

Art.Nr. 10016181

SWITCHOVER BOX - Fronius SYMO GEN24 Plus - „Full Backup“ | 3PH\_FRO\_BBD3P\_20KW\_3PH\_FRT

enwitec electronic GmbH  
 Scherrwies 2 | 84329 Wurmansquick  
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Type designation	Switchover Box for Fronius SYMO GEN24 Plus - three-pole - Standard incl. FRT
Application	Fronius SYMO GEN24 Plus System „Full Backup“
Region	Austria
Battery inverter	Symo GEN24 6.0 Plus/8.0 Plus/10.0 Plus
Monitoring & control	Fronius Smart Meter TS65A-3 „Touchscreen“ is integrated
Grid structure	3PH 230/400 V - TN-S system, <b>NO TN-C</b> in customer's system! <b>NO TT</b> system

All values in [mm]

Dimensions

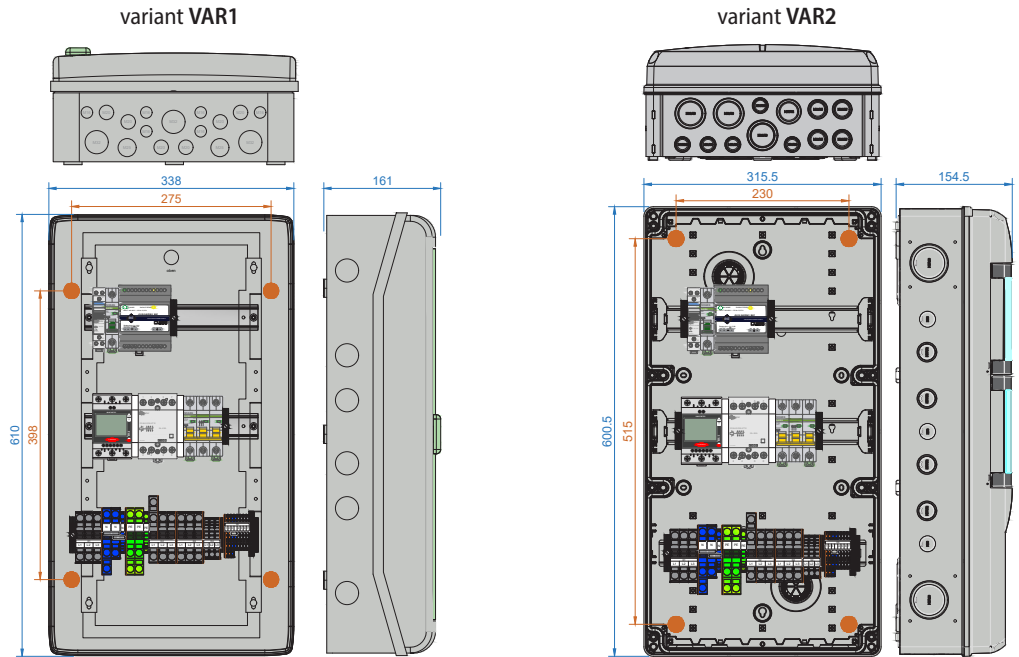
Fastening points

„blue“  
 „orange“

Inner construction as well as choice of components may differ within the variants!

Minimum distances

top	200
bottom	400
lateral	200
front	1200



## SCOPE OF DELIVERY

Quantity	Designation	Quantity	Designation
1	Switchover Box 10016181 - VAR1	1	Switchover Box 10016181 - VAR2
3	Cable gland M40 x 1,5	3	Cable gland M40 x 1,5
4	Cable gland M32 x 1,5	4	Cable gland M32 x 1,5
2	Cable gland M20 x 1,5	2	Cable gland M20 x 1,5
3	Enlargement adaptor from M32 to M40	-/-	-/-
1	Enlargement adaptor from M25 to M32	-/-	-/-
-/-	-/-	3	Locknut M40
3	Locknut M32	4	Locknut M32
1	Locknut M25	-/-	-/-
2	Locknut M20	2	Locknut M20
1	Set cover caps (grommets) for fastening screws	1	Set cover caps (grommets) for fastening screws
1	Set protective cover for Fronius Smart Meter	1	Set protective cover for Fronius Smart Meter
1	Warning label „dangerous voltage“	1	Warning label „dangerous voltage“
1	Fronius label „Backup power“	1	Fronius label „Backup power“
1	Operating instructions Fronius Smart Meter	1	Operating instructions Fronius Smart Meter
1	Installation instructions	1	Installation instructions

Status: May 2023

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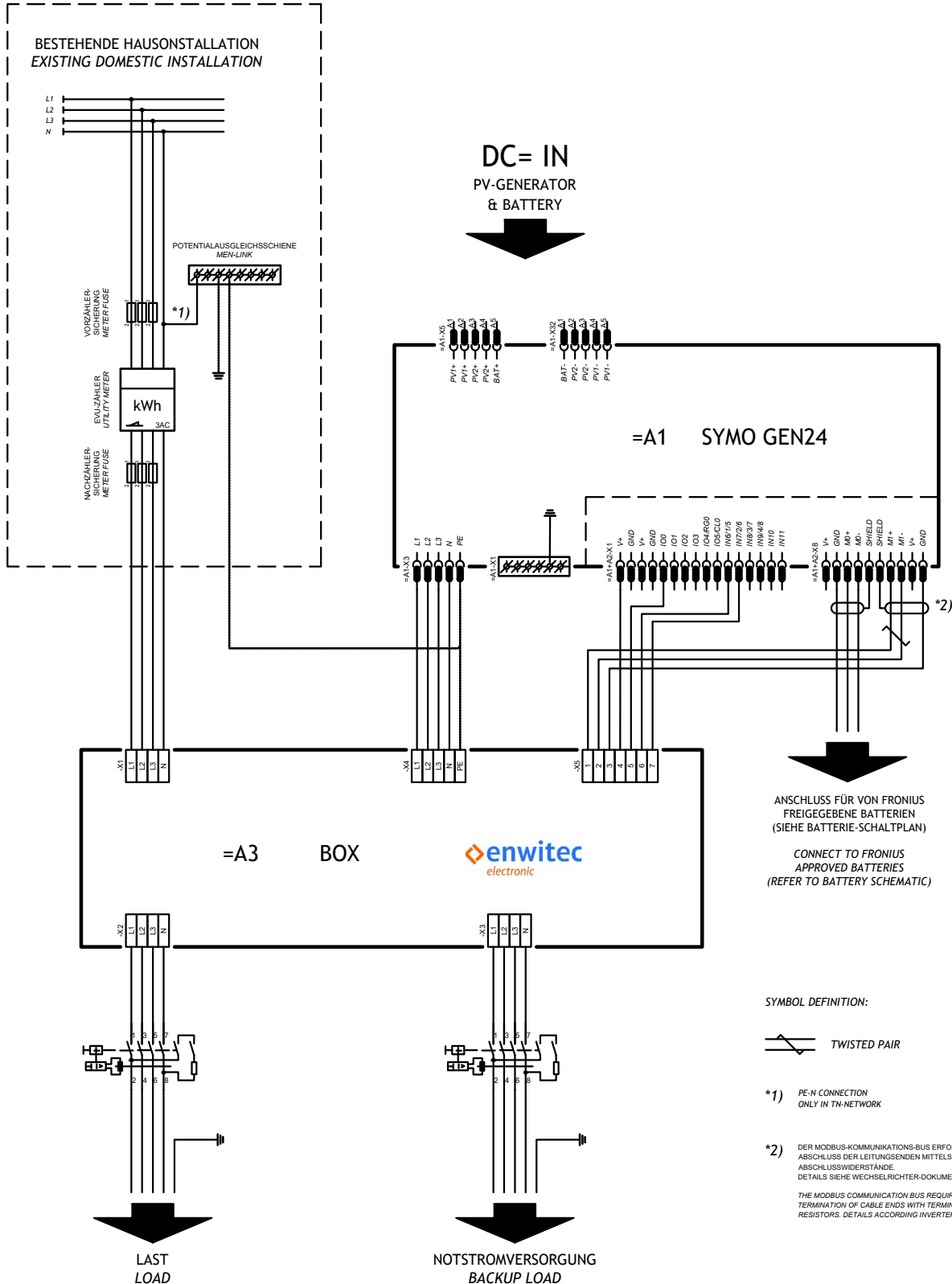
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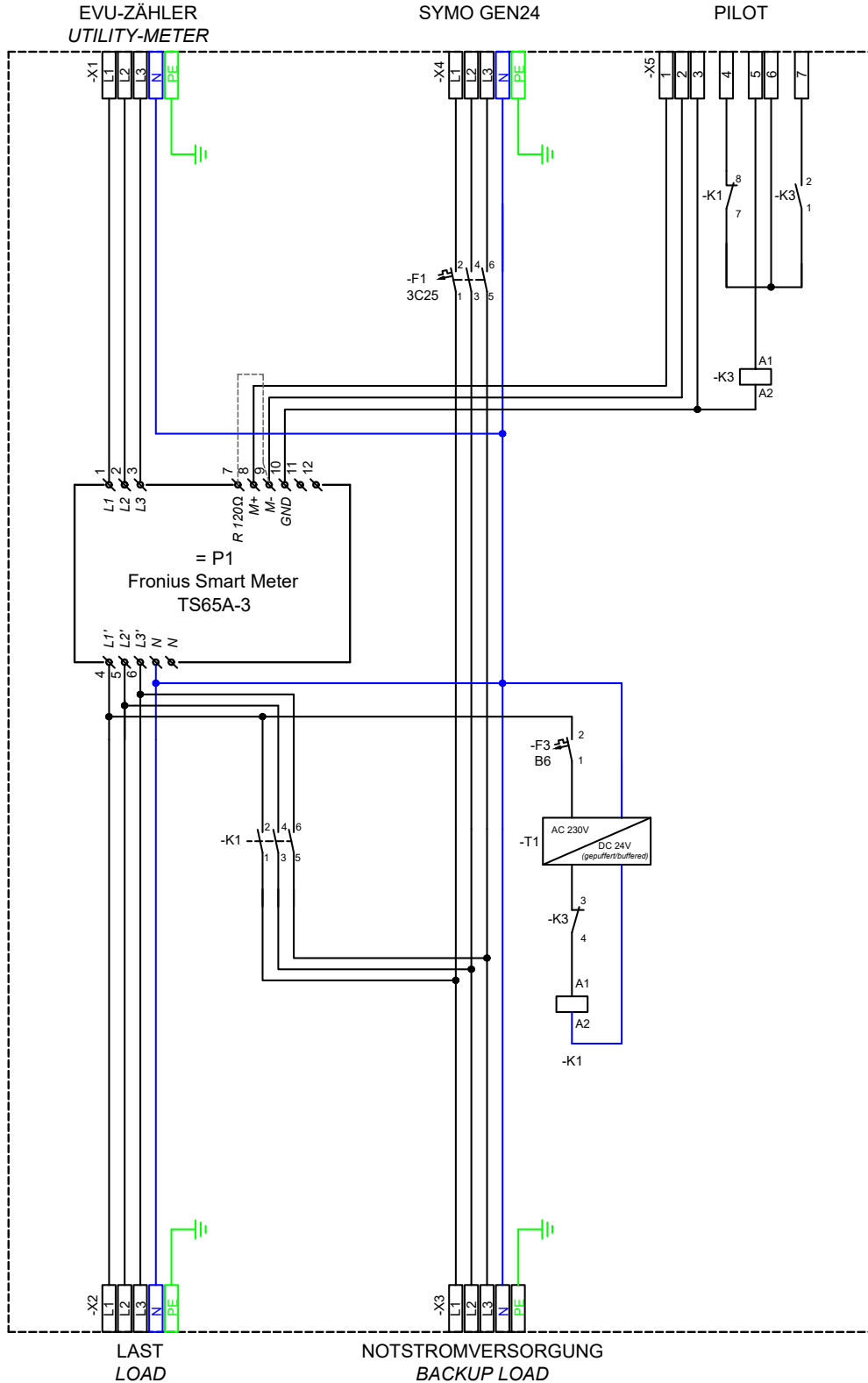
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INTERCONNECTION ENVIRONMENT - SYMO GEN24 PLUS



INTERNAL CIRCUITRY



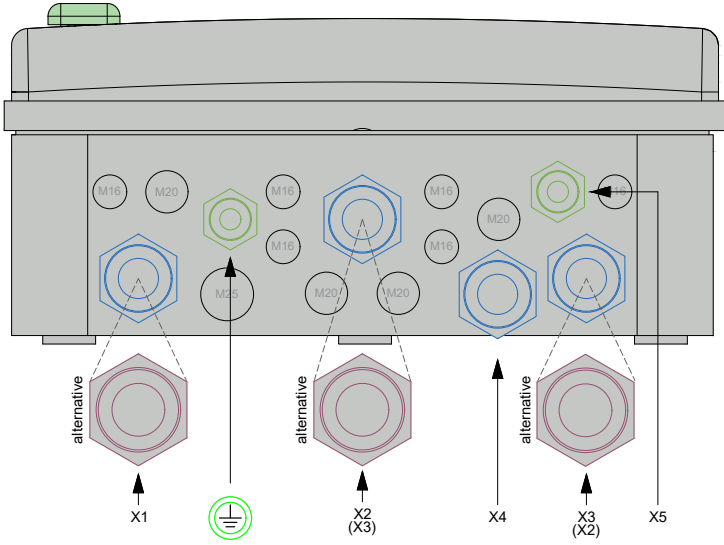
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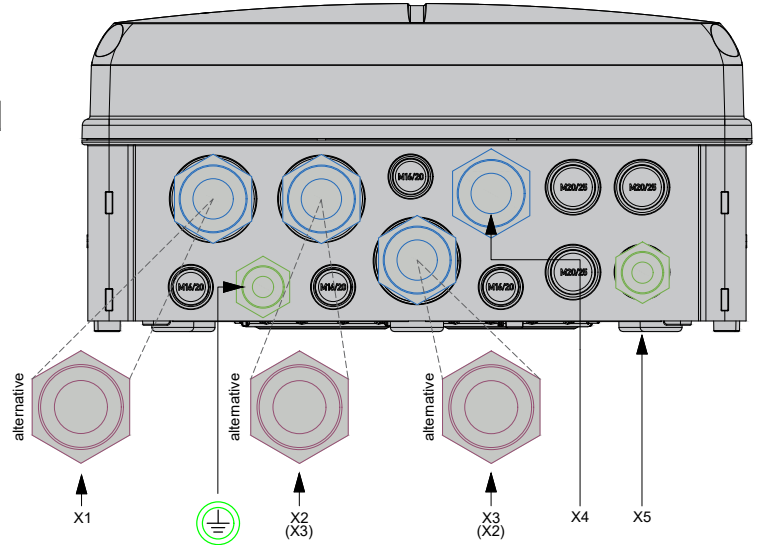
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## CABLE ENTRY

Enclosure variant VAR1



Enclosure variant VAR2



Cable gland	Terminal block	Clamping range [mm]	Wire type	Cross section [mm <sup>2</sup> ]	Stripping length [mm]
<div style="display: flex; gap: 5px;"> <div style="width: 15px; height: 15px; background-color: #0070C0; border: 1px solid black;"></div> M32  <div style="width: 15px; height: 15px; background-color: #800040; border: 1px solid black;"></div> M40                 </div>	X1 – Grid	19 - 25 16 - 28	solid /stranded fine stranded fine stranded + wire end ferrule	16 25 16	18 - 20
<div style="display: flex; gap: 5px;"> <div style="width: 15px; height: 15px; background-color: #0070C0; border: 1px solid black;"></div> M32  <div style="width: 15px; height: 15px; background-color: #800040; border: 1px solid black;"></div> M40                 </div>	X2 – Load „Standard“	19 - 25 16 - 28	solid /stranded fine stranded fine stranded + wire end ferrule	16 25 16	18 - 20
<div style="display: flex; gap: 5px;"> <div style="width: 15px; height: 15px; background-color: #0070C0; border: 1px solid black;"></div> M32  <div style="width: 15px; height: 15px; background-color: #800040; border: 1px solid black;"></div> M40                 </div>	X3 – Load „Backup“	19 - 25 16 - 28	solid /stranded fine stranded fine stranded + wire end ferrule	16 25 16	18 - 20
<div style="display: flex; gap: 5px;"> <div style="width: 15px; height: 15px; background-color: #0070C0; border: 1px solid black;"></div> M32                 </div>	X4 – Symo GEN24 Plus	19 - 25	solid /stranded fine stranded fine stranded + wire end ferrule	10 10 6	13 - 15
<div style="display: flex; gap: 5px;"> <div style="width: 15px; height: 15px; background-color: #70AD47; border: 1px solid black;"></div> M20                 </div>	X5 – Data cable	6 - 13	solid /stranded fine stranded fine stranded + wire end ferrule	2,5 2,5 1,5	10 - 12
<div style="display: flex; gap: 5px;"> <div style="width: 15px; height: 15px; background-color: #70AD47; border: 1px solid black;"></div> M20                 </div>	PE – equipotential bonding rail	6 - 13	solid /stranded fine stranded fine stranded + wire end ferrule	16 25 16	18 - 20

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## GENERAL DATA

NOMINAL VALUES			• applicable / - not applicable
Rated voltage		[V]	3PH - 230/400
Rated insulation voltage		[V]	400
Operating frequency		[Hz]	50/60 +/- 5%
Max. prospective* short circuit current		[kA]	10
Permitted grid structure			TN-S
Grid disconnection			three-pole
Max. grid-side pickup fuse (gL/gG)		[A]	63
Max. thermal throughput power	ta = 40°C ta = 25°C	[kW]	20 30#
Standby-loss, ca.		[W]	6

## CIRCUIT BREAKERS

F1	Symo GEN24 Plus	MCB [A]	3C25
F3	Power supply T1	MCB [A]	B6

## CONTACTORS (IEC/EN 61095; IEC/EN60947-1; IEC 60947-5-1)

K1	Grid disconnection	AC1 [A]	63
K3	Communication	AC1 [A]	20
K1	Control voltage	[VDC]	24
K3	Control voltage	[VDC]	12
Hum-free		•/-	•

## ENERGY METER

Manufacturer	Fronius
Type	TS65A-3

## FRT (Fault ride through) support

Buffered power supply	[VDC]	24
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\* Is the maximum, unaffected continuous short-circuit current of the mains connection.

# When operating the switchover box with 30KW max. thermal throughput power, the use of 2 x ventilation valves is required (diagonal air flow – positioning bottom left and top right e.g.; knockouts are available)  
 Protection class is being reduced to IP44.

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## TECNICAL DATA

GENERAL DATA			• zutreffend / - nicht zutreffend
Dimensions W x H x D VAR1 (without cable glands)		[mm]	338 x 610 x 161
Dimensions W x H x D VAR2 (without cable glands)		[mm]	315 x 600 x 155
Weight, ca.		[kg]	11
Operating temperature range t <sub>a</sub>		[°C]	-5...+40
Temperature - transport/storage (24 h. 70°C)		[°C]	-25...+55
Humidity - condensing allowed		•/-	-
Humidity - permitted range		[%]	5...95
Max. altitude above sea level N.N.		[m]	2000
Protection class IP (EN 60529)	ta = 40°C ta = 25°C	IP	65 44#
outdoor-application permitted		•/-	-
Installation type			indoor
Protection against electric shock (EN 61140)			II
Case material			polycarbonate
RoHS-conformity (2011/65/EU)		•/-	•
Case colour			similar RAL 7035
Cover			transparent
Mounting method			wall mounting
Locking system			without tool

### MISCELLANEOUS

Customs tariff number			85371098
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### ACCESSORY (not included in scope of delivery)

# Set of ventilation valves – order number			10017652 (enwitec)
Consisting of:			
2 x Ventilation valve – order number			036579 (LeGrand)
2 x Reduction adaptor			M40/M32
2 x Locknut			M40

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## EC DECLARATION OF CONFORMITY

The product, designation: **3PH\_FRO\_BBD3P\_20KW\_3PH\_FRT**

variants: **VAR1/VAR2**

article number: **10016181**

manufacturer: **enwitec electronic GmbH  
Scherrwies 2  
84329 Rogglfing**

description: **Switchover Box for Fronius system Symo GEN24 Plus - „Full Backup“**

to which this declaration relates, is in conformity to the following standards or normative documents:

EN 61439-1	Low-voltage switchgear and controlgear assemblies
EN 61439-2	Power switchgear and controlgear assemblies
EN 61439-3	Distribution boards intended to be operated by Ordinary persons (DBO)

and is in accordance with the provisions of the following EC-directives:

**Low-voltage directive 2014/35/EU**

**Restriction of Hazardous Substances Directive 2011/65/EU (RoHS)**

Year of affixing CE-marking: **2021**

Date of issue: **17.11.2020**

enwitec electronic GmbH



Name / Signature

Johann Wimmer  
CEO