



# ALCAD

SISTEMA DE MULTICONMUTADORES  
MULTISWITCH SYSTEM  
MULTISWITCH SISTEMI  
SYSTÈME MULTICOMMUTATEUR



# MULTICONMUTADORES - MULTISWITCHES- MULTISWITCH'LER - MULTICOMMUTATEURS

CÓDIGO-CODE-CODE	9130079	9130080	9130081	9130082	9130083						
MODELO-MODEL-MODELE	MB-302	MB-303	MB-304	MB-305	MB-306						
Entradas/salidas/derivaciones Inputs/outputs/taps Giriş/çıkış/yan çıkış Entrées/sorties/dérivations		13/0/8	13/0/12	13/0/16	13/0/20	13/0/24					
Rango de frecuencia Frequency range Frekans Gamme de fréquences	Band MHz	TV 47-862	SAT 950-2150	TV 47-862	SAT 950-2150	TV 47-862	SAT 950-2150	TV 47-862	SAT 950-2150		
Atenuación de derivación Tap loss Yan çıkış kaybı Atténuation de dérivation	dB ±TOL	0 ±2,0	0 ±2,0	1 ±2,0	1 ±2,0	1 ±2,0	2 ±2,0	2 ±2,0	2 ±2,0		
Equalización de derivación Tap equalization Yan çıkış eğimi Egalisation de dérivation	dB	3	3	2	3	2	3	1	2	1	2
Nivel de salida Output level Çıkış seviyesi Niveau de sortie	dBpV	95 (DIN 45004B)	100 (IMD <sub>3</sub> -35 dB) 90 (IMD <sub>2</sub> -35 dB)	92 (DIN 45004B)	100 (IMD <sub>3</sub> -35 dB) 90 (IMD <sub>2</sub> -35 dB)	92 (DIN 45004B)	100 (IMD <sub>3</sub> -35 dB) 90 (IMD <sub>2</sub> -35 dB)	91 (DIN 45004B)	100 (IMD <sub>3</sub> -35 dB) 90 (IMD <sub>2</sub> -35 dB)	91 (DIN 45004B)	100 (IMD <sub>3</sub> -35 dB) 90 (IMD <sub>2</sub> -35 dB)
Rechazo entre bandas Rejection between bands Girişler arası izolasyon Rejection entre bandes	dB						>25	TV/SAT			
							>65	SAT/TV			
Desacoplo entre usuarios Isolation between users Yan çıkışlar arası izolasyon Décoyage entre utilisateurs	dB						>25	TV			
							>30	SAT			
Desacoplo de commutación Isolation of switching Anahtarlama Découplage de commutation	dB						>30	SAT/SAT			
Commutación de las salidas Switching the outputs Uydu seçimi Commutation des sorties							DSEqC 2.0				
							14 V.../18 V...				
							0/22 KHz				
Alimentación de las LNB Power supply of the LNB LNB besleme Alimentation des LNB							2000 mA / 13 V...				
Consumo desde el receptor Consumption from the receiver Uydu alıcıdan çekilen akım Consommation du récepteur	mA						40 ±2,0 (14/18 V... )				

IMD<sub>3</sub> -35 dB: 2 equal carriers, EN 50083-5  
 IMD<sub>2</sub> -35 dB: 2 equal carriers, EN 50083-5

Data published in compliance with the definitions and measurement methods of the following standards: EN 50083-3, EN 50083-4 and EN 50083-5

# MULTICONMUTADORES - MULTISWITCHES- MULTISWITCH'LER - MULTICOMMUTATEURS

CÓDIGO-CODE-CODE	9130114	9130115	9130116	9130117	9130118	
MODELO-MODEL-MODELE	ML-302	ML-303	ML-304	ML-305	ML-306	
Entradas/salidas/derivaciones Inputs/outputs/taps Giriş/cıkış yan çıkış Entrées/sorties/dérivations	13/13/8	13/13/12	13/13/16	13/13/20	13/13/24	
Rango de frecuencia Frequency range Frekans Gamme de fréquences	Band MHz	TV 47-862	SAT 950-2150	TV 47-862	SAT 950-2150	
Atenuación de derivación Tap loss Yan çıkış kaybı Atténuation de dérivation	dB ±TOL	2 ±2,0	0 ±2,0	4 ±2,0	1 ±2,0	
Equalización de derivación Tap equalization Yan çıkış eğimi Egalisation de dérivation	dB	3	3	2	3	
Atenuación de paso Through loss Geçiş kaybı Atténuation de passage	dB ±TOL	4,5 ±1,0	2,0 ±1,0	4,5 ±1,0	3,0 ±1,0	
Nivel de salida Output level Çıkış seviyesi Niveau de sortie	dB $\mu$ V	95 [DIN 45004B] 90 [IMD <sub>2</sub> -35 dB]	100 [IMD <sub>3</sub> -35 dB] 92 [DIN 45004B] 90 [IMD <sub>2</sub> -35 dB]	100 [IMD <sub>3</sub> -35 dB] 92 [DIN 45004B] 90 [IMD <sub>2</sub> -35 dB]	100 [IMD <sub>3</sub> -35 dB] 91 [DIN 45004B] 90 [IMD <sub>2</sub> -35 dB]	100 [IMD <sub>3</sub> -35 dB] 91 [DIN 45004B] 90 [IMD <sub>2</sub> -35 dB]
Rechazo entre bandas Rejection between bands Girişler arası izolasyon Rejection entre bandes	dB			>25 TV/SAT >65 SAT/TV		
Desacoplo entre usuarios Isolation between users Yan çıkışlar arası izolasyon Découplage entre utilisateurs	dB			>25 TV >30 SAT		
Desacoplo de conmutación Isolation of switching Anahtarlama Découplage de commutation	dB			>30 SAT/SAT		
Comutación de las salidas Switching the outputs Uydu seçimi Commutation des sorties				DiSEqC 2.0 14 V--/18 V-- 0/22 KHz		
Alimentación de las LNB Power supply of the LNB LNB besleme Alimentation des LNB				2000 mA / 13 V--		
Consumo desde el receptor Consumption from the receiver Uydu alıcıdan çekilen akım Consommation du récepteur	mA			40 ±2,0 (14/18 V--)		

IMD<sub>3</sub> -35 dB: 2 equal carriers, EN 50083-5

IMD<sub>2</sub> -35 dB: 2 equal carriers, EN 50083-5

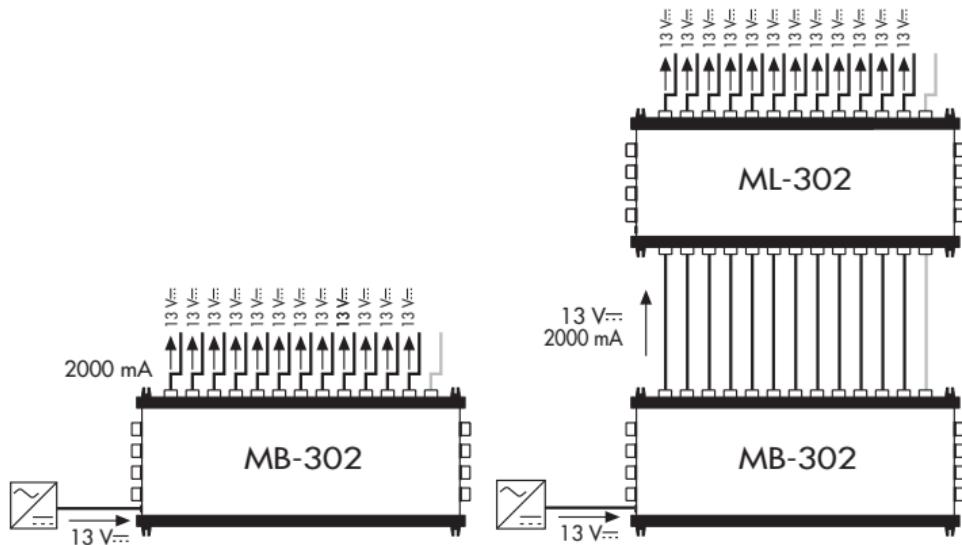
CÓMO ALIMENTAR LOS MULTISWITCHES

HOW TO FEED THE MULTISWITCH

MULTISWITCH BESLEMESİ

COMMENT ALIMENTER LE MULTICOMMUTATEUR

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INSTALACIÓN DE LNBS

INSTALLING LNB

LNB KULLANIMI

INSTALLATION DES LNB

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QUATRO



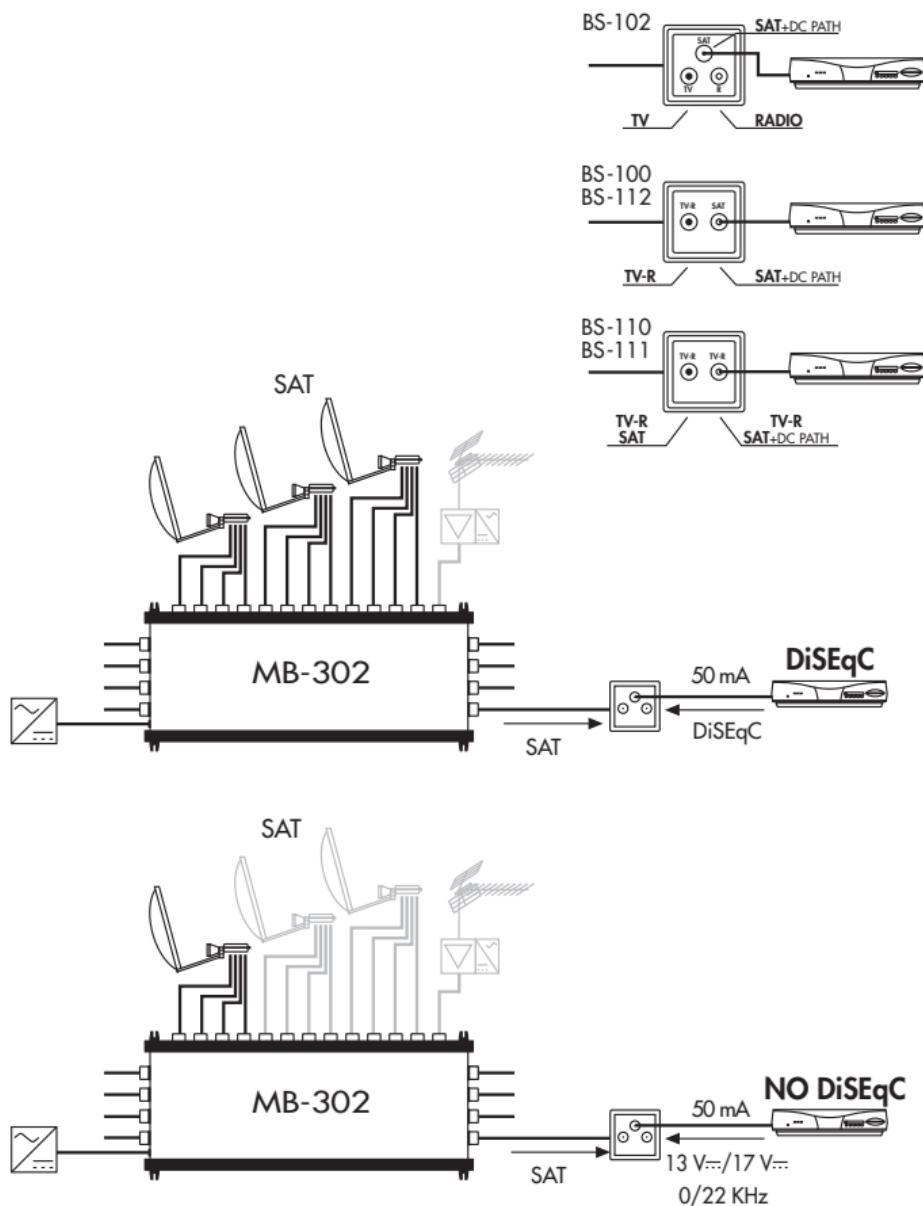
High Horizontal  
High Vertical  
Low Horizontal  
Low Vertical

# CONMUTACIÓN DE LAS SALIDAS

## SWITCHING THE OUTPUTS

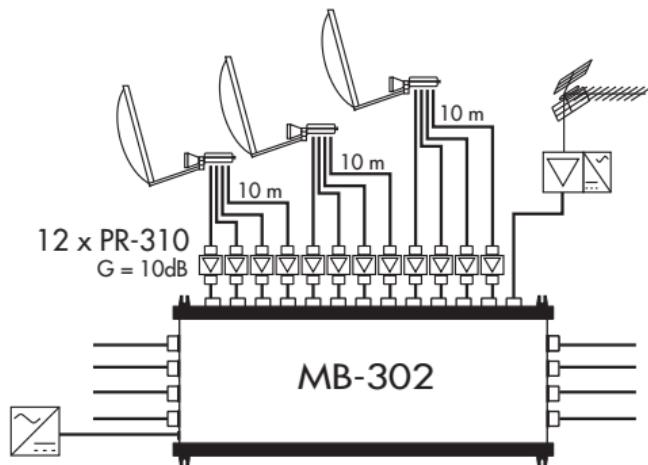
### UYDU SEÇİMİ

#### COMMUTATION DES SORTIES



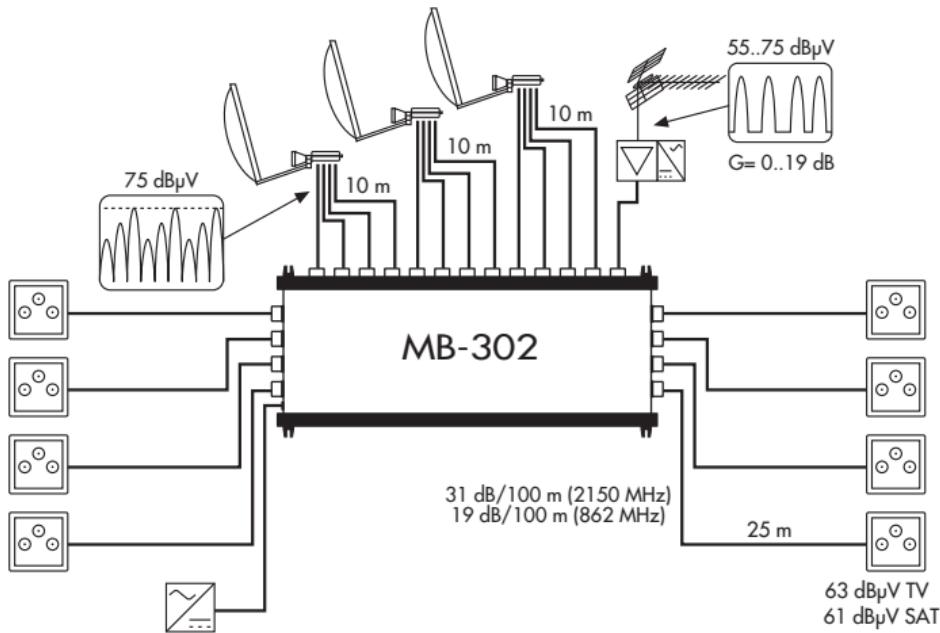
**PREAMPLIFICACIÓN DE LA SEÑAL DE ANTENA**  
**PREAMPLIFICATION OF THE ANTENNA SIGNAL**  
**ÖN YÜKSELTİCİ BAGLANTISI**  
**PRE AMPLIFICATION DU SIGNAL D'ANTENNE**

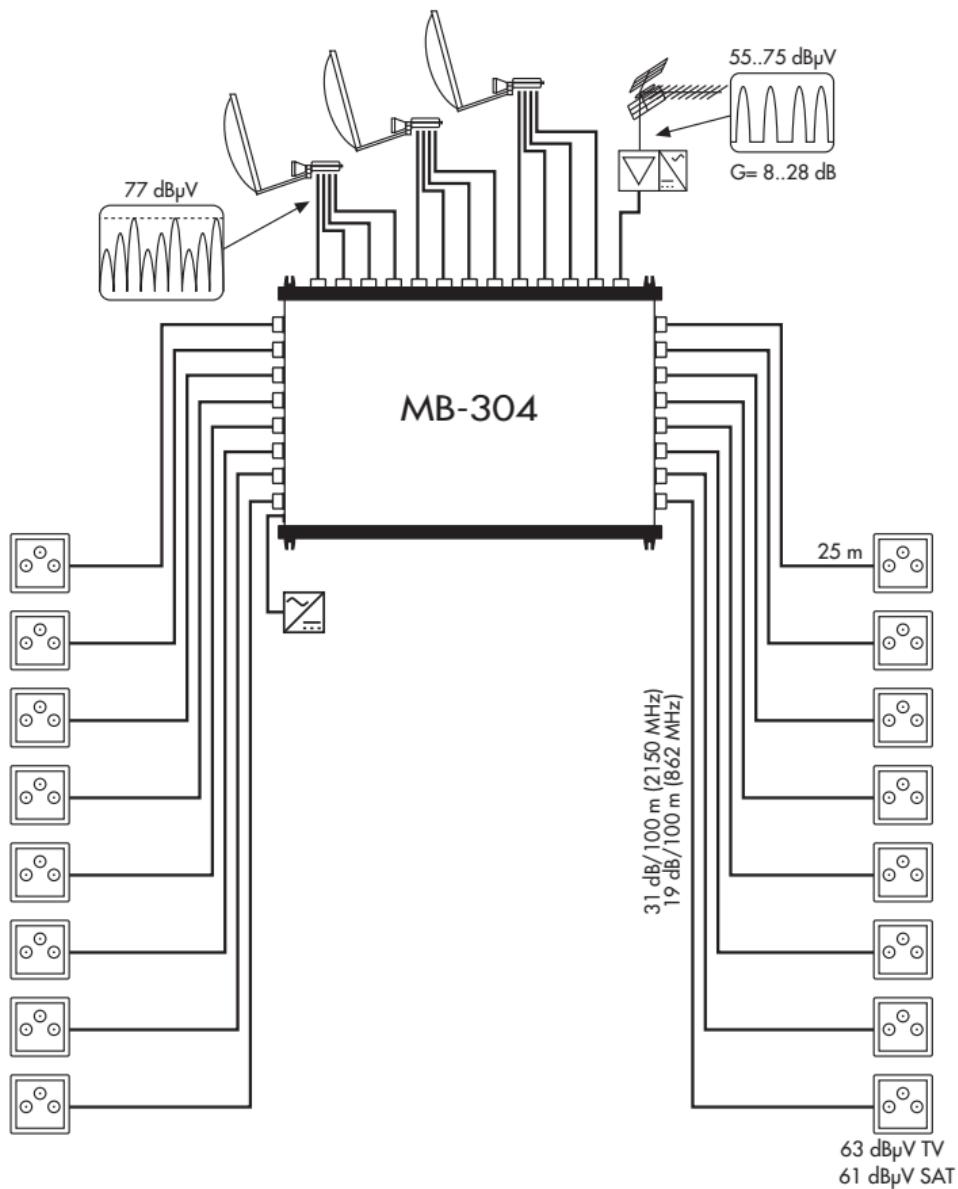
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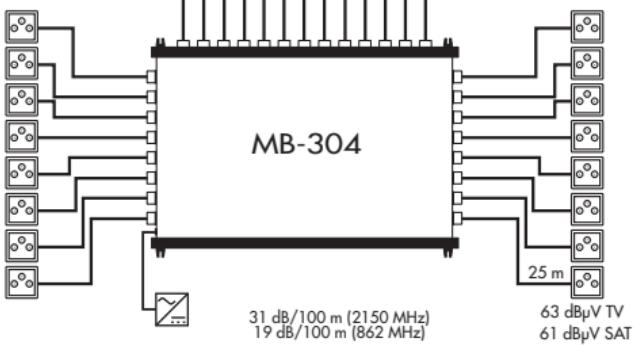
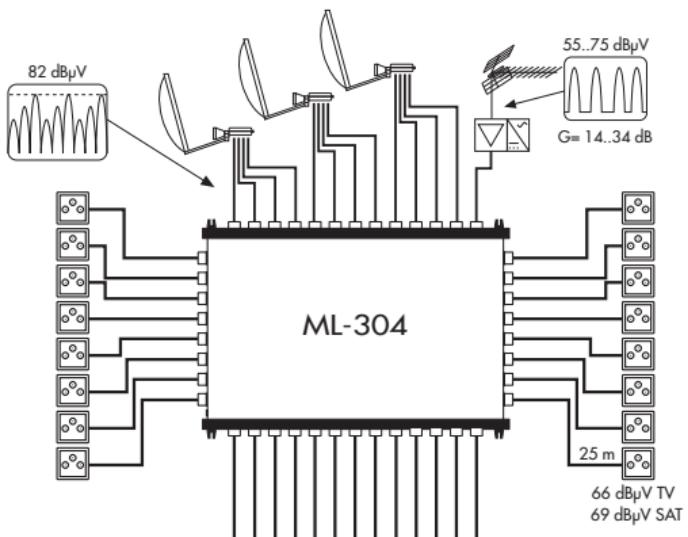


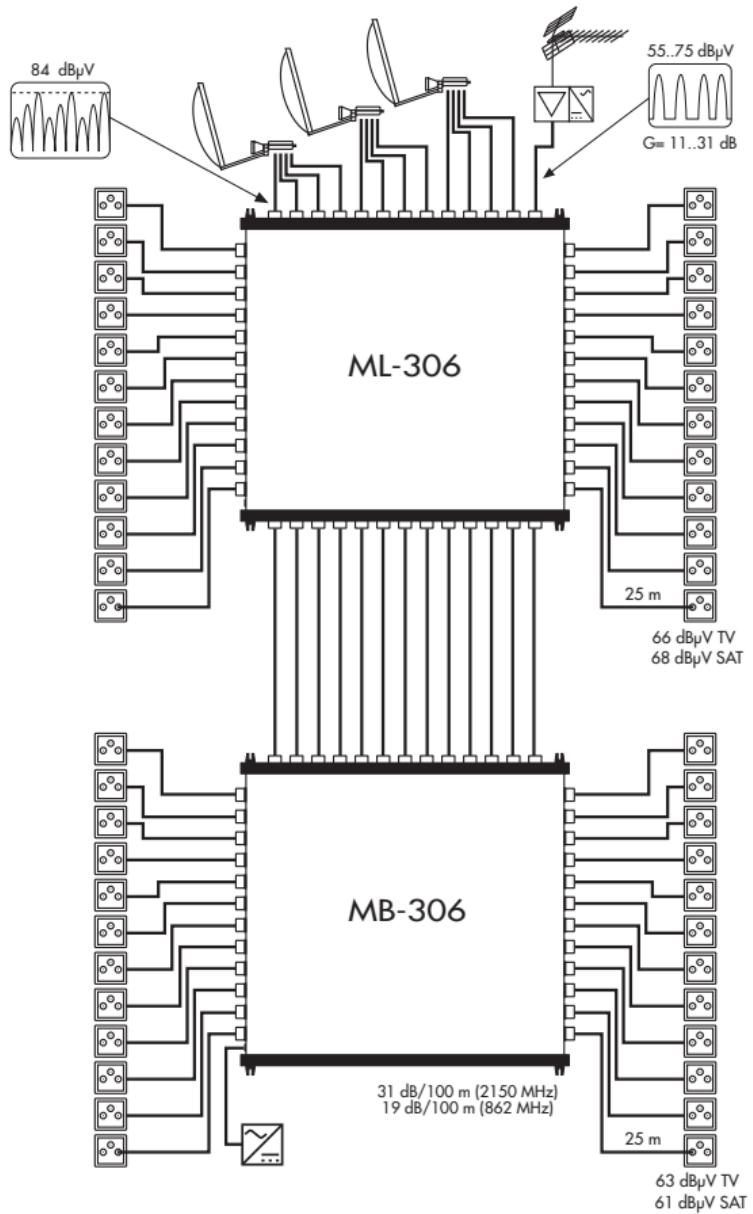
13 x 8

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## Instrucciones de seguridad

No exponga el equipo a goteo o proyecciones de agua. No sitúe objetos llenos de líquido, como vasos, sobre el equipo. No sitúe fuentes de llama desnuda, tales como velas encendidas, sobre el equipo. No cubra las aberturas de ventilación del equipo con objetos, tales como periódicos, cortinas, etc. Instale el equipo dejando un espacio libre alrededor para disponer de una ventilación suficiente. Instale el equipo de modo que la clavija de red de alimentación o el conector del equipo sean fácilmente accesibles.

## Safety Instructions

Do not place the equipment where water can drip or splash onto it. Do not place objects containing liquid, such as glasses, on the equipment. Do not place sources of naked flame, such as burning candles, on the equipment. Do not block the ventilation slots of the equipment with objects such as newspapers, curtains, etc. When installing the equipment, leave some free space around it to provide adequate ventilation. Install the equipment in such a way that the mains supply plug or the connector of the equipment can be easily reached.

## Consignes de sécurité

N'exposez pas l'équipement à des projections ou gouttes d'eau. Ne posez pas d'objets contenant du liquide, tels que des verres, sur l'équipement. Ne mettez pas de source de flamme, comme des bougies, sur l'équipement. Ne bouchez pas les ouvertures de ventilation de l'équipement avec des objets comme des journaux, des rideaux, etc. Installez l'équipement en laissant un espace libre tout autour de lui afin de permettre une ventilation suffisante. Installez l'équipement de telle sorte que la prise d'alimentation d'électricité ou le connecteur de l'équipement soit facilement accessible.



## DECLARATION OF CONFORMITY

according to EN ISO/IEC 17050-1:2004

**Manufacturer's Name:** ALCAD, S.L.

**Manufacturer's Address:** Pol. Ind. Arreche-Ugalde, 1

Apdo. 455, 20305 IRÚN (Guipúzcoa), SPAIN

declares that the product

**Model Number(s):** MB-302, MB-303, MB-304, MB-305, MB-306, ML-302, ML-303, ML-304, ML-305, ML-306

**Product Description:** MULTISWITCH SYSTEM

**Product Option(s):** INCLUDING ALL OPTIONS

is in conformity with:

Safety: EN 50083-1:1993

EN 60065:2002

EMC: EN 50083-2:2006

The product herewith complies with the requirements of the Low Voltage Directive 2006/95/EC and the EMC Directive 2004/108/EC.

**Supplementary Information:** To comply with these directives, do not use the products without covers and operate the system as specified.



Irún(SPAIN), 21 Jul 2009

Francisco Navarro  
General Manager

Especificaciones sujetas a modificación sin previo aviso

Specifications subject to modifications without prior notice

Les spécifications sont soumises à de possibles modifications sans avis préalable



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ISO 9001

