



MSR A 09X SA

USER'S MANUAL

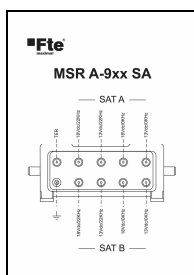


## Chapter 1. Installation.

### 1.1. Safety Rules

- 1.- Never place the equipment next to hot sources.
- 2.- Never undergo the equipment to temperatures that exceed the level of operation of the device.
- 3.- Do not expose the equipment to dripping or splashing.
- 4.- Do not place objects filled with liquids on the equipment.
- 5.- Respect ventilation slots of this equipment. Avoid covering them with any object.
- 6.- Keep clean and without obstacles a minimum radius of 40 cm around this equipment.
- 7.- Avoid locations with possibilities of spilling liquids on the inside of the device, and with important changes of temperature.
- 8.- Use the equipment only in moderate climates (not in tropical climates).
- 9.- Never open the equipment yourself due to electric risk. In case of problems, go always to qualified technicians.
- 10.- Never, under no circumstances, open the equipment connected to the electrical net.
- 11.- During the handling it is better to disconnect the equipment of the electrical net.
- 12.- Respect the electricity security rules during the assembling. Use materials that obey the current law.
- 13.- The connecting plug must be accessible in a fast and simple way to have a fast disconnection.
- 14.- Never touch the plug with wet hands. Also, disconnect always the device before handling the connections.
- 15.- Never put any heavy object over the device, as it could get damaged.
- 16.- If the equipment is going to remain some time without use, it is recommendable to disconnect it from the electrical net.
- 17.- The repairmen and the maintenance of the equipment must be done by TV and radio specialist technicians.

### 1.2. Box Content



Quick guide



Tooling for F connector

Depending on the model purchased, the box will contain one of the following multiswitches:



MSR A 0908 SA



MSR A 0916 SA

### 1.3. Description and connections

#### Description

This family of multiswitches is used to make installations with a certain number of connected users and it is compatible with digital and analogical signals.

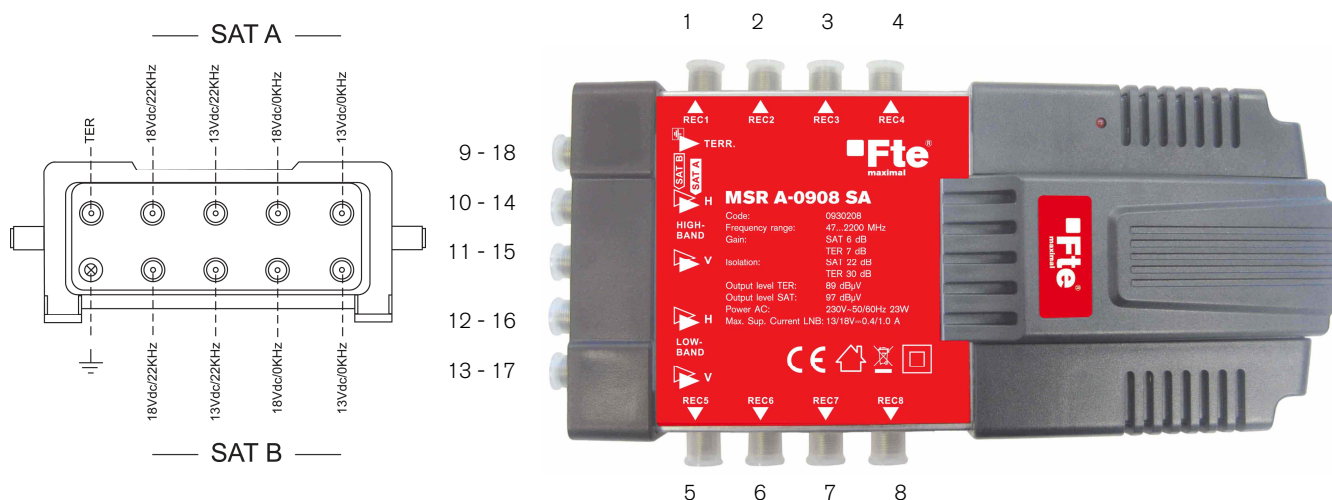
The models available allow us to distribute 4 polarities of two satellites for 8 or 16 receivers making an independent commutation in order to receive in each receiver the 4 polarities of each satellite. The inputs are independent for each polarity of the satellite.

All the models of this family are provided with an inner amplification in order to avoid the derivation losses and the distribution of the terrestrial bans is active.

The switching criterion of the satellite signal will be made by DiseqC 1.0 (13 / 18Vdc and 0-22kHz).

#### Connections

##### MSR A 0908 SA



- 1-8 REC1-REC8 47-2150 MHz: Outputs (SAT + TERR) \*
- 9 TERR 47 – 862 MHz: Terrestrial signal input
- 10 H HIGH-BAND 950 – 2150 MHz 18V / 22 kHz: Satellite A input signal
- 11 V HIGH-BAND 950 – 2150 MHz 13V / 22 kHz: Satellite A input signal
- 12 H LOW-BAND 950 – 2150 MHz 13V / 0 kHz: Satellite A input signal
- 13 V LOW BAND 950 – 2150 MHz 13V / 0 kHz: Satellite A input signal
- 14 H HIGH-BAND 950 – 2150 MHz 18V / 22 kHz: Satellite B input signal
- 15 V HIGH-BAND 950 – 2150 MHz 13V / 22 kHz: Satellite B input signal
- 16 H LOW-BAND 950 – 2150 MHz 18V / 0 kHz: Satellite B input signal
- 17 V LOW BAND 950 – 2150 MHz 13V / 0 kHz: Satellite B input signal
- 18 Ground

(\*) Note::

In order to identify the outputs in the others models it is indicated with arrow in the direction of the connector and the number of the respective output.

## 1.4. Accesories and example of installation

### Accesories



Parabolic antenna

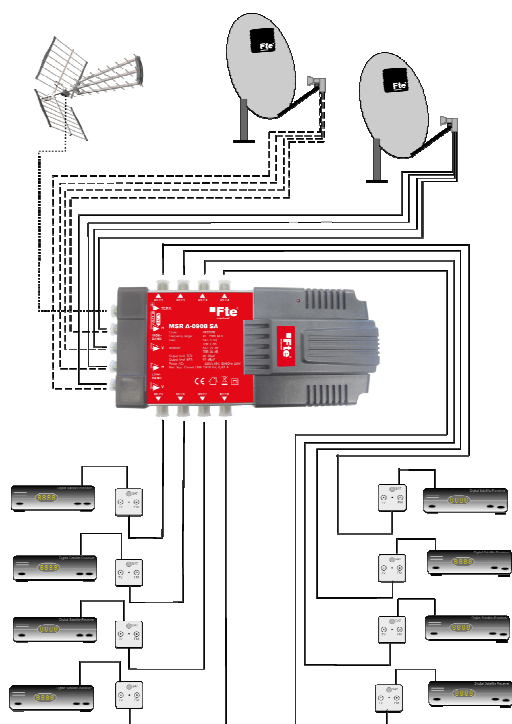


LNC Universal Quattro



Terrestrial antenna

### Example of installation



Example of an installation for 8 users from 2 satellites with 4 polarities by satellite distributed by a MSR A 0908 SA multiswitch. It allows the full reception (analogical and digital) signals of a satellite. The multiswitch does not introduce losses in the terrestrial output therefore it does not need previous amplification. In this case in order to access to the different satellite polarities, the receiver must be provided with DiSEqC 1.0 standard commutation or upper.

Example of an installation for 8 users with an MSR A 0908 SA multiswitch, which allows to select signals of any polarity of the two satellites and mix it with the terrestrial signals. The multiswitch does not introduce losses in the terrestrial output. In order to access the different polarities of the two satellites, the receiver must have the switching standard DiSEqC 1.0 or higher.

## Chapter2. Technical features

Reference		MSR A 0908 SA	MSR A 0916 SA
Code		0930208	0930216
Number of Inputs		9 (8 SAT + 1 TER)	9 (8 SAT + 1 TER)
Salidas derivación		8	16
Type of connectors		F hembra	F hembra
Frequency range	TER:	47-862 MHz	47-862 MHz
	SAT:	950-2200 MHz	950-2200 MHz
Gain	TER:	-2 ~ 7 dB	-5 ~ 3 dB
	SAT:	-3 ~ 6 dB	-3 ~ 6 dB
Isolation Ter - Sat		≥30 dB	≥30 dB
Isolation Sat-Ter		≥28 dB	≥28 dB
Isolation pol. H/V		≥25 dB	≥25 dB
Isolation Out-Out TER		≥30 dB	≥30 dB
Isolation Out-Out SAT		≥22 dB	≥22 dB
Return loss	TER Input	≥10 dB	≥10 dB
	TER Output	≥8 dB	≥8 dB
Return loss	Entrada SAT	≥10 dB	≥10 dB
	Salida SAT	≥8dB	≥8 dB
Output level TER (IMD3 - 60 dB)		89 dBμV	89 dBμV
Output level SAT (IMD3 - 35 dB)		97 dBμV	97 dBμV
Impedance input/output		75 Ω	75 Ω
Switching		13Vdc/18Vdc / 13Vdc-22 kHz / 18Vdc-22 kHz / DisEqc1.0	
22KHz Generator		No	
Max Current LNB		13Vdc: 400mA / 18Vdc: 1000mA	
Mains		230Vac ±15% 50-60Hz	
Power Consumption		23W	23.2 W
Operation temperature		-10°C / 50°C	
Dimensions		248x129x64 mm	328x129x64 mm

## Chapter3. Conformity Declaration



## CONFORMITY DECLARATION

"WE, FTE MAXIMAL, DECLARE THAT THE PRODUCTS  
MSR A 0908 SA and MSR A 0916 SA  
ARE IN CONFORMITY WITH FOLLOWING DIRECTIVES

RED DIRECTIVE 2014/53/EU  
RoHS2 2011/65/EU"

If you wish a copy of the conformity declaration, please contact to the company

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