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### Installation Instructions Installationsanleitung Manuel d'installation Instrucciones de Instalación Istruzioni per l'installazione



#### ENGLISH

Please read the following before installing your Surge Protective Device:

- Verify the system voltage and configuration on the label if it is appropriate for the application.
- Risk of Electric Shock – Installation and maintenance should be performed by qualified personnel only.
- Disconnect from energized circuits before installing or servicing.
- Safety rules and regulations applicable to all devices connected to power lines should always be followed. National standards and safety regulations must be followed.
- The external mechanical integrity of the device must be checked before installation. Products with visible damage should not be installed.
- Its use is only permitted within the limits shown and stated in these installation instructions. Opening or tampering with the device invalidates the warranty.
- Connecting leads shall be kept as short as possible, without loops and not exceed 0.5m in total length per SPD.

#### DEUTSCH

Bitte lesen Sie die folgenden Angaben vor Installation der Überspannungsschutzgerät:

- Sicherstellen, dass die Systemspannung und -konfiguration auf dem Etikett für die Anwendung geeignet ist.
- Stromschlaggefahr – Installation und Wartung sollten nur vom Fachmann durchgeführt werden.
- Gerät vor der Installation oder Wartung/Reparatur von spannungsführenden Leitungen trennen.
- Die Sicherheitsvorschriften und -regeln für alle an Stromleitungen angeschlossenen Geräte sind stets zu befolgen. Vor Ort geltende Normen und Sicherheitsvorschriften befolgen.
- Vor der Installation ist die externe mechanische Unversehrtheit des Geräts sicherzustellen. Produkte mit sichtbaren Schäden dürfen nicht installiert werden. Das Gerät ist nur für den Betrieb innerhalb der angegebenen Grenzwerte zugelassen. Wird das Gerät geöffnet oder manipuliert, erlischt die Garantie.
- Anschlussleitungen sollten so kurz wie möglich gehalten werden, dürfen keine Schleifen enthalten und nicht länger 0,5 m sein.

#### FRANÇAIS

Veillez lire les instructions suivantes avant d'installer votre parafoudre:

- Vérifiez que la tension et la configuration du système sur l'étiquette du produit convient à l'application
- Déconnectez le produit de circuits sous tension avant l'installation ou l'entretien
- Les règles de sécurité et les réglementations applicables aux appareils connectés aux lignes électriques doivent toujours être respectées. Les normes nationales et les règles de sécurité doivent être respectées
- L'intégrité mécanique externe du produit doit être vérifiée avant l'installation. Les produits présentant des dommages visibles ne doivent pas être installés
- L'utilisation du produit est uniquement autorisée dans les limites indiquées dans ce manuel d'installation. Le désassemblage ou la modification du produit annule sa garantie
- Les câbles de raccordement doivent être aussi courts que possible, sans boucles et ne pas dépasser une longueur totale de 50 cm par parafoudre.

#### ESPAÑOL

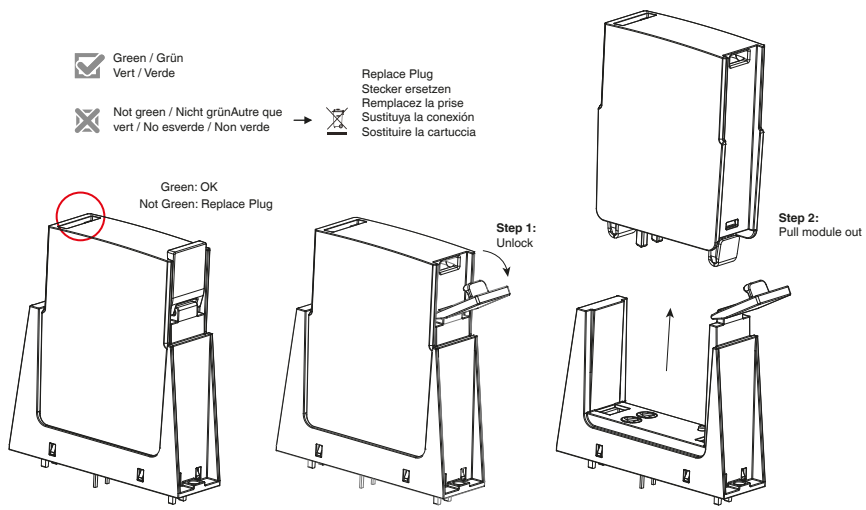
Lea las siguientes instrucciones antes de la instalación de su dispositivo de protección contra sobretensiones:

- Compruebe que la tensión y configuración del sistema que aparecen en la etiqueta son adecuadas para su instalación.
- Riesgo de descarga eléctrica: únicamente personal cualificado puede instalar o dar mantenimiento a este dispositivo.
- Desconecte los circuitos con tensión antes instalarlo o darle mantenimiento.
- Siga siempre todas las normativas y reglamentos de seguridad pertinentes a todos los dispositivos conectados a la red eléctrica. Debe respetar la normativa nacional y los reglamentos de seguridad.
- Compruebe la integridad mecánica externa del dispositivo antes de su instalación. Nunca instale productos que presenten daños visibles.
- Sólo se permite utilizarse dentro de los límites establecidos en estas instrucciones de instalación. Abrir o alterar el dispositivo anula la garantía.
- Las conexiones de cables deben ser lo más cortas posibles, sin bucles y sin exceder 0,5 m de longitud total por cada SPD según la norma IEC 60364-5-53.

#### ITALIANO

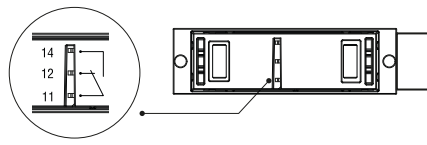
Prima di installare il limitatore di sovratensione (SPD: Surge Protective Device), leggere attentamente quanto segue:

- Verificare la tensione e la configurazione del sistema sull'etichetta per capire se sono appropriati per l'applicazione del dispositivo.
- Rischi di elettrocuzione – L'installazione e la manutenzione devono essere effettuate unicamente da personale qualificato.
- Togliere corrente ai circuiti, prima dell'installazione o della manutenzione.
- È necessario rispettare sempre le normative e i regolamenti di sicurezza applicabili, per tutti i dispositivi collegati alla linea elettrica. È necessario rispettare gli standard nazionali e i regolamenti di sicurezza.
- Prima dell'installazione, è necessario verificare l'integrità meccanica esterna del dispositivo. Non bisogna installare prodotti che mostrino danni evidenti.
- Il suo uso è consentito solo entro i limiti indicati e dichiarati in queste istruzioni di installazione. L'apertura o la manomissione del dispositivo causano l'annullamento della garanzia.
- L'interconnessione delle parti conduttrici deve essere la più corta possibile, evitando la formazione di anelli e non deve comunque superare gli 0,5m di lunghezza totale, per gli SPD.

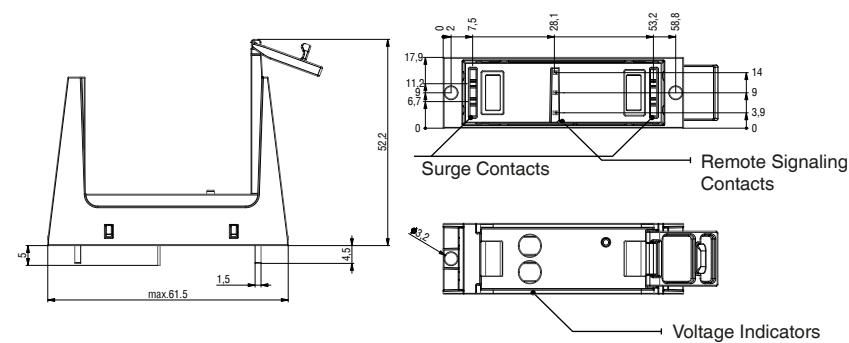


REMOTE CONTACT

A.C.		D.C.		
250V / 1A	125V / 1A	48V / 0.5A	24V / 0.5A	12V / 0.5A
<b>RC contact(s) states</b>		11- 12	11-14	
SPD module functional/installation is protected		Closed	Open	
SPD module unplugged or non-functional/installation is unprotected		Open	Closed	



DIMENSIONS [mm]



- Additional Fixation**
- Ø3.2mm
  - Screw head diameter max. Ø 4mm.
  - Usage of contersunk screw head is not allowed.
  - Max. torque is 0.25 Nm.

Air clearances and creepage distances of the track routing according to the standard for the relevant application (for example IPC-2221 product standard, Standard on printed board designs ...) whereby material properties should be considered (e.g. PCB with lower CTI [Comparative Tracking Index] requires higher creepage distances between adjacent contacts as would with lower CTI).

Therefore, an adequate distance, required by national or international standards, must be maintained from:

- Other PCB Sockets
- Other components on the PCB
- PCB tracks

Discharge capacity of the SPD must be considered when designing PCB tracks. See table [2].

PCB TRACK - THICKNESS [2]

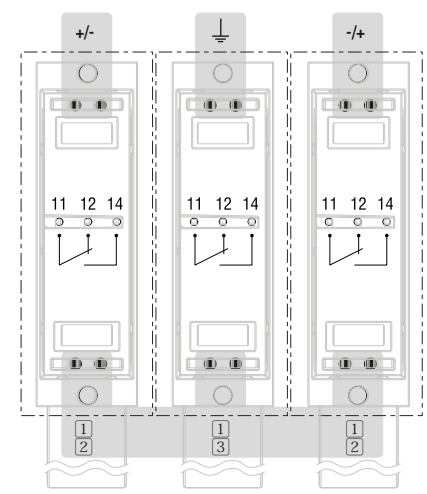
Surge ratings		Thickness of the PCB track [µm]			
		35 µm	70 µm	105 µm	150 µm
$I_n$ 20kA (8/20)	Width of the PCB Track	10mm	5.5mm	4mm	2.8mm
$I_{max}$ 50kA (8/20)		20mm	10mm	7mm	5mm

In case of different dimensions (width, thickness, 2 layers) the cross section should stay unchanged.

TECHNICAL DATA

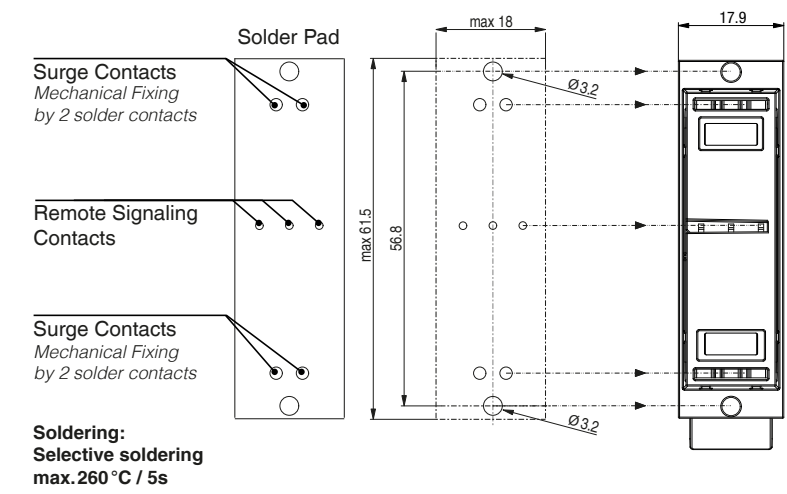
Product name	PCB Socket T2-PV(-R)		
$U_{CPV}$	DC	up to 750V	
$I_n$ (8/20)		up to 20kA	
$I_{max}$ (8/20)		up to 50kA	
$I_{SCPV}$		up to 11kA	
$V_{pVdc}$ (per UL 1449)		up to 750V	
$I_n$ (per UL 1449)		up to 20kA	
SOCR (per UL 1449)		up to 65kA	
$T_a$		-40°C to 85°C [-40°F to 185°F]	
RH		5%...95%	
Mounting		Directly on Printed Circuit Board (PCB)	
Location		Indoor	
IP		20 (built-in PCB, with protection module plugged in) 00 (stand alone component)	
Altitude (max)		13123 ft [4000 m]	
Minimum distance from any conductive surface	<b>Altitude</b>	≤2000 m	2001-4000 m
	<b>Ucpv [V]</b>		
	PV application ≤ 800	0mm	0mm
	800 > PV application ≤ 1100	1.5mm	3.0mm
1100 > PV application ≤ 1500	3.5mm	3.5mm	

EXAMPLE OF A Y CIRCUIT



- Option 1: ① PCB Socket T2-xxxPV(-R)
- Option 2: ② PCB Socket T2-xxxPVG(-R)  
③ PCB Socket T2-xxxPVG-G(-R)

**PCB socket has to be soldered in one week from opening the product package.**



CROSS REFERENCE

Product Combinations with Associated Plugs

