

# Rectifier Module

Type GR-5713 (1~) and GR-5701 (3~)



The modules can be used for direct supply or as a float charge rectifier an unlimited number of units can be connected in parallel. The rectifiers are of the newest state of the art, in switched-primary construction. The current into the intermediate circuit filter is limited at switch-on, so that the AC inrush current does not exceed 120% of the rated current.

The operation status of each unit is displayed with LED's. Test sockets are available for current and voltage measurements. The modules are provided with 3-4 voltage characteristics for charging. The connection is made at the front of the unit. The modules are protected by external fuses.

## Specials features

- High efficiency
- Compact design
- Easy accessible connection
- In wide range without fans
- Noise < 1 mV (24 V), < 2 mV (48/60 V)
- Option: Temperature controlled charging voltage

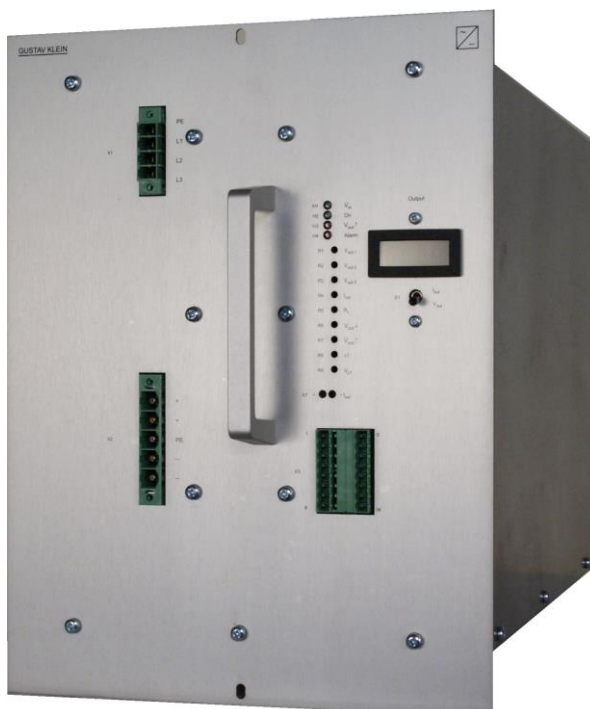
## High test voltages

According to German Railway standard

Input – Output: 5,3 kV rms

Output – Ground: 2,8 kV rms

Output – Ground: 2,8 kV rms



## Technical Data

AC input voltage:	V	see table
Frequency:	Hz	45 – 63
Power factor cos phi:		> 0.95 (10 – 100 % load)
Crestfactor:		< 1.6
<b>DC output</b>		
Voltage characteristics:	V / Z	2.0 / 2.23 / 2.4 (adjustable)
Regulation of output voltage:	%	± 1
Regulation time:	msec	10
Output voltage tolerance at load change 10-100-10 %:	%	< 2
Current limiting threshold:		at nominal current
Charging characteristic:		IU according to DIN 41772
Ripple of output voltage:	%	≤ 1 rms.
Noise voltage:		≤ 1 mV (24 V); ≤ 2 mV (48/60 V) Weighted with a (CCITT-A-filter)
EMC:		EN 61000-6-2 and EN 61000-6-4
Protection class:		IP 20 according EN 60529 for cabinet mounting
Permissible climate:		Indoor, 3K3 according to EN 60721 (max. 85% rel. humidity, no condensation)
Ambient temperature:	°C	-5 ... + 40

### Standard types 1)

Input voltage V	Output voltage V	Output current A	Efficiency %	Dimensions			Cooling 1)	Weight kg		
				width	height	depth				
230	24	10	> 85%	80	x	219	x	282	AN	0,9
230	24	25	> 85%	88	x	304	x	352	AN	3,8
3x 400	24	50	> 89%	132	x	355	x	440	AN	9,4
3x 400	24	100	> 88%	150	x	449	x	303	AN	14
230	48/60	5	> 88%	80	x	219	x	282	AN	0,9
230	48/60	10	> 87%	88	x	304	x	352	AN	3,8
230	48/60	25	> 89%	132	x	355	x	442	AN	7,4
3x 400	48/60	25	> 90%	110	x	304	x	382	AN	6,3
3x 400	48/60	50	> 91%	132	x	355	x	440	AF / AN	9,4 / 16
3x 400	48/60	110	> 90%	267	x	355	x	440	AF	20
230	48/60	125	> 88%	483	x	265,9	x	444 (6HE)	AF	33
3x 400	110	12,5	> 92%	110	x	304	x	382	AN	6,3
3x 400	110	30	> 92%	132	x	355	x	440	AF / AN	9,4 / 16
3x 400	110	60	> 92%	267	x	355	x	440	AF	20
3x 400	110	100	≥ 93%	483	x	310,3	x	440 (7HE)	AF	48
3x 400	140	75	≥ 93%	483	x	310,3	x	440 (7HE)	AF	48
3x 400	220	30	> 93%	267	x	355	x	440	AF	20
230	110/220	35	> 91%	483	x	265,9	x	440 (6HE)	AF	33
3x 400	220	50	> 93%	483	x	265,9	x	440 (6HE)	AF	48
230	375	35	> 96%	483	x	265,9	x	440 (6HE)	AF	32

<sup>1)</sup> Other versions on demand

<sup>2)</sup> „AN“ natural convection; „AF“ forced air cooling (fan)

Subject to change without notice (tech)

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### GUSTAV KLEIN GMBH & CO. KG

D-86956 Schongau, Im Forchet 3  
D-86952 Schongau, Postfach 1248  
Tel. +49(0)8861/209-0  
Fax +49(0)8861/209-180  
E-Mail: [vertrieb@gustav-klein.com](mailto:vertrieb@gustav-klein.com)  
[www.gustav-klein.com](http://www.gustav-klein.com)

A-6401 Inzing/Tirol, Schießstand 2  
Tel. +43(0)5238/54209-0  
Fax +43(0)5238/54209-23  
E-Mail: [vertrieb@gustav-klein.com](mailto:vertrieb@gustav-klein.com)  
[www.gustav-klein.com](http://www.gustav-klein.com)

