


**SAFETEC B(R) 12.5 PV TCG**


- **Category IEC / EN:** Class I, II / Type 1, 2 / B, C
- **Location of use:** Photovoltaic systems - PV module side
- **Protection modes:** (+) → PE, (-) → PE, (+) → (-)
- **Protective elements:** High energy MOV and GDT
- **Surge discharge rating:**  $I_{imp} = 12.5kA$
- **Safety:** Ground fault immunity
- **Leakage current:** NO leakage current (TCG)
- **Housing:** Compact design
- **Complies with:** EN 50539-11, UL 1449 3rd Ed.


**Technical data**

Type	SAFETEC B(R) 12.5/xxxx PV TCG			
	300	600	1000	
<b>Electrical characteristics</b>				
Max. continuous operating voltage (DC)	$U_{CPV}^*$	300V	600V	1000V
Nominal discharge current (8/20)	$I_n (+) \rightarrow PE / (-) \rightarrow PE$		12.5kA	
Max. discharge current (8/20)	$I_{max} (+) \rightarrow PE / (-) \rightarrow PE$		40kA	
Impulse current (10/350)	$I_{imp} (+) \rightarrow PE / (-) \rightarrow PE$		12.5kA	
Short circuit withstand	$I_{SCPV}$		1000A	
Specific energy			39kJ/Ω	
Charge			6.25As	
Protection level	$U_p$	< 1.1kV	< 1.6kV	< 2.4kV
Residual voltage at 5kA (8/20)	$U_{res}$	< 0.8kV	< 1.4kV	< 2.1kV
Follow current	$I_{fi}$		NO	
Residual current	$I_{PE}$		NO	
Response time	$t_A$		< 25ns	
Thermal protection			YES	
Ground fault immunity (DC)		600V	1200V	2000V
<b>Mechanical characteristics</b>				
Temperature range		- 40°C ... + 80°C		
Terminal screw torque		max. 3.0Nm		
Terminal cross section		35mm <sup>2</sup> (solid) / 25mm <sup>2</sup> (stranded)		
Mounting		35mm DIN rail, EN 60715		
Degree of protection		IP 20		
Housing material		Thermoplastic; extinguishing degree UL 94 V-0		
Indication of disconnector operation		red flag		
Remote contacts (RC)		YES		
Contact ratings		AC: 250V/0.5A; 125V/3A		
Terminal cross section		max. 1.5mm <sup>2</sup>		
Remote terminal torque		0.25Nm		

\*  $U_{CPV} \geq 1.2 \cdot U_{OCSTC}$  → open circuit voltage under standard test condition

**Ordering information**

$U_{CPV}$	300	600	1000
Ordering code SAFETEC B 12.5/xxxx PV TCG	54.0096	54.0098	54.0102
Ordering code SAFETEC BR 12.5/xxxx PV TCG (with remote contacts)	54.0097	54.0099	54.0103

TC solution available on request


**SAFETEC B(R) 12.5 Y PV TCG**


- **Category IEC / EN:** Class I, II / Type 1, 2 / B, C
- **Location of use:** Photovoltaic systems - PV module side
- **Protection modes:** (+) → PE, (-) → PE, (+) → (-)
- **Protective elements:** High energy MOV and GDT
- **Surge discharge rating:**  $I_{imp} = 12.5kA$
- **Safety:** Ground fault immunity
- **Leakage current:** NO leakage current (TCG)
- **Housing:** Compact design
- **Complies with:** EN 50539-11, UL 1449 3rd Ed.


**Technical data**

Type		SAFETEC B(R) 12.5/xxxx Y PV TCG			
		600	1000	1200	1500
<b>Electrical characteristics</b>					
Max. continuous operating voltage (DC)	$U_{CPV}^*$	600V	1000V	1200V	1500V
Nominal discharge current (8/20)	$I_n (+) \rightarrow PE / (-) \rightarrow PE / (+) \rightarrow (-)$	12.5kA			
Max. discharge current (8/20)	$I_{max} (+) \rightarrow PE / (-) \rightarrow PE / (+) \rightarrow (-)$	40kA			
Impulse current (10/350)	$I_{imp} (+) \rightarrow PE / (-) \rightarrow PE / (+) \rightarrow (-)$	12.5kA			
Short circuit withstand	$I_{SCPV}$	1000A			
Specific energy		39kJ/Ω			
Charge		6.25As			
Protection level	$U_p$	< 1.8kV	< 3.0kV	< 3.6kV	< 4.2kV
Residual voltage at 5kA (8/20)	$U_{res}$	< 1.5kV	< 2.6kV	< 3.2kV	< 3.8kV
Follow current	$I_{fi}$	NO			
Residual current	$I_{PE}$	NO			
Response time	$t_A$	< 25ns			
Thermal protection		YES			
Ground fault immunity (DC)		1200V	2000V	2400V	3000V
<b>Mechanical characteristics</b>					
Temperature range		- 40°C ... + 80°C			
Terminal screw torque		max. 3.0Nm			
Terminal cross section		35mm <sup>2</sup> (solid) / 25mm <sup>2</sup> (stranded)			
Mounting		35mm DIN rail, EN 60715			
Degree of protection		IP 20			
Housing material		Thermoplastic; extinguishing degree UL 94 V-0			
Indication of disconnector operation		red flag			
Remote contacts (RC)		YES			
Contact ratings		AC: 250V/0.5A; 125V/3A			
Terminal cross section		max. 1.5mm <sup>2</sup>			
Remote terminal torque		0.25Nm			

\*  $U_{CPV} \geq 1.2 \cdot U_{OCSTC}$  → open circuit voltage under standard test condition

**Ordering informations**

$U_{CPV}$	600	1000	1200	1500
Ordering code SAFETEC B 12.5/xxxx Y PV TCG	54.0100	54.0104	54.0106	54.0108
Ordering code SAFETEC BR 12.5/xxxx Y PV TCG (with remote contacts)	54.0101	54.0105	54.0107	54.0109

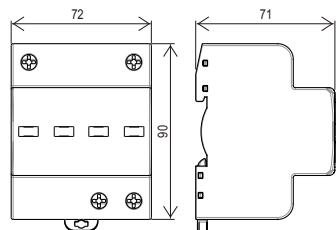
TC solution available on request



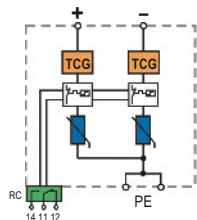
Dimensions, Internal configuration, Weight, Packaging, Connections

SAFETEC B(R) 12.5/xxxx PV TCG

Dimensions



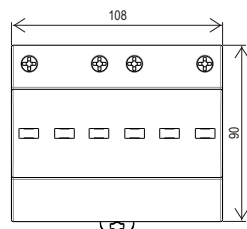
Internal configuration



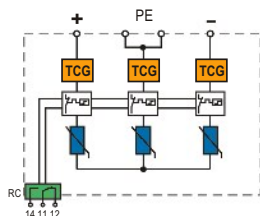
SAFETEC B 12.5/xxxx PV TCG	300	600	1000
Dimensions DIN 43880		4TE	
Weight per unit	440g	460g	800g
SAFETEC BR 12.5/xxxx PV TCG	300	600	1000
Dimensions DIN 43880		4TE	
Weight per unit	445g	465g	805g
Packaging dimensions (single unit)	109 x 76.5 x 78mm		
Min. Packaging quantity	3 pcs.		

SAFETEC B(R) 12.5/xxxx Y PV TCG

Dimensions

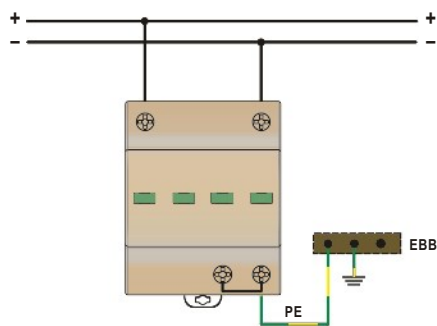


Internal configuration



SAFETEC B 12.5/xxxx Y PV TCG	600	1000	1200	1500
Dimensions DIN 43880		6TE		
Weight per unit	590g	630g	1100g	1160g
SAFETEC BR 12.5/xxxx Y PV TCG	600	1000	1200	1500
Dimensions DIN 43880		6TE		
Weight per unit	600g	640g	1110g	1170g
Packaging dimensions (single unit)	109 x 110 x 78mm			
Min. Packaging quantity	2 pcs.			

SAFETEC B(R) 12.5/xxxx PV TCG



SAFETEC B(R) 12.5/xxxx Y PV TCG

