BENNING

Data sheet

11.07.2018

Rectifier TEBECHOP 6000SE
D400 - 480 48V/125A

1	Device	
1.1	Product type	Rectifier
1.2	Product name	TEBECHOP 6000SE
1.3	Part-no	10118409
1.4	Type	D400-480 G48/125 BWru-PDT

2	Power input	
2.1	Rated input voltage	400 - 480V_{AC} 3-ph (340-530V_{AC})
2.2	Rated input current per line	9,7 – 8,2A at V_{nom} (12A max.)
2.3	Rated input frequency	47-63Hz
2.4	Input power factor	0,99 at full load
2.5	Efficiency	≥ 0,95 (input = 480V and output = 53,5V / 50% load)
2.6	Inrush current	< nominal
2.7	Internal input fuse	20A
2.8	Upstream mains fuse	Max. 63 A gl / or m.c.b. 63A B-characteristic
2.9	THD of current	Comply EN / IEC 61000-3-12 (Target: THD 5% @ 50% Load)

3	DC output	
3.1	Nominal voltage	48V
3.2	Nominal current	125A
3.3	Maximum current	125A @ = < 48 V_{DC}
3.4	Maximum Power	6000W
3.5	Boost charge voltage	57,6V (2,4V/Z)
3.6	Float charge voltage	53,52V (2,23V/Z)
3.7	Direct feed	48V
3.8	Battery test mode	43,2V (1,8V/Z)
3.9.1	Voltage adj. range	43,2 – 57,6V
3.9.2	Current / Power adj. range	10% - 100% @ output voltage range 43,2 – 57,6V
3.9.3	Power limited max. current	104 – 125A (57,6V – 48V)
3.10	Voltage regulation	± 1%
3.11	Characteristic	IPU
3.12	Ripple	< 1%SS (30MHz bandwidth) < 2mV Filter A CCITT 0.41
3.13	Dynamic load regulation	U_{output} = <5%, t= <50ms Load change: 90 – 10 – 90% di/dt: < 0,5A/µs
3.14	Short circuit	static current-limited 125A -0%+3% Output shut down after 4 Minutes @ output voltage below 40V (Attention! output fuse 220A)
3.15	Parallel operation	max. 24 modules, >24 modules only with bus converter Load sharing < ±5%, at >20% load
3.16	Insulation resistance	10 M Ohm

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4	**General data**	
4.1	Case protection	IP 20
4.2	Module dimension (H x W x D)	Body 80 x 131 x 380mm (3,15” x 5,16’’ x 15”) Faceplate 88 x 132mm (3,5” x 5,2”) Carrier with 4 module: 2 U in 600mm PSJ or UC Cabinet Depth with Carrier and Backplane 452mm (17,78”)
4.3	Cooling	Forced cooling, fan speed controlled
4.4	Operating temperature	Starting at -33°C – +75°C (-27,4°F – 167°F) Compliance with data: after heating -5°C – +75°C (23F – 167°F) Derating above 45°C (113°F) 2,5% load reduction per 1°C
4.5	Relative humidity	0 – 90% (non-condensing)
4.6	Storage temperature	-40°C – 85°C -40°F – 185°F
.7	Operation altitude	2000m over N.N 10% / per 2000m derating >2000m until 5000m over NN
4.8	Connection technology	Backplane (Hot – Plug)
4.9	Weight	< 6kg
4.10	Protection class	I by IEC950/ EN60950/ UL1950, galvanic separation between input and output
4.11	Noise level (1meter)	<55dB (A) Conditions: ambient temperature 30°C; nominal Mains; 53,5V / 112A
4.12	MTBF	>120.000 h, MIL-HDBK-217-F
4.13	Opt. indication (LED)	Mains applied: green on Rectifier fault: red on
4.14	External function	Remote on/off through external switch (option) Voltage and charger mode adjustment via RS485 (Sat-Bus)
4.15	Monitoring:	Mains Voltage: shut down at over and under voltage; self recovery Output voltage: over voltage shut down; recovery after : mains on off ; Bus command Temperature: warning and shut down; recovery after cooling

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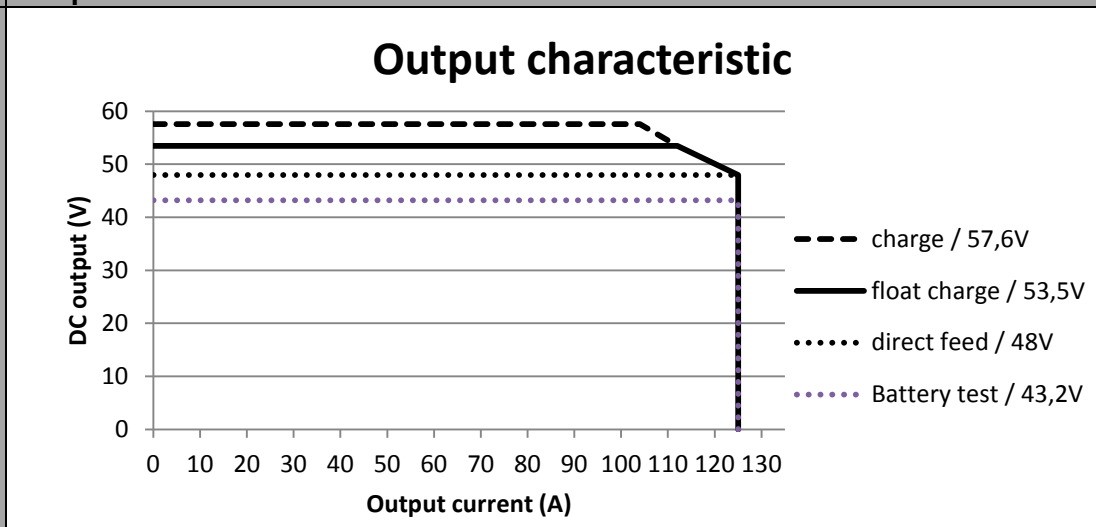
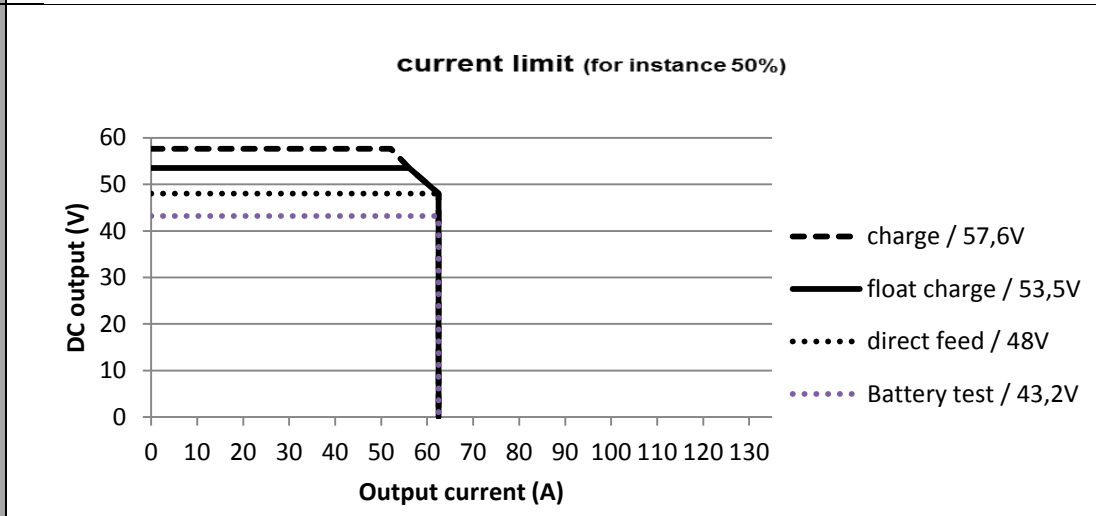
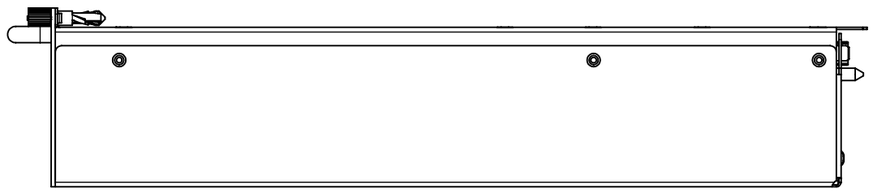
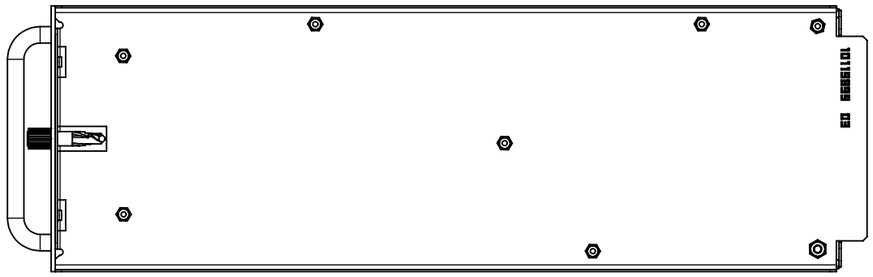
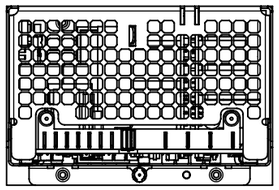
	Applicable Standards	
5.1	**Electrical safety**	**EN 60950-1 \ IEC 60950-1 \ UL 60950-1 \ CAN / CSA-C22.2 No 60950-1-07**
5.2.0	**EMC Emission (industrial)**	**EN 61000-6-4**
5.2.1	RFI	EN55022 class A
5.2.2	Voltage Flicker	EN 61000-3-11
5.2.3	Harmonic current	EN 61000-3-12
5.3.0	**EMC Immunity (industrial)**	**EN 61000-6-2**
5.3.1	Electrostatic discharge	EN 61000-4-2 ±4kV(contact dis.) ±8kV(air dis.)
5.3.2	Radiated electromagnetic-field	EN 61000-4-3 80MHz – 1,0GHz 10V/m 1,4GHz – 2,0GHz 3V/m 2,0GHz – 2,7GHz 1V/m
5.3.3	Fast Transient (Burst)	EN 61000-4-4 Mains and Output: ±4kV Signals: ±2kV
5.3.4	Surge	EN 61000-4-5 Mains: ±6kV asym. and sym. Output: ±1kV asym. and sym.
5.3.5	Conducted RFI disturbances	EN 61000-4-6 150kHz – 80MHz 10V
5.3.6	Voltage interruptions and dips	EN 61000-4-11
5.3.7	Ring wave	EN 61000-4-12 Mains: ±6kV
5.3.8	EMC	EN300386 V1.4.1
5.4.0	**Environment**	
5.4.1	Storage	ETS300019-1-1 class 1.3
5.4.2	Transport	ETS300019-1-2 class 2.3
5.4.3	Operation	ETS300019-1-4 class 4.1
		Design to pass NEBS Level 3
5.5.0	**Safety Report**	EN 60950-1 \ IEC 60950-1 \ UL 60950-1 \ CAN / CSA-C22.2 No 60950-1-07

Rectifier TEBECHOP 6000SE
D400 - 480 48V/125A

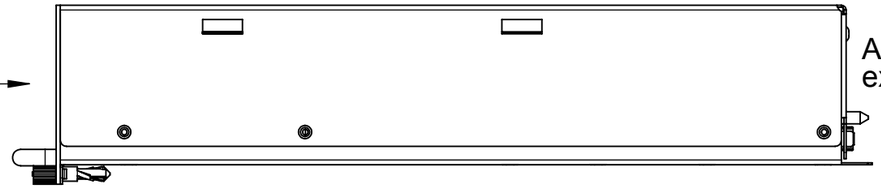
	Output characteristic
6.1	
6.2	



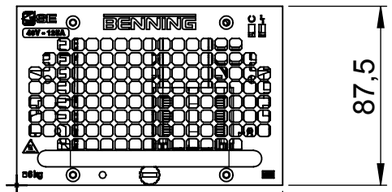


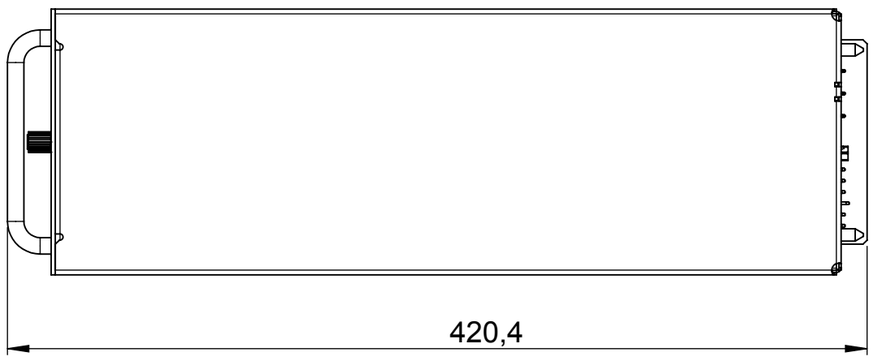


Zuluft
supply air



Abluft
exhaust air





Schutzvermerk nach ISO 16016 beachten

Rev	Modification	Date	Name	Erstellungsdatum / Date	Ersteller / Name
				Prüfdatum / Date	Prüfer / Name

BENNING

Maßbild
Dimension diagram
Tebechop TE 6000W SE

Massstab / Scale: 1:3

Zeichnung Nr. / Drawing No.: **10119898.00M0**

10119898 — Ers. f. / Replaces

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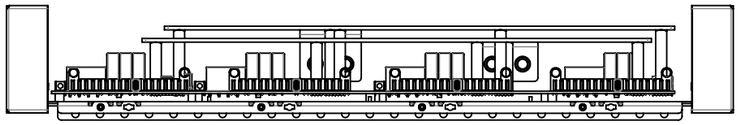
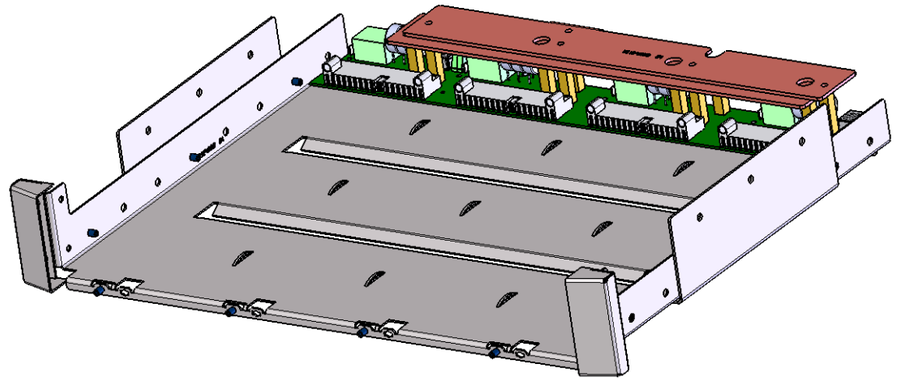
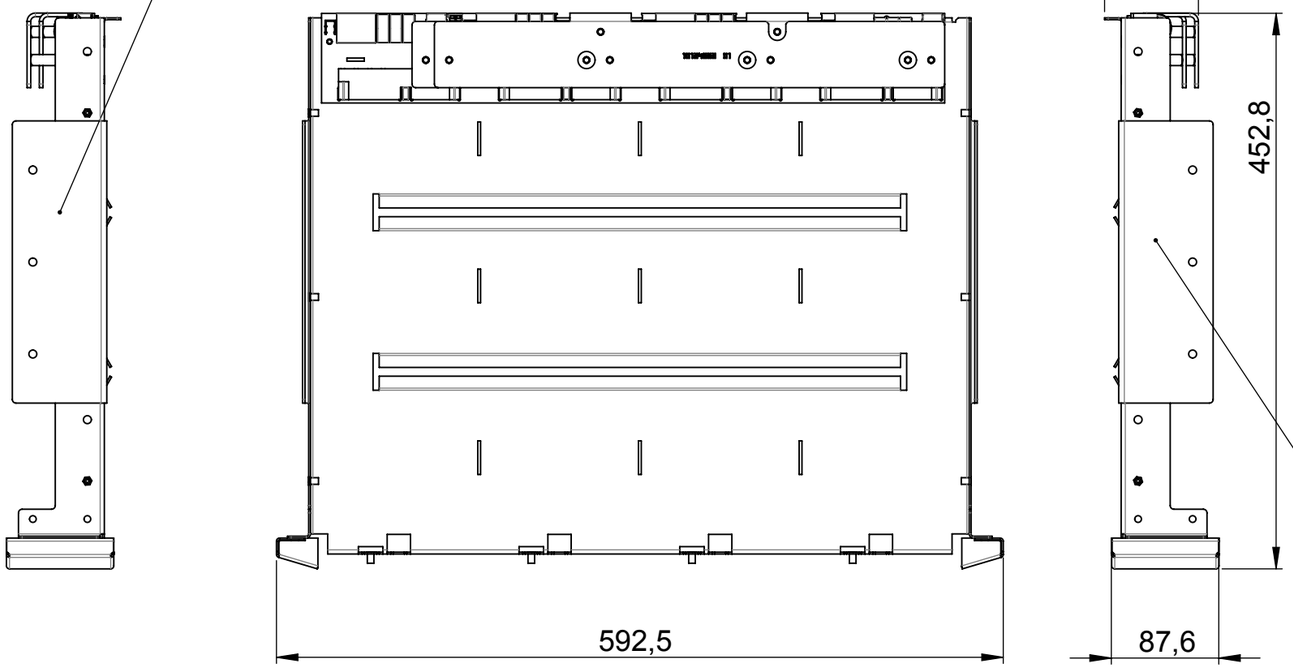
Schutzart / Protection mode: **IP20**

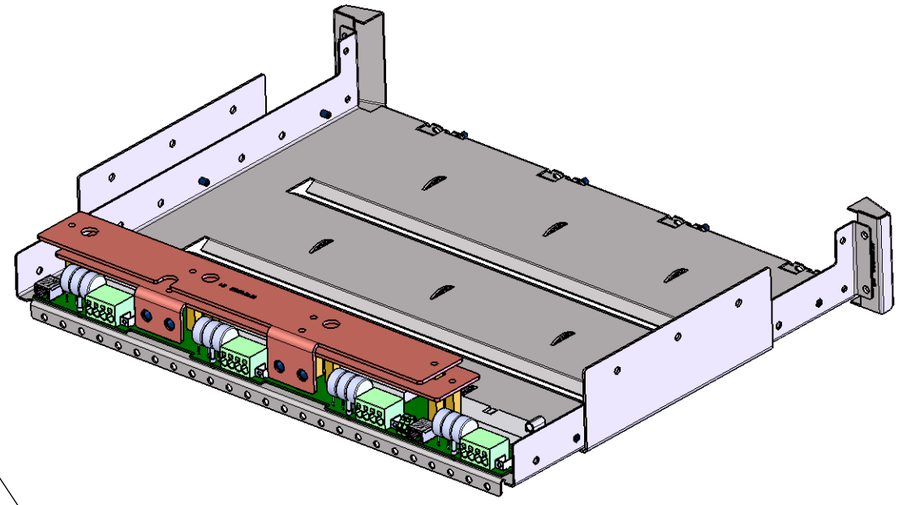
Blatt / Sheet: 1 of 1





Tragschiene
nicht befestigt
an Geräteträger, Zubehör
für Schrankmontage





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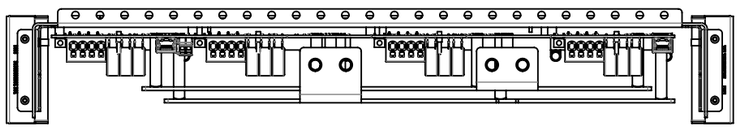

Schutzvermerk nach ISO 16016 beachten

Rev	Modification	Date	Name	Date	Name
				04.11.2015	FEIC
				04.11.2015	STACK

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Maßbild
Dimension diagram
Geräteträger TEBECHOP 6000SE

Massstab
Scale
1:5

Zeichnung Nr.
Drawing No.
10151342.00M0

10151342 — Ers. f. Replaces

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Schutzart
Protection mode **IP20**

Blatt Sheet
1 of 1