

Item no. 10016616

DC generator connection box | GAK-S-1500-12S(x2)xx-T315-BC-US-PES-1.0

enwitec electronic Ltd  
 Scherrwies 2 | 84329 Wurmanssquick  
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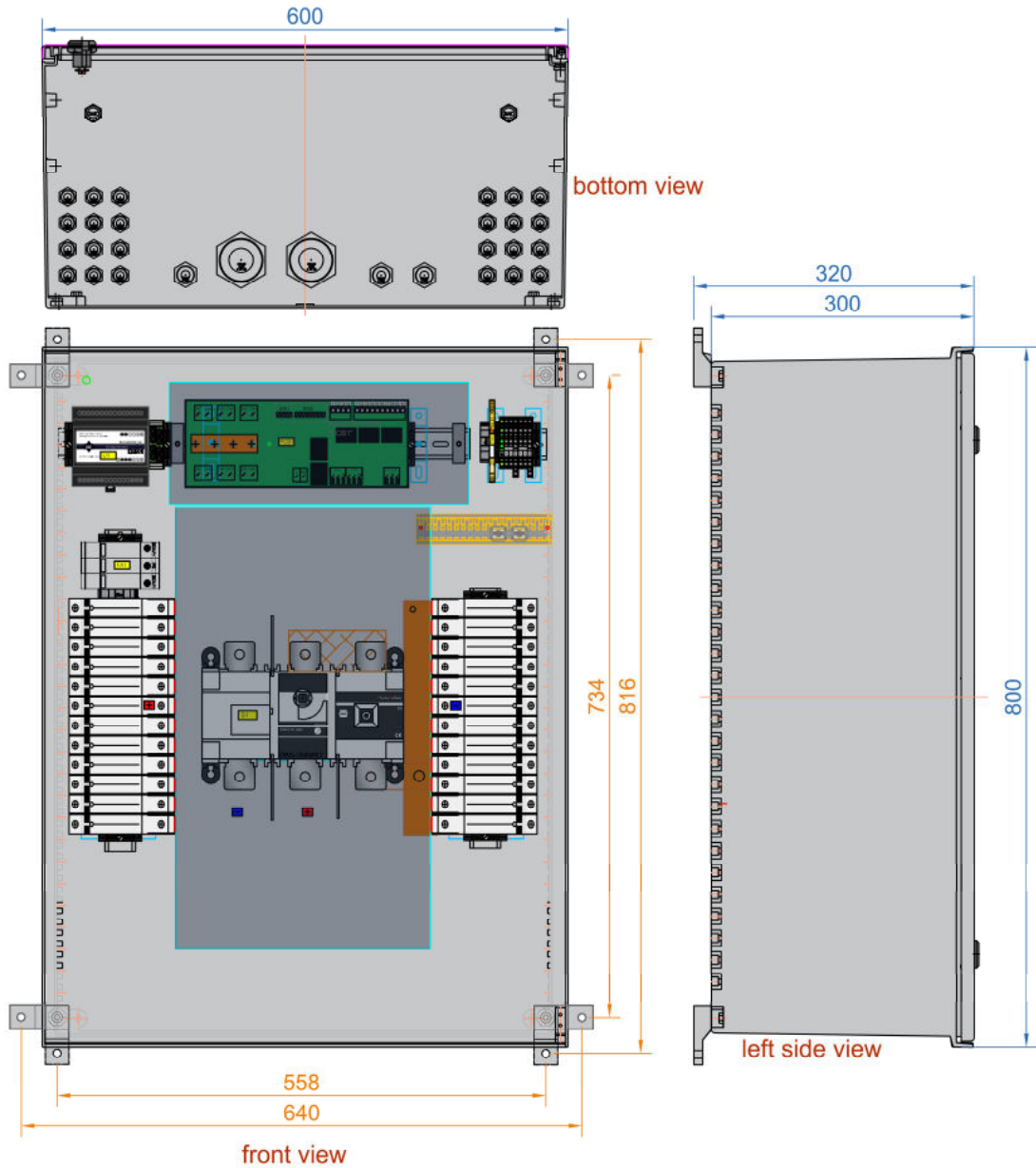
All values are in [mm]

Dimensions „blue“  
 Mounting points „orange“

The internal layout and components may vary depending on the model.

**Minimum distances**

above	200
below	200
sideways	100
front	800



## SCOPE OF DELIVERY

Number	Name	Number	Name
1	Installation instructions for GAK Standard	2	Pressure equalisation element M12, incl. lock nut
1	Wall mounting bracket set	1	Membrane inlet EMT 20
2	Cable gland M50, incl. lock nut	1	Handle for load-break switch
3	Cable gland M20, incl. lock nut	1	Circuit diagram
24	Cable gland M16, incl. lock nut		

Status: (a)

10016616-GB\_DAT\_GAK-S-1500-12S(x2)xx-T315-BC-US-PES-1.0 (a)

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## TECHNICAL SPECIFICATIONS

### NOMINAL VALUES

• applicable / - not applicable

Rated insulation voltage $U_{i1}$	[VDC]	1500
Rated operating voltage $U_{e1}$	[VDC]	1500
Rated current $I_{nA} (= \sum I_{SC\,STC})$	[ADC]	240
Rated current* $I_{SC\,MAX} (= \sum I_{SC\,STC} \times 1.25)$	[ADC]	300
Number of independent MPP inputs		1
Max. number of PV strings IN/OUT		12/1
Inputs/outputs connected in parallel per MPP		12/-

### PER STRAND

Rated current $I_{nc} (I_{SC\,STC})$	[ADC]	20
Rated current* $I_{SC\,MAX} (I_{SC\,STC} \times 1.25)$	[ADC]	25
Fuse in the '+' terminal	•/-	•
Fuse in the '-' terminal	•/-	•
Fuse holder	[mm]	10 x 85
Fuse fitted on delivery	•/-	-

### SURGE PROTECTOR

Test class in accordance with EN 61643-11 (type)		I+II
Maximum permissible continuous voltage $U_{cpv}$	[VDC]	1500
For Type 1: surge current, max. $I_{imp}$ 10/350	[N/A]	5
<u>Surge protection for communication systems</u>		
Test class in accordance with EN 61643-11 (type)		II/P1
Maximum permissible continuous voltage $U_{cpv}$	[VDC]	8,5
For Type 1: surge current, max. $I_{imp}$ 10/350	[N/A]	-

### LOAD BREAK SWITCH

Thermal flow $I_{th}$ at 60°C	[A]	315
Application category in accordance with DIN EN 60947-3		DC-21B
Manufacturer and model number		Socomec SIRCO PV 315A 26PV3030

\* The design current  $I_{SC\,MAX}$  as defined in VDE 0100-712:2016-10, includes a factor of 1.25 for  $I_{the\,SC\,STC}$  of the PV module or PV string.

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**INPUT (TO THE PV GENERATOR)** • applicable / - not applicable

<u>Cable entries</u>		
Screw connections (EN 62444)		M16
Clamping range (from – to)	[Ømm]	4,5 - 10
<u>Connections</u>		
Connection type		Screw terminal
Stripping length	[mm]	12
Tightening torque	[Nm]	2,5
<u>Conductor cross-section (from – to)</u>		
Fine-stranded copper with ferrule	[mm <sup>2</sup> ]	2,5 - 25
Fine-stranded copper	[mm <sup>2</sup> ]	-
Single-strand or multi-strand copper	[mm <sup>2</sup> ]	-

**OUTPUT (TO THE PV INVERTER)**

<u>Cable entries</u>		
Screw connections (EN 62444)		M50
Clamping range (from – to)	[Ømm]	21 - 35
<u>Connections</u>		
Connection type		Cable lug M10 <sup>#</sup>
Stripping length	[mm]	-
Tightening torque	[Nm]	26
<u>Conductor cross-section (from – to)</u>		
Fine-stranded copper with ferrule	[mm <sup>2</sup> ]	-
Fine-stranded copper	[mm <sup>2</sup> ]	-
Single-strand or multi-strand copper	[mm <sup>2</sup> ]	max. 185

<sup>#</sup> Bimetallic cable lugs must be used with aluminium conductors! When connecting aluminium conductors, the standard industry guidelines must be followed! The contact surfaces of the aluminium conductors must be cleaned, brushed and treated with a suitable grease.

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**EARTH CONNECTION** • applicable / - not applicable

Cable entries		
Screw connections (EN 62444)		M20
Clamping range (from – to)	[Ømm]	7 - 13
<u>Connections</u>		
Connection type		Screw terminal
Stripping length	[mm]	19
Tightening torque	[Nm]	2,5
<u>Conductor cross-section (from – to)</u>		
Fine-stranded copper with ferrule	[mm <sup>2</sup> ]	1,5 - 16
Fine-stranded copper	[mm <sup>2</sup> ]	-
Single-strand or multi-strand copper	[mm <sup>2</sup> ]	2,5 - 25

**COMMUNICATION AND MONITORING**

Channels/Channels in use		12/12
Single-strand monitoring		12
Circuit board		Kernel String Monitoring Board 1225
Communication protocol		Modbus RS485
Power supply board		self-powered (including DC/DC converter)
<u>Cable entries</u>		
Screw connections (EN 62444)		M20
Clamping range (from – to)	[Ømm]	7 - 13
<u>Connections</u>		
Connection type		spring-loaded terminal
Stripping length	[mm]	10 - 12
<u>Conductor cross-section (from – to)</u>		
Fine-stranded copper with ferrule	[mm <sup>2</sup> ]	0,25 - 2,5
Fine-stranded copper	[mm <sup>2</sup> ]	0,25 - 4
Single-strand or multi-strand copper	[mm <sup>2</sup> ]	0,25 - 4

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## TECHNICAL SPECIFICATIONS

GENERAL		• applicable / - not applicable
Dimensions WxHxD (excluding fasteners)	[mm]	600 x 800 x 300
Weight, approx.	[kg]	26
Operating temperature range	[°C]	-25...+35
Temperature – Transport/storage s (24 hours at 70°C)	[°C]	-25...+35
Humidity – condensation permitted	•/-	•
Humidity – permissible range	[%]	5...95
Max. installation height above sea level	[m]	2000
IP rating (EN 60529)		65
Suitable for outdoor use (in a sheltered area)	•/-	•
Protection class (EN 61140)		II
Housing material		polyester
RoHS-compliant (2011/65/EU)	•/-	•
Case colour		RAL 7035
Lid		Hinged door
Installation method		Wall mounting
Type of fastening		Double-bar fastening
MISCELLANEOUS		
Tariff code		85372091

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## EU DECLARATION OF CONFORMITY

The product,	Description:	<b>GAK-S-1500-12S(x2)xx-T315-BC-US-PES-1.0</b>
	Item number:	<b>10016616</b>
	Manufacturer:	<b>enwitec electronic Ltd Scherrwies 2 84329 Rogglfing</b>
	Description:	<b>Generator connection box</b>

The product to which this declaration relates complies with the following standards or normative documents:

<b>EN 61439-1</b>	<b>Low-voltage switchgear assemblies</b>
<b>EN 61439-2</b>	<b>Power switchgear assemblies</b>
<b>IEC 60364-7-712</b>	<b>PV power supply systems</b>
<b>EN 62305-3 Amendment 5</b>	<b>Lightning and surge protection for PV power supply systems</b>

and complies with the provisions of the following EC Directive(s):

**Low Voltage Directive 2014/35/EU**  
**Restriction of Hazardous Substances Directive 2011/65/EU (RoHS)**

Year in which the CE marking was affixed: **2021**

Date of issue: **21.10.2021**

enwitec electronic Ltd



Name / Signature

Johann Wimmer  
CEO