

Summary of Siemens Power and special Purpose Tubes

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This brochure provides a survey of the current range of Siemens & Halske power and special purpose tubes. The most important technical data for each tube is included.

For circuit design precise technical data in the form of data sheets and technical application information is available on request.

A list of addresses of Siemens & Halske world wide sales organizations and representatives to whom all enquiries should be sent, may be found on the last few pages of this brochure. Our technical staff is available for consultation where particular problems may arise from applications of tubes contained in this brochure.

SIEMENS & HALSKE AKTIENGESELLSCHAFT

WERNERWERK FÜR BAUELEMENTE

Werk für Röhren

München (Western Germany)

Power Grid Tubes

Type
Overall length max.
Diameter max.

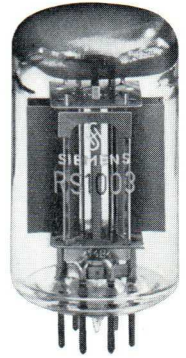
RS 1029
6360
78,4 mm
22,2 mm



RS 1009
5894
106 mm
46 mm

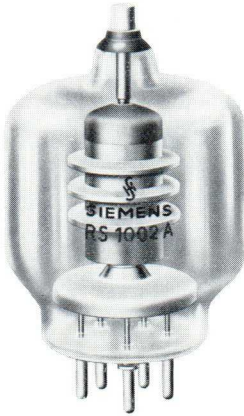


RS 1003
105,5 mm
51 mm



Type
Overall length max.
Diameter max.

RS 1002 A
7527
156 mm
90 mm



RS 1091
276 mm
192 mm



Radiation cooled Power Grid Tubes

Type	Design and Application	Heating		Typical Operation RF-Amplifier				Remarks
		E_f V	I_f A	f Mc	E_b kV	P_o W	P_i W	
RS 1002 A 7527	Tetrode, especially for VHF-Transmitters	5	14,1	110	4	800	2	
RS 1003	Pentode for communication	6,3	2,3	100	0,8	105	1	
RS 1006 B 5866 A	Triode for communication and electromedical applications	6,3	5,8	150	2,5	390	14	

Radiation cooled Power Grid Tubes

Type	Design and Application	Heating		Typical Operation RF-Amplifier				Remarks
		E_f V	I_f A	f Mc	E_b kV	P_o W	P_i W	
RS 1007 6155	Tetrode for communication and electromedical applications	5	6,5	120	3	375	2	
RS 1009 5894	Twin Tetrode for VHF, UHF and TV-Transmitters	6,3 12,6	1,8 0,9	500	0,6	60	—	*
RS 1016 5868	Triode for communication and industrial RF applications	10	9,9	100	4	1690	60	
RS 1019 6252	Twin Tetrode for communications	6,3 12,6	1,3 0,65	600	0,4	20	—	*
RS 1026 5867 A	Triode for communication and electromedical applications	5	14	100	4	1200	46	
RS 1029 6360	Twin tetrode for communications	6,3 12,6	0,82 0,41	200	0,3	14,5	0,1	*
RS 1036	Triode for industrial RF-applications	5	32,5	50	6	1640	—	as oscillator
RS 1046 7092	Triode for industrial RF-applications	6,3	32,5	50	6	2840	—	as oscillator
RS 1091	Triode especially for industrial generators	6,3	50	50	6	4500	130	as oscillator
YL 1000	Quick Heating 8-W Pentode for Mobile Applications	1,1	1,05	50 175	0,3 0,3	8 3,3	—	
YL 1020 8118	Quick Heating 45-W Double-Tetrode for Mobile VHF-Transmitters	1,6	4,25	200 460	0,6 0,4	45 21	1,5 5	*
YL 1060 7854	150-W Double-Tetrode for VHF-Transmitters	6,3 12,6	1,8 0,9	175	1	146	3,5	*
YL 1070 8117	150-W Double-Tetrodes for SSB-Transmitters	6,3 12,6	1,8 0,9	7	1	141	0	Amplifier at SSB
YL 1071 8116		26,5 13,25	0,43 0,86					Both systems in parallel
YL 1080 8348	12-W Quick Heating Double-Tetrode for Mobile VHF-Transmitters	1,6	2,5	200	0,3	12	1	*
YL 1130 8408	15-W Quick Heating Double-Tetrode for Mobile VHF-Transmitters	1,1	3,1	200 500	0,275 0,175	15 8	0,7 1,5	*
YL 1210 8457	14,5-W Double-Tetrode for Mobile VHF-Transmitters	6,75 13,5	0,72 0,36	200	0,3	14,5	0,1	*
YL 1220	5-W Double-Tetrode for Mobile VHF-Transmitters	6,75 13,5	0,76 0,38	500	0,18	5,8	1,2	*
YL 1240 8458	30-W Double-Tetrode for Mobile VHF-Transmitters	6,75 13,5	0,76 0,38	200	0,4	20	1	*
YL 1250 8505	50-W Beam-Tetrode for Transmitters at frequencies up to 250 Mc	6,75 13,5	1,2 0,6	75 175	0,55 0,4	52 38	0,5 1,5	
6146 QE 05/40	50-W Beam-Tetrode for RF-, AF-Power Amplifier and Oscillator	6,3 26,5 12,6	1,25 0,3 0,62	60 175	0,6 0,32	52 25	0,2 3	
6883 QE 05/40F								
6159 QE 05/40H								
6939 QQE 02/5	5-W Double-Tetrode for Mobile VHF-Transmitters	6,3 12,6	0,6 0,3	500	0,18	5,8	1,2	*
7377 QQE 04/5	7-W Double-Tetrode	6,3 12,6	0,6 0,3	960	0,25	7	1,4	*
8042 QC 05/35	65-W Quick-Heating Beam-Tetrode	1,6	3,2	60 175	0,6 0,4	65 35	0,3 3,0	

* both sections in push-pull

Power Grid Tubes



Type
Overall length max.
Diameter max.

RS 1032 C
180 mm
159 mm



RS 1082 CL
315 mm
220 mm



Type
Overall length max.
Diameter max.

RS 2041 V
660 mm
315 mm



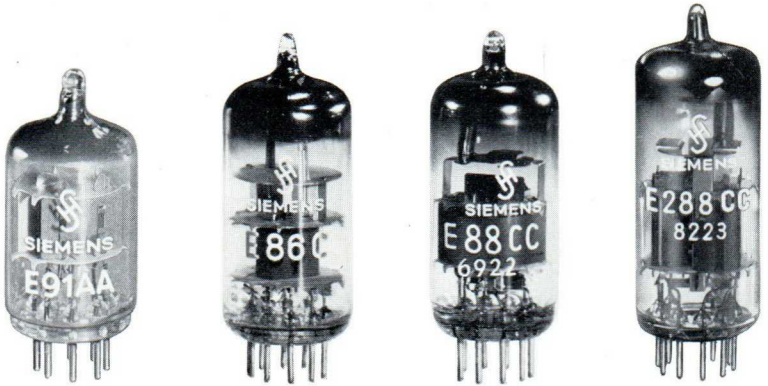
RS 1041 W
656 mm
218 mm

Air-, Water- and Evaporative cooled Power Grid Tubes

Type	Design and Application	Heating		Typical Operation RF-Amplifier				Remarks
		E_f V	I_f A	f Mc	E_b kV	P_o kW	P_i kW	
RS 1001 L RS 1001 W RS 1001 V	Triode for frequencies up to 100 Mc	5	150	100	6	11	0,6	Grounded grid
RS 1011 L RS 1011 W	Triode especially for VHF-Transmitters	10	75	220	4	12	1,3	Grounded grid Sync. level
RS 1012 L RS 1012 V	Tetrode especially for TV-Transmitters	5	62	220	4	5,5	0,5	Grounded grid Sync. level
RS 1021 L	Triode especially for TV-Transmitters	5	52	220	2,2	1,65	0,2	Grounded grid Sync. level
RS 1022 C	Tetrode in Metal-Ceramic Technique for frequencies up to 600 Mc	6	38	600	3,3	2,5	0,4	Grounded grid Sync. level
RS 1031 L RS 1031 W RS 1031 V	Triode for frequencies up to 70 Mc	10	130	30	12	70	1,2	
RS 1032 C	Tetrode in Metal-Ceramic Technique for frequencies up to 1000 Mc	4,1	130	790	5,0	10	0,8	Grounded grid Sync. level
RS 1041 W RS 1041 V	Triode for frequencies up to 30 Mc	18	280	10	15	360	5,5	
RS 1051	Air cooled Triode for frequencies up to 30 Mc	5,3	135	30	6	15	0,3	
RS 1052 C	Tetrode in Metal-Ceramic Technique for frequencies up to 1000 Mc	3,2	80	790	3,3	2,5	0,4	Grounded grid Sync. level
RS 1061 L RS 1061 W RS 1061 V	Triode especially for industrial RF-Generators	10	52	30	9	15	0,5	as Oscillator
RS 1062 C	7650 Forced air-cooled coaxially based Tetrode	6,3	7,85	790 30 790	2,5 2,5 1,4	0,59 0,68 0,055		Class C operation Amplifier at SSB AB1-TV Translator
RS 1071 L	Air cooled Triode, especially for TV-Transmitters	5	80	220	2,8	3,5	0,36	Grounded grid Sync. level
RS 1072 C	Forced air-cooled coaxially based 1100-Watts Tetrode in Ceramic Technique for frequencies up to 100 Mc	3,8	23	60	3	1,1	0	Amplifier at SSB
RS 1081 L RS 1081 W RS 1081 V	Triode especially for industrial RF-Generators	8	115	30	10	33	0,5	as Oscillator
RS 1082 CL RS 1082 CW RS 1082 CV	YL 1011 YL 1010 YL 1012 Tetrode in Metal-Ceramic Technique suitable for SSB Transmitters	10	200	30	8	30	0	as linear Power Amplifier at SSB
RS 2001 W RS 2001 K	YL 1030 YL 1032 Triode for frequencies up to 30 Mc	18	164	10	14	200	4,0	
RS 2002 W RS 2002 V	YL 1090 YL 1091 High power transmitting Tetrode	22	350	30	9	120	0	SSB single tone
RS 2011 L RS 2011 W RS 2011 V	Triode for frequencies up to 70 Mc	10	70	30	6	6	0,26	Plate voltage modulation
RS 2021 L RS 2021 W RS 2021 V	YL 1001 YL 1000 YL 1002 Triode for frequencies up to 60 Mc	12,6	160	30	12	90	1,9	
RS 2031 W RS 2031 V	YL 1090 YL 1092 Triode especially for Modulators	18	166	—	11	240	2x0,6	AF-Power Amplifier 2 Tubes in push-pull
RS 2041 W RS 2041 V	Triode for frequencies up to 30 Mc	22	400	10	12	380	10	Plate voltage modulation
RS 2051 W RS 2051 V	Triode especially for Modulators	18	260	—	11	420	1	AF-Power Amplifier 2 Tubes in push-pull
YL 1040	Forced air cooled Disc-Seal Tetrode for frequencies up to 3000 Mc	6,3	2,5	900	1	0,030	0	Grounded grid SSB single tone
YL 1050	Forced air cooled Tetrode in Ceramic Technique for frequencies up to 1250 Mc	4	23	600	2,5	1	0,08	

L air cooling W water cooling C air-cooled in Metal-Ceramic Technique
V resp. K evaporative cooling

Special Quality Tubes



Type	E 91 AA/5726	E 86 C	E 88 CC/6922	E 288 CC/8223
Overall length max.	45,1 mm	56,2 mm	56,2 mm	61,7 mm
Diameter max.	19 mm	22,2 mm	22,2 mm	22,2 mm

Twin Diode

Type	Design and Application	Heating		Maximum Ratings				Remarks
		E_f V	I_f A	$E_{b\ peak}$ V	I_b mA	$I_{b\ peak}$ mA	$E_{fk\ peak}$ V	
E 91 AA 5726	Double diode	6,3	0,3	360	10	60	360	

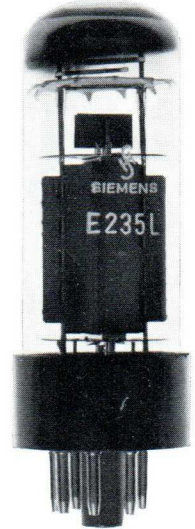
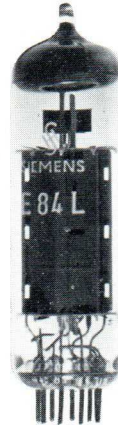
Triodes

Type	Design and Application	Heating		Characteristics			Max. Ratings		Remarks
		E_f V	I_f A	I_b mA	S_m mA/V	μ	I_k mA	P_p W	
E 86 C	UHF-Triode up to 800 Mc	6,3	0,165	12	14	68	20	2,4	
E 88 C	UHF-Triode up to 1000 Mc	6,3	0,155	12,5	13,5	65	15	2,4	
EC 1030 EC 1031	High transconductance Low-Hum UHF-Triode	6,3	0,135	7	16	65	12	1	
EC 8010	UHF-Power-Triode up to 1000 Mc	6,3	0,28	25	28	60	35	4,5	
ED 8000	High Transconductance Power Triode for electronically stabilized power supply	6,3	0,8	150	16	3,6	180	17	

Twin Triodes

E 80 CC 6085	Twin triode for af and automatic control amplifiers	6,3 12,6	0,6 0,3	6	2,7	27	12	2	
E 81 CC 6201	Twin triode for rf amplifiers, oscillators and mixers up to 300 Mc	6,3 12,6	0,3 0,15	10	5,5	60	18	2,8	$S_C = 1,8 \text{ mA/V}$
E 82 CC 6189	Twin triode for af amplifiers and multivibrators	6,3 12,6	0,3 0,15	10,5	2,2	17	22	3	
E 83 CC 6681	Low microphonic twin triode for af voltage amplifiers	6,3 12,6	0,3 0,15	1,25	1,6	100	9	1,2	
E 88 CC 6922	High transconductance, low noise universal twin triode	6,3	0,3	15	12,5	33	20	1,5	$r_g (100 \text{ Mc}) = 3 \text{ k}\Omega$
E 90 CC 5920	Twin triode for computer	6,3	0,4	8,5	6,0	27	15	2	
E 188 CC 7308	High transconductance, low microphonic twin triode	6,3	0,335	15	12,5	33	22	1,65	$r_g (100 \text{ Mc}) = 3 \text{ k}\Omega$
E 283 CC	Low hum, low microphonic twin triode for af voltage amplifiers	6,3	0,33	1,25	1,6	100	9	1,2	$E_{hum} < 5 \mu\text{V}$
E 288 CC 8223	High transconductance, low noise power twin triode	6,3	0,475	30	20	25	40	3	$R_{eq} \approx 200 \Omega$
ECC 2000	High transconductance low noise universal twin triode	6,3	0,33	27	22/17,5	28/27	40	2,7	
ECC 8100	High transconductance, low noise universal twin triode	6,3	0,33	25	16/20	30	40	2,5	
5751	Twin triode for voltage amplifiers	6,3 12,6	0,35 0,175	1	1,2	70	9	0,8	
5814 A	Twin triode for amplifiers and blocking oscillators	6,3 12,6	0,35 0,175	10,5	2,2	17	22	3	
6463	Twin triode for computer	6,3 12,6	0,6 0,3	14,5	5,2	20	31	4,4	$I_k \text{ peak max} = 300 \text{ mA}$

Special Quality Tubes



Type	5654	E 280 F	E 84 L	E 235 L / 7751
Overall length max.	45,1 mm	61,7 mm	78,4 mm	100 mm
Diameter max.	19 mm	22,2 mm	22,2 mm	33 mm

Pentodes

Type	Design and Application	Heating		Characteristics			Max. Ratings		Remarks
		E_f V	I_f A	I_b mA	S_m mA/V	μ_{g2g1}	I_k mA	P_p W	
E 80 F 6084	Low Hum Pentode for Audio and Measuring Amplifiers	6,3	0,3	3	1,85	25	9	1,3	
E 83 F 6689	Pentode for broadband RF- and IF-Amplifiers	6,3	0,3	10	9	38	16	2,1	
E 180 F 6688	Broadband pentode	6,3	0,3	13	16,5	50	25	3	$r_g (100 \text{ Mc}) = 2 \text{ k}\Omega$
E 280 F 7722	High transconductance, low noise universal broadband pentode	6,3	0,315	20	26	60	30	4	$S_m/C = 2,2 \text{ mA/VpF}$
5654 6 AK 5 W	Universal broadband pentode	6,3	0,175	7,5	5	32,5	20	1,65	$S_m/C = 0,75 \text{ mA/VpF}$
7721	High transconductance, low noise broadband pentode	6,3	0,315	22	35	80	30	4,2	

Power Pentodes

Type	Design and Application	Heating		Characteristics			Max. Ratings		Remarks
		E_f V	I_f A	I_b mA	S_m mA/V	μ_{g2g1}	I_k mA	P_p W	
E 55 L 8233	High transconductance power pentode	6,3	0,6	50	45	30	75	10	
E 80 L 6227	Power pentode for af amplifiers	6,3	0,75	30	9	21,5	50	8	
E 84 L 7320	Power pentode for af and broadband amplifiers	6,3	0,76	48	11,3	19	100	13,5	
E 130 L 7534	High transconductance power pentode	6,3	1,7	100	27,5	6,5	300	27,5	
E 235 L 7751	Power pentode, especially for stabilized power supplies	6,3	1,2	100	14	5,6	220	15	
E 236 L	Power pentode for horizontal deflection	6,3	1,2	100	14	5,6	220	15	$E_{b \text{ peak max}} = 7 \text{ kV}$
E 282 F	High transconductance, low distortion broadband power pentode	6,3	0,35	35	26	27	50	4,2	$S_m/C = 2,2 \text{ mA/VpF}$
E 810 F 7788	High transconductance broadband power pentode	6,3	0,34	35	50	57	50	5	
EL 3010	High transconductance pentode	6,3 12,6	2,2 1,1	200	80	16	350	35	
EL 8000	High transconductance pentode	6,3 0,55		65	60	80	100	12	
F 2 a 11	High transconductance power tetrode	6,3	2,0	100	18	17,5	140	30	

Triode-Pentode

E 80 CF 7643	Triode for oscillators up to 300 Mc Pentode for af and rf amplifiers	6,3	0,33	14	5		18	1,75
				10	6,2		40	18
ECF 8070	Triode for oscillators up to 300 Mc pentode for af and rf amplifiers	6,3	0,38	14	5,5		15	1,5
				10	12		70	18

Nuvistors



Type	7586	7895	7587
Overall length max.	20 mm	20 mm	26 mm
Diameter max.	11 mm	11 mm	11 mm

Nuvistor-Triodes

Type	Design and Application	Heating		Characteristics				Max. Ratings		Remarks
		E_f V	I_f A	E_b V	I_b mA	S_m mA/V	μ	I_k mA	P_p W	
7586	Triode for universal application	6,3	0,135	26,5 40 75	2,8 6,8 10,5	7 11 11,5	31 35 33	15	1	
7895	Triode for rf amplifiers and at preamplifiers	6,3	0,135	110	7,0	9,4	64	15	1	
8056	Triode with low plate voltage	6,3	0,135	12	5,8	8	12,5	15	0,45	
8058	UHF-Triode for amplifiers and oscillators	6,3	0,135	110	10	12,4	70	15	1,5	

Nuvistor-Tetrode

Type	Design and Application	Heating		Characteristics				Max. Ratings		Remarks
		E_f V	I_f A	E_b/E_{c2} V	I_b/I_{c2} mA	S_m mA/V	r_p M Ω	I_k mA	P_p/P_{g2} W	
7587	Tetrode for universal application	6,3	0,15	125/50	10/2,7	10,6	0,2	20	2,2/0,2	

Tubes for Telecommunication Systems



Type	CC a	D 3 a	C 3 m
Overall length max.	56,2 mm	61,7 mm	69,4 mm
Diameter max.	22,2 mm	22,2 mm	32 mm

Type	Design and Application	Heating		Characteristics			Max. Ratings		Remarks
		E_f V	I_f A	I_b mA	S_m mA/V	μ	I_k mA	P_p W	
CC a	High transconductance, low noise universal twin triode	6,3	0,3	15	12,5	33	20	1,5	$R_{eq} = 300 \Omega$
C 3 g	High transconductance, low noise broadband pentode	6,3	0,37	13	14	—	30	3,5	$R_{eq} = 450 \Omega$
C 3 m } C 3 o }	Universal pentode	20	0,125	16	6,5	—	30	4	$S_m/C = 2,9 \text{ mA/VpF}$
D 3 a	High transconductance, low noise broadband pentode	6,3	0,315	22	35	—	30	4,2	
F 2 a	Power tetrode	6,3	2,0	100	18	—	140	30	

For replacement purposes further tubes for telecommunication systems are available
 Aa, Ba, Bas, Be, Bh, Bi, Cd, Ce, Cf, C3b, C3e, C3f, Da, Ec, Ed, E2d, E2e, Z2b, Z2c, Z2e

Microwave Tubes



Type **2 C 39 A**
 Overall length max. 69,8 mm
 Diameter max. 32,1 mm



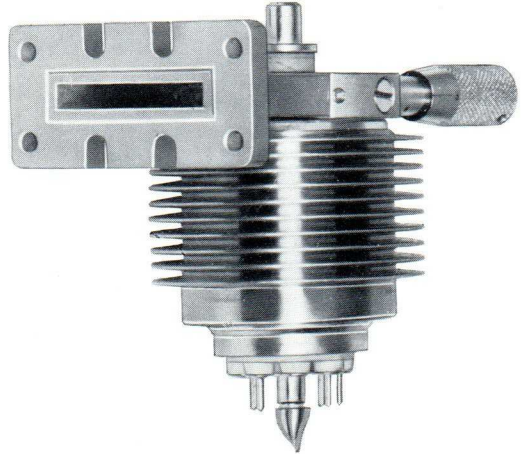
Type **2 C 39 BA**
 Overall length max. 68,6 mm
 Diameter max. 32,1 mm



Type **YD 1060**
RH 6 C/8412
 Overall length max. 61,3 mm
 Diameter max. 23,4 mm



Type **YD 1070**
RH 7 C/8413
 Overall length max. 48,4 mm
 Diameter max. 13,1 mm



Type **RK 6**
 Overall length max. 87 mm
 Diameter max. 50 mm

Planar Tubes

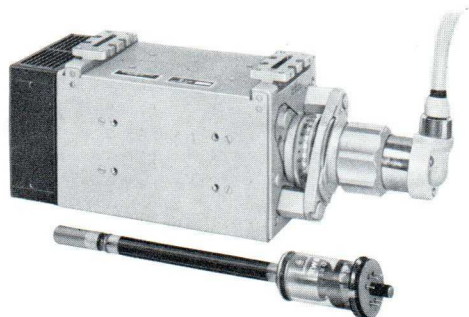
Type	f kMc	Typical Operation				Maximum Ratings			Heating		Remarks
		f kMc	P _O W	E _b V	I _b mA	E _b V	P _p W	I _k mA	E _f V	I _f A	
YD 1060/RH 6 C/8412	up to 7	4	4,5	420	60	600	30	75	6,0	0,8	Metal-ceramic-technique
YD 1070/RH 7 C/8413	up to 9	6	1,8	420	60	600	25	75	6,0	0,8	Metal-ceramic-technique
YD 1100	up to 7	2	2	285	20	350	10	30	6,3	0,35	Metal-ceramic-technique
2 C 39 A	up to 3	2,5	18	800	100	1000	100	125	6,3	1	
2 C 39 BA	up to 3,5	2,5	24	800	100	1000	100	125	6,0	0,95	Metal-ceramic-technique
YD 1040	up to 3	2,5	2000	3500	3000	3500	100	3000	6,0	1	Metal-ceramic-technique *
YD 1050	up to 2,5	0,5	26	600	80	800	100	125	6,0	1	Metal-ceramic-technique
YL 1040	up to 3	1,25	50	900	190	1200	140	400	6,3	2,5	Planar-tetrode Metal-ceramic-technique

* Typical operation and Maximum Ratings for plate-pulse-oscillator

Reflex Klystrons

Type	Typical Operation							Heating		Remarks
	f kMc	P _O W	Δf Mc	S _m Mc/V	$\frac{\Delta S_m}{S_m}$ %	E _{rs} V	I _{rs} mA	E _f V	I _f A	
RK 6	5,775 to 5,925	0,175	60	3	< 1	400	60	6,3	1	Metal-ceramic-technique
RK 25	3,6 to 4,5	0,18	60	1,8	< 5	310	38	6,3	1	

Microwave Tubes

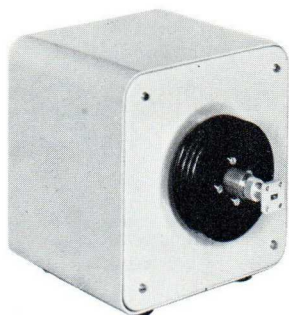


Type RW 6

Dimensions max. 100 mm × 112 mm × 264 mm (without tube socket)

Travelling Wave Tubes

Type Tube	Magnet system	Typical Operation						Heating		Remarks
		f kMc	P_O W	G db	E_C V	E_h V	I_C mA	E_f V	I_f A	
RW 2	MRW 2	1,7 to 2,3	20	40	1600	1900	85	6,3	0,8	periodic perm. magn. focused
RW 21	MRW 21	2,5 to 2,7	20	40	1600	1850	85	6,3	0,8	periodic perm. magn. focused
RW 3	MRW 3	3,3 to 4,3	5	39	1450	1350	40	6,3	1,15	permanent focused
RW 4	MRW 4	3,3 to 4,3	10	40	1300	2000	60	6,3	0,8	periodic perm. magn. focused
RW 6	MRW 6	5,8 to 7,3	10	39	1300	2480	45	6,3	0,9	periodic perm. magn. focused
RW 70	MRW 70	7,1 to 7,8	4	38	1400	1400	25	6,3	0,85	permanent focused
RW 80	MRW 80	5,8 to 8,5	10	41	1300	2850	50	6,3	0,8	periodic perm. magn. focused
YH 1020	MYH 1020	0,47 to 0,96	200	32	2900	3100	700	6,0 to 7,0	2,5	periodic perm. magn. focused
YH 1040	MYH 1040	5,9 to 6,45	2000	30	5 to 15 kV	16 kV	1100	5,5 to 8,5	2,5	periodic perm. magn. focused



Type RWO 40

Dimensions max. 158 mm × 158 mm × 260 mm



Power supply RWON 11

Backward Wave Oscillator

Type	Typical Operation				Heating	
	f kMc	P_O mW	E_h V.	I_h mA	E_f V	I_f A
RWO 40	26,5 to 42	60	500 to 2700	15	6,3	1
RWO 60	42 to 65	20	500 to 2400	15	6,3	1
RWO 80	60 to 90	5	500 to 2500	15	6,3	1
RRWO 10	6,5 to 12,7	1000	300 to 2500	25	6,3	1
RRWO 40	32 to 40	150	500 to 2500	20	6,3	1

Power Supply for RWO 40 - RWO 60 - RWO 80 - RRWO 10 - RRWO 40

Type	Power supply E_f E_f / I_f V / A	Power supply E_{g1} E_{g1} / I_{g1} V / mA	Power supply E_{g2} E_{g2} / I_{g2} V / mA	Power supply E_{g3} E_{g3} / I_{g3} V / mA	Power supply E_h E_h / I_h V / mA	Remarks
RWON 11	4 to 8/0 to 2	0 to 400/0 to 1	500 to 3000/0 to 4	100 to 1000/0 to 10	400 to 3000/0 to 25	Amplitude and frequency modulation device
RWON 111	4 to 8/0 to 2	0 to 400/0 to 1	500 to 3000/0 to 4	100 to 1000/0 to 10	400 to 3000/0 to 25	Only frequency modulat. device
RWON111M	Amplitude modulation device for retrofitting in the RWON 111					

Cathode Ray Tubes

Type	Fluorescence Color	Persistence ²⁾	Screen Diameter	Length	Deflection ¹⁾	Heating		Deflection Faktor	
			max. mm	max. mm		U_f (V)	I_f (A)	d_1 (V/cm)	d_2 (V/cm)
D 7-15 BG (3 BVP 35)	blue	medium short							
D 7-15 GH (3 BVP 31)	green	medium short							
D 7-15 GJ (3 BVP 1)	yellowish green	medium	78	305	s	6,3	0,3	3,2 to 4,2	10,7 to 13,3
D 7-15 GL (3 BVP 2)	yellowish green	medium short							
D 7-15 GM (3 BVP 7)	publish blue	long							
D 7-16 GJ	yellowish green	medium	78	167	s+a	6,3	0,08	19,5 to 23,5	41 to 46
D 7-16 GM	publish blue	long							
D 7-17 BG	blue	medium short							
D 7-17 GH	green	medium short							
D 7-17 GJ	yellowish green	medium	78	305	s	6,3	0,08	3,2 to 4,2	10,7 to 13,3
D 7-17 GL	yellowish green	medium short							
D 7-17 GM	publish blue	long							
DG 7-14	green	medium short	78	259	s+a	6,3	0,3	22 to 28	31 to 42
DG 7-52 A (3 BNP 1)	yellowish green	medium	78	180	s+a	6,3	0,3	19,5 to 23,5	41 to 46
DG 7-74 A (3 ARP 1)	yellowish green	medium	78	305	s	6,3	0,3	7,2 to 8,8	12,5 to 14,5

1) s = symmetrical, a = asymmetrical

2) Persistence for decay to 10% of initial brightness: very short: < 1 μ s, short: 1 μ s to 10 μ s, medium short: 10 μ s to 1 ms, medium: 1 ms to 100 ms, long: 100 ms to 1 s, very long: > 1 s

Cathode Ray Tubes

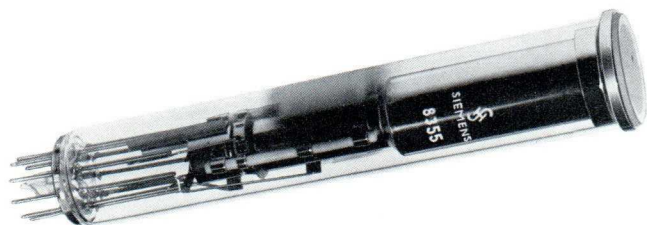
Type	Fluorescence Color	Persistence ²⁾	Screen Diameter max. mm	Length max. mm	Deflection ¹⁾	Heating		Deflection Factor	
						U_f (V)	I_f (A)	d_1 (V/cm)	d_2 (V/cm)
DG 7-31 ³⁾ DG 7-32 (3 AMP 1 A)	yellowish green	medium	71	172	s	6,3	0,3	19 to 23	33 to 42
DG 7-36 (3 WP 1)	yellowish green	medium	78	296	s	6,3	0,3	17 to 20,5	24,5 to 30
D 13-16 BE	blue	medium short	135	596	s	6,3	0,3	6	18
D 13-16 GH	green	medium short							
D 13-16 GP	bluish green	medium short							
D 13-22 GH	green	medium short	135	526	s	6,3	0,3	2,0 to 3,1	8,8 to 12
DP 13-14	publish blue	long	136	375	s	6,3	0,3	24 to 30	30 to 37
DG 13-54	green	medium short	136	458	s	6,3	0,3	10 to 16	24 to 28,5

¹⁾ s = symmetrical, a = asymmetrical

²⁾ Persistence for decay to 10% of initial brightness: very short: < 1 μ s, short: 1 μ s to 10 μ s, medium short: 10 μ s to 1 ms, medium: 1 ms to 100 ms, long: 100 ms to 1 s, very long: > 1 s

³⁾ At DG 7-31 the deflection plate D 21 is connected with G 2+4

Vidicons



Types	8355	1354-011	1354-012	1348-001	1348-011	1348-012
Overall length max.	162 mm					
Diameter max.	29 mm					

Without separate mesh

Type	
8355	X-ray quality for radiographs
1354-011	First rate industrial quality with high resolution and high sensitivity
1354-012	Industrial quality for universal application

With separate mesh

Type	
1348-001	X-ray quality for radiographs
1348-011	First rate industrial quality with high resolution and high sensitivity
1348-012	Industrial quality for universal application

General Data		Electrical Characteristics								
Focusing Deflection Method	Scanned Area mm ²	E_f V	I_f mA	C_{out} pF	$-E_{C1}$ V	E_{C2} V	E_{C3} V	E_b V	$I_b^{1)}$ μA	γ'
magnetic	9,6 × 12,6	6,3 ± 10%	300 ± 10%	3,1	45 to 100	300	200 to 300	15 to 75	0,2	≈ 0,65

¹⁾ at 0,02 μA dark current and 1 foot-candle faceplate illumination

Indicator Tubes

Type	Indication			Characteristics			Typical Operation dc operation	
	Symbol	Position	Height mm	Firing voltage V	Burning voltage V	Cutoff potential V	U_{ba} V	R_a k Ω
ZM 1020 Z 520 M	0 to 9	frontal view	15,5	≤ 160	≈ 140	≤ 120	170 250 300 350	15 56 86 100
ZM 1021 Z 521 M	+ - \sim A V Ω 0/9	frontal view	15,5	≤ 160	≈ 140	≤ 120	170 250 300 350	15 56 86 100
ZM 1040 Z 522 M	0 to 9	side	31	≤ 160	≈ 140	≤ 120	200 250 300 350	15 27 39 47
ZM 1080	0 to 9	side	13	≤ 170	140 185 ¹⁾	≤ 118	200	30

¹⁾ pulsed operation

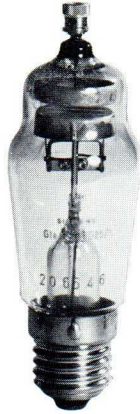
Voltage Regulator Tubes



Type	85 A 2	108 C 1	150 C 2
Overall length max.	54,6 mm	67,3 mm	67,3 mm
Diameter max.	19 mm	19 mm	19 mm

Type	Design	Ion-ization Voltage V	Tube Voltage Drop V	$I_{\text{boge y}}$ mA	Regulation Range mA	Dynamic Internal Resistance Ω
85 A 2 0 G 3	Precision regulator tube	125	83 to 87	5,5	1 to 10	280
108 C 1 0 B 2	Regulator tube	127	106 to 111	17,5	5 to 30	100
150 C 2 0 A 2	Regulator tube	180	144 to 164	17,5	5 to 30	100
ZZ 1010	Regulator tube	112	83,6 to 85,2	30	4 to 70	100
ZZ 1020 STV 85/8	Regulator tube	112	83,9 to 85,3	8	1,7 to 8	480
ZZ 1030 STV 500/01	Regulator tube	155	123 to 127	0,1	0,09 to 0,5	12
ZZ 1040	Regulator tube	125	98 to 101	60	5 to 60	

High Voltage Rectifiers



Type Gle 10000/025/1

Overall length max.

147 mm

Diameter max.

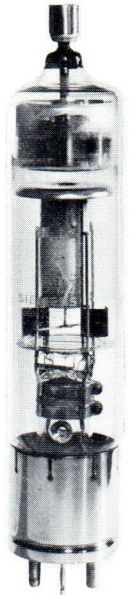
50 mm



Type Gle 15000/1,5/6

245 mm

62 mm



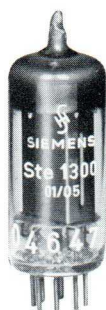
Type Gle 20000/2,5/10

381 mm

75 mm

Type	Design	Heating		Maximum Ratings			Typical Operation Three-Phase Bridge			
		E_f	I_f	Inver- se volt- age kV	DC-Current		Trans- former Volt. kVeff	E_{-}	I_{-}	P_{-}
					Average Value A	Peak Value A				
Gle 10000/025/1	Mercury Vapor Half-Wave Rectifier	2,5	4,8	10	0,25	1	7	9,6	0,75	7,2
Gle 13000/1,5/6	Mercury Vapor Half-Wave Rectifier	5	7	13	1,5	6	9,2	12,4	4,5	55,5
Gle 15000/1,5/6	Mercury Vapor Half-Wave Rectifier	5	9,5	15	1,5	6	10,6	14,3	4,5	64,3
Gle 15000/3/12	Mercury Vapor Half-Wave Rectifier	5	11,5	15	3	12	10,6	14,3	9,0	129
Gle 20000/2,5/10	Mercury Vapor Half-Wave Rectifier	5	12,5	21	2,5	10	14,8	20	7,5	150

Thyratrons



Type	ST 21	ST 106	Ste 15000/15/45
Overall length max.	54,6 mm	290 mm	460 mm
Diameter max.	19 mm	73 mm	170 mm

Type	Design	Heating		Maximum Ratings			Typical Operation			
		E_f	I_f	Inver- se volt- age kV	DC Current		Ion- ization Time μ s	Deion- ization Time μ s	Averag- ing Time s	Heat- ing Time s
					Average value A	Peak value A				
ST 21-Ste 1300/01/05 2 D 21	Inert Gas Tetrode	6,3	0,6	1,3	0,1	0,5	0,5	35	30	10
ST 1000/02/03 Ste 1000/02/03	Inert Gas Triode	3	1,1	1	0,2	0,3	1	75	15	5
ST 57-Ste 1000/2,5/15 5559	Mercury Vapor Triode	5	4,5	1,5	2,5	15	10	1000	15	300
ST 6011-Ste 6011	Inert Gas Triode	2,5	9	1,25	2,5	30	10	1000	5	30
ST 106-Ste 2000/6/80	Inert Gas and Mer- cury Vapor Triode	2,5	22	2	6	80	10	500	15	60
ST 17-Ste 2500/05/2 5557	Mercury Vapor Triode	2,5	5	5	0,5	2	10	1000	15	10
ST 105-Ste 2500/6/40	Mercury Vapor Tetrode	5	10	2,5	6	40	10	1000	15	300
Ste 15000/15/45	Mercury Vapor Triode	5	20	15	15	45	10	1000	15	600

List of Equivalent Tube Types for Special Quality Tubes and Microwave Tubes

The tubes listed below may normally be replaced by equivalent S&H types. Since, however, small electrical and mechanical differences may be possible, data, characteristics and external dimensions of the tubes concerned should be compared in any case.

Type	Siemens-Type	Type	Siemens-Type	Type	Siemens-Type
A2900	E81CC	CV4020	150C2	ECC803	E83CC
AG5209	85A2	CV4024	E81CC	ECC803S	E83CC
AG5210	108C1	CV4025	E91AA	ECC960	E90CC
AG5211	150C2	CV4028	108C1	ECF80	E80CF
		CV4032	5814A	EF95	5654
B152	E81CC	CV4050	5654	EF861	E180F
B309	E81CC	CV4054	85A2	EF905	5654
B329	E82CC	CV5214	E90CC	EL36	E236L
B339	E83CC	CV5215	E80CF	EL84	E84L
		CV5231	E88CC		
CK5654	5654	CV5232	C3m		
CK5726	E91AA	CV5358	E88CC	G108/1k	108C1
CK5751	5751			G150/4k	150C2
CK5783	85A2	D2M9	E91AA	GD85M/S	85A2
CK5783WA	85A2	D27	E91AA	GD150M/S	150C2
CK5783WB	85A2	D77	E91AA	GL5726	E91AA
CK5814	5814A	D152	E91AA		
CK5814A	5814A	DD6	E91AA	HD51	150C2
CK5814WA	5814A	DD6S	E91AA	HD52	108C1
CK6073	150C2	DP61	5654		
CK6074	108C1			KL73551	F2a11
CK6201	E81CC	E82CC	5814A		
CV140	E91AA	E88CC	CCa		
CV283	E91AA	E88CC/01	E88CC	M8079	E91AA
CV449	85A2	E95F	5654	M8098	85A2
CV455	E81CC	EAA91	E91AA	M8100	5654
CV491	E82CC	EAA91W	E91AA	M8132	85A2
CV492	E83CC	EAA901	E91AA	M8133	150C2
CV850	5654	EAA901S	E91AA	M8136	E82CC
CV1833	108C1	EB91	E91AA	M8137	E83CC
CV1832	150C2	EC86	E86C	M8142	85A2
CV2020	5654	EC806S	E86C	M8162	E81CC
CV2492	E88CC	EC88	E88C	M8212	E91AA
CV2493	E88CC	ECC80	E80CC	M8223	150C2
CV2516	2C39A	ECC81	E81CC	M8224	108C1
CV2975	E84L	ECC82	E82CC		
CV3508	E81CC	ECC83	E83CC		
CV3998	E180F	ECC87	E80CC	N709	E84L
CV4003	E82CC	ECC88	E88CC		
CV4004	E83CC	ECC186	E82CC	OA2	150C2
CV4007	E91AA	ECC801	E81CC	OA2WA	150C2
CV4010	5654	ECC801S	E81CC	OB2	108C1
CV4016	5814A	ECC802	E82CC	OB2WA	108C1
CV4017	5751	ECC802S	E82CC	OG3	85A2

Type	Siemens-Type	Type	Siemens-Type	Type	Siemens-Type
PM05	5654	Z1764	5751	150C4	150C2
QA2404	E91AA	Z2104	5654	403A	5654
QA2406	E81CC	Z5099	2C39BA	731A	5654
QB309	E81CC	2C39	2C39A	1381HQ	5654
QB329	E82CC	2C39B	2C39BA	5651	85A2
QB339	E83CC	2C39WA	2C39A	5651WA	85A2
QM557	5654	2C39WB	2C39BA	5726	E91AA
QM559	E91AA	3CX100A5	2C39BA	5751WA	5751
QS83/3	85A2	3H/151J	2C39A	5783	85A2
QS1207	150C2	3X100A5	2C39BA	5783WA	85A2
QS1208	108C1	5A/170K	E180F	5783WB	85A2
QS1209	85A2	5A/185K	E280F	5814	5814A
QS1210	150C2	5FP14A	150C2	5814WA	5814A
QS1211	108C1	5ZP16	150C2	5856	150C2
QS1212	85A2	6AH6WA	108C1	5920	E90CC
QS1213	85A2	6AK5	5654	6057	E83CC
S856	150C2	6AK5W	5654	6058	E91AA
S860	108C1	6AK5WA	5654	6060	E81CC
SR2	85A2	6AL5	E91AA	6067	E82CC
SR3	108C1	6AL5W	E91AA	6073	150C2
SM150-30	150C2	6AX8	E80CP	6074	108C1
SN1039	5654	6B32	E91AA	6085	E80CC
SN1039A	5654	6BL8	E80CF	6096	5654
St105/30	108C1	6BQ5	E84L	6097	E91AA
St150/30	150C2	6CC40	E82CC	6189	E82CC
Str85/10	85A2	6D2	E91AA	6201	E81CC
Str108/30	108C1	6DJ8	E88CC	6227	E80L
Str108/40	108C1	6F32	5654	6626	150C2
Str150/30	150C2	6L13	E83CC	6627	108C1
Stv85/10	85A2	6L40	E84L	6663	E91AA
Stv108/30	108C1	6M5	E80L	6679	E81CC
Stv150/30	150C2	6P15	E84L	6680	E82CC
TD1/100A	2C39A	11TA31	150C2	6681	E83CC
TS49	C3m	12A7	E81CC	6688	E180F
TS51	5654	12A7WA	E81CC	6897	2C39BA
VR105MT	108C1	12AU7	E82CC	6922	E88CC
VR150MT	150C2	12AU7A	E82CC	7025	E83CC
WE403A	5654	12AU7WA	E82CC	7211	2C39BA
WE731A	5654	12AU7R	E82CC	7289	2C39BA
WT210-0051	150C2	12AX7	E83CC	7308	E188CC
YD1060	RH6C	12AX7WA	E83CC	7316	E82CC
YD1070	RH7C	12AX7R	E83CC	7320	E84L
Z1494	5654	12DF7	E83CC	7534	E130L
Z1751	E91AA	12DT7	E83CC	7643	E80CF
				7722	E280F
				7751	E235L
				7788	E810F
				8223	E288CC
				8412	RH6C
				8413	RH7C

List of Equivalent Tube Types for Power Grid Tubes, Generating Tubes and High Voltage Rectifiers

Type	Siemens-Type	Type	Siemens-Type	Type	Siemens-Type
AG866A	(Gle10000/025/1)	E125A	RS1007	QQV06—40A	RS1009
AG869B	(Gle20000/2,5/10)	E250A	(RS1002A)	QQV07—40	(RS1009)
AG872A	(Gle15000/1,5/6)			QY3—125	RS1007
AG5006	Gle15000/3/12	FG17	Ste2500/05/2	QY4—250	(RS1002A)
AG8008	Gle13000/1,5/6	FG57	Ste1000/2,5/15		
ASG5017	(Ste2500/05/2)	FG105	Ste2500/6/40	RG4—3000	Gle15000/3/12
ASG5121	Ste1300/01/05			RL17	Ste2500/05/2
ASG6011	Ste6011	G7,5/0,6d	(Gle10000/025/1)	RL21	Ste1300/01/05
AX105	Ste2500/6/40	G10/4d	(Gle15000/1,5/6)	RL57	Ste1000/2,5/15
AX9900	(RS1006B)	GL2D21	Ste1300/01/05	RL105	Ste2500/6/40
AX9901	RS1026	GL57	Ste1000/2,5/15	RS612	(RS1006B)
AX9902	RS1016	GL829	(RS1009)	RS613	(RS1006B)
AX9903	RS1009	GL5557	Ste2500/05/2	RS614	RS1006B
AX9910	RS1019	GL5559	Ste1000/2,5/10	RS630	RS1026
		GL6011	Ste6011	RS631	RS1016
B142	(RS1016)			RS635	(RS1046)
BT5	Ste1000/2,5/15	K2	Gle10000/025/1	RS565	RS2001W
				RS567	RS1041W
C144	RS1009	ML4—125A	RS1007	RS683	(RS1007)
C180	RS1019	MT17	Ste2500/05/2	RS685	RS1007
C1108	(RS1007)	MT57	Ste1000/2,5/15	RS686	(RS1002A)
C1112	(RS1002A)	MT105	Ste2500/6/40	RS865	RS2001V
C1134	(RS1019)			RS867	RS1041V
CE309	Ste2500/05/2	NL710	Ste6011		
CT1/2500	Ste1000/2,5/15	NL715	Ste2500/05/2	S15/40i	(Ste15000/15/45)
CV797	Ste1300/01/05	NL720	Ste6011	SRS360	RS1026
CV1350	RS1046	NL5557	Ste2500/05/2	SRS551	RS1003
CV1351	RS1016	NL5559	Ste1000/2,5/15	SRS4451	RS1009
CV1625	Gle10000/025/1	NU829	RS1009	SRS4452	RS1019
CV1924	(RS1006B)				
CV2130	RS1007	P2—4013	(RS1009)	T130—1	(RS1006B)
CV2131	(RS1002A)	PL17	Ste2500/0,5/2	T300—1	(RS1016)
CV2797	RS1009	PL21	Ste1300/01/05	T350—1	(RS1026)
CV2798	RS1029	PL57	Ste1000/2,5/15	TB2,5/300	(RS1006B)
CV2799	RS1019	PL105	Ste2500/6/40	TB2,5/400	RS1006B
CV2957	Ste2500/05/2	PL106	Ste2000/6/80	TB3/750	RS1026
CV3879	RS1002A	PL5557	Ste2500/0/2	TB4/1250	RS1016
		PL5559	Ste1000/2,5/15	TB4/1500	RS1036
		PL6011	Ste6011	TB5/2500	RS1046
DGC4/1000ED	Gle10000/025/1			TB6/20	RS1011L
DGC5/5000GB	(Gle15000/1,5/6)	Q160—1	(RS1007)	TBW6/20	RS1011W
DGC5/5000GS	Gle13000/1,5/6	Q400—1	(RS1002A)	TBL12/50	RS1031L
DGC6/18	Gle15000/2/12	QB3/300	RS1007	TBW12/50	RS1031W
DGC6/6000	(Gle15000/1,5/6)	QB3,5/750	(RS1002A)	TG57	Ste1000/2,5/15
DGC7/100	Ste15000/15/45	QB4/1100	RS1002A	TH171	RS1011W
DGC7/6000	(Gle15000/1,5/6)	QQE03/20	RS1019	TH471	RS1011V
DGC9/20	Gle20000/2,5/10	QQE03/12	RS1029	TH478	RS1041V
DQ2a	Gle10000/025/1	QQE06/40	RS1009	TH6011	Ste6011
DQ4	(Gle15000/1,5/6)	QQV03—10	RS1029	TH6031	Ste1000/2,5/15
DQ6	(Gle20000/2,5/10)				

Type	Siemens-Type	Type	Siemens-Type	Type	Siemens-Type
TH6120	Ste2500/6/40	WT606	Ste1300/01/05	866A	(Gle10000/025/1)
TQ2	(Ste2500/05/2)	WTT111	Ste1000/2,5/15	872A	(Gle15000/1/4)
TQ7	(Ste15000/15/45)	WTT117	Ste2500/05/2	967	Ste2500/05/2
TT16	RS1007	WTT118	Ste2500/6/70	1257	Ste1000/2,5/15
TT20	RS1019			4260	Ste2500/05/2
TXM100	Ste1300/01/05	XG1—2500	Ste1000/2,5/15	4261	Ste2500/05/2
TY2—125	(RS1006B)	XG5—500	Ste2500/05/2	4649	Gle15000/1,5/6
TY2—150	RS1006B	XG15—12	Ste15000/15/45		
TY3—250	RS1026	XGQ2—6400	Ste2500/6/40	5557	Ste2500/05/2
TY4—500	RS1016			5559	Ste1000/2,5/15
TY5—500	RS1036	1×9901	RS1026	5866	(RS1006B)
TY6—800	RS1046	2D21	Ste1300/01/05	5867	RS1026
		3V/390A	Ste1000/2,5/15	5868	RS1016
VH550	Gle10000/025/1	4D21	RS1007	5894	RS1009
VT146	Gle10000/025/1	4G/280K	Ste1300/01/05		
		4—125A	RS1007	6011	Ste6011
		4—250A	(RS1002A)	6155	RS1007
		4—400A	RS1002A	6156	(RS1002A)
WE17	Ste2500/05/2	5D22	(RS1002A)	6252	RS1019
WL2D21	Ste1300/01/05	11E13	RS1029	6360	RS1029
WL17	Ste2500/05/2	17	Ste2500/05/2	6508	Gle20000/2,5/10
WL57	Ste1000/2,5/15	20A3	Ste1300/01/05	6524	(RS1019)
WL105	Ste2500/6/40	57	Ste1000/2,5/15	6693	Gle15000/3/12
WL631	Ste1000/2,5/15	105	Ste2500/6/40	6850	(RS1019)
WL5557	Ste2500/05/2	272	Ste2500/05/2	7092	RS1046
WL5559	Ste1000/2,5/15				
WT210—0001	Ste1300/01/05	829B	(RS1009)	8008	Gle13000/1,5/6
W210—0015	Ste2500/05/2	832A	(RS1019)		
WT210—0056	Ste1000/2,5/15	833A	(RS1016)	38217	Ste2500/05/2
WT210—0074	Ste2500/6/40				
WT272	Ste2500/05/2				

The types in brackets are practically equivalent and can in most cases be used without misgivings. In some cases minor circuit modifications may be necessary.

Sales Organization and Representatives Abroad

Europe

Country	Address (Post Office Box)	Cables	Telephone (Telex)
Austria	Siemens & Halske Ges. m. b. H. Wiener Schwachstrom Werke Wien III/40, Apostelgasse 12	siemens-halske wien	726611, 726621, 735531 (01 1866)
Belgium	S. A. Siemens N. V. 116, Chaussée de Charleroi, Bruxelles 6	siemens bruxelles	373100, 386080 (02 1347)
Denmark	Dansk Siemens A/S Blegdamsvej 124, Kopenhagen Ø.	siemens kopenhagen	[0176] Triia 6464 (2313)
Finland	Siemens Sähkö Oy Mikonkatu 8, Helsinki K (Postilokero 8)	siemens helsinki	10714 (12-465)
France	Siemens S. A. F. 128, Rue du Faubourg, St-Honoré, Paris 8 ^e	siemens paris	359-55-28 (20060)
Great Britain	Siemens Liaison Office London of Siemens & Halske AG, Siemens-Schuckertwerke AG, Siemens-Electrogeräte AG Berk House, 8, Baker Street, London, W. 1	siemenstec london	Hunter 1441 (23176)
Greece	Siemens Hellas Elektrotechnische AG Eleftheriou Venizelou 16, Athen 135 (P. O. B. 601)	siemens athens	625301/05, 632301/05 (121)
Iceland	Smith & Norland H/F. Sudurlandsbraut 4, Reykjavik (P. O. B. 519)	electrosmith reykjavik	38320/21
Ireland	Siemens-Schuckert (Ireland) Ltd. 8, Raglan Road, Ballsbridge, Dublin 4	siemens dublin	684727 (5341)
Italy	Siemens Elettra S. p. A. Hauptverwaltung Via Fabio Filzi, 29, Milano (Casella Postale 4183)	siemenselettra milano	6992 (31 585)
	Siemens Elettra S. p. A. Zweigniederlassung Piazza Mignanelli, 3, Roma	siemenselettra roma	687791 (61 170)
Luxemburg	S. A. Siemens 17, Rue Giesener, Luxembourg (Boîte postale 109)	siemens luxembourg	46821 (430)
Netherlands	Nederlandsche Siemens Maatschappij N. V. Huygenspark 38/39, 's-Gravenhage (Postbus 1068)	siemens haag	183850 (31 373, 31 370)
Norway	Siemens Norge A/S Rosenkrantzgaten 11, Oslo 1 (Postboks 1384 Vika)	siemens oslo	337870 (1177)
Poland	Dom Handlow "Transactor" S. A. Al. I Armii W. P. Nr. 3, Warszawa 10 (P. O. B. 176)	transactor warszawa	28 13 12, 28 85 85 (8 1288)
Portugal	Siemens Companhia de Electricidade S. A. R. L. Av. Almirante Reis, 65, Lisboa 1 (Apartado 1380)	siemens lisboa	736921 (563)
Spain	Siemens Industria Eléctrica, S. A. Barquillo, 38, Madrid (Apartado 155)	siemens madrid	2312600 (7769)
Sweden	Svenska Siemens Aktiebolag Norra Stationsgatan 63-65 (Siemens-huset) Stockholm (Fack Stockholm 23)	siemens stockholm	229680 (1880)
Switzerland	Siemens Elektrizitätserzeugnisse AG Zürich 1, Löwenstr. 35 (Postfach 605)	siemens zürich	051/253600 (52 131)
Turkey	Simko Ticaret ve Sanayi A. S. Meclisi Mebusan Cad. 55, Istanbul/Fındıklı (P. K. 64 Tophane)	simko istanbul	493410
Yugoslavia	Generalexport Dragoslava Jovanovica 11, Beograd (Postanski fah 223)	genagent beograd	30695, 30696 (01188)

Africa

Country	Address (Post Office Box)	Cables	Telephone (Telex)
Algeria	Siemens S. A. F. 3, Viaduc du Duc des Cars, Alger	siemens alger	639547/49 (91 817)
Egypt	Siemens Resident Engineers Immobilier Building, Flat 644 Chérif Street No. 26 b, Cairo (P. O. B. 2220)	siemwerk cairo resident engineers	74130, 74138, 74139
Ethiopia	Jos. Hansen & Soehne (Ethiopia) Ltd. Field Marshal Smuts Street, Addis Ababa (P. O. B. 1501)	dahanjed addisababa	47270/72
ivory Coast	C. F. C. D., Zone Portuaire Km 1 route de Port Bouët, Abidjan (Boîte Postale 956)	charbon abidjan	71-91, 71-92
Liberia	Jos. Hansen & Soehne (Liberia) Ltd. Waterside, Monrovia (P. O. Box 28)	hansen monrovia	535
Libya	Ditta Maurizio Dawan, 16a, Sc. Giamà Magharba Tripoli (P. O. B. 130)	dawan tripolilibya	30101
Marocco	Siemens Maroc S. A. R. L. Rue d'Agadir, Rond Point St. Exupéry Casablanca	siemens casablanca	689-31, 702-34 (21 914)
Nigeria	Dipl.-Ing. Georg C. Schoepplein Lagos, Ikoyi Hotel	bestotel lagos	24075
Portug. East Africa	Breyner & Wirth, L. ^{da} Avenida da Republica, No. 32 Lourenço Marques (Caixa Postal 206)	produce lourenco- marques	4091/08, 4091/08, 92001/02
	Breyner & Wirth (Beira) L. ^{da} Rua Gov. Augusto de Castillo, 25 Beira (Caixa Postal 293)	produce beira	3154
Republic of South Africa	Siemens S. A. (Pty.) Ltd., Zygmarsh House, Corner Kruis and Marshall Streets Johannesburg (P. O. B. 4583)	siemsa johannesburg	23-6391 (543-7721)
	Siemens S. A. (Pty.) Ltd., Renfrew House 80, Roeland Street, Cape Town (P. O. B. 860)	siemsa cape town	2-7751 (via Johannesburg)
	Siemens S. A. (Pty.) Ltd., Panama House 72, Smith Street, Durban (P. O. B. 2533)	siemsa durban	2-9779 (via Johannesburg)
Rhodesia North	Fraser & Chalmers (S. A.), (Pty.) Ltd. First Street Ndola (P. O. Box 77)	frachalmer ndola	2691/93 (5324)
Rhodesia South	Fraser & Chalmers (S. A.), (Pty.) Ltd. Corner Hull and Birmingham Roads Heavy Industrial Sites, Salisbury (P. O. Box 72)	frachalmer salisbury	22071/72, 27481/82
	Fraser & Chalmers (S. A.), (Pty.) Ltd. Newport Street, Belmont Industrial Area Bulawayo (P. O. Box 8106 Belmont)	frachalmer bulawayo	5670, 60808, 60850, 62323
Senegal	C. F. C. D., 36, Boulevard Pinet-Laprade Dakar (Boîte Postale 145)	charbon dakar	229-14, 229-15, 338-39 (533)
South-West- Africa	M + Z Motors and Engineering Ltd. Tal Street, Windhoek (P. O. B. 192)	emzetmotor windhoek	5401/05 (WX 19)
Sudan	Obering. Helmut Geissler House No. 7, Block 5. X. E. Khartoum (P. O. B. 1202)	siemkhart khartoum	42314
Tunisia	Sitelec S. A., Société d'Importation et Travaux d'Electricité 26, Rue de Portugal, Tunis	sitelec tunis	242860, 243003

America

Country	Address (Post Office Box)	Cables	Telephone (Telex)
Argentina	Siemens Argentina S. A. Av. Pte. J. A. Roca 530, Buenos Aires (Casilla de Correo Central 1232)	siemens buenosaires	30-1071/78 (02812) (BA 264 via Transradio)
Bolivia	Johansson & Cia. S. A., Socabaya Esq. Mercado, La Paz (Casilla Correo 678)	johansson lapaz	5700, 8700, 9846, 10646
Brazil	Siemens do Brasil Companhia de Eletricidade Rua Pedro Americo, 32, São Paulo/SP (Caixa Postal 1375)	siemens saopaulo	35-0117 (492 via Radiobras)
	Siemens do Brasil Companhia de Eletricidade Av. Presidente Vargas, 409, 17º andar Rio de Janeiro/GB (Caixa Postal 630-ZC 00)	siemens riodejaneiro	23-5971 (via São Paulo)
Canada	Siemens Halske Siemens Schuckert (Canada) Ltd., 407, McGill Street Montreal 1, P. Q.	siemenscan montreal	849-5783 (01 2800)
Chile	Gildemeister S. A. C., Agustinas esq. Amunátegui, Santiago de Chile (Casilla 99-D)	gildemeist santiagochile	82523 (SGO 88)
Colombia	Siemens Colombiana Ltda. Carrera 10a, No. 24-49, Bogotá 1 (Apartado Aéreo 6829)	siemens bogota	435060 (044750)
Costa Rica	Siemens de Centro-América Ltda. Calle 7, Ave. F/G 1a, San José (Apartado XXII)	siemens sanjose	6247, 2997
Guatemala	Compañía Agro-Comercial, S. A. 8a. Avenida, No. 10 43, Zona 1 Ciudad de Guatemala (Apartado Postal 193)	comagro guatemala	22122/24
Mexico	Siemens Mexicana, S. A. Calle Poniente 116 No. 590 Col Industrial Vallejo, México, D. F.	siemens mexico	474243, 474247
Nicaragua	Siemens de Nicaragua Calle Central O. 108, Managua, D. N. (Apartado 7)	siemens managua	3333
Paraguay	La Química-Técnica, Fr. Rieder & Cia. Cnel. Bogado 1039/1047 Asunción (Casilla de Correo 586)	rieder asuncion	9169, 4185, 4186
Peru	Corporación Comercial Sudamericana S. A. "COSMANA", Edificio Cosmana, Esq. 28 de Julio y Petit Thouars, Lima (Casilla 505)	cosmana lima	41660 (3540037)
El Salvador	Layco, S. A., Calle Rubén Darío No. 436 San Salvador / El Salvador, C. A. (Apartado Postal 346)	layco sansalvador	5682, 5683
Uruguay	Conatel S. A., Ejido 1690 Montevideo (Casilla de Correo 1371)	conatel montevideo	97331, 97332
U.S.A.	Siemens America Incorporated Empire State Building, 350, Fifth Avenue 68th floor, New York 1, N. Y.	siemens newyork	Longacre 4-7674 (01-2070 Western Union)
Venezuela	Siemens Venezolana S. A. Avda. Principal Urbanización, Los Ruices Caracas (Apartado 3616)	siemens caracas	348531 (261)

Asia / Australia

Country	Address (Post Office Box)	Cables	Telephone (Telex)
Afghanistan	Siemens Afghanistan Ltd. Djade Maiwand 67-68, Kabul (P. O. B. 7)	siemens kabul	21911, 21912, 24003
Burma	Resident Engineer of Siemens & Halske AG, Siemens-Schuckertwerke AG, Siemens-Electrogeräte AG, 91, Sparks Street Rangoon (P. O. Box 1427)	siemens rangoon	10624
Hong Kong	Jebsen & Co., 12, Pedder Street Hong Kong (P. O. B. 97)	jebsen hongkong	225111 (HK 221)
India	Siemens Engineering & Manufacturing Co. of India Ltd., Raj Mahal, 84, Veer Narimam Road Bombay 1 (G. P. O. Box 490)	siemens bombay	(PR 77)
Indonesia	Siemens Indonesia Office, Kebon Sirih 4 Djakarta (P. O. B. 2469)	siemens djakarta	OG 47981 OG 47982 OG 47983 (250)
Iraq	Siemens Iraq Co. W. L. L. Electrical Engineers and Contractors Sa'adoon Street, Baghdad	irasiemens baghdad	86127/29
Iran	Siemens Iran Sherkate Sahami Kh. Takhte-Djamshid No. 32 Siemenshaus, Teheran	siemens teheran	60871 (2051)
Japan	Siemens Liaison Office Marunouchi 2-chome 8, Naka 10th Bldg., Annex Tokyo (Central P. O. Box 1144)	siemens tokyo	211-1754, 211-1755 (TK 2808)
Jordan (H. K. of)	F. A. Kettaneh & Co. Ltd. King Hussein Street, Amman (P. O. B. 485)	tenis amman	799, 910
Kuwait	Abdulmajeed Al-Gharabally & Co. Gharabally Street, Kuwait/Arabia (P. O. B. 101)	almajeed kuwait	32634, 32838, 32017, 35411
Lebanon	Ets. F. A. Kettaneh S. A. (Kettaneh Frères) Rue du Port, Beyrouth (P. O. B. 242)	tenis beyrouth	221180 (614)
Malaysia	The Cycle & Carriage Co. (Malaya) Ltd. Siemens Department, 362, Jalan Tuanku Abdul Rahman, Kuala Lumpur (P. O. B. 305)	cyclecarri kualalumpur	80381/85
Pakistan	Siemens Pakistan, Engineering Co. Ltd. ILACO House, Victoria Road, Karachi (P. O. B. 7158)	siemens karachi	55911 (02083-20)
The Philippines	Machinery and Engineering Supplies Inc. MESMA Building, Ayala Blvd. Ext. Corner Camagong Makati, Rizal, Manila (Manila, P. O. B. 1845)	mesma manila	87231, 87241 (147)
South Korea	Eisenberg & Co., Inc. Bando Building, Room 232, 238, Seoul (P. O. B. Kwanghwamoom 237)	eisenberg seoul	2-0835, 2-4024, 2-4476 (02045)
Syria	Syrian Import Export & Distribution Co., S. A. S. SIEDCO, Port Saïd Street, Damas (P. O. B. 363)	siedco damas	13431/33
Thailand	B. Grimm & Co. R. O. P., 63, Nakorn Sawan Road Bangkok (P. O. B. 66)	thairimm bangkok	26661/65
South-Viet-Nam	Groupement d'Achats Mines Industries (GAMI) 94, Boul. Hai-Ba-Trung, Saigon (Boîte Postale B 5)	groupachat saigon	23992, 23997
Australia			
Australia	Siemens Halske, Siemens Schuckert (Australasia) Pty. Ltd., 534-544, Church St. Richmond E. 1, Melbourne, Vic. (P. O. B. 24)	siemaustal melbourne	42 23 71 (30 425)





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