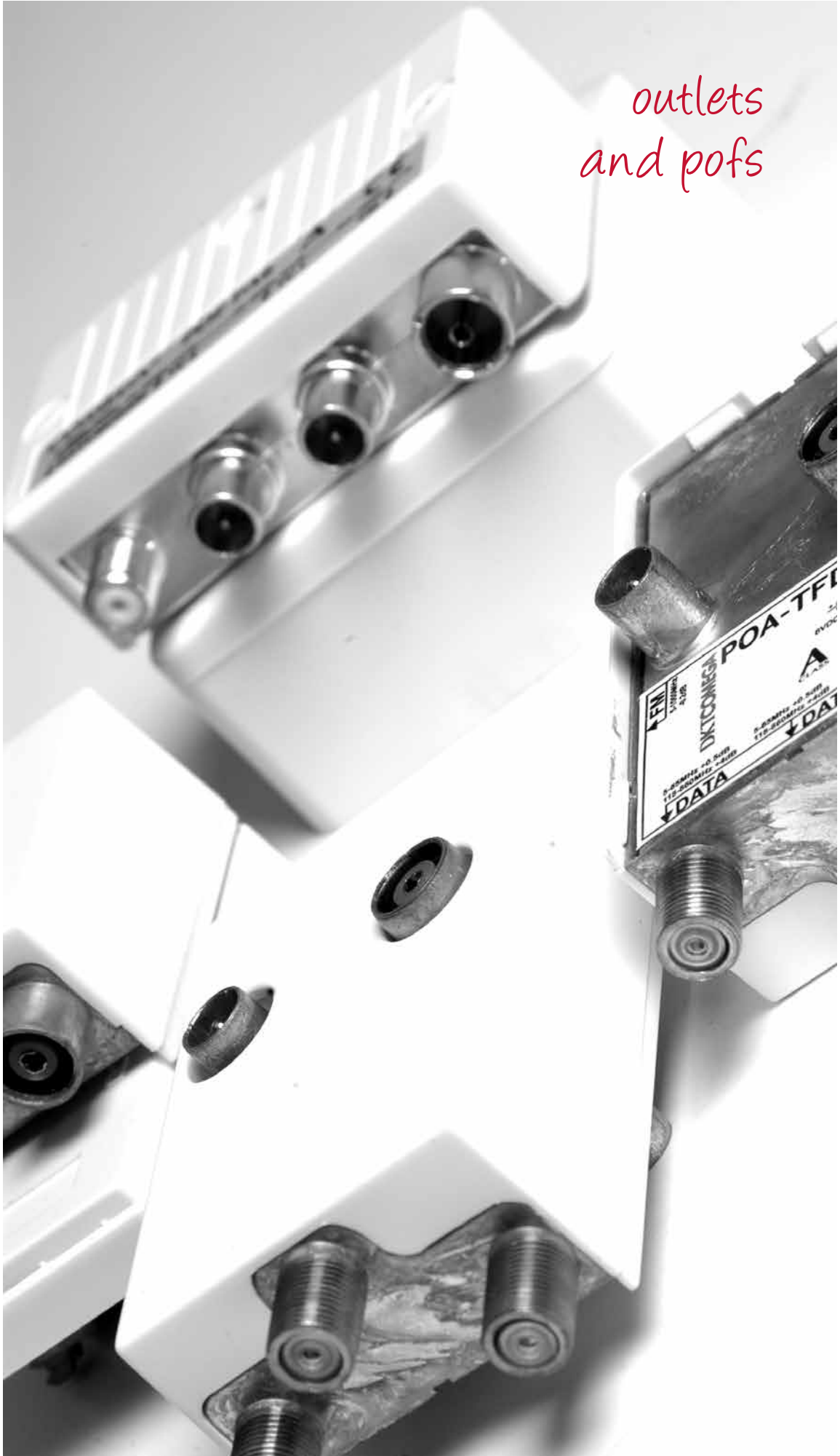


*outlets
and pofs*

DKTCOMEGA



passive tv/fm outlets



Product information

These TV/FM outlets comply with industry standards and have focus on screening efficiency and easy, flexible and stable cable installation. Full program with terminated or loop-through, each with specific attenuation, to match all type of networks.

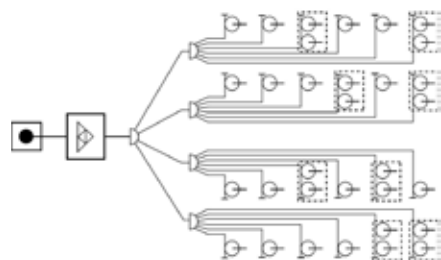


Each outlet is available with a front plate and surface mounting frame (C), with a front plate only (FP) or without any enclosure.

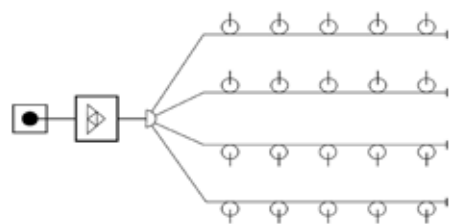
All outlets are assigned colour codes on the IEC constructions, in order to identify the type of outlet on the front (See page 23 for more information regarding these codes).

Explanation to "version": Std. = Standard (no diplex), Dip = Diplex filter, TM = Terminated, LT = Loop-through

Terminated outlets in star networks



Loop-through outlets in cascading networks



Type *	TOBX-C
Item no.	52500
Version	Std, TM
TV	
Frequency range	5-68 / 118-1000
Insertion loss IN-TV (dB)	1,0
Return loss** EN50083-4	Cat. C
Isolation to FM (dB)	> 15
Connector	IEC-Male
FM	
Frequency range (MHz)	87,5-108
Insertion loss IN-FM (dB)	1,3
Connector	IEC-Female

Type *	T4BX-C	T7BX-C	T10BX-C	T13BX-C	T16BX-C
Item no.	52505	52510	52515	52520	52525
Version	Std, TM	Std, TM	Std, TM	Std, TM	Std, TM
TV					
Frequency range (MHz)	5-68 / 118-1000	5-68 / 118-1000	5-68 / 118-1000	5-68 / 118-1000	5-68 / 118-1000
Insertion loss IN-TV (dB)	4,0	7,0	10	13	16
Return loss** EN50083-4	Cat. C	Cat. C	Cat. C	Cat. C	Cat. C
Isolation to OUT (dB)	> 20	> 20	> 30	> 30	> 30
Connector	IEC-Male	IEC-Male	IEC-Male	IEC-Male	IEC-Male
FM					
Frequency range (MHz)	87,5-108	87,5-108	87,5-108	87,5-108	87,5-108
Insertion loss IN-FM (dB)	4,5	7,5	10	13	16
Connector	IEC-Female	IEC-Female	IEC-Female	IEC-Female	IEC-Female
IN & OUT					
Frequency range (MHz)	5-1000	5-1000	5-1000	5-1000	5-1000
Insertion loss IN-OUT (dB)	3,8	2,8	1,8	0,9	0,9
Return loss** EN50083-4	Cat. C	Cat. C	Cat. B	Cat. B	Cat. B

Dimension (H 82 x W 82 x D 30 mm)
Back box only. Faceplate adds 8 mm to depth to overall 38 mm.

* Type suffix defines product package:

C - complete housing (front and back), example TOBX-C.

FP - front plate only, example TOBX-FP.

No suffix - no front or back, example TOBX.

Each available in minimum order quantity of 10 units.

** According to CENELEC 50083:

A: 5-40 MHz ≥ 22 dB, min. 14 dB @ 40-1750 MHz ÷ 1,5/oct.

B: 5-40 MHz ≥ 18 dB, min. 10 dB @ 40-1750 MHz ÷ 1,5/oct.

C: 5-40 MHz ≥ 14 dB, min. 10 dB @ 40-1750 MHz ÷ 1,5/oct.

D: 5-1750 MHz ≥ 10 dB



Benefits

- Designed for optimal performance in multimedia installations
- High isolation between outputs
- Low through loss
- High return loss
- Easy visual identification of outlet type (colour code)
- Robust housing - discrete mounting, only 24 mm depth
- Support installation with mini-cable (0,41 mm Ø centre conductor)

passive tv/fm/data outlets



Product information

These multimedia outlets are designed to meet the requirements of a multimedia installation, with a mix of FM, TV, modem and Set Top box, where high isolation between ports is critical for optimal performance.

The outlets are available in terminated and loop-through designs, and for each of these as standard and diplex versions.

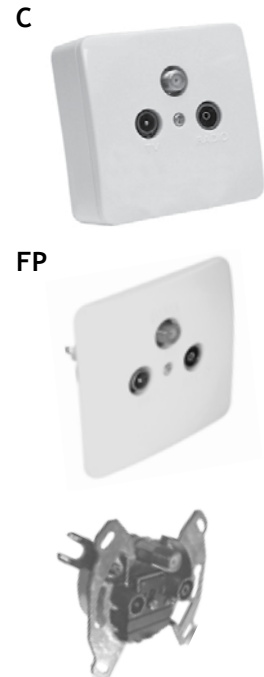
The choice between a standard or a diplex data outlet means that network performance can be optimized according to return path attenuation. Diplex is used in low tolerance networks.

Each outlet is available with a front plate and surface mounting frame (C), with a front plate only (FP) or without any enclosure.

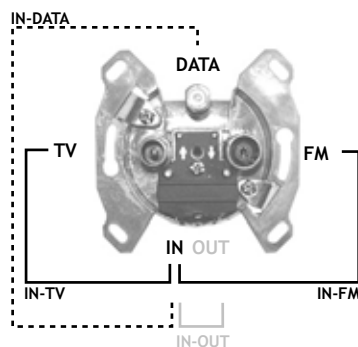
Galvanic isolated multimedia outlets are also available. These provide optimal isolation of potential differences between the network and the subscriber's equipment. These too are available in terminated and loop-through designs (see page 9).

All outlets are assigned colour codes on the IEC constructions, in order to identify the type of outlet on the front (See page 23 for more information regarding these codes).

Explanation to "version": Std = Standard (no diplex), Dip = Diplex filter, TM = Terminated, LT = Loop-through



Insertion loss



Insertion loss

A signal is applied to the IN connector and the output is measured on the OUT, TV, FM and DATA connectors.

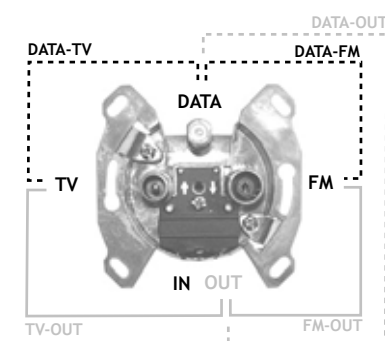
Isolation

A signal is applied to a connector, for example TV, and the output is measured on other connectors, for example FM, DATA and OUT.

Return loss

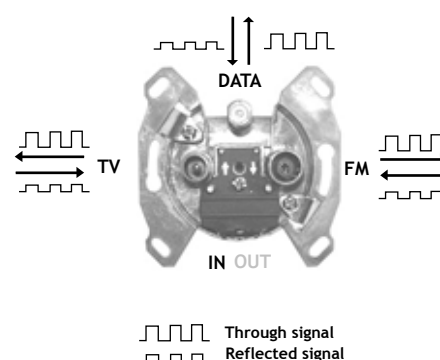
The fraction of the incoming signal that is reflected from this port on the outlet.

Isolation



----- Only on multimedia outlets
 ————— Only on unterminated loop-through outlet:

Return loss



Type *	MM4-DABX-C	MM4-65X-C	MM7-65X-C	MM4-65DX-C	MM10-65DX-C
Item no.	52600	52605	52615	52610	52625
Version	Std, TM	Std, TM	Std, TM	Dip, TM	Dip, TM
DATA					
Frequency range (MHz)	5-1000	5-1000	5-1000	5-65 / 188-1000	5-65 / 188-1000
Insertion loss reverse (dB)	3,5	3,5	7,0	0,8	0,8
Insertion loss forward (dB)	3,5	3,5	7,0	4,5	10,0
Return loss** EN50083-4	Cat. B	Cat. B	Cat. B	Cat. B	Cat. B
Isolation to TV (dB) 5-65 MHz	> 55 (5-30 MHz)	> 50	> 50	> 45	> 45
Isolation to TV (dB) 118-1000 MHz	> 22 (47-862 MHz)	> 22	> 22	> 22	> 22
Connector	F-Female	F-Female	F-Female	F-Female	F-Female
TV					
Frequency range (MHz)	47-1000	118-1000	118-1000	118-1000	118-1000
Insertion loss IN-TV (dB)	4,5	4,5	2,5	4,5	2,0
Return loss** EN50083-4	Cat. C	Cat. C	Cat. C	Cat. C	Cat. C
Connector	IEC-Male	IEC-Male	IEC-Male	IEC-Male	IEC-Male
FM					
Frequency range (MHz)	87,5-108	87,5-108	87,5-108	87,5-108	87,5-108
Insertion loss IN-FM (dB)	5,0	5,0	4,0	4,5	2,5
Connector	IEC-Female	IEC-Female	IEC-Female	IEC-Female	IEC-Female

Type	MM10-65X-C	MM13-65X-C	MM16-65X-C	MM10-65-DPTX-C
Item no.	52620	52645	52650	52635
Version	Std, LT	Std, LT	Std, LT	Dip, LT
DATA				
Frequency range (MHz)	5-1000	5-1000	5-1000	5-65 / 188-1000
Insertion loss reverse (dB)	10	13	16	5
Insertion loss forward (dB)	10	13	16	10
Return loss** EN50083-4	Cat. B	Cat. B	Cat. B	Cat. B
Isolation to OUT (dB)	25	25	25	25
Isolation to TV (dB) 5-65 MHz	> 55	> 50	> 50	> 45
Isolation to TV (dB) 118-1000 MHz	> 22	> 22	> 22	> 22
Connector	F-Female	F-Female	F-Female	F-Female
TV				
Frequency range (MHz)	118-1000	118-1000	118-1000	118-1000
Insertion loss IN-TV (dB)	10	13	16	9,5
Return loss** EN50083-4	Cat. C	Cat. C	Cat. C	Cat. C
Isolation to OUT (dB)	25	25	25	25
Connector	IEC-Male	IEC-Male	IEC-Male	IEC-Male
FM				
Frequency range (MHz)	87,5-108	87,5-108	87,5-108	87,5-108
Insertion loss IN-FM (dB)	10	13	16	10,5
Connector	IEC-Female	IEC-Female	IEC-Female	IEC-Female
IN & OUT				
Frequency range (MHz)	5-1000	5-1000	5-1000	5-1000
Insertion loss IN-OUT (dB)	2,5	2,0	1,7	4,5 (±1)
Return loss** EN50083-4	Cat. B	Cat. B	Cat. B	Cat. B

Dimension (H 82 x W 82 x D 30 mm)
Back box only. Faceplate adds 8 mm to depth to overall 38 mm.

* Type suffix defines product package:

C - complete housing (front and back), for example MM10-65X-C.
FP - front plate only, for example MM10-65X-FP.
No suffix - no front or back, for example MM10-65X.
Each available in minimum order quantity of 10 units.

+ The data connection in the MM4-DABX-C outlet can be used to receive DAB signals.

** According to CENELEC:

A: 5-40 MHz ≥ 22 dB, min. 14 dB @ 40-1750 MHz ÷ 1,5/oct.
B: 5-40 MHz ≥ 18 dB, min. 10 dB @ 40-1750 MHz ÷ 1,5/oct.
C: 5-40 MHz ≥ 14 dB, min. 10 dB @ 40-1750 MHz ÷ 1,5/oct.
D: 5-1750 MHz ≥ 10 dB



Benefits

- Maximum flexibility
- Standard and duplex models for all types of networks
- Simple Do-It-Yourself quick and easy product concept
- Low capital expenditure, installation and maintenance
- Ideal for return path services and higher average revenue per user

push-on passive tv/fm/data filters



Product information

The “push-on” passive multimedia filters are available in various configurations. These satisfy the demands made for passive filtering of TV, FM and DATA signals in modern CATV home networks.

Push-on filters

These multimedia push-on passive filters are available in standard and diplex versions. Standard versions have a higher attenuation in the return path and are suited to home applications where extra loss in the data signal is tolerable. Diplex versions are designed with extremely low return path attenuation and for separation of TV, FM and satellite intermediate frequency bands.



Type	POF 4-4	POF 7-7	POF 1-4	POF 1-10
Item no.	42102	42103	42100	42101
Version	Standard	Standard	Diplex	Diplex
DATA				
Frequency forward (MHz)	118-1000	118-1000	118-1000	118-1000
Frequency reverse (MHz)	5-65	5-65	5-65	5-65
Insertion loss forward (dB)	4,0 (±0,5)	7,0 (±1,0)	4,0 (±0,5)	10,0 (±1,0)
Insertion loss reverse (dB)	4,0 (±0,5)	7,0 (±1,0)	0,6 (±0,5)	0,6 (±0,5)
Return loss* EN50083-4	Cat. B	Cat. B	Cat. B	Cat. B
Isolation to TV/DATA (dB) 5-65 MHz	50	50	50	50
Isolation to TV/DATA (dB) 118-470 MHz	30	20	25	27
Isolation to TV/DATA (dB) 470-1000 MHz	20	17	23	24
Connector	F-Female	F-Female	F-Female	F-Female
TV				
Frequency range (MHz)	87-1000	87-1000	118-1000	118-1000
Insertion loss (dB)	4,0 (±0,5)	2,0 (±0,5)	4,0 (±0,5)	1,6 (±0,5)
Isolation TV OUT / TV IN (dB) 5-65 MHz	35	35 (5-65)	50	50
Connector	IEC-Male	IEC-Male	IEC-Male	IEC-Male
FM				
Frequency range (MHz)	87,5-108	87,5-108	87,5-108	87,5-108
Insertion loss (dB)	0,6 (±0,5)	0,6 (±0,5)	0,6 (±0,5)	0,6 (±0,5)
Isolation FM OUT / FM IN (dB) 5-65 MHz	30	30	30	30
Connector	IEC-Female	IEC-Female	IEC-Female	IEC-Female

Dimension (H 62 x W 84 x D 25 mm)

Freja Push-on filters

The Freja push-on passive filter satisfies the demands made by modern CATV household installations where passive filtering of TV, FM and DATA signals is required.



Type	Freja POF 1-4
Item no.	42108
Version	Diplex
DATA	
Frequency forward (MHz)	118-1000
Frequency reverse (MHz)	5-65
Insertion loss forward (dB)	4,0 (±0,5)
Insertion loss reverse (dB)	0,5 (±0,5)
Return loss* EN50083-4	Cat. B
Isolation to TV/DATA (dB) 5-65 MHz	45
Isolation to TV/DATA (dB) 118-470 MHz	25
Isolation to TV/DATA (dB) 470-1000 MHz	23
Connector	F-Female
TV	
Frequency range (MHz)	118-1000
Insertion loss IN-TV (dB)	4,0 (±0,5)
Isolation TV OUT / TV IN (dB) 5-65 MHz	35
Connector	IEC-Male
FM	
Frequency range (MHz)	87,5-108
Insertion loss IN-FM (dB)	0,6 (±0,5)
Connector	IEC-Female

Dimension (H 68 x W 50 x D 24 mm)

* According to CENELEC:

A: 5-40 MHz ≥ 22 dB, min. 14 dB @ 40-1750 MHz ÷ 1,5/oct.
B: 5-40 MHz ≥ 18 dB, min. 10 dB @ 40-1750 MHz ÷ 1,5/oct.
C: 5-40 MHz ≥ 14 dB, min. 10 dB @ 40-1750 MHz ÷ 1,5/oct.
D: 5-1750 MHz ≥ 10 dB

Reduced performance can be expected in the 862-1000 MHz range.



Benefits

- Low cost Do-It-Yourself installation and low maintenance
- Increased installer efficiency
- Ideal for return path services
- Extra TV and/or VCR capability

push-on amplifier, active distribution



Product information

The extra loss arising from data filtering cannot be tolerated in many existing CATV networks. This can cause problems with the signal level.

These problems can be resolved with the active version of the DKTCOMEGA push-on filter. With a built-in forward amplifier designed with a high output level, it is possible to compensate for the extra loss from filtering/taps in the forward path. The return path in the active version is designed with diplexers, resulting in very low loss on return path transmissions (no return path in PA2TA).



Type	POF - PA 1	POF - PA 6	POF - PA2TA
Item no.	42110	42113	42112
Data			
Frequency forward (MHz)	118 - 862	118 - 862	-
Frequency - reverse (MHz)	5 - 65	5 - 65	-
Gain Forward (dB)	2,0	8,0	-
Output level* (dBμV)	90	90	-
Insertion loss reverse	-0,6 dB (±0,5 dB)	-0,6 dB (±0,5 dB)	-
Isolation DATA/TV OUT 1,2,3 (5-65 MHz)	50 dB	50 dB	-
Isolation DATA/TV OUT 1,2,3 (118-470 MHz)	30 dB	30 dB	-
Isolation DATA/TV OUT 1,2,3 (470-860 MHz)	27 dB	27 dB	-
Connector	F-female	F-female	-
TV Output			
Frequency (MHz)	118 - 862	118 - 862	47 - 862
Gain TV 1 (dB)	1,0	6,5	2,5
Output level* TV 1 (dBμV)	89	89	85
Gain TV 2 (dB)	0,0	5,5	2,0
Output level* TV 2 (dBμV)	88	88	84
Gain TV 3 (dB)	-	-	14,0
Output level* TV 3 (dBμV)	-	-	97 dBμV
Isolation TV OUT 2/ TV OUT 1 (118-860 MHz)	30 dB	30 dB	-
Isolation TV/FM OUT 3 > TV/FM OUT 1.2/FM Out	-	-	> 30 dB
Isolation TV/FM/OUT 1 - TV/FM/OUT 2 - FM/Out	-	-	VHF > 42 dB UHF > 36 dB
Rejection TV Out 2 / TV In (5-65 MHz)	45 dB	45 dB	-
Connector	IEC-male	IEC-male	F-female
FM Output			
Frequency (MHz)	87,5 - 108	87,5 - 108	87,5 - 108 MHz
Gain (dB)	-	-	0,5
Output level* (dBμV)	-	-	84
Insertion loss (dB)	-0,6 (±0,5)	-0,6 (±0,5)	-
Isolation FM OUT/ FM IN (5-65 MHz)	30 dB	30 dB	-
Connector	IEC-female	IEC-female	F-female
Other			
Attenuator (dB)	-	-	0 / 3 / 6
Equalizer (dB)	-	-	0 / 3 / 6
Noise Figure (dB)	4	4	4
Power	230 VAC / 6 VDC / 70 mA	230 VAC / 6 VDC / 70 mA	230 VAC / 6 VDC / 70 mA
Return loss on all ports**	EN50083-4 Cat. B	EN50083-4 Cat. B	EN50083-4 Cat.B

Radiation: < 20 dBpW/0,03 - 1 GHz, compliant according to EN50083-2

* CTB/CSO > 60 dB with 42-channel CENELEC

** According to CENELEC:

5-40 MHz ≥ 18 dB, 40-862 MHz min. 18 dB ÷ 1.5/oct.