

# Televés

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# T-03

**Single Channel Amplifiers**  
*User manual*



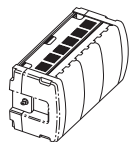


1.- REFERENCES DESCRIPTION

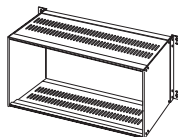
- Ref. 5081 .... Low gain BI amplifier
- Ref. 5083 .... Low gain BIII amplifier
- Ref. 5087 .... Mid Band amplifier
- Ref. 5088 .... Upper Band amplifier
- Ref. 5089 .... Hyper Band amplifier
- Ref. 5099 .... DAB amplifier
- Ref. 5082 .... FM Amplifier T03
- Ref. 5084 .... Low gain UHF amplifier
- Ref. 5094 .... High gain UHF amplifier
- Ref. 5097 .... A.G.C. UHF amplifier
- Ref. 5098 .... UHF amplifier high selectivity
- Ref. 5086 .... UHF DTT amplifier
- Ref. 5085 .... UHF DTT amplifier with coupler
- Ref. 5080 .... IF Amplifier (950 - 2150 MHz)
- Ref. 5498 .... Power supply (230 V  $\pm$  15 % - 50/60 Hz)  
(24 V - 2,5 A)

Accessories:

- Ref. 4061 .... Load "F" 75 ohm
- Ref. 5073 .... Face plate
- Ref. 5074 .... Link "F" connectors
- Ref. 5071 .... Wall mount (10 mod. + P.S.U.)
- Ref. 5239 .... Wall mount (12 mód. + P.S.U.)
- Ref. 5072 .... Universal cabinet (10 mod. + P.S.U.)
- Ref. 5069 .... Universal cabinet (14 mod. + P.S.U.)
- Ref. 5235 .... Universal cabinet (22 mod. + P.S.U.)
- Ref. 5301 .... 19" wall/sub-rack
- Ref. 8250 .... 19" sub-rack
- Ref. 5302 .... MATV headend cabinet



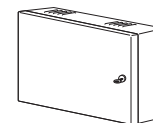
Refs. 5072, 5069, 5235



Ref. 8250



Ref. 5301



Ref. 5302

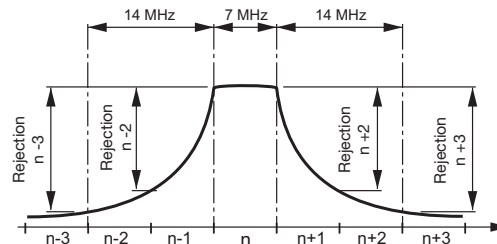
2.- TECHNICAL SPECIFICATIONS

2.1.- VHF Single-channels

Reference	5081	5083	5099	5087	5088	5089
Bandwidth (MHz)	7	7 / 16 (1)	37	7	7	8
Gain (dB)	50 ±2	50 ±2	45 ±3	58 ±2	58 ±2	58 ±2
Flatness (dB)	< 1	< 1	< 3	< 1	< 1	< 1
Gain adjustment (dB)	> 35	> 35	> 35	> 35	> 35	> 35
Rejection (n ±2) (dB)	> 40	> 30	> 20	> 30	> 25	> 30
Output level (EN 50083-5) (dBμV)	123	123	--	125	124	125
Output level (DAB) (dBμV)	--	112 (2)	114 (2)	--	--	--
Noise figure (dB)	< 9	< 9	< 9	< 9	< 9	< 9
Consump. at 24Vcc (mA)	65 ±5	65 ±5	90 ±5	90 ±5	90 ±5	90 ±5
Preamp. max. current (24Vcc) (mA)	100	100	100	100	100	100

1.- Adjust CH13 (refer to channels table on page 21)

2.- Fordi= 50 dB (2 channels at 4 MHz)



Ref.	Band	Chan.	Channel Freq. (MHz)
5081	B I	2	47 ... 54
		3	54 ... 61
		4	61 ... 68
	Sub Band	L1	68 ... 75
		L2	75 ... 82
		L3	82 ... 89
5083	B III	C5	174 ... 181
		C6	181 ... 188
		C7	188 ... 195
		C8	195 ... 202
		C9	202 ... 209
		C10	209 ... 216
		C11	216 ... 223
		C12	223 ... 230
		C13	216 ... 232 (DAB-UK)
		5099	

Ref.	Band	Chan.	Channel Freq. (MHz)
5087	BS Mid	S1	104 ... 111
		S2	111 ... 118
		S3	118 ... 125
		S4	125 ... 132
		S5	132 ... 139
		S6	139 ... 146
		S7	146 ... 153
		S8	153 ... 160
		S9	160 ... 167
		S10	167 ... 174
5088	BS Upper	S11	230 ... 237
		S12	237 ... 244
		S13	244 ... 251
		S14	251 ... 258
		S15	258 ... 265
		S16	265 ... 272
		S17	272 ... 279
		S18	279 ... 286
		S19	286 ... 293
		S20	293 ... 300

Ref.	Band	Chan.	Channel Freq. (MHz)
5089	BS Hyper	S21	302 ... 310
		S22	310 ... 318
		S23	318 ... 326
		S24	326 ... 334
		S25	334 ... 342
		S26	342 ... 350
		S27	350 ... 358
		S28	358 ... 366
		S29	366 ... 374
		S30	374 ... 382
		S31	382 ... 390
		S32	390 ... 398
		S33	398 ... 406
		S34	406 ... 414
		S35	414 ... 422
		S36	422 ... 430
		S37	430 ... 438
		S38	438 ... 446
		S39	446 ... 454
		S40	454 ... 462
S41	462 ... 470		

## 2.2.- FM Amplifier

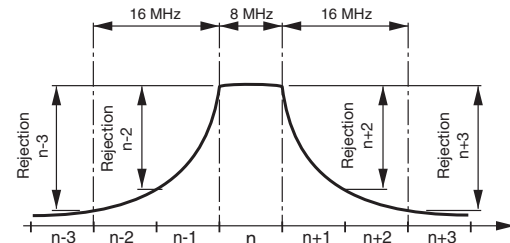
Reference		<b>5082</b>
Bandwidth	(MHz)	87,5 - 108
Gain	(dB)	35 ±3
Flatness	(dB)	< 3
Gain adjustment	(dB)	> 35
Rejection 77 MHz and 120 MHz	(dB)	> 30
Output level	(UNE - 523-79) (dBμV)	114
Noise figure	(dB)	< 9
Consumption at 24Vcc	(mA)	65 ±5
Preamp. maximum current (24Vcc)	(mA)	100

2.3.- UHF Single-channels

Reference	5084	5094	5086				5085 (DTT)	5098	5097
Bandwidth (MHz)	8	8	16	24	32	40	32	6	8
Gain (dB)	48 ±2	57 ±3	50 ±3				57 ±2	52 ±3	57 ±3
Flatness (dB)	< 1	< 1	< 3				< 3	< 2	> 1
Output level EN 50083-5 (dBμV)	> 120	> 125	111	109	108	108	> 106	> 121	A:125 / D:118
Rejection (n ± 1) (dB)	> 3	> 3	> 3				-	> 15	> 3
Rejection (n ± 2) (dB)	> 25	> 25	> 15				-	> 50	> 25
Rejection (n ± 3) (dB)	> 50	> 50	> 30				-	-	> 50
Rejection Vc ch 65 (dB)	-	-	> 20	> 15		> 22		-	-
Noise figure (dB)	< 9	< 9	< 9				< 9	< 11	< 9
Gain adjustment (dB)	> 30	> 30	> 30				> 30	> 30	20
Directivity (output mixing) (dB)	-	-	-				> 15	-	-
Output through attenuation (dB)	-	-	-				< 1,2	-	-
A.G.C. margin (dB)	-	-	-				-	-	30
Consump. at 24Vdc (mA)	70 ±5	90 ±5	70 ±5				90 ±5	90 ±5	90 ±5
Pream. max. current (24Vdc) (mA)	100	100	100				100	100	100

Notes:

- Specify channels on ordering.
- Rejection (n±1): measured between PV<sub>N</sub> and PA<sub>N-1</sub> or PA<sub>N</sub> and PV<sub>N+1</sub>, if N is the adjusted channel and N+1 and N-1 are the channels immediately above and below respectively.



2.4.- IF Amplifier

Reference		5080	
Bandwidth	(MHz)	47 - 862	950 - 2150
Gain	(dB)	---	35 - 50
Output level	(DIN V VDE 0855/12) (dBμV)	---	124
Rejection between inputs	(dB)	---	> 10
Return losses	(dB)	---	> 10
Insertion losses	(dB)	< 1.5	---
Input level	(dBμV)	> 100	---
Attenuation margin	(dB)	---	> 20
Equalisation margin	(dB)	---	> 12
Noise figure	(dB)	---	12.5
Consumption at 24Vcc (just amplifier)*	(mA)	---	130
LNB current (input 2)	(mA)	---	400 max.

\* For the installation calculation, add the predicted LNB consumption

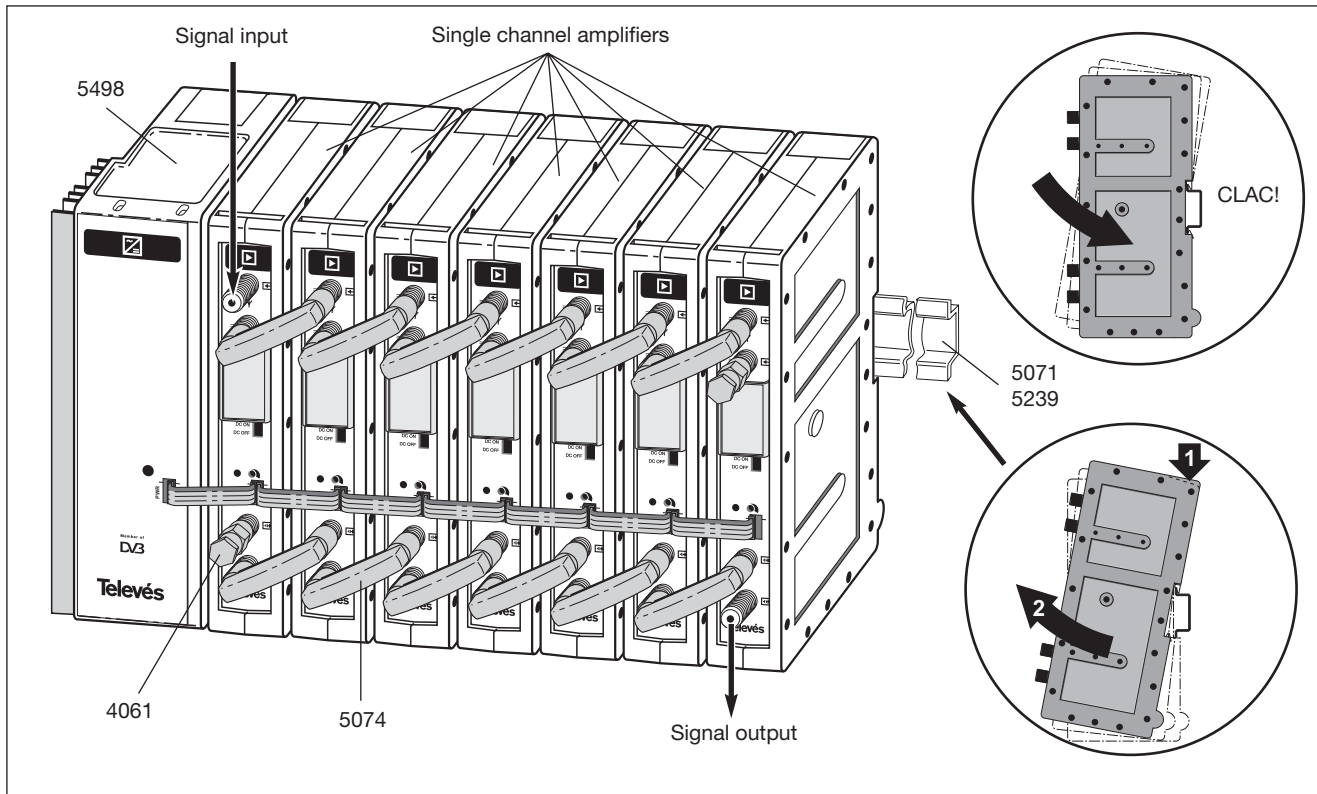
2.5.- Power Supply Unit

Reference		5498
Mains voltage	(V~)	230 ± 15 %
Frequency	(Hz)	50 / 60
Maximum power	(W)	70
Output voltage	(V=)	24
Maximum output current	(A)	2.5 (24V)
Maximum output power	(W)	60

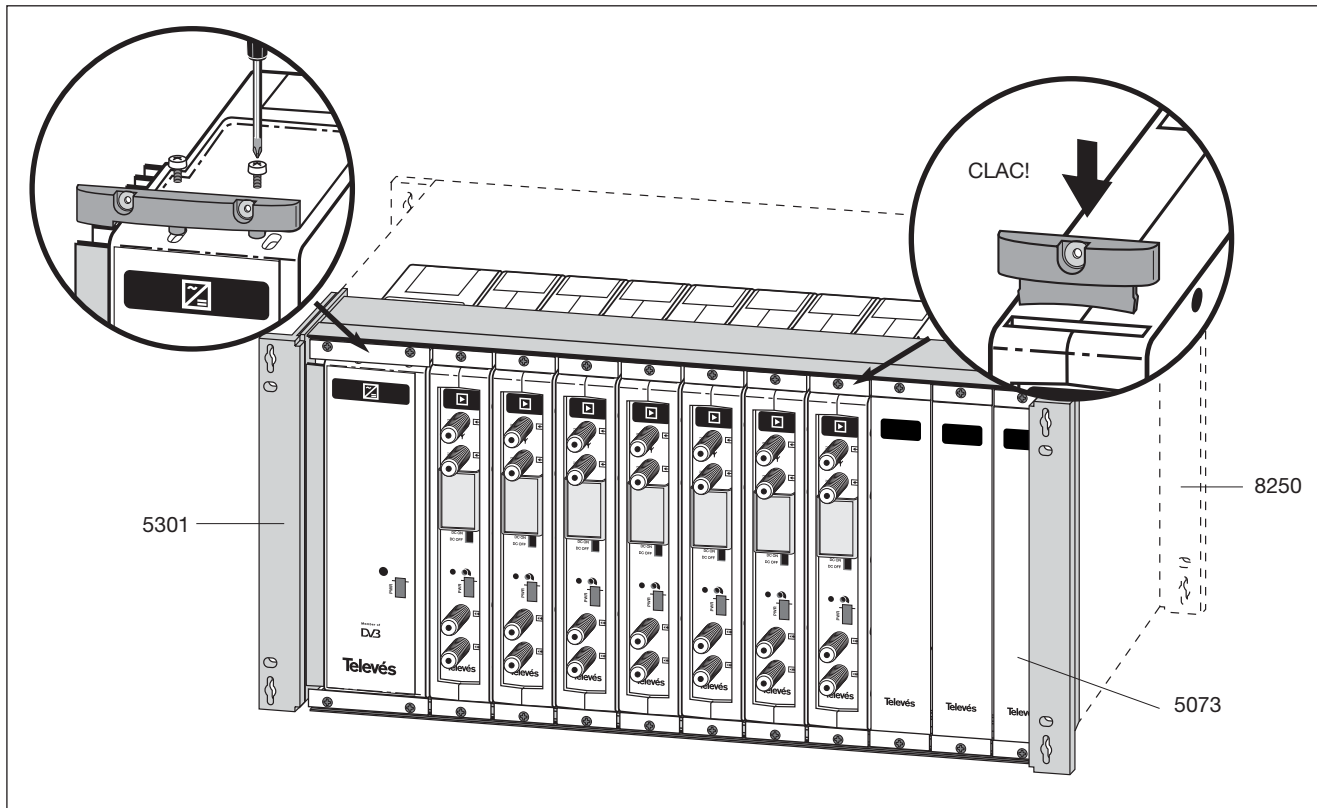


3.- MOUNTING

3.1.- Wall Mounting

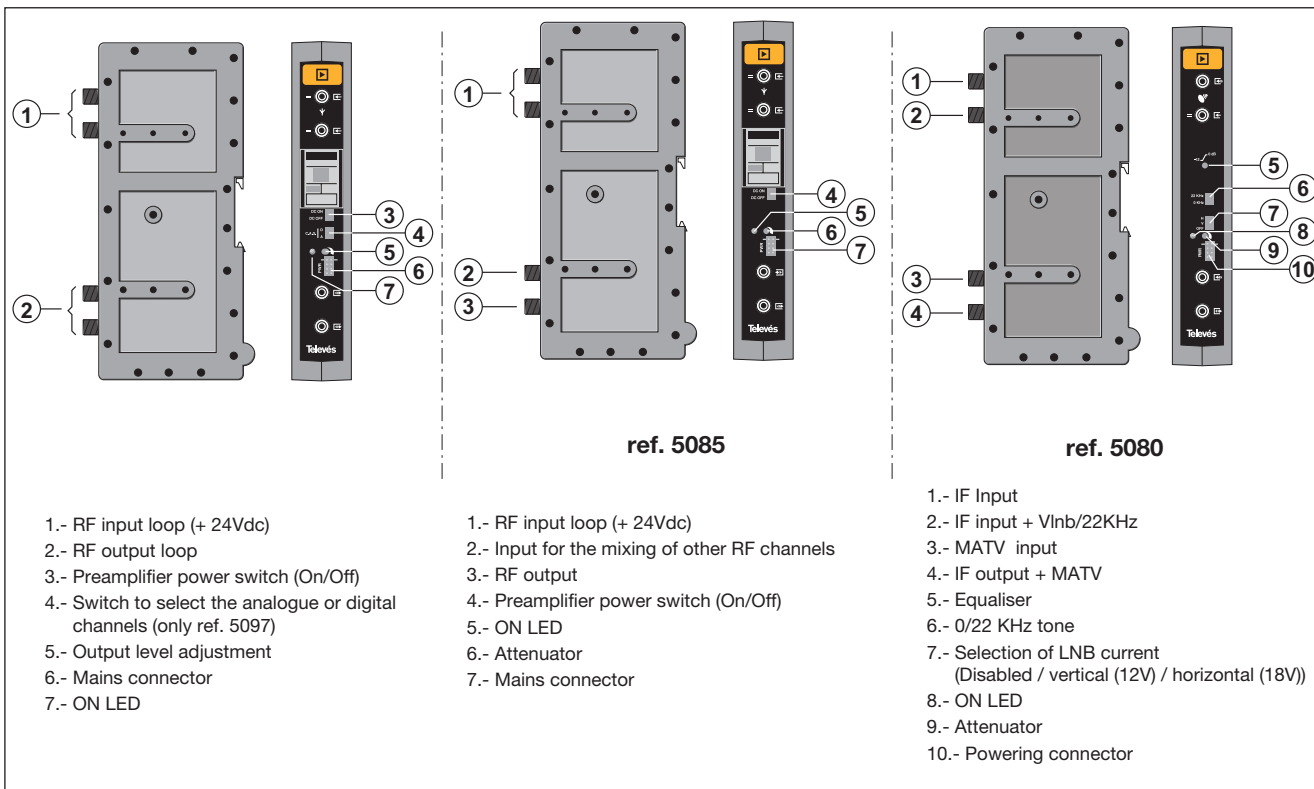


3.2.- 19" Rack Mounting



4. - DESCRIPTION OF ELEMENTS

4.1.- Single-channels



Single-channel amplifiers with diecast chassis and "F" connectors that can be rack or wall mounted.

The loop-through technique is used to mix the output signal from the units.

The connection between the supply and the modules, and between the modules themselves, is carried out via interconnecting links.

They also dispose of a bypass current via the input connectors to power the preamplifiers. This means that they can be disabled using the switch located on the front of the equipment.

***When various modules are used in an installation, the channels with higher frequencies must be located near to the output that is to be used.***

**(Only ref. 5085)**

With ref. 5085, given the output directivity, the mixing with the other channels in the installation is carried out via connector "2" and the output of the single channel, via connector "3".

**(Only ref. 5098)**

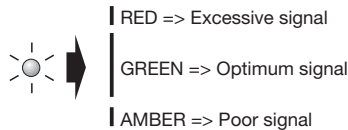
If the installation uses amplifiers ref. 5098, the adjacent channel modules should not be mounted together (see application example 6).

**(Only ref. 5097)**

After installing the modules, it is necessary to adjust the output level using the multi-turn potentiometre "5" that is located on the front of the unit. The output level will remain constant because of the units' AGC.

The amplifier can work with analogue or digital channels, by selecting "A" or "D" on the "AGC" switch (4) depending on which type of channel is going to be amplified.

The front LED informs us about the signal levels at the input.



**(Only ref. 5080)**

An amplifier with 2 IF inputs. It disposes of a bypass current through the input connector (2) to feed the LNB. It is possible to choose between (7) vertical polarity powering, horizontal polarity powering or switch the power off, so as to be able to power it from the outside.

Also, this input has a 22KHz tone to control the LNB, that can be switched on at the front (6).

When only one of the inputs is in use, the other input should be charged with 75 .

When the LNB can be powered with either of the two levels (for example ref. 7477, LNB Quatro), is advisable to select 18V.

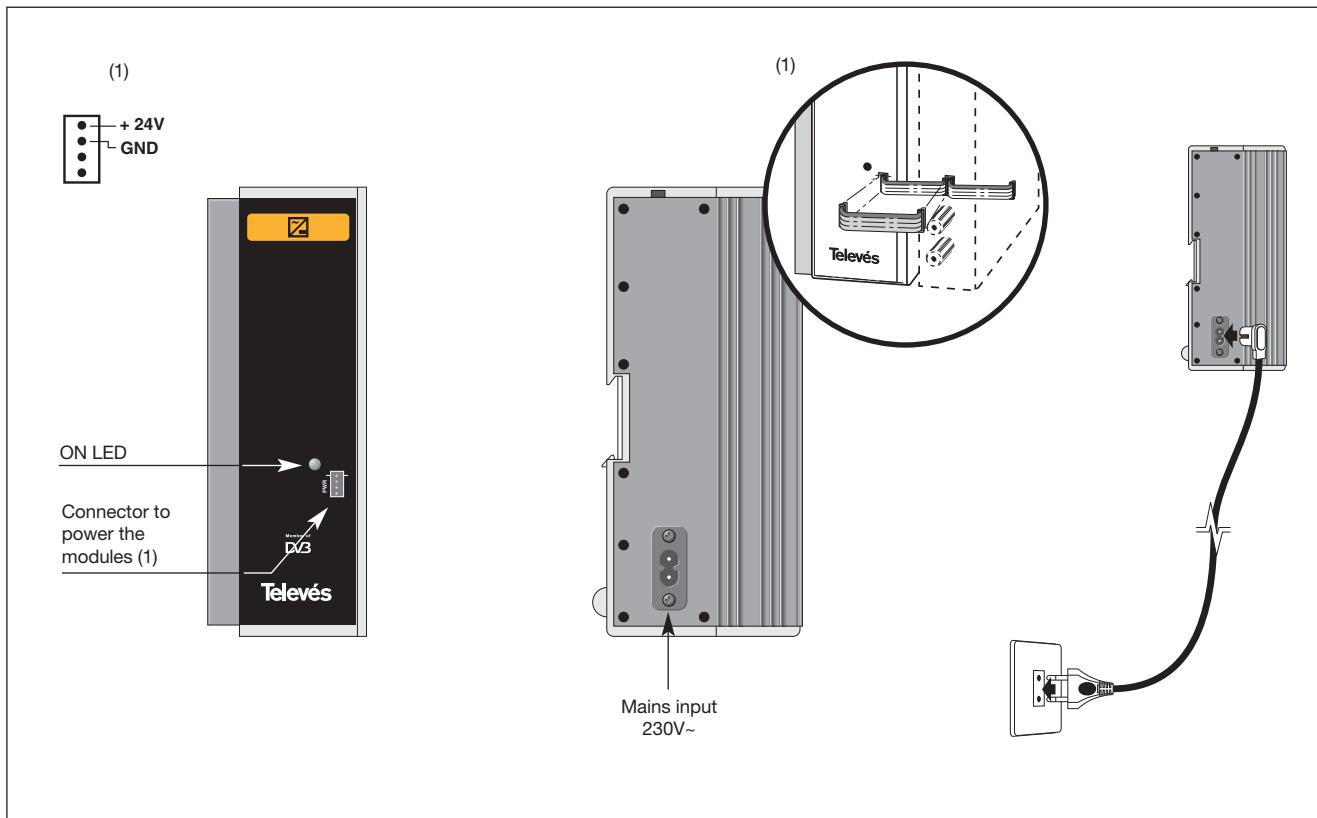
In the output, it disposes of an input loop through connector (3) for mixing the headend's MATV signal.

It also has an attenuator (9) and an equaliser (5) to treat the input signal and prepare it for the distribution conditions.

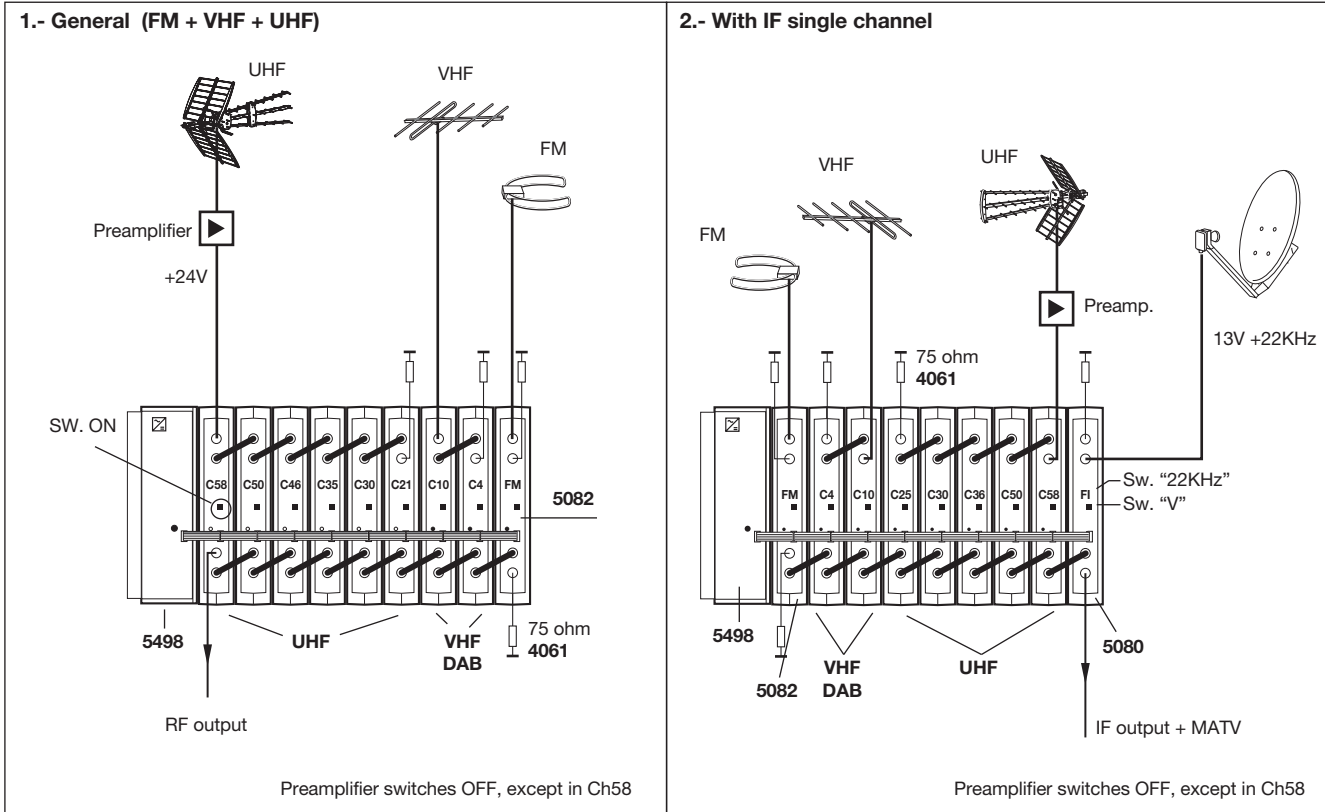
If there is a short-circuit or overconsumption, the amplifier warns the user - the LED begins to blink.

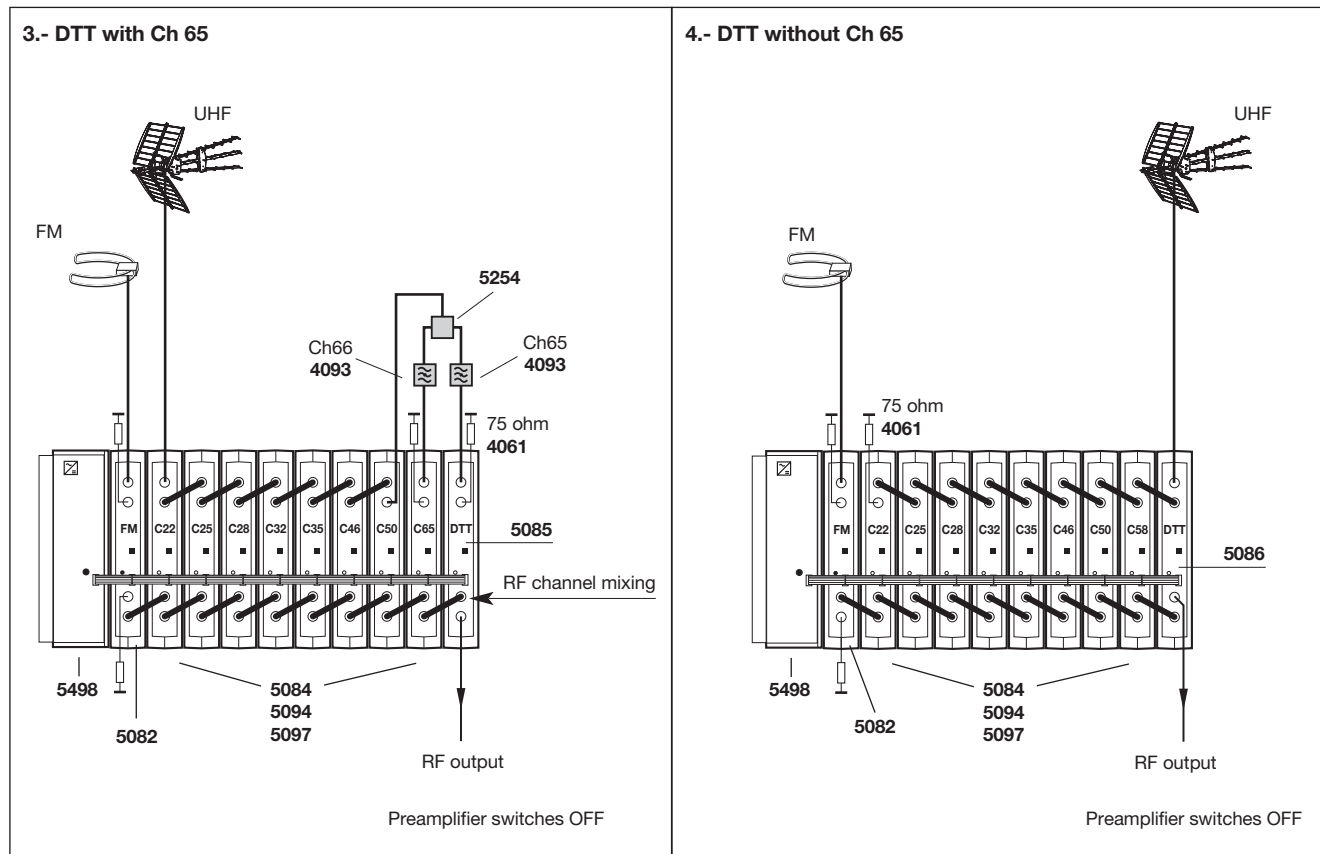
	LED colour
V <sub>LNB</sub> OFF	Green
V <sub>LNB</sub> ON (13 or 18V)	Amber
Short-circuit or overconsumption	Blinking

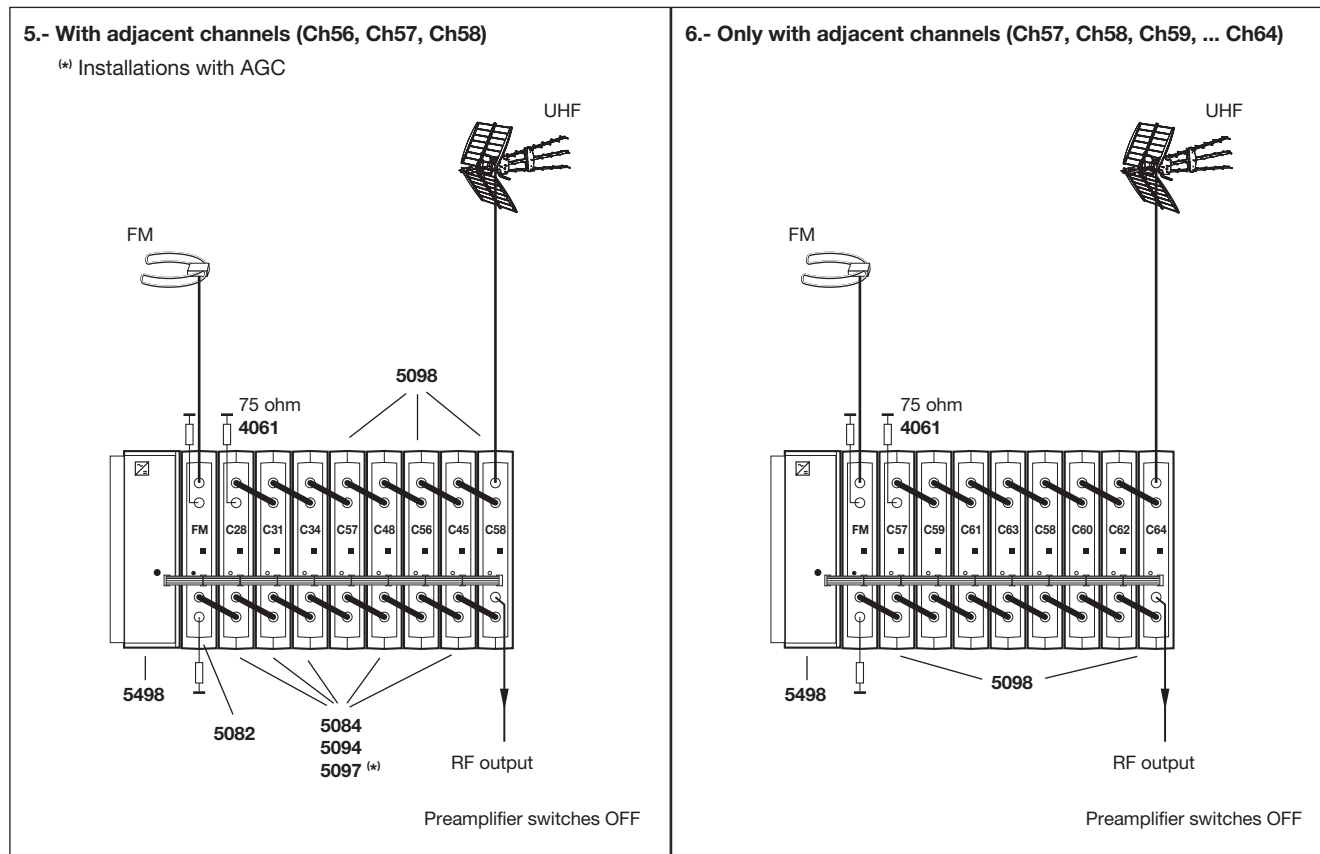
4.2.- Power Supply



7.- APPLICATIONS









**Televés**

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DECLARAÇÃO DE CONFORMIDADE  
DECLARATION DE CONFORMITE  
DECLARATION OF CONFORMITY**

Fabricante / Fabricante / Fabricant / Manufacturer: **Televés S.A.**  
Dirección/ Direção / Adresse / Address: **Rúa B. Conxo, 17  
15706 Santiago de Compostela  
SPAIN  
A-15010176**

NIF / VAT : **A-15010176**

Declaro bajo su exclusiva responsabilidad la conformidad del producto:  
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Declare, sous notre responsabilité, la conformité du produit:  
Declare under our own responsibility the conformity of the product:

Modelo / Modelo / Modèle / Model: **T 03**  
Marca / Marca / Marque / Mark: **Televés**

Con los requerimientos de la Directiva de baja tensión 73 / 23 / ECC y Directiva EMC 89 / 336 / ECC, para cuya evaluación se ha utilizado las siguientes normas:

Com as especificações da Directiva da baixa tensão 73 / 23 / ECC e Directiva EMC 89 / 336 / ECC, para cuja aprovação se aplicou as seguintes normas:

Avec les spécifications des Directives 73/ 23 / ECC et 89 / 336 / ECC, pour l'évaluation on a appliqué les normes.

With the Low Voltage Directive 73 / 23 / ECC and the EMC Directive 89 / 336 / ECC requirements, for the evaluation regarding the Directive, the following standards were applied.

**EN 50083-1: 1993  
EN 50083-2: 1995**

**Santiago de Compostela, 16/04/2002**



**José L. Fernández Camero**  
Technical director

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Televés S.A. ofrece una garantía de dos años calculados a partir de la fecha de compra para los países de la UE. En los países no miembros de la UE se aplica la garantía legal que está en vigor en el momento de la venta. Conserve la factura de compra para determinar esta fecha.

Durante el período de garantía, Televés S.A. se hace cargo de los fallos producidos por defecto del material o de fabricación. Televés S.A. cumple la garantía reparando o sustituyendo el equipo defectuoso.

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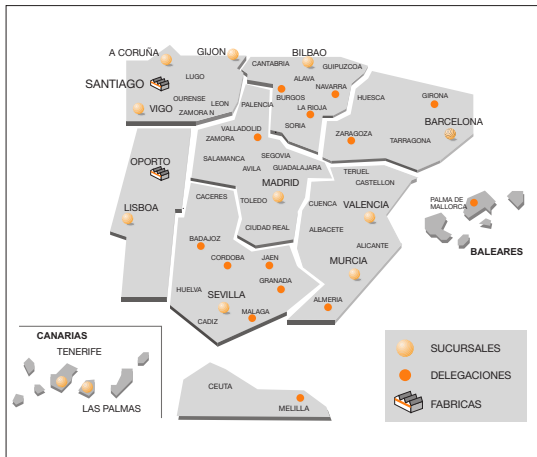
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