

Sat-IF splitting system (8 x Sat-IF) Multi-switch

Multi-switch

- Cascadable multi-switch for splitting 8 Sat levels and terrestrial signals to multiple receivers
- Facility to select horizontal/vertical, low/high, Sat position A/ position B independently for each receiver using DiSEqC™ controls
- If not using DiSEqC™ controls, changing the horizontal/vertical, low/high of Sat position A can be performed, also by tone burst changing Sat position A/position B
- Integral amplifier for low attenuation in Sat signal band
- Integral pre-emphasis to equalise cable attenuation
- Terrestrial signals also receivable with Sat receiver switched off
- Terrestrial band: 5-862 MHz, passive
- High degree of insulation between outputs
- Can be remote fed via the horizontal low inputs. All other inputs are voltage-free
- For indoor mounting

EXR 2908

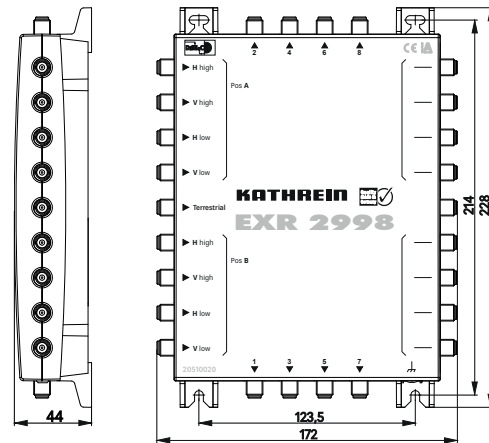
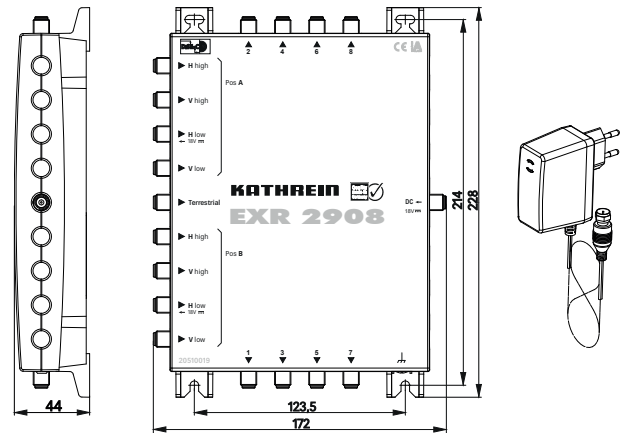
- Multi-switch for 8 connections, with integral power supply unit
- Can be extended using EXR 2998

EXR 2998

- Multi-switch loop-through for system extension with eight connections each
- Highly cascadable (up to 40 connections)

NCF 18

- Highly efficient, short-circuit-proof external power supply unit with integrated EMC protection for supplying LNB, multiswitch and amplifier



Transport and storage

- Transport the device in its original packaging and store it in a dry place.
- Ensure that no condensation forms.

Scope of delivery

- EXR 2908 | EXR 2998
- Plug-in power supply NCF 18 (only for EXR 2908)
- Operating instructions

Intended use

The devices described are intended exclusively for the installation of satellite reception systems. Any other use or non-compliance with these instructions for use will invalidate the warranty or guarantee.

Settings for receivers with DiSEqC™

Setting	Effect
DiSEqC™ "On"	All inputs can be selected
22 kHz and tone burst to "Off"	Changeover time is shortened

Settings for receivers without DiSEqC™

Setting	Effect
22 kHz → High/Low	All inputs position "A" can be selected
Tone Burst → Pos. A/B	All inputs position "A" and "B" can be selected

DiSEqC™ commands, e.g. for Kathrein measuring instrument MSK 25 or MSK 33

Reception range	Position A/satellite 1 (e.g. ASTRA)				Position B/satellite 2 (e.g. EUTELSAT)			
	Low band		High band		Low band		High band	
	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal
Command	E2 10 38 F0	E2 10 38 F2	E2 10 38 F1	E2 10 38 F3	E2 10 38 F4	E2 10 38 F6	E2 10 38 F5	E2 10 38 F7

Technical data

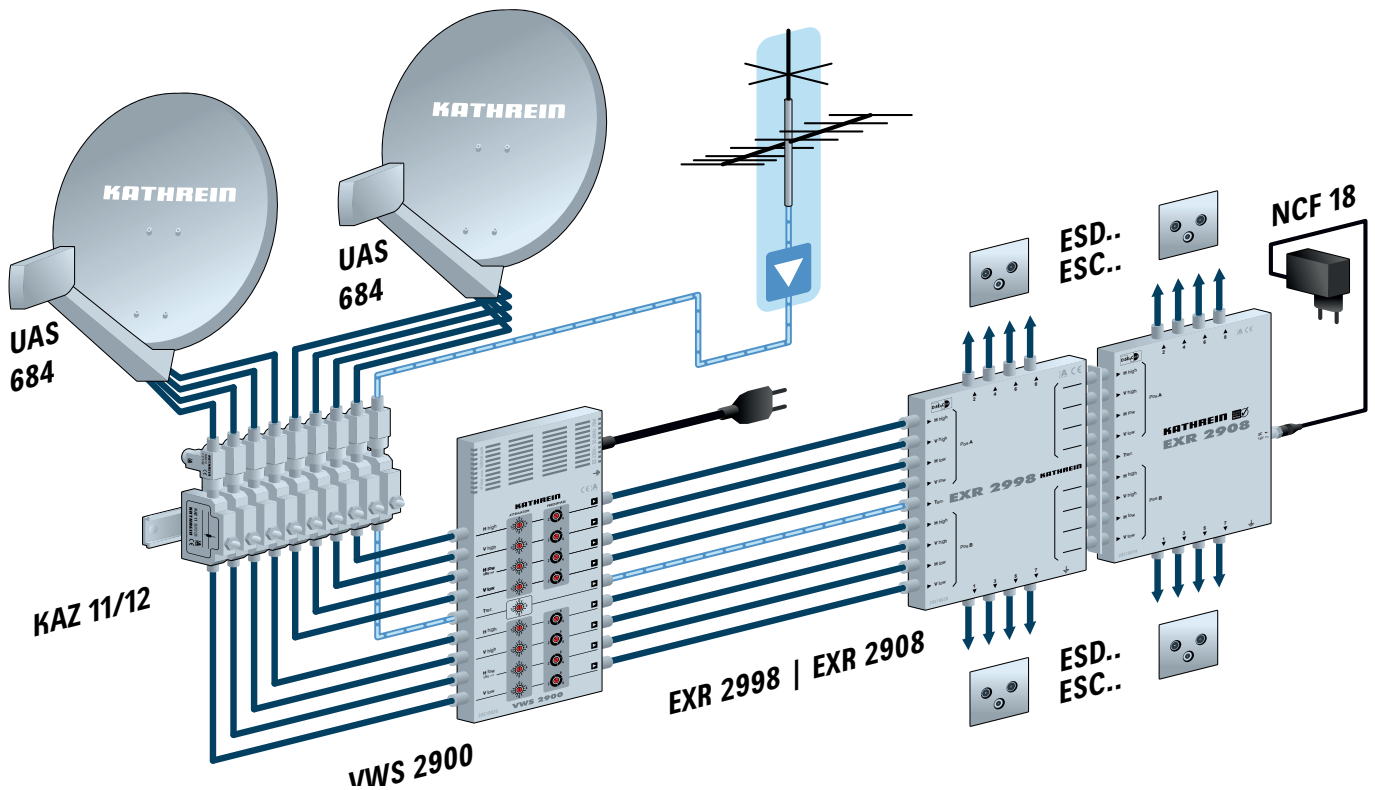
Type		EXR 2908		EXR 2998	
Order no.		20510019		20510020	
Subscriber connections		8		8	
Inputs		1 x terr.	8 x Sat-IF	1 x terr.	8 x Sat-IF
Frequency ranges	MHz	5-862	950-2150	5-862	950-2150
Through loss	dB	-	-	3.5	1-2.5 ¹⁾
Attenuation ¹⁾	dB	10-13	5-0	13-16	5-0
Horizontal/vertical isolation	dB	-	25	-	25
Subscriber isolation	dB	25	25	25	25
Max. output level ²⁾	dBμV	-	109	-	109
Screening factor	dB	5-300 MHz > 85 300-470 MHz > 80 470-1000 MHz > 75 1000-2150 MHz > 55			
Control with DiSEqC™		Vert./horiz., low/high, pos. A/B			
Controls without DiSEqC™ - with 14/18 V and 0/22 kHz - with tone burst		Vert./horiz., low/high, (pos. A) Pos. A/B			
Current consumption per subscriber	mA	30			
Nominal input voltage	V	198-253		-	
Nominal input power (800/400 mA load)	W	18.1 / 10		-	
Secondary voltage ³⁾	V	18		-	
Max. total remote feed current ³⁾	mA	800		-	
Max. remote feed current per trunk	mA	-		1000	
Protection class/protection type		II (totally insulated)/IP 30		IP 30	
Permissible ambient temperature	°C	- 20 to + 50		- 20 to + 55	
Connections		F-connectors		F-connectors	
Dimensions (W x H x D)	mm	227 x 228 x 44		172 x 228 x 44	
Packing unit/Weight	units/kg	1 (10)/1.0		1 (10)/0.85	

¹⁾ Frequency-dependent attenuation

²⁾ SAT to EN 50083-3, 35-dB-IMA

³⁾ Via horizontal low inputs

System example



Installation instructions



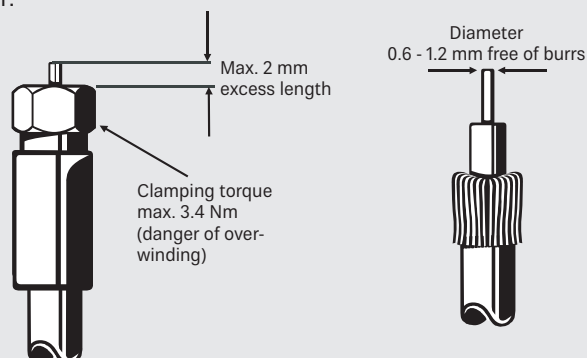
- ▶ The equipment described is designed solely for the installation of satellite reception systems and may only be installed by trained specialist personnel.
- ▶ Any other use, or failure to comply with these instructions, will result in voiding of warranty cover.
- ▶ The equipment may only be installed in dry indoor areas. Do not install on or against highly combustible materials.
- ▶ The equipment must be provided with an earthing wire (Cu, at least 4 mm²).
- ▶ The safety regulations set out in the current EN 60728-11 and EN 62368-1 standards must be complied with.
- ▶ Fasteners for concrete substrates and masonry: 4 suitable plugs and associated screws with half-round or cylindrical head, outer thread diameter 4.5 - 5 mm, head diameter ≥ 9 mm and a screw length ≥ 30 mm. For other types of wall, use the appropriate screws or screw-dowel systems, which offer the same or better fastening.



- ▶ Connector: RF plug 75 Ω (series F) to EN 61169-24.
- ▶ **Unused subscriber ports should be closed off with 75 Ω resistors (e.g. EMK 03).**

Risk of damage to property!

An inner cable conductor with a diameter greater than 1.2 mm, or the presence of burrs may damage the device inputs/outputs beyond repair.



Safety instructions

**Warning! Risk of fatal electric shock**

- ▶ Do not open or tamper with the unit!
- ▶ When working on the system always unplug the mains plug from the wall socket!
- ▶ Ensure adequate clearance! Clearance all round at least 5 cm!
- ▶ The units must not be mounted on the ceiling.
- ▶ Free circulation of air must be possible to discharge the heat emitted by the unit. Risk of overheating!
- ▶ Permissible ambient temperature -20 to +50 °C

Caution:

- ▶ No liquid-filled items may be placed on top of the power supply unit.
- ▶ The power supply unit must not be exposed to dripping or splashing water.
- ▶ The mains plug must be easily accessible and operable.
- ▶ The only reliable method of disconnecting the units from the mains is to unplug them.

SIMPLIFIED EU DECLARATION OF CONFORMITY

Hereby, KATHREIN Digital Systems GmbH declares that the radio equipment types EXR 2908, order no.: 20510019/EXR 2998, order no.: 20510020 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.kathrein-ds.com

Service and support



All relevant information (address, telephone number, e-mail address, opening hours) for repairs or help with problems with our products can be found at:

<https://www.kathrein-ds.com/support/servicestellen>

Please note that there are different contact persons for **repair** and **support**!



Disposal



Electronic equipment

Electronic equipment is not domestic waste – in accordance with directive 2012/19/EU OF THE EUROPEAN PARLIAMENT AND THE COUNCIL dated 4th July 2012 concerning used electrical and electronic appliances, it must be disposed of properly. At the end of its service life, take this unit for disposal at a designated public collection point.