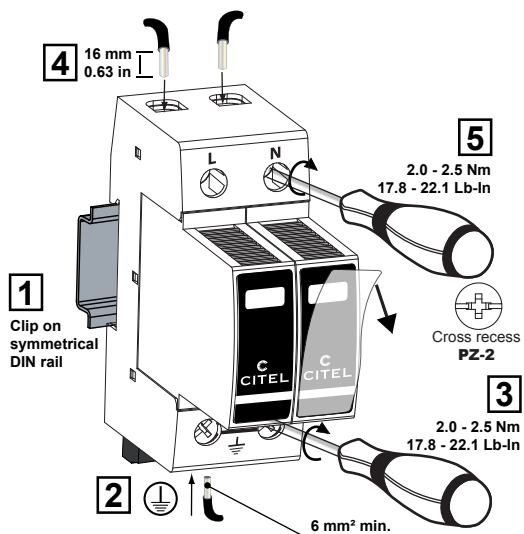
Table 1

Application example

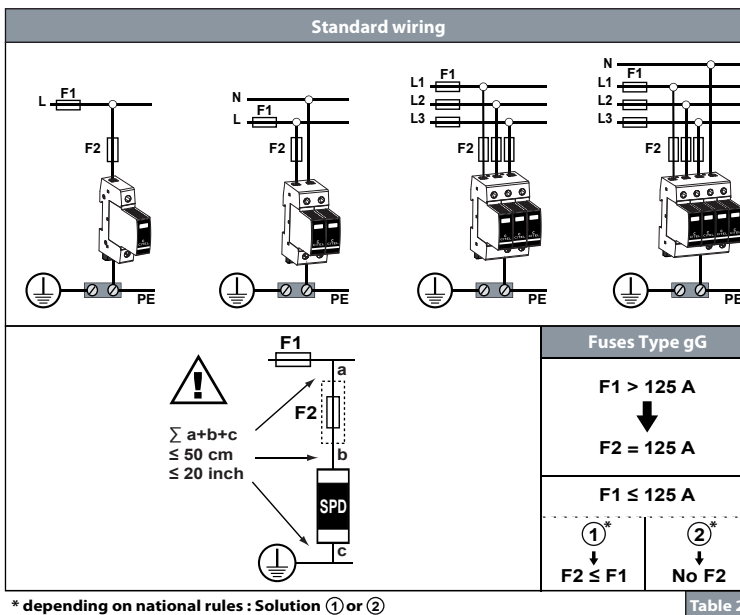


Installation

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



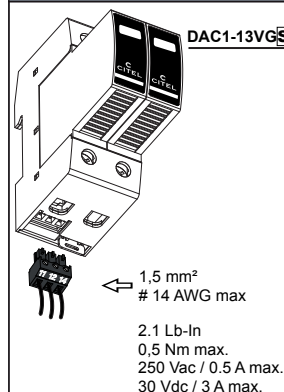
Wiring



* depending on national rules : Solution ① or ②

Table 2

Remote contact wiring

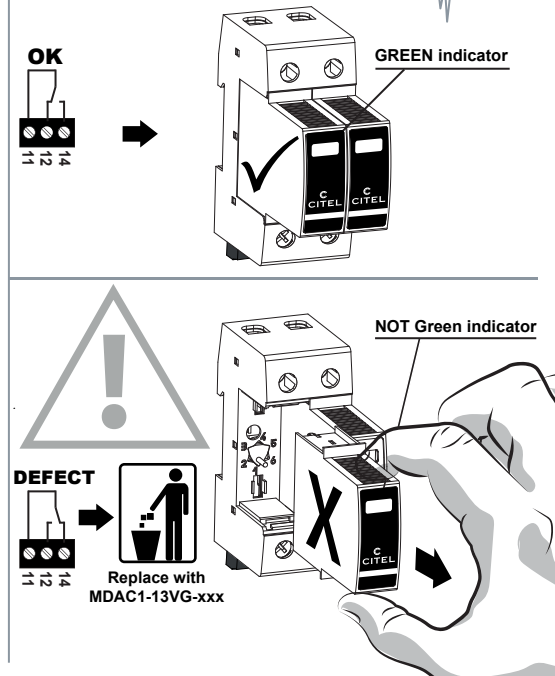


Remote signal for disconnection information

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

Table 3

Maintenance





CITEL

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



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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).
- 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).
- 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).
- 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.
- 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.
- 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 fúsisveis 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;