



EKSELANS BY ITS

**2024**  
VERSION

# DIGITAL PROGRAMMABLE AMPLIFIERS

JOIN THE  
TECHNOLOGICAL  
EXCELLENCE



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# EKSEL

## DIGITAL PROGRAMMABLE AMPLIFIERS

EK presents the new range of EKSEL programmable exchanges developed with the most modern digital filtering technology.

EKSEL models incorporate 32 ultra-selective digital filters that allow the selection, filtering and amplification of each digital multiplex, guaranteeing the ideal output level for each type of installation - whether individual or collective - and a very high quality output.

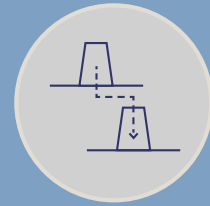
The control units also incorporate an automatic search system for fast and efficient self-programming of the DTT multiplexes of the UHF inputs.

The EKSEL range complies with the requirements for header equipment required by the Common Telecommunications Infrastructure Regulatory Regulation (ICT2) for access to telecommunication services inside buildings, approved by Royal Decree 346/2011 of March 11, since it incorporates very high selectivity filters that allow to guarantee a difference less than 3dB between channels of the same band.

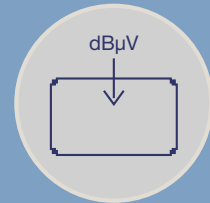
EKSEL programmable control panels: the perfect solution for the Second Digital Dividend



AUTOMATIC PROGRAMMING  
+  
AUTO SEARCH OF DTT MUXES



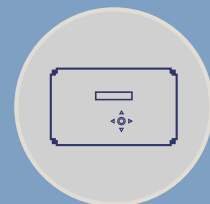
CHANNEL CONVERSION



INPUT LEVEL MEASUREMENT



AUTOMATIC GAIN CONTROL



PROGRAMMING WITH DISPLAY  
+  
JOYSTICK



HIGH SELECTIVITY

# PROGRAMMABLE AMPLIFIERS

## EKSEL 432

REFERENCE	EKSEL 432		
Code	071011		
	UHF	FM	DAB/ BIII/ UHF
Inputs	2	1	1
Frequency range	470 MHz – 862MHz	88-108 MHz	DAB 195-223MHz BIII 174-230MHz UHF 470-694/790/862MHz
Max. gain	>55dB	35dB	>55dB
Number of filters	32*	-	32*
Channels per filter	1	-	1
Selectivity	>30@+/-1MHz	>20@+/-20MHz	>30@+/-1MHz
Equalizer	0.6	-	0.6
Attenuation control	0...20dB+AGC	0...20dB	0...20dB+AGC
Max. input level	110dBμV	-	110dBμV
Max. output level (DIN45004B)	120dBμV		
Max. output level (EN50083 IMD3 2CH -36dB)	128-131dBμV**		
Noise figure	-	<6dB	-
Isolation	>35dB@+/-1MHz	>20dB@+/-20MHz	>35dB@+/-1MHz
Preamp. power supply	12V/24V/OFF	-	-
Max. preamplifier energy consumption	***	-	-
Power supply	100-254 V/ 50 - 60 Hz		
Energy consumption	<20W		
Operational temperature range	0...50°C		
USB Port	USB 2.0/3.0 tipo A		
Screen	2 lines, 16 characters		
Connector type	F		
RF output	TER / TEST -30dB		

\*\* Number of filters for UHF inputs. If the DAB input is selected, 6 filters will be assigned to this band and 26 to the UHF inputs

- ✓ Programmable amplifier with ultraselective filters
- ✓ 4 inputs (2 x UHF, 1 x FM, 1 x DAB / VHF-UHF selectable)
- ✓ 2 outputs (TER / TEST -30dB)
- ✓ 32 ultra-selective digital filters
- ✓ Gain > 55dB
- ✓ Output level 120dBμV (45004B) / 131dBμV (IMD3-36dB)
- ✓ Frequency conversion option
- ✓ Automatic gain control
- ✓ Manual programming (display + joystick) and automatic (automatic search and adjustment)



# PROGRAMMABLE AMPLIFIERS

## EKSEL 432 ICT

REFERENCE	EKSEL 432 ICT			
Code	071012			
	UHF	DAB/ BIII/ UHF	FM	SAT
Inputs	2	1	1	1
Frequency range	470 – 862 MHz	DAB 195-223MHz BIII 174-230MHz UHF 470-694/790/862MHz	88-108 MHz	950-2150 MHz
Max. gain	>55dB	>55dB	35dB	40dB
Number of filters	32	32*	-	-
Channels per filter	1	1	-	-
Selectivity	>30@+/-1MHz	>30@+/-1MHz	>20@+/-20MHz	
Equalizer	0..6	0..6	-	0..9
Attenuation control	0..20dB	0..20dB	0..20dB	0..20dB
Max. input level	110dBμV	110dBμV	-	-
Max. output level (DIN45004B)	116dBμV (UHF/VHF); > 119 dBμV SAT (35 dB)			
Max. output level (EN50083 IMD3 2CH -36dB)	>131dBμV (terrestre)			
Noise figure	-	-	<6dB	<8dB
Isolation	>35dB@+/-1MHz	>35dB@+/-1MHz	>20dB@+/-20MHz	>40dB(5-862MHz)
Preamp. power supply	12V/24V/OFF		-	13V/17V, 22kHz
Max. preamplifier energy consumption	***		-	300mA
Power supply	100-254 V/ 50 - 60 Hz			
Energy consumption	<25W			
Operational temperature range	0...50°C			
USB Port	USB 2.0/3.0 tipo A			
Screen	2 líneas, 16 caracteres			
Connector type	F			
RF output	SAT+ TER/ TER/ TEST -30dB			

\*\* Number of filters for UHF inputs. If the DAB input is selected, 6 filters will be assigned to this band and 26 to the UHF inputs

- ✓ 5 inputs (2 x UHF, 1 x FM, 1 x DAB / VHF-UHF selectable, 1 x SAT)
- ✓ 3 outputs (TER / TER + SAT / TEST -30dB)
- ✓ 32 ultra-selective digital filters
- ✓ Gain > 55dB (DTT) / 40dB (SAT)
- ✓ DTT output level 118dBuV (45004B) / 129dBuV (IMD3-36dB)
- ✓ SAT 119dBuV output level (IMD-35dB)
- ✓ Automatic digital multiplex search
- ✓ Programming with joystick and display. Simple navigation through the menu
- ✓ Processing functionality for channel conversion
- ✓ Measurement of the digital multiplex input level
- ✓ Automatic real-time gain control
- ✓ Automatic detection of the necessary filter LTE1 (4G) / LTE2 (5G)
- ✓ Preamp Power Option
- ✓ USB 2.0 / 3.0 for dump configurations
- ✓ Easy access internal power supply



# PROGRAMMABLE AMPLIFIERS

## EKSEL COMPACT

REFERENCE	EKSEL COMPACT		
Code	071015		
	BIII/UHF	FM	DAB/ BIII/ UHF
Inputs	2	1	1
Frequency range	BIII 174-230MHz UHF 470-694/790/ 862MHz	88-108 MHz	DAB 195-223MHz BIII 174-230MHz UHF 470-694/790/ 862MHz
Max. gain	>70dB autoreg.	35dB	>70dB autoreg.
Input sensitivity (Auto search) typ	48dB $\mu$ V	-	48dB $\mu$ V
Input sensitivity (Manual search) (Watchdog off) Typ	43dB $\mu$ V	-	43dB $\mu$ V
Number of filters	32*	-	32*
Channels per filter	1	-	1
Equalizer	0.6	-	0.6
Attenuation control	0...20dB+AGC	0...20dB	0...20dB+AGC
Max. input level	110dB $\mu$ V	-	110dB $\mu$ V
Max. output level (DIN45004B)	120dB $\mu$ V		
Max. output level (EN50083 IMD3 2CH -36dB)	128-131dB $\mu$ V		
Noise figure	-	<6dB	-
Isolation	>35dB@+/-1MHz	>20dB@+/-20MHz	>35dB@+/-1MHz
Max. preamplifier energy consumption	12Vdc/OFF	-	12Vdc/OFF
Power supply	100-254Vac / 50-60Hz 12Vdc remote power option through the output connector		
Energy consumption	<20W		
Operational temperature range	-10...45°C		
Screen	2 lines, 16 caracteres		
Connector type	F		
RF output	TER / TEST -30dB		

\*\* Number of filters for UHF inputs. If the DAB input is selected, 6 filters will be assigned to this band and 26 to the UHF inputs

- ✓ 4 inputs (1 x FM, 1 x VHF + DAB + UHF selectable, 2 x VHF/UHF selectable)
- ✓ 2 outputs (TER / TEST -30dB)
- ✓ 32 ultra-selective digital filters
- ✓ Gain >70dB autoreg.
- ✓ Output level 120dB $\mu$ V (45004B) / 131dB $\mu$ V (IMD3-36dB)
- ✓ Automatic digital multiplex search
- ✓ Programming with buttons and display. Simple navigation through the menu
- ✓ Processing functionality for channel conversion
- ✓ Automatic gain control in real time
- ✓ Preamp Power Option
- ✓ Possibility of remote power supply through the output connector
- ✓ Compact size: 190 x 120 x 50 mm



# PROGRAMMABLE AMPLIFIERS

## EKSEL COMPACT ICT

REFERENCE	EKSEL COMPACT ICT			
Code	071016			
	BIII/UHF	FM	DAB/ BIII/ UHF	SAT
Inputs	2	1	1	1
Frequency range	BIII 174-230MHz UHF 470- 694/790/862MHz	88-108 MHz	DAB 195-223MHz BIII 174-230MHz UHF 470- 694/790/862MHz	950-2150 MHz
Max. gain	>70dB autoreg.	35dB	>70dB autoreg.	40dB
Input sensitivity (Auto search) typ	48dB $\mu$ V	-	48dB $\mu$ V	-
Input sensitivity (Manual search) (Watchdog off) Typ	43dB $\mu$ V	-	43dB $\mu$ V	-
Number of filters	32*	-	32*	-
Channels per filter	1	-	1	-
Equalizer	0..6	-	0..6	0..9
Attenuation control	0...20dB+ AGC	0...20dB	0...20dB+ AGC	0...20dB
Max. input level	110dB $\mu$ V	-	110dB $\mu$ V	-
Max. output level (DIN45004B)	118dB $\mu$ V (UHF/VHF); > 119 dB $\mu$ V SAT (35 dB)			
Max. output level (EN50083 IMD3 2CH -36dB)	>131dB $\mu$ V (terrestrial)			
Noise figure	-	<6dB	-	<8dB
Isolation	>35dB@+/-1MHz	>20dB@+/- 20MHz	>35dB@+/-1MHz	>40dB(5- 862MHz)
Max. preamplifier energy consumption	***	-	-	300mA
Power supply	100-254Vac / 50-60Hz 12Vdc remote power option through the output connector			
Energy consumption	<25W			
Operational temperature range	-10...45°C			
Screen	2 lines, 16 caracteres			
Connector type	F			
RF output	SAT+ TER/ TER/ TEST -30dB			

\*\* Number of filters for UHF inputs. If the DAB input is selected, 6 filters will be assigned to this band and 26 to the UHF inputs

- ✓ 5 inputs (1 x FM, 1 x VHF + DAB + UHF selectable, 2 x VHF/UHF selectable 1 x SAT)
- ✓ 3 outputs (TER / TER + SAT / TEST -30dB)
- ✓ 32 ultra-selective digital filters
- ✓ Gain >70dB autoreg.
- ✓ Output level TDT 118dB $\mu$ V (45004B) / 129dB $\mu$ V (IMD3-36dB) Output level SAT 119dB $\mu$ V (IMD3-35dB)
- ✓ Automatic digital multiplex search
- ✓ Programming with buttons and display. Simple navigation through the menu
- ✓ Processing functionality for channel conversion
- ✓ Automatic gain control in real time
- ✓ Preamp Power Option
- ✓ Possibility of remote power supply through the output connector
- ✓ Compact size: 190 x 120 x 50 mm



# PROGRAMMABLE AMPLIFIERS

## EKSEL COMPACT PLUS

REFERENCE	EKSEL COMPACT PLUS		
Code	071018		
	BIII/UHF	FM	DAB/ BIII/ UHF
Inputs	2	1	1
Frequency range	BIII 174-230MHz UHF 470-694/790/ 862MHz	88-108 MHz	DAB 195-223MHz BIII 174-230MHz UHF 470-694/790/ 862MHz
Max. gain	>70dB autoreg.	35dB	>70dB autoreg.
Input sensitivity (Auto search) typ	48dBµV	-	48dBµV
Input sensitivity (Manual search) (Watchdog off) Typ	43dBµV	-	43dBµV
Number of filters	32*	-	32*
Channels per filter	1	-	1
Equalizer	0..6	-	0..6
Attenuation control	0...20dB+AGC	0...20dB	0...20dB+AGC
Max. input level	110dBµV	-	110dBµV
Max. output level (DIN45004B)	125dBµV		
Max. output level (EN50083 IMD3 2CH -36dB)	136dBµV		
Noise figure	-	<6dB	-
Isolation	>35dB@+/-1MHz	>20dB@+/-20MHz	>35dB@+/-1MHz
Max. preamplifier energy consumption	12Vdc/OFF	-	12Vdc/OFF
Power supply	100-254Vac / 50-60Hz 12Vdc remote power option through the output connector		
Energy consumption	<20W		
Operational temperature range	-10...45°C		
Screen	2 lines, 16 caracteres		
Connector type	F		
RF output	TER / TEST -30dB		

\*\* Number of filters for UHF inputs. If the DAB input is selected, 6 filters will be assigned to this band and 26 to the UHF inputs

- √ 4 inputs (1 x FM, 1 x VHF + DAB + UHF selectable, 2 x VHF/UHF selectable)
- √ 2 outputs (TER / TEST -30dB)
- √ 32 ultra-selective digital filters
- √ Gain >70dB autoreg.
- √ Output level 125dBµV (45004B) / 136dBµV (IMD3-36dB)
- √ Automatic digital multiplex search
- √ Programming with buttons and display. Simple navigation through the menu
- √ Processing functionality for channel conversion
- √ Automatic gain control in real time
- √ Preamp Power Option
- √ Possibility of remote power supply through the output connector
- √ Compact size: 190 x 120 x 50 mm



# PROGRAMMABLE AMPLIFIERS

## EKSEL COMPACT ICT PLUS

REFERENCE	EKSEL COMPACT ICT PLUS			
Code	071019			
	BIII/UHF	FM	DAB/ BIII/ UHF	SAT
Inputs	2	1	1	1
Frequency range	BIII 174-230MHz UHF 470- 694/790/862MHz	88-108 MHz	DAB 195-223MHz BIII 174-230MHz UHF 470- 694/790/862MHz	950-2150 MHz
Max. gain	>70dB autoreg.	35dB	>70dB autoreg.	40dB
Input sensitivity (Auto search) typ	48dBµV	-	48dBµV	-
Input sensitivity (Manual search) (Watchdog off) Typ	43dBµV	-	43dBµV	-
Number of filters	32*	-	32*	-
Channels per filter	1	-	1	-
Equalizer	0..6	-	0..6	0..9
Attenuation control	0...20dB+ AGC	0...20dB	0...20dB+ AGC	0...20dB
Max. input level	110dBµV	-	110dBµV	-
Max. output level (DIN45004B)	123dBµV (UHF/VHF); > 119 dBµV SAT (35 dB)			
Max. output level (EN50083 IMD3 2CH -36dB)	>134dBµV (terrestrial)			
Noise figure	-	<6dB	-	<8dB
Isolation	>35dB@+/-1MHz	>20dB@+/- 20MHz	>35dB@+/-1MHz	>40dB(5- 862MHz)
Max. preamplifier energy consumption	***	-	-	300mA
Power supply	100-254Vac / 50-60Hz 12Vdc remote power option through the output connector			
Energy consumption	<25W			
Operational temperature range	-10...45°C			
Screen	2 lines, 16 caracteres			
Connector type	F			
RF output	SAT+ TER/ TER/ TEST -30dB			

\*\* Number of filters for UHF inputs. If the DAB input is selected, 6 filters will be assigned to this band and 26 to the UHF inputs

- ✓ 5 inputs (1 x FM, 1 x VHF + DAB + UHF selectable, 2 x VHF/UHF selectable 1 x SAT)
- ✓ 3 outputs (TER / TER + SAT / TEST -30dB)
- ✓ 32 ultra-selective digital filters
- ✓ Gain >70dB autoreg.
- ✓ Output level TDT 123dBuV (45004B) / 134dBuV (IMD3-36dB) Output level SAT 119dBuV (IMD3-35dB)
- ✓ Automatic digital multiplex search
- ✓ Programming with buttons and display. Simple navigation through the menu
- ✓ Processing functionality for channel conversion
- ✓ Automatic gain control in real time
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- ✓ Possibility of remote power supply through the output connector
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HIGH LEVEL  
OUTPUT

EKSEL  
COMPACT ICT  
PLUS

PC  
SOFTWARE  
AVAILABLE



# ACCESSORIES

Reference	Code	Description
FA EKSEL	071014	Replacement power supply EKSEL
AMCD	059001	DIN rail fixing accessory

SUITABLE ONLY  
FOR 432 AND  
432 ICT VERSIONS



FA EKSEL

AMCD



SUITABLE ONLY  
FOR COMPACT Y  
COMPACT PLUS  
VERSIONS



**EKSELANS BY ITS**

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