

*outlets
and pofs*

product introduction

Introduction

Bidirectional CATV networks and services are increasing the demands to the home installation. DKTCOMEGA offers a comprehensive line of high quality outlets and Push-On-Filters (POF's). This enables designer's, installation contractors and operators to design, build and operate home installations optimized to quality, performance, cost and maintenance.

Overview



A Line of Outlets with a bandwidth of 5Mhz to 1 GHz complying with Cenelec standards. Designed with focus on screening efficiency and easy, flexible and stable cable installation. Full range of TV/FM outlets supporting star and cascading networks. TV/FM/DATA outlets optimized to multimedia installations.



A series of galvanic isolated TV/FM/DATA outlets that effectively separate electrical potential differences between a network and the home installation.



Freja/Odin has been designed to meet the high quality standard of DKTCOMEGA outlets and at the same time focus on a modern and discrete design.



A series of outlets designed specifically for multimedia installations. A build-in amplifier eliminates the loss in filtering and taps.



The Push-on-Filters is a line of product specially designed to overcome issues when subscribers are upgraded to installations with data and/or Set-top box and more TV-set's without changing the existing home installation. The POF is mounted by the subscriber on an existing outlet and provides one or more additional data outputs. The POF is also available in a version with a build in amplifier.

Benefits

Optimal specifications

- Low insertion loss and low through loss maintain signal strength
- High return loss, isolation and screening efficiency ensure interference-free signals
- Stable performance across TV, FM and DATA frequency ranges

Ideal for subscribers

- Mix-and-match to meet subscriber's network
- Easily upgrade existing subscriber networks with minimal intervention and cost
- Protected investment by ensuring future upgradeability
- Reliable signal delivery requiring minimal service and expense

Ideal for installers and service providers

- Quick and easy installation with minimal service overhead
- Designed and approved according to industry standards





Benefits

- Low through 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 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.



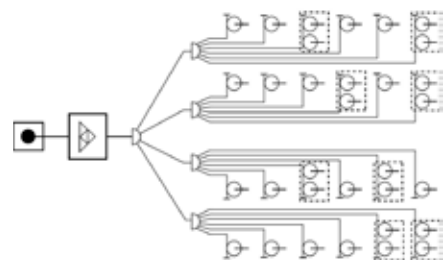
Each outlet is available with a front plate and surface mounting frame (C), with a front plate only (FP) or without any enclosure.

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).

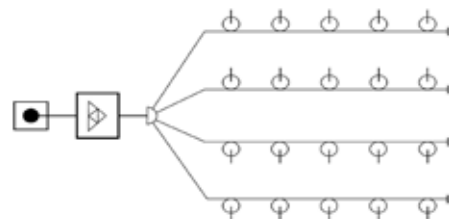
Explanation to “version”: Std. = Standard (no diplex), Dip = Diplex filter, TM = Terminated, LT = Loop-through

Type *	
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

Terminated outlets in star networks



Loop-through outlets in cascading networks



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 T0BX-C.
FP - front plate only, example T0BX-FP.
No suffix - no front or back, example T0BX.
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.

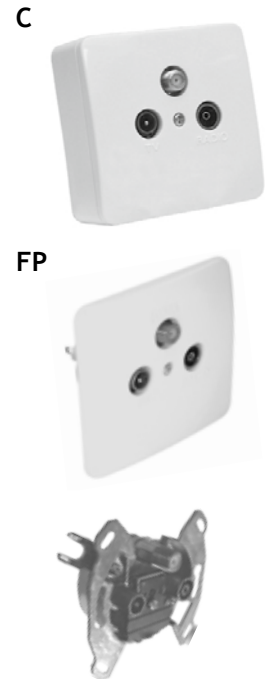
The choice between a standard or a diplex data outlet means that network performance can be optimized according to return path attenuation. Diplex is used in low tolerance networks.

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

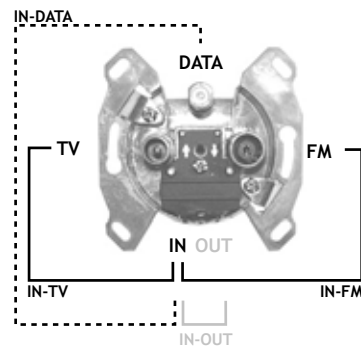
Galvanic isolated multimedia outlets are also available. These provide optimal isolation of potential differences between the network and the subscriber's equipment. These too are available in terminated and loop-through designs (see page 9).

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.

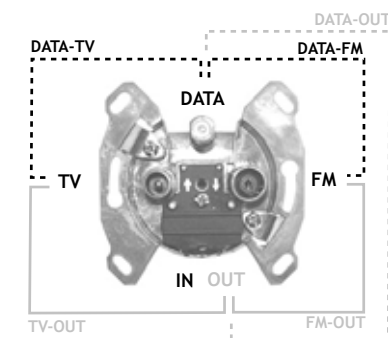
Isolation

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

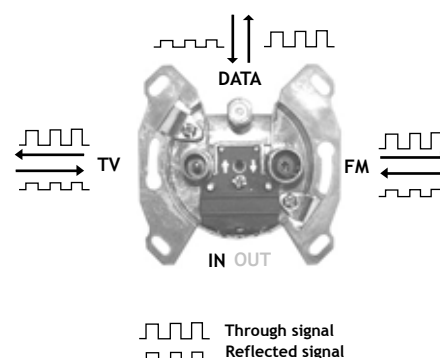
Return loss

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

Isolation



Return loss



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

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	Std, TM	Std, 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

passive galvanic isolated



tv/fm/data outlets

Product information

These TV/FM/DATA outlets effectively separate electric potential differences between a network and a subscriber's installation. Each product consist of two parts - a faceplate with an F-connector for the network and a push-on filter that connects to the subscriber's installation.

The outlet's galvanic isolation is tested at 2,2 kV for a minimum period of one minute where leakage current must not exceed 0,7 mA. Such effective isolation is a prerequisite in many countries. (Ref. CENELEC 50083-1 paragraph 9)

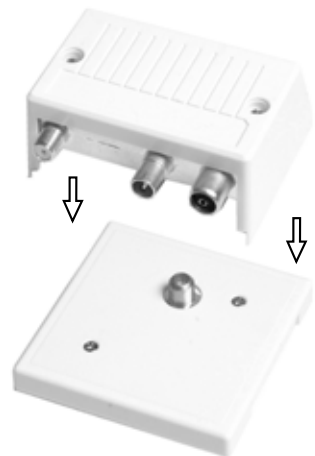
Explanation to "version": Std = Standard (no diplex), Dip = Diplex filter, TM = Terminated, LT = Loop-through

Type:	Gi-4
Item no.	52690
Version	Std, TM
DATA	
Frequency range (MHz)	5-1000
Insertion loss forward (dB)	4
Insertion loss reverse (dB)	4
Isolation DATA/TV (dB) 5-65 MHz	> 55
Isolation DATA/TV (dB) 118-1000 MHz	> 20
Return loss* EN50083-4	Cat. B
Connector	F-Female
TV	
Frequency range (MHz)	118-1000
Insertion loss (dB)	4
Isolation TV/IN (dB) 5-65 MHz	> 50
Connector	IEC-Male
FM	
Frequency range (MHz)	87,5-1000
Insertion loss (dB)	5
Connector	IEC-Female

Combined unit



Mounting procedure



Push-on unit



These isolated outlets comply with EN 50083-2 Class A, EMC screening effectiveness of minimum 85 dB for 5-470 MHz and minimum 75 dB for 470-860 MHz.

Type:	Gi-8	Gi-10	Gi-13	Gi-16
Item no.	52691	52693	52695	52697
Version	Std, LT	Std, LT	Std, LT	Std, LT
DATA				
Frequency range (MHz)	5-1000	5-1000	5-1000	5-1000
Insertion loss forward (dB)	8	10	13	16
Insertion loss reverse (dB)	8	10	13	16
Isolation DATA/TV (dB) 5-65 MHz	> 55	> 55	> 55	> 55
Isolation DATA/TV (dB) 118-1000 MHz	> 20	> 20	> 20	> 20
Return loss* EN50083-4	Cat. B	Cat. B	Cat. B	Cat. B
Connector	F-Female	F-Female	F-Female	F-Female
TV				
Frequency range (MHz)	118-1000	118-1000	118-1000	118-1000
Insertion loss (dB)	8	10	13	16
Isolation TV/IN (dB) 5-65 MHz	> 50	> 55	> 55	> 60
Isolation TV/OUT (dB) 118-470 MHz	> 30	> 30	> 30	> 30
Isolation TV/OUT (dB) 470-1000 MHz	> 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 (dB)	9	11	14	17
Connector	IEC-Female	IEC-Female	IEC-Female	IEC-Female
IN & OUT				
Frequency range (MHz)	5-1000	5-1000	5-1000	5-1000
Insertion loss (dB)	3,5	2,8	2,3	1,5
Return loss* EN50083-4	Cat. B	Cat. B	Cat. B	Cat. B

Dimension (H 82 x W 82 x D 70 incl. Push-on unit 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

