

## 9 cable system

# **Launch and line amplifiers**

- for compensation of through losses of multiswitches and interconnection cables in 9 cable distribution systems
- integrated LTE signal suppression filter
- signal level control and adjustable equalizer at all inputs
- push-pull amplifier on terrestrial TV line
- die-cast housing

#### SA91L

launch amplifier for amplifying of 8 SAT IF and terrestrial TV signals; built-in switch-mode power supply allows to feed: 18 V DC via H inputs and 14 V DC via V inputs to up lines; switchable 18 V DC via H outputs and switchable 14 V DC via V outputs to down lines; switchable 12 V DC via Terr. TV input

#### SA91DL

line amplifier for amplifying of 8 SAT IF and terrestrial TV signals; in line powering through H lines; switchable DC pass through H and V lines; switchable 12 V feeding via Terr. TV input; remote powering voltage indication











### Technical specifications

Frequency range         SAT IF         950-2400 MHz           Terr. TV         47-790 MHz           Gain         SAT IF, adjustable         22 dB (0 ÷ -15 dB) by 1 dB step           Terr. TV, adjustable         22 dB (0 ÷ -15 dB) by 1 dB step           Slope         SAT IF, switchable         0/3/5/7 dB           Terr. TV, switchable         0/6/12/18 dB           Isolation         SAT/SAT         30 dB           SAT/Terr. TV         30 dB           Noise figure, typical         ≤ 9 dB           Output level IMD3 = 60 dB Terr. TV****         109 dBμV           Output level IMD3 = 35 dB SAT IF****         114 dBμV           External equipment through V lines         14 V 0.5 A max. (switchable)         -           powering         through Terr line         12 V 0.1 A max. (switchable)         -           DC pass through, switchable through H lines         2 A* max.           Power consumption         230 V~ 50/60 Hz 7 W**         DC 9-18 V 5 W***           Operating temperature range         -20° ÷ + 50° C	Tourniour spourrioutions			
Frequency range         SAT IF         950-2400 MHz           Terr. TV         47-790 MHz           Gain         SAT IF, adjustable         22 dB (0 ÷ -15 dB) by 1 dB step           Terr. TV, adjustable         22 dB (0 ÷ -15 dB) by 1 dB step           Slope         SAT IF, switchable         0/3/5/7 dB           Terr. TV, switchable         0/6/12/18 dB           Isolation         SAT/SAT         30 dB           SAT/Terr. TV         30 dB           Noise figure, typical         ≤ 9 dB           Output level IMD3 = 60 dB Terr. TV****         109 dBμV           Output level IMD3 = 35 dB SAT IF****         114 dBμV           External equipment through V lines         14 V 0.5 A max. (switchable)         -           powering         through Terr line         12 V 0.1 A max. (switchable)         -           DC pass through, switchable through H lines         2 A* max.           Power consumption         230 V~ 50/60 Hz 7 W**         DC 9-18 V 5 W***           Operating temperature range         -20° ÷ + 50° C		TYPE	SA91L	SA91DL
Terr. TV	Ordering number		02781	02782
Gain         SAT IF, adjustable         22 dB (0 ÷ -15 dB) by 1 dB step           Slope         SAT IF, switchable         22 dB (0 ÷ -15 dB) by 1 dB step           Slope         SAT IF, switchable         0/3/5/7 dB           Isolation         SAT/SAT         30 dB           SAT/Terr. TV         30 dB           Noise figure, typical         ≤ 9 dB           Output level IMD3=60 dB Terr. TV****         109 dBμV           Output level IMD3=35 dB SAT IF****         114 dBμV           External equipment powering         through V lines         14 V 0.5 A max. (switchable)         -           powering         through H lines         18 V 1.8 A* max. (switchable)         -           DC pass through, switchable through H lines         12 V 0.1 A max. (switchable)         2 A* max.           Power consumption         230 V~ 50/60 Hz 7 W**         DC 9-18 V 5 W***           Operating temperature range         -20° ÷ + 50° C	Frequency range	SAT IF	950-2400 MHz	
Terr. TV, adjustable   22 dB (0 ÷ -15 dB) by 1 dB step		Terr. TV	47-790 MHz	
Slope       SAT IF, switchable       0/3/5/7 dB         Terr. TV, switchable       0/6/12/18 dB         Isolation       SAT/SAT       30 dB         SAT/Terr. TV       30 dB         Noise figure, typical       ≤ 9 dB         Output level IMD3=60 dB Terr. TV****       109 dBμV         Output level IMD3=35 dB SAT IF****       114 dBμV         External equipment prowering       through V lines       14 V 0.5 A max. (switchable)       -         by 1.8 A* max. (switchable)       -       -         through Terr line       12 V 0.1 A max. (switchable)       -         DC pass through, switchable through H lines       2 A* max.         Power consumption       230 V~ 50/60 Hz 7 W**       DC 9-18 V 5 W***         Operating temperature range       -20° ÷ + 50° C	Gain	SAT IF, adjustable	22 dB (0 ÷ -15 dB) by 1 dB step	
Terr. TV, switchable   SAT/SAT   30 dB     SAT/Terr. TV   30 dB     Noise figure, typical   ≤ 9 dB     Output level IMD3=50 dB Terr. TV****   109 dBμV     Output level IMD3=35 dB SAT IF****   114 dBμV     External equipment   through V lines   14 V 0.5 A max. (switchable)   -     through Terr line   12 V 0.1 A max. (switchable)   -     DC pass through, switchable through H lines   2 A* max.     Power consumption   230 V~ 50/60 Hz 7 W**   DC 9-18 V 5 W***     Operating temperature range   -20° ÷ + 50° C     Overating t		Terr. TV, adjustable	22 dB (0 ÷ -15 dB) by 1 dB step	
SAT/SAT   30 dB   SAT/Terr. TV   30 dB	Slope	SAT IF, switchable	0/3/5/7 dB	
SAT/Terr. TV  S		Terr. TV, switchable	0/6/12/18 dB	
Noise figure, typical $\leq 9 \text{ dB}$ Output level IMD3=60 dB Terr. TV****  Output level IMD3=35 dB SAT IF****  External equipment through V lines through H lines through Terr line through Terr line through Terr line through Terr line through H lines through H lines through H lines through Terr line through H lines through Terr line th	Isolation	SAT/SAT	30 dB	
Output level IMD3=60 dB Terr. TV****       109 dB $\mu$ V         Output level IMD3=35 dB SAT IF****       114 dB $\mu$ V         External equipment powering       through V lines       14 V 0.5 A max. (switchable)       -         powering       through H lines       18 V 1.8 A* max. (switchable)       -         through Terr line       12 V 0.1 A max. (switchable)       -         DC pass through, switchable through H lines       2 A* max.         Power consumption       230 V~ 50/60 Hz 7 W**       DC 9-18 V 5 W***         Operating temperature range       -20° ÷ + 50° C		SAT/Terr. TV	30 dB	
Output level IMD3=35 dB SAT IF****         114 dBμV           External equipment powering         through V lines         14 V 0.5 A max. (switchable)         -           powering         through H lines         18 V 1.8 A* max. (switchable)         -           through Terr line         12 V 0.1 A max. (switchable)         -           DC pass through, switchable through H lines         2 A* max.           Power consumption         230 V~ 50/60 Hz 7 W**         DC 9-18 V 5 W***           Operating temperature range         -20° ÷ + 50° C	Noise figure, typical		≤ 9 dB	
External equipment powering         through V lines         14 V 0.5 A max. (switchable)         -           powering         through H lines         18 V 1.8 A* max. (switchable)         -           through Terr line         12 V 0.1 A max. (switchable)         -           DC pass through, switchable through H lines         2 A* max.           Power consumption         230 V~ 50/60 Hz 7 W**         DC 9-18 V 5 W***           Operating temperature range         -20° ÷ + 50° C	Output level IMD3=60 dB Terr. TV****		109 dBμV	
powering         through H lines         18 V 1.8 A* max. (switchable)         -           through Terr line         12 V 0.1 A max. (switchable)         -           DC pass through, switchable through H lines         2 A* max.           Power consumption         230 V~ 50/60 Hz 7 W**         DC 9-18 V 5 W***           Operating temperature range         -20° ÷ + 50° C	Output level IMD3=35 dB SAT IF***		114 dBμV	
through Terr line	<b>External equipment</b>	through V lines	14 V 0.5 A max. (switchable)	-
DC pass through, switchable through H lines     2 A* max.       Power consumption     230 V~ 50/60 Hz 7 W**     DC 9-18 V 5 W***       Operating temperature range $-20^{\circ} \div + 50^{\circ}$ C	powering	through H lines	18 V 1.8 A* max. (switchable)	-
Power consumption         230 V~ 50/60 Hz 7 W**         DC 9-18 V 5 W***           Operating temperature range         -20° ÷ + 50° C		through Terr line	12 V 0.1 A max. (switchable)	-
Operating temperature range -20° ÷ + 50° C	DC pass through, switchable through H lines		2 A* max.	
	Power consumption		230 V~ 50/60 Hz 7 W**	DC 9-18 V 5 W***
Dimensions/Weight (nacked) 335x135x52 mm/1 18 kg 255x135x32 mm/0 9 kg	Operating tempera	ture range	-20° ÷ + 50° C	
Ziministria, Traight (Pasies)	Dimensions/Weigh	t (packed)	335x135x52 mm/1.18 kg	255x135x32 mm/0.9 kg

- \* 1 A max. through one line
- \*\* without external DC loading; with maximal external DC load 55 W
- \*\*\* in line powering of SA91D through H lines
- \*\*\*\* measured using 2 equal signals; output level by DIN45004B add 3 dB to mentioned above value