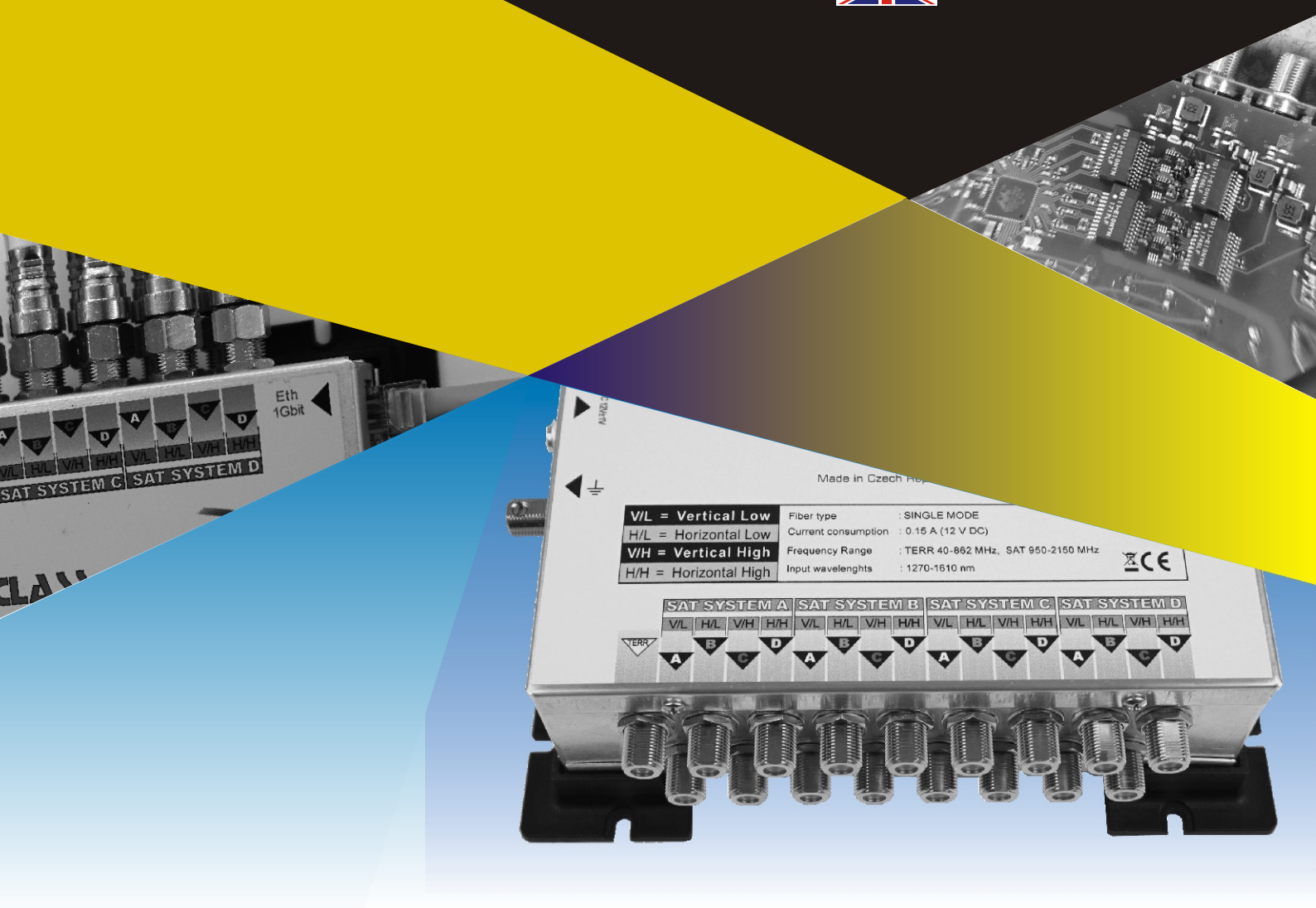
EMP-CENTAURI®

Simple building networking by coaxial and optical cable
Satellite, TV, Computers

CATALOG
PRODUCT

2023

EN



INTRODUCTION

EMP-CENTAURI
product catalogue
MADE IN EUROPE

On these pages we would like to introduce our company and its main products.

EMP-Centauri company, since its founding in 1995, develops and manufactures electronic and electrical equipment. Main company's products are intended primarily for distribution of satellite and terrestrial television signals, radio, data and Internet.

The devices developed and manufactured by us differ from competing products by their specific design that allows transmission of high speed data and TV signals over a single coaxial cable or optical fibre while maintaining a user-friendly price, which simplifies requirements for the installation of our equipment at the customer, saves time and work done by installer and ultimately provides the customer higher added value.

The company's products are exported to many countries in the world, the installations with our products can be found in a number of buildings in Europe and in the world. Our team builds on more than 25 years of experience in development and production in this segment.

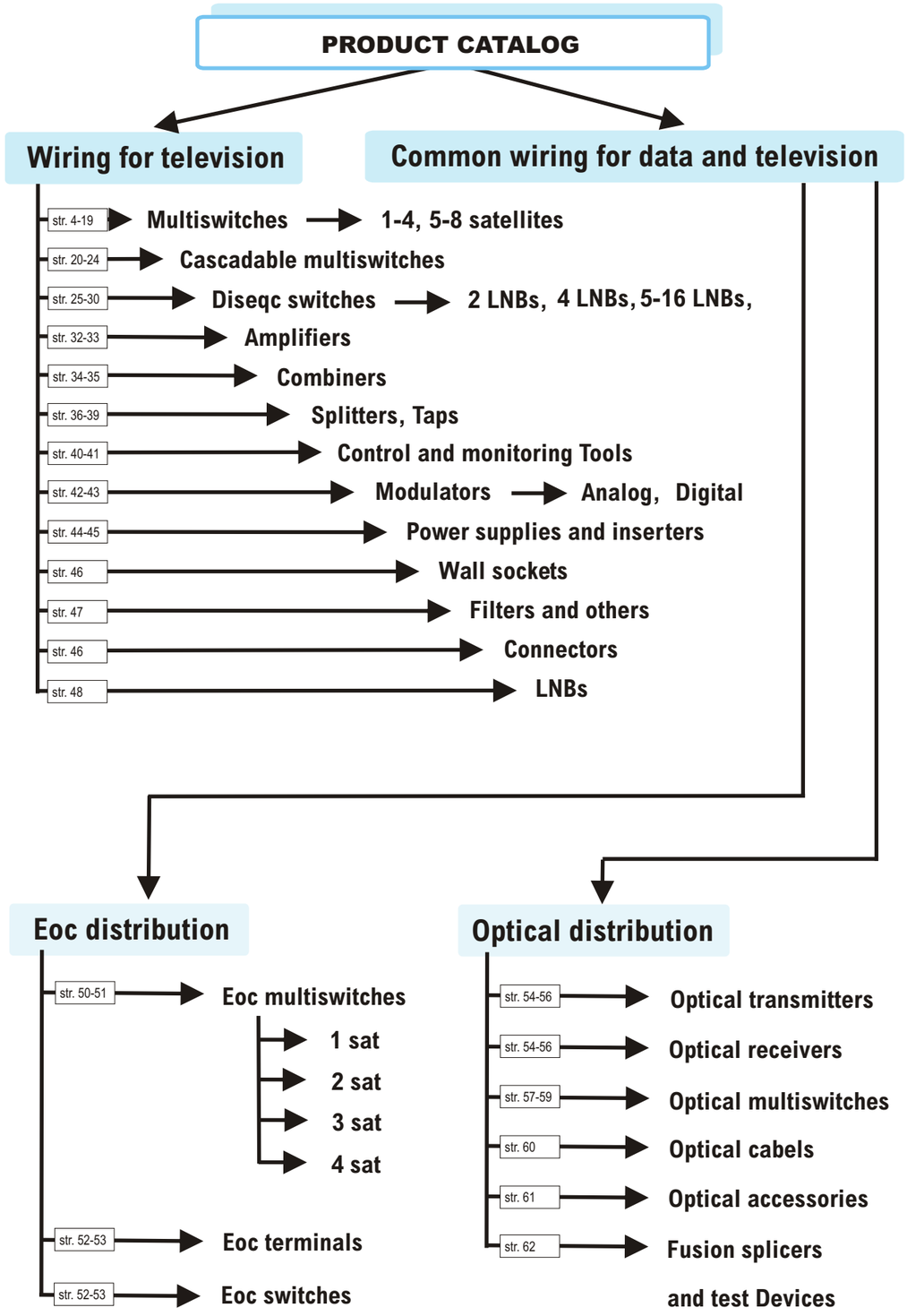
Thanks to that and to our unique technology, we can offer to our customers products at an affordable price while maintaining high quality and value.

TABLE OF CONTENT

Engineers in our development department along with production managers greatly appreciate good experience with the products that customers have in practice, as well as their practical observations.

Suggestions and experiences from our customers motivate us to improve the quality and parameters of our products and to develop new models and types.

EMP-Centauri is aware that only a good approach to customers and meeting their needs and requirements is the cornerstone of company success.

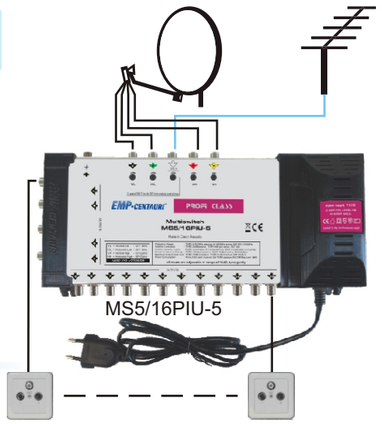


WIRING FOR TELEVISION

MULTISWITCHES

1 SATELLITE MULTISWITCHES

1-satellite (4 polarities) standalone multiswitches with an integrated power supply are designed for the distribution of terrestrial and satellite signals from 1 satellite position. We offer models with 4 outputs up to 28 outputs. Multiswitches are compatible with all satellite receivers, and are suitable for both analog and digital reception.



Advantages of PROFI CLASS multiswitches:

- input attenuators at all inputs*
- support for Quad LNB*
- selectable active / passive processing of terrestrial band*
- 12V DC supply for terrestrial preamplifier*
- extended temperature range

* does not apply to types of extension PLP-3

SATVISION
EMP-Centauri P.143-UP
SEHR GUT 92,8 %
9 Multischalter 5/8 im Vergleich Heft 10/2008

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EMP 5/8 P. 143-UP
www.digitalfernsehen.de

6 YEARS WARRANTY

Overview of PROFI CLASS products - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range LNB inputs (MHz)	Frequency range Terr. Input passive (MHz)	Frequency range Terr. Input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control 13/18V + 0/22kHz	Insertion loss Sat. (dB avg)	Insertion loss Terr. active (dB avg)	Insertion loss Terr. passive (dB avg)	Sat. inputs isolation (dB min)
MS5/4PIU-4	5	4	Multiswitch with integrated power supply, 0 to 15 dB attenuators, Quad LNB compatible, switchable active/passive terr. Input	950-2300	5-862	40-862	5-2300	40-2300	●	3	2	19	20
MS5/6PIU-4	5	6		950-2300	5-862	40-862	5-2300	40-2300	●	4	3	20	20
MS5/8PIU-4	5	8		950-2300	5-862	40-862	5-2300	40-2300	●	4	3	20	20
MS5/12PIU-5	5	12		950-2300	5-862	40-862	5-2300	40-2300	●	0	gain 7	21	20
MS5/16PIU-5	5	16		950-2300	5-862	40-862	5-2300	40-2300	●	0	gain 6	22	20
MS5/20PIU-6	5	20		950-2300	5-862	40-862	5-2300	40-2300	●	4	10	23	20
MS5/24PIU-6	5	24		950-2300	5-862	40-862	5-2300	40-2300	●	4	10	24	20
MS5/28PIU-6	5	28		950-2300	5-862	40-862	5-2300	40-2300	●	4	10	25	20
MS5/4PLP-3	5	4	Multiswitch, passive terrestrial, self powered	950-2300	5-862	-	5-2300	-	●	0	-	13	20
MS5/6PLP-3	5	6		950-2300	5-862	-	5-2300	-	●	3	-	15	20
MS5/8PLP-3	5	8		950-2300	5-862	-	5-2300	-	●	3	-	16	20

Main features of E.LITE CLASS multiswitches:

- some models support for Quad LNB
- active or passive terrestrial input depending on product type
- integrated or external power supply

4 YEARS WARRANTY

MS5/8EIP-8

Overview of E.LITE CLASS products - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range LNB inputs (MHz)	Frequency range Terr. Input passive (MHz)	Frequency range Terr. Input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control 13/18V + 0/22kHz	Insertion loss Sat. (dB avg)	Insertion loss Terr. active (dB avg)	Insertion loss Terr. passive (dB avg)	Sat. inputs isolation (dB min) Between V/H polarisations	Sat. inputs isolation (dB min) Between low/high bands
MS5/4EUP-2	5	4	Multiswitch, passive terr. input, DC socket	950-2150	5-862	-	5-2150	-	●	12	-	11	20	25
MS5/4EUP-4	5	4		950-2150	5-862	-	5-2150	-	●	3	-	14	20	25
MS5/8EUP-4	5	8		950-2150	5-862	-	5-2150	-	●	3	-	17	20	25
MS5/4EIA-4	5	4	Multiswitch with integrated power supply, active terr. input, Quad LNB compatible	950-2150	-	40-862	-	40-2150	●	3	2	-	20	25
MS5/8EIA-4	5	8		950-2150	-	40-862	-	40-2150	●	3	3	-	20	25
MS5/12EIA-5	5	12		950-2150	-	40-862	-	40-2150	●	0	3	-	20	25
MS5/16EIA-5	5	16		950-2150	-	40-862	-	40-2150	●	0	5	-	20	25
MS5/20EIA-6	5	20		950-2150	-	40-862	-	40-2150	●	4	10	-	20	25
MS5/24EIA-6	5	24		950-2150	-	40-862	-	40-2150	●	4	10	-	20	25
MS5/28EIA-6	5	28		950-2150	-	40-862	-	40-2150	●	4	10	-	20	25
MS5/8EIP-8	5	8	Multiswitch with integrated power supply, passive terr. input, Quad LNB compatible	950-2150	5-862	-	5-2150	-	●	6	-	15	20	25
MS5/12EIP-5	5	12		950-2150	5-862	-	5-2150	-	●	0	-	20	20	25
MS5/16EIP-5	5	16		950-2150	5-862	-	5-2150	-	●	0	-	22	20	25
MS5/20EIP-6	5	20		950-2150	5-862	-	5-2150	-	●	4	-	23	20	25
MS5/24EIP-6	5	24		950-2150	5-862	-	5-2150	-	●	4	-	24	20	25
MS5/28EIP-6	5	28		950-2150	5-862	-	5-2150	-	●	4	-	25	20	25
MS7/24EIA-6	7	24	Multiswitch with integrated power supply, active terr. Input	950-2150	-	FM 88-108 DAB216-240 UHF 470-862	-	40-2150	●	950-2300MHz - 0/5/10 dB avg 88 - 108MHz - 0/5/10 dB avg 216 - 240MHz - 0/5/10 dB avg 470 - 862MHz - 0/5/10 dB avg			20	25
MS5/12ELP-4	5	12	Multiswitch, passive terr. input, DC socket, DC path from receivers to trunk	950-2150	5-862	-	5-2150	-	●	5	-	19	20	25
MS5/16ELP-4	5	16		950-2150	5-862	-	5-2150	-	●	5	-	20	20	25

Useful information (General)

► Multiswitches are controlled by receiver according to the table:

command sent by receiver	selected input of multiswitch
13 V, 0 kHz	A
18 V, 0 kHz	B
13 V, 22 kHz	C
18 V, 22 kHz	D

► Connect outputs of Quattro LNB to appropriate inputs of multiswitch: VL → A, HL → B, VH → C, HH → D

► If Quad LNB is installed, it doesn't matter how its outputs are connected to inputs of multiswitch

PROFI CLASS

► Switching between active and passive processing of terrestrial band is possible by turning the attenuator at terrestrial input fully clockwise /counterclockwise

► DC supply for preamplifier of terr. antenna is limited to 100 mA max. The supply is disconnected if higher load or short circuit is applied to terrestrial input

E.LITE CLASS

► Models without built-in power supply depend on receiver's LNB power supply. If power related problems would occure, connect external power supply PA 18, see page 52.

Detailed specifications

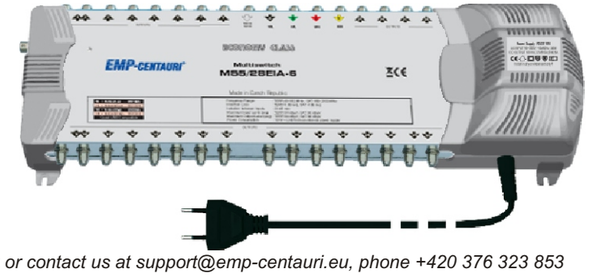
Part number	Maximum input level* Sat. (dBµV avg) **	Maximum input level* Terr. passive (dBµV avg)	Maximum input level* Terr. active (dBµV avg)	Maximum output level* Sat. (dBµV avg) **	Maximum output level* Terr. passive (dBµV avg)	Maximum output level* Terr. active (dBµV avg)	Power consumption From each receiver (mA-18 V)	Power consumption From internal power supply passive (W)	Power consumption From internal power supply active (W)	Terr. preamplifier supply (mA max - 12V DC)	Dimensions (w.d.h) (power cord length 130 cm)	Temperature range
PROFI CLASS												
MS5/4PIU-4	90	100	93	87	81	91	40	4 + LNB	6 + LNB	100	26,5 x 15,2 x 8,7cm	-30 ~ +70 °C
MS5/6PIU-4	90	100	93	86	80	90	40	4 + LNB	6 + LNB	100	27,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS5/8PIU-4	90	100	93	86	80	90	40	4 + LNB	6 + LNB	100	27,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS5/12PIU-5	90	100	85	90	79	92	40	5 + LNB	9 + LNB	100	34,5 x 15,2 x 8,7cm	-30 ~ +70 °C
MS5/16PIU-5	90	100	85	90	78	91	40	5 + LNB	9 + LNB	100	35,4 x 15,2 x 8,7cm	-30 ~ +70 °C
MS5/20PIU-6	90	100	90	86	77	80	40	3,5 + LNB	5 + LNB	100	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS5/24PIU-6	90	100	90	86	76	80	40	3,5 + LNB	5 + LNB	100	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS5/28PIU-6	90	100	90	86	75	80	40	3,5 + LNB	5 + LNB	100	47,5x 15,2 x 8,7cm	-30 ~ +70 °C
MS5/4PLP-3	90	105	-	90	92	-	55	-	-	-	13,5 x 10,4 x 4,1cm	-30 ~ +70 °C
MS5/6PLP-3	90	105	-	87	90	-	55	-	-	-	13,5 x 10,4 x 4,1cm	-30 ~ +70 °C
MS5/8PLP-3	90	100	-	87	84	-	55	-	-	-	13,5 x 10,4 x 4,1cm	-30 ~ +70 °C
E.LITE CLASS												
MS5/4EUP-2	90	100	-	78	89	-	60	-	-	-	13,6 x 10,4 x 3,3cm	-25 ~ +60 °C
MS5/4EUP-4	90	100	-	87	86	-	55	-	-	-	17,5 x 15,2 x 4,5cm	-25 ~ +60 °C
MS5/8EUP-4	90	100	-	87	83	-	55	-	-	-	18,2 x 15,2 x 4,5cm	-25 ~ +60 °C
MS5/4EIA-4	90	-	93	87	-	91	40	-	6 + LNB	-	26,5 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/8EIA-4	90	-	93	87	-	90	40	-	6 + LNB	-	27,5 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/12EIA-5	90	-	89	90	-	86	40	-	5 + LNB	-	34,7 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/16EIA-5	90	-	89	90	-	84	40	-	5 + LNB	-	35,4 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/20EIA-6	90	-	90	86	-	80	40	-	5 + LNB	-	47,0 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/24EIA-6	90	-	90	86	-	80	40	-	5 + LNB	-	47,0 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/28EIA-6	90	-	90	86	-	80	40	-	5 + LNB	-	47,0 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/8EIP-8	90	100	-	84	85	-	40	0,5 + LNB	-	-	26,0 x 11,4 x 5,3cm	-25 ~ +60 °C
MS5/12EIP-5	90	100	-	90	80	-	40	2 + LNB	-	-	34,7 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/16EIP-5	90	100	-	90	78	-	40	2 + LNB	-	-	35,4 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/20EIP-6	90	100	-	86	77	-	40	3,5 + LNB	-	-	47,0 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/24EIP-6	90	100	-	86	76	-	40	3,5 + LNB	-	-	47,0 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/28EIP-6	90	100	-	86	75	-	40	3,5 + LNB	-	-	47,0 x 15,2 x 8,7cm	-25 ~ +60 °C
MS7/24EIA-6	90	-	95	80 outputs 1-8 85 outputs 9-16 90 outputs 17-24	- - -	85 outputs 1-8 90 outputs 9-16 95 outputs 17-24	45	-	9 + LNB	-	47,0 x 15,2 x 8,7cm	-25 ~ +60 °C
MS5/12ELP-4	90	110	-	85	91	Current consumption 50 mA			DC current pass 500 mA max		18,2 x 15,2 x 4,5cm	-25 ~ +60 °C
MS5/16ELP-4	90	110	-	85	91	Current consumption 50 mA			DC current pass 500 mA max		18,2 x 15,2 x 4,5cm	-25 ~ +60 °C

Notes: 1* TERR: EN 50083-3/60dB IMA3[dBuV]; SAT: EN 50083-3/35dB IMA3[dBuV]

2** Max. input level increases when input attenuator is used. The given value is valid for no attenuation

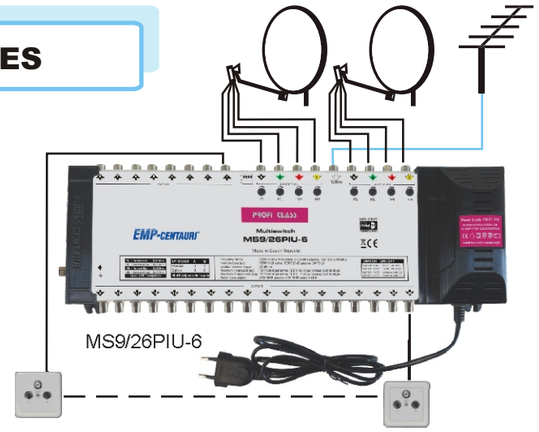
MS5/4PLP-3

MS5/28EIA-6



For more info see the website www.emp-centauri.eu or contact us at support@emp-centauri.eu, phone +420 376 323 853

2 SATELLITES MULTISWITCHES



MS9/26PIU-6

2-satellites (8 polarities) standalone multiswitches with an integrated power supply are designed for the distribution of terrestrial and satellite signals from 2-satellite positions for up to 26 subscribers. Multiswitches are compatible with all satellite receivers which support DiSEqC control system. They are suitable for both analog and digital reception.
The multiswitches with integrated power supplies are designed for maximum efficiency in full operation, eliminating need for stand-by mode functionality.

Advantages of PROFI CLASS multiswitches:

- input attenuators at all inputs
- configurable support for Quad LNBs
- selectable active / passive processing of terrestrial band
- 12V DC supply for terrestrial preamplifier
- extended temperature range

DiSEqC 2.0

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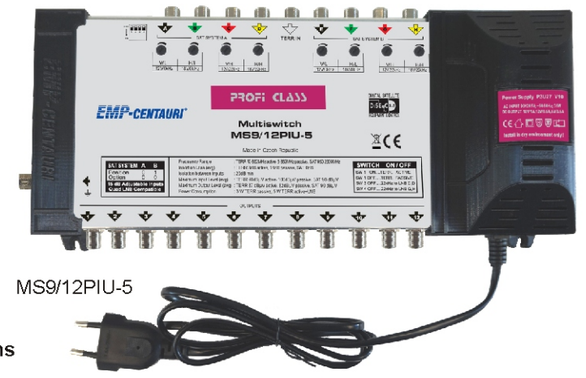


MS9/12PIU-5

6 YEARS WARRANTY

Overview of PROFI CLASS products - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range LNB inputs (MHz)	Frequency range Terr. Input passive (MHz)	Frequency range Terr. Input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control DiSEqC 1.0 (2.0) commands	Insertion loss Sat. (dB avg)	Insertion loss Terr. passive (dB avg)	Insertion loss Terr. active (dB avg)	Sat. inputs isolation (dB min) Between V/H polarisations	Sat. inputs isolation (dB min) Between low/high bands	Sat. inputs isolation (dB min) tween sat. systems
MS9/4PIU-5 V10	9	4	DiSEqC multiswitch with integrated power supply, 0 to 15 dB attenuators, Quad LNB compatible, switchable active/passive terr. input	950-2300	5-862	40-862	5-2300	40-2300	●	0	12	3 gain	20	20	25
MS9/6PIU-5 V10	9	6		950-2300	5-862	40-862	5-2300	40-2300	●	0	14	1 gain	20	20	25
MS9/8PIU-5 V10	9	8		950-2300	5-862	40-862	5-2300	40-2300	●	0	16	0	20	20	25
MS9/10PIU-5 V10	9	10		950-2300	5-862	40-862	5-2300	40-2300	●	0	18	1	20	20	25
MS9/12PIU-5 V10	9	12		950-2300	5-862	40-862	5-2300	40-2300	●	0	18	3	20	20	25
MS9/16PIU-6 V10	9	16		950-2300	5-862	40-862	5-2300	40-2300	●	0	21	5	20	20	25
MS9/20PIU-6 V10	9	20		950-2300	5-862	40-862	5-2300	40-2300	●	4	24	7	20	20	25
MS9/26PIU-6 V10	9	26		950-2300	5-862	40-862	5-2300	40-2300	●	5	25	8	20	20	25

Main features of E.LITE CLASS multiswitches:

- designed for Quattro LNB
- switchable active / passive terrestrial input *
- external power supply (included) *

* models ECU

4 YEARS WARRANTY

MS9/30ECU-17

MS9/6ECU-4

MS9/8EIP-9

Overview of E.LITE CLASS products - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range LNB inputs (MHz)	Frequency range Terr. Input passive (MHz)	Frequency range Terr. Input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control DiSEqC 1.0 (2.0) commands	Insertion loss Sat. (dB avg)	Insertion loss Terr. active (dB avg)	Insertion loss Terr. passive (dB avg)	Sat. inputs isolation (dB min) Between V/H polarisations	Sat. inputs isolation (dB min) Between low/high bands	Sat. inputs isolation (dB min) Between sat. systems
MS9/4EIP-8	9	4	DiSEqC multiswitch with integrated power supply, passive terr. input, Quad LNB compatible	950-2150	5-862	-	5-2150	-	●	5	-	13	25	25	30
MS9/8EIP-9	9	8		950-2150	5-862	-	5-2150	-	●	8	-	16	25	25	30
MS9/6ECU-4	9	6	DiSEqC multiswitch with external power supply, switchable active/passive terr. input	950-2150	40-862	40-862	40-2150	40-2150	●	5	3	20	20	25	25
MS9/10ECU-4	9	10		950-2150	40-862	40-862	40-2150	40-2150	●	5	3	20	20	25	25
MS9/16ECU-12	9	16		950-2150	40-862	40-862	40-2150	40-2150	●	5	8	25	20	25	25
MS9/20ECU-12	9	20		950-2150	40-862	40-862	40-2150	40-2150	●	5	8	25	20	25	25
MS9/26ECU-17	9	26		950-2150	40-862	40-862	40-2150	40-2150	●	5	12	30	20	25	25
MS9/30ECU-17	9	30		950-2150	40-862	40-862	40-2150	40-2150	●	5	12	30	20	25	25

Useful information (General)

► Multiswitches are controlled from receiver by analog and DiSEqC commands. In receiver's configuration menu set LNB type to Universal and differentiate received satellites by DiSEqC 1/2 (A/B) parameter

► Multiswitches are not compatible with Monoblock LNBs

► If higher than available number of user outputs is required, simply use two multiswitches instead of one, routing LNB outputs via signal splitters

► If terrestrial band is used, terminate all unused outputs by 75 ohm loads.

PROFI CLASS

► Switching between active and passive processing of terrestrial band is performed by lever No. 1 of configuration DIP-switch

► 22 kHz tone required for Quad LNB can be disabled by DIP-switch

► DC supply for preamplifier of terr. Antenna is limited to 150 mA max. The supply is disconnected if higher load or short circuit is applied to terrestrial input.
To keep power consumption at minimum level, it is recommended to include an external DC block if short-circuit conditions should persist on terrestrial input

E.LITE CLASS

► A suitable cascadable unit can be placed before to extend the number of available outputs

► Switching between active and passive processing of terrestrial band is performed by rotary knob

Detailed specifications

Part number	Maximum input level* Sat. (dBµV avg) **	Maximum input level* Terr. passive (dBµV avg)	Maximum input level* Terr. active (dBµV avg)	Maximum output level* Sat. (dBµV avg) **	Maximum output level* Terr. passive (dBµV avg)	Maximum output level* Terr. active (dBµV avg)	Power consumption From each receiver (mA-18 V)	Power consumption From internal power supply passive (W)	Power consumption From internal power supply active (W)	Terr. preamplifier supply (mA max - 12V DC)	Dimensions (w,d,h) (power cord length 130 cm)	Temperature range
PROFI CLASS												
MS9/4PIU-5 V10	90	100	90	90	88	93	70	3 + LNB	4,5 + LNB	150	34,7 x 15,2 x 8,7cm	-30 ~ +70 °C
MS9/6PIU-5 V10	90	100	90	90	86	91	70	3 + LNB	4,5 + LNB	150	34,7 x 15,2 x 8,7cm	-30 ~ +70 °C
MS9/8PIU-5 V10	90	100	90	90	84	90	70	3 + LNB	4,5 + LNB	150	34,7 x 15,2 x 8,7cm	-30 ~ +70 °C
MS9/10PIU-5 V10	90	100	90	90	82	89	70	3 + LNB	4,5 + LNB	150	34,7 x 15,2 x 8,7cm	-30 ~ +70 °C
MS9/12PIU-5 V10	90	100	90	90	82	87	70	3 + LNB	4,5 + LNB	150	34,7 x 15,2 x 8,7cm	-30 ~ +70 °C
MS9/16PIU-6 V10	90	100	90	90	79	85	70	3 + LNB	4,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS9/20PIU-6 V10	90	100	90	86	76	83	70	3 + LNB	4,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS9/26PIU-6 V10	90	100	90	85	75	82	70	3 + LNB	4,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
E.LITE CLASS												
MS9/4EIP-8	90	100	-	85	87	-	70	3 + LNB	-	-	26,0 x 11,4 x 5,3cm	-25 ~ +60 °C
MS9/8EIP-9	90	100	-	82	84	-	40	6 + LNB	-	-	36,0 x 11,4 x 5,3cm	-25 ~ +60 °C
MS9/6ECU-4	105	105	105	100	102	102	100	-	-	-	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS9/10ECU-4	105	105	105	100	102	102	100	-	-	-	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS9/16ECU-12	105	105	105	100	97	97	100	-	-	-	18,6 x 25,0 x 5,1cm	-25 ~ +60 °C
MS9/20ECU-12	105	105	105	100	97	97	100	-	-	-	18,6 x 25,0 x 5,1cm	-25 ~ +60 °C
MS9/26ECU-17	105	105	105	100	93	93	90	-	-	-	18,6 x 33,0 x 5,1cm	-25 ~ +60 °C
MS9/30ECU-17	105	105	105	100	93	93	90	-	-	-	18,6 x 33,0 x 5,1cm	-25 ~ +60 °C

Notes: 1* TERR: EN 50083-3/60dB IMA3[dBuV]; SAT: EN 50083-3/35dB IMA3[dBuV]

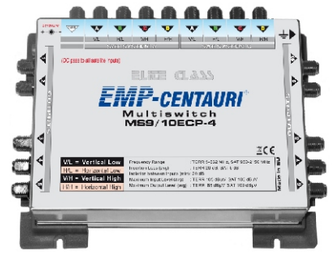
2** Max. input level increases when input attenuator is used. The given value is valid for no attenuation

Useful information (General)

► Multiswitches are controlled by receiver according to the table:

command sent by receiver	selected input of multiswitch	PROFI CLASS multiswitches selected input of multiswitch	ELITE CLASS multiswitches selected input of multiswitch
13 V, 0 kHz, DiSEqC A (1)	A	A	A
18 V, 0 kHz, DiSEqC A (1)		B	B
13 V, 22 kHz, DiSEqC A (1)		C	C
18 V, 22 kHz, DiSEqC A (1)		D	D
13 V, 0 kHz, DiSEqC B (2)	B	E	A
18 V, 0 kHz, DiSEqC B (2)		F	B
13 V, 22 kHz, DiSEqC B (2)		G	C
18 V, 22 kHz, DiSEqC B (2)		H	D

MS9/10 ECP-4



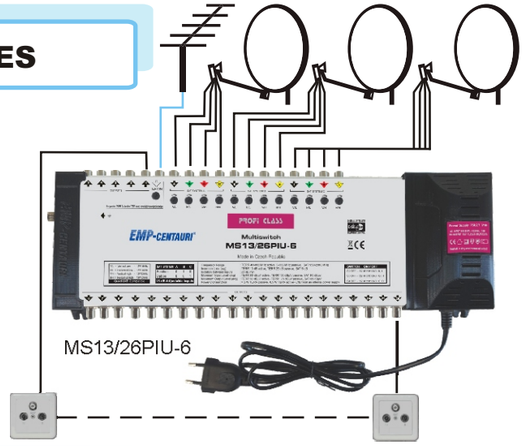
► Connect outputs of Quattro LNB to appropriate inputs of multiswitch:
VL → A or E, HL → B or F, VH → C or G, HH → D or H

► If Quad LNB is installed, it doesn't matter how its outputs are connected to inputs of multiswitch

► **For all output configurations are available also "ECP" versions with fixed user output SAT loss 5 dB and passive terrestrial band.**

3 SATELLITES MULTISWITCHES

3-satellites (12 polarities) standalone multiswitches with an integrated power supply are designed for the distribution of terrestrial and satellite signals from 3-satellite positions for up to 26 subscribers. Multiswitches are compatible with all satellite receivers, which support DiSEqC control system. They are suitable for both analog and digital reception.
The multiswitches and integrated power supplies are designed for maximum efficiency in full operation, eliminating need for stand-by mode functionality.

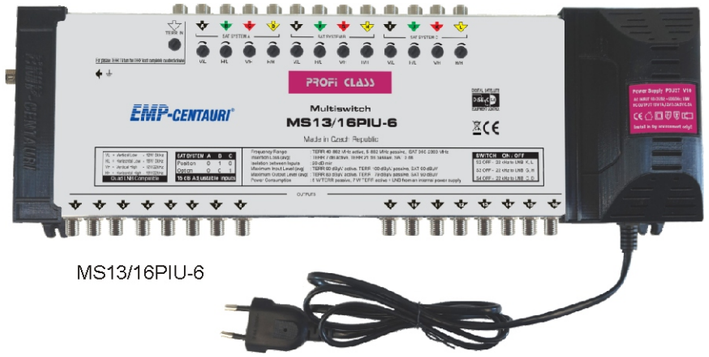


MS13/26PIU-6

Advantages of PROFI CLASS multiswitches:

- input attenuators at all inputs
- configurable support for Quad LNBs
- selectable active / passive processing of terrestrial band
- 12V DC supply for terrestrial preamplifier
- extended temperature range

DiSEqC 2.0



MS13/16PIU-6

6 YEARS WARRANTY

Overview of PROFI CLASS products - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range LNB inputs (MHz)	Frequency range Terr. Input passive (MHz)	Frequency range Terr. Input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control DiSEqC 1.0 (2.0) commands	Insertion loss Sat. (dB avg)	Insertion loss Terr. passive (dB avg)	Insertion loss Terr. active (dB avg)	Sat. inputs isolation (dB min) Between V/H polarisations	Sat. inputs isolation (dB min) Between low/high bands	Sat. inputs isolation (dB min) tween sat. systems
MS13/4PIU-6 V10	13	4	DiSEqC multiswitch with integrated power supply, 0 to 15 dB attenuators, Quad LNB compatible, switchable active/passive terr. input	950-2300	5-862	40-862	5-2300	40-2300	●	0	12	0	20	20	25
MS13/8PIU-6 V10	13	8		950-2300	5-862	40-862	5-2300	40-2300	●	0	16	2	20	20	25
MS13/12PIU-6 V10	13	12		950-2300	5-862	40-862	5-2300	40-2300	●	0	19	5	20	20	25
MS13/16PIU-6 V10	13	16		950-2300	5-862	40-862	5-2300	40-2300	●	0	21	7	20	20	25
MS13/20PIU-6 V10	13	20		950-2300	5-862	40-862	5-2300	40-2300	●	4	24	9	20	20	25
MS13/26PIU-6 V10	13	26		950-2300	5-862	40-862	5-2300	40-2300	●	5	25	10	20	20	25

Main features of E.LITE CLASS multiswitches:

- designed for Quattro LNB
- switchable active / passive terrestrial input *
- external power supply (included)

MS13/10ECU-4

MS13/26ECU-17

DiSEqC 2.0

* models ECU

4 YEARS WARRANTY

Overview of E.LITE CLASS products - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range LNB inputs (MHz)	Frequency range Terr. Input passive (MHz)	Frequency range Terr. Input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control DiSEqC 1.0 (2.0) commands	Insertion loss Sat. (dB avg)	Insertion loss Terr. active (dB avg)	Insertion loss Terr. passive (dB avg)	Sat. inputs isolation (dB min) Between V/H polarisations	Sat. inputs isolation (dB min) Between low/high bands	Sat. inputs isolation (dB min) Between sat. systems
MS13/6ECU-4	13	6	DiSEqC multiswitch with external power supply, switchable active/passive terr. Input	950-2150	40-862	40-862	40-2150	40-2150	●	5	3	20	20	25	25
MS13/10ECU-4	13	10		950-2150	40-862	40-862	40-2150	40-2150	●	5	3	20	20	25	25
MS13/16ECU-12	13	16		950-2150	40-862	40-862	40-2150	40-2150	●	5	8	25	20	25	25
MS13/20ECU-12	13	20		950-2150	40-862	40-862	40-2150	40-2150	●	5	8	25	20	25	25
MS13/26ECU-17	13	26		950-2150	40-862	40-862	40-2150	40-2150	●	5	12	30	20	25	25
MS13/30ECU-17	13	30		950-2150	40-862	40-862	40-2150	40-2150	●	5	12	30	20	25	25

Useful information (General)

- Multiswitches are controlled from receiver by analog and DiSEqC commands. In receiver's configuration menu set LNB type to Universal and differentiate received satellites by DiSEqC 1/2/3 (A/B/C) parameter
- Multiswitches are not compatible with Monoblock LNBs
- If higher than available number of user outputs is required, simply use two multiswitches instead of one, routing LNB outputs via signal splitters
- If terrestrial band is used, terminate all unused outputs by 75 ohm loads.

PROFI CLASS

- Switching between active and passive processing of terrestrial band is performed by lever No. 1 of configuration DIP-switch
- 22 kHz tone required for Quad LNB can be disabled by DIP-switch
- DC supply for preamplifier of terr. Antenna is limited to 150 mA max. The supply is disconnected if higher load or short circuit is applied to terrestrial input.
  To keep power consumption at minimum level, it is recommended to include an external DC block if short-circuit conditions should persist on terrestrial input

E.LITE CLASS

- A suitable cascadable unit can be placed before to extend the number of available outputs
- Switching between active and passive processing of terrestrial band is performed by rotary knob

Detailed specifications

Part number	Maximum input level* Sat. (dBµV avg) **	Maximum input level* Terr. passive (dBµV avg)	Maximum input level* Terr. active (dBµV avg)	Maximum output level* Sat. (dBµV avg) **	Maximum output level* Terr. passive (dBµV avg)	Maximum output level* Terr. active (dBµV avg)	Power consumption From each receiver (mA-18 V)	Power consumption From internal power supply passive (W)	Power consumption From internal power supply active (W)	Terr. preamplifier supply (mA max - 12V DC)	Dimensions (w,d,h) (power cord length 130 cm)	Temperature range
PROFI CLASS												
MS13/4PIU-6 V10	90	100	90	90	88	90	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS13/8PIU-6 V10	90	100	90	90	84	88	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS13/12PIU-6 V10	90	100	90	90	81	85	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS13/16PIU-6 V10	90	100	90	90	79	83	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS13/20PIU-6 V10	90	100	90	86	76	81	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS13/26PIU-6 V10	90	100	90	85	75	80	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
E.LITE CLASS												
MS13/6ECU-4	105	105	105	100	102	102	100	-	-	-	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS13/10ECU-4	105	105	105	100	102	102	100	-	-	-	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS13/16ECU-12	105	105	105	100	97	97	100	-	-	-	18,6 x 25,0 x 5,1cm	-25 ~ +60 °C
MS13/20ECU-12	105	105	105	100	97	97	100	-	-	-	18,6 x 25,0 x 5,1cm	-25 ~ +60 °C
MS13/26ECU-17	105	105	105	100	93	93	90	-	-	-	18,6 x 33,0 x 5,1cm	-25 ~ +60 °C
MS13/30ECU-17	105	105	105	100	93	93	90	-	-	-	18,6 x 33,0 x 5,1cm	-25 ~ +60 °C

Notes: 1* TERR: EN 50083-3/60dB IMA3[dBuV]; SAT: EN 50083-3/35dB IMA3[dBuV]

2** Max. input level increases when input attenuator is used. The given value is valid for no attenuation

Useful information (General)

► Multiswitches are controlled by receiver according to the table:

command sent by receiver	selected input of multiswitch	PROFI CLASS multiswitches selected input of multiswitch	ELITE CLASS multiswitches selected input of multiswitch
13 V, 0 kHz, DiSEqC A (1)	A	A	A
18 V, 0 kHz, DiSEqC A (1)		B	B
13 V, 22 kHz, DiSEqC A (1)		C	C
18 V, 22 kHz, DiSEqC A (1)		D	D
13 V, 0 kHz, DiSEqC B (2)	B	E	A
18 V, 0 kHz, DiSEqC B (2)		F	B
13 V, 22 kHz, DiSEqC B (2)		G	C
18 V, 22 kHz, DiSEqC B (2)		H	D
13 V, 0 kHz, DiSEqC C (3)	C	I	A
18 V, 0 kHz, DiSEqC C (3)		J	B
13 V, 22 kHz, DiSEqC C (3)		K	C
18 V, 22 kHz, DiSEqC C (3)		L	D

► Connect outputs of Quattro LNB to appropriate inputs of multiswitch:
VL→ A or E or I, HL→ B or F or J, VH→ C or G or K, HH→ D or H or L

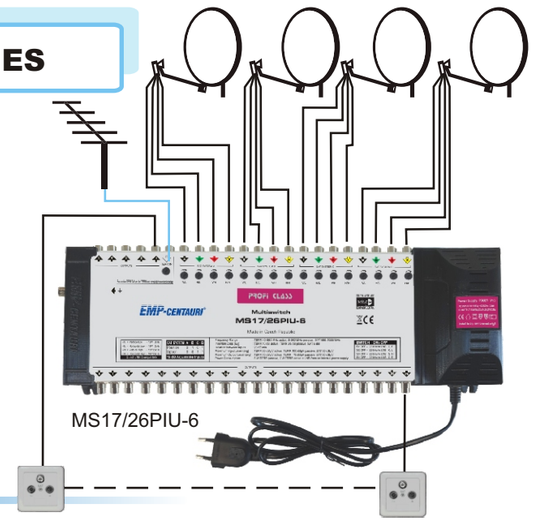
► If Quad LNB is installed, it doesn't matter how its outputs are connected to inputs of multiswitch

► **For all output configurations are available also "ECP" versions with fixed user output SAT loss 5 dB and passive terrestrial band.**

MS13/10 ECP-4

4 SATELLITES MULTISWITCHES

4-satellites (16 polarities) standalone multiswitches with an integrated power supply are designed for the distribution of terrestrial and satellite signals from 4-satellite positions for up to 26 subscribers. Multiswitches are compatible with all satellite receivers, which support DiSEqC control system. They are suitable for both analog and digital reception.
The multiswitches and integrated power supplies are designed for maximum efficiency in full operation, eliminating need for stand-by mode functionality.



MS17/26PIU-6

Advantages of PROFI CLASS multiswitches:

- input attenuators at all inputs
- configurable support for Quad LNBs
- selectable active / passive processing of terrestrial band
- 12V DC supply for terrestrial preamplifier
- extended temperature range

6 YEARS WARRANTY

MS17/16PIU-6

Overview of PROFI CLASS products - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range LNB inputs (MHz)	Frequency range Terr. Input passive (MHz)	Frequency range Terr. Input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control DiSEqC 1.0 (2.0) commands	Insertion loss Sat. (dB avg)	Insertion loss Terr. passive (dB avg)	Insertion loss Terr. active (dB avg)	Sat. inputs isolation (dB min) Between V/H polarisations	Sat. inputs isolation (dB min) Between low/high bands	Sat. inputs isolation (dB min) Between sat. systems
MS17/4PIU-6 V10	17	4	DiSEqC multiswitch with integrated power supply, 0 to 15 dB attenuators, Quad LNB compatible, switchable active/passive terr. input	950-2300	5-862	40-862	5-2300	40-2300	●	0	12	0	20	20	25
MS17/8PIU-6 V10	17	8		950-2300	5-862	40-862	5-2300	40-2300	●	0	16	2	20	20	25
MS17/12PIU-6 V10	17	12		950-2300	5-862	40-862	5-2300	40-2300	●	0	19	5	20	20	25
MS17/16PIU-6 V10	17	16		950-2300	5-862	40-862	5-2300	40-2300	●	0	21	7	20	20	25
MS17/20PIU-6 V10	17	20		950-2300	5-862	40-862	5-2300	40-2300	●	4	24	9	20	20	25
MS17/26PIU-6 V10	17	26		950-2300	5-862	40-862	5-2300	40-2300	●	5	25	10	20	20	25

Main features of E.LITE CLASS multiswitches:

- designed for Quattro LNB
- switchable active / passive terrestrial input *
- external power supply (included)

MS17/10ECU-4

MS17/20ECU-12

DiSEqC 2.0

* models ECU **4 YEARS WARRANTY**

Overview of E.LITE CLASS products - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range LNB inputs (MHz)	Frequency range Terr. Input passive (MHz)	Frequency range Terr. input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control DiSEqC 1.0 (2.0) commands	Insertion loss Sat. (dB avg)	Insertion loss Terr. active (dB avg)	Insertion loss Terr. passive (dB avg)	Sat. inputs isolation (dB min) Between V/H polarisations	Sat. inputs isolation (dB min) Between low/high bands	Sat. inputs isolation (dB min) Between sat. systems
MS17/6ECU-4	17	6	DiSEqC multiswitch with external power supply, switchable active/passive terr. Input	950-2150	40-862	40-862	40-2150	40-2150	●	5	3	20	20	25	25
MS17/10ECU-4	17	10		950-2150	40-862	40-862	40-2150	40-2150	●	5	3	20	20	25	25
MS17/16ECU-12	17	16		950-2150	40-862	40-862	40-2150	40-2150	●	5	8	25	20	25	25
MS17/20ECU-12	17	20		950-2150	40-862	40-862	40-2150	40-2150	●	5	8	25	20	25	25
MS17/26ECU-17	17	26		950-2150	40-862	40-862	40-2150	40-2150	●	5	12	30	20	25	25
MS17/30ECU-17	17	30		950-2150	40-862	40-862	40-2150	40-2150	●	5	12	30	20	25	25

Useful information (General)

- Multiswitches are controlled from receiver by analog and DiSEqC commands. In receiver's configuration menu set LNB type to Universal and differentiate received satellites by DiSEqC 1/2/3/4 (A/B/C/D) parameter
- Multiswitches are not compatible with Monoblock LNBs
- If higher than available number of user outputs is required, simply use two multiswitches instead of one, routing LNB outputs via signal splitters
- If terrestrial band is used, terminate all unused outputs by 75 ohm loads.

PROFI CLASS

- Switching between active and passive processing of terrestrial band is performed by lever No. 1 of configuration DIP-switch
- 22 kHz tone required for Quad LNB can be disabled by DIP-switch
- DC supply for preamplifier of terr. Antenna is limited to 150 mA max. The supply is disconnected if higher load or short circuit is applied to terrestrial input.
  To keep power consumption at minimum level, it is recommended to include an external DC block if short-circuit conditions should persist on terrestrial input

E.LITE CLASS

- A suitable cascadable unit can be placed before to extend the number of available outputs
- Switching between active and passive processing of terrestrial band is performed by rotary knob

Detailed specifications

Part number	Maximum input level* Sat. (dBµV avg) **	Maximum input level* Terr. passive (dBµV avg)	Maximum input level* Terr. active (dBµV avg)	Maximum output level* Sat. (dBµV avg) **	Maximum output level* Terr. passive (dBµV avg)	Maximum output level* Terr. active (dBµV avg)	Power consumption From each receiver (mA-18 V)	Power consumption From internal power supply passive (W)	Power consumption From internal power supply active (W)	Terr. preamplifier supply (mA max - 12V DC)	Dimensions (w.d.h) (power cord length 130 cm)	Temperature range
PROFI CLASS												
MS17/4PIU-6 V10	90	100	90	90	88	90	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS17/8PIU-6 V10	90	100	90	90	84	88	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS17/12PIU-6 V10	90	100	90	90	81	85	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS17/16PIU-6 V10	90	100	90	90	79	83	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS17/20PIU-6 V10	90	100	90	86	76	81	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
MS17/26PIU-6 V10	90	100	90	85	75	80	75	4,5 + LNB	6,5 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +70 °C
E.LITE CLASS												
MS17/6ECU-4	105	105	105	100	102	102	100	-	-	-	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS17/10ECU-4	105	105	105	100	102	102	100	-	-	-	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS17/16ECU-12	105	105	105	100	97	97	100	-	-	-	18,6 x 25,0 x 5,1cm	-25 ~ +60 °C
MS17/20ECU-12	105	105	105	100	97	97	100	-	-	-	18,6 x 25,0 x 5,1cm	-25 ~ +60 °C
MS17/26ECU-17	105	105	105	100	93	93	90	-	-	-	18,6 x 33,0 x 5,1cm	-25 ~ +60 °C
MS17/30ECU-17	105	105	105	100	93	93	90	-	-	-	18,6 x 33,0 x 5,1cm	-25 ~ +60 °C

Notes: 1* TERR: EN 50083-3/60dB IMA3[dBuV]; SAT: EN 50083-3/35dB IMA3[dBuV]

2** Max. input level increases when input attenuator is used. The given value is valid for no attenuation

Useful information (General)

- Multiswitches are controlled by receiver according to the table:

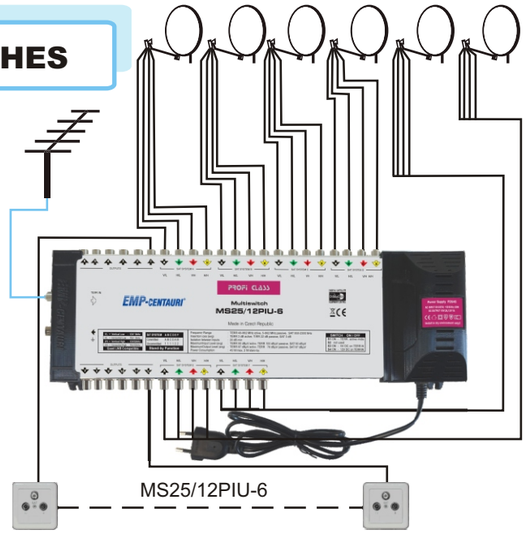
command sent by receiver	selected input of multiswitch	PROFI CLASS multiswitches selected input of multiswitch	ELITE CLASS multiswitches selected input of multiswitch
13 V, 0 kHz, DiSEqC A (1)	A	A	A
18 V, 0 kHz, DiSEqC A (1)		B	B
13 V, 22 kHz, DiSEqC A (1)		C	C
18 V, 22 kHz, DiSEqC A (1)		D	D
13 V, 0 kHz, DiSEqC B (2)	B	E	A
18 V, 0 kHz, DiSEqC B (2)		F	B
13 V, 22 kHz, DiSEqC B (2)		G	C
18 V, 22 kHz, DiSEqC B (2)		H	D
13 V, 0 kHz, DiSEqC C (3)	C	I	A
18 V, 0 kHz, DiSEqC C (3)		J	B
13 V, 22 kHz, DiSEqC C (3)		K	C
18 V, 22 kHz, DiSEqC C (3)		L	D
13 V, 0 kHz, DiSEqC D (4)	D	M	A
18 V, 0 kHz, DiSEqC D (4)		N	B
13 V, 22 kHz, DiSEqC D (4)		O	C
18 V, 22 kHz, DiSEqC D (4)		P	D

- Connect outputs of Quattro LNB to appropriate inputs of multiswitch:
  VL→ A or E or I or M, HL→ B or F or J or N, VH→ C or G or K or O, HH→ D or H or L or P
- If Quad LNB is installed, it doesn't matter how its outputs are connected to inputs of multiswitch
- **For all output configurations are available also "ECP" versions with fixed user output SAT loss 5 dB and passive terrestrial band.**

MS17/6 ECP-4

5-8 SATELLITES MULTISWITCHES

Unique compact solution for the distribution of terrestrial and satellite signals from up to 8-satellite positions for up to 12 subscribers. Multiswitches are compatible with all satellite receivers, which support DiSEqC 1.1 or DiSEqC 1.2 control system. Due to the high number of connected LNBs the multiswitches offer stand-by mode functionality, that minimizes power consumption.



MS25/12PIU-6

Advantages of PROFI CLASS multiswitches:

- support Quad LNBs
- selectable active / passive processing of terrestrial band
- selectable DC supply for terrestrial preamplifier 12V / 5V / OFF

DiSEqC 1.1 DiSEqC 1.2

MS33/12PIU-6

6 YEARS WARRANTY

Overview of PROFI CLASS products - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range LNB inputs (MHz)	Frequency range Terr. Input passive (MHz)	Frequency range Terr. Input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control 13/18V + 0/22kHz	Control DiSEqC 1.0 (2.0) commands	Insertion loss Sat. (dB avg)	Insertion loss Terr. passive (dB avg)	Insertion loss Terr. active (dB avg)	Sat. inputs isolation (dB min)
MS21/12PIU-6	21	12	DiSEqC multiswitch with integrated power supply, Quad LNB compatible, switchable active/passive terr. input	950-2300	5-862	40-862	5-2300	40-2300	●	●	3	22	3	20
MS25/12PIU-6	25	12		950-2300	5-862	40-862	5-2300	40-2300	●	●	3	22	3	20
MS29/12PIU-6	29	12		950-2300	5-862	40-862	5-2300	40-2300	●	●	3	22	3	20
MS33/12PIU-6	33	12		950-2300	5-862	40-862	5-2300	40-2300	●	●	3	22	3	20

Detailed specifications

Part number	Maximum input level* Sat. (dBµV avg) **	Maximum input level* Terr. passive (dBµV avg)	Maximum input level* Terr. active (dBµV avg)	Maximum output level* Sat. (dBµV avg) **	Maximum output level* Terr. passive (dBµV avg)	Maximum output level* Terr. active (dBµV avg)	Power consumption From each receiver (mA-18 V)	Power consumption From internal power supply passive (W)	Power consumption From internal power supply active (W)	Terr. preamplifier supply (mA max - 12V DC)	Dimensions (w.d.h) (power cord length 130 cm)	Temperature range
MS21/12PIU-6	90	100	90	87	78	87	45	2,1-5,5 + LNB	2,3-7 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +60 °C
MS25/12PIU-6	90	100	90	87	78	87	45	2,1-6,5 + LNB	2,3-8 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +60 °C
MS29/12PIU-6	90	100	90	87	78	87	45	2,1-7,5 + LNB	2,3-9 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +60 °C
MS33/12PIU-6	90	100	90	87	78	87	45	2,1-8,5 + LNB	2,3-10 + LNB	150	47,0 x 15,2 x 8,7cm	-30 ~ +60 °C

Notes: 1* TERR: EN 50083-3/60dB IMA3[dBuV]; SAT: EN 50083-3/35dB IMA3[dBuV]

2** Max. input level increases when input attenuator is used. The given value is valid for no attenuation

Useful information (General)

► Individual LNBs are accessible using following DiSEqC 1.1 commands:

Sat system (LNB)	"committed command"	"uncommitted command"
A (1)	A (1,AA)	1
B (2)	B (2,AB)	1
C (3)	C (3,BA)	1
D (4)	D (4,BB)	1
E (5)	E (5,AA)	2
F (6)	F (6,AB)	2
G (7)	G (7,BA)	2
H (8)	H (8,BB)	2

► If the receiver does not support DiSEqC 1.1, user has to resort to DiSEqC 1.2 motor commands (not USALS)

► With standard DiSEqC 1.0 setting only sat systems A to D are available

► Multiswitches are not compatible with Monoblock LNBs

► Stand-by circuitry monitors usage of any LNB and if not watched by any user, shuts off power to this LNB and relevant inner circuits

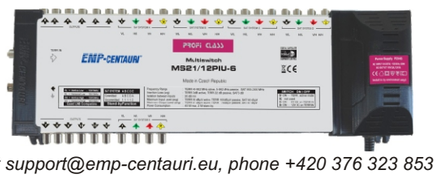
► Terrestrial input can provide 12 V or 5 V DC (selectable by DIP-switch), up to 150 mA

► If higher than available number of user outputs is required, simply use two multiswitches instead of one, routing LNB outputs via signal splitters

► Terminate all unused outputs by 75 ohm loads, if terrestrial band is used

MS29/12PIU-6

MS21/12PIU-6



For more info see the website www.emp-centauri.eu or contact us at support@emp-centauri.eu, phone +420 376 323 853

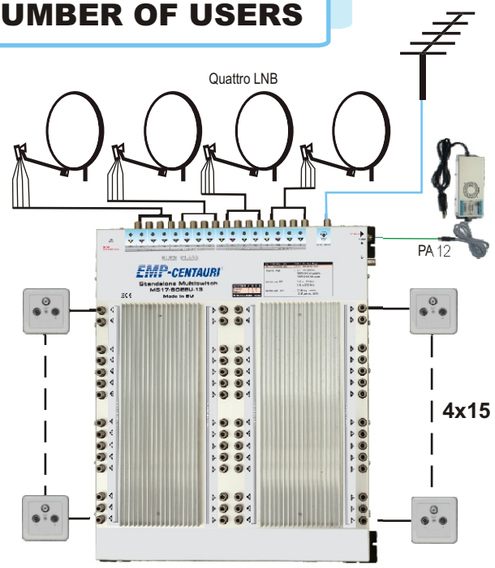
MULTISWITCHES FOR LARGE NUMBER OF USERS

Main features:

- available models for 1, 2, 3 or 4 Quattro LNBs
- designed for Quattro LNBs
- 32 to 60 user outputs
- external power supply (included)
- input attenuators at all satellite inputs
- selectable active / passive processing of terrestrial band

TV/SAT Wall Socket at every output

4 YEARS WARRANTY



MS17/60 EEU-13

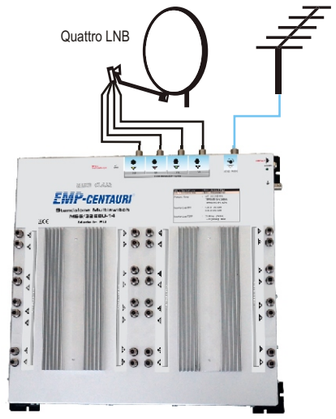
Specifications series EEU

Part number	Number of inputs	Number of outputs	Frequency range Sat. inputs (MHz)	Frequency range Terr. input passive (MHz)	Frequency range Terr. input active (MHz)	Frequency range Outputs passive (MHz)	Frequency range Outputs active (MHz)	Control 13/18V + 0/22kHz	Control DiSEqC 1.0 (2.0) commands
MS5/32EEU-14	5	32	950-2150	5-840	40-840	5-2150	40-2150	●	-
MS5/40EEU-14	5	40	950-2150	5-840	40-840	5-2150	40-2150	●	-
MS5/52EEU-13	5	52	950-2150	5-840	40-840	5-2150	40-2150	●	-
MS5/60EEU-13	5	60	950-2150	5-840	40-840	5-2150	40-2150	●	-
MS9/32EEU-14	9	32	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS9/40EEU-14	9	40	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS9/52EEU-13	9	52	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS9/60EEU-13	9	60	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS13/32EEU-14	13	32	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS13/40EEU-14	13	40	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS13/52EEU-13	13	52	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS13/60EEU-13	13	60	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS17/32EEU-14	17	32	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS17/40EEU-14	17	40	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS17/52EEU-13	17	52	950-2150	5-840	40-840	5-2150	40-2150	-	●
MS17/60EEU-13	17	60	950-2150	5-840	40-840	5-2150	40-2150	-	●

Description: DiSEqC multiswitch with external power supply,
SAT inputs attenuators, switchable active/passive terr. input

MS 5/32 EEU-14

1 satellites / 32 user outputs



MS5/32 EEU-14

Specifications series EEU

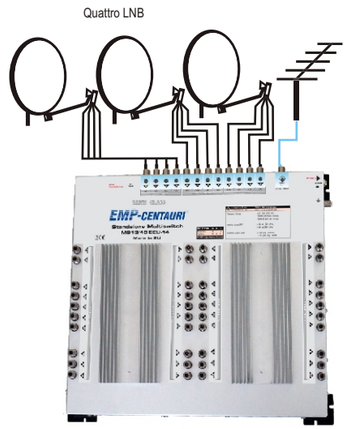
Part number	Insertion loss Sat.	Insertion loss Terr. Passive (dB avg)	Insertion loss Terr. Active (dB gain avg)	Sat. inputs isolation (dB min) Between V/H polarisations	Sat. inputs isolation (dB min) Between low/high bands	Sat. inputs isolation (dB min) Between sat. systems	Maximum input level* Sat. (dBµV avg) **	Maximum input level* Terr. active (dBµV avg)	Maximum output level* Sat. (dBµV avg) **	Maximum output level* Terr. active (dBµV avg)
MS5/32EEU-14	~ 0 dB (2150 MHz) 5 dB (950 MHz)	27	2	25	25	-	100	85	100	87
MS5/40EEU-14		27	2	25	25	-	100	85	100	87
MS5/52EEU-13		27	2	25	25	-	100	85	100	87
MS5/60EEU-13		27	2	25	25	-	100	85	100	87
MS9/32EEU-14		27	2	25	25	30	100	85	100	87
MS9/40EEU-14		27	2	25	25	30	100	85	100	87
MS9/52EEU-13		27	2	25	25	30	100	85	100	87
MS9/60EEU-13		27	2	25	25	30	100	85	100	87
MS13/32EEU-14		27	2	20	20	25	100	85	100	87
MS13/40EEU-14		27	2	20	20	25	100	85	100	87
MS13/52EEU-13		27	2	20	20	25	100	85	100	87
MS13/60EEU-13		27	2	20	20	25	100	85	100	87
MS17/32EEU-14		27	2	20	20	25	100	85	100	87
MS17/40EEU-14		27	2	20	20	25	100	85	100	87
MS17/52EEU-13		27	2	20	20	25	100	85	100	87
MS17/60EEU-13		27	2	20	20	25	100	85	100	87

Notes: 1* TERR: EN 50083-3/60dB IMA3[dBuV]; SAT: EN 50083-3/35dB IMA3[dBuV]

2** Max. input level increases when input attenuator is used. The given value is valid for no attenuation

MS 13/40 EEU-14

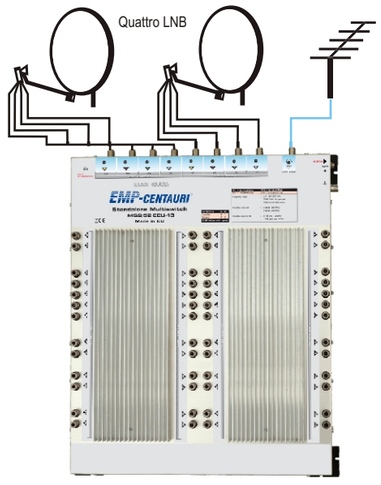
3 satellites / 40 user outputs



MS13/40 EEU-14

MS 9/52 EEU-13

2 satellites / 52 user outputs



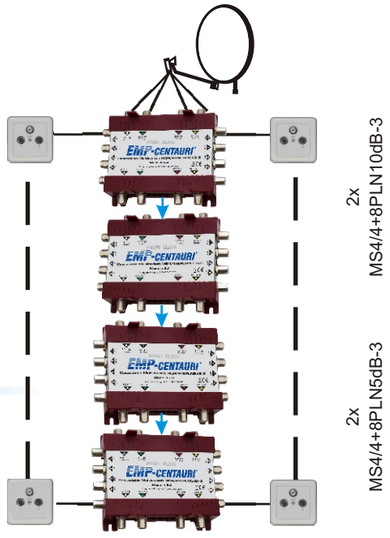
MS9/52 EEU-13

Specifications series EEU

Part number	Power consumption From each receiver (18 V)	Power consumption From internal power supply passive (W)	Power consumption From internal power supply active (W)	Dimensions (w.d.h) (power cord length 130 cm)	Temperature range
MS5/32EEU-14	55 mA	5 + LNB	6 + LNB	35,5 x 35,0 x 5,0cm	-25 ~ +50 °C
MS5/40EEU-14	55 mA	5 + LNB	6 + LNB	35,5 x 35,0 x 5,0cm	-25 ~ +50 °C
MS5/52EEU-13	55 mA	5 + LNB	6 + LNB	35,5 x 44,0 x 5,0cm	-25 ~ +50 °C
MS5/60EEU-13	55 mA	5 + LNB	6 + LNB	35,5 x 44,0 x 5,0cm	-25 ~ +50 °C
MS9/32EEU-14	70 mA	7 + LNB	8 + LNB	35,5 x 35,0 x 5,0cm	-25 ~ +50 °C
MS9/40EEU-14	70 mA	7 + LNB	8 + LNB	35,5 x 35,0 x 5,0cm	-25 ~ +50 °C
MS9/52EEU-13	70 mA	7 + LNB	8 + LNB	35,5 x 44,0 x 5,0cm	-25 ~ +50 °C
MS9/60EEU-13	70 mA	7 + LNB	8 + LNB	35,5 x 44,0 x 5,0cm	-25 ~ +50 °C
MS13/32EEU-14	85 mA	9 + LNB	10 + LNB	35,5 x 35,0 x 5,0cm	-25 ~ +50 °C
MS13/40EEU-14	85 mA	9 + LNB	10 + LNB	35,5 x 35,0 x 5,0cm	-25 ~ +50 °C
MS13/52EEU-13	85 mA	9 + LNB	10 + LNB	35,5 x 44,0 x 5,0cm	-25 ~ +50 °C
MS13/60EEU-13	85 mA	9 + LNB	10 + LNB	35,5 x 44,0 x 5,0cm	-25 ~ +50 °C
MS17/32EEU-14	100 mA	11 + LNB	12 + LNB	35,5 x 35,0 x 5,0cm	-25 ~ +50 °C
MS17/40EEU-14	100 mA	11 + LNB	12 + LNB	35,5 x 35,0 x 5,0cm	-25 ~ +50 °C
MS17/52EEU-13	100 mA	11 + LNB	12 + LNB	35,5 x 44,0 x 5,0cm	-25 ~ +50 °C
MS17/60EEU-13	100 mA	11 + LNB	12 + LNB	35,5 x 44,0 x 5,0cm	-25 ~ +50 °C

CASCADABLE MULTISWITCHES

Cascadable multiswitches are designed for distribution of satellite signals from up to 4 satellite positions (16 polarities) for up to 80 subscribers with or without terrestrial television. Cascades are flexible, the number of satellite positions or subscribers can be easily adapted to local requirements.
Basic building block of cascade systems is cascadable multiswitch. EMP-Centauri offers units with up to 20 user outputs, with or without terrestrial band processing, with stepped loss to maintain balanced signal levels within whole system.



Advantages of PROFI CLASS multiswitches:

- low insertion loss on trunk outputs
- stepped insertion loss on user outputs
- optionally passive terrestrial band
- DC path from user outputs to trunk lines

MS5/5+8PCP10dB-3

6 YEARS WARRANTY

Overview of PROFI CLASS products - specifications

Part number	Number of inputs	Number of trunk outputs	Number of user outputs	Frequency range Sat.trunks (MHz)	Frequency range Terr.trunk (MHz)	Frequency range User outputs (MHz)	Control 13/18V	Control 13/18V+0/22 kHz	Insertion loss-user outputs Sat. (dB avg)	Insertion loss-user outputs Terr. (dB avg)	Insertion loss-trunk outputs Sat. (dB avg)	Insertion loss-trunk outputs Terr. (dB avg)	Sat. inputs isolation At user outputs (dB min)	Sat. inputs isolation At trunk outputs (dB min)
MS5/5+4PLP-3	5	5	4	950-2300	5-862	5-2300		●	5dB (5/18), 10dB (10/21)		2	3	25	30
MS5/5+4PCP-3	5	5	4	950-2300	5-862	5-2300		●	5dB (5/18), 10dB (10/21)		2	3	25	30
MS5/5+8PCP-3	5	5	8	950-2300	5-862	5-2300		●	5dB (5/21), 10dB (10/24)		2	3	25	30
MS5/5+8PLP-3	5	5	8	950-2300	5-862	5-2300		●	5dB (5/21), 10dB (10/24)		2	3	25	30

CASCADABLE MULTISWITCHES

Overview of PROFI CLASS products - continued

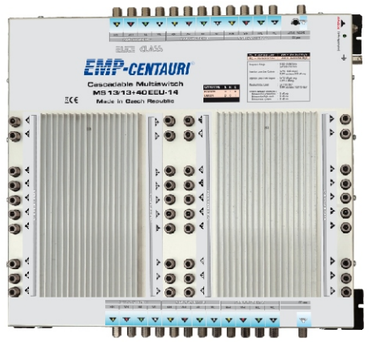
Part number	Maximum input level* Sat. (dBµV avg)	Maximum input level* Terr. (dBµV avg)	Maximum user output level* Sat. (dBµV avg) **	Maximum user output level* Terr. (dBµV avg)	Maximum input level* Sat. / Terr. (dBµV avg)	Maximum user output level* **5 dB** Sat. / Terr. (dBµV avg)	Maximum user output level* **10 dB** Sat. / Terr. (dBµV avg)	Power consumption From each receiver (mA-18 V)	Dimensions (w.d.h)	Temperature range
MS5/5+4PLP-3					90/110	85/92	80/89	50	12,7 x 10,4 x 4,1cm	-30 ~ +70 °C
MS5/5+4PCP-3					90/110	85/92	80/89	50	12,7 x 10,4 x 4,1cm	-30 ~ +70 °C
MS5/5+8PCP-3					90/110	85/89	80/86	50	13,5 x 10,4 x 4,1cm	-30 ~ +70 °C
MS5/5+8PLP-3					90/110	85/89	80/86	50	13,5 x 10,4 x 4,1cm	-30 ~ +70 °C

Notes: *Terr.: EN 50083-3/60dB IMA_3 [dBµV]; SAT: EN 50083-3/35dB IMA_3 [dBµV

Main features:

- designed for Quattro LNBs

MS13/13+40EEU-14



4 YEARS WARRANTY

Overview of E.LITE CLASS products - specifications

NEW - *Cascadable multiswitch, active/passive terrestrial TV*

Part number	Number of inputs	Number of trunk outputs	Number of user outputs	Frequency range Sat.trunks (MHz)	Frequency range Terr.trunk (MHz)	Frequency range User outputs (MHz)	Control 13/18V+0,22kHz+ DiSEqC 1.0 / 2.0	Insertion loss-user outputs Sat. (dB)	Insertion loss-user outputs Terr.active / passive (dB avg)	Insertion loss-trunk outputs Sat. (dB avg)	Insertion loss-trunk outputs Terr. (dB avg)	Weight (kg)	Dimensions (w.d.h)	Temperature range
MS9/9+32EEU-14	9	9	32	950-2150	40-840	40-2150	●	5-0(slope)	0/30	gain 1	4	3,25	37,5 x 35,0 x 6,5cm	-25 ~ +50 °C
MS9/9+40EEU-14	9	9	40	950-2150	40-840	40-2150	●	5-0(slope)	0/30	gain 1	4	3,25	37,5 x 35,0 x 6,5cm	-25 ~ +50 °C
MS9/9+52EEU-13	9	9	52	950-2150	40-840	40-2150	●	8-0(slope)	5/32	gain 1	4	3,67	37,5 x 45,0 x 6,5cm	-25 ~ +50 °C
MS9/9+60EEU-13	9	9	60	950-2150	40-840	40-2150	●	8-0(slope)	5/32	gain 1	4	3,67	37,5 x 45,0 x 6,5cm	-25 ~ +50 °C
MS13/13+32EEU-14	13	13	32	950-2150	40-840	40-2150	●	5-0(slope)	0/30	gain 1	4	3,25	37,5 x 35,0 x 6,5cm	-25 ~ +50 °C
MS13/13+40EEU-14	13	13	40	950-2150	40-840	40-2150	●	5-0(slope)	0/30	gain 1	4	3,25	37,5 x 35,0 x 6,5cm	-25 ~ +50 °C
MS13/13+52EEU-13	13	13	52	950-2150	40-840	40-2150	●	8-0(slope)	5/32	gain 1	4	3,67	37,5 x 45,0 x 6,5cm	-25 ~ +50 °C
MS13/13+60EEU-13	13	13	60	950-2150	40-840	40-2150	●	8-0(slope)	5/32	gain 1	4	3,67	37,5 x 45,0 x 6,5cm	-25 ~ +50 °C
MS17/17+32EEU-14	17	17	32	950-2150	40-840	40-2150	●	5-0(slope)	0/30	gain 1	4	3,25	37,5 x 35,0 x 6,5cm	-25 ~ +50 °C
MS17/17+40EEU-14	17	17	40	950-2150	40-840	40-2150	●	5-0(slope)	0/30	gain 1	4	3,25	37,5 x 35,0 x 6,5cm	-25 ~ +50 °C
MS17/17+52EEU-13	17	17	52	950-2150	40-840	40-2150	●	8-0(slope)	5/32	gain 1	4	3,67	37,5 x 45,0 x 6,5cm	-25 ~ +50 °C
MS17/17+60EEU-13	17	17	60	950-2150	40-840	40-2150	●	8-0(slope)	5/32	gain 1	4	3,67	37,5 x 45,0 x 6,5cm	-25 ~ +50 °C

Overview of E.LITE CLASS products - specifications

NEW - *Cascadable multiswitch, active/passive terrestrial, self-powered*

4 YEARS WARRANTY

Part number	Number of inputs	Number of trunk outputs	Number of user outputs	Frequency range Sat.trunks (MHz)	Frequency range Terr.trunk (MHz)	Frequency range User outputs (MHz)	Control 13/18V+0,22kHz+ DiSEqC	Insertion loss-user outputs Sat. (dB)	Insertion loss-user outputs Terr.active / passive (dB avg)	Insertion loss-trunk outputs Sat. (dB avg)	Insertion loss-trunk outputs Terr. (dB avg)	Weight (kg)	Dimensions (w,d,h)	Temperature range
MS9/9+6ECU-4	9	9	6	950-2150	40-862	40-2150	●	5-20(adjustable)	8/25	3	5	1,05	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS9/9+10ECU-4	9	9	10	950-2150	40-862	40-2150	●	5-20(adjustable)	8/25	3	5	1,05	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS9/9+16ECU-12	9	9	16	950-2150	40-862	40-2150	●	5-20(adjustable)	12/26	3	5	1,05	18,6 x 24,5 x 5,1cm	-25 ~ +60 °C
MS9/9+20ECU-12	9	9	20	950-2150	40-862	40-2150	●	5-20(adjustable)	12/26	3	5	1,05	18,6 x 24,5 x 5,1cm	-25 ~ +60 °C
MS9/9+26ECU-17	9	9	26	950-2150	40-862	40-2150	●	5-20(adjustable)	20/35	5	6	1,05	18,6 x 33,2 x 5,1cm	-25 ~ +60 °C
MS9/9+30ECU-17	9	9	30	950-2150	40-862	40-2150	●	5-20(adjustable)	20/35	5	6	1,05	18,6 x 33,2 x 5,1cm	-25 ~ +60 °C
MS13/13+6ECU-4	13	13	6	950-2150	40-862	40-2150	●	5-20(adjustable)	8/25	3	5	1,05	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS13/13+10ECU-4	13	13	10	950-2150	40-862	40-2150	●	5-20(adjustable)	8/25	3	5	1,05	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS13/13+16ECU-12	13	13	16	950-2150	40-862	40-2150	●	5-20(adjustable)	12/26	3	5	1,05	18,6 x 24,5 x 5,1cm	-25 ~ +60 °C
MS13/13+20ECU-12	13	13	20	950-2150	40-862	40-2150	●	5-20(adjustable)	12/26	3	5	1,05	18,6 x 24,5 x 5,1cm	-25 ~ +60 °C
MS13/13+26ECU-17	13	13	26	950-2150	40-862	40-2150	●	5-20(adjustable)	20/35	5	6	1,05	18,6 x 33,2 x 5,1cm	-25 ~ +60 °C
MS13/13+30ECU-17	13	13	30	950-2150	40-862	40-2150	●	5-20(adjustable)	20/35	5	6	1,05	18,6 x 33,2 x 5,1cm	-25 ~ +60 °C
MS17/17+6ECU-4	17	17	6	950-2150	40-862	40-2150	●	5-20(adjustable)	8/25	3	5	1,05	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS17/17+10ECU-4	17	17	10	950-2150	40-862	40-2150	●	5-20(adjustable)	8/25	3	5	1,05	18,6 x 15,6 x 5,1cm	-25 ~ +60 °C
MS17/17+16ECU-12	17	17	16	950-2150	40-862	40-2150	●	5-20(adjustable)	12/26	3	5	1,05	18,6 x 24,5 x 5,1cm	-25 ~ +60 °C
MS17/17+20ECU-12	17	17	20	950-2150	40-862	40-2150	●	5-20(adjustable)	12/26	3	5	1,05	18,6 x 24,5 x 5,1cm	-25 ~ +60 °C
MS17/17+26ECU-17	17	17	26	950-2150	40-862	40-2150	●	5-20(adjustable)	20/35	5	6	1,05	18,6 x 33,2 x 5,1cm	-25 ~ +60 °C
MS17/17+30ECU-17	17	17	30	950-2150	40-862	40-2150	●	5-20(adjustable)	20/35	5	6	1,05	18,6 x 33,2 x 5,1cm	-25 ~ +60 °C

MS9/9+6ECU-4

MS13/13+20ECU-12

MS5/5+16ELP5dB-4

MS17/17+30ECU-17

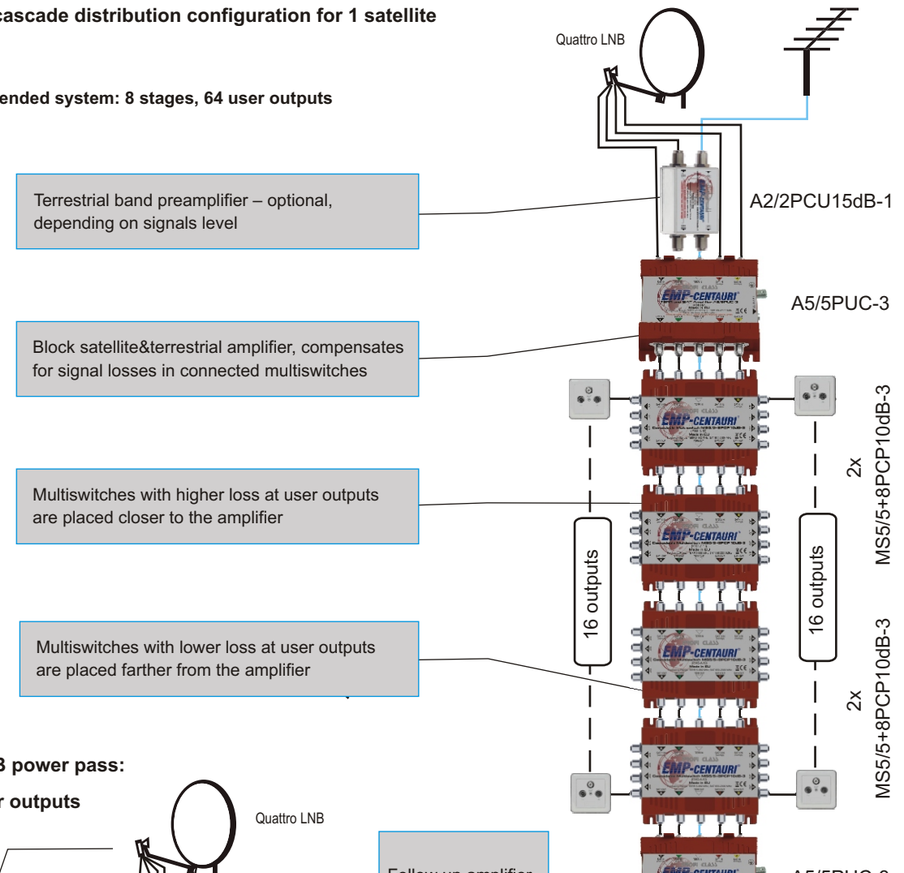
▶ **For all output configurations are available also "ECP" versions with fixed user output SAT loss 5 dB and passive terrestrial band.**

Cascadable multiswitch, passive terrestrial, self-powered, DC path from receivers to trunk

Part number	Number of inputs	Number of trunk outputs	Number of user outputs	Frequency range Sat.trunks (MHz)	Frequency range Terr.trunk (MHz)	Frequency range User outputs (MHz)	Control 13/18V+0,22kHz	Insertion loss-user outputs **5 dB** Sat./ Terr (dB avg)	Insertion loss-user outputs **10 dB** Sat./ Terr (dB avg)	Insertion loss-trunk outputs Sat. (dB avg)	Insertion loss-trunk outputs Terr. (dB avg)	Dimensions (w,d,h)	Temperature range
MS5/5+12ELP-4	5	5	12	950-2150	5-862	5-2150	●	5-24	10/27	4	3	18,2 x 15,2 x 4,5cm	-25 ~ +60 °C
MS5/5+16ELP-4	5	5	16	950-2150	5-862	5-2150	●	5-25	10/28	4	3	18,2 x 15,2 x 4,5cm	-25 ~ +60 °C

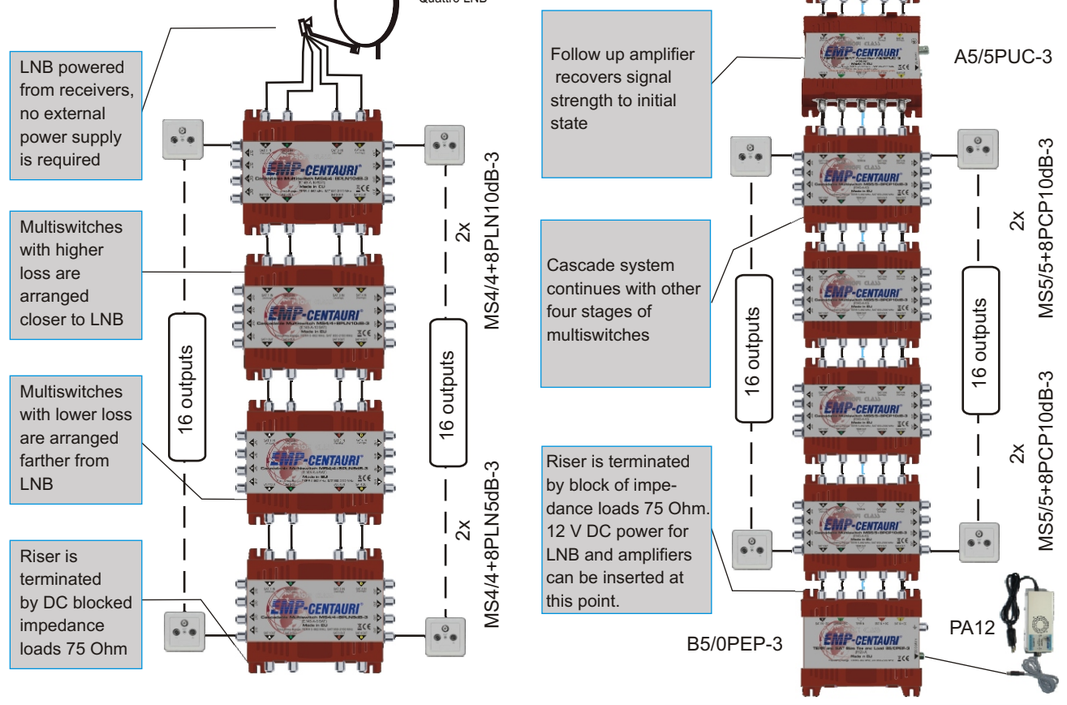
Recommended cascade distribution configuration for 1 satellite

Maximum recommended system: 8 stages, 64 user outputs



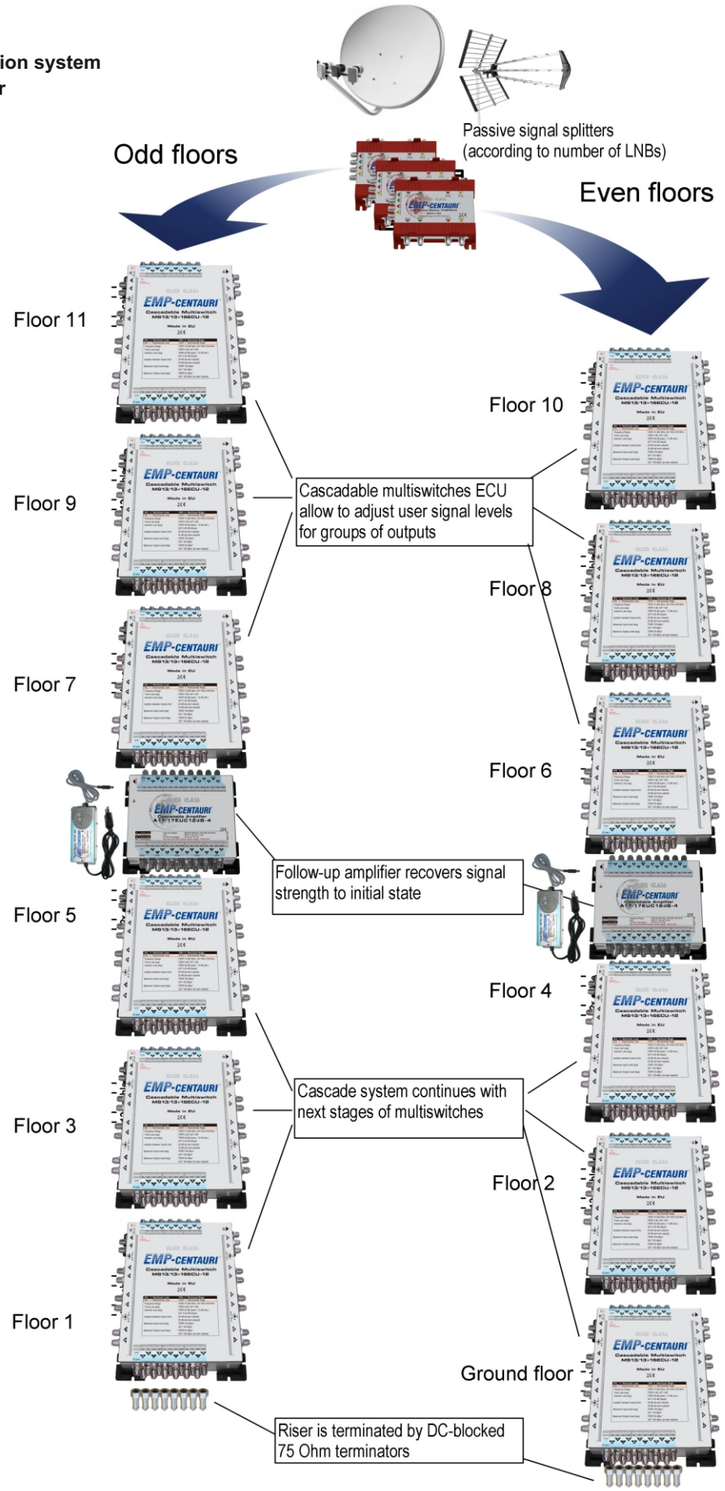
System with LNB power pass:

4 stages, 32 user outputs



Example:

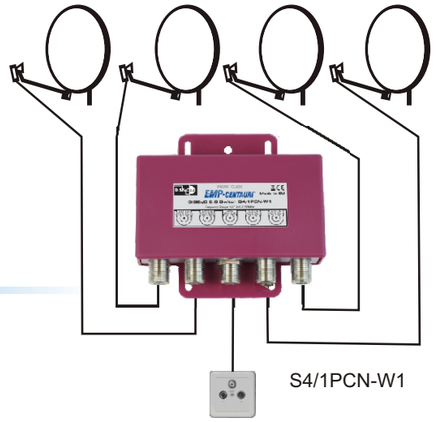
Cascade distribution system for 12 floors tower



WIRING FOR TELEVISION

2 TO 4 LNBs DiSEqC SWITCHES

DiSEqC switches are broadly used products that enable users to receive channels from different satellites. EMP-Centauri offers wide selection of 2 and 4 input switches, with or without extra input for terrestrial antenna.
“Option” switches are handy tools for switching of Monoblock LNBs, owners of dual-tuner receivers will appreciate offer of switches with double outputs.
Switches of EMP-Centauri are compatible with all DiSEqC enabled satellitereceivers.



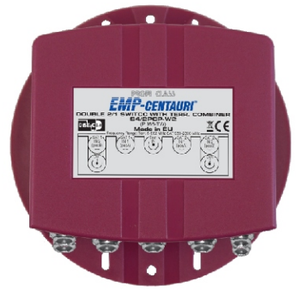
S4/1PCN-W1

Advantages of PROFI CLASS switches:

- weatherproof outdoor plastic housing
- support for Twin/Quad/Octo LNB (“High ISO”)
- short-circuit protection
- extended temperature range

DiSEqC 2.0

6 YEARS WARRANTY



S4/2PCP-W2

S2/1PCN-W1

Overview of PROFI CLASS switches - specifications

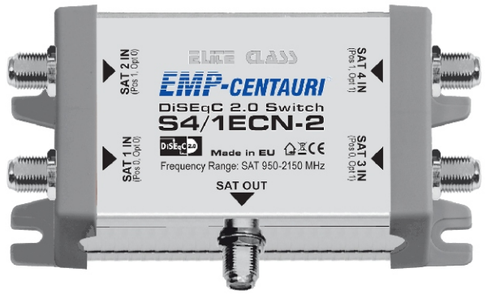
Part number	Number of inputs	Number of outputs	Frequency range Sat. inputs (MHz)	Frequency range terr. inputs (MHz)	Frequency range Outputs (MHz)	Control DiSEqC 1.0 (2.0) commands "Position"	Control DiSEqC 1.0 (2.0) commands "Option"	ControlDiSEqC 1.1 commands "Uncommitted"	ControlDiSEqC 1.2 commands "Goto nn"	Insertion loss Sat. (dB avg)	Insertion loss Terr. (dB avg)	Sat. inputs isolation (dB min)
S2/1PCN-W1	2	1	950-2300		950-2300	●		●	●	5		25
S2/1PCNopt-W1	2	1	950-2300		950-2300		●			5		25
S2/1PCNpos-W1	2	1	950-2300		950-2300	●				5		25
S2/1PCP-W1	3	1	950-2300	5-862	950-2300	●	●			5	2	25
S4/1PCN-W1	4	1	950-2300		950-2300	●	●			4		25
S4/1PCP-W2	5	1	950-2300	5-862	5-2300	●				6	2	25
S4/2PCN-W2	4	2	950-2300		950-2300	●				5		25
S4/2PCP-W2	5	2	950-2300	5-862	950-2300	●				5	5	25
S8/2PCN-W2	8	2	950-2300		5-2300	●	●			4		25
S16/4PCN-W3	16	4	950-2300		5-2300	●	●			4		25

Main features of E.LITE CLASS switches:

- indoor case
- support for Twin/Quad/Octo LNB (“High ISO”)
- short-circuit protection

4 YEARS WARRANTY

S4/1ECN-2



Overview of E.LITE CLASS switches - specifications

Part number	Number of inputs	Number of outputs	Frequency range Sat. inputs (MHz)	Frequency range Terr. Input (MHz)	Frequency range LNB input 2 (MHz)	Frequency range Output (MHz)	Control DiSEqC 1.0 (2.0) commands "Position"	Control DiSEqC 1.0 (2.0) commands "Option"	Insertion loss Sat. (dB avg)	Insertion loss Terr. (dB avg)	Sat. inputs isolation (dB min)
S2/1ECP-1	3	1	950-2150	5-862	-	5-2150	●		4	3	25
S2/1ECT-1	2	1	5-862, 950-2150	-	950-2150	5-2150	●	●	4	3	25
S4/1ECN-2	4	1	950-2150			950-2150	●	●	4		30
S4/2ECP-2	4	2	950-2150	5-862		5-2150	●		5	8	25

Detailed specifications

Part number	Power consumption From each receiver (mA-18 V)	Power consumption DC current pass (mA)	Dimensions (w,d,h)	Temperature range
S2/1PCN-W1	30 + LNB	400 max	8,2 x 7,7 x 2,3cm	-30 ~ +70 °C
S2/1PCNopt-W1	30 + LNB	400 max	8,2 x 7,7 x 2,3cm	-30 ~ +70 °C
S2/1PCNpos-W1	30 + LNB	400 max	8,2 x 7,7 x 2,3cm	-30 ~ +70 °C
S2/1PCP-W1	30 + LNB	400 max	8,2 x 7,7 x 2,3cm	-30 ~ +70 °C
S4/1PCN-W1	35 + LNB	400 max	8,2 x 7,7 x 2,3cm	-30 ~ +70 °C
S4/1PCP-W2	35 + LNB	400 max	11,2 x 11,2 x 4,9cm	-30 ~ +70 °C
S4/2PCN-W2	30 + LNB	400 max	11,2 x 11,2 x 4,9cm	-30 ~ +70 °C
S4/2PCP-W2	30 + LNB	400 max	11,2 x 11,2 x 4,9cm	-30 ~ +70 °C
S8/2PCN-W2	35 + LNB	400 max	11,2 x 11,2 x 4,9cm	-30 ~ +70 °C
S16/4PCN-W3	35 + LNB	400 max	16,8 x 22,4 x 6,6cm	-30 ~ +70 °C

How to choose the right switch?

PROFI CLASS

- For receiver with single SAT input use Single LNBs and single-output switch, e.g. S2/1PCN-W1 or S4/1PCN-W1
- For receiver with double SAT input use Twin LNBs and double-output switch, e.g. S4/2PCN-W2, S8/2PCN-W2
- Use switch with extra terrestria l input for combining satellite with terrestrial channels, e.g. S2/1PCP-W1, S4/1PCP-W2
- Use "Option" switch to combine Monoblock LNB with other standard or Monoblock LNB, e.g. S2/1PCNopt-W1, S2/1PCPopt-W1
- Use switch with terrestrial path to combine output from multiswitch with extra LNB or with output of another multiswitch, e.g. S2/1PCT-1

Detailed specifications

Part number	Power consumption From each receiver (mA-18 V)	Power consumption DC current pass (mA)	Dimensions (w,d,h)	Temperature range
S2/1ECP-1	35 + LNB	400 max	5,4 x 6,0 x 3,2cm	-25 ~ +60 °C
S2/1ECT-1	35 + LNB	400 max	5,4 x 6,0 x 3,2cm	-25 ~ +60 °C
S4/1ECN-2	35 + LNB	400 max	10,6 x 6,4 x 3,1cm	-25 ~ +60 °C
S4/2ECP-2	35 + LNB	400 max	10,6 x 6,4 x 3,1cm	-25 ~ +60 °C

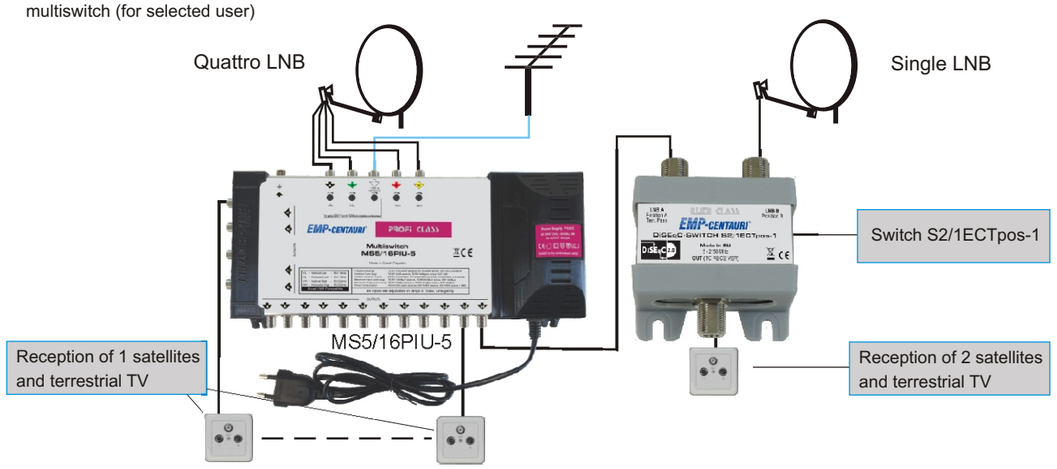
How to pick-out the right switch?

E.LITE CLASS

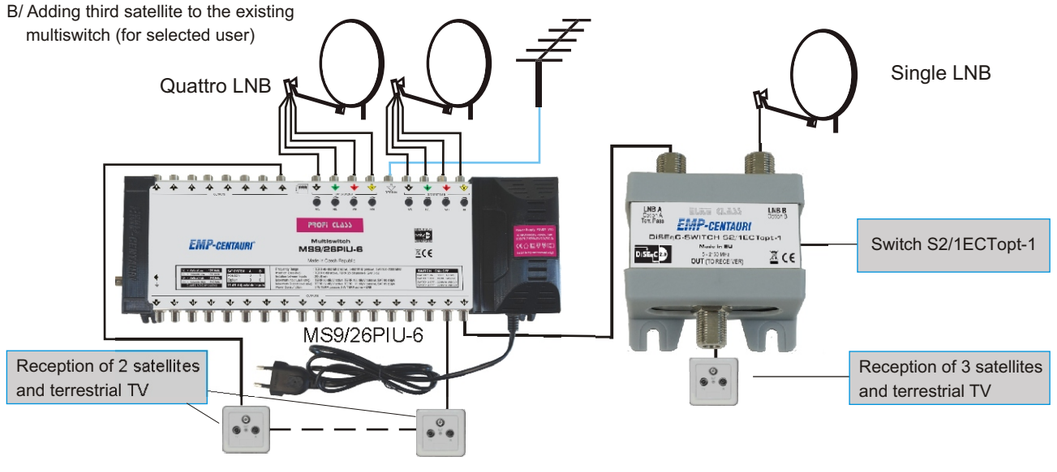
- For receiver with single SAT input use Single LNBs and single-output switch, e.g. S2/1ECTpos-1 or S4/1ECN-2
- For receiver with double SAT input use Twin LNBs and double-output switch, e.g. S4/2ECP-2
- Use switch with extra terrestrial input for combining satellite with terrestrial channels, e.g. S2/1ECP-1, S4/2ECP-2
- Use "Option" switch to combine Monoblock LNB with other standard or Monoblock LNB, e.g. S2/1ECTopt-1
- Use switch with terrestrial path to combine output from multiswitch with extra LNB or with output of another multiswitch, e.g. S2/1ECTpos-1, S2/1ECTopt-1

Examples of non-standard use of switches

A/ Adding a second satellite to the existing multiswitch (for selected user)



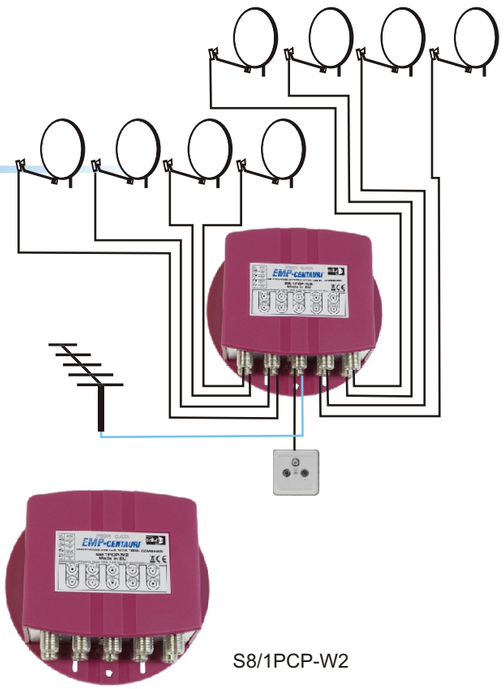
B/ Adding third satellite to the existing multiswitch (for selected user)



For more info see the website www.emp-centauri.eu or contact us at support@emp-centauri.eu, phone +420 376 323 853

5 TO 16 LNBs DiSEqC SWITCHES

DiSEqC switches designed for the most demanding users. Up to 16 satellite input ports, terrestrial input is provided for connecting of terrestrial antenna. Support of DiSEqC 1.1 or 1.2 is required on the receiver's side.



Advantages of PROFI CLASS switches:

- weatherproof outdoor plastic housing
- support for Twin/Quad/Octo LNB (“High ISO”)
- configurable operation mode DiSEqC 1.1 / 1.2
- terrestrial input
- short-circuit protection
- extended temperature range

6 YEARS WARRANTY

S8/1PCP-W2

Overview of PROFI CLASS switches - specifications

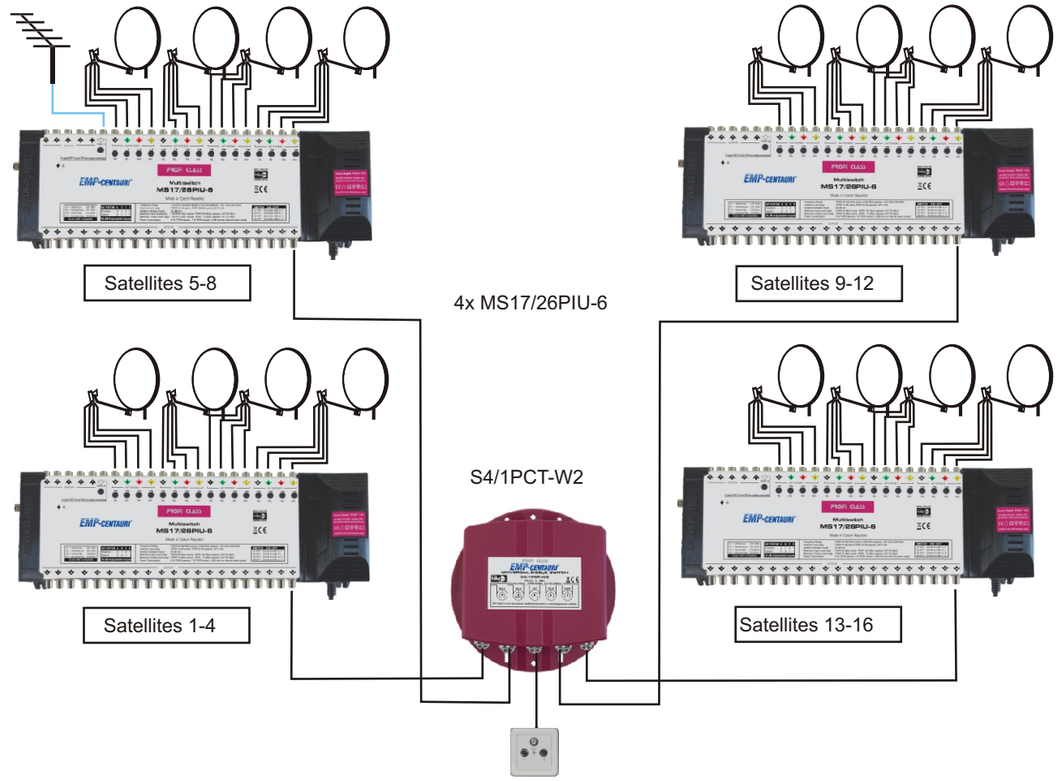
Part number	Number of satellite inputs	Number of outputs	Frequency range Sat. inputs (MHz)	Frequency range LNB + Terr. Inputs 2 (MHz)	Frequency range Outputs (MHz)	Control DiSEqC 1.0, 1.1, 1.2 commands	Insertion loss Sat. (dB avg)	Insertion loss Terr. (dB avg)	Sat. inputs isolation (dB min)
S4/1PCT-W2	4	1	950-2300	5-862, 950-2300	5-2300	●	5	5	25
S8/1PCN-3	8	1	950-2300		950-2300	●	5		25
S8/1PCP-W2	9	1	950-2300	5-862	5-2300	●	5	3	25
S16/1PCP-W3	17	1	950-2150	5-862	5-2150	●	5	2	25

Part number	Power consumption From receiver (mA-18 V)	Power consumption DC current pass (mA)	Dimensions (w.d.h)	Temperature range
S4/1PCT-W2	35 + LNB	400 max	11,2 x 11,2 x 4,9cm	-30 ~ +70 °C
S8/1PCN-3	50 + LNB	400 max	13,6 x 10,4 x 3,3cm	-30 ~ +70 °C
S8/1PCP-W2	60 + LNB	400 max	11,2 x 11,2 x 4,9cm	-30 ~ +70 °C
S16/1PCP-W3	80 + LNB	400 max	16,8 x 22,4 x 6,6cm	-30 ~ +70 °C

S16/1PCP-W3

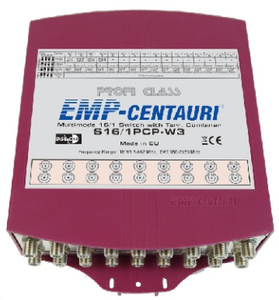
Examples of use of the switch S4/1PCT-W2

Combining of inputs from more multiswitches / LNBs / monoblocks, DiSEqC 1.1 or 1.2 is required (one switch per user)

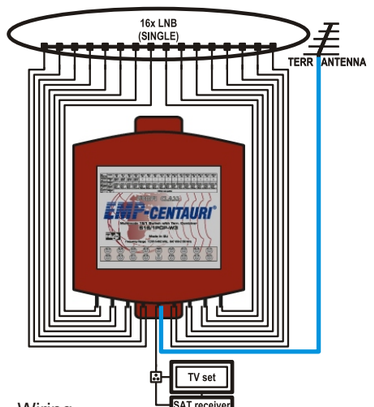


S16/1PCP-W3: 16 SAT inputs, built-in combiner with terrestrial band

S16/1PCP-W3



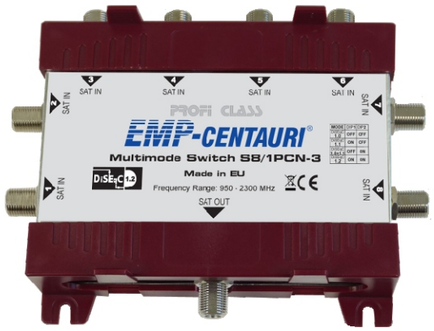
The switch within plastic weatherproof housing



Wiring

How to set-up a system with 8/1 or 16/1 switch?

1. Make sure that your receiver supports DiSEqC 1.1 or DiSEqC 1.2
2. If DiSEqC 1.1 is available, check allowed range of parameter " uncommitted"
3. If "uncommitted" can be set to full number of inputs (8 or 16), set configuration switch DIP1 to ON and DIP2 to OFF; in receiver's menu assign "uncommitted" parameter for each LNB to number of used input
4. If "uncommitted" parameter is limited to number 4, set configuration switch DIP1 to OFF and DIP2 to ON; in receiver's menu assign "uncommitted" and "committed" parameter according to the table
5. If DiSEqC 1.1 is unavailable, set configuration switch DIP1 to ON and DIP2 to ON, than enter procedure for setting up DiSEqC motor, following user's manual to your receiver



S8/1PCN-3

DiSEqC 1.1 setting options for switches 8/1 & 16/1

Input of switch S8/1PCP-W2 [1]	Input of switch S16/1PCP-W2	DIP1=ON, DIP2=OFF	DIP1=ON, DIP2=OFF
1	1	uncommitted = 1	uncommitted = 1, committed = A [2]
2	2	uncommitted = 2	uncommitted = 1, committed = B
3	3	uncommitted = 3	uncommitted = 1, committed = C
4	4	uncommitted = 4	uncommitted = 1, committed = D
5	5	uncommitted = 5	uncommitted = 2, committed = A
6	6	uncommitted = 6	uncommitted = 2, committed = B
7	7	uncommitted = 7	uncommitted = 2, committed = C
8	8	uncommitted = 8	uncommitted = 2, committed = D
	9	uncommitted = 9	uncommitted = 3, committed = A
	10	uncommitted = 10	uncommitted = 3, committed = B
	11	uncommitted = 11	uncommitted = 3, committed = C
	12	uncommitted = 12	uncommitted = 3, committed = D
	13	uncommitted = 13	uncommitted = 4, committed = A
	14	uncommitted = 14	uncommitted = 4, committed = B
	15	uncommitted = 15	uncommitted = 4, committed = C
	16	uncommitted = 16	uncommitted = 4, committed = D

Note:
1 Setting is valid also for switch S8/1PCN-3
2 Values for "committed" command may be put also as 1/2/3/4 or AA/AB/BA/BB

Useful information

- We recommend to operate the switches in DiSEqC 1.1 mode whenever possible, because of straightforward setup procedure
- If DiSEqC 1.2 setup routine (motor emulation) is to be performed, check first transponders on which receiver tests particular satellites: avoid using similar frequencies for different satellites, as this may confuse setup procedure. If necessary, change test frequencies.
- The switches are able to operate in DiSEqC 1.0 mode, however due to DiSEqC protocol restriction only inputs 1 to 4 are available. For this kind of operation, set both configuration levers DIP1 and DIP2 to OFF
- Always reset the product by short disconnecting from power after DIP- levers configuration was altered

PRODUCT MARKING GUIDE

SELECTED CATEGORIES

MS — Standalone multiswitches

code	pos.	meaning
MS	1	Multiswitch
•	2	Number of inputs (incl. terrestrial)
•	3	Number of outputs
P E	4	PROFI CLASS E.LITE CLASS
I C U	5	Integrated power supply Powered via coaxial cables Via cables or from ext. supply
U P A	6	Switchable (act./pas.) terrestrial Passive terrestrial Active terrestrial
•	7	Form factor

Example:

MS5/28PIU-6

pos: 1 2 3 4 5 6 7

MS — Cascadable multiswitches

code	pos.	meaning
MS	1	Multiswitch
•	2	Number of inputs (incl. terrestrial)
•	3	Number of trunk outputs (incl. terr.)
•	4	Number of user outputs
P E	5	PROFI CLASS E.LITE CLASS
C L	6	Powered via coaxial cables Power pass from rec. output to LNB
P N	7	Passive terrestrial No terrestrial
•	8	User output loss
•	9	Form factor

Example:

MS5/5+8PCP10dB-3

pos:1 2 3 4 5 6 7 8 9

A — Amplifiers

code	pos.	meaning
A	1	Amplifier
•	2	Number of inputs
•	3	Number of outputs
P E	4	PROFI CLASS E.LITE CLASS
E C I U	5	External power supply Powered via coaxial cables Integrated power supply Via cables or from ext. supply
T S C U	6	Terrestrial amplifier Satellite amplifier Block of SAT and TERR amplifiers Wideband amplifier
•	7	Gain / Combined frequency bands
•	8	Form factor

Example:

A1/1PET12dB-1

pos: 1 2 3 4 5 6 7 8

C — Combiners

code	pos.	meaning
C	1	Combiner
•	2	Number of inputs
•	3	Number of outputs
P E	4	PROFI CLASS E.LITE CLASS
N	5	No power
P	6	Passive combining
•	7	Combined frequency bands
•	8	Form factor

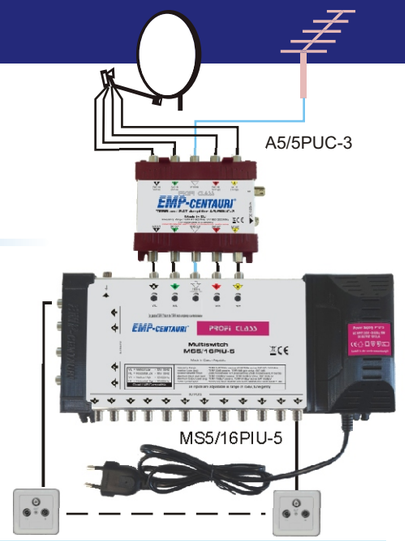
Example:

C2/1PNP(T+S)-W1

pos: 1 2 3 4 5 6 7 8

AMPLIFIERS

The amplifiers are designed to boost up satellite and/or terrestrial signals. Usually they are used for combating losses in coaxial cables.
EMP-Centauri offers both single amplifiers and compact amplifying blocks.



Advantages of PROFI CLASS amplifiers:

- high output signal level
- extended satellite frequency range
- extended temperature range

A1/1PCU15dB-1

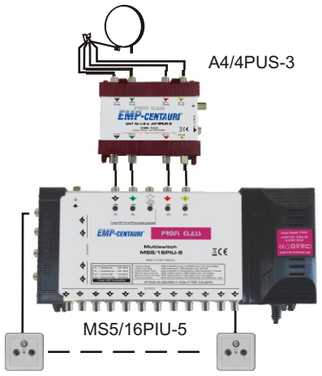
6 YEARS WARRANTY

Overview of PROFI CLASS amplifiers - specifications

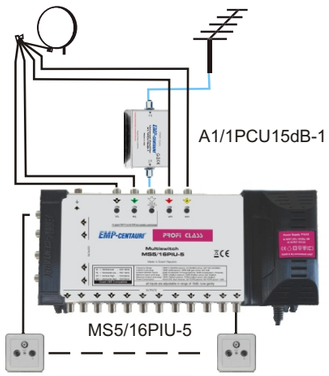
Part number	Number of inputs	Number of outputs	Frequency range Sat. inputs (MHz)	Frequency range Terr. Input (MHz)	Insertion gain (dB avg)	Isolation between trunks (dB min)	Maximum input level* Sat. (dBµV avg)	Maximum input level* Terr. (dBµV avg)	Maximum output level* Sat. (dBµV avg)	Maximum output level* Terr. (dBµV avg)	Power consumption (mA)	Dimensions (w.d.h)	Temperature range
A1/1PET12dB-1	1	1	10-862	10-12	-	- 105-103	-	-	115	-	100 (12V DC)	7,6 x 6,0 x3,2cm	-30 ~ +70 °C
A1/1PET30dB-1	1	1	10-862	25-30	-	- 90-85	-	-	115	-	170 (12V DC)	7,6 x 6,0 x3,2cm	-30 ~ +70 °C
A1/1PEU15dB-1	1	1	40-2300	12-15	-	100-98 -	97-95	113	-	109	75 (9-20V DC)	7,6 x 6,0 x3,2cm	-30 ~ +70 °C
A1/1PCU15dB-1	1	1	40-2300	12-15	-	100-98 -	97-95	113	-	109	75 (9-20V DC)	7,6 x 3,7 x1,7cm	-30 ~ +70 °C
A2/2PCU15dB-1	2	2	40-2300	12-15	30	100-98 -	97-95	113	-	109	75 (9-20V DC)	7,5 x 4,5 x2,8cm	-30 ~ +70 °C
A4/4PUS-3	4	4	950-2300	13	25	100 -	-	113	-	-	4x70 (12 V)	12,7 x 10,4 x4,1cm	-30 ~ +70 °C
A5/5PUC-3	5	5	950-2300 40-862	13	25	100 -	95	113	-	108	5x70 (12 V)	12,7 x 10,4 x4,1cm	-30 ~ +70 °C

Examples of amplifiers utilization

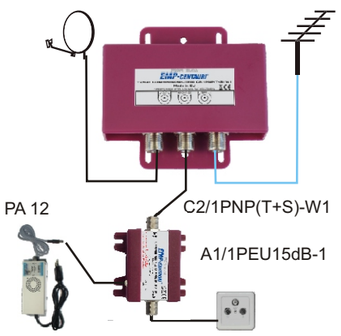
A/ Boosting satellite signals to pass then through a long cable



B/ Boosting weak signals from a terrestrial antenna before entering multiswitch



C/ Wideband amplifying of combined terrestrial and satellite signals from an output of combiner or multiswitch



Overview of E.LITE CLASS amplifiers - specifications

4 YEARS WARRANTY

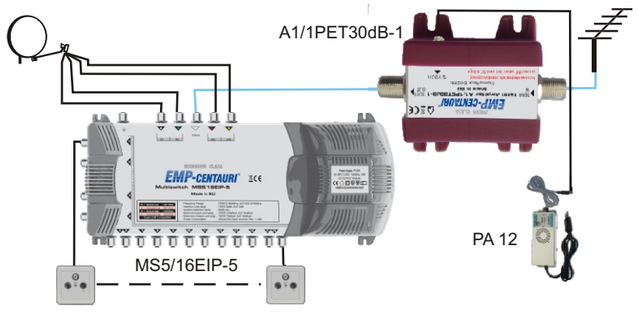
Part number	Number of inputs	Number of outputs	Frequency range Sat. (MHz)	Frequency range Terr. (MHz)	Insertion gain Sat. (dB avg)	Insertion gain Terr. (dB avg)	Isolation between trunks (dB min)	Maximum input level* Sat. (dBµV avg)	Maximum input level* Terr. (dBµV avg)	Maximum output level* Sat. (dBµV avg)	Maximum output level* Terr. (dBµV avg)	Power-curent consumption (mA)	Dimensions (w.d.h)	Temperature range
A1/1ECS-1	1	1	950-2150		10-15			87-82		97		25 (12-18V DC)	7,6 x 6,0 x 3,2cm	-25 ~ +60°
A1/1ECT16dB-1	1	1	47-862		13-16			88-85		101		40 (5V DC)	7,6 x 6,0 x 3,2cm	-25 ~ +60°
A1/1EET16dB-1	1	1	47-862		13-16			88-85		101		40 (12V DC)	7,6 x 6,0 x 3,2cm	-25 ~ +60°
A9/9EUC12dB-4	9	9	950-2150	40-862	12	11	25	90	95	102	106	210 (12V DC)	18,6 x 14,6 x 5,1cm	-25 ~ +50°
A9/9EUC-4	9	9	950-2150	40-862	25	22	25	90	85	115	107	450 (12V DC)	18,6 x 14,6 x 5,5cm	-25 ~ +50°
A13/13EUC12dB-4	13	13	950-2150	40-862	12	11	25	90	95	102	106	290 (12V DC)	18,6 x 14,6 x 5,1cm	-25 ~ +50°
A13/13EUC-4	13	13	950-2150	40-862	25	22	25	90	85	115	107	670 (12V DC)	18,6 x 14,6 x 5,5cm	-25 ~ +50°
A17/17EUC12dB-4	17	17	950-2150	40-862	12	11	25	90	95	102	106	370 (12V DC)	18,6 x 14,6 x 5,1cm	-25 ~ +50°
A17/17EUC-4	17	17	950-2150	40-862	25	22	25	90	85	115	107	840 (12V DC)	18,6 x 14,6 x 5,5cm	-25 ~ +50°

Part number	Number of inputs	Number of outputs	Frequency range FM (MHz)	Frequency range VHF (MHz)	Frequency range UHF1, UHF2 (MHz)	Insertion gain VHF 47-68,174-230 (MHz dB)	Insertion gain FM (dB)	Insertion gain UHF (dB)	Maximum input level* VHF, (DBµV)* 47-68 / 174-230 MHz**	Maximum input level* FM. (dBµV avg)*	Maximum input level* UHF. (DBµV) **	Maximum output level* (dBµV) *	Dimensions (w.d.h)	Temperature range
A2/1+1EIT(U+U)-7	2	2	-	-	470-862	-	-	33-38	-	-	77-72	110	22,5 x 11,4 x 5,3cm	-25 ~ +60°
A2/1+1ECT(U+U)-7	2	2	-	-	470-862	-	-	33-38	-	-	77-72	110	12,3 x 10,8 x 4,7cm	-25 ~ +60°
A2/1+1EIT(V+U)-7	2	2	-	47-68,174-230	470-862	25/28	-	35-41	85/82	-	77-72	110	22,5 x 11,4 x 5,3cm	-25 ~ +60°
A2/1+1ECT(V+U)-7	2	2	-	47-68,174-230	470-862	25/28	-	35-41	85/82	-	77-72	110	12,3 x 10,8 x 4,7cm	-25 ~ +60°
A2/1+1EIT(F+U)-7	4	2	88-108	-	470-862	-	27	35-41	-	83	77-72	110	22,5 x 11,4 x 5,3cm	-25 ~ +60°
A2/1+1ECT(F+U)-7	5	2	88-108	-	470-862	-	27	35-41	-	83	77-72	110	12,3 x 10,8 x 4,7cm	-25 ~ +60°
A4/1+1EIT-7	4	2	88-108	47-68,174-230	470-862	25/28	27	33-38	85/82	83	77-72	110	22,5 x 11,4 x 5,3cm	-25 ~ +60°
A4/1+1ECT-7	4	2	88-108	47-68,174-230	470-862	25/28	27	33-38	85/82	83	77-72	110	12,3 x 10,8 x 4,7cm	-25 ~ +60°

Examples of amplifiers utilization

A/ Boosting satellite signals to pass through a long cable

B/ Boosting weak signals from a terrestrial antenna before entering multiswitch

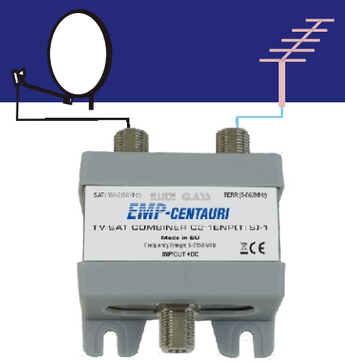


Useful information (General)

- Install any amplifier only in case of need - too strong signals may get distorted either within the amplifier itself, or in subsequently connected device (e.g.multiswitch). Pay attention to the maximum allowed signal levels for all connected devices in the distribution system
- Before choosing of any amplifier supplied by power via coaxial cable, make sure that the power will be available anytime needed. Check the proper voltage and current available from the remote supply
- Use a proper power supply for amplifiers with DC socket, recommended type is PA12

COMBINERS

The combiners are relatively simple devices used wherever is needed to combine outputs of two antennas (usually satellite and terrestrial) into a single coaxial cable.
Basic combiners can handle quite opposite task as well: split input signals into two output ports.



C2/1ENP(T+S)-1

Advantages of PROFI CLASS combiners:

- weatherproof outdoor plastic housing
- full range of block-combiners
- extended temperature range

6 YEARS WARRANTY

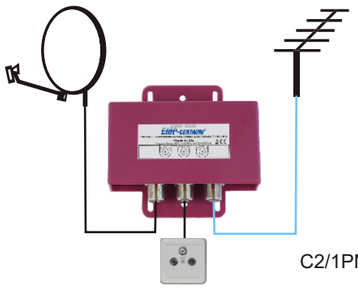
C2/1PNP(T+S)-W1

Overview of PROFI CLASS combiners - specifications

Part number	Number of satellite inputs	Number of terrestrial inputs	Number of outputs	Frequency range Sat. inputs (MHz)	Frequency range Terr. Input (MHz)	Insertion loss Sat. (dB avg)	Insertion loss Terr. (dB avg)	Steepness of filters (dB min)	Terr. preamplifier supply	Dimensions (w.d.h)	Temperature range
C2/1PNP(T+S)-W1	1	1	1	950-2300	5-862	2	1	20	-	8,2 x 7,7 x 2,3cm	-30 ~ +70 °C
C2/1PNP(T+S)5V-W1	1	1	1	950-2300	5-862	2	1	20	5 V / 100 mA max	8,2 x 7,7 x 2,3cm	-30 ~ +70 °C
C3/2PNP(T+2S)-W1	2	1	2	950-2300	5-862	2	5	30	-	8,2 x 7,7 x 2,3cm	-30 ~ +70 °C
C5/4PNP(T+4S)-W2	4	1	4	950-2300	5-862	2	9	30	-	11,2 x 11,2 x 4,9cm	-30 ~ +70 °C

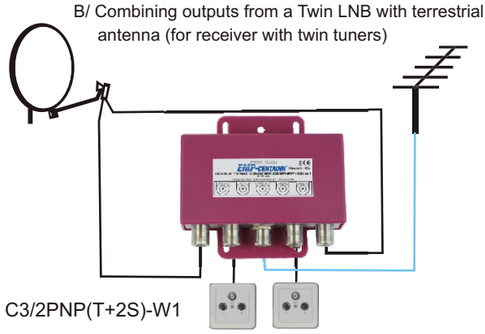
Examples of combiners utilization

A/ Combining an output from Single LNB with terrestrial antenna (single user)



C2/1PNP(T+S)-W1

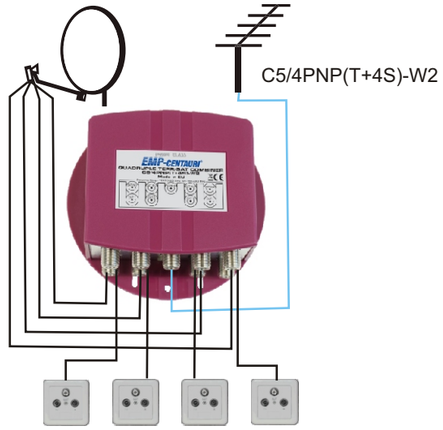
B/ Combining outputs from a Twin LNB with terrestrial antenna (for receiver with twin tuners)



C3/2PNP(T+2S)-W1

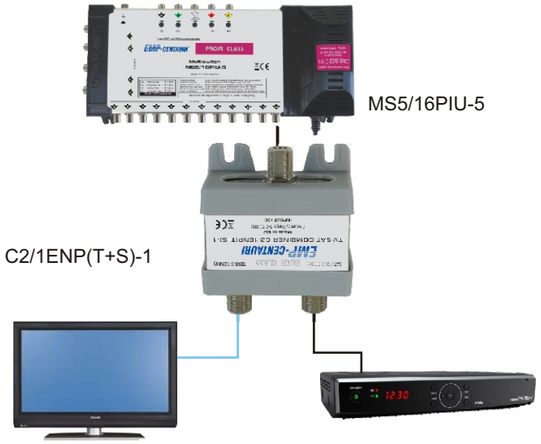
Examples of combiners utilization

C/ Combining outputs from a Quad LNB with terrestrial antenna (multiple users)



C5/4PNP(T+4S)-W2

D/ Splitting of combined satellite and terrestrial bands into separate cables (for satellite and terrestrial tuners)



MS5/16PIU-5

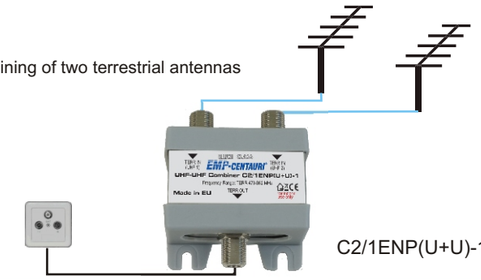
C2/1ENP(T+S)-1

Main features of E.LITE CLASS combiners:

- indoor housing
- for Single or Quad LNB

4 YEARS WARRANTY

E/ Combining of two terrestrial antennas



C2/1ENP(U+U)-1

Overview of E.LITE CLASS combiners - specifications

Part number	Number of satellite inputs	Number of terrestrial inputs	Number of outputs	Frequency range Sat. inputs (MHz)	Frequency range Terr. Input (MHz)	Insertion loss Sat. (dB avg)	Insertion loss Terr. (dB avg)	Isolation between sat. Inputs (dB min)	Dimensions (w.d.h)	Temperature range
C2/1ENP(U+U)-1	-	2	1	470-862	-	4	-	15	6,5 x 7,6 x 4,3cm	-25 ~ +60 °C
C2/1ENP(T+S)-1	1	1	1	950-2150	5-862	3	2	-	5,4 x 6,0 x 3,2cm	-25 ~ +60 °C
C5/4ENP(T+4S)-2	4	1	4	950-2150	5-862	2	9	30	10,6 x 7,1 x 3,1cm	-25 ~ +60 °C

Useful information (General)

- Combiners allow to pass DC power to their satellite line to allow feeding of a LNB. The terrestrial line is usually DC blocked.
- Use combiner C2/1PNP (T+S) 5V-W1 if an active terrestrial antenna with preamplifier is installed. Voltage supplied by this combiner is 5V DC but LNB power must be active of course.
- If double or quad combiner must be used with active terr. antenna, DC inserter B1/1PEP-1 with a connected power supply must be applied between antenna and input of the combiner
- Reverse task of frequency splitting (necessary at the user's side of the cable) is usually performed by an appropriate wall outlet. A single combiner 2/1 in reversal connection can be used instead of a wall outlet.

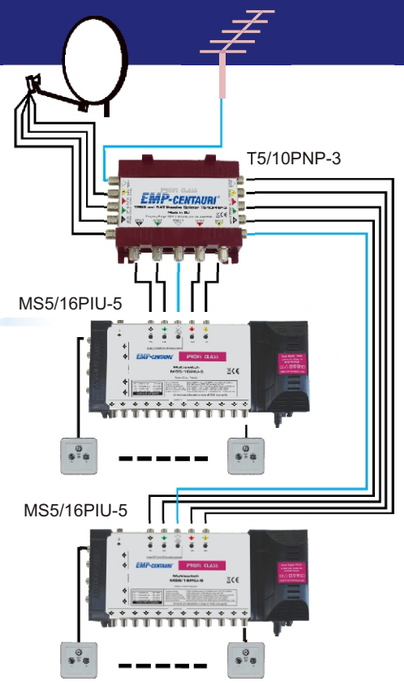
Additional offer

- DiSEqC switches with integrated sat/terr combiner S2/1PCPpos-W1, S4/1PCP-W2, S8/1PCP-W2, S16/1PCP-W3, see pages 40 - 45

S2/1PCPpos-W1

SPLITTERS & TAPS

Splitters and taps EMP-Centauri are intended to push distribution systems beyond limits of a single multiswitch. While splitters divide input signals equally, taps are characterized by two different sets of outputs: through (trunk) outputs with minimum loss, and tap outputs with considerably higher insertion loss.



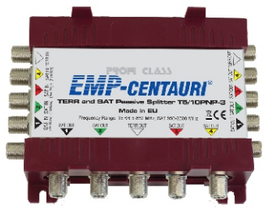
Features of passive splitters:

- offered as SAT-only devices or incl. terrestrial section
- DC path from streight outputs to inputs
- side outputs are DC blocked

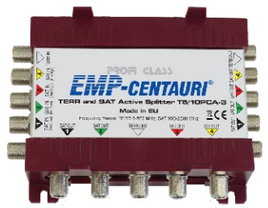
Features of active splitters:

- offered as SAT-only devices or incl. terrestrial section
- slight gain with slope is provided to compensate for cable losses
- side outputs are DC blocked

T5/10PNP-3



T5/10PCA-3



6 YEARS WARRANTY

Overview of PROFI CLASS splitters - specifications

Part number	Number of inputs	Number outputs	Frequency range Sat. inputs (MHz)	Frequency range Terr. Inputs (MHz)	Frequency range Sat. Outputs (MHz)	Frequency range Terr. Outputs (MHz)	Insertion loss Sat. (dB avg)	Insertion loss Terr. (dB avg)	Isolation Between splitters (dB min)	Isolation Between outputs of sat. splitter (dB min)	Isolation Between outputs of terr. splitter (dB min)
T4/8PCN-3	4	8	950-2300		950-2300		0	-	35	13	-
T4/8PNN-3	4	8	950-2300		950-2300		5	-	35	13	-
T5/10PCA-3	5	10	950-2300	48-862	950-2300	48-862	0	0	35	13	7
T5/10PNP-3	5	10	950-2300	5-862	950-2300	5-862	5	4	35	13	7

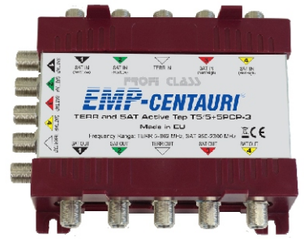
Features of passive taps:

- offered as SAT-only devices or incl. terrestrial section
- DC path exists between respective trunk outputs and inputs (tap outputs are DC isolated)

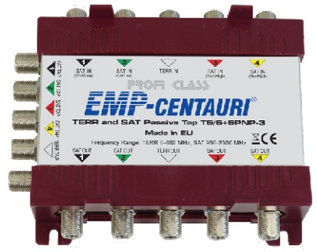
Features of active taps:

- offered as SAT-only devices or incl. terrestrial section
- tap loss is reduced by integrated amplifiers
  DC path exists between respective trunk outputs and inputs
- (tap outputs are DC isolated)

T5/5+5PCP-3



T5/5+5PNP-3



6 YEARS WARRANTY

Overview of PROFI CLASS taps - specifications

Part number	Number of inputs	Number outputs	Frequency range Sat. inputs -trunks-(MHz)	Frequency range Terr. inputs -trunk- (MHz)	Frequency range Sat. Outputs -tap- (MHz)	Frequency range Terr. Outputs -tap- (MHz)	Insertion Sat. (dB avg)	Insertion Terr. (dB avg)	Tap loss Sat. (dB avg)	Tap loss Terr. (dB avg)	Trunk loss Sat. (dB avg)	Trunk loss Terr. (dB avg)	Isolation Between trunks (dB min)
T4/4+4PNN-3	4	8	950-2300	-	950-2300	-	-	-	5	-	2	-	30
T4/4+4PCN-3	4	8	950-2300	-	950-2300	-	-	-	5	-	2	-	30
T5/5+5PNP-3	5	10	950-2300	5-862	950-2300	5-862	-	-	11	11	2	3	30
T5/5+5PCP-3	5	10	950-2300	5-862	950-2300	5-862	-	-	5	6	2	3	30

Detailed specifications

Part number	Maximum input level* Sat. (dBµV avg)*	Maximum input level* Terr. (dBµV avg)*	Maximum output level* Sat. (dBµV avg)*	Maximum output level* Terr. (dBµV avg)*	Maximum output level* Sat trunk outputs (dBµV avg)*	Maximum output level* Sat tap outputs (dBµV avg)*	Power consumption Total (mA) - from taps (18V)	Dimensions (w.d.h) (power cord length 130 cm)	Temperature range
T4/8PCN-3	95	-	95	-	-	-	40	12,7 x 10,4 x 4,1cm	-30 ~ +70 °C
T4/8PNN-3	-	-	-	-	-	-	-	12,7 x 10,4 x 4,1cm	-30 ~ +70 °C
T5/10PCA-3	95	95	95	95	-	-	100	12,7 x 10,4 x 4,1cm	-30 ~ +70 °C
T5/10PNP-3	-	-	-	-	-	-	-	12,7 x 10,4 x 4,1cm	-30 ~ +70 °C
T4/4+4PNN-3	100	-	-	-	98	95	40	12,7 x 10,4 x 4,1cm	-30 ~ +70 °C
T4/4+4PCN-3	100	-	-	-	98	95	40	12,7 x 10,4 x4,1cm	-30 ~ +70 °C
T5/5+5PNP-3			-	-	-	-	-	12,7 x 10,4 x 4,1cm	-30 ~ +70 °C
T5/5+5PCP-3	100	-	-	-	98	95	40	12,7 x 10,4 x4,1cm	-30 ~ +70 °C

Notes: *Terr.: EN 50083-3/60dB IMA_3 [dBµV]; SAT: EN 50083-3/35dB IMA_3 [dBµV]

Features of E.LITE CLASS taps:

- DC path exists between trunk input and output (tap output is DC isolated)

T1/1+1ENP-1

Useful information

- ▶ Taps allow wideband branching of terrestrial @ satellite signals
- ▶ An individual tap must be used for each satellite IF band to be distributed
- ▶ Taps with different tap losses allow to ballance signal levels throughout the distribution system

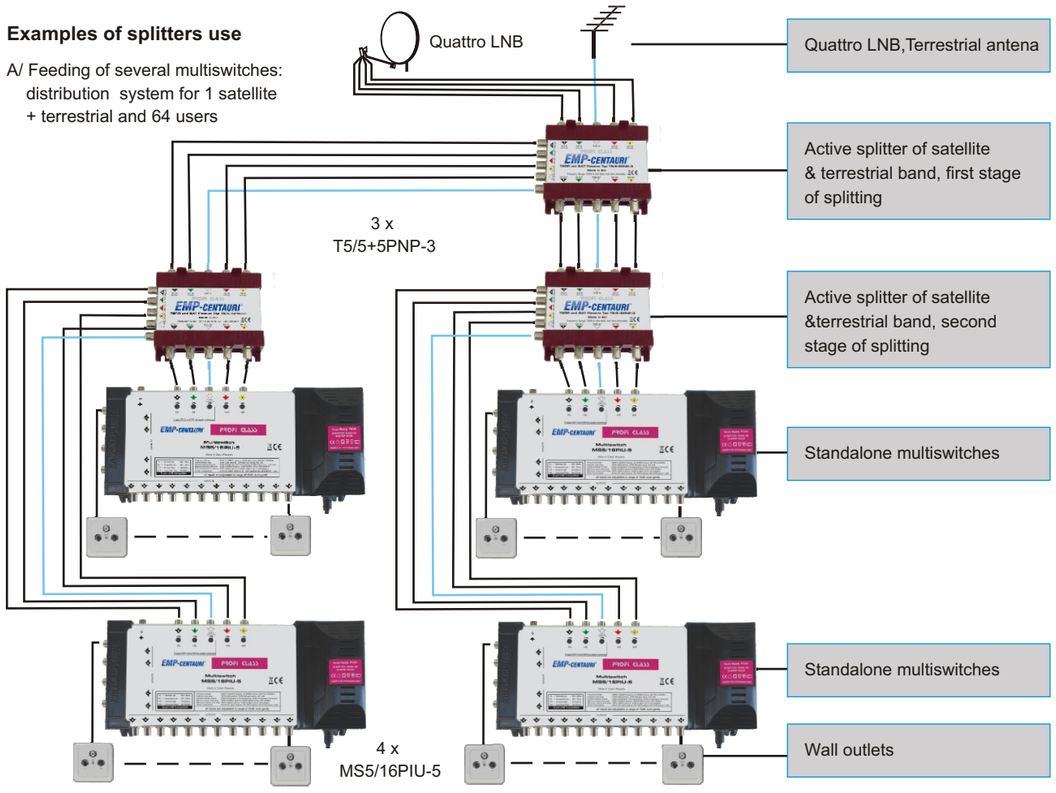
4 YEARS WARRANTY

Overview of E.LITE CLASS taps - specifications

Part number	Number of inputs	Number of outputs	Description	Frequency range (MHz)	Tap loss (dB max) T1/1+1ENP8dB-1	Tap loss (dB max) T1/1+1ENP12dB-1	Tap loss (dB max) T1/1+1ENP16dB-1	Tap loss (dB max) T1/1+1ENP20dB-1	Trunk loss (dB max)	Insertion loss (dB)	Isolation (dB min)	Dimensions (w.d.h)	Temperature range
T1/1+1ENP-1	1	2	Wideband passive tap	5-2150	9	12	16	20	2,5			5,4 x6,0 x 3,2 cm	-25 ~ +60 °C
T1/4ENP-1	1	4	4-way wideband splitter/combiner	470-2150						8	15	6,5 x6,1 x 3,2 cm	-30 ~ +60 °C

Examples of splitters use

A/ Feeding of several multiswitches: distribution system for 1 satellite + terrestrial and 64 users



Quattro LNB,Terrestrial antena

Active splitter of satellite & terrestrial band, first stage of splitting

Active splitter of satellite &terrestrial band, second stage of splitting

Standalone multiswitches

Standalone multiswitches

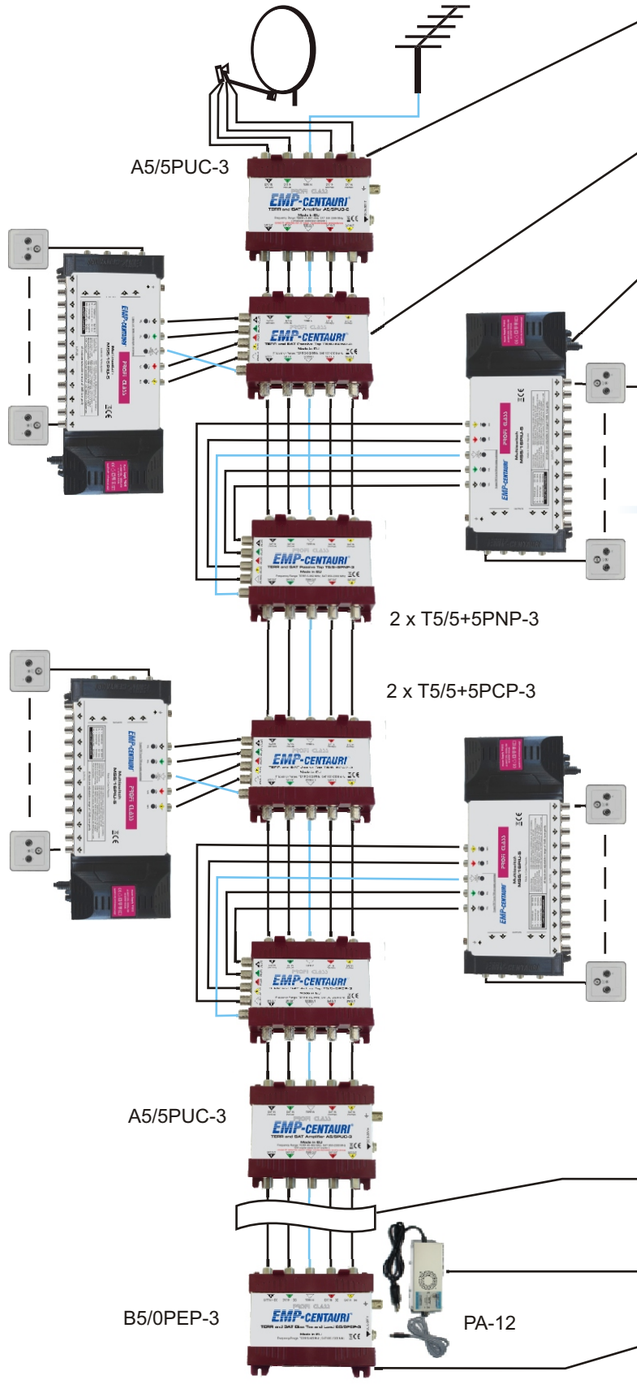
Wall outlets

Useful information (General)

- ▶ Splitters are used especially for feeding multiple standalone multiswitches with signals from Quattro LNB
- ▶ DC power from multiswitch connected to straight outputs is passed to LNB
- ▶ For splitting signals from 2 or more LNBs, use 2 or more boxes tied by plastic clips, combine full-version splitter as basic unit with SAT-version splitters as add-on units
- ▶ For feeding 3 or 4 multiswitches, use multiple splitters in two-stage configuration

Examples of taps use

Distribution system for 1 satellite + terrestrial and 128 users



Quattro LNB, terrestrial antena

Block satellite&terrestrial amplifier, compensates for signal losses in connected multiswitches

Passive taps are used in stages 1 & 2

Active taps are used in stages 3 & 4

Standalone multiswitches

Wall outlets

System continues with next four stages (tap+multiswitch)

Power supply

Block of impedance loads, DC insertion point

Useful information

- ▶ Taps can be used for supplying multiple standalone multiswitches with RF signals, forming an unique cascade system with standalone multiswitches
- ▶ For distributing signals from 2 or more LNBs, use 2 or more boxes tied by plastic clips, combine full-version tap as basic unit with SAT-version taps as add-on units
- ▶ For best results, it is recommended to terminate the last stage by DC isolated 75 ohm terminators or by termination blocks B5/0PEP-3, B4/0PEN-3; termination using end-stage multiswitch is not recommended
- ▶ Don´t forget to apply a LNB power supply PA12, for taps don't pass power from multiswitches to the riser lines

CONTROL AND MONITORING TOOLS

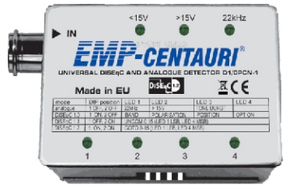
Products in this group may be used either as universal diagnostic tools, or as permanent aids for receivers which do not support control commands required by connected slave devices. Any switching commands can be generated and monitored.
Device G1/1PCP-1 can restrict user access to channels available through the multiswitch by manipulating incoming DiSEqC commands.

G1/1PCN-1

Advantages of PROFI CLASS tools:

- support for 22kHz tone, DiSEqC 1.0, 1.1, 1.2
- configurable by DIP-switch
- voltage or mechanical control
- extended temperature range

G1/1PCNman-1



D1/0PCN-1

6 YEARS WARRANTY

DiSEqC 1.1 DiSEqC 1.2 DiSEqC 2.0

G1/1PCP-1

Overview of PROFI CLASS tools

Part number	Number of inputs	Number of outputs	Generated commands	Monitored commands	Control by 12V DC	Control by mech. Switches	Selection of operation mode	Frequency range (MHz)
G1/1PCN-1	1	1	22 kHz, DiSEqC 1.0/1.1/1.2	-	●	-	●	950-2300
G1/1PCNman-1	1	1	22 kHz, DiSEqC 1.0/1.1/1.2	-	-	●	●	950-2300
G1/1PCP-1	1	1	DiSEqC 1.0	DiSEqC 1.0	-	●	-	5-2300
D1/0PCN-1	1	0	-	analog, DiSEqC 1.0/1.1/1.2	-	-	●	-

Main features of E.LITE CLASS tools:

- support for 22kHz tone, DiSEqC 1.0
- voltage or mechanical control
- including non-configurable fixed tools

4 YEARS WARRANTY

DiSEqC 1.0

G1/1ECN22kHz-1

G1/1ECNpos-1

Overview of E.LITE CLASS tools

Part number	Number of inputs	Number of outputs	Generated commands	Control by 12V DC	Control by manual Switches	Selection of operation mode	Frequency range (MHz)
G1/1ECN22kHz-1	1	1	22 kHz	-	●	-	950-2150
G1/1ECNpos-1	1	1	DiSEqC 1.0 (Position)	-	-	-	950-2150
G1/1ECNopt-1	1	1	DiSEqC 1.0 (Option)	-	-	-	950-2150
G1/1ECNposopt-1	1	1	DiSEqC 1.0 (Position&Option)	-	-	-	950-2150
G1/1ECN-1	1	1	22 kHz, DiSEqC 1.0	●	-	-	950-2150
G1/1ECNman-1	1	1	22 kHz, DiSEqC 1.0	-	●	-	950-2150

Detailed specifications

Part number	Insertion loss (avg)	Power consumption (mA-18V)	Dimensions (w,d,h) (power cord length 130 cm)	Temperature range
PROFI CLASS				
G1/1PCN-1	2	40	7,6 x 4,4 x 3,1cm	-30 ~ +70 °C
G1/1PCNman-1	2	40	7,6 x 5,7 x 3,1cm	-30 ~ +70 °C
G1/1PCP-1	sat5/terr2	35	7,6 x 3,8 x 2,8cm	-30 ~ +70 °C
D1/0PCN-1	-	30	6,2 x 3,6 x 3,1cm	-30 ~ +70 °C
E.LITE CLASS				
G1/1ECN22kHz-1	2	30	7,3 x 6,0 x 3,2cm	-25 ~ +60 °C
G1/1ECNpos-1	2	30	7,6 x 6,0 x 3,2cm	-25 ~ +60 °C
G1/1ECNopt-1	2	30	7,6 x 6,0 x 3,2cm	-25 ~ +60 °C
G1/1ECNposopt-1	2	30	7,6 x 6,0 x 3,2cm	-25 ~ +60 °C
G1/1ECN-1	2	40	7,6 x 4,4 x 3,1cm	-25 ~ +60 °C
G1/1ECNman-1	2	40	7,6 x 5,7 x 3,1cm	-25 ~ +60 °C

Useful information (General)

► To obtain high band signals from a universal LNB or from multiswitch, use 22 kHz generator G1/1ECN22kHz-1

► To route signals from the second (third, fourth) LNB via DiSEqC multiswitch, use generators G1/1ECN-1 or G1/1ECNman-1; for permanent redirecting use fixed generators, see table:

Redirection to position	Position of mechanical switches (manual control)	Voltage on control inputs (voltage control)	Equivalent fixed generator
B (2nd LNB)	IN 3 - ON, IN 4 - OFF	IN 3: 12V, IN 4: 0V	G1/1ECNpos-1
C (3nd LNB)	IN 3 - OFF, IN 4 - ON	IN 3: 0V, IN 4: 12V	G1/1ECNopt-1
D (4nd LNB)	IN 3 - ON, IN 4 - ON	IN 3: 12V, IN 4: 12V	G1/1ECNposopt-1

► To get signals from the second feedhorn of Monoblock LNB use generators G1/1ECN-1 or G1/1ECNman-1; if you always need signals from the second feedhorn, use fixed G1/1ECNpos-1 instead

► Use PROFI CLASS generators if DiSEqC 1.1 or 1.2 is required

► To control access of particular user to satellites or individual LNB outputs, use G1/1PCP-1. This device can also completely disable the satellite reception,leaving access to terrestrial / cable channels only.

RF MODULATORS

Premium range of digital and analog modulators which are designed for distribution of video and audio content from variety multimedia sources in the coaxial cable networks.

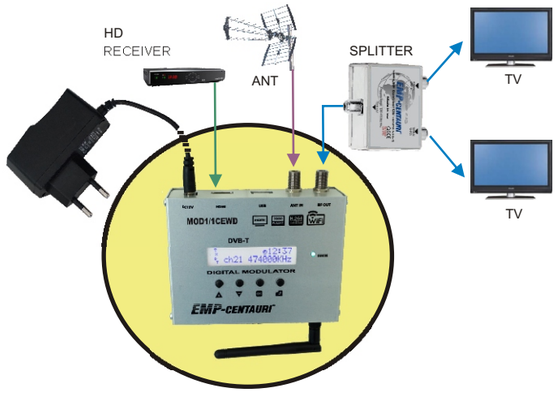
MOD1/1CEWD

DIGITAL RF MODULATORS

Designed to sends HDMI audio video signal from any sources (satellite receivers, cameras, video players, etc.) to a DVB-T multiplex for viewing on a digital TV. Modulators can distribute HD content in the coaxial cable networks or used in antenna systems.

Features of Modulators products:

- HDMI input
- low latency HD encoder with perfect picture and sound quality
- Wi-Fi connection and embedded Web server
- Adjustable output gain
- Easy to configure with user-friendly “Quick setup” feature



Overview of MODULATORS products - specifications

Part number	Type	Encoder type	Number of inputs	Input type	Number of outputs	Number of transmitted channels	Output level (dBuV)	Additional info
MOD1/1CEWD	digital	MPEG-4, AVC/H264	1	HDMI	1	1	69-95 adj.	Wi-Fi, loop through input
MOD3/1AER-18	analog	-	1	RCA	1	1	75	

ANALOG UHF BAND MODULATOR

Designed to convert a separate audio and video component signals (from a video camera, VCR, satellite receiver, DVD player, etc.) into analog UHF TV signals that you can see on any regular TV set.

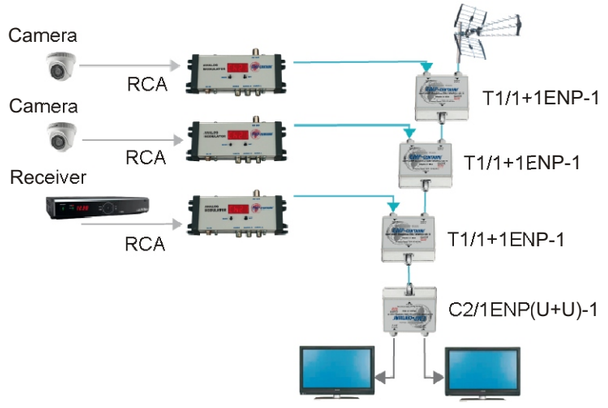
In the era of 4K digital television, this device may seem quite outdated, but overwhelming majority of TV sets still feature an analog tuner. Also many devices, for example, security cameras have a component output.

Since the composite output is not designed to transmit video over a long distance, this modulator will be the best solution for combining multiple devices with this output into common network and transmitting a video/audio signal over a coaxial cable to several TVs or other devices. Also, this kind of solution is very cheap and requires neither special knowledge or skills for installation and configuration.

MOD3/1AER-18

Features of Modulators products:

- RCA (CINCH) input
- Large 4-digit LED display
- High quality picture, low noise
- Easy to set up



Detailed specifications

Part number	Frequency range		Power consumption	Dimensions (w,d,h)	Temperature range
MOD1/1CEWD	174-230 MHz	470-862 MHz	600 mA	13,2 x 15,0 x 4,2 cm	-10 ~ +60 °C
MOD3/1AER-18	474-858 MHz		9-18 V	15,0 x 7,0 x 3,3 cm	-20 ~ +60 °C

POWER SUPPLIES AND INSERTERS

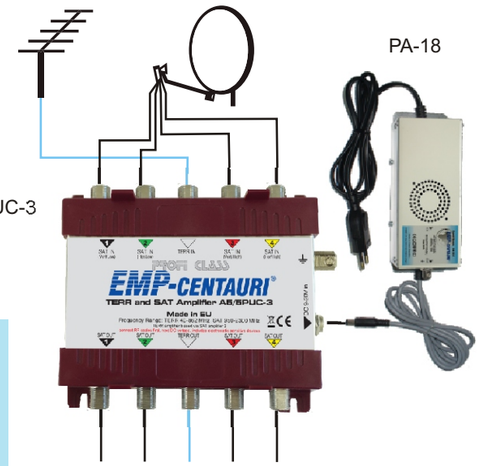
The power supplies are designed for supplying of multiswitches, amplifiers and other devices with DC power.
High reliability is achieved by sophisticated design and careful selection of key components. If necessary, use power inserters to include a DC power onto coaxial cable for supplying any remote active devices.

PA 12F

Features of power supplies:

- wide input voltage range
- high durability, overload protection
- 100 cm cord length terminated by DC2.1 plug

4 YEARS WARRANTY



A5/5PUC-3

PA-18

To cascade distribution system

Overview of POWER SUPPLIES products - specifications

Part number	Output voltage (V)	Output current (A, max)	Overload protection	Input voltage	Output voltage
PA12 2A	12	2	●	90-265 AC, 50/60 Hz	12 V DC
PA18 1.5A	18	1.5	●	90-265 AC, 50/60 Hz	18 V DC
PA12F	12	2	●	90-265 AC, 50/60 Hz	12 V DC

Detailed specifications

Part number	Maximal output current	Efficiency	Dimensions (w.d.h)	Temperature range
PA12 2A	2 A	75 % min	15,0 x 6,0 x 5,0cm	-30 ~ +70 °C
PA18 1.5A	1.5 A	75 % min	15,0 x 6,0 x 5,0cm	-30 ~ +70 °C
PA12F	2 A	75 % min	15,0 x 6,0 x 5,0cm	-30 ~ +70 °C

Features of DC power inserters:

- insert a DC voltage to the coaxial cable for feeding remote devices
- single or quadruple version
- DC2.1 socket

6 YEARS WARRANTY

B1/1PEP-1

B5/0PEP-3

Overview of DC power - specifications

Part number	Number of inputs	Number of outputs	Number of through lines	Number of terminated lines	Number of powered lines	Impedance termination
B4/0PEN-3	4	0	-	4	4	●
B5/0PEP-3	5	0	-	5	4	●
B1/1PEP-1	1	1	1	-	1	
B2/2PCP-1	2	2	1	-		

Detailed specifications

Part number	Frequency range SAT	Frequency range TERR	Insertion loss SAT (avg)	Insertion loss TERR (avg)	DC power (V max)	Dimensions (w.d.h)	Temperature range
B4/0PEN-3	950-2300	-	-	-	24	12,7x 10,4x 4,1cm	-30 ~ +70 °C
B5/0PEP-3	950-2300	5-862	-	-	24	12,7x 10,4x 4,1cm	-30 ~ +70 °C
B1/1PEP-1	950-2300	5-862	1	1	24	7,6 x 6,0 x 3,2cm	-30 ~ +70 °C
B2/2PCP-1	5-2300		1		24	7,5 x 4,5 x 2,8cm	-30 ~ +70 °C

Useful information (General)

- Power supplies are designed to operate anywhere in the world, however mains plug follows European standard (F-type plug for adapter supply plug)
- The overloading protection circuitry can temporarily disable operation of the supply. In that case, check if applied current load meets technical specifications of the supply. Check also whether sufficient air ventilation around the product is ensured.
- Replacement of an integrated power supply may be performed only by qualified technician
- Use the single DC inserters for bullet amplifiers supplying, quadruple inserters for cascade distribution systems supplying.

Wall sockets

TSR-SET

- end wall socket
- outputs SAT+TV+R
- DC pass to SAT outlet
- compatible with Unicable system

TSR-P10-DC-SET

- through wall socket
- outputs SAT+TV+R
- DC pass to SAT outlet
- compatible with
- Unicable system tap loss 10 dB

TSSR-SET

- end wall socket
- outputs SAT+SAT+TV+R
- DC pass to SAT outlets

F connector wrench

- F connector montage wrench
- part no. 1003836

F-connectors

F cable connector, screwable

- F connector for cable
- 6.5 mm inner diameter
- screwable
- part no. 1000050

F cable connector, push on

- F connector for cable
- 6.5 mm inner diameter
- quick (push on) plug
- part no. 1003970

F male quick adaptor

- Fm – Fm quick adaptor
- part no. 1002227

F adaptor / coupler

- Fm – Fm Adaptor Cable Extension Coupler
- part no. 1002115

F female screw adaptor

- Ff – Ff precision screw adaptor
- part no. 1002280

75 ohm load

- 75 ohm load
- NOT for use on lines with DC voltage!
- part no. 1000066

75 ohm DC blocked load

- 75 ohm DC blocked load
- Use this type if RF line carries DC voltage
- part no. 1002282

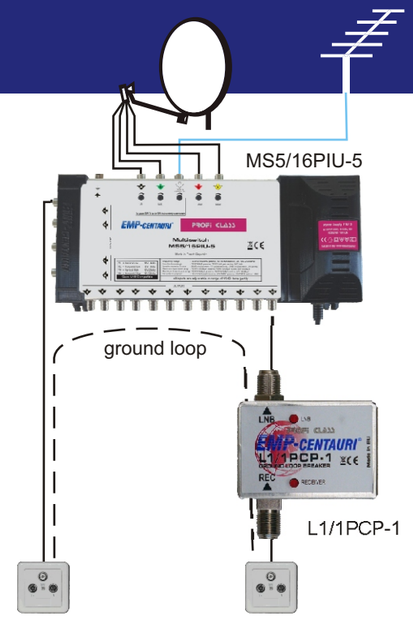
Audio adaptor

- Audio adaptor mono jack 3.5 mm female > RCA (CINCH) male
- part no. 1000061

WIRING FOR TELEVISION

Filters and others

Ground loop breaker L1/1PCP-1



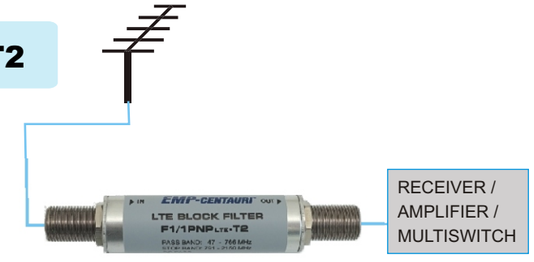
1in/1out ground loop breaker. The device provides galvanic isolation between connected coaxial cables (both center conductor and shielding). Nevertheless the DC current and all control signals required in satellite distribution systems are transferred through as well as RF signals.
The product should eliminate audible hum, interferences in picture etc. in those cases where mentioned problems emerge with interconnection of several devices.

6 YEARS WARRANTY

Specifications

Part number	Number of inputs	Number of outputs	Frequency range Sat. inputs (MHz)	Transferred control commands	Insertion loss (dB avg)	Current consumption From receiver (mA-18 V)	Current consumption DC current pass (mA-max)	Dimensions (w.d.h)	Temperature range
L1/1PCP-1	1	1	47-2300	13/18V, 22 kHz, Tone Burst, DiSEqC	1	70	100	5,1 x 6,4 x 3,2 cm	-30 ~ +70 °C

LTE block filter F1/1PNPLTE-T2



1in/1out LTE stop filter (Low pass filter) with DC pass.
Suppresses interferences from nearby LTE transmitters.

6 YEARS WARRANTY

Specifications

Part number	Number of inputs	Number of outputs	Frequency range Passband (MHz)	Frequency range Stopband (MHz)	Insertion loss Passband (dB max)	Insertion loss Stopband (dB min)	Dimensions (w.d.h)	Temperature range
F1/1PNPLTE-T2	1	1	47-766	791-2150	3	25	8,2 x 1,5 cm	-30 ~ +70 °C

EMP-CENTAURI
CZECH DESIGN AND MANUFACTURING

LNBs

These branded LNBs from EMP-Centauri are suitable for receiving analogue and digital channels from any satellite. The LNBs are characterized by a minimal and stable noise, excellent processing and UV-resistant weather protection housing.

Quattro LNB Twin LNB Quad LNB Single LNB

Technical data:

ITEM	LOW BAND	HIGH BAND
Input Frequency	10.7~11.7 GHz	11.7~12.75 GHz
Output Frequency	950~1950 MHz	1100~2150 MHz
LO Frequency	9.75 GHz	10.6 GHz
Noise Figure	0.1 dB (Typ.)	
Conversion Gain	55 ~ 70 dB (Typ.62dB)	
P 1dB	0 dBm (Min.)	
Operation Temperature	-30°C ~ +60°C	

Quattro LNB

Twin LNB

Quad LNB


Single LNB

Low power consumption
Cold and heat resistant
High polarization decoupling
High frequency stability
Feed diameter 40mm
HD compatible

LNB Monoblock QUAD 4.3°

Technical data:

ITEM	LOW BAND	HIGH BAND
Input Frequency	10.7~11.7 GHz	11.7~12.75 GHz
Output Frequency	950~1950 MHz	1100~2150 MHz
Output VSWR	2,5:1 (Max.)	
Output impedance	75Ω	
Output Connector	F Type Female 4x	
Local Oscillator Frequency	9,75 / 10,60 GHz	
L.O: Stability	±1MHz@25°C ±2MHz@(-40°C to +60°C)	
Phase Noise (offset)	-50dBc/Hz@1KHz -75dBc/Hz@10KHz -100dBc/Hz@100KHz	
Conversion Gain	55dB /Typ.)	
Gain Flatness	±3 (±0,5dB/27MHz) (Typ.)	
P 1dB Gain Compression	5dBm (Typ.)	
Noise Figure	0,1dB (Typ.)	
Cross Pol. Isolation	25dB (Typ.)	
Image Rejection	45dB(Typ.)	
Band Select Control	0 KHz	22 ±4KHz
Polarity Select Control	V: 11.5~14V DC H: 16~19V DC	
Input Selection (Satellite)	Tone Burst/DiSEqC 2.0	

EXPLANATION OF TECHNICAL TERMS AND GRAPHIC SYMBOLS

LNB
LNB is always a source of distributed signals. There are several types available on the market:
Single: basic model for single user, often used with DiSEqC switches, but not suitable with multiswitches
Twin: suitable for receivers with dual tuners, limited use with multiswitches, often used with DiSEqC switches
Quattro: designed solely for use with multiswitches
Quad: handy LNB usable for up to 4 individual users or - in some cases - for multiswitch system
Octo: high-end LNB for up to 8 individual users
Monoblock: multiple LNBs (usually 2) in compact housing; doesn't work with multiswitches!
Unicable: special LNB designed for feeding Unicable receivers

Coaxial cable
For satellite distribution use only cables certified up to 2150 MHz at least

Wall socket
Connecting point to home receiving equipment with integrated frequency splitter for satellite and terrestrial bands

Receiver
All contemporary satellite receivers support “analogue” voltage/22kHz control (required by LNBs and some multiswitches), almost all receivers support also DiSEqC commands (required by multiswitches and DiSEqC switches). There are however several levels of DiSEqC implementation, as described below

DiSEqC 1.0
Supports switching up to 4 LNBs by “committed command”

DiSEqC 1.1
For switching more than 4 LNBs by “uncommitted command”

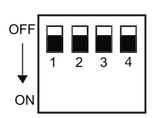
DiSEqC 1.2
Designed for controlling of positioning equipment (motor), can be utilized by several EMP-Centauri DiSEqC switches

DiSEqC 2.0, 2.1, 2.2
In addition to above mentioned features allows backward signaling

Unicable
Unicable technology allows connection of receivers in a chain instead of usual star-like wiring. Requires Unicable-compatible components (LNB or multiswitch, wall outlets, receivers). Number of users is limited to 8.

Attenuators
Turnable tools placed close to inputs of the device, usually multiswitch; allow to reduce too high input signal strength

DIP-switch
A block of miniature two-state switches, allowing the installer to setup the device to particular operating mode of the device



Grounding terminal
Many products, especially devices with integrated power supply, provide earthing socket. Use this to connect the device to the ground potential.

Common wiring for data and television

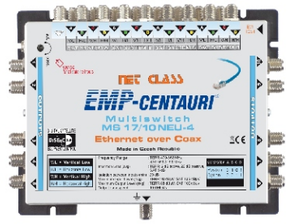
Eoc distribution - Eoc multiswitches

ETHERNET OVER COAX

Although twisted-pairs (UTP) cables prevailed in local computer networks (LAN), there exist practical options of utilizing existing coaxial TV distribution system for high speed data connection. Using EMP-Centauri own innovative solution, a 100 Mbit/s full duplex data link can be created on single coaxial segment with length up to 100 m.
Data transmission occupies lower frequency bands, while leaving UHF and satellite bands free for TV reception. The coax is used also for common powering all connected devices.

Features of NET CLASS products:

- standard distribution of UHF and SAT channels
- 100 Mbit/s full duplex data link over coaxial cable, 1 Gbit/s port at multiswitch
- support of standards 10BASE-T/100BASE-TX
- comply with applicable sections of IEEE 802.3, IEEE 802.3u, IEEE 802.3x
- compatible with any common data transmission



MS 17/10NEU-4

4 YEARS WARRANTY

Overview of NET CLASS products - specifications

Part number	Number of Coaxial Inputs (including terrestrial)	Number of data connectors (Rj45)	Number of coaxial outputs	Description	Frequency range SAT inputs (MHz)	Frequency range Terr. Inputs (MHz)	Frequency range Outputs (MHz)	Control DiSEqC 1.0 (2.0) commands	Data Rj45 port (Mbit/s)	Data coaxial output (Mbit/s)	Insertion loss Sat. (dB avg)	Insertion loss Terr. active (dB avg)	Insertion loss Terr. passive (dB avg)
EOC STANDALONE MULTISWITCHES													
MS5/6NEU-4	5	1	6	1 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS5/10NEU-4	5	1	10	1 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS5/16NEU-12	5	1	16	1 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS5/20NEU-12	5	1	20	1 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS9/6NEU-4	9	1	6	2 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS9/10NEU-4	9	1	10	2 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS9/16NEU-12	9	1	16	2 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS9/20NEU-12	9	1	20	2 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS13/6NEU-4	13	1	6	3 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS13/10NEU-4	13	1	10	3 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS13/16NEU-12	13	1	16	3 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS13/20NEU-12	13	1	20	3 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS17/6NEU-4	17	1	6	4 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS17/10NEU-4	17	1	10	4 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS17/16NEU-12	17	1	16	4 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20
MS17/20NEU-12	17	1	20	4 SAT	950-2150	470-862	470-2150	●	1000	100	10	2	20

EoC multiswitch with external power supply, 100 Mbit/s

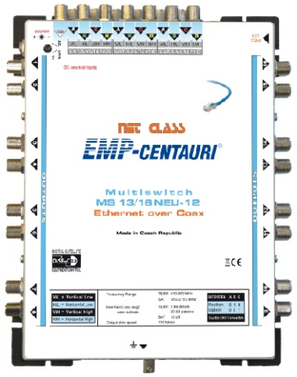
Detailed specifications

Part number	Sat. inputs isolation (dB min) Between V/H polarisations	Sat. inputs isolation (dB min) Between low/high bands	Sat. inputs isolation (dB min) Between sat. systems	Maximum input level* Sat. (dBµV avg	Maximum input level* Terr. (dBµV avg)	Maximum output level* Sat. (dBµV avg)	Maximum output level* Terr. (dBµV avg)	Power consumption From each receiver (mA-18 V)	Power consumption From external power supply (W max.)	Dimensions (w,d,h)	Temperature range
EOC STANDALONE MULTISWITCHES											
MS5/6,10NEU-4	20	25	25	105	90	95	88	150	20	18,6 x 14,6 x5,1cm	-25 ~ +60 °C
MS5/16,20NEU-12	20	25	25	105	90	95	88	150	30	18,6 x 24,5 x5,1cm	-25 ~ +60 °C
MS9/6,10NEU-4	20	25	25	105	90	95	88	150	20	18,6 x 14,6 x5,1cm	-25 ~ +60 °C
MS9/16,20NEU-12	20	25	25	105	90	95	88	150	30	18,6 x 24,5 x5,1cm	-25 ~ +60 °C
MS13/6,10NEU-4	20	25	25	105	90	95	88	150	20	18,6 x 14,6 x5,1cm	-25 ~ +60 °C
MS13/16,20NEU-12	20	25	25	105	90	95	88	150	30	18,6 x 24,5 x5,1cm	-25 ~ +60 °C
MS17/6,10NEU-4	20	25	25	105	90	95	88	150	20	18,6 x 14,6 x5,1cm	-25 ~ +60 °C
MS17/16,20NEU-12	20	25	25	105	90	95	88	150	30	18,6 x 24,5 x5,1cm	-25 ~ +60 °C

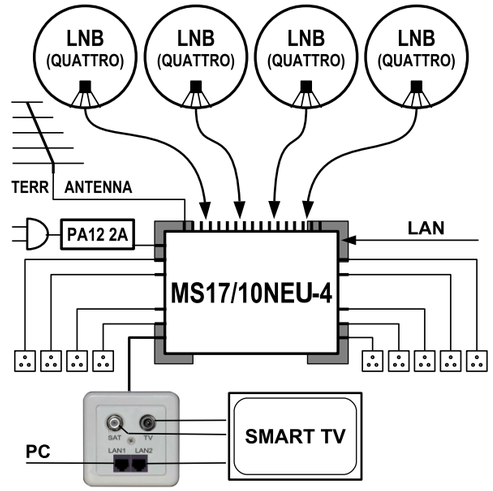
Notes: * TERR: EN 50083-3/60dB IMA3[dBuV]; SAT: EN 50083-3/35dB IMA3[dBuV]

Example of utilization

A / Data network over coaxial distribution system for 4 satellites and terrestrial band



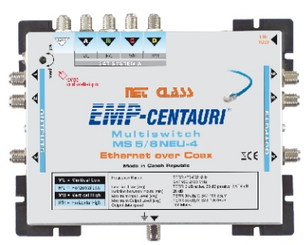
MS 13/16NEU-12



Useful information (General)

EOC STANDALONE MULTISWITCHES

- Connect outputs of Quattro LNB to appropriate inputs of multiswitch: VL - A, HL - B, VH - C, HH - D
- Any standard wall socket may be connected to the multiswitch, however for data transmission is necessary EMP-Centauri NET CLASS wall socket
- EMP-Centauri NET CLASS products are not compatible with similar products from other parties



MS 5/6NEU-4

Eoc distribution - Eoc terminals

NT11

The device is an EoC terminal to convert UTP cable to 75 ohm coaxial cable and vice versa.
The device allows to replace the UTP cable with a coaxial cable up to 200 meters of length.
No settings are required, just connect the device according to the picture below.
For the external power, use our original power adapter 9-12V DC.
The NT11 terminal works in connection with any Ethernet devices according to 100BASE-TX and 10BASE-T standard.
When two NT11 terminals are connected together using a coaxial cable, the coaxial cable should not be interrupted by any cable connector or other device.
If this can not be avoided and it is necessary to use a cable connector, use only quality connectors for coaxial cables with an impedance of 75 ohm.

NT12

The device is an EoC terminal to convert UTP cable to 75 ohm coaxial cable and vice versa.
Moreover, it allows terrestrial or cable TV signals to be combined into the coaxial cable. It is therefore suitable for use where wiring by 75 ohm coaxial cable is already prepared and the user requests to extend it with data transmission (Ethernet).
No settings are required, just connect the device according to the picture below.
For the external power, use our original power adapter 9-12V DC.
The NT12 terminal works in connection with any Ethernet devices according to 100BASE-TX and 10BASE-T standard.
When two NT12 terminals are connected together using a coaxial cable, the coaxial cable should not be interrupted by any cable connector or other device.
If this can not be avoided and it is necessary to use a cable connector, use only quality connectors for coaxial cables with an impedance of 75 ohm.

Nt13

The device is an EoC terminal to be used in connection with EMP-Centauri EoC multiswitches.
No settings are required, just connect the terminal according to the schematic diagram below.
The terminal is powered by the coaxial cable comming from the multiswitch.
The NT13 terminal works in connection with any standard Ethernet devices according to 100BASE-TX and 10BASE-T standard.
Use only good quality coaxial cable of 75 ohm impedance to connect Nt13 terminal with an EoC multiswitch.

Eoc wall socket

NS 01-S1

EoC enabled end wall socket,
outputs SAT+TV+2xRJ45, 100 Mbit/s.
Only for use with EMP-Centauri NET CLASS devices.

Common wiring for data and television

Eoc distribution - Eoc switches

ES 05-15

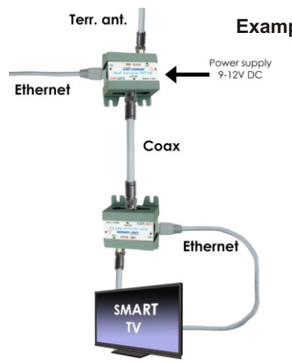
UTP/coaxial ethernet switch, 100 Mbit/s.
Provides 3 standard Fast ethernet RJ-45 sockets plus 2 coaxial ports (F-sockets).
Requires external power supply PA12 (not included in the package), or remote powering through coaxial cable.
Should be used in pairs or together with other EMP-Centauri NET CLASS devices.

ES 41-15

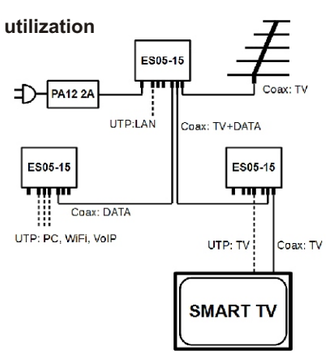
UTP/coaxial ethernet switch, 100 Mbit/s.
Provides 1 standard Fast ethernet RJ-45 socket plus 4 coaxial ports (F-sockets) for connection of up to 4 wall sockets.
Signals from antenna input are routed to wall sockets along with bi-directional data link. Can supply active antenna with user-selectable 5/12 V. Requires external power supply PA12 (included in the package).
Must be used only with EMP-Centauri NET CLASS wall sockets.

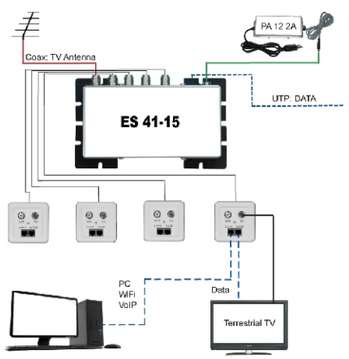
Overview of Eoc products - specifications

Part number	Parameter	Frequency range SAT (MHz)	Frequency range TV (MHz)	Insertion loss SAT (dB avg)	Insertion loss TV (dB avg)	Data RJ45 port	Data Coaxial input	Power consumption LAN active (mA/ 12V)	Dimensions (w,d,h)	Temperature range
NT11	Value					100 Mbit/s	100 Mbit/s	50	54x60x32 mm	-25 ~ +60 °C
NT12	Value		470-862		2	100 Mbit/s	100 Mbit/s	50	54x60x32 mm	-25 ~ +60 °C
NT13	Value	950-2300	470-862	2	2	100 Mbit/s	100 Mbit/s	50	54x60x32 mm	-25 ~ +60 °C
EOC WALL SOCKETS										
NS 01-S1	Value	950-2300	470-862	3	3	100 Mbit/s	100 Mbit/s	65	76x76x10 mm	-25 ~ +60 °C
UTP/COAXIAL ETHERNET SWITCHES										
ES 41-15	Value		470-862		13	100 Mbit/s(1x)	100 Mbit/s output(4x)	6W max	148x89x54 mm	-25 ~ +60 °C
ES 05-15	Value		470-862		1	100 Mbit/s(3x)	100 Mbit/s output(2x)	5W max	148x89x54 mm	-25 ~ +60 °C



Example of utilization

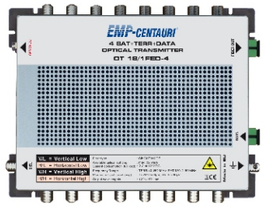


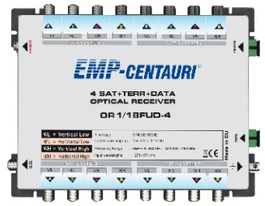


Optical distribution - Transmitters - Receivers

Fiber optic link is an advantageous supplement to traditional coaxial cables either in extensive distribution networks (with distances more than 100 metres) or in the cases where several coaxial systems should be feeded from remote antenna.
The basic components for building the fiber optic link is an optical transmitter and optical receiver.

OT 18/1FED-4





OR 1/18FUD-4

Features of optical transmitters:

- Convert electrical signal from coaxial inputs to infrared light beam
- Compatible with data PON networks (models "FED")
- External power supply

Features of optical receivers:

- Convert optical beam back into electrical signals
- Compatible with data PON networks (models "FUD")
- External power supply or remote powering through coaxial cables

4 YEARS WARRANTY

Overview of optical transmitters - specifications

Part number	Inputs	Data connector	Number of outputs	Input - Frequency range SAT (MHz)	Input - Frequency range TERR (MHz)	Maximum Input Level (dBuV)	Maximum split ratio	Optical wavelength (nm)
OT1/1FEC	1 x coaxial	-	1x optical	70-2150		90	64	1270
OT5/1FEC-4	5 x F (4xSAT, 1xTERR)	-	1 optical (SC/APC),SM	950-2150	40-862	85	1:32	1270-1350
OT6/1FED-4	5 x F (4xSAT, 1xTERR)	1 optical (SC/APC), SM	1 optical (SC/APC),SM	950-2150	40-862	85	1:32	1270-1350
OT9/1FEC-4	9 x F (8xSAT, 1xTERR)	-	1 optical (SC/APC),SM	950-2150	40-862	85	1:32	1270-1430
OT10/1FED-4	9 x F (8xSAT, 1xTERR)	1 optical (SC/APC), SM	1 optical (SC/APC), SM	950-2150	40-862	85	1:32	1270-1430
OT13/1FEC-4	13 x F (12xSAT, 1xTERR)	-	1 optical (SC/APC), SM	950-2150	40-862	85	1:32	1270-1530
OT14/1FED-4	13 x F (12xSAT, 1xTERR)	1 optical (SC/APC), SM	1 optical (SC/APC), SM	950-2150	40-862	85	1:32	1270-1530
OT17/1FEC-4	17 x F (16xSAT, 1xTERR)	-	1 optical (SC/APC), SM	950-2150	40-862	85	1:32	1270-1610
OT18/1FED-4	17 x F (16xSAT, 1xTERR)	1 optical (SC/APC), SM	1 optical (SC/APC), SM	950-2150	40-862	85	1:32	1270-1610

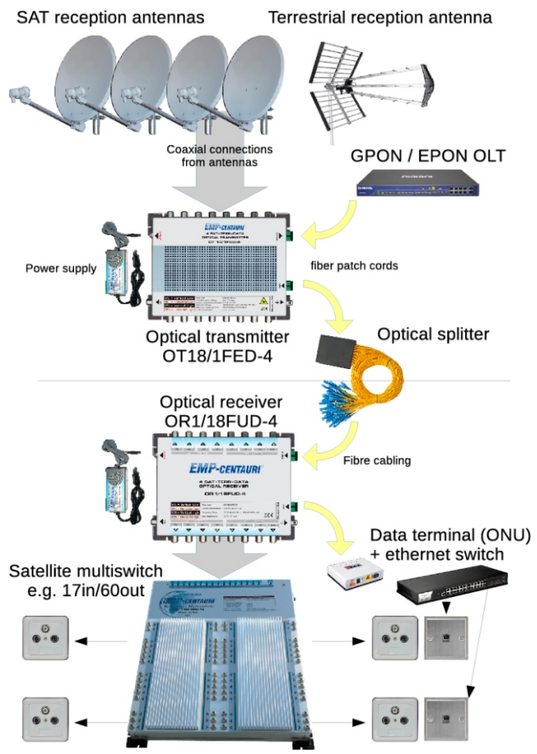
Overview of optical receivers - specifications

Part number	Inputs	Data connector	Number of outputs	Outputs - Frequency range SAT (MHz)	Outputs - Frequency range TERR (MHz)	Optical wavelength (nm)
OR1/1FUC	1 x optical	-	1 x coaxial	70-2150		1260-1620
OR1/5FUC-4	1 optical (SC/APC), SM	-	5 x F-connector (4xSAT, 1xTERR)	950-2150	40-862	1270-1350
OR1/6FUD-4	1 optical (SC/APC), SM	1 optical (SC/APC), SM	5 x F-connector (4xSAT, 1xTERR)	950-2150	40-862	1270-1350
OR1/9FUC-4	1 optical (SC/APC), SM	-	9 x F-connector (8xSAT, 1xTERR)	950-2150	40-862	1270-1430
OR1/10FUD-4	1 optical (SC/APC), SM	1 optical (SC/APC), SM	9 x F-connector (8xSAT, 1xTERR)	950-2150	40-862	1270-1430
OR1/13FUC-4	1 optical (SC/APC), SM	-	13 x F-connector (12xSAT, 1xTERR)	950-2150	40-862	1270-1530
OR1/14FUD-4	1 optical (SC/APC), SM	1 optical (SC/APC), SM	13 x F-connector (12xSAT, 1xTERR)	950-2150	40-862	1270-1530
OR1/17FUC-4	1 optical (SC/APC), SM	-	17 x F-connector (16xSAT, 1xTERR)	950-2150	40-862	1270-1610
OR1/18FUD-4	1 optical (SC/APC), SM	1 optical (SC/APC), SM	17 x F-connector (16xSAT, 1xTERR)	950-2150	40-862	1270-1610

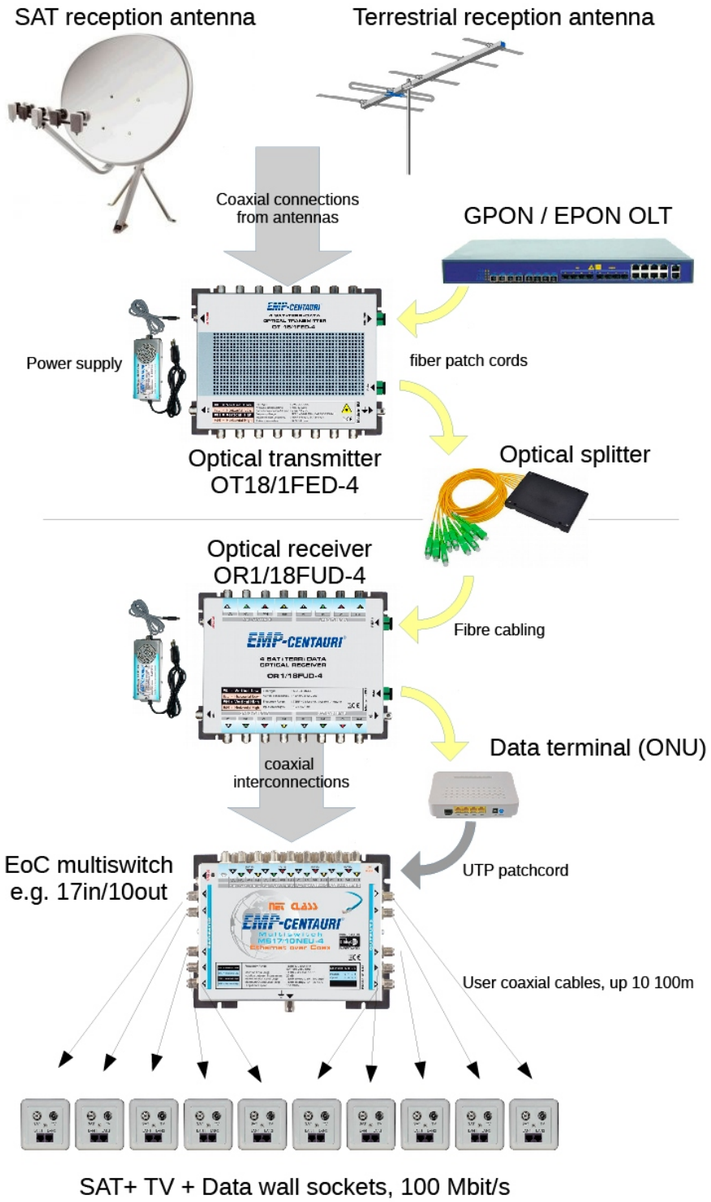
Detailed specifications

	Part number	Data wavelengths (for GPON / EPON) (nm)	Current consumption	Dimensions (w.d.h)	Temperature range	Housing material
OPTICAL TRANSMITTERS	OT1/1FEC	-	0,15 A (12 V DC) + LNBs	15,0 x 6,0 x 5,0 cm	-30 ~ +60 °C	
	OT5/1FEC-4	-	0,25 A (12 V DC) + LNBs	18,5 x14,5 x 9,0 cm	-25 ~ +50 °C	aluminium
	OT6/1FED-4	1310 & 1490	0,25 A (12 V DC) + LNBs	18,5 x14,5 x 9,0 cm	-25 ~ +50 °C	aluminium
	OT9/1FEC-4	-	0,6 A (12 V DC) + LNBs	18,5 x14,5 x 9,0 cm	-25 ~ +50 °C	aluminium
	OT10/1FED-4	1310 & 1490	0,6 A (12 V DC) + LNBs	18,5 x 14,5 x9,0 cm	-25 ~ +50 °C	aluminium
	OT13/1FEC-4	-	0,8 A (12 V DC) + LNBs	18,5 x 14,5 x9,0 cm	-25 ~ +50 °C	aluminium
	OT14/1FED-4	1310 & 1490	0,8 A (12 V DC) + LNBs	18,5 x 14,5 x9,0 cm	-25 ~ +50 °C	aluminium
OPTICAL RECEIVERS	OT17/1FEC-4	-	1 A (12 V DC) + LNBs	18,5 x 14,5 x9,0 cm	-25 ~ +50 °C	aluminium
	OT18/1FED-4	1310 & 1490	1 A (12 V DC) + LNBs	18,5 x14,5 x9,0 cm	-25 ~ +50 °C	aluminium
	OR1/1FUC	-	20 mA (12 V DC)	15,0 x 6,0 x 5,0 cm	-30 ~ +60 °C	
	OR1/5FUC-4	-	40 m A (12 V DC)	18,5 x14,5 x 5,5 cm	-25 ~ +60 °C	aluminium
	OR1/6FUD-4	1310 & 1490	40 m A (12 V DC)	18,5 x14,5 x 5,5 cm	-25 ~ +60 °C	aluminium
	OR1/9FUC-4	-	80 m A (12 V DC)	18,5 x14,5 x 5,5 cm	-25 ~ +60 °C	aluminium
	OR1/10FUD-4	1310 & 1490	80 m A (12 V DC)	18,5 x14,5 x 5,5 cm	-25 ~ +60 °C	aluminium
	OR1/13FUC-4	-	0,15 A (12 V DC)	18,5 x14,5 x 5,5 cm	-25 ~ +60 °C	aluminium
	OR1/14FUD-4	1310 & 1490	0,15 A (12 V DC)	18,5 x14,5 x 5,5 cm	-25 ~ +60 °C	aluminium
	OR1/17FUC-4	-	0,15 A (12 V DC)	18,5 x 14,5 x5,5 cm	-25 ~ +60 °C	aluminium
	OT1/18FUD-4	1310 & 1490	0,15 A (12 V DC)	18,5 x14,5 x5,5 cm	-25 ~ +60 °C	aluminium

Example of utilization:



Example of utilization:



Useful information (General)

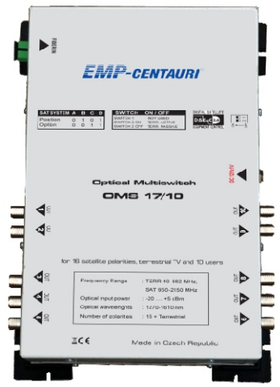
- The single optical link can transmit both terrestrial and satellite bands
- Use single mode fiber optic cable terminated with proper connectors
- Take care of recommended input signal levels
- Optical splitters can be used to split the light in several fiber link to feed more optical receivers. The splitting however reduces output signal levels provided by receiver.

Optical distribution - Multiswitches

Optical multiswitch system to receive complete TV signals of one satellite via single optical link. The optical multiswitch is a device with integrated optical receiver and multiswitch in one common housing. It is equipped with just one input for connecting of single mode optical cable from optical transmitter output.
The complete TV signals of one satellite and terrestrial TV are r eceived from the optical transmitter via the SC/APC optical input. The subscriber coaxial outputs are made of 75 ohm F connectors. The optical multiswitch is offered with 4 subscriber outputs for direct connection of satellite set top boxes.

OMS 5/4

OMS 17/10



Optical multiswitch system to receive complete TV signals of 1,2,3 and 4 satellites via single optical link. The optical multiswitch is a device with integrated optical receiver and multiswitch in one common housing. It is equipped with just one input for connecting of single mode optical cable from optical transmitter output. The complete TV signals of up to 4 satellites and terrestrial TV are received from the optical transmitter via the SC/APC optical input.
The subscriber coaxial outputs are made of 75 ohm F connectors. The optical multiswitch is offered with 10 subscriber outputs for direct connection of satellite set top boxes.

Other versions

Overview of optical multiswitches - specifications

Part number	Inputs SC/APC single mode	Optical wavelenghts	Outputs	Outputs Frequency range SAT (MHz)	Outputs Frequency range TERR (MHz)	Current consumption	Operating temperature range
OMS 5/2	1 optical	1270,1290,1330,1350 nm	4x F connector (2x SAT, 1x TERR)	950-2150	40-862	80mA (12V DC)	-25 ~ +60 °C
OMS 5/4	1 optical	1270,1290,1330,1350 nm	4x F connector (4x SAT, 1x TERR)	950-2150	40-862	80mA (12V DC)	-25 ~ +60 °C
OMS 5/10	1 optical	1270-1350 nm	10x F connector (16x SAT, 1x TERR)	950-2150	40-862	0,18A (12V DC)	-25 ~ +60 °C
OMS 9/10	1 optical	1270-1430 nm	10x F connector (16x SAT, 1x TERR)	950-2150	40-862	0,18A (12V DC)	-25 ~ +60 °C
OMS 13/10	1 optical	1270-1530 nm	10x F connector (16x SAT, 1x TERR)	950-2150	40-862	0,18A (12V DC)	-25 ~ +60 °C
OMS 17/10	1 optical	1270-1610 nm	10x F connector (16x SAT, 1x TERR)	950-2150	40-862	0,18A (12V DC)	-25 ~ +60 °C

Other versions

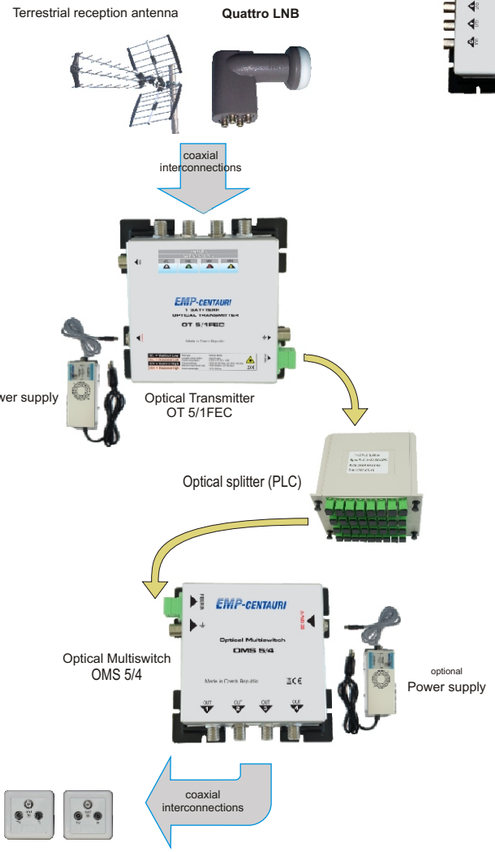
Overview of optical multiswitches - specifications

Part number	Main optical input/output SC/APC single mode	GPON/EPON optical input/output	RF outputs Frequency range SAT (MHz)	RF outputs Frequency range TERR (Mhz)	GPON/EPON maximum data speed	GPON/EPON optical signal loss	Current consumption	Operating temperature range
OMS 6/10	1270-1350 nm	1310-1490 nm	950-2150	40-862	2,5 Gbps uplink/downlink	2.0 + -1dB	0,18A (12V DC)	-25 ~ +60 °C
OMS 10/10	1270-1430 nm	1310-1490 nm	950-2150	40-862	2,5 Gbps uplink/downlink	2.0 + -1dB	0,18A (12V DC)	-25 ~ +60 °C
OMS 14/10	1270-1530 nm	1310-1490 nm	950-2150	40-862	2,5 Gbps uplink/downlink	2.0 + -1dB	0,18A (12V DC)	-25 ~ +60 °C
OMS 18/10	1270-1610 nm	1310-1490 nm	950-2150	40-862	2,5 Gbps uplink/downlink	2.0 + -1dB	0,18A (12V DC)	-25 ~ +60 °C

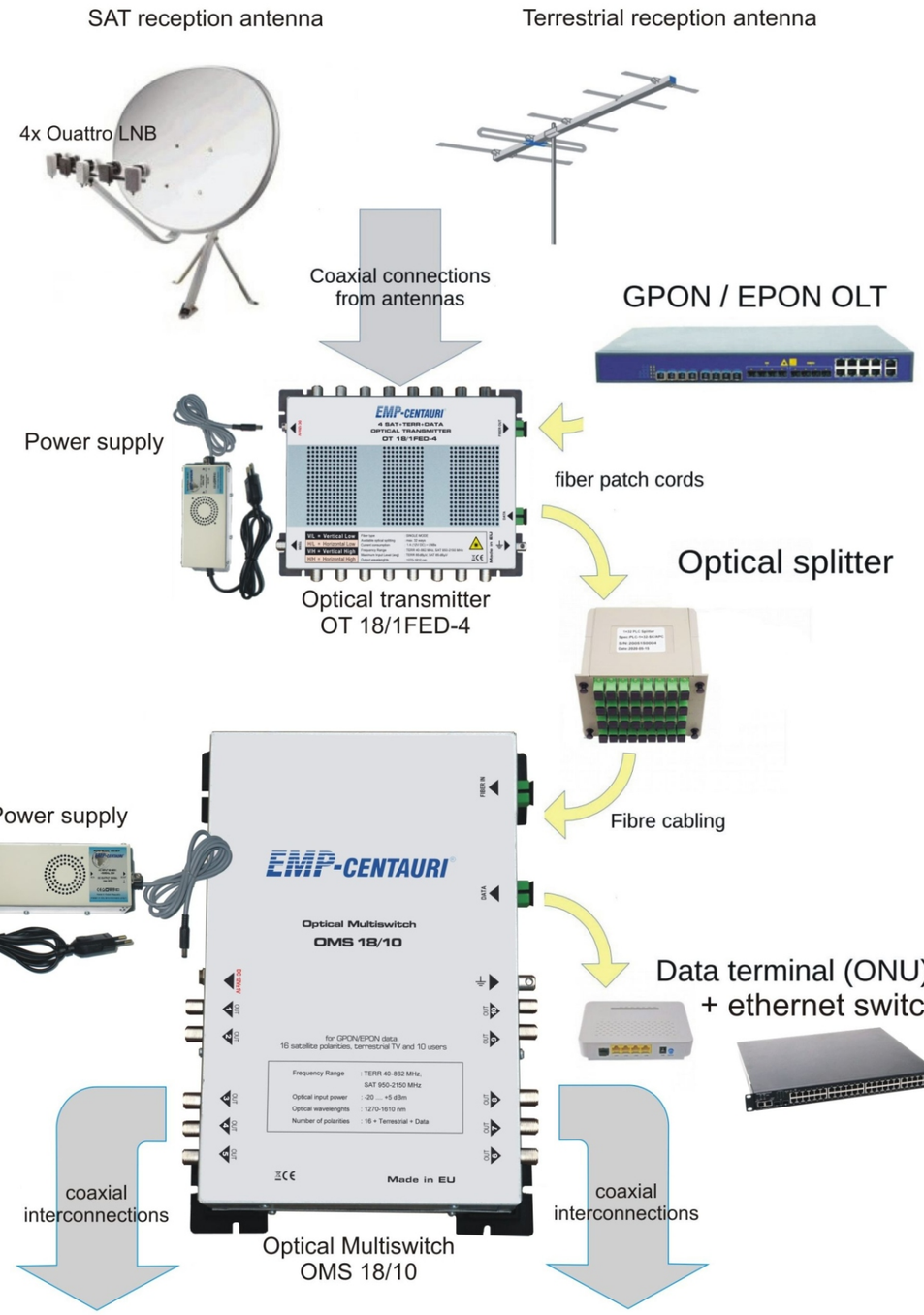
The optical multiswitch is a device with integrated optical receiver and multiswitch in one common housing. The OMS 18/10 optical multiswitch system can be used for reception of not only satellite and terrestrial TV signals via its single mode SC/APC optical input, but Gigabit speed data as well. The system is designed for reception of complete TV signals of 1,2,3 and 4 satellites, terrestrial TV and Gigabit data via the SC/APC optical input of multiswitch. It is equipped with 10 subscriber coaxial outputs made of 75 ohm F connectors, for direct connection of satellite set top boxes. Moreover, the multiswitch is equipped with additional SC/APC optical connector for connection of data terminal (ONU).

OMS 18/10

Example of utilization: (OMS 5/4)



Example of utilization:



Optical distribution - Optical cables

Cable Design

- Optical fiber
- Tight buffer
- Aramid yarn
- Strength member
- Outer sheath

Features

- Choice of fiber type
- Choice of outer diameter
- High strength aramid yarn strength member
- Easy to strip
- Choice of outer sheath material
- Choice of outer sheath color

Main Applications

Building to building interconnection; indoor distribution; Pigtails for instrument-type communication equipment, as a moveable connect line for patch cords and connectors.

Temperature Characteristics

Operating temperature range: -20°C to +60°C

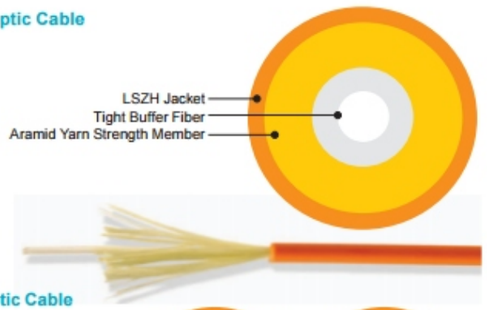
Storage temperature range: -20°C to +60°C

Environmental Characteristics

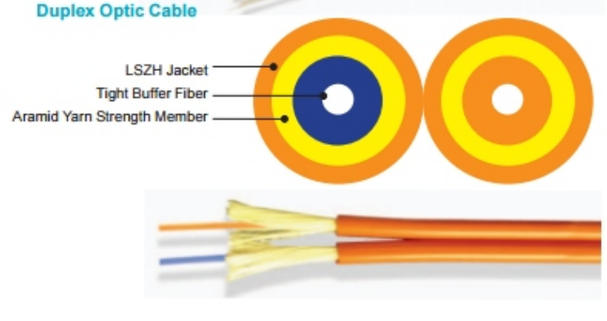
This cable meets RoHS requirement.

Simplex & Duplex Optic Cable

Simplex Optic Cable



Duplex Optic Cable



TECHNICAL CHARACTERISTICS

SIMPLEX OPTICAL FIBER CABLE					
Outer diameter	mm	1.6	1.8	2.0	2.4
Normal weight	kg/km	2.6	3.0	3.5	5.0
Long term tensile strength	n	40	40	60	60
Short term tensile strength	n	80	80	100	100
Minimum static bending radius		10D			
Minimum dynamic bending radius		20D			
Long term crush resistance	N	500			
Short term crush resistance	N	100			

DUPLEX OPTICAL FIBER CABLE					
Outer diameter	mm	1.6X3.3	1.8X3.7	2.0X4.1	2.8X5.7
Normal weight	kg/km	5.7	6.7	8.2	13.2
Long term tensile strength	n	40	40	60	60
Short term tensile strength	n	160	160	200	300
Minimum static bending radius		10H			
Minimum dynamic bending radius		20H			
Long term crush resistance	N	500			
Short term crush resistance	N	100			

ORDERING INFORMATION

To order optical fiber cables the Fiber-Rex part number follows the following sequence.

CORD					
	Cable Type SI=Simplex DU=Duplex	Cable Diameter(mm) 16=1.6 18=1.8 20=2.0 24=2.4 28=2.8 30=3.0	Fiber Type 62=62.5/125 50=50/125 09=9/125 OM3=OM3 OM4=OM4 7A=G657A 7B=G657B	Outer Sheath Material LZ=LSZH PV=PVC	Outer Sheath Colour OR=Orange PR=Purle YE=Yellow XX=Colour
Marking: As required. Packing: Standard 2000m or as required.					

Options

- Bend insensitive fibers G657A/B
- OM4 fibers 10 Gigs at 550 meters
- Any color of cable jacket
- Printing on cable
- OFNP plenum jacket

Common wiring for data and television

Optical distribution - Optical accessories

Fiber tap

Fiber tap FBT-A-1x2 - 4:96

Fiber tap FBT-A-1×2-4:96, 2 outputs, single mode, connectors SC/APC, through loss approx. 1 dB, tap loss approx. 15 dB

Other versions

Part number
Fiber tap FBT-A-1x2 - 10:90
Fiber tap FBT-A-1x2 - 25:75

Optical splitter

PLC-A-1x32

Fiber splitter PLC-A-1x32, 32 outputs, Singlemode, connectors SC/APC, loss 16 dB

Other versions

Part number
Optical splitter PLC-A-1x2
Optical splitter PLC-A-1x4
Optical splitter PLC-A-1x8
Optical splitter PLC-A-1x12
Optical splitter PLC-A-1x16

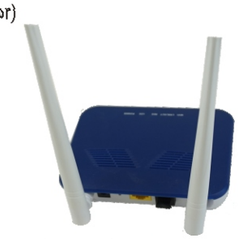
GPON OLT 4PON

4 PON is a small-capacity cassette GPON OLT, meeting the requirements of ITU-T G.984 and relative standards of Unicom GPON, with excellent GPON access capacity, carrier-class reliability and the complete security function. It can satisfy long-distance optical fiber access requirement on account of its management, maintenance and monitoring capability, abundant service features and flexible network mode. It can be used with NGBNVIEW network management system so as to provide users with the comprehensive access and perfect solution.

Optical Attenuator SC/APC 3dB

SC/APC Singlemode
Fixed Fiber Optic Attenuator,
Male-Female,
3dB (also available 6dB Attenuator)

XPON ONU 1GE-WiFi



Features:
– HGU ONU, bridging and routing modes can be set
– Compatible with popular EPON OLT
– Support loop detection, IGMP, IGMP snooping
– 802.1Q VLAN, QinQ, Cos, DSCP, QoS for priority of service
– Support port speed, support for storm suppression
– WiFi support 802.11n speed up to 300Mbps
– Support No-auth, WEP, WPA-PSK and WPA2-PSK.
– Support Telnet, CLI, OAM and Web management
– Support NAT, Firewall function
– Support remote software upgrade

EMP-CENTAURI
CZECH DESIGN AND MANUFACTURING

Optical distribution - fusion splicers and test devices

4108M fusion splicer

Actual average link loss is 0.02 dB (SM), 0.01 dB (MM), 0.04 dB (DS), 0.04 dB (NZDS)
Typical welding time is 9 s (for standard SM fiber)
Reflection attenuation of the welded joint 60 dB min.
There are several optional welding modes.
There are 53 programs for factory mode, or 100 for user mode.
It is possible to store welding results in memory – up to 10,000 results,
24 parameters per result, 100 sets of images
Fiber image magnification up to 120X
3.5 “color LCD monitor
Electrode life 2500 cycles
Internal battery (5200 mAH)
Weight 1.7 kg incl. Battery
Power supply 100 – 240 V AC, with DC adapter 13.5 V
Dimensions 122 mm (l) × 148 mm (w) × 130 mm (h)
2 years warranty, sale on tax document.
Battery capacity 300 cycles
Tensile test 2N
USB terminal
Other types of welders can also be supplied.

Fusion splicer DVP-740

Compact & Light weight
– Applied for Fibers, Cables and SOC (splice- on connector)
– Integrated Holder Design
– Fully Automatic, Semi-automatic and Manual Operation
– Shockproof, Drop resistance
– Power saving Function
– 4.3 inch Color LCD monitor
– USB&DC interface

Precision optical analyzer 18-channel CWDM

Professional optical power meter WT-3226A with full warranty for 1 year.
It is designed for optical systems and installations covering wavelengths from 1270 to 1610 nm. It measures and monitors the optical power and attenuation value for all 18 CWDM channels from a wavelength of 1270 nm to 1610 nm. All wavelengths are tested simultaneously and the results are displayed on the LCD screen. It is characterized by simple operation, fast response and high measurement accuracy, making it an ideal tester for the installation and maintenance of optical systems. You can save results or download results of up to 1000 tests via a USB port. The device is equipped with a color TFT-LCD display with a resolution of 320*240 pixels.
Dynamic range +10 to -40dBm. Resolution 0.01dB, measurement accuracy +-0.5dB.
Optical interface /connector/ on the FC/PC. The device is equipped with a rechargeable battery and comes with an external power supply. Battery life on a single charge is 10 hours.
Instrument dimensions 220cm*110cm*70cm, weight 850g. The warranty on the device is 1 year.

NOTES TO PRODUCT’S SPECIFICATIONS

Frequency range
For satellite inputs, the standard frequency range is 950-2150 MHz, which makes our products fully compatible with any commercial analogue or digital satellite receiver and with any LNB. The PROFI CLASS offers anextended range of up to 2300 MHz.
For a terrestrial input, the frequency range 40-862 MHz is ensured, covering all terrestrial TV broadcasting bands worldwide.
Passive devices (combiners, switches, passive multiswitches) offer an extended frequency range from 5 MHz, making them compatible with cable internet systems.

Insertion loss / Insertion gain
The value given in dB describes how much the signal is weakened on its way through the product. If the value of 0 dB is specified, then the strength of the signals is unaltered. The higher the value is, the more the signal strength is reduced. In some cases, the insertion gain is specified instead.
It can be noted that contemporary LNBs mounted on a dish with an average diameter, give more than a sufficient margin for signal strength, ensuring that even with long cable runs (up to 100m) and bad weather conditions, the user will get a perfect picture. To give an approximate idea, the loss of 10 dB is roughly equivalent to 30 m run of medium-class coaxial cable.
For the terrestrial band however, reception conditions may vary greatly. For example, powerful distribution amplifier makes it possible to use a passive multiswitch with 20 dB terrestrial loss without compromising picture quality, while in another case an active multiswitch with 0 dB loss is required to maintain the medium-level signals from the directly connected antenna.
Because insertion loss varies a bit within a whole frequency range, an average value is usually given (avg).
At particular frequencies, deviations of ± 3 dB may occur (± 4 dB for some multiswitches).

Maximum input / output level
While the high level of signals at the device‘s inputs ensures safe reception in all conditions, they present the risk of distortion in internal amplifiers. For this reason, the actual input level for any of the distributed signals must not override the given value. For some products, the maximum output level is specified as well.
The signal level on outputs of the product may affect the design of the rest of the distribution system: an either too high output level may disqualify a particular follow-up unit or a too low level output signal may reduce the length of the user’s cables.

Input isolation
An ideal switch would pass only signals from the selected input. In the real product, however, signals from other, especially from adjacent inputs, are mixed together with the desired signals. The isolation value specifies how much unwanted signals are lowered against the selected signals.
For vertical & horizontal inputs of multiswitches, 20 dB isolation is sufficient, provided that the frequency plan of most satellites tends to avoid using the same frequencies on both polarities. For other input combinations, a minimum 25 dB isolation is required. In cascadable units even better isolation should be achieved, typically 30 dB and more.

Power consumption
Power consumption is measured without connected LNBs. Where appropriate, two values for active and passive terrestrial operation are given.
To estimate real conditions, a typical value of 4 W per each connected LNB should be added.

SALES AND WARRANTY TERMS

1. General Provisions

a) The General Trade Conditions are part of the Contract of Purchase made under conditions specified here below between EMP Centauri, Limited Liability Company (hereinafter "Seller" and the Consumer (hereinafter "Buyer").

b) The seller of the goods listed below is the trading company EMP-Centauri Limited Liability Company, with registered offices at 5. května 690, 33901 Klatovy, identification No (IČ): 62620088, tax identification No. (DIČ): CZ62620088, phone: 376 323 813, e-mail: sales@emp-centauri.cz. The Seller's mail delivery address is identical with the address stated in the previous sentence.

c) The legal relations resulting for the Consumer and the Seller from the sale and the purchase of goods (Contract of Purchase) shall be governed by the Civil Code (Act No. 40/1964 Coll., Civil Code, as amended) and these General Trade Conditions (hereinafter "GTC").

d) Either Contracting Party shall cover the costs incurred to it by using the long-distance communication facilities, which it employed in making the Contract of Purchase.

2. Object of the Contract of Purchase

a) The object of the Contract of Purchase is goods listed in the order for goods and the quantity of those goods. Only goods offered by the Seller for sale, possibly above-standard goods, on the delivery of which the purchasing parties have agreed, may be the object of the Contract of Purchase.

b) The name or the type description of the goods must be given in words for each particular product or kind of goods.

c) The data relating to the goods referred to on the Internet, in the catalogues, prospectuses and other printed matter of the Seller (e.g. size, materials, supplements, composition, etc.) are only of informative character, and the delivered goods may therefore show slight deviations (which are not defects).

d) The ordered goods shall be delivered to the Buyer in the quality and finish suitable for the purpose for which such goods are intended and in accordance with the specifications and properties customary for that particular kind of goods, meeting the standards, rules and regulations concerned, applying on the territory of the Czech Republic.

e) The goods will be packed or secured for transport in a way necessary for the preservation and protection of the goods.

3. Ordering of Goods

a) The Buyer may order the goods from the Seller by:

I. a fax message at 376 323 809

II. e-mail at sales@emp-centauri.cz or info@emp-centauri.cz

III. in writing by mail

IV in writing on a form downloaded from www.emp-centauri.cz

b) Each order sent to the Seller according to points 3.a.i-iv shall be binding for the Buyer and shall be considered a draft contract of purchase.

c) The Contract of Purchase shall have been made at the moment the Seller notified the Buyer in writing, by fax or by electronic mail that he accepts the order. Any other notification on the part of the Seller shall not be considered an acceptance of the order.

d) The Seller shall be entitled each time, depending on the character of the order–quantity of the goods, price, transport costs, distance, etc., to ask the Buyer to authorize the order in a suitable way (e.g. in writing or by phone), or ask the Buyer to pay the purchase price or its part in advance. In such case the contract of purchase shall not be made before the conditions required by the Seller are met, duly and in time.

4. Purchase Price

a) The purchase price is specified in Czech crowns (CZK).

b) The Buyer is obliged to pay for the goods the amount of the purchase price attached to the ordered kind of goods of the Buyer, valid at the moment the order was delivered to the Seller. The price of the goods shall be agreed on the basis of the mutually approved price list of the goods. The Seller reserves the right to change the stated prices in the case of massive inflation or when significant changes of the delivery terms on the part of the manufacturers and other suppliers of the goods have occurred. If the Buyer does not inform the Seller within three days of receiving a notification to that effect that he does not agree to the new price, he is obliged to pay the purchase price stated on the tax document – the invoice.

c) Along with the purchase price of the goods the Buyer is obliged to pay to the Seller:

I. value added tax applying at the time the deal was realized, if applicable

II. transport charges – depending on the kind of transport

III. packing – EUR 10.- (excl. VAT)

IV. handling fee – EUR 30.- (excl. VAT)

The payment specified in para III and IV relates to orders, where the total price of the goods is less than EUR 500.- excl. VAT. If the price is higher, the costs stated in para III and IV shall be covered by the Seller. The Buyer shall pay the amounts stated in points I and II to the Seller in any case.

d) The Seller shall send to the buyer the invoice – tax document together with the goods or after delivery by mail

e) The payment conditions are specified in GTC Article 6.

5. Delivery terms

a) Place of performance and delivery

I. The place of performance is the Seller's place of business, where the Seller will hand over the goods to the forwarder or the Buyer.

II. The place of delivery is the address stated in the order.

b) Mode of transport

I. The Seller shall ensure the delivery of the goods to the Buyer on the basis of an agreement or in another way, at the time and at the price mentioned below:

i. by the transport service

ii. by Česká pošta s.p. parcel post package c)Time of delivery

I. The time of delivery will be confirmed to the Buyer in the confirmation of order.

6. Terms of Payment

a) Payment of the purchase price

I. The Buyer is obliged to pay the purchase price either in cash on delivery to the transport contractor

II. or in advance in the Seller's bank account, unless an "Agreement on trade cooperation" was signed with the Buyer.

III. or if an "Agreement on trade co-operation" was signed with the Buyer the standard maturity of invoices is 14 days from the date of taxable performance.

SALES AND WARRANTY TERMS

7. Responsibility for Defective Goods

a) Handover of goods, devolution of ownership and risk of damage to goods, guarantee

I. The Buyer is obliged to take over the goods from the transport contractor and confirm that fact on the delivery note and the transport document, or another document. By signing the delivery note the Buyer confirms that the consignment has been delivered without any obvious defects and no later claims as to the damaged packing shall be taken into consideration.

II. The responsibility for damage caused by force majeure passes on the Buyer at the moment of the takeover of the goods.. If the place of delivery is not the Seller's headquarters, his place of business or workplace, the liability for damage caused by force majeure passes on the Buyer at the moment the goods are handed over to the first transport contractor for delivery.

III. The ownership right to the goods devolves on the Buyer at the moment of takeover.

IV. The Seller is responsible for any defects, which manifest themselves as being in contradiction with the contract of purchase after the takeover of the thing within the guarantee period (guarantee). The guarantee does not apply to the wear of the thing caused by its customary use. The guarantee period is 24 months, 48 months for PROFI CLASS products. The guarantee period begins to run on the takeover of the thing by the Buyer. The period from the time when the liability for the defects was claimed until the time, when the Buyer was obliged to take over the thing after its repair, shall not be included in the guarantee period. If the thing is exchanged, the guarantee period begins to run from the takeover of the new thing.

V. The guarantee applies to production defects or other defects, which were not caused by unprofessional or careless handling of the things, or their use in contradiction with their purpose or directions for use, by mechanical damage, wear, or elemental disasters (e.g. lightning or some other atmospheric discharge, fire or water, or the operation of other non-standard phenomena).

VI. The liability for the defects of goods shall expire, if it was not claimed within the guarantee period.

b) The Buyer's obligations after the delivery of goods, defective goods

I. The Buyer is obliged to examine the goods immediately after takeover. In particular he is obliged to check if the packing has not been damaged, check the number of parcels and in the case of any irregularities to notify the transport contractor accordingly without delay. If the packing is damaged showing an unauthorized interference with the consignment, the Buyer is entitled to refuse taking the goods over; in that case he is obliged to inform the Seller thereof and to co-operate with him, if necessary.

II. If at the inspection of the goods the Buyer ascertains any defects, or if any defects appear during the guarantee period, the Buyer is obliged to notify the Seller of those defects immediately after he has ascertained them. The notification of the defects must be made in writing, by fax or by electronic mail and the Buyer must state it in his claim. In addition, the Buyer is obliged to send back to the Seller the goods for which he has lodged a claim, in the way agreed with the Seller in advance.

III. The place for lodging the claim is the Seller's headquarters – EMP-Centauri s.r.o., 5. května 690, Klatovy, 339 00, phone: 376 323 813, fax: 376 323 809, e-mail: sales@emp-centauri.cz.

IV. A copy of the purchase and delivery document – the invoice and a detailed description of the defect must be attached to the goods for which a claim has been lodged.

V. The liability for the defects of the delivered goods is governed by current legislation (especially section 612 et seq. of the Civil Code).

VI. The cost of the transport of the goods for which a claim has been lodged from the place of delivery to the Seller's headquarters or some other place determined by the Seller shall be covered by the Buyer. The cost of the return transport, if the claim was justified, shall be covered by the Seller. If the claim was not justified, the cost shall be covered by the Buyer.

8. Packing

a) Under section 13(1)(B) of Act No. 477/2001 Coll., the ownership right to packing passes to the buyer at the moment of the takeover of the goods from the supplier, or the transport contractor, as the case may be.

9. Protection of Personal Data

a) The Buyer declares that all data, which he gave to the Seller for the goods to be delivered, are true and are in keeping with actual facts, and that he is aware of potential consequences that may result from any misrepresentation.

b) The Seller declares that all personal data, which the Buyer gave to him, are confidential, that they will only be used for the Seller's internal needs and will not be published, made available to

A third person or otherwise abused. Personal data are collected for commercial, logistic, statistical and marketing purposes. In handling personal data, the Seller is obliged to observe the provisions of Act No 101/2000 Coll. on the protection of personal data, as amended.

c) By sending his order of goods, the Buyer gives the Seller his consent to collect and keep the personal data about his person and his purchases and to process those data in accordance with the Seller's needs.

d) The Buyer has the right to ask, at any time, for his personal data to be deleted from the Seller's database and the Seller is obliged to comply with his request without delay.

The General Trade Conditions are valid from 1 March 2006.

NOTES

CONTACTS

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